Sports beyond genders. Sociological analysis on the participation of transgender women in female sport competitions

Salvatore Monaco

Abstract. Although sport historically represents an important vehicle for the dissemination of values and principles, it is often an arena of discrimination, most all based on gender (Balbo, 2001). The paper is aimed at analyzing the issue of the participation of transgender women in female sports in order to identify which are the main discrimination factors. To achieve this goal, the article analyzes the online conversations on the House Bill 2706 of Arizona that proposes that transgender female student athletes should not take part in female sporting activities, as they have physiological benefits that would make unequal the sport competitions. In particular, the paper studies the contents about this issue hosted on Twitter, the popular real-time microblogging social network. The method is based on design data mining analysis, supported by the use of software for quantitative analysis of the content. The study considers Tweets published during the period between February and March 2020. Sentiment analysis of Tweets shows that the road to the complete acceptance of the female transgender universe in sport is still very long and difficult to follow.

Keywords: discrimination; sentiment analysis; #HB2706; transgender; Arizona.

Abstract. Aunque el deporte representa históricamente un vehículo importante para la difusión de valores y principios, tal vez este se convierte en un escenario de discriminación, sobre todo con respecto al género (Balbo, 2001). El artículo tiene como objetivo analizar el tema de la participación de las mujeres transgénero en el deporte femenino para identificar cuáles son los principales factores de discriminación. Para lograr este objetivo, el artículo analiza las conversaciones en línea sobre el proyecto de ley 2706 de la Cámara de Representantes de Arizona que propone que las mujeres transgénero no deben participar en actividades deportivas femeninas, ya que tienen beneficios fisiológicos que harían desigual las competiciones deportivas. En particular, este documento estudia el contenido sobre este tema alojado en Twitter, el popular sitio de microblogging. El estudio se basa en un análisis de datos texuales, hecho a través del uso de software para análisis cuantitativa del contenido. El período de estudio considera los Tweets publicados durante los meses de Febrero y Marzo 2020. Los resultados del análisis de sentimiento revelan que el camino hacia la aceptación completa del universo transgénero en el deporte femenino aún es muy largo y difícil.

Keywords: discriminación; sentiment analysis; #HB2706; transgénero; Arizona.

1. Introduction

Sport is an activity always characterized by positive values, able to enhance social ties, community memberships and shared objectives (Gammon and Robinson, 2003).

The inclusive feature of sport has also been noted by United Nations, indicating it as a factor of sustainable development, recognizing its contribution to the promotion of tolerance and respect (UN, 2018).

The scientific sociological community studies and analyzes sport as a social phenomenon to understand the dynamics and the processes of socialization and relationship network that it is capable of generating (Bifulco and Pirone, 2014; Kennett, 2013). In addition, the practice of sport in the modern world has a significant impact on social actors’ consumer activities and lifestyles, with many repercussions on the development of territorial and tourism policies (Clayset, 2017; Garcia, Lagardera and Puig, 2009; Ritchie Adair, 2004; Blanco Gregory and Monaco, 2019).

However, sometimes sport can become a stage of discrimination (Collins and Kay, 2003). In particular, gender is one of the structural variables that most of all create situations of discrimination in the sports...
field (Balbo, 2001). Historically sport was a predominantly male activity. Throughout history women had to fight to participate in sports. As Dworkin and Messner (2002) suggest, organized sport was created “for white middle-class men to bolster a sagging ideology of natural superiority over women” (p. 17). Thus, today there are sports for women or men only. Despite the female achievements, nowadays, sports women have significantly different and less media coverage than their male counterparts (Scheidler and Wagstaff, 2018).

This phenomenon also depends on a macho and patriarchal vision that still emphasizes the male figure by placing the female one in a condition of subordination (Warner, 1991; Hunnicat, 2009; Butler, 2011). Starting from the nineteenth century, women’s liberation movement began to challenge traditional gender roles, almost breaking them. If during the time equal rights formally came to characterize, not without difficulty, many cultures (but not all), methods and actions were different from country to country. So, nowadays, in some daily life contexts, still remains the idea that gender differences and superiority of men over women sink their roots in the natural order of things (Nicholson, 1997; Connell and Messerschmidt, 2005). True equality is not fully achieved yet in the Western world either (FRA, 2020; Sacco, 2007; Ruspini, 2013).

It is clear that, in a culture based on sexual and gender identity, people who are beyond the dichotomy of male – female or that somehow does not fully meet gender expectations, live forms of discrimination (Notaro, 2019), also in the world of sport. This is the case, for example, of transgender people. All the individuals who aspire to transit from their biological sex to the opposite one fall into this category. “For some, gender may be expressed through, for example, dress, grooming, mannerisms, speech patterns, and social interactions. Gender expression usually ranges between masculine and feminine, and some transgender people express their gender consistent with who they identify internally, rather than with the sex they were assigned at birth” (Petrikowski, 2017, p. 56).

The recognition of transgender people’s rights has been achieved thanks to an intense activity conducted by international associations which has favored processes of subjectivization and identity claims at a global level (e.g., Espejo, Cuenca and Tarrés, 2020; Sharpe, 2007). In Foucauldian terms, more specifically, social movements have fought for the transformation of the order of things, promoting a sort of resistance against imposed subjectivities. Through their work, social movements implicate an explicit refusal to adopt specific forms of individuality, proposing new forms of subjectivization that dissociates gender identity from genitality (e.g., Giaccaglia et al., 2009; Saldivia, 2017). The regulatory and social goals achieved in the world have varied from country to country.

Based on these considerations, the paper aims at analyzing the issue of the participation of transgender women in female sports in order to identify which are the main discrimination factors. To achieve this goal, the article starts from a recent report: the House Bill 2706 was approved by Arizona’s House Health and Human Services Committee at the end of February 2020. The HB 2706 proposal is that transgender female student athletes should not take part in female sporting activities, as they have physiological benefits that would make unequal the sport competitions. This study analyzes the various voices publicly expressed on this topic to highlight how public opinion is divided all over the world between supporters and opponents. Hence, after presenting a reconstruction of the situation, the work focuses on the analysis of online conversations on the House Bill 2706. In particular, this paper takes into account the contents on this argument hosted on Twitter, the popular real-time microblogging platform. The collected textual material will be first synthesized in a word cloud to give visibility to the most discussed topic and themes; in a second phase of the work, a Sentiment Analysis will be realized. Starting from the analysis of the public opinion expressed through social networks about the possibility for transgender women to participate in female sport competitions, some critical considerations are listed in the conclusions.

2. Rights of transgender women athletes: the case of Arizona

The question of transgender women athletes’ rights in sports is very complex. It is characterized by two diametrically opposite positions: on the one hand there are those who believe that transgender women are advantaged for their physical characteristics compared to their peers; on the other one we can find those who consider the presence of transgender women in female teams as an effective tool for social inclusion to fight discrimination. This issue has been also addressed in the context of the Olympics, which has established a set of strict parameters to allow transgender women to take part in the female competitions. In particular, the regulations of the International Olympic Committee requires that all transgender women athletes who want to participate in a female competition must declare their gender identity. It cannot be changed for sporting purposes for at least four years. The athletes must then demonstrate that the total level of testosterone in their blood has been consistently below 10 nanograms per liter at least 12 months before the competition. Furthermore, they have to be subject to a specific therapy to suppress endogenous testosterone in their bodies.

Nowadays there is a debate at the political level about this specific issue in Arizona. There, the major political force is the Republican Party, which has held power in the state House and Senate since 1993. Since 2015, Douglas Anthony Ducey has been the
Governor of the State of Arizona. In 2017, his Government took the decision to not extend the Arizona’s statutes that prevent discrimination on the base of race, gender and religion to sexual orientation and gender identity.

Currently, the Arizona Interscholastic Association allows all students to participate in sports according with their gender identities, regardless of their biological sex. In addition, the Arizona Interscholastic Association guarantees the confidentiality of data in its possession, not revealing the identity of any transgender students. But things could change in the near future. In fact, in late February 2020, the Arizona’s House Health and Human Services Committee approved a bill that aims to prohibit to transgender athletes to participate in the female school sports. If this proposal should become a formal law, this prohibition would be applied to all State students attending a college or a public or private University. The proposal is part of a national campaign backed by the Scottsdale-based Alliance Defending Freedom, a conservative religious freedom group.

According to the HB 2706, to verify that an athlete is not transgender, if anyone requests it, the suspected player should show a medical certificate that attests her biological sex confirmed by a genetic test. The law allows lawsuits by students and their families who consider they’ve missed opportunities because a transgender person is on their school team.

According to Nancy Barto’s opinion, who co-sponsored the bill with 22 other Republican House members, the measure does not discriminate nor forbids anyone to play sports, but rather it would protect girls who has to compete with transgender women, who are, from her point of view, physically advantaged. She is certain that transgender athletes’ participation in female school sports discourages female participation in athletics and it can result in women and girls being denied important educational and financial opportunities, as scholarships. It is only a female matter: in fact, the measure doesn’t apply to males because, in Barto’s opinion, they are biologically different from females in terms of bone density, lung capacity, strength, and other respects; for these reasons they are not disadvantaged by females in boys’ sports.

In Arizona, the bill will be debated in the Senate. There are political discussions about similar measures also in Alabama, Georgia, Indiana, New Hampshire, Missouri, Washington, Tennessee, and Missouri, according to the American Civil Liberties Union. This specific proposal is the latest on a growing list of more than a dozen states with bills that focus on transgender young people.

3. The study of Tweets about HB 2706

The HB 2706 has activated much discussion around the world. There are many people who have decided to express their point of view publicly. In the contemporary society, new communication channels are the main tools through which people’s thoughts are spread. The web is characterized by being a modern digital agora, where, in a convergence of cultures, everyone can express their opinion and share it in real-time with millions of connected users (Jenkins, 2006). In particular, is on social networks that people have the opportunity to be able to say freely what they think.

In line with the most recent literature about the online public opinion analysis (e.g., Hu, Wang and Kambhampati, 2013; Mohammad et al., 2015; Zavattaro, French and Mohanty, 2015), among the various social networks on the web, we decided to use Twitter. The choice of considering this communication channel is the result of a series of methodological considerations. Among the various social networks on the web, Twitter is the one preferred by users to publicly express and disseminate their opinions about the various subjects on the political agenda as quickly and concisely as possible. On this microblogging site people have the opportunity to confront each other in real time on many issues through messages that have a maximum length of 280 characters. The high number of Tweets (we are talking about 300 thousand Tweets every minute in the world) allow to collect a good number of textual materials to implement significant analysis. In addition, a specific hashtag is associated with each discussion topic, which allows researchers to immediately identify the Tweets that have to be included in the analysis.

Also, due to the bill approved by Arizona’s House Health and Human Services Committee a hashtag was created: #HB2706. Not surprisingly, the hashtag within a few hours entered in the Trend Topics, involving a very large audience.

All the Tweets written between the last week of February and the first week of March 2020 were collected and analyzed with the objective of understanding the orientation of the people about the possibility for transgender women to participate in female sport competitions. The analysis was done with the support of R software, programming language for statistical that consists of thousands of integrated packages with various functions for the datamining (Kwartler, 2017). All Tweets published during the individuated period that contained the hashtag #HB2706 were collected from the individual Twitter’s libraries using the Twitter API. In a second step R made possible to normalize the text corpus and to highlight the words that have been used with greater frequency. The software has proceeded to standardize the words contained in the text, placing all nouns in the singular, all the verbs in the infinitive form and combining the words with the same root in semantic families. Also, the so-called “empty words” (undefined adjectives, articles, adverbs, exclamations, interjections, prepositions, pronouns, auxiliary and modal verbs) have been excluded from the analyzed text.
The study has some limitations. Firstly, only the Tweets posted on public profiles have been collected. As a result, the analysis of all the opinions of people who have a private profile have been excluded. Secondly, as search key has been used the hashtag #HB2706; it means that if some people has expressed their opinions about the House Bill 2706 without using it, their Tweets were not considered in this study. Thirdly, although the idea of the research project is to detect the opinion of people globally, for analysis only the Tweets in English have been considered. Tweets written in other languages have not been included in the textual corpus. In addition, Twitter is very popular among young people overall, so it is possible that the reviews collected and analyzed are of the younger generation that does not always coincide with the general public. Finally, many posts on Twitter were written in the form of Retweet, but through the Twitter API downloading this data was not possible. The study is therefore based only on single original Tweets and does not take into account any post that have been listed or published more than once.

The critical aspects just explained are not real problems, as this work has heuristic purposes. The present study intends to investigate the opinion of people around the world, without the ambition of representativeness. It rather seeks to understand the reasons behind some thoughts.

However, a cloud of words has been created using the collected material to emphasize the most recurrent words and topics. Subsequently, a Sentiment Analysis has been realized.

In the following section the results of the study are shown, with the image of some Tweet in support of the discussion.

4. What do Twitter users say about Arizona’s House Bill 2706?

After having identified within the textual corpus the words most frequently used by Twitter users about Arizona’s House Bill 2706, a word cloud was built: it is a tool that collects together the most frequent words; their sizes represents the number of times that words have been used from users.

As it is possible to see from the Figure number 1, within the textual material collected it is possible to identify at least 3 semantic cores:

- A first group of words which were used (“Fight”, “Violence”, “Harmful”, “Oppose”, “Victory”) refers to the idea that around House Bill 2706 will be a real battle that is being fought between those who favor and those who are against it. This group of words makes it clear that there is not a unique line of thought about this issue in the Twitter audience;
- A second group of words which were used (“Discrimination”, “Dignity”, “Privacy”, “Hurt”, “Bully”) refers to the possible negative consequences that the law could have on transgender people if the law will be approved, and the pain that this law could lead to transgender girls;
- A third and last group of words (“Protection”, “Kid”, “Student”, “Save”, “Support”) legitimate somehow the bill, stressing that it is a tool to defend and save children and students, who may be denied important opportunities if the matter is not addressed and resolved. For these reasons a lot of people thought it was necessary to openly express their support.

Figure 1. Word Cloud

After identifying the most frequent words for the creation of the word cloud, a tool to accomplish a Sentiment Analysis has been used: it is a type of analysis already tested to study the content of the conversations on Twitter (Thelwall, Buckley and Paltoglou, 2011) that automatically associates the words contained in the Tweets to different types of emotions.

The library’s Tweets were categorized into three different types of sentiments: in favor (to the bill), in opposition (to the bill) and neutral. The group of words in favor included all those expressions that support,
justify and support the bill, while in the group of words in opposition all expressions of dissent, denial and condemnation to the bill have been included. Tweets within the neutral group are those who speak of the measure without expressing an opinion. This group includes mainly articles from newspapers and blogs that reported the news, without taking a real position. Figure 2 shows the sentiment analysis of tweets library.

![Figure 2. Sentiment analysis of library tweets](image)

The Sentiment Analysis shows that also Twitter users are divided into two factions: on one side there are those in favor of the measure highlighting the importance of dividing sports teams on the basis of biological sex, and on the other side there are those who disagree with the bill, as it endangers the dignity and privacy of individuals. The percentage of difference is very low, with a 4% of interventions in favor of the law. Analyzing in depth what the pro-law people have said, we can see that some persons argued the need to take transgender women out by female teams because they reiterate the idea that there are only two biological sexes (see Figure 3). This point of view shows how today many people still do not fully recognize the identity of transgender people. The consequence is a stigmatizing attitude, which is based above all on a sexualized vision of society that does not accept identities outside of gender binarism. According to this perspective, identity is considered linked to immutable biological factors and not also the result of a social and cultural process. As a result, transgender women are considered almost as a social danger. This is the reason why some people consider the bill as a salvation for women’s sports (see Figure 4), in line with the hashtag #SaveWomensSports (see Figure 5).

![Figure 3. Tweet # 1](image)

Thank you for standing for the self-evident biological and scientific truth of God’s divine design for the 2 sexes, and for standing up for the rights of millions of biological women everywhere whose basic human rights have been ignored in favor of dystopian insanity. #HB2706

![Figure 4. Tweet # 2](image)

Vote YES! #HB2706! Our women deserve a level playing field.

![Figure 5. Tweet # 3](image)

I deserve a level playing field: A high-school athlete doesn’t want to compete against transgender girls nydailynews.com/opinion/ny-ope... #FairPlay
These Tweets make it clear that nowadays transgender women are still victims of transphobia phenomena based on a series of ideas that many people have about being boys or girls, even in the sport world. Transphobia is characterized by the fear, loathing, or hatred of transgender people (Denny, 1994). It is manifested not only through forms of harassment or violence, but, as in this case, also through forms of bullying, social exclusion and lack of identity recognition.

In addition, we have to argue that some people are not able to understand that participation in sport is an important opportunity for personal growth and identity, also for transgender people. Rather, they insinuate the idea that transgender women are introduced in the female teams to derive some benefit from their size or their male DNA. These people do not care about the fact that the bill exposes transgender women to a huge stress, which can also cause trauma in their everyday lives, another drama to add to those already experienced in their daily lives due to non-acceptance of their biological sex.

This way of thinking is not much different from the ideology spread by some activists, defined trans-exclusionary radical feminists (to distinguish them from radical feminists who do not share the same position), that “have tended to perceive transfeminine people as infiltrators of ‘womanhood and of women’s space” (Erickson-Schroth, 2014, p. 568). This ideology is partly the result of a culture grown up in the roots of human civilization, which considers the masculine and the feminine two natural and biological elements, and which is carried out through ideological campaigns (Short and Wilton, 2016; Corbisiero and Monaco, 2017). Underlying this still widespread anti ideology transgenderism it is strongly rooted in the idea “that trans women are shameful, that trans women are not worthy of being seen” (Mock, 2013).

As for the detractors of the law, these people are strongly convinced that this is a discriminatory act (See Figure 6), which can have negative consequences on both the trans community, already too often protagonist of suicide episodes (See Figure 6), either on the whole LGBT+ community in general (See Figure 7). This type of opinion is close to the US Democratic Party’s ideology: some politicians of the Democratic Party are opposing it in institutional settings; they have called the bill unnecessary and transphobic, stressing that the measure is an act of psychological violence, with negative consequences on the mental health of trans girls. Those who are opposed to the law point out that this type of measure threatens the privacy of students and authorizes anyone to ask and to investigate about the identity of their colleagues. This would increase the de facto bullying and discrimination. Also, it would force people to do coming out, even if they do not want to do it.
Figure 6. Tweet # 5 and # 6

I don’t think any trans person has talked to you about this. I don’t even think they would agree with you on anything. HB2706 is discriminatory!

Nancy Barto @NancyBarto · 1 mar
Not about to give up! Even many trans individuals agree that the male body is what it is—generally bigger, stronger and outperforms the female sex—and shouldn’t disadvantage women on the playing field. Thank you. twitter.com/twopluscutestalt...

Figure 7. Tweet # 7

Please do not undo everything you just did by enacting Jake’s Law. Teen Suicide rates are higher in Trans kids, please, do not undo the good you just did. Veto HB2706. SuicideAwareness

Figure 8. Tweet # 8

#HB2706 is blatantly unconstitutional
#HB2706 will hurt students
#HB2706 will hurt trans people
#HB2706 will hurt the entire LGBTQ+ community
#HB2706 will hurt all Arizonans. None of us are free to exist until all of us are free to exist

Do the right thing.
5. Conclusions

The information obtained from the analysis of the Tweets written by people allows to make a series of critical reflections not only on the participation of transgender women in female sports, but also on their social inclusion more generally. Thus, the online discussion about House Bill 2706 has certainly highlighted that in the last years there has been a growing improvement of transgender people’s social living conditions at a global level. Thanks to the work of the associations for the rights of trans people, issues related to gender identity have gained increasing visibility, in the political, media and academic fields. The processes of resistance and subjectification that have been activated in many societies have represented a deviation from the rigid social norms on gender expectations and roles. However, the work highlights that the path of full recognition of transgender people is still in progress. In fact, the binary and essentialist sexual division within a heteronormative system has not ceased to exist (Aquino, 2013). Some people delegitimize, reject and in the most extreme cases despise transgender femininity. This analytical framework allows to understand why transgender people are still too often subject to stigma, social exclusion and discrimination in contemporary society (Vázquez, 2009). This attitude is also found in sports.

The history of sport is full of cases where transgender women players took part in sports competitions, sparking some controversy. Among the most recent cases we can remember Hanna Mouncey, the young handball player who last December was excluded from the Australian National because she was a transgender player. Other cases are those of players Terry Miller and Andraya Yearwood, both transgender girls, that have come first and second both in the women’s 100 and 200 meters in recent state championships in Connecticut, and the Argentine footballer Mara Gómez.

Last February, the tennis player Martina Navratilova had harshly criticized the inclusion of a transgender woman in the women’s competition because she feared of her hypothetical muscle and physical superiority.

We cannot deny that a male athlete has a developed and enhanced muscle structure, but it is also true that not all males are equal, with the same body size, bone structure, and physical endurance. Moreover, transgender people are under constant hormonal therapies. People involved in the transition from the male gender to the female one take estrogen and antiandrogens, which prevent androgens like testosterone. The feminizing hormonal therapy involves a series of treatments that do not change only the body on morphological point of view, by modifying the features and redistributing fat, the treatments also act on bone density and muscles. The testosterone inhibitors that are part of the therapy of a trans woman reduce their muscle mass.

If the aim of the exclusion of transgender women by female sports activities is to ensure fairness in the competition, it should check the levels of testosterone present in all athletes: cases of women with hyperandrogenism, a condition that causes excessive production of male sex hormones (such as testosterone) are not uncommon. However, reducing everything to a DNA or hormone levels question is disqualifying for the professionalism of these people and belittles the sport of its value and aggregator of social device, exchange, debate and mutual enrichment. Many studies showed that the participation in sporting activities, regardless of the end results, influences positively to the achievement of good academic performance and promote better self-esteem in people who practice it (Shaffer, 2008). Furthermore, it must be said that sport is not just a matter of muscle mass, it is also game, tactics, strategy, ability to predict and relate to the opponent, being team skilled, doing group, empathizing with their sports-mates and living a healthy competition with opponents. Recent studies have highlighted that among the benefits that young people can gain by taking part in team activities there are intercultural exchanges and the learning of social justice (e.g., Newman et al., 2020; Schinke et al., 2016).

Moreover, numerous Arizona women’s rights and sports organizations are expressing their disappointment about the bill through a letter distributed by the American Civil Liberties Union. They claim that barring transgender people from sports teams aligning with their gender identity often means they are excluded from participating altogether.

In conclusion, Tweet analysis has highlighted that the road to the complete acceptance of the female transgender universe in sport is still very long and difficult to follow, also because of a political ideology that delegitimizes transgender people, considering them only on the basis of their gender and not for them being people first of all.

It could be good that the political class starts to reflect on the incidence that its own decision could have on people and, specifically about the bill 2706, on the possibilities that they damage or remove, regardless of genders.

6. References

Aquino, Alejandra M. (2013): “La subjetividad a debate”. Sociológica, 80, pp. 259-278
Balbo, Laura (2001): “Parlare della sociologia (scelte, gerarchie, esclusioni) partendo dal mondo dello sport”, Rassegna Italiana di Sociologia, XLIII(3), pp. 485-491
Bifulco, Luca and Pirone, Francesco (2014): A tutto campo. Il calcio da una prospettiva sociologica, Napoli: Guida Editori
