

## Breaking the Binary: Gender Politics and Science

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Throughout 2020, numerous inequalities amongst social and ethnic groups were brought into the spotlight, most notably the Black Lives Matter Protests that occurred during the Summer and Fall which addressed issues of deeply rooted systematic racism within the United States government. While this movement is critical to achieving social and racial equality, its massive scale ultimately overshadowed smaller state issues that had been raised against transgender rights within school athletics. Now as we've begun to close the door on 2021, Texas Governor Greg Abbott, has passed a bill that will take effect on January 18th, requiring interscholastic athletes to participate in sports based on their gender assigned at birth. As with Texas's recent heartbeat bill, these new regulations will inevitably trigger a reanalysis of policies in Southern states concerning the equity and inclusion given to members of the LGTB+ community. With all of the recent proposals coming from conservative politicians and states, an affiliation known for being anti-LGBT, it begs the question of whether these laws are factually justified, or merely coming from a place of political or personal bias.

Even before Abbott's government control on the expression of identity, there were obvious signs of rising conflict between the athletic and trans communities. In February of 2020, three cisgender female athletes, Alanna Smith, Selina Soule, and Chelsea Mitchell filed lawsuits against the Connecticut Interscholastic Athletic Conference for violating the Title IX Act by allowing transfemale athletes to compete against biological females. The athletes targeted by the case were, at the time, two high school seniors, named Andraya Yearwood and Terry Miller, and both of them are transfemale. This case not only called into question, the morality of allowing

trans athletes to participate in school sports but also highlighted the extreme bias on the side of the plaintiffs, especially due to the involvement of the Alliance Defending Freedom and ADF Attorney Christiana Holcomb. The Alliance Defending Freedom is an outspoken and actively anti-LGBT+ legal/hate group, which operates under the basis/guise of religion to paint the image of the LGBT+ community as a threat to national and even global society. The case became a national news story following the plaintiff's appearance on "The Ingram Angle" on Fox News, where Laura Ingram, Holcomb, and the three cisgender athletes utterly condemned the image and likeness of Andraya Yearwood and Terry Miller, who were underrepresented and given weak defense. Social class was also brought into the debate, as a central argument from both sides of the case, particularly the risk of being denied athletic opportunities in college, even though there was clear hypocrisy on the side of the plaintiffs. For one, filing a lawsuit, in general, requires either a substantial amount of money and/or personal connection, and secondly, Alanna Smith is the daughter of former MLB pitcher Lee Smith which immediately indicates a higher financial status. While other cisgender females have also filed lawsuits against school districts and athletic conferences prompting involvement from conservative politicians and commentators, this case, in particular, stands out because it directly pointed a finger at two transgender students specifically and effectively accused them of cheating.

The majority of the debate concerning the participation of transgender athletes specifically looks at the fairness of trans-female individuals participating in sports with cisgender females. Which at first glance, might appear reasonable, when looking solely at the gender divide within various sports, as there are clear differences in performance between males and females, especially in endurance sports such as cross country and track. As a former runner, however, I can verify that there are **always** exceptions, and for proof look no further than

Geneva's local treasure, and my dear friend, Audra Burrall. Audra was finishing top-three on the girl's Varsity Crosscountry team at only fifteen years old, and continued to be one of the most consistent top runners in the league. Even in practices, she was capable of outrunning almost every male member on the team, myself and other members of the top ten included. Audra is a cisgender female, yet she was and still is capable of leaving runners of both genders in the wind, and that's because she is extremely rigorous and precise when it comes to her training. So to assume that a female athlete is automatically at a disadvantage when facing a male or even transfemale athlete is a harshly rushed judgment, especially since that athlete would be prematurely determining a reality they might be surprised by. Moreover, factors such as hormone blockers and basic facts related to gender identity should be taken into account.

The science and statistics behind the proposed bills is almost nonexistent, with some politicians completely ignoring research that's been done, and some merely basing it on their religious or political beliefs. With anti-trans athlete bills growing as a threat, researchers in the past year or so have turned to address the actual science behind these claims. Geneticist, Dr. Eric Vilain, who was featured on NPR earlier this year, has spent the better part of his life attempting to understand how male and female athletes perform differently, and, more recently, how hormone differences might impact the performance of a transgender athlete. According to Vilain, "sex categorization, from a medical perspective, is simultaneously ideological in that there are vast differences between members of one sex", and these differences involve the various factors (physical, genetic, cultural, social, etc.) that encompass the physical and metaphysical elements of an individual's identity. Moreover, Vilain is adamant that MTF (male to female) transgender athletes do not hold an unfair advantage over their biological female counterparts, and this claim is based upon Vilain's research in addition to other studies conducted in the past.

The hormone treatment supplied to patients who want to make MTF transition (i) decreased their levels of testosterone in plasma to castration levels, in such a way that MTF Serum testosterone (nmol/L) before treatment 21.5 +/-5.8 and MTF Serum testosterone (nmol/L) after treatment 1.0 +/-0.0; and (ii) significantly reduced muscle mass of the patient after one year of treatment (see Table 1 in Gooren and Bunck 2004). Major changes in serum testosterone level in the Gooren and Bunck study happened only after one year of hormone treatment and without performing sex reassignment surgery.

Therefore, from a hormonal standpoint, trans female athletes who are conducting hormone treatments, and reducing their levels of testosterone do not hold an unfair advantage over their cisgender female counterparts.

In analyzing the political affiliations of those proposing trans athlete restrictions, and considering the beliefs of their majority, it becomes extremely difficult to see how such legal action is factually based, especially with the science and studies being released and conducted, that counteracts the justification given by these politicians. With Texas's restrictions set to take effect in merely two months, and other proposals on hold, more researches like Vilain are needed in order to counter the political and religious biases of anti-transgender politicians seeking to control the identities of individuals, and ultimately the expression of said identity as well.