

Carole Hooven opening statements for New England University President's Forum
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No matter which side people take on this issue, they open themselves up to being the target of campaigns of intimidation. I think this is why James, who appears to be one of the most tenacious people I've ever met, had a tough time finding two people to participate tonight. But it's also why I agreed. Bullying people into viewpoint submission doesn't change their views; it only drives them underground where they rarely see the light of day, festering and often just becoming more extreme. So Steph and I are starting in profound agreement: we value open debate, even in the face of strong disagreement about sensitive issues, so that we and others may test our ideas and widen our perspectives. So thank you Steph for slushing across the pond to discuss transwomen in sports.

In the two years since my book came out, I've been invited to participate in many public (and private) conversations about tonight's topic, and until now, I've refrained from expressing (even holding) an opinion about relevant policy. But after discussions with my students, who come in a wide array of identities and views, and stakeholders including trans men and trans women, female athletes from highschoolers to Olympic gold medal winners, and sports scientists, I've come to a clear view: the female category in sports should be for females only.

Before I explain why I believe that, I'd like to make a couple of points. First, it's easy for one to assume that taking a strong position on this topic indicates particular feelings or views about trans people. But I don't believe this is the case. Trans people face many challenges, deserve our empathy and understanding, and the same basic rights as the rest of us: to live with dignity and respect; to be free from harassment; to express their gender as they see fit; to have access to necessary medical care without stigma, and to pursue their goals for fulfilling lives.

Second: our language influences what we imagine and how we perceive reality. My goal is to minimize offense; but when language that's designed to do that

contributes to bias or obfuscation of the relevant facts or argument, I will err on the side of truth and clarity.

So here's my argument for keeping the female category females only.

Men have natural physical advantages that explain why they outcompete women in almost every sport. (Add "on average" every time I talk about group differences!) Weight or age categories, for instance, give big and small, young and old alike the chance to compete and win. Without a senior category in many sports, no matter the genes or the level of fitness, people my age would never have that chance. And it is the same logic motivates separate categories for males and females.

I can throw a baseball farther and more accurately than my husband, so I have first-hand experience with the principle that not all men beat all women in all sports. But when men and women are in peak condition, all other things being equal, with rare exceptions, men will consistently outperform women, and usually by a large margin, anywhere from 10-50%.

Let's hear from Serena Williams about the size of the male advantage: When Williams appeared on *The David Letterman Show* in 2013, Letterman asked her what would happen if she played one of the top men's tennis players, Andy Murray: Quote: "For me, men's tennis and women's tennis are completely, almost, two separate sports. If I were to play Andy Murray, I would lose 6-0, 6-0 in five to six minutes, maybe 10 minutes. No, it's true. It's a completely different sport. The men are a lot faster and they serve harder, they hit harder, it's just a different game. I love to play women's tennis. I only want to play girls, because I don't want to be embarrassed."

And her impression is backed by tons of evidence. For example, if you compare 200 meter race times of female Olympic finalists to those of U.S. highschool boys competing in a national track and field event, not one of the female Olympians would even qualify for entry into the boy's competition in that event. [A time of 21.55 seconds was required, but the fastest time for a female Olympic finalist was 21.28...the fastest highschooler's time was 20.71].

Males outperform females because they have a suite of physical traits, developed under the influence of testosterone in puberty, that underpins this advantage.

Testosterone helps men reproduce, by directing the development and expression of adaptations that benefit physical competition. Over human evolutionary history, this has resulted in the ability to, in essence, win mates.

At puberty, differences in levels of the sex hormones estrogen and testosterone drive the divergence in our secondary sex characteristics, like muscle, breasts and beards. T levels in men, anywhere from 5-30 times women's levels, lead to larger body size, increased height, bone density, muscle, lung and heart volume, and hemoglobin (which carries oxygen around the blood, fueling working muscles during exercise). All of these testosterone induced traits are beneficial for sports.

Relative to high T, which biases energy to be used to add muscle, high estrogen, results in a bias toward fat deposition. This is great for growing and feeding babies with our own bodies, but it's not great for speed, strength and power. For the same bodyweight, women are required to carry around twice as much dead weight in the form of fat than men, who instead, have about 40% more muscle.

So if testosterone is what gives males their advantage, then all transwomen would need to do, to "level the playing field," is to reduce T to female levels. Right? Wrong. First, why are we not talking about transmen, that is, females who identify as male, competing in the male category? Because even with large, male-typical doses of testosterone and low estrogen, transmen, who did not experience the lasting benefits of male puberty, pose little to no competitive advantage over males who have. Male puberty provides adult males with lasting advantages that females don't have, and can't acquire.

There's just no evidence to support the claim that reducing male T in adulthood eliminates the advantage conferred by male puberty. In fact, the evidence we do have suggests that a significant advantage in muscle, strength and power (not to mention height, bone density, lung and heart volume) is retained, even after several years of hormone therapy. In fact, two meta-analyses (that is, summaries of the available evidence), one which happens to be by a transwoman who is pro transwomen in the category, and the other by Hilton and Lunberg, confirm

these findings. For example, when male T is suppressed (even for three years), muscle drops by a mere 5% (with wide variability) on average, nowhere near enough to offset the initial 40% advantage.

Being “inclusive” sounds like the right thing to do, and excluding sounds like the wrong thing. But the essence of sports categories *is* exclusion, and we do this to ensure that people who have a large and consistent disadvantage have the opportunity for meaningful competition. If you’re 20 years old, you are excluded from participation in the senior category, because of your natural advantages. And while exclusion can be painful, that rule and the protected category for seniors exists for a good reason. And the female category is no different: exclusion, in this case, is good. It’s just that here, it’s good for women. If 20 year olds could take drugs that completely removed their age advantage, then maybe I’d support making exceptions for them to enter the senior category, if that’s what they desperately desired. But because sports performance depends on biology and bodies and not identities, and we have no similar drug for transwomen [that eliminates their male advantage], I am not persuaded that a female athlete should give up her spot to someone who is not a member of the female category.