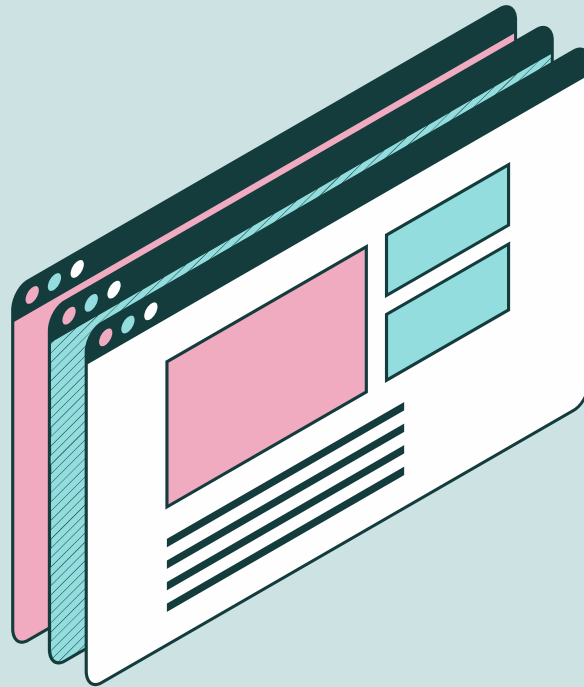


a queer sex ed community curriculum zine

*Deconstructing the...*

# Biological Gender Binary.

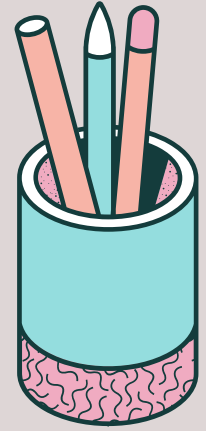


Biologically-determined sex is a myth  
(let's get into it).

*Disclaimer: the terms "male" and "female" appear throughout this zine. We have to look at them while we interrogate the false binary that insists on their use, but we're ultimately arguing against their validity.*

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**Myth:** Gender is a social construct, but sex is biologically determined.



This statement is what most of us are taught about sex and gender. Guess what? **Not true.**

Gender is a social construct, and **sex is not biologically determined.**

Numerous scientific and sociological studies have found evidence suggesting that the biological processes previously believed to determine a person's sex (genetics, hormones, etc.) have a **significantly smaller influence on sex and gender** than we previously thought.

# Myth: XX or XY chromosomes determine sex.

(Guess what? **Not true.**)

The X and Y chromosomes carry over 1,400 genes, and **only a few** of these genes have anything to do with **sex characteristics**.

The X or Y chromosomes **don't control the development of secondary sex characteristics**. Those arise later in life, and are mostly regulated by hormones.



People can be born with **different combinations** of X and Y chromosomes. For example, people can be born with a single X chromosome, or possibly and XXY.

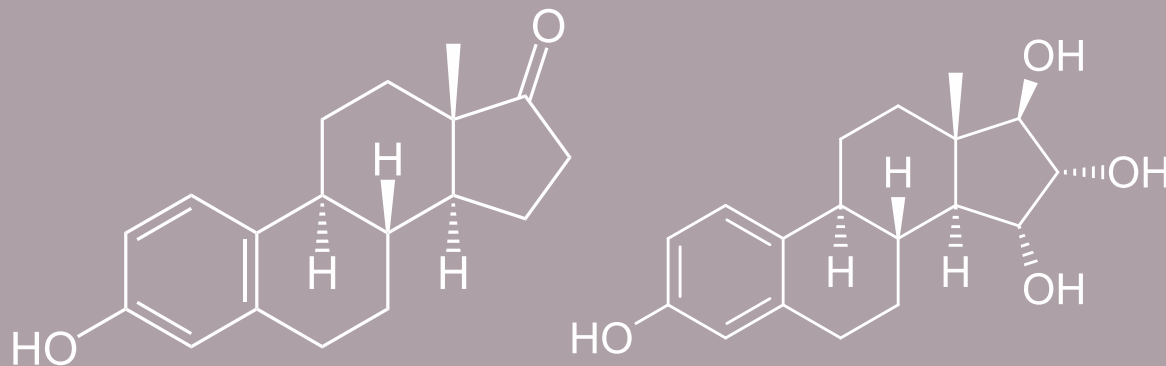
People can be born with **XY chromosomes** but may not develop male sex characteristics without the presence of the **SR Y gene**.

**Myth:** Hormones like estrogen or testosterone determine sex.

(Guess what? **Not true.**)



All bodies produce both **estrogen** and **testosterone**.



Before puberty, most people have **no significant difference in estrogen and testosterone levels** in their bodies.

In adulthood, both "males" and "females" produce **almost equal levels** of estrogen and progesterone. ("Males" just tend to produce higher levels of testosterone).

**Myth:** Being intersex is a rare “medical condition.”

(Guess what? **Not true.**)



I. Being intersex isn't a medical condition.

Intersex traits tend to be **medicalized**, which can lead to misinformation and non-consensual surgeries.

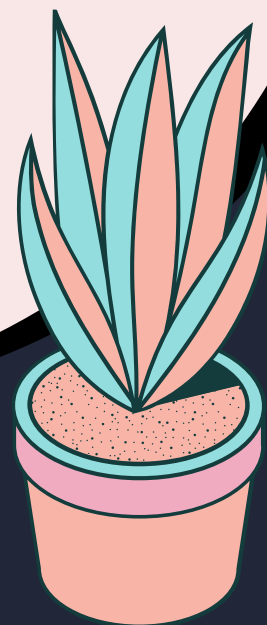
II. Intersex traits are very common.

Recent research suggests as many as **1 in 100 people** are born with some variety of an intersex trait.

Transgender, non-binary, intersex & all other genders are biologically valid.

"Transgender humans represent the **complexity** and **diversity** that are fundamental features of life, evolution and nature itself."

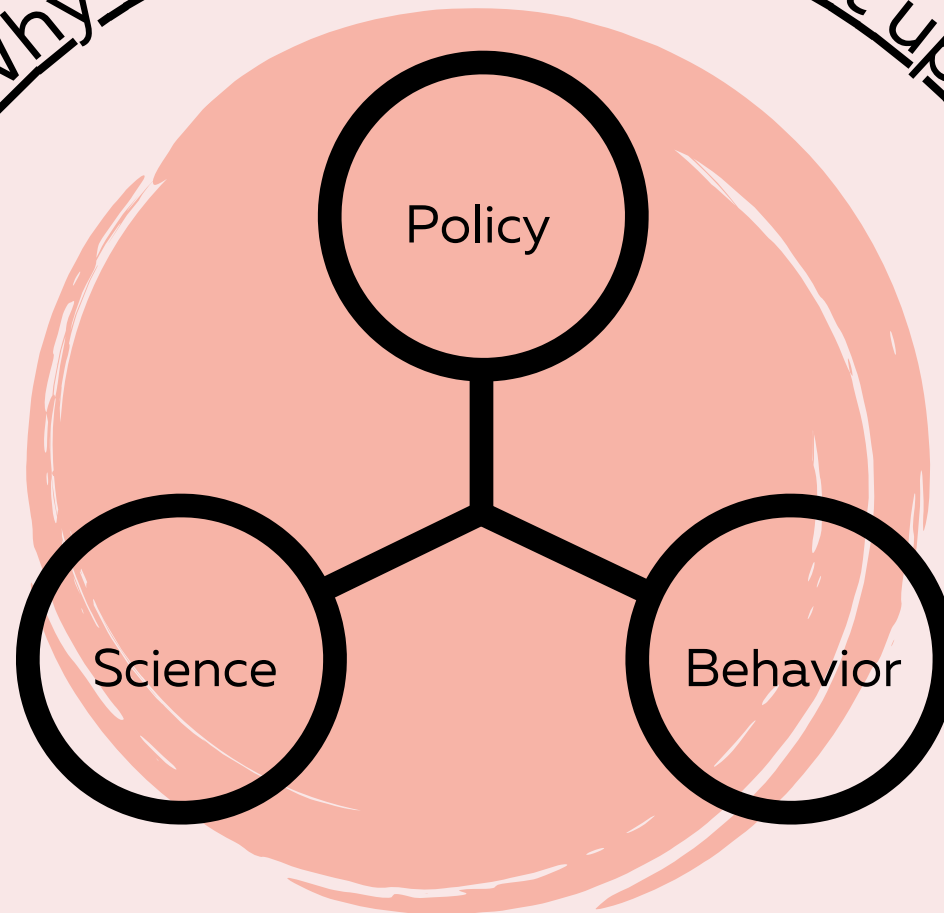
- Sun, 2019



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The myth of a biological gender binary is being **slowly** but **thoroughly** debunked in the scientific community.

Why hasn't society caught up?



The gender binary is deeply **foundational to the power imbalances** that sustain a white-supremacist, capitalist, and patriarchal society.

The binary is reinforced and reproduced in our policies, science, and behavior. **It is difficult but necessary to unlearn.**

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# Sources

A. Ainsworth, C. (2018, October 22). Sex Redefined: The Idea of 2 Sexes Is Overly Simplistic. Retrieved from <https://www.scientificamerican.com/article/sex-redefined-the-idea-of-2-sexes-is-overly-simplistic1/>

B. M. E., Says (. (2020, December 28). Sociology of Gender. Retrieved from <https://othersociologist.com/sociology-of-gender/>

C. Mikkola, M. (2017, October 25). Feminist Perspectives on Sex and Gender. Retrieved from <https://plato.stanford.edu/entries/feminism-gender/#BioDet>

D. Sun, S. D. (2019, June 13). Stop Using Phony Science to Justify Transphobia. Retrieved from <https://blogs.scientificamerican.com/voices/stop-using-phony-science-to-justify-transphobia/>

E. US proposal for defining gender has no basis in science. (2018, October 30). Retrieved from <https://www.nature.com/articles/d41586-018-07238-8>

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