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Glitching trans* athletes: possibilities for research and practice in sports coaching

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ABSTRACT

The international discussion about policies regulating the inclusion of transgender athletes in elite sports is ongoing. . In this paper, we introduce the metaphor "glitch" to provide a novel way to embrace the possibilities of trans athletes in sport. To do this, we feature three Swedish cases of transgender athletes to consider: (1) What do "trans" and "trans athlete" mean from a glitch perspective? (2) What does this metaphor help us critique regarding sport's dual gender categorisation? and (3) How can glitch be a source to generate new ways to understand trans athletes? In thinking with glitch, we demonstrate that the "problem" of current trans discussions are not the bodies that transcend certain (gender) categories, but rather the dualistic categories themselves. Glitching athletes, trans or otherwise, help us turn what is taken for granted upside down, and in so doing, can help coaches, coach educators, and coaching researchers explore the possibilities of trans athletes in relation to their everyday sporting practices.

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Introduction

Media reports around the globe are drawing attention to trans*[1] athletes' experiences in sport (e.g. Ore, 2021; RFSL, 2020). In response, sport organisations are busy developing policy aimed at "resolving" concerns raised by trans participation in sport, more specifically, trans women's participation in women's sport (e.g., World Rugby, World Athletics, SCEG, 2021) informed by "research[2]" that has largely focused on trans athletes who have undergone male puberty and are understood to have a physiological and biological advantage over ciswomen (Handelsman, Hirschberg, & Bermon, 2018; Schultz, 2011). In rationalising their policies, the common arguments are that trans athletes participating in women's sport create an unfair playing field as such individuals possess a competitive advantage, and in some cases, (may) pose a physical threat to cisgender athletes' safety

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(Jones, Arcelus, Bouman & Haycraft, 2017; Pérez-Samaniego, Fuentes-Miguel, Pereira-García, López-Cañada, & Devís-Devís, 2019; World Rugby, 2020).

While fairness and safety are of course important, scholars have highlighted that discussions relating to what is considered an unfair advantage are gendered (Fisher & McClearen, 2020). That is, differing natural levels of hormones are not problematised in men's sport and athletes assigned female at birth and aiming to participate in men's sport are not limited by minimum/maximum hormone levels.[3] This gendering has consequences, and policies regarding the inclusion of trans (women) athletes have been criticised, especially from a human rights perspective, focusing on the rights and freedoms that protect an individual from discrimination (i.e., United Nations, 1948; Anderson & Travers, 2017; Flores et al., 2020). However, sport organisations such as the International Olympic Committee (IOC), and most international sport organisations, like World Rugby, the Association of Boxing Commissions, the International Tennis Federation, and World Athletics (formerly the IAAF), have implemented policies to only allow athletes assigned female at birth and trans athletes with a certain maximum level of testosterone to compete in their respective sports.

Given this background, most international and national sport organisations presently adopt the IOC (2015) Consensus Meeting on Sex Reassignment and Hyperandrogenism. Supportive policies for the inclusion of trans athletes are thus not only rare, but also limited. Examples are the Swedish Gymnastics Federation (2020) recent decision that trans athletes in their gymnastics sports can decide which group they would like to train and which competitive class to compete in. However, this policy only applies to participants up to and inclusive of junior national level, which differs between gymnastics disciplines, from 13 to 18 years. In a similar way, the Australian Human Rights Commission (2019) recommends that Australian sport organisations include in their policies "a statement that participation in sport *should be* based on a person's affirmed gender identity and not the sex they were assigned at birth to the fullest extent possible" (p. 35, emphasis ours). The recommendations are "only" guidelines, however, and in sports where "an individual's strength directly affects their ability, and the ability of others, to 'effectively compete'", organisations can seek to exclude athletes over the age of 12 based on the "competitive sporting activity" exemption in the Act. Thus, it appears that existing trans inclusive policies in Olympic sports, at least as exemplified by the Swedish and Australian examples included here, are limited by age and exemptions.

There are signs, currently, that the trans policy accepted in sport may be about to change. In July 2021, the IOC announced that its current guidelines for transgender athletes are not fit for purpose and that they will release a new policy within the next two months (Ingle, 2021). While it is not yet clear

what the IOC trans policy will look like, the IOC's medical and science director, Dr Richard Budgett, is quoted that "the threat to women's sport has probably been overstated" and that the IOC must consider emerging scientific evidence to revise their policy and work increasingly towards safety, fairness, and inclusion.

In non-Olympic sports, trans inclusive policies have to a much greater degree focused on inclusion, such as CrossFit (O'Hara, 2018), International Quidditch Association (International Quidditch Association [IQA], 2013), and the Women's Flat Track Derby Association (Women's Flat Track Derby Association [WFTDA], n.d.). For such organisations, it may be easier to be inclusive as they are not members of the Olympic family and thus not obliged to follow IOC policy. Critics may also argue that an equal level playing field is not (as) necessary given that competitive success in these activities does not carry the same weight as in Olympic or other high profile professional sports. Regardless, and despite positive examples of trans supportive policies, the trans debate remains heated and bound by the opposites of equal playing field, fairness, and safety on the one side and human rights, exclusion, and health risks because of hormonal therapy on the other side (Gleaves & Lehrback, 2016). Ultimately, sport's gender-binary model remains strong (Kerr & Obel, 2018), while trans athletes, particularly trans women and non-binary athletes wanting to participate in women's sport, lack equality of inclusion.

In this article, our starting questions are: What can academics do to meaningfully contribute to the trans debate? And specific to the sport coaching community, what could a meaningful debate achieve for coaches and coaching? In answering these questions, we aim in this article to bring the discussion about trans athletes and policies to the sport coaching community. To do this, and in keeping with the purpose of this Special Issue to introduce new theories, we present "glitch", a metaphor originating from technology and adopted by feminist scholars to critique gender binaries (Linghede, 2018, 2019). Glitch and glitching have been argued to provide novel ways to think about trans athletes and specifically trans women participating in women's sport. Therefore, in this paper, we aim to consider: (1) What do "trans" and "trans athlete" mean from a glitch perspective? (2) What does this metaphor help us critique regarding sport's dual gender categorisation that excludes trans athletes? and (3) How can glitch be a source to generate new ways to understand trans athletes, and through this, inform coaches, coaching practice, coach education (CE), and coaching research?

To answer these questions, we first outline in the following the glitch metaphor and the theorisations it allows regarding trans in sport. We then present three storied accounts of Swedish trans athletes' sporting experiences, each of which is followed by a discussion of issues that the stories,

seen through the perspective of glitch, raise. Lastly, we conclude the article by presenting implications for coaches, coaching practice, CE, and coaching research.

Glitch, glitching and trans bodies in sport

Glitch usually refers to a malfunction or defect in modern technology, a sudden unexpected event, an error in a structured system (Menkman, 2011a, 2011b; Sundén, 2015). It is the rainbowed spinning wheel on the computer screen, the moment when a CD player begins to stutter and stumble and the pixilated hiccup on the TV. Since glitches are unexpected breaks in the flow, a loss of control over technologies and systems, they are seldom desired and therefore possibly anxiety-inducing when they occur, often resulting in desperate attempts to patch what is glitching. However, following Sundén (2015), glitch is also about "the other side of technology, about a perceived beauty in crashing and skipping coupled with a critique of media industries" (n. p.). In the field of glitch art, for example, the fragility of new media is celebrated. Here, existing flaws, defects or errors are amplified. Instead of covering up the seams, it presents them proudly. As a result, the spectator is forced to acknowledge that the use of the computer is based on a genealogy of conventions, while in reality, the computer is a machine that can be used in many different ways.

According to Menkman (2011a), exposing digital and social fingerprints of imperfection is a way of showing the new opportunities they facilitate. Such breaks within politics and social and economic conventions can increase awareness of the pre-programmed patterns. In the words of Russel (2013), there are thus good reasons, as a feminist, to turn "the gloomy implication of glitch on its ear to see how errors in social and technological systems alike carry political potentials" (n. p.). Elaborating further on the ideas of glitch feminism, Sundén (2015) suggests an understanding of gender as glitchy at its core and transgender as something that makes such glitchiness obvious. Elaborating Sundén's theorising, Linghede (2018) shows how intersex phenomena carry a similar potential. If glitch in digital media is caused by lost or incorrect binary code, trans and intersex as glitch is a similar struggle to cope with loss of binaries, of binary gender. Following Sundén and Linghede, exploring trans and intersex phenomena as glitch is key to understanding (binary) gender as a machinery of failure and a source for new patterns and possibilities. Trans bodies put stress on the binary limits of gender. It is a way of challenging its boundaries, to say that such bounds are too tight to accommodate the many layers, glitches and inconsistencies that are at the centre of how gender works (or rather, does not work). In this sense, trans athletes are examples of what Haraway (1991) terms cyborgs; figurations that cannot be categorised and placed in neat

binaries and therefore define different political possibilities and limits from those proposed by the mundane fiction of Man and Woman. As glitching phenomena in a structured and binary sporting system, they hold both beauty and sadness, both political explosiveness and pain. By failing to uphold the boundaries of a gender dichotomy, they force us to acknowledge the machinery that seemingly effortlessly makes and shapes bodies along the lines of binary sex and make us aware of the things that previously slipped by. The promise of these glitching bodies is that they show us that trans phenomena may be understood as possibilities, rather than as abnormal or deviant.

By adopting a more celebratory mode to analyse trans athletes, we in no way want to reduce the pain and exposure that glitching bodies can be forced to bear (due to sporting authorities' obsession with keeping the gates clear from "cyborgs"). We recognise that the treatment of trans athletes is "indisputably prima facie discrimination. Truly, it is indisputable" and causes a myriad of harm (Ivy, 2021, p. 5). Moreover, we understand that using trans people as potential vehicles of gender disruption is problematic (Namaste, 2009). Although below, we present the accounts of three trans athletes' sporting experiences, we do not mean to portray them as individual vehicles of change. Rather, our starting point is that the gender binary in sport remains strong and that the current *epoch* of trans athletes, as represented by the three accounts included in this article, promises to disrupt this order. By presenting representative real-life trans sporting stories, we hope that the spirit of glitch art can support coaches', coach educators', and coaching researchers' in increasing their awareness of the flaws, breaks and imperfections of sport and their thinking towards other, more inclusive, coaching practices.

To some, the idea of "imperfection" as promising may sound strange. Indeed, using "a glitch or glitches to glitch" the taken-for-granted can be challenging, threatening, and even counter-intuitive (Sundén, 2015). Thus, before we turn to the three trans athlete stories, we wish to present an example of "glitching" and what insights such questioning can create, using the coaching-related practice of talent identification (TI). TI is today considered a key dimension of athletic success and one that is integrated in many national sport systems (De Bosscher, Shibli, Westerbeek, & Van Bottenburg, 2015). At its heart, TI systems aim to "find" individuals, usually children, who in one way or another stand out in terms of anthropometric, neuromuscular, cognitive and/or coordinative attributes (Di Cagno, Battaglia, et al., 2014; Fuchslocher, Romann, & Gulbin, 2013). The aim is not to identify the average individual; essentially, TI systems aim to find *exceptional* individuals, which in relation to the majority of society, could be regarded as "glitches". Consider the US swimmer Michael Phelps, winner of 14 Olympic gold medals. Phelps is famous for his long torso, short legs, six-

foot-seven-inch (2 m 6 cm) arm span and extremely flexible size-fourteen feet (47–48 Euro size) (Cooper, 2010). Or the Italian gymnast Vanessa Ferrari, winner of 12 World and European Championship medals, competitor of three Olympic Games, and who at the age 30, has won a silver medal at the Tokyo Olympic Games for her floor exercise. Ferrari is 4 feet and 9 inches tall (146 cm) and weighs 97 pounds (44 kg). Both Phelps and Ferrari have exceptional anthropometric attributes and undoubtedly, were identified as neuromuscularly, cognitively and coordinatively "talented". In their respective sporting contexts, these attributes are sought after, celebrated. Outside of their specific sporting contexts, however, they may be considered unsuitable; Ferrari would not have been identified as "talented" for swimming and Phelps not for gymnastics. And further, outside of sport, Ferrari would be considered to suffer from proportionate short stature, or in medical terms, dwarfism (Jain & Saber, 2020). It appears, thus, that talent and TI systems in sport rely on glitches, at least at an initial stage of an athletic career. However, what is understood as "talented" is highly specified. In a similar way, trans athletes, especially those who have transitioned from having been assigned male at birth to female, are positioned as unsuitable, as disruptions to the system. While talent and TI build on ideas of ability, it is the principle of gender binary that drives the understanding that trans athletes are flaws, breaks and imperfections. There is men's sport and women's sport.[4] When explicitly motivated, the reasoning goes like this: since men generally perform better than women, it would be unfair with one class only (Cahn, 1994; Parks Pieper, 2016). In other words, there is one category of people (those assigned women at birth) that seems to need protection from another category of people (those assigned men at birth). One consequence of this rigid gender segregation in sport is that it is difficult, sometimes even impossible, to participate if you are intersex or trans (Jönsson, 2007; Amy-Chinn, 2012; Parks Pieper, 2016: Travers, 2018b). Ironically, since the structuring principle of binary gender is motivated by biological sex differences, it is biology that continues to trouble this binary (Fausto-Sterling, 2000; Haraway, 1991). Over and over, it has been found that some athletic bodies cannot adjust to sporting and scientific sex classifications. Intersex and trans athletes reveal that gender glitches as temporary disruptions are everywhere. Gender simply does not cohere. In fact, it seems to take a fair amount of violence to make materially specific bodies to coincide with a particular sex (Sundén, 2015). World Athletics' and IOC's ever more specialised technologies for sex determination and revised regulations for competition (Linghede, 2018), as well as the IOC Transgender Guidelines implemented in 2015,[5] are examples of this violence. They illustrate the continuous maintenance, upgrades and reboots that move gender in the illusive direction of an untouched and ordinary sexual dimorphism.

Trans athletes' experiences in sport

In the following, we present the sport stories of three Swedish trans athletes. The three stories were sourced from the report "Trans People and Sports" (Swedish: "Trans & idrott. Ingen ska lämnas utanför"), which was published by the Swedish Federation for Lesbian, Gay, Bisexual, Transgender, Queer and Intersex Rights (RFSL) (2020). The stories presented in this report were created from formal interviews with 10 trans athletes in Swedish sporting contexts. Some of the stories were anonymised, some not. According to RFSL, all participants reviewed the stories, which were built around the interviews, before publication. The article's first author translated the full version of each story, sentence-by-sentence, from Swedish into English.

We chose the three stories included in this article because they go some way to represent the diverse population of trans athletes in competitive (elite) and recreational sports and because of the trans challenges they experience in relation to sport. The first story features Cassandra, a child trans athlete (assigned male at birth-to-female) in football, who at the time of her account, was unsure as to whether she would be able to continue to play in this sport after turning 13. The second account is from Noel, an adult trans athlete (assigned female at birth-to-male) in basketball, who had been selected for the Swedish junior national women's team and after gender affirming treatment sought to play in the men's league. The third story, by Cim, demonstrates what sport can mean for an adult athlete (non-binary) in the sport of roller derby.

We recognise that as a source of information, reports such as the one published by RFSL may have limitations, particularly regarding the scientific rigour of the research methodology and the empirical content (Cooky, Dycus, & Dworkin, 2013; Fiske, 1996). Media texts have, however, been recognised as "nodes of communication" (Plymire, 2008) that can transmit a cultural message (Millington & Wilson, 2016; Zehntner, McGannon, & McMahon, 2019). In our view, the RFSL stories offer unique accounts of trans sporting experiences beyond the scientific and public debate and the popularised representations of famous athletes such as Caster Semenya and Dutee Chand. Lastly, adopting the theory of glitch, we expected that the stories could, by way of the glitch theory, critique sport's gender binary that excludes trans athletes, and offer potential for new ways to understand trans athletes and through this, inform coaches, coaching practice, CE, and coaching research.

Case 1: Footballer Cassandra

Cassandra, 12, was anxious when she started to play football since she did not know how the local football club would welcome a trans girl but was surprised when the girl's team accepted her with open arms. The only concern left was if she would be allowed to play in the upcoming series games. Cassandra's mother, Mona, commented "the Swedish Football Federation's rules feel unclear, but it is comforting that our club fights for us."

When Cassandra and her family moved to a new city, they contacted the chairman of the local football club to ask if Cassandra could play with their girls' team. This was not a problem. "Though the club did not have an official policy on inclusion of trans athletes, their vision is that 'everybody is welcome,'" said Mona.

Since Cassandra turns 13 in 2020, and her team is advancing, the local club has sent an application for exemption to the Swedish Football Federation. Cassandra is still registered as a boy legally, since it is not possible in Sweden to change legal gender before the age of 18. This could mean that she will not be allowed to play games with her team. The Swedish Football Federation can give her an exemption, but it is unclear what rules should be applied to trans girls. Essentially, it comes down to whether people think that girls like Cassandra have an unfair advantage due to their physiology.

Cassandra has been taking 'stop hormones'[6] for some time and her endocrinologist says that the physical advantages, in relation to her teammates, should not be a problem. "But we don't know if the Swedish Football Federation is familiar with issues like these. We're afraid that they will base their decision on preconceptions," stated Mona.

The decision is expected soon and until then, the family is keeping their fingers crossed. And whatever the outcome, Cassandra can continue to practice with her team. "But it wouldn't feel good if I wasn't allowed to play games," Cassandra said emphatically.

If the family were to advise people involved in youth sport, they would tell them to do away with the gender division as much as possible. "I think they do it without thinking really. They're stuck in the rut and don't think about how hard it can be for trans athletes," said Mona. However, she is happy to emphasise the inclusion of her daughter and the obvious support from coaches in the local club. "They really fight for our girl, and that's important to highlight since you often hear negative stuff about trans persons. We almost only have good experiences and I hope our situation can work as a positive example."

Cassandra agrees with her mother. Apart from a football camp she skipped because she was anxious about the gender-divided locker rooms and sleeping arrangements, she has never given up sport activities due to her trans experience. She has also made many friends in her team, and she feels secure enough to be open with them. According to Cassandra, "Everybody's been really good and supportive."

Discussion: trans inclusive policies are in their infancy

Cassandra's account represents an assigned male at birth to female trans story during childhood. She has not yet experienced puberty and is now undergoing hormone therapy to support her gender transition. Her football club and her coaches support her; the Swedish Football Federation, at the time Cassandra was 12, is working to translate their vision of "all are different – different is good" into inclusive participation conditions (RFSL, 2020). At the time of Cassandra's story, inclusion is defined in the federation's general fair play and values documents, but a concrete policy on trans football has not yet been put forward. This is a point of importance as most debates and policy development have focused on athletes, who have gone through puberty. For Cassandra and other pre-pubescent trans children, this lack of policy creates additional challenges if they desire to participate in sport. A positive sign is, however, Östersund Football Club's Hbtqi certification, which was the first Swedish football club to receive this certification in 2016 (RFSL utbildning, , n.d.; Östersund, n.d.). The certification means that the football club has completed the education provided by the Swedish Federation for Lesbian, Gay, Bisexual, Transgender, Queer and Intersex Rights (RFSL) on how to strategically work towards creating a good working (sporting) environment and an LGBTQI-competent attitude. Cassandra's club has not come as far yet and her future participation, particularly regarding playing in tournaments, is uncertain.

The situation of trans inclusive policy emerging or being absent reflects global insecurities as to best solutions and practices. Guidance is, mostly, dominated by non-trans inclusive sport policies, such as IOC (2015) Consensus Meeting on Sex Reassignment and Hyperandrogenism, or those developed by international and national federations (e.g., World Rugby, World Athletics; English Football Association). As outlined at the outset of this article, policies may exclude trans athletes or inclusion may be limited to the childhood years. The English (Football Association [FA], 2014), exemplifies this latter point by outlining that:

> During the growth period, leading up to puberty, there is little difference in male and female strength development. Mixed football is allowed until the U16 age group and under 16's are entitled to play in boys' or girls' teams regardless of their natal sex.

For Cassandra, this regulation would give her another three years to play in the girls' team. More long-term, however, her participation may be complicated by gender verification procedures.

A further concern that policies miss is that although the regulation of hormones represents one way to create a physiologically-level playing field, the financial and medical costs that incur are omitted (Gleaves & Lehrback, 2016). Such treatments can be financially burdensome and create medically unnecessary obstacles for athletes, which create division as opposed to facilitate inclusion. Furthermore, the side effects of the required hormone therapy have received little attention. The limited research that has been conducted with trans female athletes who have hormonally and surgically transitioned has found that these athletes reported feeling weaker and had testosterone levels that tended to be lower than average compared with cisgender women (Cavanagh & Sykes, 2006; Schultz, 2011). For children and youth, the medical concerns (as concerns regarding ethics and cost-benefit efficiency) are today also recognised and in Sweden, the international renowned Karolinska Hospital has, as of May 2021, ended the practice of prescribing puberty blockers and cross-sex hormones to gender-dysphoric patients under the age of 18 (Society for Evidence Based Gender Medicine [SEGM], 2021). However, children and young people, who are currently undertaking this treatment, such as Cassandra, require assessment[7] and consultation between the medical team, parents/guardians and the child to determine whether continued use of puberty blockers and cross-sex hormones will be supported (Karolinska Universitetssjukhuset, Astrid Lindgrens Barnsjukhus, 2021). Such a change, and a lack of clear policy and resources for inclusion, may be detrimental to a child's participation in sport. Lastly, most existing policies do not provide instructions or recommendations on how to support athletes during gender transition. Yet, as Cassandra's example indicates, transition is a long-term process and at a day-to-day level, entails a social transition of identity construction, public appearance, and social acceptance (Buzuvis, 2012; Travers, 2018a). A context that ensures that "transitioning employees and players are treated with respect and dignity, any concerns from others in the organisation are addressed, and the organisation remains free from discrimination, harassment and unfair treatment", such as the World Dodgeball Federation (2019, p. 5) promises, is thus vital. In this regard, adjusting changing rooms to gender-neutral spaces can offer a pragmatic change (Cunningham, Buzuvis, & Mosier, 2018; Greey, 2020; Oakleaf & Richmond, 2017). Unfortunately, research has shown that such backing is not a given, complicating transition and sporting experiences and causing drop-out (Greey, 2020; Jones, Arcelus, Bouman, & Haycraft, 2017; Pérez-Samaniego et al., 2019).

Case 2: Basketballer Noel

When Noel played his first game with the men's team Södertälje Knights in January 2020, history was made. Noel started to play basketball when he was ten. Before his inaugural game in the men's league, he had played 25 games with the women's team Telge Basket. He had also played 25 games with the Swedish junior national team.

In the spring of 2018, Noel made a decision that changed his life. He started gender affirming treatment and stopped playing basketball. Noel's return to playing basketball has not been easy, although his coach Jocke has been supportive.

When Noel expressed interest in returning to basketball, the coach searched for information about what to do. Was Noel supposed to play with girls or guys? Jocke did not find any information in Sweden, and he told Noel it would probably be a long process, but if Noel was ready, he was. They contacted the Swedish Basketball Federation and the Swedish Sports Confederation, both of which responded by saying that they had never encountered something like this and barely knew what a trans person was. They did not know what to do or where Noel belonged. Consequently, Noel did not feel welcome or included.

Noel thinks that gender division and ignorance about trans are factors that complicate participation in sports for trans persons today. He stated: "There are girls' teams and boys' teams and nothing in between. I cannot walk into the girls' locker room, but I cannot walk into the boys' locker room either, so I am left with the wheelchair accessible toilet. They say that they welcome all, and basketball is one of the most equal sports, but they did not know anything about trans persons. We are non-existent. There is no policy or programme to follow in Swedish sport federations, no guide for how to act as a coach, and no knowledge about hormonal treatment as medicine. My hormonal treatment was not intended as doping."

With a feeling of never really belonging, Noel simultaneously talks about how much sport can mean. He has always felt welcome in the basketball arena and with the people there. In his teens, basketball became a way of escaping reality and focusing on something else than on how bad he was feeling. Mental illness and self-destructive behaviours were pushed aside, and his basketball career thrived. But at the age of 17, he felt that he had to choose. Basketball or life. After a gender assessment in which he was diagnosed with gender dysphoria, he decided to start with gender affirming treatment.

Noel recalled "I posted a piece about this on social media and honestly, I have never been more nervous. I knew it would affect my basketball career so in my head it was 'okay, now I post this and then I won't play another game in my life.' You know, I had never heard of a trans athlete before."

Noel describes this as a period of great sorrow. He said goodbye to his team and to his sport, though he really did not want to. He wanted to continue to play in the European Championships. But no matter how tough it was, he felt that he had to first choose to love himself. He stated: "There is a need for guidelines, so that it doesn't have to be a question of either or. Sport organisations should review the treatment of trans athletes, educate coaches and sport federations about trans issues and work out rules for what's okay and not when it comes to competitive sports. For example, it must be a smoother process to apply for exemption from anti-doping rules."

Noel thinks an exemption would have been useful when he did not feel ready to play with the men's team yet. He wanted to keep going with the women's team but was stopped due to his medical treatment with testosterone – a substance classified as doping. He highlighted: "It's hard as hell to play with guys straight away, when your body hasn't adjusted to the treatment and when you've played with girls and women all your life. I've tried to be as clear as possible with the basketball federation and the doping committee that I'm not here to win every game with the help of testosterone. I'm here to play because it facilitates my everyday life – and basketball helps me."

Discussion: talent, testosterone, and therapeutic use exemption

Noel's account represents a female-to-male trans story during young adulthood. His story entailed leaving basketball because of gender affirming treatment, which also meant that Noel had to leave the Swedish women's junior national team. His selection into this national team had involved talent identification and selection; his 25-game playing career indicates successful performance. With the begin of Noel's gender affirming treatment, however, his playing career ended, and his talent was lost. The maintenance of the gender binary through strict men's and women's teams could not accommodate a trans or transitioning athlete. Once Noel had decided to undergo gender affirming treatment, which entails testosterone therapy, his increased level of testosterone would have conflicted with the 2021 World Anti-Doping Agency Prohibited List (WADA, 2021).

While discussions of testosterone have dominated the literature regarding a level playing field regarding male-to-female transitions (Jones et al., 2017; Pérez-Samaniego et al., 2019), Noel's story focuses on the use of testosterone in female-to-male transitions. This is a much less discussed transition, a reason being that these athletes do not challenge the men's category, reinforcing historical views of women's inferiority (Sailors, 2020). However, Noel's involvement in basketball has raised the attention of the Swedish Basketball Federation, who has concerns that his use of testosterone

could be performance enhancing. Given his hormone treatment is needed for his transition, Noel asked his federation to acknowledge this by affording him a Therapeutic Use Exemption (TUE).

In situations in which an athlete has an illness or condition that might require medication or undergo a procedure that is on WADA's Prohibited List (WADA, 2021), a TUE can be used to enable the athlete to take the needed medicine or method. However, there are suspicions around the use of TUEs as there have been cases in which the boundaries between the use of pharmacological substances for medical reasons and doping have been blurred (Overbye & Wagner, 2013). According to WADA (2017), TUEs can be provided for the use of testosterone (see WADA, 2017). However, the guidelines state:

> It is not the purpose of this medical information to define the criteria for the eligibility of these athletes to participate in competitive sport, which is entirely left to the different sporting federations and organizations. The individual sporting federations and organizations need to decide on the eligibility of transgender athletes in their sport, and a TUE will only be considered for eligible athletes (p. 1).

As the guidelines state, for Noel, the decision to award a TUE for the use of testosterone lies within the Swedish Basketball Federation. Currently, the federation is developing policies in this regard (RFSL, 2020).

Noel and Cassandra's accounts of their experiences as trans athletes in competitive basketball and football draw attention to organisational barriers that affect participation in sport, barriers that could be reduced or resolved if organisations were to provide opportunities to better engage trans athletes in meaningful discussions about matters that concerned them. The two stories also demonstrate how trans athletes, at least at present, are at the mercy of their sport organisations' decision – and policy-making. Cassandra's continued football participation depends on the policy direction the federation adopts; Noel is awaiting the TUE. Non-trans athletes are not exposed to such decision-making as they fit into the dual gender system of sport (i.e., do not glitch), their participation is without these barriers.

Noel and Cassandra's stories are still ongoing. They may glitch, however, their talent and motivation raise possibilities for sport. On a practical level, offering mixed gender training and/or mixed gender teams would help create a more forward-thinking sports federation (Grahn & Berggren Torell, 2016). Such spaces would alleviate the regulated adherence to gender norms when participating in or switching to/from male – or female-only teams. Also, mixed-gender training and sports teams may encourage the participation of nonbinary athletes.

It is important to recognise that trans athletes are not a homogenous group and each athlete has unique circumstances during their transition, which need to be considered. Towards this end, as Cassandra's story has

highlighted, while clubs and coaches may support trans athletes and their transitioning, Noel's account reinforces the need for and importance of having an individual management plan to ensure a safe and supportive social transition to/within/between sports (Buzuvis, 2012). Certainly, a management plan would be of use for Noel, who did not feel ready (physically, emotionally, and socially) to move to the men's team and preferred to stay with the women's team until further into his transition. In this way, Noel as glitch helps draw attention to the welfare and wellbeing of athletes and their holistic development.

Case 3: roller derby skater Cim

As a teenager non-binary, Cim practiced martial arts but stopped due to homophobic statements from coaches. However, the passion for sport was revived when Cim, as an adult, was invited to a roller derby team. Today, Cim is an active roller derby player who is critical to the treatment of non-binary athletes in sports. "Here, whether we are men or women, are easily forgotten, even when trans issues are discussed."

It started when a friend wanted that Cim follows to a derby practice a couple of years ago. Cim was initially sceptical since they thought of roller derby as a "fashion sport". "It felt as a silly trend, but I came along and eventually learned to skate. I wasn't really dedicated at first but after a year, when we started to compete, something happened. I understood that I didn't suck but rather had the opportunity to be good," recalled Cim.

Today, Cim practices on skates and exercises at the gym several times a week, something that has also contributed to an improved mental health. "Actually, I don't know if I would still be alive if it wasn't for sports, and it scares me that it was so random that I found roller derby. It's quite hard to start with a sport as a grown up if you haven't done it before."

One reason that Cim dared to try roller derby is that the international organisation Women's Flat Track Association (WFTDA, n.d.) has a policy to include people of all genders and identities. Also, players on hormonal treatment are included. Cim does note: "Roller Derby isn't free from transphobia, but it's light years away from the situation in more established sporting worlds. I know there has been some improvements for binary trans athletes, but I'm really worried about what will happen with non-binary athletes. We're so easily forgotten. Is it, for example, possible for us to use the locker room we want and will people use the right pronoun?"

Cim means that there is something with the sporting world that is conservative when it comes to gender. These norms and ideals are so strong that it will be hard for binary and non-binary athletes to compete side by side. "The sports movement must do away with gender division and the idea of binary gender. It's as if women need to be protected in their own category

to have a chance to win. At the same time, the male category is open: within that category, hormonal levels are allowed to vary as long as you haven't taken something external," stated Cim.

Cim feels that in general, the sports movement does not take trans issues seriously and that much could be done differently. Educating coaches and officials is a good start. "There's a need for more knowledge about trans and the sports movement must open its eyes to the problems trans athletes face. Otherwise, it will be hard to come up with creative solutions."

Discussion: what does this mean for Cim?

While Cim's passion for sports was (re)ignited in roller derby, unfortunately, Cim's early negative experiences in martial arts were not an isolated experience. Scholarship in the last two decades has highlighted that sporting environments are discriminatory towards minority groups (e.g. gender, sexuality, ethnicity, disability, religion). Focusing on sexual orientation in particular, work has highlighted derogatory initiation rituals and team songs (Price & Parker, 2003) and the nature of homophobic language used (Anderson, 2005). McCormack (2013) highlights, however, that a greater social awareness of the nature of "homosexually themed language" and the negative effects it has on individuals has decreased its use. Moreover, homosexually themed words (e.g., fag) may not necessarily be homophobic as it depends on how they are being used, with what intent, and how they are being received. Such language can even have a bonding effect between heterosexual and gay individuals. The sport context has, however, been identified as a context particularly resistant to social changes, despite an increased cultural consciousness of the problem of homophobia (Magrath, 2018). Indeed, unsupportive coaches and marginalising sporting environments have been recognised as obstacles that make it difficult, if not impossible, for trans athletes to participate (Elling-Machartzki, 2017; Hargie, Mitchell, & Sommerville, 2017; Herrick, Rocchi, & Couture, 2020). Consequently, quitting or retiring early is a common theme amongst the trans athlete population (Elling-Machartzki, 2017; Hargie et al., 2017).

Whilst in discussions of Noel and Cassandra we have drawn attention to organisational barriers and how sports organisations can contribute towards inclusive and welcoming sport spaces, Cim notes that coaches also have a role to play in inclusion. Consequently, questions can be raised about the education and development of coaches about trans athletes. There has been increasing attention on coach education (CE) and development initiatives in various nations and across a range of sports with content largely constructed around rationalistic and mechanistic ideas that do not always prompt coaches to consider their work within the sociocultural context in which it occurs (Piggott, 2012; Norman, 2016). Discussions of coaches'

responsibilities regarding social inclusion and equity are particularly lacking. As such, it is possible for coaches to achieve the required qualifications, but (intentionally or unintentionally) promote gendered, heteronormative, racist and ableists ideas in their coaching practice. Our concern is how these can be revealed or challenged.

Professional development might be one way to engage coaches in considering their views on equity and inclusion. For example, as mentioned above, the Swedish Federation for Lesbian, Gay, Bisexual, Transgender, Queer and Intersex Rights (RFSL) has initiated Hbtqi certification. Similarly, some organisations responsible for CE have introduced equity training. UK coaching (2021) "Equity in your coaching" is an optional professional development programme for coaches of all levels and across all sports. Some of the aims of this programme are to help practitioners "identify and deal with any barriers to participation" and to learn how to "use appropriate language and terminology" (UK coaching, 2021). Regarding the effectiveness of this, however, as identified by Norman (2016), beyond prompts, reminders and awareness raising, there is little evidence that the small sample of coaches had taken what they had learnt from the workshop to inform their own practice. Notwithstanding the quality of the professional development, the optionality of this course, as the Hbtqi certification in Sweden, might be problematic as it (unintentionally) tells practitioners that the content is not a high priority. Moving forward, Cushion (2018) and Norman (2016) recommend that professional development in this area needs to be in a form that is relevant, relatable, and in-depth in order to challenge coaches to consider those parts of their practice they often perform unconsciously (Cushion, 2018; Norman, 2016).

In addition to using education and development initiatives to draw coaches' attention to equity, some sports organisations are requiring that coaches sign a code of conduct which promotes equity in the sporting environment. For example, the FA (2021) code of conduct for coaches, team mangers and officials include the clause: "Never engage in, or tolerate, offensive, insulting or abusive language or behaviour." While the organisations' expectations are clearly articulated, the consequences of breaching this is unclear. In addition, if the coach is not aware of the problematic nature of their language or behaviour, a code of conduct is of limited use. It is here that we see the potential for glitch. In light of its celebratory approach to diversity, incorporating glitch (in particular embodied glitches) into CE and professional development might allow for possibilities to better engage coaches in meaningful discussions relating to equity in their coaching practice.

Conclusion and implications for coaches, CE, and research in coaching

In this article, we started out by asking what academics can do to meaningfully contribute to the trans debate and what a meaningful debate could achieve for coaches and coaching. Using the theory of "glitch", we aimed to consider what "trans" and "trans athlete" mean, what the metaphor can help us critique regarding sport's dual gender categorisation and how glitch can be a source to generate new ways to understand trans athletes, and through this, inform coaches, coaching practice, coach education (CE), and coaching research.

Through the three stories, we have featured the individual sporting experiences of trans athletes. In doing so, we have illustrated that trans athletes are diverse, participate in all sports and can be children. In using the glitch metaphor and focusing on individual stories, we have drawn attention to the connection between glitches at the micro-level and the systematic glitches of sport. That is, in sport, certain bodies are celebrated because they fit or support the existing system, while glitching bodies have been positioned as disruptive. However, gender glitch in the form of binary and non-binary trans athletes holds a potential to infiltrate and put pressure on the norms of pure and binary gender. It reveals that gender is always noisy. In accordance with Sundén (2015), noise is that which disrupts a clean, supposedly true signal, that which betrays the perfect ideal of cisgender normativity. Cisgender is the opposite of trans, a gender machinery which seemingly effortlessly makes and shapes bodies along the lines of gender binaries and heteronormative desires. Highlighting the sporting glitch using trans athletes, no matter how fractional this population is in relation to the total sport population, is meaningful for others who exist outside of the gender normative sport culture. Trans bodies like Noel's, Cassandra's and Cim's, although enrolled in a sex-segregated (sporting) culture, disturb and "do" something. They could be read as *glitch artists* creating and flashing breaks and ruptures as critique, showing us that it could be otherwise. Importantly, and as mentioned, our intention is not to romanticise individual trans athletes by turning them into persons that are somehow by default transgressive, carrying the burden of performing and embodying a revolution in gender. We recognise that the brokenness of gender often hurts.

Having that said, thinking with glitch makes visible that the problem is not the bodies that for one reason or another transcend certain (gender) categories, but rather the dualistic categories themselves. By focusing on what escapes regulatory regimes, glitching bodies help us turn what is taken for granted upside down and inside out. We thus argue that glitching

athletes, like the cases presented in this paper, can help coaches, coach educators, and coaching researchers explore and elaborate the possibilities of transgender athletes in relation to their everyday sporting practices.

Athletes are visible bodies, celebrities, with considerable media presence. If we can proudly display athletic glitches, it may be possible to promote cultural inclusiveness as well. Noel, Cassandra and Cim provide keys to the development of different and more inclusive sporting cultures. Inclusive when it comes to everyday treatment, when it comes to implementation of transgender guidelines, when it comes to organisation of sporting activities and facilities, when it comes to CE, and when it comes to approaches to international and national (binary) regulations for competition.

Notes

1. The asterisk at the end of trans expands the umbrella term "trans" to include all transgender, non-binary – and gender nonconforming identities, including (but not limited to) transgender, transsexual, transvestite, genderqueer, genderfluid, non-binary, genderfuck, genderless, agender, non-gendered, third gender and bigender. To allow best reading flow, we do not use the asterisk from here onwards, however, "trans" as used in the article always refers to "trans*".
2. Emphasis here due to criticisms of the scientific research that informed the IOC's early transgender policy and the recent criticism of the "substance" that partially informed World Rugby's decision to ban trans players from the elite women's game.
3. Where appropriate, we use "assigned female/male at birth" to highlight that biological sex is assigned at birth, usually using visual examination of genitals (Butryn, 2003).
4. We acknowledge that scholars have called for the binary gender categories in sports to be removed (e.g., Kerr & Obel, 2018), however, we would like to offer some critique. We recognise that such an act would be advantageous for some, but still disadvantage others. Furthermore, while sex-integrating sport might solve policy issues relating to participation, there is a danger that it may thwart the media presence of trans issues (and other calls for equality) more globally.
5. These guidelines state that those who transition from female to male are eligible to compete in the male category without restriction. Those who transition from male to female are eligible to compete in the female category if (1) the athlete has declared that her gender identity is female and (2) the athlete can demonstrate that her total testosterone level in serum has been below 10 nmol/L for at least 12 months before her final competition (IOC, 2015).
6. By "stop hormones", male-to-female (MTF) hormone therapy, or oestrogen hormone therapy, is meant. This therapy blocks testosterone, the hormone responsible for developing masculine traits (e.g., facial hair; deep voice).
7. According to Karolinska University's Astrid Lindgren's Children's Hospital, this assessment requires the sharing of information about the uncertainty of evidence regarding long-term effects and potential risks of the treatment to make it possible for patients and guardians to make an assessment, and an as well-informed decision as possible, about consenting to a potential continued treatment. The young patients'

degree of maturity in their ability to consent, and remaining indication, should also factor into this decision.

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