

**Categorically (Trans)Fixed:
Attitudes Towards Trans Inclusion in Sports**

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Categorically (Trans)Fixed:
Attitudes Towards Trans Inclusion in Sports

PhD Dissertation

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Acknowledgment

: a sign, statement, gesture, etc., which indicates or is a token of such recognition; something given or done in return for a favour; (esp. in plural) an author's statement of indebtedness to others (Oxford English Dictionary).

I must confess: I have been thinking about this acknowledgement for longer than I care to admit; possibly longer than I spent deliberating over the title, the arguments, or the precise content of this little book. Colleagues who have defended before me have set a high bar with their metaphors and heartwarming openings, and I know that for many of you, this will be the first thing you read — whether you're searching for your own name (totally valid) or just trying to figure out what is going on in the thesis. So, no pressure, like, at all.

The thing is, I rarely show gratitude in full; I find it a bit awkward and maybe too revealing, saying to someone's face how much I appreciate what they've done for me (don't worry, I talk about it with my therapist). Since a PhD defense is a rare occasion, and nobody has any editing power over my acknowledgement, I figured this would be the time and place to commit in writing all the words I could not have uttered, all the sentiments I have kept close to my heart.

I will start in a somewhat linear manner, giving shout-outs to different times and places that have been significant to my journey. Feel free to skip around to find a paragraph that might contain a reference to you; I know sometimes you just want to see yourself reflected in the lives of others.

To my family, спасибо за поддержку, материальную и моральную, моих амбиций, связанных с академией. Я знаю, что академический мир понять непросто, и что тема моих исследований, возможно, не соотносится с тем будущим, которое вы хотели для меня; спасибо, что несмотря на все эти трудности, вы никогда не пытались переубедить и отговорить меня от жизненной траектории, по которой я иду. Более того, вы всегда были готовы поддержать мои амбиции, будь то семестр в Америке, аспирантура в России, или получение степени в маленьком, никому неизвестном городе Орхус в Дании, где ни вы ни я никогда не были. Смотря на свои достижения, я часто думаю о возможностях, которые вы предоставили мне в детстве (английский, хорошие школы, поездки за рубеж) и прихожу к выводу что во многом мой успех напрямую исходит из среды, которая меня окружала в юношестве.

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To sign off, I would like to do a special shoutout to Emma and Dr. Mariia Tepliakova. Emma, I hope you know how much I appreciate all that you have done for me; truly, I don't think this dissertation would be half as good as it is without your input (not only due to diligent proofreading performed time and again on a myriad of drafts). Mariia, I am glad we stayed friends and ended up in close academic fields; your insight into doing a PhD guided many of my decisions and I would have been completely lost without you.

I said at the start that I rarely show gratitude in full; I hope this acknowledgment sets that record straight. While this dissertation might be about public opinion on trans inclusion, in some ways, it's also about all the above. If we crossed paths, and you don't find your name here, know that I carry the memory anyway. And since nobody has editing power over this section, let me just say:

Protect the Dolls.
Free Palestine.

MJ Balezina
April 2026

Preface

This report provides an overview of my PhD dissertation, *Categorically (Trans)Fixed: Attitudes Towards Trans Inclusion in Sports*. The dissertation consists of three single-authored research papers and this summary. In this report, I synthesize the core arguments, identify the central puzzles and motivations, reflect on key methodological choices, and introduce an overarching theoretical framework that links the three papers. Detailed discussions of research design, analysis, and findings are contained within the individual papers. For brevity, I refer to these as Paper A, Paper B, and Paper C.

Paper A: Persuading or Mobilizing? Priming Effects of “Sex” vs. “Gender” on Support for Trans Athletes’ Inclusion. *Under review in Political Behavior*.

Paper B: To Each Their Sport: Support for Trans Inclusion and Fair Play Concerns. *Accepted for publication in Sexuality Research and Social Policy*.

Paper C: Mind the Gap: Identifying Differential Support for Inclusion of Trans Men and Women. *Working paper*.

Chapter 1: Introduction

Contemporary debates about trans rights exemplify broader struggles over equality, citizenship, and the boundaries of legitimate state intervention. Like other queer minority groups, trans individuals¹ have experienced expanded rights in certain domains, while other rights remain contested, conditional, or subject to reversal in other areas. These conflicts are seldom presented as direct opposition to trans people but are often justified through appeals to competing values such as fairness, safety, institutional integrity, or protection of vulnerable groups (Flores, 2015). Analyzing how these justifications function is essential for understanding why trans inclusion remains politically fragile, even in societies that formally endorse equality.

This dissertation investigates these dynamics through the case of trans inclusion in sports. Although sports have emerged as a particularly visible arena for trans-related policy conflict, it is not considered exceptional in this analysis. Instead, sports are conceptualized as a theoretically significant institutional context where gender categories are highly salient, widely accepted, and rarely questioned (Braumüller et al., 2020). In contrast to other areas of social life, where gender segregation faces increasing scrutiny, sex-based divisions in sports are often regarded as natural, necessary, and foundational to fairness itself (Anderson et al., 2019; Adlwarth, 2021). Consequently, sports serve as a valuable case for examining how claims about difference and equality are reconciled and where the boundaries of inclusion are established.

Debates concerning trans athletes raise questions that extend beyond the realm of sports. Central to these debates are assumptions regarding the immutability of sex categories, beliefs about biological difference, and normative commitments to fairness that inform a wide array of public policies (Weisman,

¹ Throughout the dissertation and the papers, I use trans to refer to a broad group of individuals whose gender identity does not match their sex assigned at birth. “Cis individuals” are understood as people whose sex assigned at birth matches their gender identity. “Gender identity” in this configuration is understood as first and foremost proclaimed/declared (“I am [blank]”) and lived identity. I do not refer to any physical or bureaucratic requirements for being considered a trans person (e.g., partaking in hormonal treatment, having one’s documents changed). In some cases, further clarifications are given for individuals with Differences of Sexual Development (DSD), who can either be labeled “trans” or “cis” (depending on their personal stance on the matter). Occasionally, I refer to trans men as FtM (female-to-male) and trans women as MtF (male-to-female) for brevity; this is particularly applicable to Paper C.

2022). Similar logics appear in discussions of prisons, education, healthcare, and other gender-segregated institutions, where trans inclusion is often framed as a unique issue necessitating exceptional justification (Currah, 2022). In this context, sports provide a focused lens for observing broader patterns of resistance to trans rights.

Driven by the public's investment in the issue and emerging empirical challenges that contradict some fundamental assumptions in public opinion literature, I ask: *What drives public opinion on trans rights, specifically the right of trans individuals to participate in sports in alignment with their gender identity?* Existing research suggests that attitudes toward trans people and political ideology are important predictors of policy preferences (Flores et al., 2018; Harrison & Michelson, 2017). Yet studies of trans inclusion in sports repeatedly show ambivalence, division, and context-specific opposition that cannot be fully explained by general attitudes alone (Shaw et al., 2024; Goldbach et al., 2022; Merrill & Anderson, 2024). Appeals to fairness, competitive integrity, and biological difference appear to play a distinct role, raising questions about how values interact and which beliefs ultimately constrain inclusion.

Accordingly, public opinion is not the primary object of concern, but rather a lens through which to examine the justificatory frameworks by which rights are evaluated and constrained. Public views are significant because they influence the political environment in which policies are proposed, contested, and implemented, and because they reveal how widely held beliefs about gender and difference shape the boundaries of acceptable inclusion (Burstein, 2003). By analyzing how individuals reason about trans inclusion in sports, this dissertation seeks to illuminate the deeper assumptions that render certain exclusions politically defensible.

Empirically, the dissertation utilizes survey experiments conducted in the United States, a context in which debates over trans rights have been especially visible and institutionalized. The U.S. case is not presented as normative or universal but is selected for its analytical utility given its rights-based political tradition and the prominence of public discourse surrounding trans policy (Haider-Markel et al., 2017). Nevertheless, the theoretical concerns driving this project are not confined to the U.S. or to sports. They address broader questions in political science regarding the negotiation of equality, the naturalization of categories, and the justification of exclusion within ostensibly liberal democratic frameworks.

Across three papers, the dissertation examines how assumptions about sex and gender, concerns regarding fairness, and the gender of the trans individual interact to influence support for inclusion. Collectively, the project contends that resistance to trans inclusion is not solely attributable to prejudice

or misinformation but is grounded in deeply embedded beliefs about bodies, categories, and social order. By foregrounding these mechanisms, the dissertation contributes to political science scholarship on minority rights, policy justification, and the persistence of inequality.

This dissertation summary is organized to guide the reader systematically through each major element of the project. Chapter 2 sets the stage by providing critical background on the policy context, public discourse, and governance structures relevant to trans inclusion in the U.S. and in sports more broadly. Chapter 3 then offers a comprehensive literature review and establishes the theoretical framework that informs the analyses throughout the dissertation. Chapter 4 details the methodological approach, including the rationale for the chosen research design and specific empirical strategies. Chapters 5, 6, and 7 each cover one of the three research papers and address puzzles surrounding the role of category beliefs and framing, the interplay of fairness concerns and trans prejudice, and the differential treatment of trans men and trans women. Each chapter outlines the main research question, hypotheses, methods, and findings before concluding with a discussion that ties empirical insights back to the broader theoretical questions. Finally, Chapter 8 synthesizes the main findings, discusses their implications for both academic and policy debates, and highlights directions for future research.

Chapter 2: Setting the scene: discourse and policies

As the title suggests, this chapter sets the scene, increases clarity and establishes a shared understanding required for the following chapters. Here I present the most important and relevant contextual information that should serve as a foundation for the summary and all three papers.

To provide sufficient contextualization for what comes next, I cover four themes. First, I explain why focusing on the U.S. makes sense in light of the research question posited in the Introduction. Next, I comment on how trans inclusion in sports is nested in a broader rise in anti-trans sentiment in the U.S. The third theme moves from the structural descriptives of the debate to central, substantive claims against trans inclusion by going over what I believe to be a rather telling, widespread argument used against trans inclusion in sports. Finally, I finish the contextualization by returning to the bigger international structures that exist in parallel to national level institutions, i.e., I discuss sports governance more broadly as it further elaborates on the U.S. focus, the reason political actors partake in sports policy decision-making, and the variety of policy types that are important for subsequent discussion of treatment designs.

This very general look at the situation is provided primarily because many theoretical and empirical choices I make later in the summary are driven by contextual particularities discussed here. My hope is that this chapter sufficiently informs those who are not familiar with trans debates in sports.

2.1 The U.S. context

The decision to focus on the United States is informed by both substantive and practical considerations. The U.S. has a longstanding tradition of minority-focused civil rights movements rooted in a rights-based legal and political framework. Within this context, the claims made in the social movements have frequently emphasized the extension and protection of specific rights, making debates on inclusion prominent in the public discourse (Tilly, 2004; Engel & Lyle, 2021). Queer and trans movements in the U.S. have generally followed this pattern, with access to institutions such as marriage, healthcare, and education serving as central points for coalition-building and political mobilization both in the early years of the movements and now (Fetner, 2008; Murib et al., 2017).

Trans inclusion in sports, specifically, has become an unusually visible and contested issue in the U.S. public sphere relatively recently, partially due to

the country's distinctive systems of sports governance. As discussed at length in section 2.4, educational institutions in the U.S. play a central role in sports governance, and athletic participation is closely linked to the federal legal frameworks, most notably Title IX (Sharrow, 2021). As a result, debates regarding trans athletes often intersect with broader legal and moral disputes concerning sex discrimination, gender equality, and the purpose of sex-segregated institutions. In comparison, these institutional elements are less pronounced in other national contexts, where elite sports governance tends to be more centralized and less directly connected to educational systems.

Furthermore, the current political climate in the United States has heightened the visibility of trans-related issues. Trans rights more broadly have, since the early 2010s, constituted a partisan issue, both in terms of legislative activity on the part of Democratic and Republican political actors (Jacobsmeyer et al., 2014) and through the increasing influence of partisan identity in shaping public attitudes toward trans rights (Lewis et al., 2022). Since 2019, trans inclusion in sports has become a frequent topic of legislative proposals, executive orders, and partisan messaging (Movement Advancement Project, 2025; Anti-Trans Legislation Tracker). This mobilization of the issue on a broader scale, i.e., in electoral campaigns (Gökarıksel, 2025; Pepin-Neff & Cohen, 2021) and federal proposals (Pradhan, 2025), has elevated the issue beyond sport-specific audiences, positioning it as a particularly suitable case for analyzing public reasoning about fairness, gender categories, and inclusion.

2.2 Rights in sports amidst anti-trans politics

As indicated in the Introduction, trans rights debates are not particularly new. There is a long, well-documented history of trans advocacy in the U.S. that emerged with the rest of the 1960s' LGB movements. Despite continuous grassroots organizing, trans rights have not consistently occupied a prominent position in national political discourse; rather, particular trans-related issues periodically gain salience when political actors choose to mobilize them in pursuit of specific political objectives.

A substantial body of scholarship characterizes trans rights as a “culture war” issue (Chapman, 2015). In this view, trans issues are seen as morally charged disputes over public culture (Hunter, 1991) that can be strategically deployed to activate perceptions of cultural threat and mobilize political constituencies (Taylor & Haider-Markel, 2014). This framing suggests a high degree of polarization, with sharply opposed positions among both political elites and the public (Jones & Brewer, 2019; Castle, 2019) and has led some scholars to analyze trans rights through the lens of morality politics (Haider-Markel et al., 2019).

However, it is unclear whether all trans-related issues operate similarly within this framework. According to Trans Legislation Tracker, sports policy represents only one domain in a rapidly expanding field of trans-related legislation. The first sport-specific bills were introduced in 2019, and the number of bills introduced increased sharply in 2020 from 7 to 29. Since 2023, however, legislation targeting healthcare and education has grown more prominent, reshaping the overall composition of anti-trans policies. Within three years, more than 590 bills were introduced in the domain of healthcare and 659 in education. Comparatively, 260 sports bills were introduced between 2023 and 2025, which amounts to 11% of anti-trans legislations introduced in that period. This variation of trans issue areas suggests that trans rights debates span a diverse set of policy domains, each of which may activate distinct public attitudes and policy preferences.

There are reasons to expect that trans inclusion in sports may operate differently from other trans-related issues, such as access to medical care or protections against housing discrimination. Public opinion data show that views on trans inclusion in sports are less clearly polarized along partisan lines than other trans rights issues. For example, data from 2022 and 2025 show increasing substantial disagreement in the Democratic electorate, with nearly half supporting policies in sports that divide athletes by sex assigned at birth (Pew Research Center, 2025). Additionally, recent research in political behavior finds that certain sports-related trans issues, such as trans women participating in the women's category, do not strongly influence vote choice among progressive voters (Breckwoldt, 2025). These patterns challenge the core expectations from culture war and morality politics theories, specifically the assumption that trans inclusion in sports should produce clear polarization and electoral mobilization.

While these data raise some theoretically important questions for the morality politics literature, particularly regarding whether trans inclusion in sports can be considered a "culture war" issue in the same manner as other trans rights debates, such questions fall outside this dissertation's scope. Instead, discussion in this section aimed to paint a specific picture of trans debates: there is a general notable rise in anti-trans legislations, with sport-specific policies constituting a tangible fraction; in some sense, sports is only one and not even the most important area in the debates. That said, public opinion data indicate that views on trans policies in sports, specifically, might not follow the opinion formation principles evident in other trans-rights domains. Therefore, sport-specific controversies appear to have distinct features that require closer empirical and theoretical investigation.

2.3 Arguments against trans inclusion

Thus far in this contextualization, I have said little about the specific substantive arguments used to oppose trans inclusion. While the structural and institutional configurations of trans rights play a role in driving one's policy opinion, ultimately my research question concerns identifying the drivers of individuals' views, and my broader starting point of this dissertation concerns justifications and reasoning. As such, I believe it is important to return to the level of an individual and consider the precise arguments in the debates. What popular claims are made against trans inclusion in sports?

In this section, I use a statement from a political actor to outline the main themes common across arguments against inclusion. The themes highlighted here are later picked up in section 3.4, where I theorize about the substance and contested meanings alluded to in such arguments.

Following up on intra-party tension noted before, I believe it could be fruitful to discuss a statement against trans athlete inclusion from a Democratic party member, since they are arguing against the general party narrative. I would like to use the following quote from Democratic Representative Seth Moulton (MA)² from November 2024 (reported by Balk, 2024) as a starting point:

I have two little girls. I don't want them getting run over on a playing field by a male or formerly male athlete [...] But as a Democrat, I'm supposed to be afraid to say that. [...] I've never had more people, parents and, by the way, a lot of L.G.B.T.Q. community members, reach out to me and say, "Thank you for saying this" [...] Some of them are just speaking authentically as parents. Some of them believe the trans movement has gone too far.

I find the quote particularly telling in what it leaves out for the audience to figure out themselves, or rather it hints at multiple unvoiced assumptions. What does "run over" entail? In what way have trans movements "gone too far"? Why, as a Democrat, is he supposed to be afraid to state this position? In general, I believe the quote nicely illustrates several themes that are common in the debates. Furthermore, it acutely situates the intra-party tension within certain constituencies: parents and LGBTQ+ communities. Using the quote, I

² Rep. Moulton can generally be described as a center-left Democrat. He is a member of the New Democrat Coalition and used to have a relatively high bipartisan index especially in earlier sessions of Congress (specifically in the 114th and the 115th sessions, where he was 35th and 65th, respectively; see more in the Lugar Center reports). In October 2025, Rep. Moulton announced that he will be running for the 2026 Democratic nomination for U.S. Senate in Massachusetts. Polls of Democratic primary voters have indicated that support for Moulton is greater among somewhat liberal and moderate voters (Data for Progress, 2025).

will introduce the common, substantive arguments in debates against trans inclusion.

Just as the general discourse tends to put a lot of focus on trans women while talking about trans rights in general, Rep. Moulton exclusively employs the case of a hypothetical trans woman to argue for exclusion. The pattern of trans women posing a more prominent, salient “problem,” while consideration of trans men is completely absent is common for trans legislation that involves sex-segregated spaces (Buck & Obzud, 2018), e.g., prisons (Lamble, 2023), bathrooms (Graber, 2018), and, of course, sports (Travers, 2024). Furthermore, this prevalent focus on trans women is often accompanied by an exaggerated emphasis on their status as assigned male at birth (AMAB): the hypothetical trans (women) athletes are referred to as “male” or “formerly male”, highlighting the assumed physiological composition of trans women. This reference to trans women as “male” is extremely prevalent in the public discourse (Pickett & Valdez, 2023) and can be considered demeaning.

The prospect of cis women (or girls) being “run over on a playing field” is another consistent theme in the debate. The narrative of AMAB individuals having an “upper hand” is evident in most conversations about the issue, with sport-specific actors (Jakubowska, 2024; Lunbdberg et al., 2024), local legislators (Sharro, 2017), academics (Anderson et al., 2019), and lay people (Cleland et al., 2022) consistently employing this justification. In that regard, both arguments “for” and “against” inclusion quite often end up narrowing in on the issue of unfair advantage, with pro-inclusionary arguments focusing on ways to dispute the claim about performance differences (Knox et al., 2019).

Finally, the quote explicitly “calls out” certain groups, i.e., other Democrats and the LGBTQ community, in a way that supposes that some of them, too, support trans exclusion. There are two notable implications of direct references to specific constituencies. First, it suggests that rhetoric and logic driving resistance to trans inclusion in sports is bottom-up rather than elite-driven. Rep. Moulton positions himself as reflecting what members of the public are saying, in turn receiving thanks. Second, Rep. Moulton projects several assumptions upon the audience as if saying, “you would think that the LGBTQ community would not support my statement, but, ‘by the way’, they actually do agree”. In the same way, he calls attention to his position as a Democrat, implying that perceptions of the party as fully supportive of trans inclusion are incorrect, and that many other Democrats also oppose trans inclusion.

Throughout the rest of the dissertation, references to “arguments against trans inclusion” should be understood as invoking this cluster of claims, particularly the statement that trans women possess an inherent advantage that challenges fair competition. While other argumentative frames, like stated

worries over girls' safety (protectionist claims), also appear in the discourse (Baeth & Goorevich, 2022; Martin & Rahilly, 2025; Stone, 2019; Turnbull-Dugarte & McMillan, 2023), I contend in section 3.4 that protectionist claims are not unique to debates on trans inclusion in sports or unrelated to claims about competitive advantage. As such, the dissertation at large and the theoretical section specifically focus on developing and understanding the fairness-based arguments rooted in ideas of competition and advantage.

2.4 Sports governance and policies

The final contextualization that requires some commentary relates to sports governance as it is implemented in the U.S. In this section, I summarize some general facts about sports institutions and introduce main governing bodies that play a role in creating and regulating eligibility policies targeting trans athletes. Additionally, throughout the section I introduce examples that will become more relevant later, as they directly connect to the empirical and methodological choices made in this project.

Overall, sports operate within a multi-level regulatory environment that combines local legislation with international policies, creating a sometimes contradictory policy landscape (Harris & Jedlicka, 2020). At the national level in the United States, sports policy is shaped in part by federal and state legislation, particularly in contexts where sports programs and competitions are publicly funded. This includes primary and secondary schools as well as public colleges and universities, where participation rules are often directly affected by state law. As a result, trans-exclusionary legislation introduced at the state level has immediate consequences for interscholastic and intercollegiate athletes. Two prominent recent cases include A.B. Hernandez, a trans high school student who competes in different athletic disciplines (Macur & Mayorquín, 2025), and Lia Thomas, a trans Penn State student and a national division (D1) swimmer, who has been stripped of her titles (Rubin, 2025).

At the elite and international levels, participation policies are governed primarily by sport-specific international federations (IFs), such as World Athletics (previously called International Association of Athletics Federations) or World Aquatics, which operate in broader regulatory frameworks established by the International Olympic Committee (IOC) and the World Anti-Doping Agency (WADA). These bodies set eligibility standards that national organizations are typically required to follow in international competition. More importantly, IFs, IOC, and WADA have historically been the only sources of eligibility policies for a wide range of personal characteristics, including age, experience, cis/trans status, disability status, etc. In other words, it is unusual for local governments to be involved in setting eligibility policies.

When it comes to gender/sex categories and eligibility policies, IOC has historically been the most important regulatory body with a long and, as many scholars have pointed out, problematic history of “sex testing” and invasive practices of gender verification (Sullivan, 2011). World Athletics, which until recently followed in step with IOC, has a similar history of gender verification procedures (Camporesi et al., 2024). However, in 2021, IOC fundamentally shifted their policy governance principle: instead of providing a policy that would regulate all competitions overseen by IOC, they published the “IOC Framework on Fairness, Inclusion and Non-Discrimination on the Basis of Gender Identity and Sex Variations”, which shifted the responsibility of producing eligibility policies to sport-specific bodies. This met notable resistance from some scholars who support strong sex-segregation (see Lundberg et al., 2024) and resulted in an increasing variety of trans-related regulations across different sports.

For example, in 2023, following the IOC framework, World Athletics introduced a trans (women) exclusionary policy that restricted participation of trans women who have experienced male puberty whilst allowing participation of trans men with minor bureaucratic requirements. However, in 2025, they updated the eligibility criteria, instead opting for an SRY gene test that detects the Y chromosome. Under this regulation, athletes will be allowed to participate in the female category only if they can provide a negative SRY test, while all other athletes will be asked to compete in the men’s or an “open” category.

In 2023, in stark contrast to the clearly trans-exclusionary regulations of World Athletics, the International Shooting Sport Federation (ISSF) published their updated eligibility rules that followed the same IOC framework. In said eligibility legislation, both trans men and women face the same requirements to notify the ISSF’s Medical Committee and prove their commitment to the gender category. The document explicitly states that no medical requirements will be placed upon the athletes, and that trans athletes should be treated in the same manner as cis athletes insofar as other regulations apply.

I believe the two examples, as well as the structure of sports governance, highlight the variety of approaches to specific rules regarding trans athletes’ eligibility but also indicate a long history of powerful institutional authority. As such, sports are shaped not only by public opinion and elite rhetoric but also by existing institutional arrangements that constrain policy choices and reinforce particular understandings of sex and fairness.

Chapter 3: What we know: reciting and theorizing

Having contextualized contemporary debates about trans inclusion in sports, I now turn to a more focused review of scholarship on public opinion on trans rights. My aim in this chapter is twofold: to summarize existing findings and, more importantly, to set up conceptual and empirical puzzles. Throughout, I emphasize the unresolved questions that motivate the analyses in the three papers. At the heart of this chapter is my own theoretical perspective, developed by integrating insights from diverse literatures. This framework provides the foundational lens through which I approach the question of resistance to trans inclusion in sports.

Because the literature on public opinion towards trans rights is highly interdisciplinary, I organize my review around two overarching domains: dispositional drivers and contextual factors shaping policy support. This dual structure allows me to accommodate a range of theoretical perspectives and draw upon different literatures. I then use these findings to identify persistent tensions (puzzles) and to synthesize a theoretical framework that can help answer them. The framework draws on a variety of disciplines, including gender studies, the sociology of sports, political psychology, and sports ethics. The established theoretical backdrop will guide the empirical investigation that follows and should be viewed as one of the contributions of this dissertation.

3.1 Dispositional drivers of trans policy views

A substantial body of research has examined predictors of public attitudes towards trans policies. To effectively overview the existing literature, I organize this section around key theory-driven categories: political values and ideology, folk theories of gender, cognitive and personality traits, and contact and knowledge. However, before turning to these factors, it is important to clarify the distinction between attitudes towards a group and support for policies affecting that group.

In the literature on minority rights, affect towards an outgroup, often measured through feeling thermometers or prejudice scales, and specific beliefs about the group, such as stereotypes or attitudes, are consistently identified as central drivers of policy attitudes. The basic logic is straightforward: individuals who hold warmer feelings towards a group are more likely to support policies that benefit that group, whereas those with negative affect are more likely to oppose such policies (Nelson & Kinder, 1996). This relationship has been documented extensively for racial, ethnic, and sexual minority

groups, and it also applies to trans policies. For example, Persinger and colleagues (2020) show that explicit positive attitudes towards trans individuals are among the strongest predictors of support for inclusionary school policies.

At the same time, intergroup attitudes alone do not fully capture how individuals evaluate the legitimacy of policy intervention or conceptualize the role of government in structuring social relations. It is a long-established fact in the public opinion literature that affect cannot explain all variation in policy views (Sniderman et al., 1986). For example, it has been repeatedly shown that individuals may express positive attitudes towards minority groups while opposing specific policies based on abstract principles such as fairness or merit rather than intergroup affect (Petersen et al., 2011). Therefore, this section focuses less on group-level affects and more on factors that shape policy preferences specifically, even though many of these factors also correlate with trans prejudice.

Values and ideology

In policy opinion literature, political values are among the most robust predictors of policy views across issue domains. These value-based orientations have been operationalized throughout the literature as moral traditionalism, egalitarianism, political ideology, religiosity, right-wing authoritarianism, or social dominance orientation. At the core, they all reflect underlying beliefs about social order, hierarchy, and the desirability of change or stability.

For trans rights, value-based predictors, especially traditionalism and religiosity, have been reported to have an especially significant effect. Using panel data, Vishwanath (2025) finds that moral traditionalism is the strongest predictor of opposition to trans-inclusive bathroom and military service policies. Similarly, Lewis and colleagues (2021) report that moral traditionalism and religiosity are negatively associated with support for trans inclusion in the military, while egalitarianism is associated with greater support for inclusion. Jones and colleagues (2018), using a nationally representative telephone survey, reach a similar conclusion, finding that more egalitarian, liberal, less religious, and more Democratic respondents express greater support for trans rights across multiple policy domains.

At large, these findings mirror earlier work on support for LGB rights (Brewer, 2008), suggesting strong similarity across queer policy domains. As Lewis and colleagues (2019) argue, opposition to trans inclusion tends to emerge among those who “have a stake in the status quo”. Under this perspective, the status quo at hand explicitly excludes trans individuals or fails to recognize them. As a result, newly proposed trans inclusionary policies often challenge the established policy order; however, not all pro-trans policies meet

resistance, and some domains receive more support than others (see more in the section 3.2, Area-specific policy considerations).

To reiterate, a value-based policy opinion standpoint would posit that left-leaning individuals should be broadly supportive of trans inclusionary policies. Yet, as discussed earlier, this expectation is complicated in the context of sports, where support among Democrats is notably less uniform. This tension points to the possibility that sports-specific considerations may weaken or condition the influence of ideological values, which is a puzzle I discuss at more length later in this chapter.

Folk theories of gender

In addition to political values, more general beliefs about the nature of gender are presumed to play a central role in trans policy views. Research on gender essentialism shows that individuals who view sex and gender as binary, fixed, and biologically determined are more likely to oppose trans rights (Morgenroth & Ryan, 2021). In contrast, constructivist beliefs about gender are associated with more supportive attitudes towards the group; that is, if one believes gender to be socially constructed, fluid, and self-determined, one is more likely to support pro-trans policies.

The essentializing beliefs about gender in general should here be separated from beliefs about the origins of trans identities. According to existing research on essentializing beliefs about sexuality, one's view of trans identities as biologically determined ("born in the wrong body" discourse) might lead one to support trans-inclusionary policies. As Roberts and colleagues (2017) acutely note, "essentialism relates to support for initiatives that enhance social group boundaries" irrespective of whether the initiative is inclusionary or exclusionary. In other words, believing that someone is not responsible for their trans status (that trans-ness is genetically determined) can plausibly increase support for pro-trans policies that treat trans individuals as a special, separate category of individuals (in this case, people with a specific condition), therefore providing a positive association between essentialism and pro-trans policy acceptance.

Since a great body of social psychology literature suggests a strong causal relationship between gender essentialism and trans prejudice, whereby greater belief in biological determination of gender/sex leads one to have more negative feelings towards trans individuals, several studies have investigated the interaction of essentialism and prejudice as it relates to policy views. Rad and colleagues (2019) find that folk theories of gender and feelings towards trans people both explain unique variance in preferences regarding trans bathroom policies. Furthermore, experimental evidence suggests that weakening essentialist beliefs can increase support for the legal rights of trans

individuals by reducing prejudice (Wilton et al., 2017). In other words, while essentialist beliefs have some independent input into policy views, there is also a level of mediation involved.

3.2 Contextual drivers of trans policy views

While dispositional factors explain substantial variation in trans policy attitudes, an emerging literature highlights the importance of contextual considerations, including policy domain, policy targets, and policy formulation. In this section, I discuss some of the existing research, focusing on sport-specific findings when possible.

Area-specific policy considerations

A brief investigation of public opinion polls on trans rights reveals considerable variation in support across different policy areas. For instance, a 2025 report from the Pew Research Center finds that 56% of respondents favor policies that “protect trans people from discrimination in jobs, housing and public spaces”, while simultaneously 49% of the sample believes that trans individuals should use public bathrooms that match their sex assigned at birth. These data suggest that the public appears receptive to anti-discrimination laws protecting trans individuals, yet remains ambivalent regarding access to bathroom spaces, even though the latter can, by some, be considered “discrimination in ... public spaces”. The same report indicates that the majority of the sample, 66% of the respondents, favors policies that make trans athletes compete according to their sex assigned at birth, which is a substantial increase from 58% in 2022.

The cited variation in public opinion across different policy domains might suggest that opinions are driven by distinct considerations that are applied to various policy domains. In alignment with this explanation for policy views, Silva and colleagues (2022) in their study of public support for trans youth’s access to gender-aligned bathrooms and hormone use find significant discrepancies in the factors associated with support for each policy. They comment that policy-specific considerations may drive these differences, whereby healthcare and bathroom legislation relies on substantially distinct arguments and concerns. Similarly, Lewis and colleagues (2022) find that public opinion varies significantly across different trans issues, and that in some areas, domain-specific predictors become more prominent driving factors with time. They conclude that each issue might invoke different frames and considerations, leading to within-person differences in trans policy support across issues, domains, and time periods.

Alternatively, one can consider the domain-specific considerations through the gendered nature of certain policies, i.e., look at policy suggestions as targeting gender-segregated and gender-integrated spaces. For example, Buck and Obzud (2018) find that participants report feeling more threatened by inclusion of trans individuals in cases that involve prominent sex-segregation, such as in bathrooms, dormitories, locker rooms, and sports teams, compared to broader (non-gendered) issues like job discrimination, education access, and healthcare coverage.

In the context of sports, Shaw and colleagues (2024) argue that sport-specific considerations related to fairness influence public opinion on trans inclusion policies. They attribute the relatively low support for inclusion, despite generally positive attitudes towards trans individuals in their sample, to these fairness concerns unique to the realm of competitive sports. This explanation also accounts for the consistent observation that support for inclusion varies across different types of competitions, as reported by Goldbach and colleagues (2022).

Contact and knowledge

Contact theory posits that interpersonal interaction with members of a minority group can reduce prejudice and increase support for inclusionary policies (Allport, 1954). This logic extends to trans policy attitudes, insofar as contact improves outgroup evaluations, which then spill over into policy support. Flores (2015) documents such a secondary contact effect for trans policies, and Tadlock and colleagues (2017) report similar findings.

However, there is also evidence of no contact effect on policy views. For example, Jones and colleagues (2018) find no significant relationship between knowing a trans person and trans policy opinions, and Lewis and colleagues (2017) indicate that while contact predicts support for gay and lesbian rights, it does not have the same effect for trans policies. Similarly, Persinger and colleagues (2020) report that neither personal contact with trans individuals nor general knowledge of trans people has a significant relationship with policy views. Lewis and colleagues (2017) argue that these findings could be attributed to the relatively low chances of sustained, meaningful contact with trans individuals for the general population since there are simply not that many trans people. However, there is also a chance that trans policies are considered under a different logic, and that contact has limited effect as it competes with other dispositions, e.g., values.

Relatedly, knowledge-based approaches emphasize awareness, both political and of specific groups, rather than personal contact for policy views. These approaches can be implemented in various forms, including perspective-taking, information about policy consequences, or general familiarity with

common trans experiences. For example, Broockman and Kalla (2016) report that a short door-to-door conversation that instigated analogous perspective-taking had a positive effect on support for pro-trans legislation. Jones and Becker (2023) find that more general political awareness conditions the relationship between affect and policy views: the link between feelings towards trans people and policy support is strongest among the most politically aware, who are more likely to understand policy consequences and elite cues. Similarly, Zell and Burnett (2024) argue that partisan differences in trans policy attitudes are driven in part by asymmetries in knowledge about trans experiences and gender diversity. In other words, their findings suggest that Democrats are more supportive of trans inclusion simply because they know more precisely how that policy would change the lives of trans individuals.

Policy target

Most policies targeting trans individuals do not differentiate between trans men and trans women but regulate trans people as a single category governed by shared principles. For example, healthcare policies restricting access to gender-affirming care for minors typically apply equally to trans boys and trans girls, thereby limiting treatment opportunities for both AMAB and AFAB individuals. This feature of the trans policy landscape is also reflected in empirical research. Due to external validity concerns, studies of public opinion most often assess support for policies that address trans individuals collectively rather than specify the gender of the policy target. Consequently, it remains difficult to determine whether, in non-sports contexts, public support differs when a policy explicitly concerns trans men versus trans women.

The few studies that disaggregate the non-sports policy target indicate that such distinctions have minimal impact. Silva and colleagues (2022) report no significant differences in support when policies reference trans boys compared to trans girls. Similarly, Rudin and colleagues (2020) find no differences in support for a nondiscriminatory bathroom policy when the policy target is described as either a trans woman or a trans man.

As hinted, this apparent symmetry in policy views does not extend to the domain of sports. Studies focusing specifically on trans inclusion in sports consistently document differential treatment of FtM and MtF athletes. Across a range of competition types, there is generally greater public support for the inclusion of trans men athletes than for trans women athletes, regardless of factors such as athletic performance or hormone treatment status (Tanimoto & Miwa, 2021; Merrill & Anderson, 2024; Goldbach et al., 2022; Shaw et al., 2024).

Policy particularities

As discussed in the previous chapter, existing sports policies vary substantially in how they regulate participation of trans athletes. Some governing bodies implement explicitly inclusionary policies, permitting athletes to compete according to their gender identity (e.g., ISSF), whereas others adopt exclusionary approaches that restrict or prohibit trans participation altogether (e.g., World Athletics). These policies differ in terms of orientation as well as regulatory instruments: some require minimal documentation, some impose stringent medical or hormonal criteria, and some exclude trans athletes from competition entirely. Despite this diversity, most empirical studies assess public opinion in broad terms, typically contrasting support for gender-identity-based eligibility rules with support for sex-assigned-at-birth-based policies. Consequently, existing research says little about whether public support is influenced by the type of policy proposed or by the specific mechanisms through which inclusion or exclusion is implemented.

Two analytically distinct dimensions of trans sports policies warrant a discussion. The first dimension concerns whether a policy is fundamentally exclusionary or inclusionary, i.e., whether it prevents participation outright or seeks to incorporate trans athletes into existing competitive structures. The second dimension pertains to the specific regulatory instruments used to operationalize the policy, such as medical requirements, hormone thresholds, or the creation of alternative competitive categories.

Research on political tolerance indicates that these dimensions may influence public opinion in distinct ways. Previous studies have documented asymmetries between support for inclusion and support for exclusion, and individuals often respond more strongly to policies framed as prohibitive than to policies framed as permissive (Alexseev, 2015). In the context of trans-related policies, Persinger and colleagues (2020) demonstrate that factors such as religiosity and implicit group-level attitudes predict support for exclusionary school policies but are less predictive of support for inclusionary policies. In addition, Landau-Wells and colleagues (2025) find that opposition to exclusionary bathroom policies is associated with neural markers of self-regulation, suggesting that support for inclusion may depend more on deliberative, value-based reasoning than on intuitive or affective responses.

With respect to specific policy instruments, sports ethicists have proposed multiple approaches to trans inclusion, yet empirical research on whether public opinion varies across these solutions is limited. For instance, some proposals advocate creating “open” or mixed categories for athletes who do not fit within existing sex divisions (Harper et al., 2018; Martínková, 2020), while others propose a more fundamental paradigm and value shifts (Bekker et al.,

2023). Previously implemented solutions, such as thresholds for certain physiological characteristics (e.g., testosterone levels), have been widely criticized by scholars (Karkazis & Jordan-Young, 2018) but have rarely been mentioned when public opinion was considered. As such, it remains unclear whether the public's view of a policy would differ depending on its particular implementation.

Evidence from related policy domains provides mixed guidance. In the context of bathroom access policies, Outten and Lee (2019) report no independent effect of policy formulation on public support. Whether a policy proposed gender-neutral bathrooms or explicitly permitted trans women to use women's bathrooms did not significantly alter attitudes. Similarly, evidence from studies on trans inclusion in sports suggests that requirements related to hormone treatment or medical transition do not substantially influence overall levels of public support (Knee et al., 2024; Merrill & Anderson, 2024). However, these findings are indirect and do not directly assess variation in support across specific regulatory designs.

In contrast, research on affirmative action policies consistently demonstrates sensitivity to policy instruments. Across various contexts, scholars identify a "principle-policy" gap, in which individuals endorse equality or inclusion in general but express ambivalence or opposition toward specific implementation strategies (Aberson, 2007). Public support is typically higher for policies perceived as upholding meritocratic principles and procedural fairness, and lower for policies viewed as violating these standards. Both supporters and opponents of affirmative action tend to favor measures that assist qualified members of disadvantaged groups without relying on explicit quotas or rigid mandates (Reyna et al., 2005).

Overall, this literature suggests that although the broad distinction between inclusionary and exclusionary policies may be central to public opinion, the influence of specific policy instruments remains theoretically ambiguous. Thus, in the context of trans inclusion in sports, it is unclear whether public attitudes are primarily shaped by a policy's overall orientation or by particular regulatory details.

Policy framing

A substantial body of research on issue framing and information framing demonstrates that the way policies are described and justified can significantly shape public opinion. In the context of trans rights, protectionist frames that highlight the safety or vulnerability of cis women and position trans inclusion as a threat have been particularly prevalent. Such arguments are well documented in media and political discourse, especially in discussions of gender-segregated spaces and institutions (Westbrook & Schilt, 2014). Experimental

studies indicate that protectionist framing can significantly affect attitudes towards trans-inclusive policies, such as bathroom access (Harrison & Michelson, 2019), self-identification legislation (Turnbull-Dugarte & McMillan, 2023), and broader issues of legal recognition and rights (Galván-Hernández et al., 2025).

What is important here is that the salience and content of policy frames are not static, and recent developments highlight the need to examine framing dynamics in trans-related public opinion research. During the period I was working on this dissertation, the framing of trans rights underwent a notable shift at the elite level. In January 2025, President Trump issued an executive order instructing federal agencies to prioritize the concept of “sex” defined as biological and immutable over “gender” in official policy language. This move directly addresses a central point of contemporary debates over trans rights, as many arguments for inclusion depend on distinguishing gender identity from sex assigned at birth and recognizing gender as a socially and psychologically significant category. In contrast, the executive order explicitly rejects this distinction and reaffirms a biologically essentialist understanding of sex as the primary basis for policy.

From the perspective of this dissertation, the shift is significant both as a symbolic political act and as an attempt to reshape the discursive landscape in which trans inclusion is evaluated. By foregrounding “biological reality,” such framing seeks to naturalize gender categories and to render certain policy outcomes, particularly exclusion from gender-segregated institutions, as commonsensical rather than ideological.

This strategy is not confined to the United States. Comparable discursive approaches have emerged in the United Kingdom, especially in debates about equality law and the legal definition of sex-based discrimination, where “sex” is increasingly defined as sex assigned at birth in an explicitly essentialist way (Pearce et al., 2020). These developments indicate a broader trend in which framing contests over sex and gender function as mechanisms for articulating and legitimizing resistance to trans inclusion.

3.3 Outlining puzzles

Following the review of major factors in the literature on support for trans rights, this section focuses specifically on public opinion regarding trans inclusion in sports and outlines the specific puzzles addressed by each paper. Rather than summarizing existing findings, the aim is to revisit the literature with a targeted perspective to identify areas that remain insufficiently understood. This section emphasizes unresolved questions about the drivers and justifications of resistance to trans inclusion in sports, situated in the broader research question of the dissertation.

Sex, gender, and essentialism in folk theories of sports

The first puzzle, addressed in Paper A, examines how assumptions about sex and gender categories influence resistance to trans inclusion. While much of the literature presumes that opposition is rooted in beliefs about biological difference and competitive advantage, there is limited empirical research on how lay individuals conceptualize sports categories. It remains unclear whether the public perceives sports divisions as based on immutable biological sex, socially constructed gender categories, or an intermediate position. Furthermore, the extent to which these understandings are malleable is not well established.

Two related observations motivate this puzzle. First, both public and elite discourse frequently uses the terms “sex” and “gender” interchangeably when discussing sports categories, despite increasing efforts by political actors to enforce a clear distinction, as seen in Trump’s executive order. Second, arguments concerning unfairness, physiological advantage, and the protection of women’s sports often rely on implicit assumptions about fundamental and stable differences between men and women. However, it is not yet clear whether these assumptions are responsive to framing or evidence, or if they reflect deeper essentialist beliefs about human categories that influence reasoning about sports more broadly.

As a result of these considerations, Paper A asks: Are people more supportive of trans athlete inclusion when the sex/gender category is framed as gender-based rather than sex-based? Why (not)?

Tension between attitudes and fairness concerns

A second puzzle, taken up in Paper B, addresses the relationship between intergroup attitudes and fairness-based objections to trans inclusion. Existing research presents competing interpretations regarding the sources of resistance. Some literature on minority rights support indicates that attitudes towards the relevant group and political ideology are primary predictors of policy views. Conversely, recent studies contend that opposition to trans inclusion in sports is driven by principled concerns about fairness rather than animosity towards trans individuals.

Shaw and colleagues (2024), for example, argue that sports represent a unique domain where fairness considerations may supersede otherwise positive attitudes towards trans individuals. This observation prompts several unresolved questions: Are fairness and inclusion perceived as distinct values by the public, or do fairness claims serve as socially acceptable justifications for underlying attitudes? Do fairness concerns function independently of intergroup attitudes, or do they interact systematically? Additionally, can fairness-

based resistance be mitigated by modifying aspects of the competitive context, or does it remain largely unaffected by such changes?

Although fairness arguments have received increasing attention, the literature has not yet determined whether fairness concerns serve as a genuine alternative to attitudinal explanations or primarily influence when and how attitudes result in policy opposition. This ambiguity underscores the need for a more direct examination of how fairness is invoked, by whom, and whether it conditions the relationship between trans attitudes and policy support. Consequently, Paper B investigates the following research question: what is the relationship between trans attitudes, fair play concerns, and policy support?

Differential treatment of trans men and trans women

The third puzzle, discussed in Paper C, investigates whether public support for trans inclusion varies depending on the policy target, specifically whether the trans athlete in question is a trans man or a trans woman. Furthermore, it considers the evidence of intra-ideological polarization on the issue of trans inclusion and further investigates whether the difference in support for MtF versus FtM athletes is consistent across individuals with different political values and attitudes.

The existing literature provides mixed evidence, whereby some studies suggest that trans women are treated worse than trans men, and other studies find no consistent differences in general attitudes, discriminatory behaviors, or reported victimization across trans men and trans women. In the context of sports, however, there is evidence that the policy target may be systematically consequential. Several studies find greater support for the inclusion of trans men compared to trans women, though it remains unclear whether this pattern is attributable to sport-specific factors, broader social hierarchies of gender, or interactions with attitudes and ideology. Notably, it is unclear whether any observed support gap persists among individuals who are otherwise supportive of trans rights, such as left-leaning or trans-positive populations.

In light of the conflicting empirical evidence in the field and recent findings of growing opposition to trans inclusion in sports among individuals the literature suggests should be supportive of trans policies, Paper C asks: when competitive context is held constant, do people extend more support to a trans man athlete than to a trans woman athlete? Is this support gap consistent across different segments of the public?

Collectively, these puzzles highlight a central gap in the literature: although correlates of support for trans rights are well documented, there is limited understanding of how individuals reason about trans inclusion in sports as a distinct and normatively significant domain. The papers in this dissertation address these unresolved questions by investigating how categorical

beliefs, fairness concerns, and policy targets jointly influence public opinion on trans inclusion in sports.

3.4 Theoretical framework

This section establishes the theoretical framework that underpins the dissertation as a whole. Rather than advancing or testing a single unified theory, I use this section to articulate my conceptualization of the problem of trans inclusion in sports and to clarify the theoretical perspectives through which the empirical analyses in each paper should be interpreted. The theorizing presented here is interpretive and synthetic; it represents my effort to synthesize insights from multiple literatures to address a phenomenon that is not fully explained by existing accounts of public opinion, intergroup attitudes, or minority rights. The framework developed here offers a shared conceptual foundation for all three papers, even as each paper foregrounds distinct mechanisms and empirical questions.

Substantively, this framework draws on and integrates perspectives from gender theory, the sociology of sports, political psychology, and sports ethics. I begin by situating trans athletes in broader analyses of gender trouble and the cisheteronormative order, highlighting how trans inclusion challenges deeply entrenched assumptions about sex, gender, and social categorization. Next, I draw on sociological research that conceptualizes sports as a domain where social differences, particularly sex differences, are constructed as natural, intuitive, and necessary. Finally, I examine fairness as a central normative principle through which resistance to trans inclusion is expressed, utilizing sports ethics to explain the moral significance of concerns about advantage and competitive integrity. Collectively, these perspectives enable me to theorize resistance to trans inclusion in sports not merely as an extension of anti-trans attitudes, but as a response grounded in naturalized beliefs about gender categories, the function of sports, and the concept of fairness.

Gender trouble

Trans individuals enact a form of “gender trouble”, insofar as their existence challenges the assumed natural origin of sex/gender categories. As part of a queer rights movement, trans people share certain political affinities with LGB individuals and threaten the cisheteronormative social order. While some might object that trans identities primarily disrupt cisnormativity rather than heteronormativity, I believe that these systems are mutually constitutive. Cisgender identity is defined through prevailing norms of heterosexual womanhood and manhood, such that challenges to gender categorization inevitably destabilize heteronormative assumptions as well.

At the same time, it would be inaccurate to suggest that LGB and trans communities encounter identical forms of resistance. In the contemporary U.S. context, the emergence of homonormativity has enabled the partial incorporation of certain LGB identities into the dominant social order, particularly when they conform to ideals of respectability, domesticity, and citizenship (Puar, 2006; Dreher, 2017). Historically, homosexuality was closely linked to gender inversion and was sometimes discussed using older trans-adjacent terminology, whereby homosexual men were understood as “woman-like” and homosexual women as “masculine” (Chauncey, 1982; Weeks, 2022). Today, sexuality and gender transgression are more rigidly distinguished because of the assimilation possibilities open for some non-heterosexual individuals within the heteronormative framework. Trans people, in contrast, remain largely excluded from this process of normalization. This exclusion from normalization can be attributed to the very nature of the challenge trans individuals pose to gender essentialist arrangements upon which many social and legal frameworks depend (Verloo & Vleuten, 2020). While homonormative inclusion has often relied on stabilizing gender norms by presenting same-sex couples as otherwise conventional men and women, trans identities directly unsettle the alignment between sex, gender, and embodiment that supports the cisheteronormative order (Spade, 2015). Although one could argue that trans rights are advancing, and that trans people may eventually be incorporated into dominant norms, such a perspective risks suggesting a linear trajectory of normalization that obscures persistent structural and symbolic resistance to gender nonconformity. Consequently, the disruption of the cisheteronormative matrix by trans people is often perceived as more fundamental and more threatening than that posed by many LGB individuals, particularly those whose identities and practices can be accommodated without challenging prevailing gender norms.

This threat to the cisheteronormative order is further amplified by the public vs. private divide that structures perceptions of gender and sexuality. Sexual orientation can often be relegated to the private sphere, rendering it less visible in everyday public interactions. Trans identities, by contrast, are commonly framed as inherently visible and recognizable and therefore rendered more threatening to the order. Public debates frequently assume that trans people can be reliably recognized (“clocked”) in sex-segregated spaces, an assumption that underpins legislation based on surveillance performed by cis citizens (like bathroom regulations). In sports, this logic of visible differences is especially pronounced. The long history of sex testing, such as IOC’s practice where medical staff performs visual checks on athletes’ genitals, reflects an institutionalized effort to expose “private” bodily characteristics in cases where an athlete’s appearance triggers suspicion (Adlwarth, 2021).

Importantly, this process of assumed recognition is deeply racialized: athletes who deviate from white, Western norms of femininity (i.e., women of color from the global South) are more likely to be subjected to scrutiny and misclassification (Karkazis & Jordan-Young, 2016).

This framework helps situate trans inclusion in sports within a broader pattern of gender policing and misrecognition. High-profile cases such as Caster Semenya, an athlete with DSD who has been involved in several long court claims with the IOC (Camporesi, 2020), or Imane Khelif, who was accused of being male during the 2024 Paris Olympics (Taha & Sailofsky, 2025; Vickers, 2025), illustrate how gender transgression is often presumed even in the absence of factual violation. In these cases, the perceived transgression lies not in the athlete's identity or sex assigned at birth but in the miscategorization of their body and the attribution of athletic success to an illegitimate source. In other words, Semenya's visual "unfitness" with the standards of racialized femininity or Khelif's athletic success in a competition that relies on physical force are perceived as violations of womanhood or at least broadly agreed upon expectations of a womanhood.

By establishing the cisheteronormative matrix as the theoretical crux, this dissertation situates resistance to trans inclusion in sports within a broader moral panic over gender boundary maintenance. It also allows sports to be theorized not as a neutral arena of physical competition, but as a social institution deeply invested in stabilizing naturalized distinctions.

"The weaker sex"

Sports are a socially constructed institution with a long history of being framed as a domain governed by natural differences. As Carrington argues in the *Routledge Handbook of the Sociology of Sport* (2015), sports perform significant ideological work by presenting itself as rational, meritocratic, and fair, while obscuring the racial, gendered, and colonial logics that constitute its very foundations. Rather than embodying universal principles, modern sports reflect European myths of fair play, masculinity, and meritocracy that emerged from colonial and imperial contexts.

The conceptualization of sports as a space where European social order is naturalized is directly connected to the discourse surrounding trans athletes and the cisheteronormative matrix. Sports are frequently depicted as a domain governed by natural laws, with athlete categories perceived as both self-evident and biologically determined. The dominant belief that men possess inherent physical superiority over women underpins the rationale for sex-segregated competition. However, such beliefs obscure the extensive history of intentional exclusion of women from sports, not only from financial and professional opportunities but also from the health, social, and civic benefits

associated with athletic participation. The naturalization of sex differences in sports is closely linked to the persistent perception of sports as a masculine sphere (Ruchaud et al., 2017). While certain sports or disciplines may be culturally coded as more masculine or feminine, and these codes may vary by national context, the ideal of athletic excellence remains predominantly associated with men, regardless of the specific sport. Physical strength, fitness, and competitiveness continue to be symbolically associated with masculinity, economic provision, and broader norms of male social value. As Jones and Travers (2023) note, “the assumption of biological advantage for male athletes is a central institutional feature of modern sports via sex-segregated sport or sex-differentiated activities within the same sport”.

Even policies explicitly designed to advance women’s empowerment, such as Title IX, function within this broader ideological framework. Although these policies seek to enhance women’s inclusion and opportunities, their implementation often implicitly reinforces the belief that women’s athletic achievements should not surpass those of men. When women exceed expectations or outperform men, it is frequently regarded as anomalous or suspect, leading to increased scrutiny of women’s bodies and their legitimacy as competitors (Sharro, 2017). Trans athletes, by transgressing these deeply entrenched assumptions about sex difference, elicit resistance rooted in essentialist beliefs that the structure of sports reflects an immutable biological reality, is inherently logical and self-evident, and has always existed in this form and therefore should remain unchanged.

What’s fair is fair?

The concept of fairness occupies a central place in how sports are valued and understood. The very notion of good competition requires a “level playing field”, yet what constitutes fairness is rarely specified. In debates over trans inclusion, appeals to fairness are widespread and consistent across elite discourse, media debates, and public opinion.

Several empirical analyses indicate that fairness is the dominant organizing principle of trans-exclusionary arguments. Pickett and Valdez (2023) show that opponents of trans inclusion primarily frame their concerns around fairness and safety for cisgender women and girls, grounded in assumptions about biological advantage. Murib (2022) similarly argues that sex-segregated sports are presented as the only self-evident way to achieve fairness, while Avalos and colleagues (2022) report on the prevalence of claims such as “unfair advantage” and “cheating” in public commentary.

Two features of these fairness-based arguments are particularly pronounced. First, fairness concerns overwhelmingly focus on trans women and pay little attention to trans men. As Pickett and Valdez (2023) suggest, this

asymmetry reflects the perception of women's sports as inherently secondary, which fits the critical sociological framework described in the previous section. Second, fairness is framed in terms of biological advantage, with trans women's bodies constructed as sources of significant performance differences that must be accounted for. This, again, ties to the previously discussed focus on certain physical policing that is employed to govern the female category.

Several scholars in sports ethics have argued that fairness is so heavily contested in debates over trans inclusion precisely because it is central to the meaning and value of sports as such. In this view, disputes over trans participation are not merely disagreements about policy but about what sports are fundamentally for. To unpack this logic, I turn to two normative frameworks from sports philosophy that offer distinct but complementary accounts of fairness.

Bianchi (2017) employs "skill thesis" as a defining feature of sports (introduced by Simon, 2014) to argue that people perceive hormone-driven advantages (i.e., higher testosterone levels in AMAB individuals or some people with DSD) as an external influence on the competition that should be mitigated. In other words, if the main aim of sports is to check competitors' skills (the "skill thesis"), there is a need to control external influences (e.g., make participants use similar equipment so the results are not attributed to differences in tools) and make sure all competitors have similar opportunities. In this logic, trans women's assumed physical characteristics are seen as "unnatural competitive advantages" that are unavailable to (most) cis women, which means that the "skill thesis" cannot be maintained, and therefore, the competition would be unfair.

A related but distinct account of fairness is offered by Loland's (2013) normative theory of "fair play". While the concept of fair play is widespread in sports ethics, it is often invoked without clear definition (Sheridan, 2003). Loland's framework is particularly useful here because it provides a systematic and internally coherent account of fairness in sports, complete with explicit criteria and normative principles.

Loland formulates one of the central norms of fair play as follows: "All competitors ought to be given equal opportunity to perform through eliminating or compensating for non-relevant inequalities" (p. 46). He elaborates this norm by distinguishing between controllable and uncontrollable inequalities, as well as between person-dependent characteristics that do and do not exert systematic influence on performance. On this basis, Loland argues that differentiation into classes (competition divisions) is justified when one is not responsible for having a trait that significantly influences one's performance. By this logic, inequalities that are a result of differences in sex, age, and body size should be addressed only in cases where those traits systematically

influence an athletic performance; if they do, then the only way to eliminate them is to establish “reasonably standardized weight, height, sex, and age classes” (p. 60).

When mapped onto trans-exclusionary narratives, resistance to the inclusion of trans women aligns closely with this fair play logic. Within the argument, sex-determined inequalities are classified as having a significant and systematic influence on performance, and therefore, to comply with the fair play principles, one must participate with the group with the most similar sex-determined characteristics. As a result, exclusion is framed not as discrimination but as a necessary measure to uphold fair play.

Both the skill thesis and the fair play framework demonstrate the extent to which fairness is embedded in the normative foundations of sports. In trans-exclusionary discourse, trans athletes and their presumed physiological advantages are constructed as threats to the possibility of fair competition. Consequently, exclusion is justified as a means of preserving the core values and meaning of sports as such.

There is, however, an important caveat to the reasoning behind the fair play and skill thesis. Both incorporate the principle of physiological equivalency, which holds that competitors should be relatively equal in performance-relevant traits; yet this principle is not consistently applied in sports when assessing advantage (Lenskyj & Greey, 2022). At its core, this critique highlights that sports are never fully “equal” or “fair” in any absolute sense. Athletes differ along socio-economic, physiological, and psychological dimensions that cannot be fully controlled for (Knox et al., 2019). Moreover, environmental conditions, chance, and immediate situational factors always play a role in what is ultimately an approximation of a comparative test.

In response to these concerns, scholars have differentiated between “tolerable” and “intolerable” forms of unfairness (Devine, 2019). Certain physiological advantages, such as Michael Phelps’s wingspan, are widely acknowledged as beneficial yet are often attributed to luck or self-selection into specific sports (Hesse, 2019). In contrast, the presumed physiological advantages attributed to trans women (i.e., physiological traits assumed to be common among AMAB individuals) are frequently classified as intolerable and are framed as fundamentally threatening the fairness of competition.

From a sports ethics perspective, the distinction between tolerable and intolerable advantage is generally based on three considerations: whether the advantage is attainable by members of the relevant category (Camporesi & Hämäläinen, 2021), whether it confers an all-purpose benefit across contexts, and whether its impact on performance is substantial (Knox et al., 2019). Several of these criteria conceptually overlap with previously discussed fair play

principles. Therefore, it is analytically valuable to examine how sport-specific benefits might configure within this framework.

Crucially, treating the physiological traits attributed to trans women as conferring an all-purpose benefit would require ignoring the empirically documented variation in public support for their inclusion across different sports. It is more plausible that lay evaluations are responsive to the specific skill profile required by each competition. In these instances, individuals may determine that trans women's physiological traits have minimal or no meaningful impact on competitive outcomes. Rather than conceptualizing these traits as conferring a tolerable or intolerable advantage in the abstract, individuals may align with Loland's argument that some sports are more complex than others, and that success in these contexts is less directly determined by what he describes as "basic bio-motor abilities," which are commonly assumed to be the primary sex-based differences.

Consequently, I argue that the type of fairness the public perceives as being threatened is unlikely to be consistent across all sports. Instead, it likely depends on the specific skills a competition is understood to assess, combined with beliefs about the physiological traits attributed to trans athletes. This skill-focused perspective implies that the diversity of sports disciplines results in a corresponding diversity of relevant performance criteria. Thus, the extent to which testosterone-related traits, such as speed, endurance, or strength, are perceived as decisive varies across competitions according to the nature of the event. In sports that depend less on these traits, anti-trans arguments based on assumptions of unfair physiological advantage may have diminished resonance, if any.

Setting aside protectionist claims

Up to this point, I have primarily addressed fairness as it relates to fair play concerns, with limited discussion of concepts such as the "safety of cisgender girls," "fairness for non-transgender girls and women," and fears regarding "taking someone's sport," which also appear in the debate (Cleland et al., 2020; Avalos et al., 2022). Since protectionist claims similarly invoke notions of "fairness," it is necessary to determine whether the fairness in these examples aligns with fair play concerns. In this section, I contend that protectionist and fair play arguments are normatively distinct, as they address different forms of perceived wrongdoing. Nevertheless, both arguments rely, to varying degrees, on claims of physiological, category-based advantage. This shared assumption regarding differences between AMAB and AFAB individuals may be emphasized either in relation to sports integrity (fair play concerns) or to (cis) women's opportunities (protectionist claims). After situating this under-

standing in relation to protectionist claims, I explain why this dissertation sets aside arguments related to (cis) women's safety.

On the surface, a protection-based understanding of fairness differs from fair play considerations in two important ways. First, its primary focus is not the competitive process itself, but rather the interests and opportunities of cis women. Second, perceived unfairness is rooted in broader equality-based values, such as access and rights, rather than the internal logic of competition or skill comparison. Martin and Rahilly's (2023) analysis of political framing highlights this distinction, demonstrating that proponents of trans-exclusionary policies frequently argue that "keeping sports fair and equal is a matter of protecting women and their rights" (p. 742). Within this framework, trans inclusion is depicted as a threat to gender equality, particularly to the progress achieved through policies such as Title IX. These arguments position Title IX as a response to historical injustices that excluded women from the benefits of athletic careers (Sharrow, 2021). Consequently, protectionist arguments can be understood as engaging with normative principles of equality and focusing on the material benefits afforded to (or, in the case of trans inclusion, potentially taken away from) cis women.

However, a closer examination of protectionist arguments reveals a familiar underlying assumption of fundamental physiological differences and persistent competitive advantage allegedly possessed by trans women, which makes claims of conceptual overlap plausible. As Martin and Rahilly (2023) observe, "according to bill supporters, if unchecked, that same [biological] advantage will result in unfair and unequal treatment of women who stand to lose scholarships and the hard-won rights granted to them through Title IX" (p. 747). Similarly, Sharrow (2021) notes that the classification of (cis) women as a protected group necessitates strict category regulations, which in turn require physiological assessments based on the belief in significant, aggregate differences between AMAB and AFAB individuals.

Although protectionist and fair play claims address different normative targets (the treatment of women vs. the treatment of sports competition), protectionist arguments frequently depend on the prior establishment of the fair play principle to justify the "protected category" status of (cis) women. Sailors (2020) demonstrates this reasoning by first highlighting fair play and competition as central values in sports, then extending the argument to the broader societal benefits of placing women in a segregated category. As Sailors states, "the visible success of women athletes, highly uncommon if competing against men, undercuts the historical view of women's inferiority" (p. 3). The protected category rationale, therefore, posits that separating women from men is necessary to create more opportunities for (cis) women athletes and to

promote equality, based on the belief that women, due to “physiological difference,” would not succeed in direct competition with men.

To summarize, both protectionist claims and the fair play principle depend on differentiating AMAB and AFAB individuals based on athletic performance. These categories are distinguished by traits believed to confer performance advantages. Such perceived advantages are seen as undermining the principles of fair competition, thereby providing a normative basis for fair play arguments that oppose trans inclusion on the grounds that it disrupts the fundamental principles of sports. Alternatively, the assumption of advantage can be used to argue that separating and protecting the women’s category is necessary to prevent undesirable normative consequences, such as the erosion of the “protected category” status through which social equality is pursued.

I have several objections to this logic, most notably, as previously discussed, that such separation perpetuates the positioning of women as inherently inferior or “less than” (Sharrow, 2017). However, my theoretical or empirical critiques of protectionist claims do not directly pertain to the research question guiding this dissertation. Given the presence of both protectionist and fair play arguments in the discourse, it is necessary to determine how to address each when examining the drivers of trans exclusion.

In this dissertation, I choose to set aside protectionist claims for two reasons. First, as previously argued, protectionist and fair play arguments are grounded in the same assumption regarding the advantage AMAB individuals are believed to possess over AFAB individuals. Since this logic is more prominent in fair play arguments, I consider it more empirically productive and insightful to evaluate beliefs about advantage in the context of fair play.

Second, given that the research question centers on sports, focusing on protectionist claims is less productive, as these arguments are not unique to the sports context (see more on generalizability in section 4.4). Although protectionist claims often invoke assumptions of advantage, they are generally underpinned by the belief that AFAB and AMAB individuals constitute distinct natural kinds, rendering any physiological difference potentially threatening. The rhetoric of “safety for women” has been employed in support of other trans-exclusionary policies, such as bathroom regulations (Turnbull-Dugarte & McMillan, 2023), and concerns about “male” violence have been shown to be weaker predictors of policy views compared to broader attitudes towards trans individuals (Morgenroth et al., 2024). Together, these patterns suggest that protectionist frames reflect a more general, hierarchy-sensitive logic of categorical threat rather than a sport-specific mechanism, which motivates the narrower analytical focus on fair play and competitive integrity in this dissertation.

3.5 Chapter summary

This chapter provides an in-depth review of the scholarship on public opinion toward trans rights, focusing on both dispositional and contextual factors that shape support for trans-inclusive policies. It highlights how individual-level traits, such as political values, folk theories of gender, and attitudes towards trans individuals interact with contextual considerations like policy domains, targets, and framing. The literature shows that while value-based orientations (especially traditionalism and egalitarianism) and essentialist beliefs about gender significantly predict policy views, these factors should not be considered in isolation, as domain-specific arguments, particularly regarding fairness in sports, complicate the relationship between prejudicial attitudes and policy support.

The chapter identifies several persistent puzzles: the role of essentialist beliefs and folk theories in driving resistance to trans inclusion in sports, the tension between group-based attitudes and fairness objections, and the differential treatment of trans men and trans women as policy targets. To address these gaps, I present a synthesized theoretical framework that draws on gender studies, the sociology of sports, political psychology, and sports ethics. This framework situates resistance to trans inclusion not simply as an extension of prejudice but as a complex response rooted in naturalized beliefs about gender, the social function of sports, and contested notions of fairness. The chapter thus sets the stage for the dissertation's empirical and theoretical investigations by articulating key unresolved questions and the conceptual tools needed to interrogate them.

Chapter 4: Methodology

This chapter presents the methodological approach adopted in this dissertation and details the rationale for employing survey experiments. Given the project's focus on public opinion, causal mechanisms, and the role of framing in shaping policy support, survey experiments are particularly well suited to the research questions at hand. Survey experiments allow researchers to manipulate theoretically relevant features within political contexts while preserving a degree of realism that reflects how individuals encounter political information in everyday settings. Additionally, this chapter critically examines the limitations of survey-based methods, such as concerns regarding external validity, reliance on hypothetical reasoning, and the potential for social desirability bias. The objective is both to justify the selected methodology and to situate the empirical findings within their boundaries. Regarding the latter, after discussing survey experiments, I discuss the specificities of vignettes employed in the papers and explain why I used specific examples of sports (archery, shooting, and steeplechase) and specific policy formulations (IOC's general policy targeting all trans athletes). Finally, I comment on the generalizability of the results, pertaining to the U.S.-focused locations for both the sample and one of the paper vignettes, as well as regarding the sports-focused policy area.

4.1 Survey experiments

Survey experiments occupy a central place in contemporary political science research, particularly in the study of public opinion and political psychology. By incorporating experimental manipulations into surveys administered to large and diverse samples, these experiments combine the internal validity of randomized designs with the broader population reach of survey research (Gaines et al., 2007; Mutz, 2011). Random assignment to treatment conditions facilitates causal inference regarding the effects of specific informational cues, frames, or contextual features on respondents' attitudes. This approach is particularly valuable in politically contested and normatively charged domains, such as trans rights, where observational data often conflate pre-existing attitudes with exposure to elite discourse or media narratives (Druckman, 2001, 2011). In this dissertation, survey experiments enable the isolation of theoretically significant mechanisms, such as perceived threats to fairness or assumptions about trans athletes' gender, while controlling for other aspects of the policy context.

An additional advantage of survey experiments is their ability to model how individuals process political information in controlled yet realistic settings. Text-based vignettes in particular enable respondents to assess policy scenarios that closely resemble news coverage, organizational statements, or institutional rules, which increases the ecological validity of a study compared to more abstract survey questions (Hainmueller et al., 2015). This approach is particularly suitable for investigating framing effects, as it reflects the manner in which citizens typically encounter political information through mediated and selectively presented narratives (Chong & Druckman, 2007). Furthermore, survey experiments are well suited for examining attitudes towards policies or institutions with which respondents have limited direct experience. Although most individuals will never personally interact with trans athletes or sports-governing bodies, they nonetheless form opinions based on indirect information, which makes vignette-based survey experiments a methodologically appropriate tool for studying opinion formation in this context.

Despite these advantages, survey experiments have several well-known limitations. First, they capture expressed attitudes rather than observed behaviors. Although policy preferences are politically significant, especially in democratic contexts, they do not always translate into actions such as voting or mobilization (Mutz, 2011). Second, survey experiments depend on respondents' engagement with hypothetical scenarios, which raises concerns about inattentive responses or superficial processing of treatment information (Berinsky et al., 2014). While attention checks and specific design features can mitigate these issues, they cannot fully eliminate them. Third, responses to socially sensitive topics may be influenced by social desirability bias, leading individuals to underreport exclusionary attitudes or overstate support for inclusion in alignment with perceived social norms (Blair et al., 2020). Throughout this dissertation, these limitations are acknowledged and addressed where feasible through design choices and robustness checks, but they continue to inform the interpretation of the results.

In summary, survey experiments offer a robust yet inherently limited methodological approach. Their principal advantage is in enabling causal identification and theoretical precision, while their limitations necessitate caution when generalizing findings beyond attitudinal outcomes or particular institutional contexts. The remainder of this chapter transitions from these general considerations to a discussion of the specific design choices implemented in each paper.

4.2 On sports selection

Three sports competitions are used in the treatment materials: archery in Papers A and C, steeplechase and shooting in Paper B. In general, the selection

of sports disciplines is driven by theoretical considerations rather than by a specific interest in any individual sport. Specifically, Papers A and C required a competition where assumptions about sex-based performance differences could be both invoked and credibly challenged. Paper B required two competitions where trans inclusion might pose different levels of threats to fair play; on other dimensions, the competitions had to be as comparable as possible. As such, sports serve as analytically valuable contexts for examining broader issues related to fairness, sex-based categories, and claims of advantage considering trans athletes' inclusion. The choice of sports discipline is integral to the research design, as it was through treatment and context manipulations that constraints were placed on support for trans inclusion. Different sports activate distinct intuitions about physicality, competition, and gendered advantage, allowing for a systematic variation in the salience of these factors. In what follows, I explain the choices and their possible drawbacks.

Archery, Papers A and C

Archery was selected for Papers A and C to fulfill the requirement for a sport the public could plausibly interpret in two distinct ways. Archery, as a sex-segregated Olympic sport, aligns with prevailing assumptions about gender differences in athletics. Conversely, it can also be viewed as a discipline where biological sex-based advantage is ambiguous or minimal. As discussed in the previous chapter, a growing body of empirical research suggests that so-called precision-based competitions tend to generate greater public support for trans inclusion compared to other sports (Shaw et al., 2024; Goldbach et al., 2022; Tanimoto & Miwa, 2020; Merrill & Anderson, 2024).

While there is no universally accepted definition of a precision-based sport, these competitions are generally characterized by an emphasis on accuracy and control rather than strength, speed, or endurance. Previous studies have consistently classified archery and shooting as precision-based disciplines, and this category may also include sports such as darts or pétanque. These competitions share two key features: a small, empirically observed difference in performance outcomes between men's and women's divisions, and an unclear relationship between performance and biologically sex-linked characteristics such as testosterone levels or muscle mass. These traits are frequently cited in public debates as explanations for sex-based performance differences (Cleland et al., 2022). Consequently, the causal link between commonly referenced biological advantages and success in archery is far less obvious than in sports such as weightlifting or sprinting.

At the same time, archery occupies a middle position even in the category of precision sports. Compared to shooting, archery shows somewhat larger differences between elite men's and women's performances (Hamilton et al.,

2021) and requires more physically demanding actions, such as drawing the bow, that engage the upper body and back muscles. Nevertheless, precision remains the primary skill in archery, and it is plausible that little association with testosterone or other biological markers commonly linked to AMAB advantage would be present in one's view of the case.

The ambiguous influence of physical traits on athletic success made archery particularly well-suited for Papers A and C. Moreover, the vignettes in these papers included an artificially constructed results table indicating no performance difference between men's and women's divisions. For this manipulation to be credible, the selected sport needed to be one in which the absence of sex-based performance gaps would appear plausible to respondents. Archery meets this criterion, making it an appropriate choice for examining beliefs about category immutability, perceived advantage, and support for trans inclusion.

Shooting and steeplechase, Paper B

Paper B focuses on the role of perceived fair play threat in shaping trans policy support. Building on previous research, the experimental design differentiates between sports where trans inclusion is likely to generate either low or high perceived threat to the fairness of a competition. In line with earlier studies, precision-based disciplines are classified as low fair play threat cases, whereas sports emphasizing physical capacity are considered high fair play threat cases.

First, shooting was selected as the low fair play threat discipline. Shooting is one of the few disciplines included in the Olympics without a consistent or systematic performance advantage for men over women, with women outperforming men in certain shooting subdisciplines (Hamilton et al., 2021). As a result, shooting represents an especially strong example of a sport in which concerns about biological advantage and unfair competition are minimal. As such, shooting was considered the best possible case for a low fair play threat condition.

After selecting shooting, the choice of a high fair play threat case was mostly guided by the need to maintain equivalence across experimental conditions. To isolate the effect of fair play threat, both sports needed to be comparable along several other dimensions, including public familiarity, competitive structure, and institutional context. Therefore, the contenders for the high fair play case were restricted to individual-based competitions included in the Summer Olympic Games. This focus would allow for both vignettes to reference the same policy framework, governing institutions, and elite-level setting.

These considerations led to the selection of the 3000-meter steeplechase. Steeplechase is an individual track event that requires athletes to run a 3 km race while jumping over hurdles; the unique feature of the competition is a pool of water placed after the last hurdle in the circular track lap. The competition relies on endurance and speed, and the sport is nested within the category of physical capacity events. Despite its long-standing inclusion in the Olympic program (men’s steeplechase competitions since the 1920 Olympics; the women’s division introduced in 2008), steeplechase does not appear to attract the same level of public attention or fan engagement as more prominent running events, such as the 100-meter sprint or the marathon. This relative lack of salience reduces the likelihood that respondents’ reactions are driven by strong pre-existing opinions or media narratives, making steeplechase a suitable high fair play threat cased in comparison to shooting³.

4.3 On policy selection: formulating trans inclusion

As per the discussion in the previous chapter, sports policies vary considerably. Therefore, “trans inclusion in sports” is not a singular or uniform policy object. Instead, it encompasses a range of regulatory approaches that differ in scope, target, and normative justification. This diversity raises an important methodological question: how should support for trans inclusion be conceptualized and operationalized in survey-based research?

Across the three papers, I employ different formulations of inclusion to capture distinct public opinion processes. In Papers A and C, respondents were asked to evaluate the inclusion of an individual collegiate athlete seeking to change competition categories. In Paper B, respondents were asked to indicate their support for a hypothetical policy regulating participation of trans athletes in general in a specific Olympic competition. Although these operationalizations differ, they reflect theoretically meaningful distinctions between individual-level and group-level evaluations of trans inclusion.

Furthermore, within the group-based framework used in Paper B, I distinguish between three broad policy approaches that reflect the dominant options present in contemporary sports governance debates. The first is

³ While shooting in general does not seem to be particularly salient in the Olympic discourse, it gathered more attention in the 2024 Paris Olympics due to social media attention to two competitors, Kim Yeji (South Korea) and Yusuf Dikeç (Turkey). Both were turned into memes on social media during the Games (Rahaman Sarkar, 2024), which may have increased the salience of the competition during the survey (data was collected the week after the Paris Olympics ended). However, even if the overall salience of the competitions has increased following the memes, it is difficult to say whether a specifically gendered perception of the competition has emerged, since the two athletes were performing in separate divisions.

inclusion, defined as allowing trans athletes to compete in accordance with their gender identity. The second is a partial policy,⁴ in which participation is permitted based on sex assigned at birth. The third is exclusion, in which trans athletes are prohibited from participating altogether. While these categories simplify the wide range of existing policies, they capture the core normative alternatives that structure public and elite debate.

Inclusionary and partial policies are most frequently at the center of contemporary disputes, particularly in international federations. Complete exclusion is less commonly adopted by sports organizations, partly because sports are often framed as a fundamental social good, and participation is linked to broader human rights principles (Sharrow, 2021). Nonetheless, exclusionary policies are periodically proposed in political discourse, and adding exclusion as a response option provides a meaningful contrast to inclusionary approaches by anchoring the upper bound of opposition.

In what follows, I provide additional commentary on the underlying logic of the choices in each paper, specifically as it pertained to focusing on support for a singular athlete or support for broad policy.

Supporting an individual athlete, Papers A and C

Two primary considerations drove the decision to operationalize support for trans inclusion as a measure of support for an individual athlete. First, public controversies regarding trans inclusion in sports are frequently personalized. Media coverage and public debate often focus on specific athletes whose eligibility is contested rather than on abstract policy principles. This pattern is observed not only for openly trans athletes but also for athletes with differences of sex development (DSD), such as Caster Semenya or Dutee Chand, as well as for non-DSD athletes accused of violating gender norms, such as Imane Khelif. In these instances, generalized assumptions about sex difference and athletic advantage are filtered through evaluations of a particular individual's performance and body.

Second, resistance to trans inclusion frequently manifests in highly individualized and targeted ways. Empirical accounts and journalistic reporting document that harassment, threats, and abuse are often directed at specific

⁴ Earlier drafts of Paper B referred to the partial policy as “partial exclusion.” The terminology was revised to reflect the normative ambiguity of such policies. Allowing participation based on sex assigned at birth can be understood as partially inclusive when contrasted with outright exclusion, but it can also be experienced as exclusionary by trans individuals whose gender identity is not recognized. Whether such a policy is viewed as inclusion or exclusion depends on respondents' underlying normative commitments and beliefs about sex, gender, and fairness. Retaining the more neutral label of “partial policy” avoids imposing a particular normative interpretation.

athletes rather than at governing institutions (Pickett & Valdez, 2023; Travers, 2024). The case of A.B. Hernandez, who faced sustained online harassment following public attention to her athletic participation, exemplifies how opposition to trans inclusion becomes personalized (Macur & Mayorquín, 2025). From the perspective of everyday social interaction, it is more plausible that individuals' attitudes towards trans inclusion influence their behavior towards particular athletes than towards distant regulatory bodies. Here, research on intergroup contact and prejudice suggests that evaluations of specific individuals often guide interpersonal behavior more directly than abstract policy positions (Flores, 2015).

These considerations are further reinforced by the realities of sports governance. For most lay individuals, contesting the decisions of international federations or governing bodies is neither feasible nor meaningful. Instead, interactions with trans athletes, whether supportive or hostile, occur primarily at the individual level. This focus is further shaped by the relative rarity of trans athletes in elite sports. In the U.S., fewer than ten trans athletes have been publicly identified among approximately 510,000 collegiate athletes governed by the National Collegiate Athletics Association, NCAA (Migdon, 2024). This scarcity increases the likelihood that public attention and social reactions will concentrate on individuals rather than on generalized groups or policies.

Taken together, these considerations indicate that measuring support for the inclusion of an individual athlete captures an important and substantively meaningful dimension of public opinion. This approach aligns closely with how controversies over trans inclusion are experienced and enacted in practice.

Supporting a broad IOC policy, Paper B

While individual-level evaluations capture one important aspect of public opinion, Paper B adopts a complementary approach by examining support for a generalized policy governing trans participation at the elite level. Because spectators engage with sports across a wide range of local, national, and international contexts, they are frequently exposed to institutional rules rather than individual eligibility decisions. The Olympic Games serve as a highly visible site of global sports governance, making them an appropriate context for studying public reactions to broad regulatory frameworks.

In contrast to the individual-focused vignettes used in Papers A and C, the policy vignette in Paper B presents trans athletes as a collective category without differentiating between trans men and trans women. This formulation intentionally foregrounds group-based evaluation and outgroup positioning. Rather than inviting respondents to consider the merits or fairness of a

specific athlete’s participation, the vignette asks them to assess how “trans athletes” should be regulated as a group.

Table 1 summarizes the treatment conditions and their variation in the vignette. The full vignettes for Papers A and C can be found in the Appendix, and vignettes for Paper B are reported in Table 3.

Table 1: Summary of treatment conditions

Paper	Treatment concept(s)	Treatment implementation	Sports case	Policy case
Paper A: Persuading or mobilizing?	“Sex” vs. “gender” framing	References to sports categories as either “sex assigned at birth” and “sex” or “gender identity” and “gender” Reference to athletes as either male/female or man/woman	Archery	Individual athlete’s request to change competition categories
Paper B: To each their sport	1. Low fair play threat vs. high fair play threat 2. Inclusionary vs. partial vs. exclusionary policies	1. Description of either shooting (low fair play threat) or steeplechase at the Summer Olympics 2. Different hypothetical policy descriptions	Shooting / steeplechase	Policy proposed by the IOC as either include trans athletes based on gender identity (inclusion), include trans athletes based on sex assigned at birth (partial), do not allow trans athletes to participate (exclusion)
Paper C: Mind the gap	MtF vs. FtM athlete	Athlete described as either going from male/men’s team to female/women’s team or vice versa	Archery	Individual athlete’s request to change competition categories

4.4 Considering generalizability

Two broad dimensions of generalizability are relevant for interpreting the findings of this dissertation. The first concerns geography: to what extent can results derived from U.S.-based survey data be extended to other national contexts? The second dimension concerns policy scope: to what extent can findings from the domain of sports policy be generalized to other areas of trans-related legislation? While important contextual limitations persist, I argue that several of the core mechanisms identified in this dissertation, especially essentializing beliefs about sports categories and concerns over fairness in a

competition, are general enough to extend beyond both the U.S. context and the specific policy domain of sports.

At a fundamental level, many of the assumptions examined in this project are not uniquely American. Individuals across diverse societies are likely to share the belief that sex-segregated sports categories are natural, and that elite competition derives its value from principles of fairness and equal opportunity. The broader logic underlying resistance to trans inclusion, specifically the protection of a naturalized social order, extends beyond sports and may apply to other gender-salient policy areas where sex segregation is regarded as self-evident. Although such domains are becoming less common with increasing gender equality, several areas remain strongly sex-coded, including reproductive rights, prisons, and certain areas of healthcare.

A more global context: geographical generalizability

To comment on the generalizability of the studies' geography, I examine what is specific to the U.S. context that may limit the applicability of the findings to other settings. I argue that while certain institutional features of the U.S. context are distinctive, they are unlikely to significantly alter the underlying beliefs about the nature of sports.

As discussed in the contextualizing chapter, sports governance in the U.S. is characterized by a relatively high degree of decentralization and involvement with state governments and local institutions. This differs from many European contexts, where sports regulation is more centralized and hierarchical, and where there are fewer cases of direct funding restrictions tied to trans-related legislation. As a result, anti-trans sports policies have been more numerous and politically salient in the U.S. than in most other Western democracies, with the partial exception of the United Kingdom following recent changes to equality law (Chalson et al., 2026). This heightened salience may amplify public engagement with the issue in the U.S. context.

At the same time, the logic of sex segregation at the elite level of sports is close to universal. Across international competitions, particularly at the Olympic level, direct competition between men and women within the same bracket is exceedingly rare. While mixed-sex formats exist (mixed doubles in racket sports, mixed relays in swimming and athletics), they typically preserve sex differentiation rather than eliminate it. Equestrian events remain the only Olympic sports in which men and women compete directly. Other sports often rely on an "open" category alongside a women-only category, as in professional snooker. Consequently, audiences around the world are accustomed to viewing sports as a sex-segregated domain, particularly at higher levels of competition.

Given this near-universal exposure to sex segregation in sports, it is reasonable to expect that lay perceptions of sports as a gender-salient context extend beyond the U.S. Regardless of national policy debates or media salience surrounding trans inclusion, most casual consumers of sports are likely to understand athletic competition as structured around binary sex categories. Therefore, the key perceptual and cognitive foundations underlying responses to the experimental vignettes are not uniquely tied to the U.S. context.

A related concern involves differences in the role of sports in everyday cultural life. The U.S. is notable for its extensive interscholastic and collegiate sports infrastructure, including substantial financial investment, media attention, and scholarship opportunities. This differs markedly from many European countries, where youth and elite sports are typically organized through club systems external to educational institutions (Harris & Jedlicka, 2020). This means that the collegiate archery team described in the vignettes used in Papers A and C may be less intuitive for European audiences.

However, this limitation applies primarily to interscholastic contexts. At a broader level, sports remain a widely shared social institution across countries. Mega-events such as the Summer Olympics attract global audiences and are often integrated into national narratives of prestige and excellence (Grix & Houlihan, 2014). While the specific competitions that dominate public attention may vary, for example, Asian Games are more popular in East Asia, the general belief that sports are valuable, socially beneficial, and worthy of public investment is widespread. Thus, while some institutional details are U.S.-specific, societal engagement with sports as a meaningful domain is not.

In summary, findings that rely specifically on interscholastic sports structures should be generalized with caution outside the U.S. context. Beyond this narrow domain, there is little reason to expect systematic cross-national differences in perceptions of sports as sex-segregated and gender-salient.

Measurement and sample generalizability

There are two further questions concerning the methodologies employed in this dissertation: a) whether the variables and the way they were operationalized are uniquely tied to the U.S. context, and b) the overall implications of relying on an online sample, including whether online samples are representative of the targeted population. I start by discussing the generalizability of measurement-related factors.

While determining whether a given measure performs equivalently across cultural settings would require dedicated measurement validation studies, it is still useful to consider whether the constructs being measured and their operationalizations are likely to be culturally specific or more broadly applicable. Most of the key post-treatment measures used in this dissertation are not

exclusive to the United States with respect to the underlying constructs they capture. Measures such as support for a policy, support for an individual athlete's request, general support for trans individuals changing competition categories, perceptions of sports category immutability, assumed competitive advantage, and evaluations of fairness and discrimination are context-specific but not inherently culture-bound. Individuals in non-U.S. contexts may also hold policy opinions, perceive social categories as fixed or malleable, and recognize differences in athletic performance between groups. Therefore, these post-treatment measures are conceptually comparable across cultural contexts, although empirical distributions may differ.

Several pre-treatment measures, including sexism, social dominance orientation, and sports involvement, have previously been validated in cross-cultural research and shown to function reliably in a variety of national settings. Other measures, such as perceived importance of physical traits in sports and the T-KAB scale, lack formal validation outside the U.S. context. However, since these measures do not reference U.S.-specific institutions, policies, or historical events, there is minimal reason to anticipate significant barriers to their application in other cultural contexts at the level of construct validity.

The only pre-treatment measure that explicitly incorporated U.S.-specific content was media exposure, which utilized examples tailored to the American media landscape. Similarly, the topic exposure measure was designed to assess respondents' familiarity with themes particularly salient in the current U.S. political context. These measures were included due to the heightened visibility of trans inclusion in sports in U.S. public discourse, rendering prior exposure to elite rhetoric and media coverage a potentially significant confounding factor. Although these measures would require adaptation for use in other contexts, their inclusion does not compromise the broader generalizability of the dissertation's core theoretical claims.

Moving to the question of generalizability of the sampling strategy, it is important to distinguish between two analytically separate issues: the mode of data collection (online versus offline surveys) and the representativeness of the sample (probability-based versus non-probability-based sampling). Each dimension presents distinct concerns and implications for inference.

Regarding representativeness, the dissertation utilizes non-probability online samples. Existing research indicates that, although non-probability online samples may differ from probability samples in baseline attitudes and demographics, they generally yield comparable relationships between variables and similar experimental treatment effects, especially in survey experiments (Mullinix et al., 2015; Coppock, 2019). Therefore, while population-level prevalence estimates from these data require cautious interpretation, the

theoretical relationships and conditional patterns identified in the analyses are likely to be generalizable across sampling frames.

Concerning survey mode, online samples may systematically differ from offline samples. Online surveys often underrepresent individuals with limited internet access or lower political engagement (Karp & Lühiste, 2016; Blom et al., 2016), potentially affecting baseline distributions of attitudes and exposure to political discourse. However, this underrepresentation does not necessarily mean that these respondents would respond identically to experimental treatments or theoretical mechanisms. Additionally, online survey environments provide methodological advantages for research on socially sensitive and morally contested topics, such as reduced social desirability pressures and increased perceived anonymity, which can encourage more candid responses (Zhang et al., 2017; Kocjan et al., 2023).

Online data collection was selected for both practical and methodological reasons, such as feasibility, cost-effectiveness, and the capacity to recruit large and diverse samples for experimental designs. To ensure data quality, the studies implemented standard quality-control procedures, including attention checks, screening for satisficing behavior, and response-time monitoring. These measures, together with platform-level quality controls, aimed to minimize low-quality responses and enhance internal validity. Although all sampling strategies have limitations, the integration of experimental design, quality controls, and robustness checks strengthens the validity of the theoretical inferences drawn from the data.

Sports policy generalizability

In addition to considerations of geographic scope, this dissertation identifies two further issues related to generalizability. The first concerns the extent to which insights from sports policy debates can inform other areas of trans policy, including healthcare, education, incarceration, and anti-discrimination law. The second addresses whether findings from specific sports contexts, such as archery, shooting, or steeplechase, are applicable to other athletic competitions. To address the first issue, I consider the theoretical relevance of my arguments for scholars of trans policy and public opinion beyond the realm of sports. Regarding the second, I argue that variation across sports is primarily an empirical matter and does not significantly diminish the broader theoretical implications of the research.

Sports is not the sole policy domain organized around formally segregated gender categories, nor is it unique in making concerns about fairness, protection, or vulnerability explicit. Other gender-segregated institutions, such as prisons, school dormitories, shelters, and certain educational environments, are also structured by assumptions regarding categorical differences between

men and women. In these settings, as in sports, sex-based separation is typically regarded as natural, necessary, and normatively justified, rather than as an exceptional or controversial arrangement (Ridgeway, 2011). Consequently, debates about trans inclusion in these contexts often invoke similar justificatory logics, including appeals to fairness, safety, and protection of women as a vulnerable group.

Similarly, sports is not the only context in which perceived advantages and competitive asymmetries hold political significance. Beyond athletics, assumptions about sex-based differences frequently inform judgments in areas such as employment, education, and social development (Levanon & Grusky, 2016; Moskos, 2020). For instance, employers may engage in statistical discrimination based on beliefs about the average abilities or traits of men and women (Galos & Coppock, 2023), and educational discourse often portrays adolescent boys and girls as developmentally unequal, thereby justifying differential treatment (Stentiford et al., 2025; Musto, 2019). Although these contexts are not competitive in the same manner as sports, they nonetheless employ comparable reasoning regarding group-based differences and the legitimacy of interventions to address perceived advantages or disadvantages. This indicates that the underlying logic explored in this dissertation, that is, how individuals reason about categorical difference, fairness, and legitimacy, applies beyond the narrow confines of sports policy.

Regarding trans policy specifically, generalizability is most likely in domains that are both gender-salient and structured by hierarchical assumptions about men and women. Policies that characterize women's spaces as protected or vulnerable are especially prone to reproducing the patterns theorized in this dissertation. In these contexts, distinctions between trans men and trans women are likely to be more significant than in policy areas where gender categories are less institutionally entrenched. Conversely, mechanisms related to competitive fairness may be less transferable to non-competitive domains, although related concerns about advantage and legitimacy may persist in a diminished form.

With respect to the selection of sports disciplines, variation across sports primarily influences the empirical magnitude of support rather than the underlying theoretical mechanisms. In general, competitions perceived as relying on strength, speed, or endurance are more likely to elicit concerns about unfair advantage, whereas those emphasizing precision or technique are less likely to be seen as threatening fairness norms. Compared to the selected sports of archery, shooting, and steeplechase, resistance to trans inclusion is likely to be greater in more culturally prominent competitions, and the distinctions between trans men and trans women could become more pronounced. This does not pose a challenge to the fundamental mechanisms

tested in the dissertation; rather, the overall levels of support should be generalized to other disciplines with caution.

Team sports may introduce additional dynamics by shifting the focus from individual competition to collective outcomes, cohesion, or shared risk. Nevertheless, as long as gender categories remain central to the organization of competition, the core theoretical insights concerning essentialism and fairness justifications are expected to remain applicable. In this respect, sports function not as an isolated or exceptional case but as a valuable context for examining broader logics of social categorization and policy justification.

In sum, while the empirical details and public responses may vary across policy domains and specific sports, the theoretical frameworks outlined in this dissertation offer valuable insights into debates about trans inclusion more broadly. By highlighting how appeals to categorical difference, fairness, and legitimacy structure attitudes and policies, the research underscores the relevance of sports as a lens for examining similar dynamics in other gender-salient and hierarchically organized contexts. Ultimately, the findings suggest that the mechanisms explored here are significant not only for sports policy but also for a wider range of institutional debates in which gender and fairness remain central concerns.

4.5 Chapter summary

In this chapter, I have presented a comprehensive overview of my methodological choices, focusing on the rationale for survey experiments, the selection of sports and policy domains, and the considerations guiding the operationalization of key variables. I have situated the methodological approach within the discipline of political science and the field of public opinion research, thereby commenting on the strengths of experimental methods for investigating policy views and considering their possible limitations.

A key contribution of this chapter is the discussion of how specific sports used in the survey experiments, i.e., archery, shooting, and steeplechase, were selected for their analytical value in testing theoretical questions about fairness, attitudes, and advantage, rather than out of interest in these specific disciplines. The chapter also clarifies the necessity of both individual-level (athlete-focused) and policy-level (broad IOC policy) operationalizations to capture the complexity of public opinion on trans inclusion. Considerable attention is given to generalizability, both geographically and in terms of the broader applicability of the findings to other domains of trans policy.

As with all empirical research, the findings of this dissertation are subject to limitations regarding generalizability. However, I contend that the core beliefs examined in the project, i.e., beliefs about immutable categories, fairness, and category transgression, are neither uniquely American nor limited to the

specific sports policy domain. Although institutional details and elite cue structures differ across contexts, the underlying mechanisms identified are likely to operate in a variety of settings. These patterns may be more pronounced in particularly gender-salient contexts, which highlights the possible relevance of the findings for a broader range of political scientists (and, hopefully, social scientists at large).

4.6 Looking ahead

Having elaborated on the general context, central puzzle, theoretical framework, and methodology in the preceding sections, I will now report the findings from each paper. The next three chapters present empirical results from the survey experiments and connect them to the arguments developed in the individual papers and throughout this summary.

Each of the following three chapters focuses on a single paper and follows a consistent summarizing structure. First, each chapter addresses a specific puzzle and research question and supplements earlier general discussions by reiterating key claims or introducing additional data to clarify the paper's focus. Next, I present the hypotheses and briefly outline the relevant research design features necessary for understanding the results. I highlight key empirical findings, aiming to narrate the results in a coherent manner rather than strictly adhering to academic journal conventions. Finally, each chapter concludes with a discussion that connects the empirical findings to the theoretical considerations introduced at the beginning of the chapter and, where appropriate, relates these insights to broader theoretical claims made earlier in the summary.

The findings presented in this summary include those reported in the original papers and additional considerations or data that could not be incorporated in the manuscripts. While I have aimed to make each paper-based chapter self-contained to enable readers to understand the main arguments and logic independently, I recommend consulting the original papers alongside these chapters, especially for those interested in more detailed data analysis.

Chapter 5: Back to basics: framing, essentialism, and advantage

In this chapter, I focus on Paper A and summarize its premise and findings. Generally, the paper investigates whether framing, with regards to the way sports categories are discussed using “sex” or “gender” terminology, can shape public opinion on trans inclusion in sports.

The paper is motivated by an ongoing tension over the meaning of “sex” and “gender” in public discourse, which is shaped both by elite rhetoric and activists’ claims. Debates over trans inclusion have increasingly relied on how these concepts are defined and used, with opposing sides promoting incompatible understandings of what sex and gender are and what political consequences should follow from those definitions. On the one hand, conservative actors have attempted to define “sex” as an immutable, biologically determined category and to treat “gender” as a subjective construct, a distinction that was evident in debates over bathroom legislation (Wuest, 2019). On the other hand, pro-trans activists and advocates have emphasized gender identity as a constitutive aspect of sex, arguing that rigid biological definitions fail to capture lived experience (Ben-Asher, 2023).

This discursive tension was formalized at the elite level in January 2025, when President Trump issued an executive order titled “Defending Women From Gender Ideology Extremism and Restoring Biological Truth to the Federal Government.” The order directs federal agencies to abandon the use of “gender” in favor of “sex,” which is defined as immutable and biologically based. Although this action may be interpreted as an attempt to resolve a persistent semantic conflict through institutional means, it also prompts a broader question for public opinion research: does this elite-driven linguistic distinction meaningfully resonate with the public, and can it shape attitudes towards contested trans rights issues? In the paper, I consider more specifically what changes the use of “gender” or “sex” might prompt in public opinion on trans inclusion in sports.

5.1 Executive order, “sex” vs. “gender”, and lay theories

Paper A is grounded in the tension between elite discourse and public understandings of sex and gender. Political elites, particularly in conservative movements, have increasingly employed the sex/gender distinction to frame trans inclusion as incompatible with “biological reality” (Wuest, 2019; Graff &

Korolczuk, 2021). In contrast, research on lay theories of gender indicates that public conceptualizations of sex and gender are neither uniform nor internally consistent. Some studies report that individuals associate “sex” with fixed, binary, and biological characteristics and perceive “gender” as more fluid and socially constructed (Lloyd & Galupo, 2019; Troncoso et al., 2023; Schudson et al., 2019). Other research demonstrates that individuals often hold mixed or “hybrid” beliefs combining essentialist and constructivist perspectives (Schudson & Gelman, 2023; Machery & Faucher, 2020).

This ambiguity raises an important interpretive question regarding the executive order. Specifically, is the language shift from “gender” to “sex” intended to persuade the public by reshaping conceptualizations of identity categories, or does it primarily serve a mobilizing function by reinforcing an existing anti-gender political agenda without altering underlying beliefs? Although Paper A does not directly adjudicate between these interpretations, it empirically tests a central assumption that shifting from “gender”-based to “sex”-based language should influence public opinion; in this case, public support for trans rights. The RQ of the paper is: *Are people more supportive of trans athlete inclusion when the sex/gender category is framed as gender-based rather than sex-based? Why (not)?*

Hypotheses

Building on research that links gender essentialism to trans prejudice and policy attitudes (Roberts et al., 2017; Wilton et al., 2019; Hatch et al., 2022), Paper A poses a set of pre-registered hypotheses. Fundamentally, the study was hypothesized to yield different treatment effects, whereby support for trans inclusion would be greater in the “gender” condition than in the “sex” condition (H1). Two mechanisms are proposed and tested, one based on category immutability and another on perceived advantage. Based on the first mechanism, it is expected that “sex”-based framing will activate more essentialized views of sports categories, increasing beliefs that these categories are natural, fixed, and biologically determined. Consequently, greater essentialization is expected to reduce support for trans athlete inclusion (H2). Based on the second mechanism, respondents exposed to the “sex” condition were expected to assume that AMAB athletes hold a performance advantage over AFAB athletes, increasing the assessment of perceived advantage. As a result, greater perceived advantage is expected to reduce support for trans athlete inclusion (H3). Finally, the paper proposes that category immutability and advantage perceptions, while conceptually distinct, should be positively associated (H4).

5.2 Research design

To test these hypotheses, Paper A utilizes a preregistered vignette-based survey experiment with a sample designed to be nationally representative on key demographics of U.S. adults ($N = 1686$, 51% women, $M_{\text{age}} = 46.2$, $sd = 16$). Respondents were recruited online via Prolific and compensated for completing a 10-minute survey. Participants evaluated a collegiate archery athlete's request to change competition categories, with random assignment to either a "sex"-based or a "gender"-based framing. Further discussion of sports selection is provided in the Methodology chapter.

Measures

The survey included five pre-treatment (news consumption and topic attention, trans attitudes [T-KAB], political ideology [left-right scale], gender identity centrality, the perceived importance of traits in sports) and four post-treatment measures. These measures are described in detail in the original paper. The following section provides some key commentary and elaborates on the dependent variables.

It is important to note that some pre-treatment measures differed depending on whether participants were assigned to the "sex" or the "gender" condition. This approach was intended to maintain consistency in language and increase the frequency of treatment exposure, thereby improving the treatment's strength. Additionally, the design allowed for examination of whether introducing a differently formulated question would affect responses, specifically whether there would be differences in scores between questions using "gender" versus those using "sex" within a respondent.

Post-treatment measures included support for the athlete's request, the advantage questionnaire, the category immutability battery, and general support for trans individuals changing categories.

Support for trans inclusion was measured on a scale from 1 (strongly against) to 6 (strongly in favor) via the following question: "On a scale from "Strongly against" to "Strongly in favor", please show where you stand on Alex's request to switch categories."

Perceived advantage included three statements on which respondents were supposed to indicate their opinion, using a scale from 1 (strongly disagree) to 6 (strongly agree). The main advantage value was based on the statement, "There is a significant difference between males' and females' archery results". The paper also reports the results of two follow-up statements that clarify the direction of perceived performance differences, i.e., whether it is men outperforming women or women outperforming men.

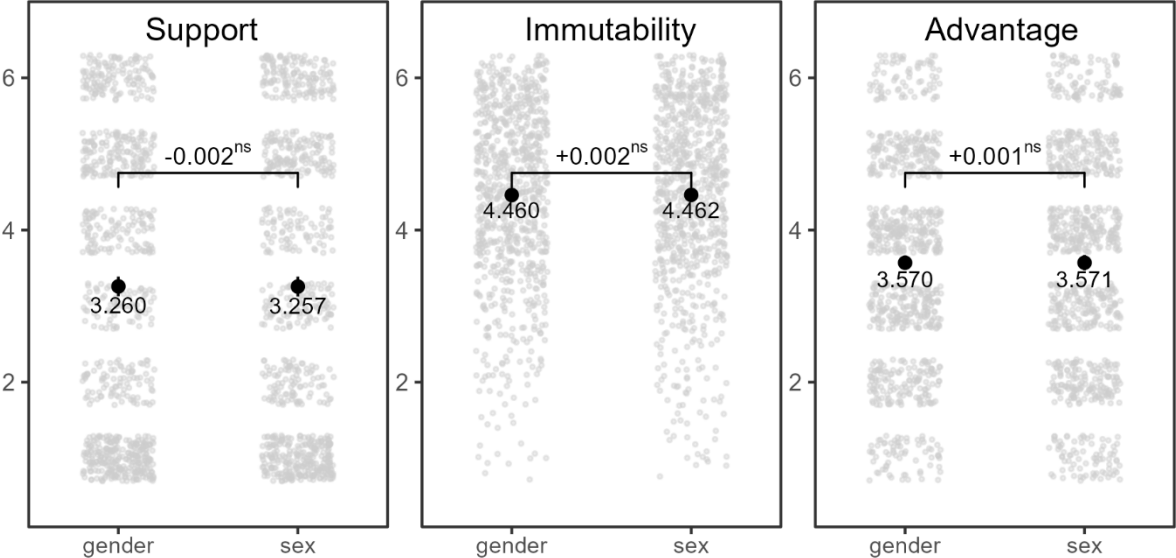
Category immutability beliefs were measured using six statements that respondents rated on a scale from 1 (strongly disagree) to 6 (strongly agree). The items reflected various beliefs one might hold if one believes that categories in sports are determined by biology, reflecting natural reality, and have moral weight, e.g., “The sex/gender categories in sports are rooted in nature” and “It is important to keep people in the two sex/gender categories separate” (Cronbach’s $\alpha = .893$).

General support for trans athletes was measured using the following question: “In general, what is your opinion on transgender athletes requesting to change competition categories?” Similar to support measure, it was rated using a scale from 1 (strongly against) to 6 (strongly in favor).

5.3 Findings

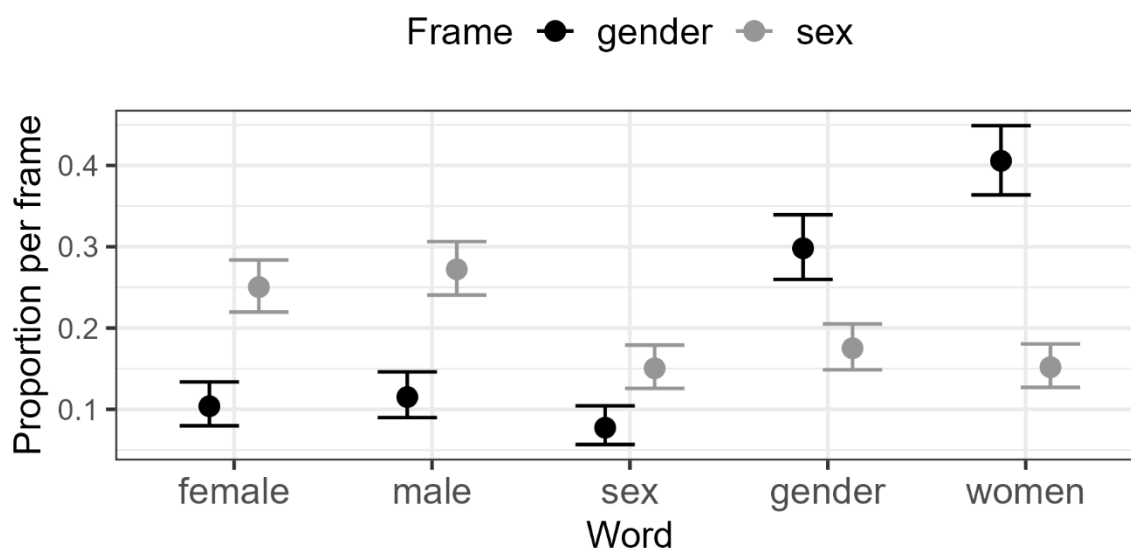
Contrary to the primary expectations of the study, the framing manipulation did not yield statistically significant differences in any primary outcome variables. Support for trans athlete inclusion, perceived category immutability, and perceived competitive advantage were similar across the “sex”-based and the “gender”-based conditions. Robustness checks, including moderation analyses across key predispositions and minimal detectable effect calculations, indicate that these null results are unlikely to result from weak treatment implementation or inadequate statistical power. Figure 1 displays post-treatment measures by framing condition and demonstrates the overall consistency of responses across experimental groups.

Figure 1: Post-treatment measures by the framing condition, Paper A



Although framing did not affect attitudinal outcomes, the experiment did produce evidence of priming. Analysis of open-ended responses, visualized in Figure 2, shows that respondents systematically adopted the terminology presented in the vignette. Terms such as “male,” “female,” and “sex” appeared more frequently in the sex-based condition, while “gender” and “women” were more common in the gender-based condition. Although this does not serve as a formal manipulation check, it suggests that participants noticed and processed the framing manipulation, even if this did not result in changes to evaluations or beliefs.

Figure 2: Frequency of selected words per treatment



Following the test of H1-H3 that yielded null results, H4 with focus on the relationship between advantage and immutability was tested. Furthermore, a regression analysis was conducted using category immutability, perceived advantage, and other available pre-treatment measures as predictors of support.

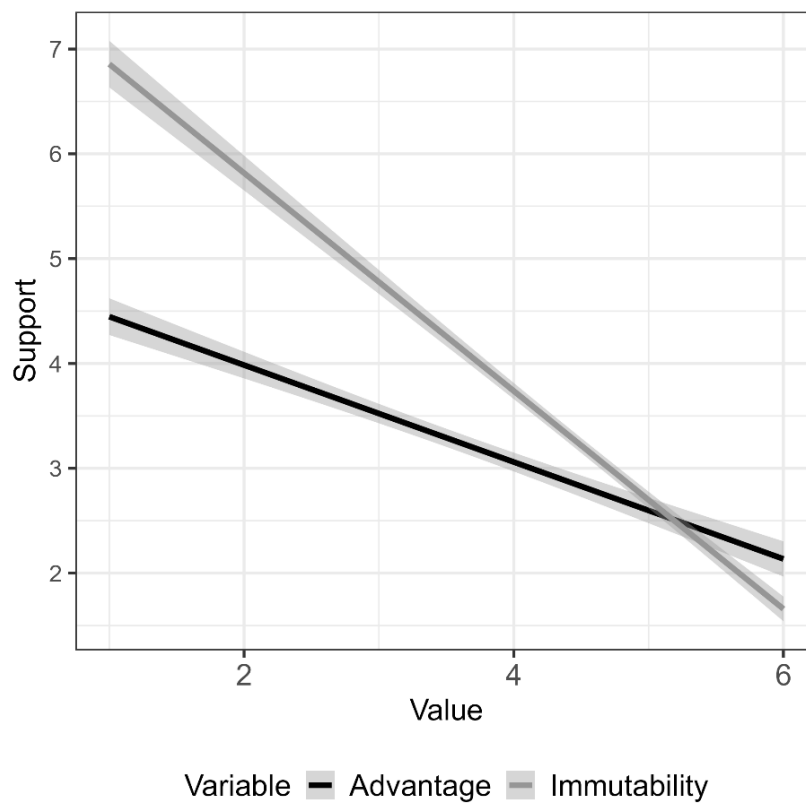
The analysis revealed that the two constructs are positively correlated ($r = .36, p < .001$), reflecting a meaningful but not redundant relationship. Regression analyses indicate that both category immutability and perceived advantage are strong predictors of support for trans inclusion. Higher perceived immutability and stronger assumptions of male advantage are each associated with significantly lower support for inclusion. Table 2 reports standardized estimate and fit parameters for the regression model that included all available pre-treatment controls. Figure 3 visualizes the linear relationship between observed values of advantage or immutability and support. Together, the results suggest that even in a sport such as archery, where respondents on average did not perceive large performance differences, essentialist beliefs about categories exert substantial explanatory power.

Table 2: Model fit parameters, Paper A

Predictors	Std. Estimates	Support	
		Std. CI	p
(Intercept)	0.19	-0.01 – 0.67	<0.001
Category immutability	-0.39	-0.43 – -0.35	<0.001
Advantage	-0.11	-0.14 – -0.07	<0.001
Observations		1684	
R ² /R ² adjusted		0.547 / 0.541	

Note: The following controls were included in the model: treatment conditions, age, gender, marriage, ethnicity, sexuality, ideology, T-KAB, news consumption, attention to LGBTQ news, identity centrality.

Figure 3: Linear relationship between observed variables of advantage/immutability and support

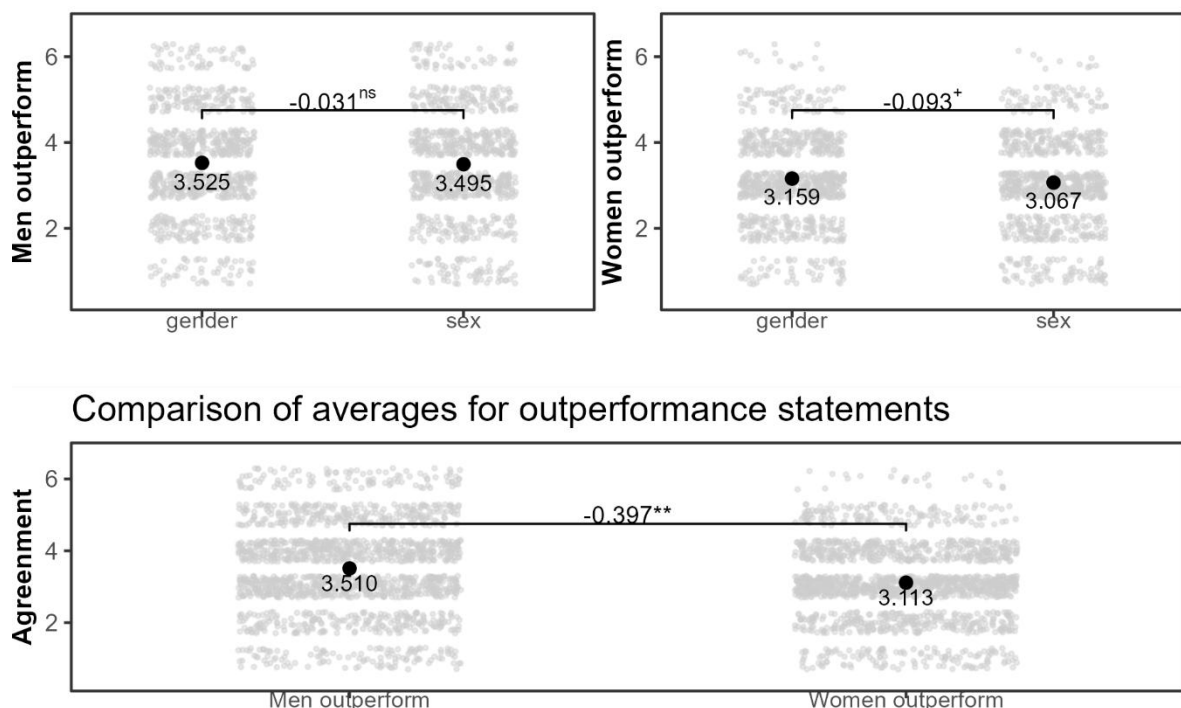


Note on advantage

I find it relevant to report here on the advantage measure specifically, as it relates closely to the claims made in the dissertation. Since these results are not reported or discussed at length in Paper A, I spend a bit more time talking about them here.

The main measure of perceived advantage consisted of one question formulated as difference in performances between men and women. However, two additional measures were implemented: following the general question, respondents were asked to rate their agreement with the statements that clarified the relationship between performances, i.e., whether men outperform women, or women outperform men. While framing did not produce meaningful differences across conditions, a notable asymmetry was observed: average agreement with the statement that men outperform women was significantly higher than agreement with the reverse statement. Figure 4 depicts averages pertaining to those two additional advantage-related questions. The bottom plot of the figure compares results across two separate questions that all respondents completed. Respondents were not made to choose between men and women in light of outperformance statements.

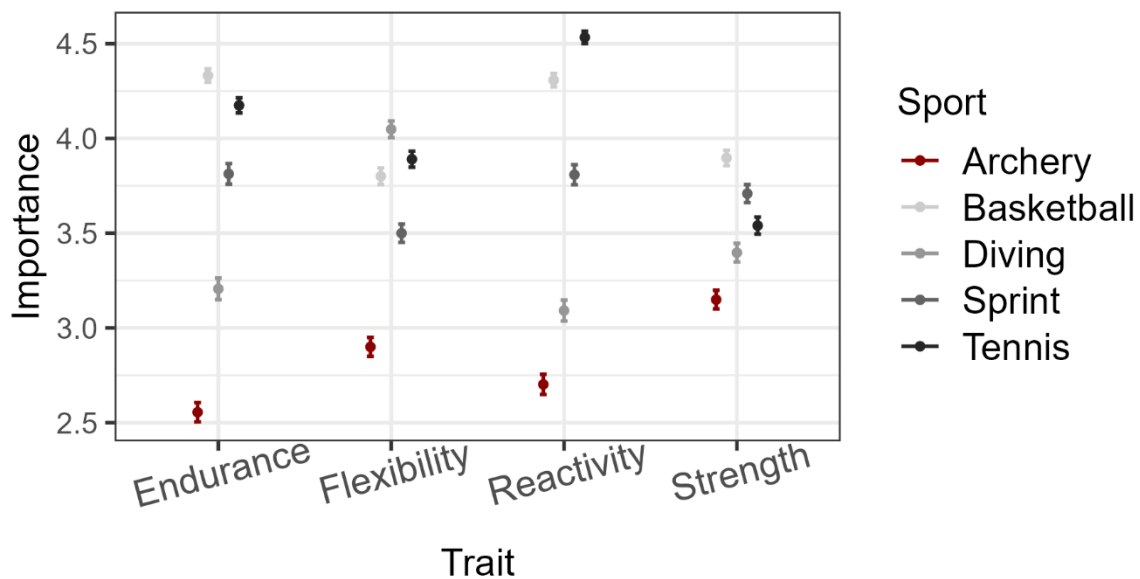
Figure 4: Means and distribution of answers for additional measures of advantage, Paper A



Importantly, the advantage pattern persisted even though the vignette included a constructed results table showing identical cumulative performances for men and women. These findings suggest that respondents either discounted the provided performance information or considered it insufficient to override existing beliefs about male athletic advantage.

One possible explanation for this pattern is that respondents may not perceive archery as entirely neutral regarding physical traits. However, analysis of a pre-treatment measure assessing the perceived importance of various athletic traits offers limited support for this interpretation. As can be seen in Figure 5, the importance of strength, endurance, flexibility, and reactivity was lower for archery compared to other, non-precision-based sports. This suggests that although respondents can differentiate between sports based on skill requirements, these distinctions do not necessarily lead to revised beliefs about gendered performance differences.

Figure 5: Importance of traits across sports



5.4 Discussion

Paper A yields three central insights. First, the results indicate that describing trans athlete inclusion using either “sex” or “gender” terminology does not significantly influence public opinion. Respondents recognize and replicate the language presented in the vignette, yet this linguistic variation does not lead to substantive perceptual or evaluative changes. Supplementary evidence from gender identity centrality measures, reported at length in the paper, further suggests that, without explicit prompts, respondents do not clearly differentiate between sex and gender as identity constructs.

Second, the findings highlight category immutability and perceptions of competitive advantage as primary factors driving opposition to trans inclusion. Respondents who perceive sports categories as natural, fixed, and biologically determined, and who believe men consistently outperform women are significantly less likely to support inclusion of a trans athlete. These associations remain robust after control for political ideology, demographic characteristics, and, notably, attitudes towards trans individuals. The continued significance of immutability beliefs, even when affective group-level positions are considered, supports the theoretical proposition that non-attitudinal factors play a critical role in support for trans inclusion, with essentialist beliefs serving as a distinct and influential explanatory factor.

Third, the results demonstrate the persistence of intuitive assumptions regarding competitive advantage. Many respondents inferred a competitive advantage even when the vignette clearly indicated that no such advantage was present. This inference occurred even though respondents on average did not rate physical traits as especially important for success in the sport. Collectively, these findings indicate that beliefs about male athletic superiority are not primarily based on careful assessments of sport-specific requirements or empirical performance data. Rather, they reflect deeply rooted intuitions that serve as a form of common knowledge about sports and gender.

In sum, Paper A demonstrates that framing alone does not meaningfully shift public opinion on trans inclusion in sports. Although language influences how individuals discuss the issue, it does not significantly alter the foundational beliefs underlying opposition. These beliefs are rooted in essentialized conceptions of sex, gender, and athletic ability, which remain highly resistant to both semantic reframing and contradictory performance evidence.

Chapter 6: Mitigating advantage: fair play threat and trans attitudes

This chapter revisits Paper B, which shifts the focus from linguistic framing and essentialist beliefs to the role of fair play concerns in shaping public support for trans inclusion in sports. Rather than treating perceptions of competitive advantage as a static belief, Paper B theorizes advantage as a context-dependent concern that emerges when inclusion is perceived to threaten the integrity of a competition. The central contribution of the paper is the conceptualization and experimental manipulation of fair play threat, defined as the extent to which the inclusion of trans athletes is perceived to undermine the core normative principle of fairness in sports.

6.1 From advantage to fair play threat

As discussed in detail in Chapter 3, trans inclusion in sports can be perceived as a threat to the fair play principle. Both empirical and theoretical scholarship has used this argument to explain resistance to trans inclusion or to justify exclusionary policies. The notion that certain individuals, such as trans women, may possess advantages over others, such as cis women, is central to claims about protecting competitive fairness. However, the theoretical section of Chapter 3 suggests that the public may hold different intuitions regarding potential advantages, and that institutional decision-making is likely influenced by skill-focused considerations that may vary across different competitions.

To reiterate, the simplified premise of some sports ethics scholarship is as follows: sports competition is meaningful only insofar as it is fair; the ideal competition should have equivalent participants who are being tested on their skill. What is great about sports is the variety of competitions and skills they test. What if a skill tested in competition has nothing to do with physiological differences between AMAB and AFAB individuals that usually come to mind? Then the fair play principle would not be threatened by trans inclusion. In other words, if skill is not dependent on physiology, which is commonly believed to be different between men and women, would people base their opinion on attitudes towards trans people?

Within this framework, opposition to trans inclusion is not necessarily rooted in stable beliefs about biology or performance but rather in situational judgments regarding the fairness of competition. When inclusion is perceived

as compatible with fair play, support is expected to be driven primarily by general attitudes towards trans people. Conversely, when inclusion is perceived to threaten fairness, even individuals with relatively positive attitudes may express opposition. This distinction enables the analysis to move beyond the dichotomy of “prejudice versus fairness” and instead examine how fairness concerns interact with intergroup attitudes.

This logic builds on Shaw and colleagues (2024), who suggest that resistance to trans inclusion may stem less from negative attitudes towards trans people and more from concerns about fairness. Paper B extends this claim by specifying the conditions under which fairness concerns are likely to be activated.

Unpacking “fair play”

The concept of fair play is central to both public discourse and sports ethics. In normative accounts of sport, competition is meaningful only when it allows for a fair comparison of athletic skill. This idea is closely related to the equivalency principle described by sports philosophers: competitions are structured to ensure that participants are sufficiently comparable in the skills being tested, so that outcomes reflect merit rather than arbitrary advantage.

Sex-segregated categories are commonly justified as mechanisms for preserving this equivalency, based on the assumption that physiological differences between men and women would otherwise distort competition. However, sports vary substantially in the types of skills they test. When a competition primarily rewards precision, concentration, or technical consistency rather than strength, speed, or endurance, the rationale for sex-based segregation becomes less clear. In these cases, the inclusion of trans athletes may pose little or no threat to fair play.

Paper B leverages this variation across sports to experimentally manipulate fair play threat. Shooting is theorized as a low fair play threat competition because performance is weakly linked to the physiological traits commonly believed to differentiate men and women. In contrast, steeplechase is theorized as a high fair play threat competition due to its reliance on endurance, speed, and physical strength. By comparing support for trans inclusion across these two contexts, the analysis isolates the role of fairness concerns independent of general attitudes towards trans people.

Importantly, the study examines these dynamics in the context of a broad policy proposal regulating trans participation at the Olympic level. This design shifts attention away from individualized assessments of athletes and toward generalized judgments about the legitimacy of inclusion as a principle, thereby foregrounding group-based evaluations and normative reasoning about sports.

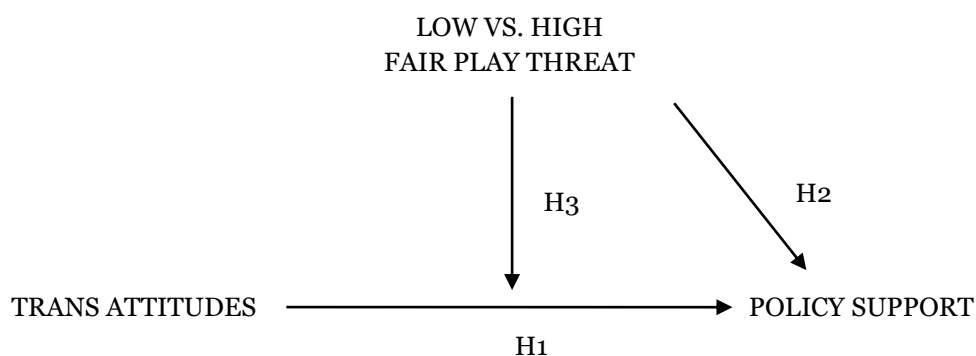
6.2 From individual to general policy support

In addition to varying the competitive context, Paper B distinguishes between different types of policies regulating trans participation. The underlying premise is that fair play concerns are not uniform across policy solutions. Inclusionary policies, which allow trans athletes to compete according to their gender identity, are most likely to be perceived as threatening fairness in high-threat competitions. Partial policies, which require participation based on sex assigned at birth, are often framed as compromises that preserve fairness while avoiding full exclusion. Exclusionary policies, although normatively extreme, eliminate fairness concerns by removing trans athletes from competition.

By crossing competition type with policy type, the analysis examines how fair play threat shapes support for inclusion, partial policy, and exclusion, as well as how these effects interact with respondents' pre-existing group-level attitudes towards trans people. As such, the separate hypotheses were formulated for each type of policy.

Since the theoretical considerations in the paper assumed a moderating effect, the hypotheses followed a general logic of first finding that X predicts Y, followed by investigation into M predicting Y, and finally a full moderation analysis. Figure 6 depicts the proposed hypotheses. Each hypothesis had three variations based on the policy condition (H1a-H3a for inclusionary policy, H1b-H3b for partial policy, and H1c-H3c for exclusionary policy). See the paper for a full overview of the hypotheses.

Figure 6: Paper B model



6.3 Research design

To test the hypotheses, Paper B employs a 2×3 vignette-based survey experiment, manipulating fair play threat (low vs. high) and policy type (inclusionary, partial, exclusionary), using a nationally representative sample ($N = 1218$, 53% women, $M_{\text{age}} = 48.42$, $sd = 16.97$). Respondents were recruited through Lucid Theorem, and the survey was administered via Qualtrics. Participants received compensation in line with Lucid's standard practices. The overall structure of the survey as well as key information about use measures are reported in Table 3.

Table 3: Survey structure, Paper B

Stage 1: Informed consent and pre-treatment measures		
Scale	Concept	Cronbach's α
Ambivalent Sexism Inventory (ASI; Glick & Fiske, 1996)	Benevolent and hostile sexism	.81
Multidimensional Sport Attitude Scale (MSAS; Yakut et al., 2016)	Involvement with sports	.90
Trans Attitudes, Knowledge, and Beliefs (T-KAB; Clark & Hughto, 2020)	Attitudes towards and beliefs about trans individuals	.97
Social Dominance Orientation (SDO; Ho et al., 2015)	Beliefs about social hierarchies	.83
Support	Opinion on whether the proposed policy should pass	Not relevant
Policy fairness	Whether policy is fair to trans/cis athletes	Not relevant
Policy discrimination	Whether policy is discriminatory towards trans/cis athletes	Not relevant

**Stage 2: Random assignment to sport condition (steeplechase OR shooting)
and policy condition (inclusion OR partial OR exclusion)**

[steeplechase]	The 3000-meter steeplechase competitions at the Summer Olympic Games require competitors to race against each other in an obstacle race over a 3 km distance, with a small pool of water placed after the last hurdle. The skills the competition tests are speed and endurance. Traditionally, men and women compete in separate categories. Mixed competitions are not allowed.	[shooting]	The 10-meter shooting competitions at the Summer Olympic Games require competitors to <i>fire at a stationary target 10 meters away using an air rifle</i> . The skills the competition tests are <i>precision and composure</i> . Traditionally, men and women compete in separate categories. Mixed competitions are <i>allowed for teams</i> .
[inclusion]	The International Olympic Committee is currently considering a policy that would regulate the participation of transgender athletes in the competition. Under the proposed policy, transgender individuals <i>will be allowed to participate according to their current gender identification</i> . This would imply that <i>transgender men can compete with men and transgender women can compete with women</i> .	[partial]	The International Olympic Committee is currently considering a policy that would regulate the participation of transgender athletes in the competition. Under the proposed policy, transgender individuals <i>will only be allowed to participate according to their sex assigned at birth</i> . This would imply that <i>transgender men can compete with women and transgender women can compete with men</i> .
[exclusion]			The International Olympic Committee is currently considering a policy that would regulate the participation of transgender athletes in the competition. Under the proposed policy, transgender individuals <i>will not be allowed to participate in the competition under any circumstances</i> . This would imply that <i>transgender men and transgender women cannot compete in any categories</i> .

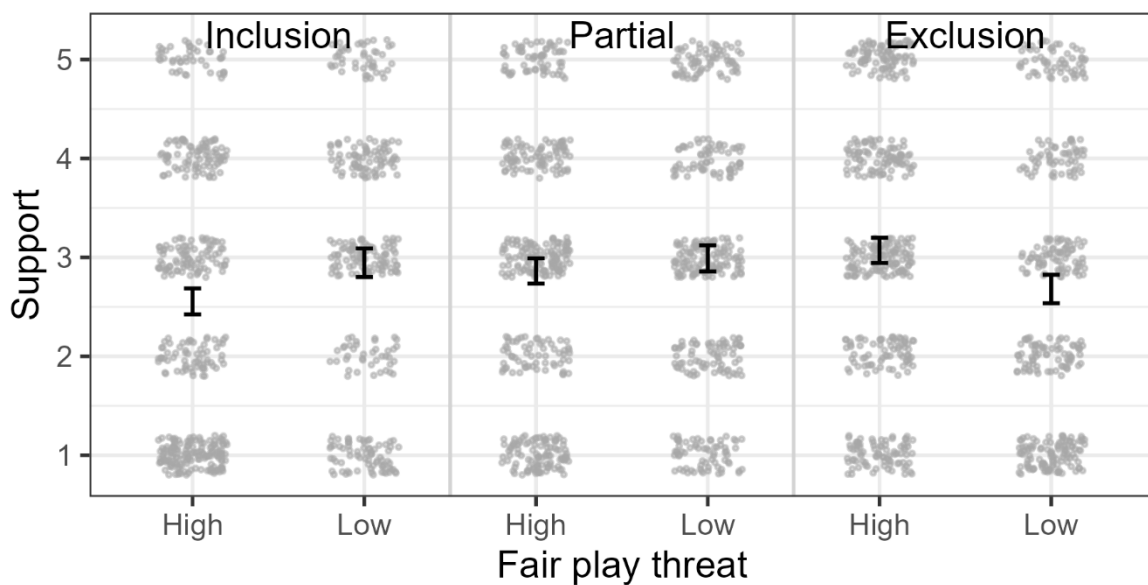
Stage 3: DV measures

- Do you think the policy should pass?
- Do you think the policy is discriminatory towards [male and female] / [transgender] athletes?
- Do you think the policy is fair towards [male and female] / [transgender] athletes?

6.4 Findings

Support means, depicted in Figure 7, suggest substantial variation in policy views across both sport type and policy type. For inclusionary policies, support was lower in the high fair play threat condition (steeplechase) than in the low fair play threat condition (shooting). For exclusionary policies, the pattern was reversed: respondents were more supportive of exclusion in steeplechase than in shooting. No significant difference in average support was observed between sports for the partial policy condition.

Figure 7: Support across treatment conditions, Paper B



Regression analyses further clarify these patterns. For inclusionary policy, fair play threat, trans attitudes (T-KAB), and their interaction significantly predicted policy support. Specifically, fair play threat reduced support for inclusion, but this effect was conditional on attitudes: respondents with more negative attitudes towards trans people were substantially more sensitive to the sport manipulation than respondents with positive attitudes. Table 4: Model fit parameters, Paper B reports model fit parameters; Figure 8 illustrates the interaction effect.

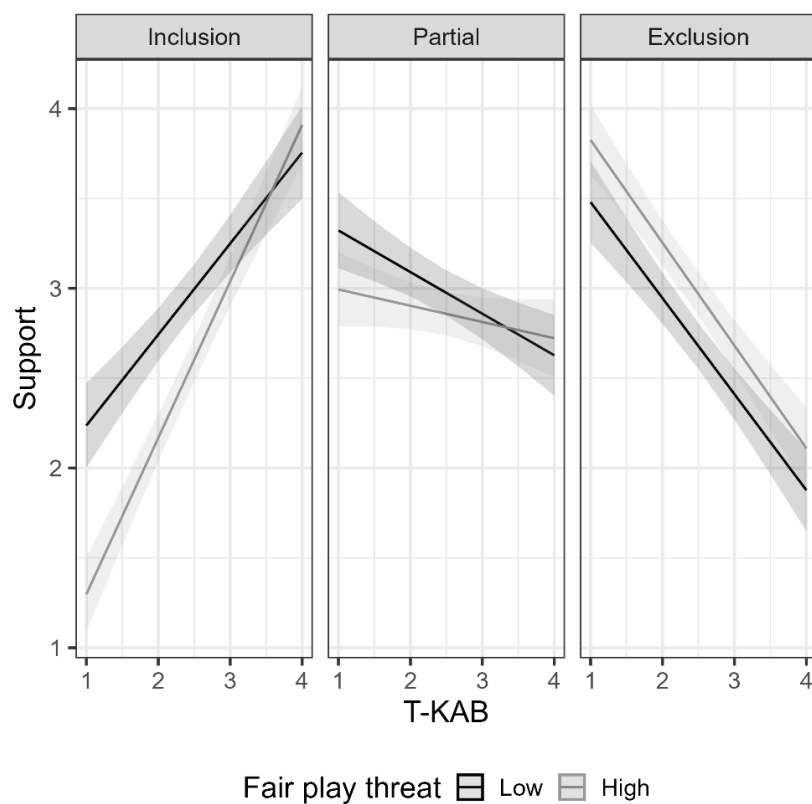
Table 4: Model fit parameters, Paper B

Predictors	Support – Inclusion			Support – Partial			Support – Exclusion		
	Estimates	CI	p	Estimates	CI	p	Estimates	CI	p
(Intercept)	2.13	1.51 – 2.75	<0.001	3.81	3.16 – 4.45	<0.001	4.39	3.73 – 5.06	<0.001
T-KAB	0.36	0.23 – 0.50	<0.001	-0.29	-0.43 – -0.14	<0.001	-0.48	-0.62 – -0.33	<0.001
Fair play threat [high]	-1.12	-1.93 – -0.31	0.007	-0.74	-1.67 – 0.20	0.122	0.19	-0.70 – 1.07	0.678
T-KAB × fair play threat	0.42	0.24 – 0.61	<0.001	0.19	-0.02 – 0.40	0.072	-0.14	-0.34 – 0.06	0.161
Observations		768			834			834	
R ² /R ² adjusted		0.355 / 0.344			0.042 / 0.027			0.223 / 0.210	

In contrast, for both partial and exclusionary policies, trans attitudes were the dominant predictor of support. Fair play threat and its interaction with attitudes were not statistically significant in these models. This suggests that while fairness considerations shape support for inclusionary policies, support for more restrictive policies is primarily attitudinal in nature.

Taken together, these findings indicate that fairness concerns operate as a contextual moderator rather than a general alternative to prejudice-based explanations. Fair play considerations matter most when inclusion is on the table; once policies move toward exclusion or quasi-exclusion, attitudes towards trans people largely determine policy support.

Figure 8: Interaction effect of T-KAB and Fair play threat across policy types



Is it actually about fairness?

A potential concern arising from the preceding analyses is whether the observed effects can be meaningfully attributed to fairness considerations as opposed to unobserved features of the sport or policy manipulations. In other words, do respondents actually perceive the experimental conditions as differing in their implications for fair play?

To address this concern, I draw on two post-treatment measures included in the survey that directly assess perceived fairness. After exposure to the vignette, respondents evaluated how fair the proposed policy was toward (1) cis

athletes and (2) trans athletes. Although these items are not manipulated, they serve as an important diagnostic check on whether the sport manipulation plausibly activated differential fairness concerns.

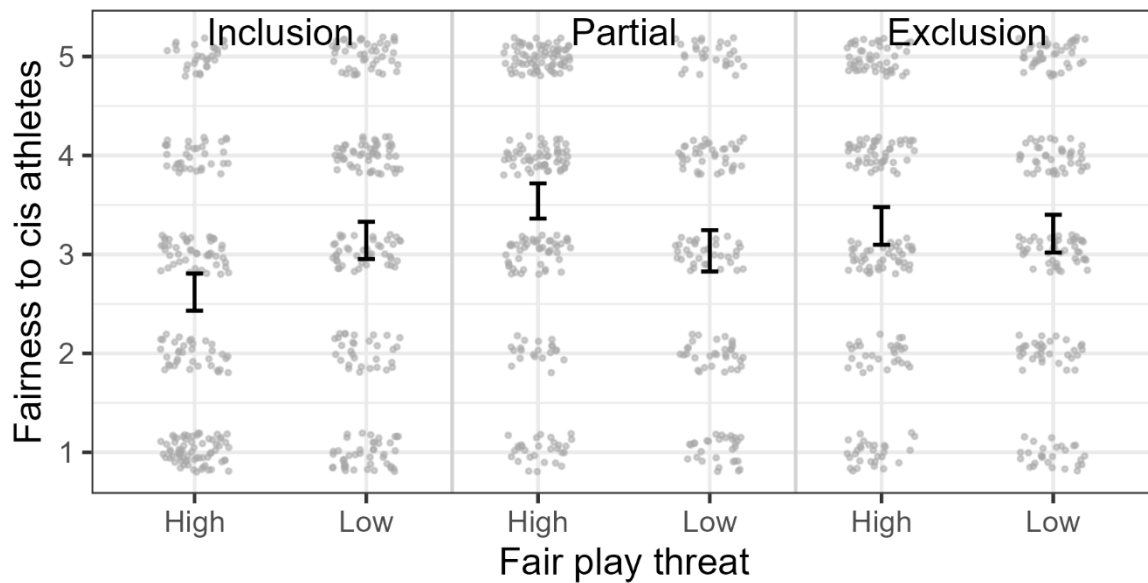
The logic underlying this analysis is straightforward. If inclusion of trans athletes is perceived as threatening the fair play principle in high fair play threat contexts, then inclusionary policies should be evaluated as less fair to cis athletes in steeplechase than in shooting. Perceived fairness toward cis athletes therefore serves as an indirect indicator of whether respondents believe the policy disrupts the existing competitive principle.

Mean comparison of fairness scores across treatment conditions supports this interpretation. As shown in Figure 9, inclusionary policies are rated as significantly less fair to cis athletes in the high fair play threat condition than in the low threat condition. This pattern aligns with the theoretical claim that respondents perceive inclusion in physically demanding competitions as undermining competitive fairness. In contrast, in the shooting condition, where physiological advantage is less salient, inclusion is viewed as comparatively fair to cis athletes.

Simultaneously, evaluations of fairness toward trans athletes reveal a different pattern. Across conditions, the partial policy, which permits trans athletes to participate only according to sex assigned at birth, is rated on average as most fair to trans athletes, particularly in the steeplechase condition. This finding suggests that many respondents interpret partial policies as balancing competing normative concerns by preserving the perceived fairness of competition while still allowing trans individuals to participate in sports. Notably, this occurs in the context where the fair play threat is otherwise highest.

Overall, these patterns indicate that respondents perceive the policies as meaningfully different in their implications for fairness. More specifically, the findings suggest that the sport manipulation operates through perceived threats to the fairness of competition for cis athletes, thereby providing additional support for interpreting the main findings in terms of fair play threat.

Figure 9: Average perceived fairness of a policy to cis athletes across conditions



On partial policy

A second concern arising from the main findings is the absence of a significant fair play threat effect for partial policy support. Given the broader arguments developed in the dissertation, this pattern warrants closer examination.

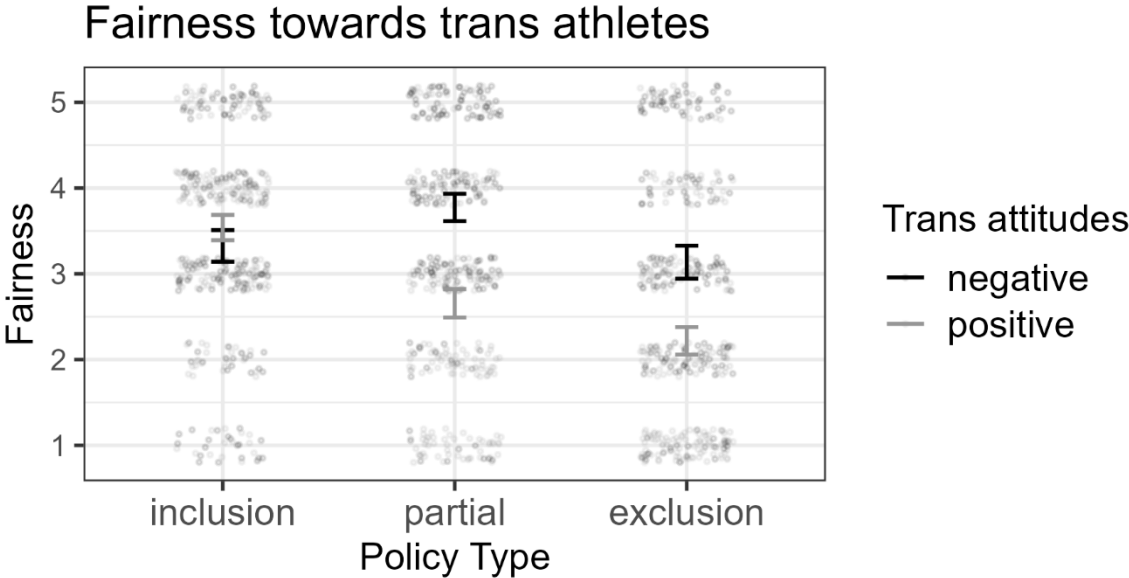
Partial policies, defined here as policies allowing participation based on sex assigned at birth, can plausibly be understood as approximating a status quo solution in contemporary sports governance. These policies permit trans participation and simultaneously neutralize perceived physiological advantages, particularly regarding trans women competing in women's divisions. Consequently, partial policies may be viewed as the most commonsense response to trans inclusion debates, especially by individuals who prioritize competitive equity.

Exploratory analyses indicate that evaluations of partial policy fairness are primarily structured by attitudes towards trans individuals rather than by sport-specific considerations. Specifically, whether respondents perceived partial policy as fair depended strongly on their baseline T-KAB scores. The data suggest that respondents with more positive outgroup attitudes are substantially less likely to view participation based on sex assigned at birth as fair, possibly interpreting such policies as fundamentally disrespectful. Conversely, respondents with more negative attitudes tend to evaluate partial policies as rather fair to outgroup members, possibly not perceiving any hostility in such policies or simply viewing hostility as permissible.

This pattern is illustrated in Figure 10. With trans attitudes dichotomized at the sample mean, a clear gap can be observed between the perceived fairness of a partial policy. The gap between trans-positive and trans-negative

respondents was persistent across sport types, indicating that instead of being contextually dependent, the fairness of a partial policy is possibly based on personal normative judgments about gender recognition and respect rather than on concerns about competitive fairness per se.

Figure 10: Observed fairness scores by T-KAB



6.5 Discussion

Paper B set out to clarify the relationship between attitudes towards trans individuals and public support for sports policies regulating participation of trans athletes. Fundamentally, it grew out of a suggestion that opposition to trans inclusion in sports is driven less by negative attitudes towards the group and more by concerns about fairness. Drawing on sports ethics literature, this paper advanced a more specific account of those fairness concerns, arguing that they are rooted in assumptions about physiological advantage as well as in normative ideas about the purpose of sports and the conditions under which competition is considered fair. Crucially, I proposed that such concerns are not uniform across sports but vary depending on the skills a competition is perceived to test.

The findings support and extend existing literature in several ways. Attitudes towards trans individuals are strongly linked to policy preferences: more positive attitudes predict greater support for inclusion and less support for exclusion. The results also show that the public distinguishes between sports when considering trans inclusion. Inclusionary policies receive more support in shooting than in steeplechase, while exclusion is favored more in steeplechase. These patterns appear in the general population, not just among those

involved in sports, indicating that public intuitions about different sports shape policy views.

That said, the main theoretical and empirical contribution of Paper B is specifying how fairness concerns interact with group attitudes rather than simply compete as alternative explanations. The moderation analysis finds that the link between trans attitudes and support for inclusion is stronger in sports where fair play is seen as threatened. This effect is not symmetric: fairness concerns do not reduce support among those with positive attitudes who support inclusion similarly across sports. Instead, differences appear mainly among those with negative attitudes who are less supportive when fairness concerns are high and more supportive when they are low.

This pattern challenges the common claim that opposition to trans inclusion in sports is based on fairness among trans-positive individuals. Instead, the evidence suggests that fairness concerns act as a context-dependent constraint on opposition among those with negative attitudes. In low fair play threat contexts, where fairness justifications are less available, these individuals are less able or willing to oppose inclusion, leading to higher overall support.

Overall, these findings suggest that public opinion on trans inclusion in sports is shaped by the interaction between attitudes towards trans individuals and the perceived demands of a specific competition. The specificities of a competition affect perceived threat to fairness when discussed in light of trans athletes, thereby making fairness-related values more salient. These values do not operate independently of group-level attitudes but instead shape when and how negative attitudes lead to opposition. By conceptualizing and testing fair play threat as a contextual moderator, this paper offers a clearer account of when fairness concerns matter, for whom, and in which sports contexts.

Chapter 7: The support gap: different views of MtF and FtM inclusion

Based on the findings from Paper B, one might arrive at a cautiously optimistic conclusion: trans-positive individuals tend to support inclusion irrespective of sport-specific context, while trans-negative individuals can be moved toward greater support when concerns about competitive fairness are addressed. Paper C pushes this conclusion further by interrogating the often implicit assumption in both public discourse and academic research that “trans athletes” are regarded as a homogeneous category in public opinion.

Paper C investigates support for inclusion of trans men compared to trans women, as this distinction reflects the realities of public discourse and sports regulation, where trans women are disproportionately scrutinized, and regulatory frameworks often differentiate between MtF and FtM athletes. The central question is whether individuals who are generally supportive of trans inclusion, particularly trans-positive and left-leaning respondents, extend that support equally across different trans identities.

In response to these questions, Paper C examines support for MtF inclusion relative to FtM inclusion. The analysis draws on existing findings of differential treatment of trans men and trans women outside of sports, particularly across ideological orientations and demographic characteristics such as age and gender. Two competing theoretical frameworks, gender essentialism and social value theory, are employed to generate alternative expectations. Paper C tests distinct predictions derived from these theoretical approaches.

Empirically, the study identifies what I term a *support gap*. Across the public, respondents consistently express greater support for the inclusion of trans men in men’s divisions than for the inclusion of trans women in women’s divisions. This pattern aligns more closely with the predictions of social value theory than with those of a strict essentialist account. Notably, and in direct relation to the findings of Paper B, this gap persists even among trans-positive and left-leaning individuals, groups that might otherwise be expected to support MtF and FtM athletes equally.

The consistency of this gap across personal dispositions is particularly noteworthy. Although absolute levels of support vary substantially between left- and right-leaning respondents and between trans-positive and trans-negative individuals, the difference in support between FtM and MtF athletes remains remarkably stable. This pattern suggests that the support gap is not

driven solely by explicit values or attitudes but rather reflects deeper, widely shared beliefs that operate across ideological lines.

7.1 Grounds for divergence

As noted in the Policy Target section of Chapter 3, empirical evidence demonstrates that MtF athletes consistently receive less support than FtM athletes across various sports contexts. This pattern aligns with the longstanding history of sex verification and differential regulation in women's sports, as outlined in Chapter 2. Historically, women's competitions have been subject to stricter eligibility requirements and increased scrutiny, frequently justified by appeals to fairness and competitive integrity.

From this perspective, one might reasonably expect trans women to be supported less than trans men. Indeed, several studies report greater resistance to MtF inclusion, particularly in physically demanding or contact sports.

The literature outside of sports presents a more mixed picture. Some studies find asymmetrical attitudes favoring trans men, while others report minimal or no difference in explicit support for trans men and trans women in domains such as employment, healthcare, or civil rights (e.g., Flores et al., 2018; Harrison & Michelson, 2019; Rudin et al., 2023).

7.2 Competing theoretical explanations

There are two theoretical approaches to discussing perceptions of trans men compared to trans women. One is gender essentialism (see Chapter 3), which sees sex and gender as conflated, biologically determined, and immutable. Men and women are viewed as distinct, natural categories, and any transgression of these categories, regardless of direction, is considered a violation of the social order. If this logic were predominant in public opinion, similar sanctions would be expected for trans men and trans women who cross gender boundaries.

However, the gender essentialist explanation overlooks the social hierarchies embedded in gender categories. The social value perspective (Feinman, 1984) explicitly incorporates considerations of hierarchy and power. Men and women are treated as distinct categories but are not socially equivalent. Men occupy a higher status position in the gender hierarchy, and this asymmetry influences how category transgression is evaluated. From this viewpoint, MtF transitions represent movement from a higher to a lower status, whereas FtM transitions can be interpreted as "upward mobility". This directional asymmetry fundamentally alters the perceived cost of gender category transgression. Upward-status movement between categories may be more readily rationalized or conditionally accepted, as belonging to a higher-status group can

be considered desirable. In contrast, downward status movement is normatively suspicious or irrational, and MtF transitions might be more likely to elicit skepticism or sanctions than FtM transitions.

While imitation of higher-status groups can provoke backlash, as observed in racial or class-based hierarchies (e.g., Stoler, 2021), a meaningful distinction exists between imitation and full category reclassification. Permanently living in a lower-status category when one is perceived as biologically entitled to higher status constitutes a particularly strong violation of hierarchical expectations.

Accordingly, social value theory predicts a persistent support gap and harsher treatment of trans women than of trans men. In contrast, gender essentialism predicts roughly symmetrical opposition. Given the exploratory nature of the study, only two broad, theoretically driven hypotheses were formulated. *H1* predicted no difference in support between FtM and MtF athletes, while *H2* predicted a significant support gap between conditions.

7.3 Research design

Paper C utilizes data originally collected for the preregistered experiment described in Paper A. While the initial study focused on linguistic framing (“sex” versus “gender”), Paper C reanalyzes the data with a different focal manipulation: the gender of the trans athlete.

Respondents were randomly assigned to read a vignette describing Alex, a trans collegiate archery athlete requesting to change competition categories. Alex was described either as a trans man moving from the women’s to the men’s division (FtM condition) or as a trans woman moving from the men’s to the women’s division (MtF condition). All other elements of the vignette, including sport type, performance statistics, and institutional context, were held constant.

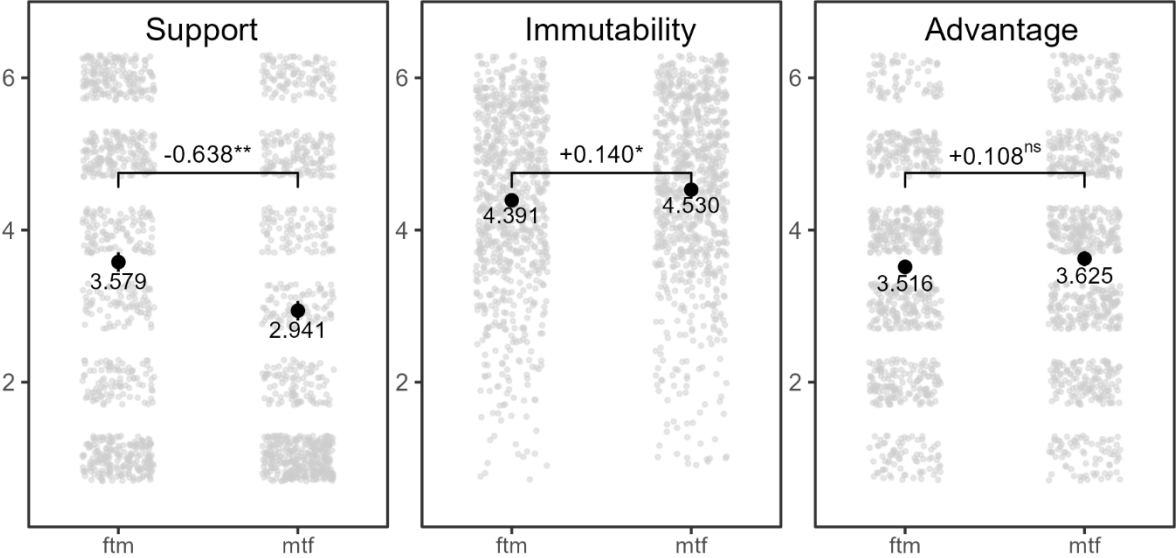
Pre-treatment measures included T-KAB, news attention and consumption, gender identity centrality, importance of traits in sports, and demographics. The primary dependent variable was support for Alex’s request, measured on a six-point scale. Additional post-treatment measures captured general support for trans athletes changing categories, enabling exploratory spillover analyses.

7.4 Findings

The results offer clear evidence of a support gap. When Alex was described as a trans man, respondents expressed moderate support for the category change. In contrast, when Alex was described as a trans woman, support declined significantly, resulting in overall opposition. The effect size, while

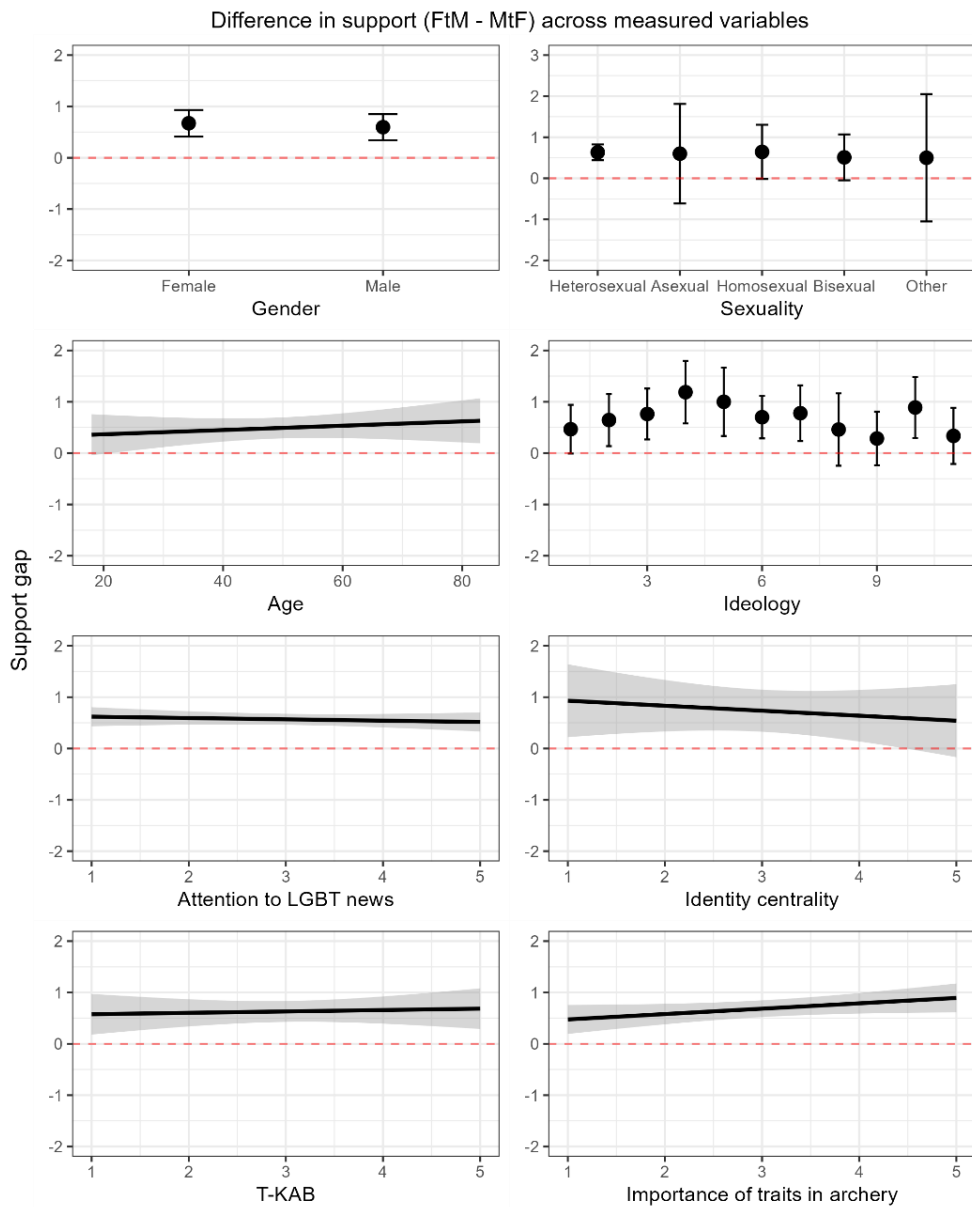
moderate, is substantively meaningful, representing more than half a scale point difference on a six-point measure. If considered at a more aggregate level, the difference across conditions can be described as a shift from support (albeit slight) to opposition (albeit relative). Figure 11 illustrates the average scores for all post-treatment measures.

Figure 11: Post-treatment measures by the athlete’s gender condition, Paper C



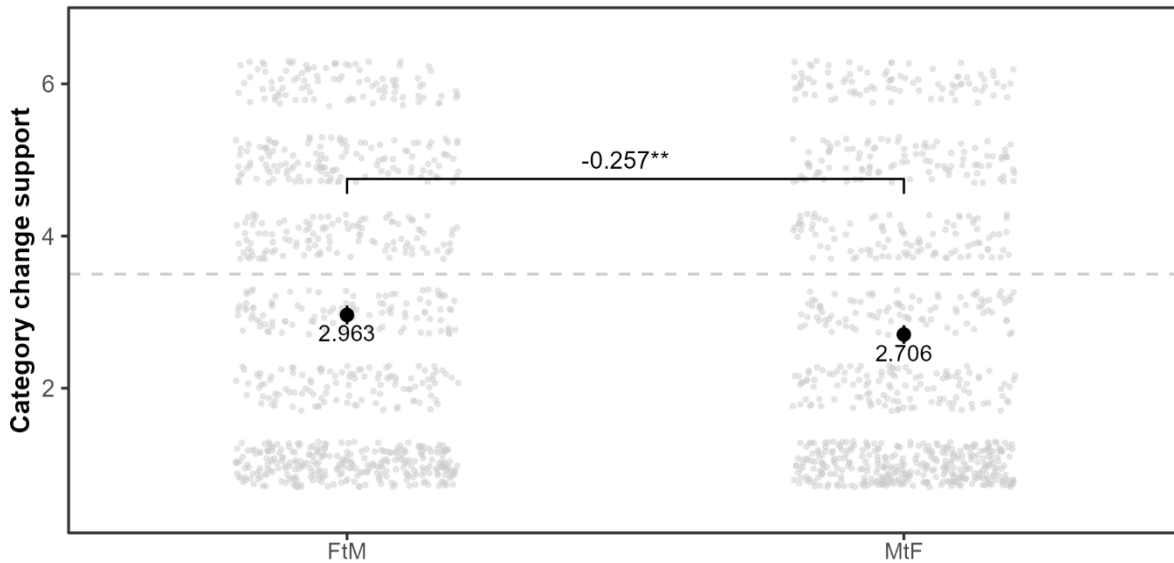
Importantly, this gap is not moderated by trans attitudes, political ideology, gender, age, news consumption, or beliefs about the importance of physical traits for archery. As shown in Figure 12, the difference between conditions remains consistently above zero across nearly all dispositions. Empirically, this indicates a stable support gap. Theoretically, it suggests a common evaluative mechanism operating across population subgroups.

Figure 12: The support gap across various dispositions, Paper C



Exploratory analyses further indicate that exposure to the FtM condition slightly increases general support for trans athletes changing categories (Figure 13). This modest carryover effect is likely driven by recency bias, i.e., respondents generalize from the athlete they have just evaluated. This finding suggests that surveys that do not specify the gender of the trans athlete may implicitly capture attitudes shaped by a default mental image, most plausibly that of a trans woman. This interpretation aligns with prior work showing divergence between explicit and implicit evaluations of trans men and trans women (Wang-Jones et al., 2018).

Figure 13: Support for trans athletes in general, Paper C



Is it advantage, again?

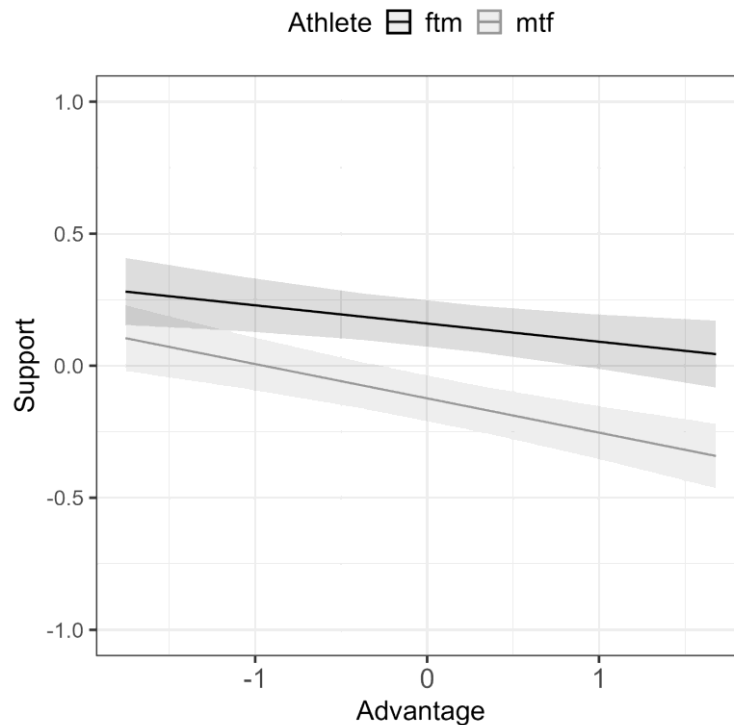
Based on previous findings reported in this dissertation, one might consider whether this support gap is in any way shaped by perceived advantage. The answer to that is twofold. First, as indicated in Figure 12, the support gap persists even among respondents who believe that physiological traits are unimportant for archery. This is the closest measure of advantage that is available in the data, at least among the pre-treatment variables.

However, one can cautiously use the post-treatment advantage measure to consider the role of advantage. While it is usually not advisable to use post-treatment measures as a “neutral” predictor of other post-treatment measures (due to possible unobserved effects of the treatment), there is no significant difference in average score for post-treatment advantage measure between MtF and FtM conditions. As such, I believe it can be used for exploratory purposes, especially when coupled with the pre-treatment measure of advantage.

This additional analysis yields no significant new explanations: even when the post-treatment advantage is included, the support gap persists. Figure 14 presents predicted values of support by athlete gender and perceived advantage. While the figure might be interpreted as suggesting some possible interaction, it does not reach conventional levels of statistical significance ($p = .09$).

Taken together, these results indicate that differential perceptions of advantage do not fully account for the support gap. Even in a precision sport, and among respondents who reject assumptions of difference in men’s and women’s results, trans women continue to receive less support than trans men.

Figure 14: Predicted values of support by treatment condition and advantage, Paper C



7.5 Discussion

The central finding of Paper C is the identification of a support gap: among the general public, support for inclusion of trans men in men’s divisions is consistently higher than support for inclusion of trans women in women’s divisions. Overall, these results support social value theory, which posits that trans women will always face harsher treatment due to the existing gender hierarchy.

Although the results cannot be interpreted as capturing specific justifications considered by respondents when evaluating requests from trans athletes, the study design intentionally sought to abstract away from both fair play and protectionist concerns. The vignette focused on collegiate archery, a precision-based sport in which men’s and women’s performance outcomes are empirically similar, and respondents were provided with identical performance statistics for each gender category. Consequently, considerations of performance advantage and concerns regarding “women’s safety” should have been minimal, given the competition structure, which involves no physical interaction between competitors and thus no risk of injury from opponents. Therefore, resistance to trans inclusion, specifically of trans women, persists even when fair play concerns and protectionist concerns are addressed.

This result is consistent with sport-specific research indicating greater acceptance of FtM athletes than of MtF athletes, but it extends the literature in

two significant ways. First, it demonstrates that the support gap exists within a nationally representative sample and is not confined to athlete or student populations. Second, it reveals that the gap persists even in contexts designed to suppress differential treatment, such as a sport with minimal assumed physiological advantage.

Notably, the support gap remains stable across personal dispositions. Although overall support levels vary significantly between left- and right-leaning respondents and between trans-positive and trans-negative individuals, the difference in support between FtM and MtF athletes remains largely unchanged. Thus, even individuals who are generally supportive of trans inclusion tend to support trans women less than trans men.

This finding indicates that the support gap cannot be attributed solely to explicit prejudice, ideology, or lack of information. Rather, it suggests the presence of shared underlying perceptions regarding gender, hierarchy, and category transgression that transcend ideological boundaries.

Chapter 8: Conclusion and final reflections

In the final chapter of this dissertation, I aim to synthesize the results with the initial motivation, theoretical framework, and overarching research question. I integrate findings from the three papers to construct a cohesive narrative. After a general discussion, I examine the broader impact of the findings, including their contributions to the literature, potential policy implications, and directions for future research to address current limitations.

8.1 General discussion

This dissertation set out to examine the factors underlying resistance to trans inclusion in sports. Rather than conceptualizing opposition solely as a function of group-level prejudice, the analysis integrated broader belief systems, particularly gender essentialism, alongside sport-specific considerations such as perceived performance advantage and fair play. Across three papers, utilizing two survey experiments with samples designed to be nationally representative on key demographics of the U.S. adults, the findings indicate that support for trans inclusion is highly context-dependent, though not always in ways anticipated in the literature or public discourse.

A recurring claim in both academic and political discourse is that resistance to trans inclusion in sports is primarily motivated by principled concerns about fairness rather than negative attitudes towards trans individuals. The findings partially support this perspective, but with an important caveat. Perceptions of advantage and threats to fair play do predict lower support for inclusion; however, these factors are most influential among individuals who already possess negative attitudes towards trans individuals. For trans-positive respondents, fairness concerns have minimal impact on support for inclusion, even in contexts where competitive advantage may be salient. This pattern is evident in the results from Papers A and B collectively (see Figure 15), as variation in support across contexts is substantially greater among trans-negative respondents than among more trans-positive respondents.

This finding complicates the frequently cited distinction between “attitudes” and “fairness.” Rather than serving as alternative explanations, fairness concerns function as a conditional justification that becomes politically and psychologically salient primarily for those already predisposed to oppose inclusion. Thus, appeals to fairness do not supplant negative attitudes; instead, they offer a socially legitimate rationale for expressing opposition without explicitly invoking prejudice.

Figure 16 may inspire one to draw an optimistic conclusion. Specifically, Paper B demonstrates that support among trans-negative individuals is not fixed. Opposition decreases when inclusion is considered within sports contexts that do not strongly activate intuitions about physiological advantage, such as precision sports. This indicates that resistance is not uniformly absolute and that contextual features of competition can meaningfully influence public opinion.

However, this optimism warrants caution. Modifying the competitive context may reduce opposition in specific instances, but it does not address the underlying beliefs about what sports categories are for, or why they are assumed to require rigid sex-based boundaries. Consequently, such contextual solutions address the symptoms rather than the fundamental sources of resistance.

A central theoretical claim of this dissertation is that the organization of sports is fundamentally intertwined with gender-essentialist assumptions. Gender categories in sports are commonly perceived as natural, biologically determined, and essential for maintaining fairness. Although these assumptions are seldom explicitly stated, they shape reasoning about trans inclusion. Results discussed in Paper A, especially, strongly suggest that beliefs in the immutability of sex- or gender-based categories predicted lower support for trans inclusion, regardless of framing effects or policy type.

This raises a broader question regarding the role of fairness itself. Much of the public debate assumes that sports can be rendered fair through appropriate categorization. From this standpoint, dividing competitors into men's and women's divisions is viewed as an effective means of equalizing competition. However, as discussed in Chapter 3, fairness in this absolute sense is largely unattainable. Athletic performance is influenced by a wide array of physiological, environmental, and social factors, many of which vary significantly within sex categories and are only partially regulated. Achieving a true separation of "skill" from biological predispositions would necessitate much more granular classification systems, fundamentally altering the nature and appeal of competitive sports (for examples, see solutions discussed in Knox et al., 2019).

In this sense, fairness functions less as an attainable standard and more as a legitimating ideal. Sex-based categories endure not because they perfectly equalize competition, but because they correspond with widely shared social conceptions of masculinity and femininity and reinforce existing social hierarchies. This alignment renders them both cognitively efficient and normatively influential. From this perspective, resistance to trans inclusion is not solely about safeguarding fairness but about maintaining a familiar and socially significant structure of competition.

Importantly, the dissertation’s normative concern is not with sports per se but with trans inclusion and equal access to social institutions. From this perspective, the empirical findings are sobering. Across studies, support for inclusion seldom exceeds the midpoint of the scale, even under the most favorable conditions. As indicated in Figure 16, the highest average support observed across the experiments is only slightly above the median of the scale. This is particularly noteworthy given that the samples, on average, expressed slightly positive attitudes towards trans individuals (overall T-KAB $M = 3.18$, $sd = 1.28$, $N = 4122$).

These findings are consistent with previous survey-based research indicating tepid or ambivalent public support for trans inclusion in sports, even among relatively accepting populations (e.g., Shaw et al., 2024; Goldbach et al., 2022). They also highlight a key tension, most evident in Paper C: even individuals who are generally supportive of trans rights and might be expected to consistently endorse inclusion display systematic reservations, particularly when the subject is a trans woman. This support gap suggests that certain perceptions and intuitions operate beneath the level of explicit attitudes or ideological commitments, transcending political and demographic boundaries.

Overall, the dissertation suggests that resistance to trans inclusion in sports cannot be fully explained by prejudice, nor can it be resolved solely by addressing fairness concerns. Rather, it is grounded in a more complex configuration of beliefs about gender, bodies, competition, and social value. Understanding and ultimately challenging these underlying configurations may be essential for achieving broader and more stable support for inclusion.

Figure 15: Support and trans attitudes across studies

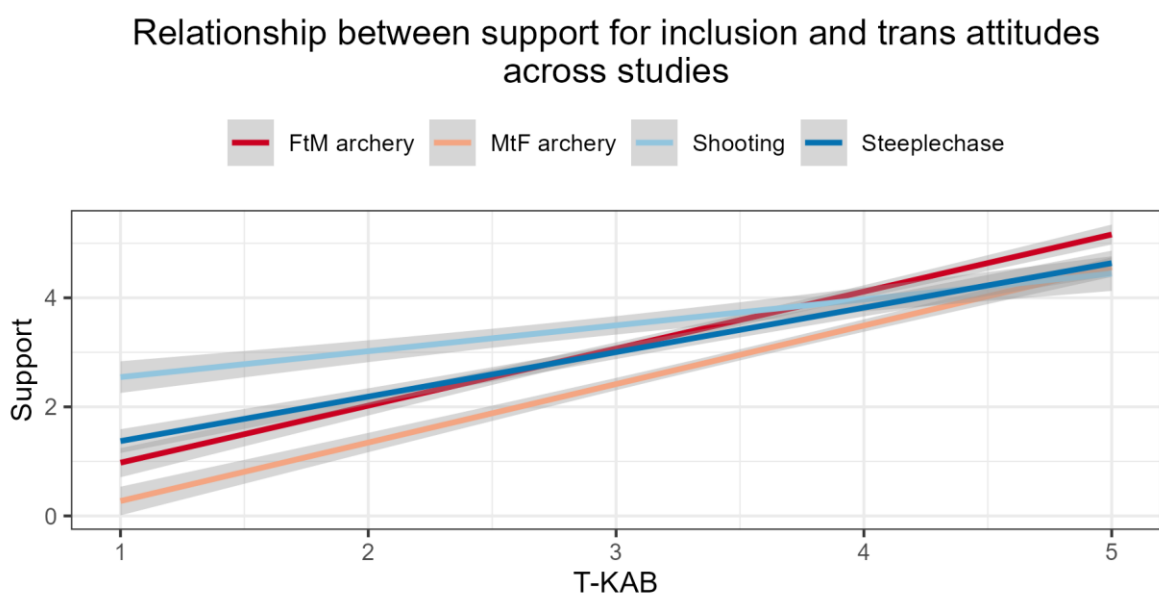
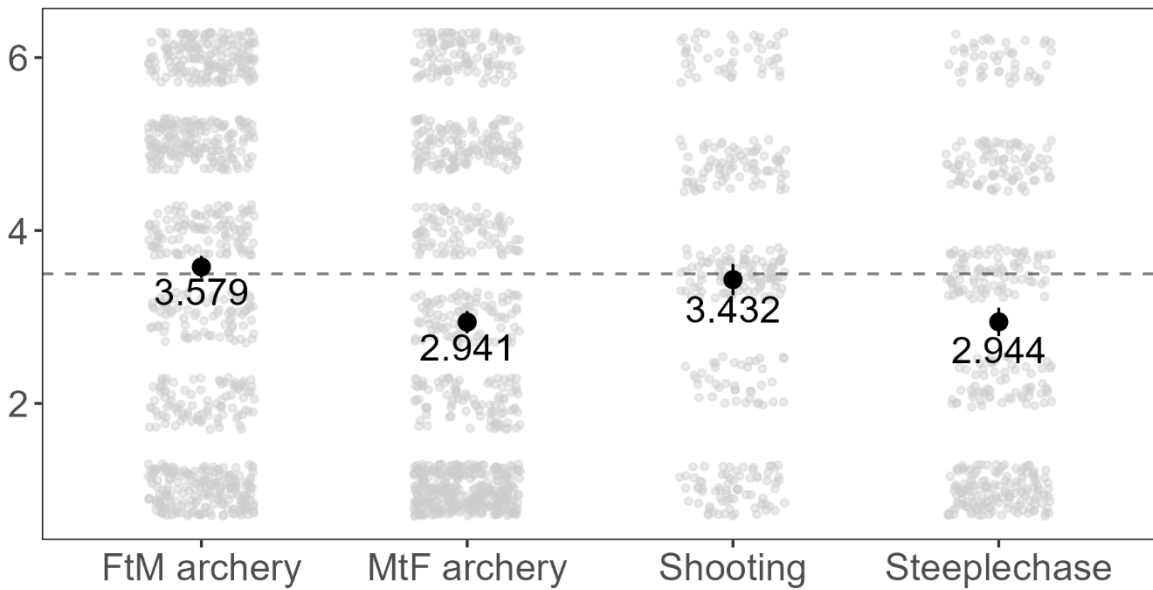


Figure 16: Support for inclusion across studies



8.2 Contributions

The dissertation makes several distinct contributions across multiple disciplines. In this section, I go over its implications and contributions by differentiating between theoretical, empirical, methodological, and policy contributions. Taken together, the contributions advance our understanding of how and why resistance to trans inclusion emerges, and why this resistance cannot be reduced to either intergroup attitudes, information deficits, or framing alone.

Theoretical contributions

The primary theoretical contribution of this dissertation lies in its interdisciplinary synthesis of political psychology, sociology of sports, and gender studies to explain resistance to trans inclusion in sports. Rather than treating opposition to trans inclusion as a simple expression of prejudice or ideological conservatism, the dissertation shows that such resistance is structured by a combination of group-based attitudes, beliefs about the naturalness and immutability of sex categories, and normative commitments to fairness that are specific to the sports domain.

Across the three papers, I argue that fairness is not a monolithic or self-evident concept but instead functions as a flexible justificatory framework through which resistance to trans inclusion is expressed. Drawing on sports ethics literature, I distinguish among various meanings of fairness, i.e., fairness as a fair play principle integral to competitions or fairness within protectionist claims over equality and demonstrate how these meanings are selectively mobilized depending on context. This theorization reconciles competing

claims in the literature that attribute resistance to either prejudice or principled concerns about competition. My findings suggest that fairness concerns are genuine and consequential, but they are unevenly activated depending on attitudes and context.

Additionally, this dissertation foregrounds gender essentialism and beliefs about category immutability as foundational elements of resistance to trans inclusion. Rather than viewing advantage claims or fairness concerns as purely instrumental or evidence based, I demonstrate that they are rooted in deeper assumptions about sex as a natural, binary, and stable classification system. This theoretical perspective extends beyond sports, as similar essentialist beliefs could underpin resistance to trans inclusion in other policy domains, such as education. Thus, sports do not serve as an exceptional case but as a particularly revealing context where naturalized beliefs about sex, gender, and fairness become visible and politically significant.

Empirical contributions

Empirically, this dissertation contributes to the growing literature on public opinion toward trans rights by providing experimental evidence in a field largely dominated by descriptive surveys and correlational analyses. Using samples designed to be nationally representative on key demographics of U.S. adults, I employ vignette-based survey experiments to isolate causal mechanisms underlying resistance to trans inclusion in sports. This approach enables me to move beyond documenting support or opposition levels and instead examine how support shifts when theoretically relevant contextual features are manipulated.

Across the three papers, I provide new evidence on several underexplored empirical questions. First, I demonstrate that linguistic framing does not significantly alter public support for trans inclusion, despite the prominence of this distinction in elite political discourse. Second, I show that concerns about fairness and perceived competitive advantage are most salient for individuals with more negative attitudes towards trans individuals, while trans-positive individuals remain largely supportive across contexts. This result is practically important as it suggests that it is possible to move individuals towards a more supportive stance on the issue of trans inclusion in sports. Third, I document a robust and consistent support gap between inclusion of trans men and trans women, even in sports where competitive advantage is widely perceived as minimal. Notably, this gap persists across ideological, attitudinal, and demographic groups, indicating that it reflects deeply shared assumptions rather than polarized value conflict.

These findings contribute to broader debates in political science regarding issue-specific opinion formation and the limitations of affect-based explana-

tions of policy views (Lewis et al., 2022). They also offer insight into internal tensions within Democratic and left-leaning constituencies on trans inclusion in sports, challenging the assumption that resistance is limited to conservative or trans-negative segments of the public.

Methodological contributions

Methodologically, this dissertation demonstrates the value of theoretically informed experimental design in studying contested rights issues. Instead of relying on abstract policy questions, I manipulate concrete features of the sports context to test how and when different considerations become salient for respondents.

Specifically, Paper B introduces a novel method for operationalizing fairness concerns by varying the competitive structure of the sport itself. This approach moves beyond simply asking respondents whether they believe trans athletes have an advantage and instead embeds fairness concerns directly into the scenario. This allows for a more realistic assessment of how fairness operates in everyday reasoning and provides a practical framework adaptable to other policy domains where concerns about advantages, competition, or procedural justice arise.

More broadly, the dissertation illustrates how experimental methods can be used not only to test hypotheses but also to clarify the boundaries of persuasion and mobilization. By identifying contexts in which fairness concerns can/cannot be mitigated, this research provides a methodological template for studying when and how public opinion on minority rights is responsive to contextual change and when it is anchored in more fundamental beliefs.

8.3 Normative and policy implications

Although this dissertation primarily focuses on explaining public resistance to trans inclusion in sports rather than prescribing normative solutions, the findings have several implications for how policymakers, advocates, and institutions might approach trans inclusion in contested policy domains.

First, the results challenge the assumption that resistance to trans inclusion in sports can be effectively addressed through information provision alone. Across the studies, respondents were largely unaffected by evidence of equal performance outcomes and framing results suggest a lack of differentiation between “sex” and “gender”. This indicates that public opposition is not primarily driven by a lack of information or misunderstanding of empirical facts but by deeper beliefs about the naturalness of sex categories and the purpose of sports. Normatively, this finding questions approaches to policy design that rely on changing public opinion through corrective information. If

resistance is rooted in essentialist beliefs and normative commitments to fairness, appeals to data alone are unlikely to produce durable attitude change.

Second, the findings underscore the central role of fairness as a justificatory principle in public reasoning about trans inclusion. Notably, fairness concerns are not evenly distributed across the public; they are most influential among individuals with more negative attitudes toward trans people, while trans-positive individuals remain supportive even when fairness is framed as threatened. This has two implications. First, under some conditions, fairness arguments may serve as a socially acceptable language for expressing exclusionary preferences rather than as neutral or universally shared principles. Second, fairness concerns are not entirely strategic or insincere; they structure opinion in predictable ways depending on context. Normatively, this suggests that policymakers should be cautious about treating fairness-based objections as purely principled or value-neutral and recognize that such concerns cannot simply be dismissed as bad faith.

Third, the dissertation raises important questions about the ethics of policy differentiation across sports and contexts. The findings indicate that support for trans inclusion increases in competitions where the perceived threat to fair play is low, and even trans-negative individuals are more supportive in such settings. This creates a tension between pragmatic and principled approaches to inclusion. Pragmatically, sport-specific or context-sensitive policies may increase public acceptance and reduce backlash. Normatively, however, differential inclusion risks reinforcing the notion that trans rights are conditional, contingent, or negotiable based on perceived advantage. This tension reflects broader debates in minority rights policy between incremental accommodation and universal rights-based approaches.

Fourth, the persistent support gap between trans men and trans women carries significant normative implications. The finding that trans women receive less support across ideological and attitudinal groups suggests that resistance is not solely a function of prejudice or political polarization but is linked to deeply embedded gender hierarchies and protectionist logics surrounding women's categories. This raises concerns about policy frameworks that treat "trans athletes" as a homogeneous group, thereby possibly obscuring the disproportionate burdens placed on trans women.

Finally, the dissertation addresses the broader relationship between public opinion and policymaking. While public attitudes do not directly determine policy outcomes, they shape the boundaries of what is considered legitimate, reasonable, or politically feasible. The findings suggest that policies framed as protecting fairness or women's categories may receive broader public acceptance, even when they disproportionately exclude trans women. This places policymakers and institutions in a challenging normative position: whether to

align with public intuitions rooted in essentialist assumptions or to pursue inclusionary policies that may conflict with widely held beliefs about sex, competition, and fairness.

Taken together, these implications underscore that debates over trans inclusion in sports extend beyond the realm of sports as such. They reflect broader societal struggles over the definitions of fairness and equality and the legitimacy of category boundaries. Any normative or policy response must therefore address not only empirical claims about performance or advantage but also the deeper social meanings attached to sex, gender, and competition.

8.4 Limitations and future research

This dissertation identifies several avenues for future research. In what follows, I outline a set of immediate extensions derived from the theoretical and empirical choices made in this study as well as limitations that future work could address.

First, future research could further examine the generalizability of fairness-based mechanisms beyond the domain of sports. One promising direction is to investigate whether competitive fairness concerns in sports are empirically similar to fairness considerations in other domains organized around performance and comparison, such as education or academic achievement. Specifically, future studies could analyze how beliefs about gendered advantage shape support for policies designed to mitigate such advantages. For example, mental rotation (the ability to manipulate two- and three-dimensional objects in the mind) is often cited as a cognitive domain with documented gender differences (Moè et al., 2021). On this basis, arguments for separating certain math competitions by gender have been considered and addressed through the introduction of girls-only math Olympiads. Such arrangements can be framed as enhancing fair play (preserving equal competition) or as protectionist (supporting girls as a disadvantaged group). Although the argumentative structure closely parallels debates in sports about competitions, rankings, and merit, the educational domain may be perceived as less biologically essentialized than sport. Comparing these contexts would provide a valuable testing ground for assessing the domain specificity of essentialist reasoning and the limits of fairness-based justifications for gender segregation or exclusion.

A second limitation of this dissertation concerns the popularity and salience of the sports examined. I intentionally selected competitions that receive relatively limited public attention to isolate variation in perceived fair play threat, particularly between steeplechase and shooting. However, these sports may be perceived as obscure by many respondents, raising questions about whether the justifications for exclusion observed in this study would gene-

ralize to more salient or culturally prominent competitions, such as the 100-meter dash, or to sports where mixed-sex events were introduced, like tennis⁵. Therefore, future research could systematically examine how contextual factors such as media salience, historical precedent, and the symbolic importance of a sport shape public reasoning about trans inclusion. Such work would help clarify the extent to which fairness concerns are driven by abstract principles as opposed to the cultural meaning attached to particular competitions.

Relatedly, future research could more explicitly engage with perceptions of femininity and masculinity across different sports. Although this dissertation does not theorize this dimension at length, it likely intersects with fairness concerns and broader gender hierarchies. While sports as a whole are widely perceived as a male-dominated domain (Ruchaud et al., 2017), prior research demonstrates that the public differentiates between sports in terms of perceived masculinity or femininity (Plaza et al., 2017). This suggests that resistance to trans women's inclusion may operate differently in sports where aesthetic judgment, grace, or femininity are emphasized, such as rhythmic gymnastics or synchronized swimming. In these contexts, trans women (often perceived as "formerly male") may encounter distinct forms of exclusion that are not easily captured by performance-based fairness arguments alone. Incorporating perceptions of masculinity and femininity would therefore not only extend the empirical scope of this research but also complicate its theoretical claims by foregrounding symbolic and aesthetic dimensions of gender hierarchy in sports.

There are also broader opportunities to extend the geographical and policy scope of this research. While this dissertation focuses on the U.S. context, future work could test the universality of essentialist beliefs about sports categories in settings where trans athletes are not a salient public issue, such as the Netherlands⁶, or in contexts where trans rights are highly politicized but not primarily through sports, such as the United Kingdom. Such comparisons would help disentangle the effects of cultural context, political discourse, and policy salience on public reasoning about trans inclusion.

Finally, future research could extend the theoretical framework beyond trans athletes to include athletes with differences of sex development (DSD). Recent policy shifts by organizations such as World Athletics, including the

⁵ In the case of tennis, I am referring specifically to the exhibition matches dubbed "Battle of the Sexes", with the most recent one organized in late 2025, and the earliest one in 1973 (Luther, 2019).

⁶ I bring up the Netherlands here as a possible site for future research as the country has a relatively high trans rights index (according to the 2025 index from Trans Europe and Central Asia), has an elite-level trans athlete (darts champion Noa-Lynn Van Leuven; see James, 2025), and has trans-inclusionary local regulations in some sports (rugby; see Pascoe, 2025).

adoption of SRY testing and case-by-case determinations, raise similar questions about sex classification, fairness, and legitimacy. Studying public opinion towards DSD athletes would not only broaden the empirical relevance of this dissertation but also sharpen its theoretical contributions by testing whether the same essentialist and fairness-based logics apply beyond trans identities.

More policy-oriented future research could also build on the findings related to “sex” vs. “gender” framing. While this dissertation suggests limited framing effects in the sports domain, future research could examine whether language choices have greater consequences in other policy areas, such as prisons, healthcare, or anti-discrimination law, where the terms “sex” and “gender” may carry different political or ideological signals. Such work would help specify the conditions under which linguistic framing affects public opinion and when deeper normative commitments make framing largely ineffective.

8.5 Parting thoughts

While witnessing the debates about trans athlete inclusion that dominated my (admittedly biased) news feed in 2022–2023, I kept returning to a simple question: how do people justify exclusion? Over the course of this dissertation, that question crystallized into a more precise research problem: what drives public opinion on trans inclusion in sports? After three years of theoretical engagement and empirical work, my answer is the following: resistance is not driven solely by attitudes toward trans people or solely by concerns about fairness; it is rooted in more fundamental beliefs about the differences between AMAB and AFAB bodies, about sports categories as self-evident and natural, and about physiology as the ultimate arbiter of who belongs where.

The conclusion I reach is both troubling and cautiously hopeful. On the one hand, it is remarkably difficult to challenge the taken-for-granted nature of sports categories and the essentialist assumptions that underpin them. On the other hand, there are cracks in these assumptions that can be leveraged to produce gradual change. Pointing to competitions where gender categories appear unnecessary or where physiological differences are perceived as less significant for success can generate greater support for inclusion. Yet even among people who share my left political commitments and broadly supportive attitudes toward trans rights, trans women are consistently afforded less support than trans men. This, I believe, reflects a deeper and more pervasive tendency: all of us, to varying degrees, rely on assumptions about categories and the different bodies, essences, and capacities that support those distinctions.

It is difficult not to fall back on categorical modes of thinking. Categories are cognitively efficient, socially reinforced, and deeply embedded in how we make sense of competition, difference, and inclusion. Still, if there is one thing I hope to take with me and encourage the readers to take with them, it is an invitation to question the perceptual shackles of categorical thinking and to remain attentive to how easily naturalized distinctions come to justify exclusion.

English Summary

Why do some inclusion claims provoke particularly intense resistance? This dissertation addresses that question by examining public responses to trans inclusion in sports. Although often treated as a niche or exceptional issue, sport is a domain in which sex segregation is rarely questioned and difference is routinely justified as natural, biological, and fair. As such, debates over trans athletes illuminate broader political dynamics surrounding categorization, legitimacy, and social order. Sport provides a particularly revealing setting for studying how people respond when entrenched categories are unsettled, and how appeals to fairness, biology, and “common sense” are mobilized to defend existing arrangements.

Rather than attributing resistance primarily to prejudice, misinformation, or elite rhetoric, this dissertation advances an alternative perspective. I argue that opposition to trans inclusion is grounded in widely shared beliefs about the naturalness and immutability of gender categories, as well as in normative commitments to how socio-political institutions are supposed to work. Drawing on political psychology, sociology of sport, and sports philosophy, I conceptualize resistance as grounded in justification rather than mere affect: individuals appeal to fairness, competitive integrity, and biological difference to defend existing categorical arrangements. However, these justifications are not applied uniformly; they vary across contexts, policy designs, and targets of inclusion, exposing internal tensions and opportunities for policy interventions in the negotiation of equality and difference.

Empirically, the dissertation investigates these dynamics using two survey experiments conducted on samples designed to be nationally representative on key demographics of U.S. adults. Across three papers, I examine whether and how support for trans inclusion shifts when individuals are exposed to different linguistic framings, different competitive contexts, and different trans policy targets. The studies manipulate whether sports categories are framed as sex-based or gender-based, whether inclusion is presented in contexts with varying perceived competitive advantage, and whether the trans athlete in question is a trans man or a trans woman. Together, these designs allow me to disentangle and analyze relationships between the roles of intergroup attitudes, essentialist beliefs, and context-specific fairness concerns in shaping support for inclusion.

The findings indicate that resistance to trans inclusion is not primarily driven by a lack of information or elite rhetoric. Rather, it is maintained by persistent assumptions about bodily difference and the legitimacy of catego-

rical boundaries. Although concerns about fairness are relevant, they are selectively activated and operate within broader interpretive frameworks that shape how evidence is perceived and evaluated. Furthermore, the research reveals a consistent asymmetry in the treatment of trans men and trans women, suggesting that resistance is influenced not only by essentialist beliefs but also by gendered hierarchies and different values associated with masculinity and femininity. Collectively, these results demonstrate that even when individuals endorse equality in principle, they may resist inclusion when it challenges categories perceived as natural, intuitive, and foundational. By tracing the structure of these justifications, this dissertation contributes to broader debates concerning rights, recognition, and the limitations of formal equality in contemporary democracies.

Dansk resumé

Hvorfor fremkalder nogle inklusionskrav særligt intens modstand? Denne afhandling behandler dette spørgsmål gennem en analyse af offentlige reaktioner på transinklusion i sport. Selvom problemstillingen ofte behandles som et niche- eller særtilfælde, udgør sport et samfundsområde, hvor kønsopdeling sjældent problematiseres, og hvor forskelle ofte legitimeres som naturlige, biologiske og forenelige med fairplay. Debatten om transatleter synliggør dermed nogle bredere politiske dynamikker knyttet til kategorisering, legitimitet og social orden. Sport udgør et særligt analytisk brugbart felt når det kommer til at undersøge, hvordan aktører reagerer, når fastforankrede kategorier udfordres, og hvordan henvisninger til fairness, biologi og sund fornuft mobiliseres til forsvar for eksisterende strukturer.

I stedet for primært at forklare modstand med fordomme, misinformation eller eliteretorik, anlægger afhandlingen et alternativt perspektiv. Jeg argumenterer for, at modstanden mod transinklusion er forankret i bredt delte forestillinger om kønskategoriernes naturlighed og uforanderlighed samt i normative forventninger til, hvordan socio-politiske institutioner bør fungere. Med afsæt i politisk psykologi, sportssociologi og kønsstudier konceptualiserer jeg modstand som forankret i retfærdiggørelse snarere end affekt: individer henviser til fairness, konkurrenceintegritet og biologisk forskel for at retfærdiggøre opretholdelsen af eksisterende, kategoriske opdelinger. Disse legitimeringer anvendes imidlertid ikke konsekvent; de varierer på tværs af kontekster, politiske designs og målgrupper for inklusion, hvilket blotlægger interne spændinger og muligheder for policy-interventioner i forhandlingen mellem lighed og forskellighed.

Empirisk undersøger afhandlingen disse dynamikker ved hjælp af to surveyeksperimenter gennemført på stikprøver, der er designet til at være nationalt repræsentative i forhold til centrale demografiske karakteristika blandt voksne i USA. Gennem tre artikler analyserer jeg, hvorvidt og hvordan opbakningen til transinklusion ændrer sig, når respondenter eksponeres for forskellige sproglige framings, forskellige konkurrencekontekster og forskellige policy-mål for transinklusion. Studierne manipulerer, hvorvidt sportskategorier indrammes som kønsbaserede ("sex-based") eller kønsidentitetsbaserede ("gender-based"), hvorvidt inklusion præsenteres i kontekster med varierende opfattet konkurrencefordel, samt hvorvidt den pågældende transatlet er en transmand eller en transkvinde. Tilsammen giver disse designs mig muligheden for analytisk at adskille og analysere forholdene mellem inter-

grubeholdninger, essentialistiske forestillinger og kontekstspecifikke hensyn til fairness i formningen af opbakning til inklusion.

Resultaterne indikerer, at modstand mod transinklusion ikke primært drives af informationsmangel eller eliteretorik. Den opretholdes snarere af vedvarende antagelser om kropslig forskel og om legitimiteten af kategoriske grænser. Selvom hensyn til fairness spiller en rolle, aktiveres de selektivt og fungerer inden for bredere fortolkningsrammer, som former, hvordan evidens opfattes og evalueres. Endvidere påviser analysen en systematisk asymmetri i behandlingen af transmænd og transkvinder, hvilket indikerer, at modstanden ikke alene formes af essentialistiske kønsopfattelser, men også af kønnede hierarkier og forskellige værdier associeret med maskulinitet og femininitet. Samlet demonstrerer resultaterne, at selv når individer tilslutter sig lighed som princip, kan de udvise modstand mod inklusion, når denne udfordrer kategorier, der opfattes som naturlige, intuitive og grundlæggende. Ved at kortlægge strukturen af disse legitimeringsprocesser bidrager afhandlingen til bredere debatter om rettigheder, anerkendelse og grænserne for formel lighed i moderne demokratier.

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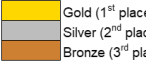

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Appendix

Appendix A. Vignette structure, Papers A and C

“Sex”-based frame		“Gender”-based frame																																																																																									
<p>We would like to ask your opinion on changing <i>sex</i> categories in sport competitions. You are asked to read about the competition and consider the athlete’s request to compete in a different <i>sex</i> category.</p> <p>Competition: Archery</p> <p>Archery contests involve athletes shooting at targets set at various distances, with the most accurate shooter being declared the winner. In the 2024 U.S. championship, <i>males</i> and <i>females</i> competed in separate <i>sex</i> categories. Below are example scores of athletes from a college team, with higher numbers indicating better performance in each type of competition. The table is organized according to the sum of points across competition types, irrespective of the sex group.</p>		<p>We would like to ask your opinion on changing <i>gender</i> categories in sport competitions. You are asked to read about the competition and consider the athlete’s request to compete in a different <i>gender</i> category.</p> <p>Competition: Archery</p> <p>Archery contests involve athletes shooting at targets set at various distances, with the most accurate shooter being declared the winner. In the 2024 U.S. championship, <i>men</i> and <i>women</i> competed in separate <i>gender</i> categories. Below are example scores of athletes from a college team, with higher numbers indicating better performance in each type of competition. The table is organized according to the sum of points across competition types, irrespective of the gender group.</p>																																																																																									
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