

# Are Sex and Gender Socially Constructed?

by [Marc J. Defant](#) (October 2024)



Man and Woman Embracing (Egon Schiele, 1917)

**The social constructionism hypothesis** touted by many radical feminists[\[1\]](#), psychologists, and social scientists infers that our understanding of reality is constructed through social and cultural processes. Rather than viewing reality as an objective truth that exists independently of human perception, social constructionists argue that what we perceive as “reality” is shaped by cultural norms, language, social practices, and power dynamics within society.

There is no doubt that society impacts our perceptions. For example, printed money takes on worth because society deems it valuable. However, problems arise when social constructionism disconnects from reality. In an extremely influential book entitled *Constructing Quarks [1]*, Andrew Pickering contends that quarks were socially constructed when the Standard Model of particle physics was developed. Psychologist and confirmed social constructionist Kenneth Gergen takes the hypothesis to a remarkable level: “The validity of theoretical propositions in the sciences is in no way affected by factual evidence [2].”

My argument is that the anti-science stance adopted by many social constructionists was developed to defend deeply entrenched beliefs and ideologies. Rather than objectively challenging scientific findings, they claim that science is merely a socially constructed viewpoint, no more valid than any other opinion. As Gergen illustrates: “Constructionists’ critique was highly appealing to marginalized groups whose voices had been sidelined by science, as well as to those whose efforts for social equality and justice were hindered by established authorities of truth. Constructionist arguments not only leveled the playing field but also enabled widespread political and moral critique.” A prime example of this is the growing claim in academia, and increasingly in broader society, that sex is not binary but exists on a spectrum between male and female. Of course, even the most die-hard social constructionists aren’t rushing to consult witch

doctors for cancer treatment, which just goes to show that their theories are more suited for cocktail parties than hospital wards. Ultimately, masculinity is not only under assault, but it is being done under the auspices of bad science.

## **Socially Constructing Sex and Gender**

Nowhere has social constructionism been more influential than in the feminist and queer studies literature. The word gender in the 1960s, before it was appropriated by feminists, was a reference to feminine and masculine articles such as *un* and *une* or *le* and *la* (*en Français*) [3] [4]. Gender started to be used by feminists in the 1970s to distinguish feminine and masculine characteristics they believed were socially constructed [5]. In contrast, at about the same time, an entire field of study was developing in biology now referred to as evolutionary psychology. One of the postulates of the field is that men are not only physically different than women but also emotionally and mentally disparate due to evolutionary influences during hundreds of thousands of years of evolution within hunter gather societies [6] [7]. Many radical feminists have been refuting the science ever since not through the scientific method but through political discourse. If gender is socially constructed it is “mutable” and can be ameliorated by social and political reform. Radical feminists even use the pejorative “biological determinism.” One of the cornerstones of the radical feminist movement has been to reform society in such a way as to make it genderless—the removal of those so-called constructed feminine and masculine traits [4].

By the late 1980s, feminist voices were being raised against the hypothesis that gender can somehow be constructed without considering race, ethnicity, social class, or even nationality. Philosopher and feminist Elizabeth Spelman

insisted that predominantly white middle-class women were being privileged at the expense of marginalizing minority and/or impoverished women [8]. Arguments also arose over gay perspectives when philosopher and feminist Judith Butler noted that the normative narrative of gender assumes there is a correct definition of the typical gendered woman [9]. That is, feminists prior to Butler assumed that “feminine” is a characteristic of women that encodes some aspects or characteristics that all women have—essential properties to being a woman. But Butler made it clear normative values such as feminine sexual orientation imply that those with the “incorrect” sexual orientation (e.g., lesbians) are somehow wrong [10]. Butler’s often quoted phrase declares: “Gender ought not be construed as a stable identity or locus of agency from which various acts follow; rather, gender is an identity tenuously constituted in time, instituted in an exterior space through a stylized repetition of acts... This formulation moves the conception of gender off the ground of a substantial model of identity to one that requires a conception of gender as a constituted social temporality[21].” Butler is infamous for concluding heterosexual society has forced us to deny our innate homosexual desires [11].

Some radical feminists saw not only gender but sex itself as impacted by social construction. Philosopher and feminist Mari Mikkola explains [4][\[3\]](#):

*Social forces can be said to construct certain kinds of objects (e.g., sexed bodies or gendered individuals) and certain kinds of ideas (e.g. sex or gender concepts) ...take the object-construction of sexed bodies. Secondary sex characteristics, or the physiological and biological features commonly associated with males and females, are affected by social practices. In some societies, females’ lower social status has meant that they have been fed less and so, the lack of nutrition has had the effect of making*

*them smaller in size.*

Mikkola emphasizes that much of the physical differences between men and women (“muscular shape, size and strength”) can be attributed to the lack of “the same exercise opportunities and equal encouragement to exercise.”

Biologist and feminist Anne Fausto-Sterling has gone so far as to claim there are five sexes. In addition to male and female she included herms (those with one testis and one ovary), merms (those with no ovaries but with testes and some female genitalia), and ferms (those with no testes but with ovaries and some male genitalia) [12]. One of the conclusions from her book *Sexing the Body: Gender Politics and Construction of Sexuality* [13] fiercely maintains that sex is not binary: “A body’s sex is simply too complex. There is no either/or. Rather there are shades of difference... only our beliefs about gender—not science—can define our sex. Furthermore, our beliefs about gender affect what kinds of knowledge scientists produce about sex in the first place.”[\[4\]](#)

First, she wants to undermine the “deterministic” stance of the biology of sex documented by scientists and proposes a radical feminist political perspective: “I am deeply committed to the ideas of the modern movements of gay and women’s liberation, which argue that the way we traditionally conceptualize gender and sexual identity narrows life’s possibilities while perpetuating gender inequality. In order to shift the politics of the body, one must change the politics of science itself.” But she admits she can’t do this “if one believes that the posited functional differences are inborn ... then one can argue that it makes no sense to develop a social policy calling for equal representation of women in fields such as engineering and physics.” Second, she wants to not only obliterate the view that sex (and gender) is binary (male and female) but that sex (i.e., as related to our

physical bodies) is socially constructed: “to illustrate how sex is, literally, constructed.” She views the body as “bare scaffolding on which discourse and performance build a completely acculturated being.”[\[5\]](#)

## **Science Versus the Social Construction of Sex**

Let’s address Fausto-Sterling’s major argument for a nonbinary view of sex—the physical continuum she erects between male and female. She contends that 1.7 percent of the population is born as intersex[\[6\]](#). She includes a table which lists “some common types of intersexuality [13].” Psychologist and practicing physician Leonard Sax took exception to Fausto-Sterling’s 1.7 percent [\[14\]](#). As he notes, most clinicians do not recognize conditions like Klinefelter syndrome, Turner syndrome, and late-onset plasias as intersex. He states: “If the term intersex is to retain any meaning, the term should be restricted to those conditions in which chromosomal sex [XY or XX] is inconsistent with phenotypic sex[\[7\]](#), or in which the phenotype is not classifiable as either male or female. Applying this more precise definition, the true prevalence of intersex is seen to be about 0.018%, almost 100 times lower than Fausto-Sterling’s estimate of 1.7 percent.” Of course, it is much more difficult to make the case for a continuum when only 0.018% of the population falls between the two poles of male and female. As Sax notes, “she has encouraged the belief that a significant fraction of the population is neither male nor female, but intersex.”

Slight deviations (0.018%) do not argue well for dismissing a binary biological concept of sex in favor of a spectrum. Let’s not forget that sex exists biologically to propagate which requires a binary male-female sexual relationship[\[8\]](#). The view of a continuum runs completely counter to the biological purpose of sex in, not only humans, but the entire animal kingdom excluding asexual reproduction in, for example,

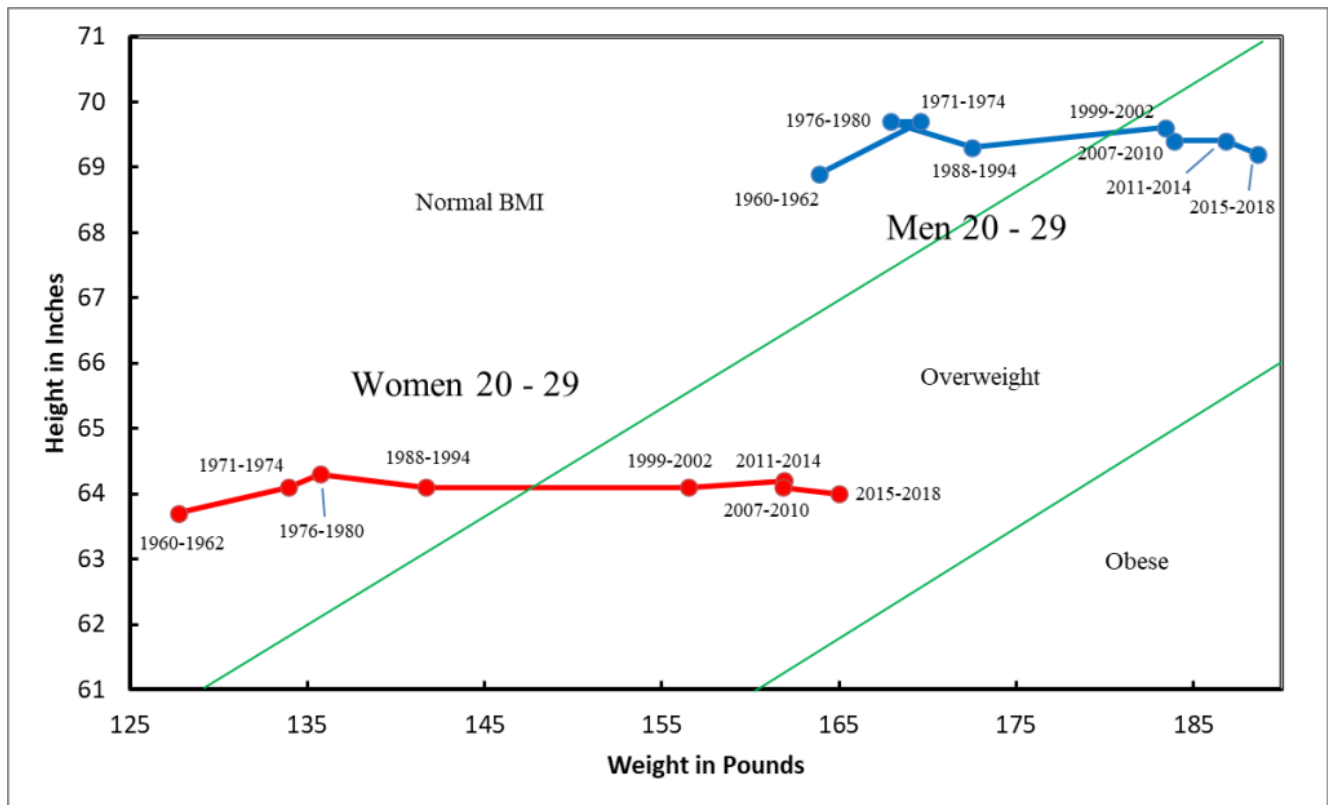


single-cell bacteria. The “spectrum” is an idea out of touch with biological reality. Fausto-Sterling even admits that “most intersex males are infertile [13].” Scientists are not trying to marginalize the intersexed as Fausto-Sterling contends. Educating people about intersex so they will be more tolerant does not require generating the false narrative that sex is on a spectrum. Ultimately, the real goal of these radical feminists goes back to my original contention that they are arguing for a genderless society even though the characteristics of sex (e.g., masculine and feminine) are what attract male and female to one another. If they can rid society of ‘gender normative’ they believe women and men will have equity of treatment. Science seems to be one of those irritable stumbling blocks toward their ideological goals. Fausto-Sterling concludes: “The implications of my argument for a sexual continuum are profound. If nature really offers us more than two sexes, then it follows that our current notions of masculinity and femininity are cultural conceits.”

Cultural conceits? Most, if not all biologists believe that the physical differences between men and women are genetic/hormonal in nature and society has very little impact on the differences (more on this later). This is in stark contrast to the radical feminists who contend that the differences are due to such things as women not receiving “the same exercise opportunities and equal encouragement to exercise.” If there is a spectrum between the sexes than we should see it expressed as a gradation in physical characteristics between men and women. Unless you are a social scientist, you know intuitively that men and women are different. The diagram below emphasizes the stark physical differences between men and women. There is no gradation [\[9\]](#). As an aside, the increase in weight probably reflects an increase in calorie consumption for both men and women. Remember, these are men and women in the prime of their lives and yet the trends are toward a well-documented increase toward obesity not only in the United States but worldwide



[15].

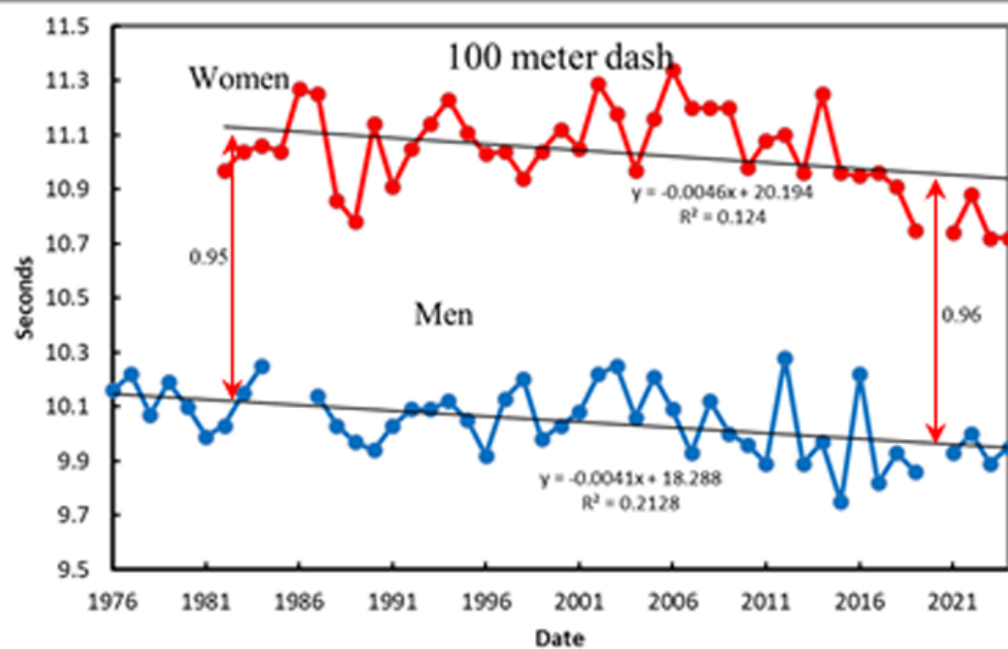
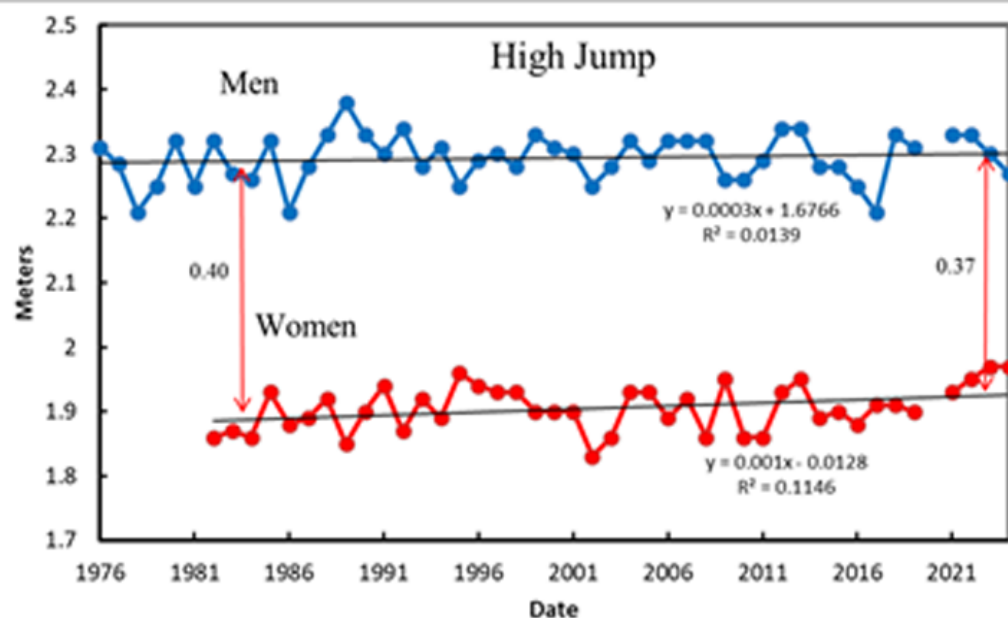
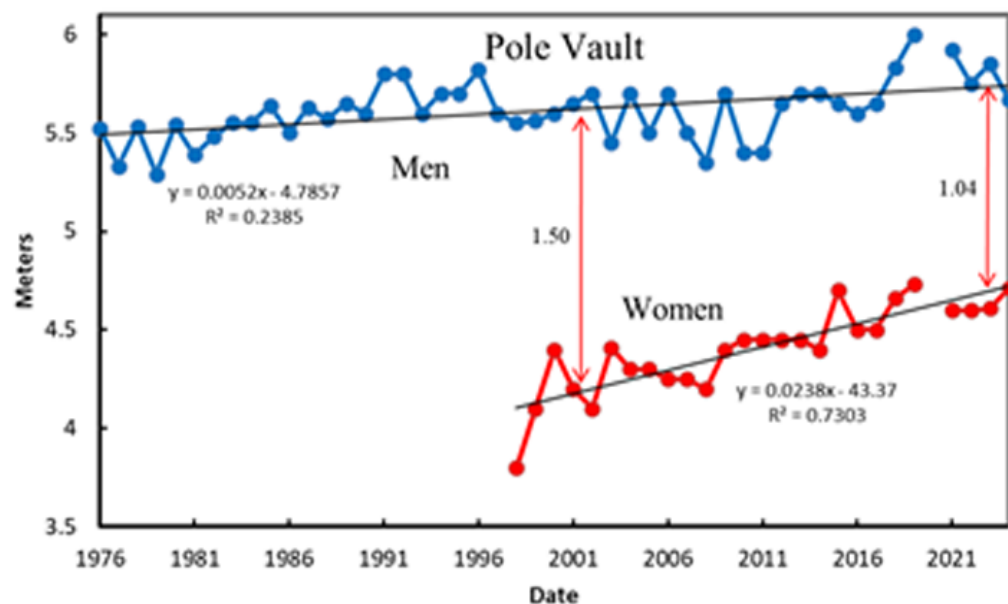


Graph of weight (lbs.) and height (inches) for biological men and women between the ages of 20 to 29. Data from the CDC [16] [17] [18] [19] – the lines separate groups on the basis of BMI.

When Title IX legislation was passed in 1972, it was used to create equity in sports for women[10]. Rightfully so. Title IX increased not only women's participation in sports but resulted in the addition of many women's sports. The increased participation also gave us a bevy of data allowing for the comparison of women and men athletes. As one might expect, national records in track and field began to rapidly fall when more women participated in sports. In 1992, physiologists Brian Whipp and Susan A. Ward in an article in *Nature* extrapolated the slope of increases in women's times in several running events to show that women's future national

record times would eventually intersect with men's [20] –the expected outcome if social construction has any merit. However, not surprisingly, the hypothesis never transpired as demonstrated in the graphs below.

The 100-meter dash has changed very little if any since 1982 between men and women. The trend lines (linear regressions) are close to horizontal and have very low coefficients of determination (see the red arrows showing the difference between the trend lines). The high jump shows a similar result. However, the same cannot be said for the pole vault[11]. I included the pole vault because I wanted to see how men and women compare in upper-body strength[12]. Although men's heights have risen, women's heights have increased faster since 1998 (coefficient of determination = 0.73). I don't want to take away from the improvement in the pole-vault numbers for women, but the increase is beginning to taper off and remain more than a meter below men's heights. After more than 50 years since Title IX was implemented, we would expect women's times and heights in track and field to be equal to or approaching those of men (women now have equal treatment in sports). But in contrast to feminist predictions, Title IX has not had the impact it should have had if physical sex-related differences are socially constructed. Of course, most people understand this—precisely why female and male sports have been separated. Once again, if social construction was behind the differences between the sexes and/or that sex is a spectrum, we would expect to see a gradation between male and female times and heights approaching an intersection.



Graph of dates and times/heights of NCAA men and women's Division I outdoor track and field championships for the 100-meter dash, the high jump, and the pole vault. Data from the NCAA.

Feminist Judith Lorber posits: "except for procreative hormones and organs, female and male beings have similar bodies ... gender constructs social bodies to be different and unequal [21]." This type of thinking is misguided and may explain why most feminists have been silent about men participating in women's sports[\[13\]](#). Fausto-Sterling and to some extent Lorber are right that the human scaffolding is similar between males and females but only until puberty is reached [22] [23]. Testosterone (androgens) levels are essentially the same in boys and girls before puberty ( $< 2$  nmol/L) explaining why girls compete successfully with boys at young ages in sports (e.g., tee-ball, soccer, etc.). But once puberty hits, a cascade of testosterone initiates rapid physical development in boys resulting in growth of muscle mass and strength along with bone mass and size, and increases in hemoglobin (i.e., increases in oxygen circulation). In stark contrast, girls produce minor amounts of testosterone. Boys have 15 times the amount of circulating testosterone girls do leading to immense advantages in athletics for boys. Furthermore, the physical advantages men have (e.g., muscle and bone mass) cannot be changed by hormone treatments despite the push to integrate trans women into female sports [22].

Research finds men between the ages of 18 to 40 years of age have circulating testosterone between 7.7 nmol/L to 29.4 nmol/L. The range for women within the same age group is 0.1 nmol/L to 1.7 nmol/L. The strong binary distribution with no overlap is inescapably clear and goes back to our evolutionary roots when men hunted large game and physically (and intellectually) competed with one another (for access to women) while women primarily raised children and gathered. The

sex hormone levels related to gender also explain a great deal of the masculine and feminine (gender) traits males and females develop in puberty including the aggressive and competitive nature of males [22] [23] [24]. The science demonstrates unequivocally there is no spectrum—sex is binary. The physical and gender differences between men and women are primarily due to hormone variations initiated at puberty[\[14\]](#)—that is, biological in nature—and has nothing to do with social constructionism.

It's important to clarify that acknowledging biological differences between the sexes is not the same as endorsing biological determinism. Men and women possess distinct strengths and weaknesses. Any attempt to degender society will discriminate against the strengths men and women both possess.

### **Qualitative Science?**

Ultimately, social constructionism is a deeply anti-science concept questioning the fabric of reality. Marxist scholar and psychologist Matthew Phillips in his 2023 review paper [25] tells us “Social constructionism aims to problematize claims surrounding the nature of the world, its phenomena, and knowledge being derived from objective observations of events [i.e., challenge science].” He goes on to admit that social construction is a “relativist positioning” and “By adopting this epistemology, it is recognized that there would never be one final, ‘*true*’, and objective account of events and phenomena, rather, multiple perspectives are held as various accounts of events and knowledge relate to the many people that exist in the world. Different ways of being, knowing, and thinking coexist in parallel; none are viewed as the ‘*one*’ truth, rather, a sceptical and critical attitude is adopted towards ways of understanding the world that are often taken for granted and assumed.”

If there were no objective truths, scientists, engineers, medical professionals, and many others would be out of jobs. I will let Phillips tell you in his own words how truth is a trap:

*Categories and dichotomies, such as male and female, individual and society, mental and physical, and urban and rural, are used in our society, where social constructionism proposes this move away from objective categories and descriptions of society and the world, and move towards these ideas as human constructions that grow and develop depending on the context and culture of the times... With the assumption that current ways of thinking and being are better than the past based on truth and accuracy, social constructionism argues that we avoid falling into this 'trap' as this has resulted in the imposing of ways of being onto other contexts and cultures (e.g., the imperialist, colonising view of psychology and replacement of Indigenous perspectives of life and being) [25].*

As you might imagine, truth has a way of gumming up the ideology. It has forced social constructionists to take some interesting swerves around nature. One popular doctrinal device is to challenge quantitative science by emphasizing qualitative approaches. Philips states: "Qualitative research is rooted in the lived experiences of individuals and therefore should adopt an interpretive stance." Let's take a look at a qualitative study that uses the "lived experiences" of cohabitating couples with children. Ruth Gaunt and her colleagues published a 2024 paper entitled "Undoing gendered identities?" Centrality and meanings of parental and work identities in semi-traditional, equal-sharing, and role-reversed couples [26] in the journal *Sex Roles*. Their study

included the collection of a significant amount of quantitative data. But the entire huge study of “2,813 British parents (1,380 men, 1,433 women)” with at least one child under 11 years of age assumed that gender is malleable and can be changed (i.e., socially constructed—note the first part of the title of the paper): “This study has taken a significant step towards understanding the processes of undoing gender in work and parental identities.”

Briefly, they subjectively categorized the participating couples into three groups: 1) role-reversed group (“the father worked at least 7 h per week less than the mother, provided at least 7 h more of childcare, carried out at least half of the childcare tasks, and contributed up to 40% of the family income”); 2) traditional group (“the mother worked at least 7 h less than the father, provided at least 7 h more of childcare, performed at least half of the childcare tasks and contributed up to 40% of the family income”); and 3) the equal sharers group (“up to 5 h difference between partners in their work and childcare hours, carrying out approximately half of the childcare, and contributing approximately half of the family income”). Under the heading “Qualitative Sample and Procedure” they also interviewed 30 couples “via in-depth semi-structured interviews.”

Gaunt and her colleagues conclude: “Although these two groups [1 and 3 – role-reversed and the equal sharers group] are still statistically rare, they represent a steadily growing phenomenon of utmost theoretical and practical importance... Couples who defy prevailing societal expectations and develop degendered identities and practices contribute a gradual pressure that has the potential to lead to policy changes, which, in turn, influence the actions of others.” There is an alternative more prescient conclusion that can be postulated from their work. Groups 1 and 3 are rare because masculine men and feminine women are hard wired (i.e., genetically) for roles as parents. The assumption that sex roles are merely a



cultural curiosity undermines our evolution in hunter-gatherer societies. Hormones make it clear that masculine and feminine are formidable characteristics more resistant to change than simply promoting cultural modifications meant to degender society. It does not mean that women are destined to be housewives. But it does imply, that most men are not as nurturing as women and most women are not as aggressive as men as I emphasize later. Certainly, gender proclivities do not impair men from sharing responsibilities in the home [27].

The Gaunt et al. qualitative study is not a one-off attempt to degender society. The American Psychological Association, the premier and largest organization of psychologists in the United States, issued guidelines to aid psychologists while working with men and boys [28]. The report assumes masculinity is due to "cultural socialization" (i.e., social constructionism). Within the very first paragraph of the report the political ideology is apparent, It reads "boys and men, as a group, tend to hold privilege and power based on gender."

The APA guidelines go on to warn of the dangers of masculinity, or more appropriately in their lingo, masculinities:

*Although there are differences in masculinity ideologies, there is a particular constellation of standards that have held sway over large segments of the population, including: anti-femininity, achievement, eschewal of the appearance of weakness, and adventure, risk, and violence. These have been collectively referred to as traditional masculinity ideology... Additionally, acknowledging the plurality of and social constructionist perspective of masculinity, the term masculinities is being used with increasing frequency.*

The APA is purportedly trying to help boys and men but relegate many male behaviors to pejorative terms such as “rigid, sexist, or restrictive gender roles.” What are the masculine vices the APA wants to help men overcome through therapy? They state:

*...men experience conflict related to four domains of the male gender role: success, power, and competition (a disproportionate emphasis on personal achievement and control or being in positions of power); restrictive emotionality (discomfort expressing and experiencing vulnerable emotions); restrictive affectionate behavior between men (discomfort expressing care and affectionate touching of other men); and conflict between work and family relations (distress due to balancing school or work with the demands of raising a family).*

What seems to roil the APA is men do not behave like women. In fact, the authors of the report insist traditional masculinity, via the “socialization” of men, buttresses the patriarchy, male hegemony, and, as a result, victimizes women. As psychologist John Paul Wright points out: “the APA committee advises therapists that men need to become allies to feminism. ‘Change men,’ an author of the report stated, ‘and we can change the world’ [29].”

By ignoring biology and implementing a social construction ideology, boys are at risk of being punished for masculine characteristics. It is an incredibly dangerous threat to boys everywhere—an effort to literally dismantle masculinity to achieve a successful outcome over these perceived oppressors. Phillips pontificates that science often disregards other ‘realities’ because those with more power in society have had greater opportunities to shape and spread dominant discourses,

which, due to their status, are further legitimized while marginalizing and oppressing those who fall outside of these constructs. When we examine the root of these convoluted arguments, it becomes apparent that the radical left seeks to elevate the narratives of those they deem marginalized by disregarding biology. In other words, they choose to deny science in favor of championing the so-called marginalized.

It should be apparent by now that the oppressors are males in general and straight white males in particular. Yet astonishingly, men are less likely to attend or graduate college, face higher suicide rates, are disproportionately imprisoned, and make up a significant portion of the homeless population. Men also overwhelmingly fight and die in wars [30]. So, where is the supposed power and privilege the radical left keeps citing?

Men have become the target under the moniker of “toxic masculinity”? Women’s Studies Professor Suzanna Danuta Walters gave reasons to justify hating men in an article for the *Washington Post* entitled “Why Can’t We Hate Men <sup>[31]</sup>?” Apparently, the *Washington Post* saw no problem with promoting hatred toward an entire group based on their gender/sex. Walters doubled down on her hatred in an interview with the *Chronicle of Higher Education* [32] knowing full well there would be no repercussions from her university.

Western culture needs to be put on notice. Women and minority studies departments (often in collusion with diversity, equity, and inclusion programs) are generally not about earnest research and understanding. They serve as the political wings of a neo-Marxist movement with one constant theme – white males suppress. Their ultimate objective is to turn the tables on a perceived white-male hegemony. If you can convince people that white males are suppressive you make it acceptable for the supposed victims to oppress. Biology professor Bret Weinstein (of Evergreen State College fame)

nicely summarized what we face on college campuses in his testimony to Congress: “What is occurring on college campuses is about power and control... What I have seen functions more like a cult in which the purpose is only understood by the leaders and the rest have been seduced into a carefully architected fiction. Most of the people involved in the movement earnestly believe that they are acting nobly to end oppression. Only the leaders understand that the true goal is to turn the tables of [perceived] oppression.”

## **Evolutionary Psychology**

The evolutionary psychology literature over the decades has persisted in attempting to understand the psychological and physical differences between men and women from an evolutionary perspective. But the radical feminist literature is suffused with articles against evolutionary psychology instead promoting the social construction of gender. Radical feminists and other social scientists contend we are born with blank slates [33]. Mikkola tells us: “Social learning theorists hold that a huge array of different influences socialize us as women and men. This being the case, it is extremely difficult to counter gender socialization.” Her evidence— “24-hour old infants” are socialized through “gender-stereotypic language: boys are describes [sic] as strong, alert and coordinated and girls as tiny, soft and delicate... The main radical feminist motivation for making this [gender/sex] distinction was to counter biological determinism or the view that biology is destiny... Commonly observed behavioral traits associated with women and men, then are not caused by anatomy or chromosomes. Rather, they are culturally learned or acquired [4]” In fact, some of the large uptick in cases of gender dysphoria may be related to the constant drumbeat that gender and sex are on a spectrum [\[15\]](#).

Correlation versus causation has been misunderstood by radical

feminists regarding different roles in society. Feminists observe, for example, that parents treat their male and female children differently and conclude that the causation must be society. But they ignore some obvious clues that suggest biology. For one thing, most of these gender roles are cross cultural indicating that societal impacts and culture are negligible. Scientists do not find boys growing up playing with dolls in some cultures whereas in other cultures they play with toy guns. Boys across all cultures are typically drawn toward toys that promote action, movement, and exploration such as cars, trucks, building blocks, and action figures. In stark contrast, girls gravitate toward toys that involve nurture, caregiving, and social interaction such as dolls, stuffed animals, and playsets that mimic domestic life (e.g., toy kitchens or houses). Therefore, gender is not a cultural construct because we do not find any cultures with exceptions to the rule. It should be obvious that the choices made by children are those that prepare them for life in hunter gatherer society where we evolved for hundreds of thousands of years. Boys grew up to hunt, track, and navigate through their surroundings. Girls grew up to raise and nurture children and forage for valuable edible plants and other resources. But more importantly, biologists have been able to tie these behaviors to hormonal differences between boys and girls and males and females. Boys/men are strongly driven by androgens such as testosterone while girls/women are not [24]. This biological component (i.e., hormones) cannot be explained by social construction.



Even vervet monkeys show preferences toward “gendered” toys. On the left, a female inspects a doll the way she might inspect a vervet infant, and on the right, a male “plays” with a police car [34].

Psychologist Melissa Hines has summarized the state of scientific understanding on behavior and psychological characteristics *relative to early hormone development* <sup>[34]</sup>. The table below summarizes the differences between the sexes in various behavioral and psychological characteristics via Cohen’s  $d$  <sup>[35]</sup> in the early hormone environment. For those unfamiliar with Cohen’s  $d$ , 0.20 is considered a small effect statistically, 0.50 medium, and greater than 0.50 a large effect. Note there are no differences between boys and girls in computational skills, math concepts, and vocabulary. Most

of the others listed show medium to large variations between boys and girls. Girls exposed to high levels of androgens (e.g., testosterone) during fetus development due to a disorder called congenital adrenal hyperplasia “show increased male-typical play and reduced female-typical play [34].”

Girls excel in empathy and fine motor skills while boys are more proficient in targeting, mental rotations, and spatial perceptions. In hunter-gatherer society, hunting not only required targeting skills but an understanding of location while navigating through environments. Empathy is an important aspect of nurturing in women. Fine motor skills are probably related to gathering and foraging tasks, caregiving of children, and social learning and tool use where tasks required precise hand-eye coordination and dexterity (see for example, [36] [37] [38] [39] [40]). Men also tend to be more physically aggressive and excel in dominance. I can’t think of a more powerful argument against social constructionism [24]. Not only are many of the sex differences statistically significant, but the research demonstrates a link to hormonal influence.

Sex differences measured in standard deviations in “human behavior/psychological characteristics that have been studied in relation to the early hormone environment.”

<b>Behavior or psychological characteristic</b>	<b>Cohen’s d in standard deviation units</b>
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<u>Core gender identity</u>	
Sexual orientation	11.0–13.2
<u>Childhood play:</u>	6.0–7.0
Play with girls' toys	
Play with boys' toys	
Feminine preschool games	1.8
Masculine preschool games	2.1
Playmate preferences	1.1
Composite of sex-typed play	0.7–1.8
(PSAI <a href="#">[16]</a> )	2.3–5.6
	2.7–3.2
<u>Cognitive and motor abilities</u>	
<u>(adolescents/adults):</u>	
Targeting	1.1–2.0
Fine motor skill	0.5–0.6
Mental rotations	0.3–0.9
Spatial perception	0.3–0.6
Spatial visualization	0.0–0.6
SAT mathematics	0.4
Computational skills	0.0
Math concepts	0.0
Verbal fluency	0.5
Perceptual speed	0.3–0.7
Vocabulary	0.0
SAT Verbal	0.0
<u>Personality (assessed with</u>	
<u>questionnaires):</u>	0.4–1.3
Tendencies to physical	0.3–1.3
aggression	0.2–0.8
Empathy	
Dominance/assertiveness	

In our modern societies where our stone-age brains attempt to

grapple with today's differences between women and men (natural selection over a few millennia has not been long enough to have had a genetic impact), radical feminists have promoted a societal patriarchy governed by men who suppress and control women. But men do not compete with women, they compete with one another, and women choose – hardly supportive of an oppressive patriarchy[\[17\]](#). This is why a relatively small group of highly competitive men (alpha males) have been so successful at capturing hard-won financial rewards. Across all cultures, women seek men with power and/or resources or the potential to obtain them [\[41\]](#). Ironically, successful women in competitive fields still carry hunter-gatherer preferences. They typically do not marry menial laborers; they marry males of higher societal status—men with power and money.

Evolutionary psychologists David Buss and David Schmitt [\[42\]](#) have defined the strategies of women and men as follows:

*The co-evolution of women's evolved mate preferences for men with resources and men's co-evolved mate competition strategies to embody what women want created gender differences in the motivational priority attached to resource acquisition. Men who failed to obtain resources that were part of what ancestral women sought in mates often failed to succeed in mate competition. Men did not place an analogous selection pressure on women. Iterated over time and across cultures, men's strategies of mate competition led them to vie with other men to acquire the resources needed to render themselves attractive to women.*

In other words, any power and privilege a select group of men have can be directly related to choices made by women in hunter-gatherer society. If women really want to change

society, they need to change their preferences in the men they choose to propagate with.

Another strong argument against social constructionism is the gender behavior of gay men and women. Frequently, both gay men and women have gender characteristics of the opposite sex. If men are oppressive and create an environment for “anti-femininity, achievement, eschewal of the appearance of weakness, and adventure, risk, and violence,” as the APA asserts, then why do gay men and women exist [43]? There are no special cultural circumstances documented that generate “gay.”

Scientists still don't know why some men and women are gay, but it probably has to do with a biological mix up in hormones (e.g., males not being bathed in androgens like testosterone) [43]. In fact, most parents want their children to grow up as normal heterosexuals (i.e., cisgender to use the lingo) for the obvious reason that they, perhaps subconsciously, want their children to pass on their genes. All the efforts to “change” gay men and women into straight men and women failed horribly in the 1950s and 1960s for the simple reason that we are a product of biological processes—in this case hormones. If gays are socially constructed, then society should be able to socially construct them back—but society can't.

Males, particularly alpha males, are mostly not predisposed toward raising children. Male-male competition over resources is genetically ingrained because women sought men that would protect and provide. This is precisely why men seem unwilling to take on permanent child-caring roles. They offer male parental investment but usually this takes the form of providing resources. The fact that men are incredibly more violent than women [44] demonstrates unequivocally that men are not as nurturing as women and may never be. Changes can only be brought about if women start selecting males that nurture. But it will take potentially hundreds of thousands of years to reverse roles through evolutionary selection.

In conclusion, men and women differ not only in their biological sex but also in their gender traits (i.e., masculine and feminine), which have evolved to attract the opposite sex. While biological differences shape certain tendencies, these are often complemented by social roles that have historically evolved based on survival and reproduction needs. Social constructionism was introduced as an alternative to biological determinism, often downplaying the role of innate biological differences with little to no factual basis for doing so. The concept of a genderless society is rooted in Marxist philosophy and denies the foundational role of biology in shaping human behavior and identity. Such a denial of natural differences overlooks the evolutionary and psychological importance of gender traits, which contribute to both individual well-being and social cohesion.

We do not need radical changes based on anti-science to assure equality for women. Equality should be based on the recognition of complementary strengths between men and women, rather than the erasure of gender distinctions. And we certainly have no reason to attack or undermine masculine characteristics, which contribute significantly to familial stability and societal resilience. If women choose to pursue full-time careers, they should be free to partner with men who are willing to take on the role of raising children or share in the responsibilities. It is important to emphasize that partnerships should be built on mutual respect and flexibility in roles, rather than enforced norms that may not align with individual preferences.

However, any drastic societal changes must be carefully considered, as they may have unintended consequences, particularly adverse to boys. The neglect of distinct male developmental needs or the pathologizing of traditional masculinity could lead to long-term social and psychological difficulties for future generations. As we strive for equality, we should be mindful not to undermine the value that

both masculine and feminine traits bring to society, and instead focus on fostering environments where all individuals can thrive in a manner consistent with their nature and aspirations.

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[\[1\]](#) I use the term radical feminist throughout the paper because not all feminists subscribe to the tenants of social construction.

[\[2\]](#) Butler is well-known for making simple ideas seem complex through her opaque writing style.

[\[3\]](#) I quote in full here to make sure I capture the full intent of the somewhat abstract idea.

[\[4\]](#) Remarkably, Fausto-Sterling has a PhD in molecular biology.

[\[5\]](#) I contacted Fausto-Sterling and verified that she still stands by her research.

[\[6\]](#) The United Nations Office of the High Commissioner defines intersex as those who do not fit the typical definitions for male or female bodies." –for example, the herms, merms, and fermes of Fausto-Sterling.

[\[7\]](#) Phenotypic sex is the observable results of the interaction of genotype (the expression of genes in an individual) and the environment. Basically, it is a biologically precise way of saying genitalia in this case.

[\[8\]](#) It is not my intention to ignore those that are the product of artificial insemination, but by far and away most of us are the products of intercourse.

[\[9\]](#) Studies comparing the heights and weights of men and women often result in statistical p-values much less than 0.05,



indicating that the observed differences are statistically significant and not due to random chance.

[\[10\]](#) Title IX was intended to be a civil rights anti-discrimination law. However, it has been used as a sports equity program even though the term sport is not mentioned in the law.

[\[11\]](#) Unfortunately for women, they did not start competing in the NCAA pole vault until 1998.

[\[12\]](#) The obvious choice was the shot put, but women use smaller shot puts than men preventing precise comparisons.

[\[13\]](#) Ironically as we shall see, many social scientists want to “degender” society. This prevents them from arguing against trans women competing in female sports. Degendering society opens female sports to trans women.

[\[14\]](#) Also, when the fetus is 6 weeks old, testosterone is released if the fetus has an XY chromosome initiating the development of male genitalia.

[\[15\]](#) It is important to note that the APA has also totally ignored the results discovered over the last 50 years in the field of evolutionary psychology which takes a quantitative scientific approach to gender and sex. Let’s not forget that boys are at risk because many if not most psychologists dismiss this quantitative biological field of study.

[\[16\]](#) Pre-School Activities Inventory evaluation.

[\[17\]](#) It is beyond the scope of this work, but women also compete with one another for desirable men.

## [Table of Contents](#)

**Marc J. Defant** is a professor of geology/geochemistry at the University of South Florida. Before he became involved in research related to the misuse or misunderstanding of science by society, he specialized in the study of volcanoes—more specifically, the geochemistry of volcanic rocks, the

associated processes within the mantle, and the origin of the continental crust. He has been funded by the *National Science Foundation*, *National Geographic*, the *American Chemical Society*, and the *National Academy of Sciences*, and has published in many internationally renowned scientific journals including *Nature*. He has written a book entitled [\*Voyage of Discovery: From the Big Bang to the Ice Age\*](#) and published several articles for general readership magazines such as *Skeptic* and *Popular Science* and appeared on the [\*Joe Rogan Experience\*](#) podcast. He has been Editor of *Geology* and an Associate Editor of the *Journal of Geophysical Research*. Dr. Defant was also invited by the Chinese Government to be a keynote speaker at a symposium on the continental crust and has given invited talks at Massachusetts Institute of Technology, Columbia University, Université de Bretagne (Brest, France), University of California at Los Angeles, University of Georgia and Tennessee, and Woods Hole Oceanographic Institution, as well as many others. Defant was one of the first American scientists allowed to work on volcanoes in the isolated and militarily sensitive area of Kamchatka, Russia, when it was still part of the old Soviet system through a cooperative joint grant between the Soviet Academy of Sciences and the National Science Foundation. He has presented a Tedx talk on [\*Why We are Alone in the Galaxy\*](#). He has also done research on volcanoes in Costa Rica, Greece, Indonesia, the Lesser Antilles, Panama, and the Philippines. Defant has been a consulting geologist on diamonds and gold for de Beers, Placer Dome, Falconbridge, Anglo American, Aurcana Gold, Diamond Fields, along with several others in West Africa and the Soviet Union/Russia.

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