

## A Response to "Testing Sex, Attributing Gender: What Caster Semenya Means to Women's Sports" by Susan Cahn

Ellen J. Staurowsky  
Drexel University

Before I begin my prepared remarks I'd like to exercise the power of the podium for a moment to thank the NCAA and President Emmert for their support of the program. I'd also like to acknowledge the work of my colleagues on the Executive Board for their dedication and commitment to this forum, most particularly Jan Boxhill and Scott Kretchmar. And finally, I'd like to make a brief observation about professional life. Like most of you, I imagine, I draw inspiration from the work of others who clarify in meaningful ways the noble purpose of the professoriate and what it means to live a life in service to our students, five of whom are with me today, and to the public good. It is a humbling experience to be on a program with some of the true titans in the field of athletes rights—Dr. Harry Edwards, Allen Sack, Pat Griffin, Ketra Armstrong, Nancy Hogshead-Makar. They are beacons of light and hope and I thank them for the contributions they have made to my own personal quest to seek justice and equality in a society that wishes to do right but needs leaders to show the way.

It is a particular pleasure to have been asked to respond to Susan Cahn's paper. I have long admired her important work, most especially *Coming on Strong: Gender and Sexuality in Twentieth Century Women's Sports*.

As I read Susan's paper in preparation for today, a scene from the 1997 film, *Titanic*, has been playing in a closed loop in my head. It is the scene where headstrong and willful daughter, Rose Dewitt Bukater, attempts to explain to her mother Ruth that she does not wish to proceed with a marriage of necessity to a man she does not love to obtain financial security for them following the death of her father. Rose's betrothed is a cruel and controlling man who views her as a possession to be seen but not heard, a symbol of his status and not someone to be dealt with in her own right.

The conversation occurs while Rose's mother is lacing her into a corset, the power of which to shape women's lives was not lost on Victorian era sociologist Thorstein Veblen (1899). In his classic work, *Theory of the Leisure Class*, he wrote, "The corset is, in economic theory, substantially a mutilation, undergone for the purpose of lowering the subject's vitality and rendering her permanently and obviously unfit for work" (n.p.).

---

Staurowsky is a professor in the Department of Sport Management, Goodwin School of Professional Studies, Drexel University, Philadelphia, PA.

As the disagreement between mother and daughter unfolds, Ruth pulls tightly on the laces, seemingly tying Rose into a set of obligations and expectations that demand Rose relinquish a part of who she is as a thinking feeling woman and human being. As Rose laments that life is not fair to require her to be bound to an abusive man, her mother responds, punctuating her words with each pull of the laces. In resignation, Ruth says, "Of course life isn't fair. We are women. Our choices are never easy." For Caster Semenya, one might expect that her choices became infinitesimally more difficult in the aftermath of worldwide speculation and surveillance about the very core of her being. The pursuit of the invented question of Semenya's womanhood, and surely it is an invented question [this was not a question for Semenya—she knew who she was] speaks not only to the operable gender binary but the investment political entities have in controlling women's lives. As Susan well argues, "... the problems of everyday athletes have everything to do with the torment of Caster Semenya and the strategic dilemma of how feminism tries to liberate female bodies of all kinds" (p. 2).

The focus of my reaction to Susan's paper will be on the second problem she identified, that being the paradox associated with the fact that despite the enormous increase in the number of girls and women participating in sport during the past four decades<sup>1</sup> "...many female athletes believe *other people* still question their femininity and sexual identity—jeopardizing their status as a 'normal' woman" (p. 2). The connections between physical strength, being an accomplished athlete, and the insistence of the gender order to try to organize human beings into neat boxes of masculinity and femininity, which is an encumbrance for women engaged in the sport system (Lenskyj, 1998; Levy, 2009; Scott-Dixon, 1998; Travers, 2008), proved combustible in Semenya's case. While Susan notes that female athletes puzzle over the linkages imposed on them that lead to the logic "if you're good, if you're a top athlete, you're gay" (p. 2), Semenya was perceived to be so good that some competitors and other observers were not satisfied with the evidence of her existence as a woman but demanded more proof.

In an article about the controversy surrounding Semenya's win at the World Athletics Championships on August 19, 2009, sportswriter Simon Hart wrote, "Ever since her arrival in Berlin, she has been the subject of whispers and innuendos about her masculine body shape and facial features" (n.p.). In news reports, the rationale for testing Semenya referred to the fact that her time was thought to be unexpectedly or excessively fast and improving too quickly. As the headline accompanying the Hart story noted, "South African teenager Caster Semenya produced the fifth fastest 800 metres time in history to become a world champion at the age of 18 on Wednesday night."

The ESPN.com News Services (2009) described her performance as follows: "Semenya took the lead halfway through the race Wednesday and won in a world-leading 1 minute, 55.45 seconds, beating defending champion Janeth Jepkosgei of Kenya by a massive 2.45 seconds" (n.p.). In tracing her performance leading up to the final, ESPN.com News Service reported, "Semenya qualified for Wednesday's final with a top time of 1 minute, 58.64 seconds. She posted the world's best time this year of 1:56.72 three weeks ago at the African junior championships in Bambous, Mauritius" (n.p.). In *Time*, Willie Lee Adams (2009) wrote the story this way: "Competing in her first senior championship on Wednesday, Semenya once again clocked the fastest time of the year — 1:55.45 — and finished a whopping two seconds ahead of the defending world champion" (n.p.).



For all of the rhetoric around the record breaking run that Semenya owned, just how good was it? In an examination of the all time best women's 800 m times (Larsson, 2011), Semenya's ranks as the 26th fastest recorded. The world record was set in 1983 by Jarmila Kratochvilov with a time of 1:53:28 (Table 1.). When the best women's 800 m times are examined in total, 12 women from nine different nations recorded times that were faster than Caster Semenya's. Further, in terms of indoor times, her record would not even place her in the top 75 in history.<sup>2</sup> So while Semenya's time was good, good enough to win a world championship, it was, in the language of the sportswriters covering the performance, a "whopping two seconds", "a massive two seconds" behind the fastest women's 800 m outdoor time ever.

And so, armed with that information, what are we to conclude? That all of the women ahead of Semenya on the list were tested as well? While it is highly likely that some of them were given the manner in which gender testing has been done on elite female athletes from the 1960s to the present (Dworkin, 2009; Martinez-Patino, Mateo-Padorno, Martinez-Vidal, Mosquera, Soidan, Pereira, & Gonzalez, 2010), we are left with the reality of what Tavio Nyong'o (2009) described as the gendered and racial panic that erupted around Semenya.

Surely, some of her competitors were not only feeling it but contributing to it. According to reporter Robyn Dixon (2009), Italian rival, Elisa Cusma Piccione, referred to Semenya as a man while Russian runner, Mariya Savino agreed. As Savino implored journalists in Berlin, "just look at her" (n.p.). And if we look, as Savino insists we must, what do we see?

In the culture of women's sports, one of the things we see is that looks count. As Daniels (2009) notes, "Since the 1970s North American women and girls have engaged in every sport that interests them and have become champions in their fields. One of the consequences of this success is ongoing criticism, not of how they perform, but of how they look" (n.p.). And while female athletes deal with the constant scrutiny of those around them and the pressure to conform to a rigid code of femininity, they are also shaped by that pressure, internalizing it in the

**Table 1 All Time Fastest Times in the Women's 800 Meters (Larsson, 2011)**

Rank	Time	Name	Country	Year
1	1:53.28	Kratochvilova	CZE	1983
2	1:53.43	Olizarenko	UKR	1980
3	1:54.44	Quirot	Cuba	1989
4	1:54.81	Minyeva	Russia	1980
5	1:54.85	Soboleva	Russia	2008
6	1:54.87	Jelimo	Kenya	2008
7	1:54.94	Kazankina	URS	1976
8	1:55.05	Melinte	Romania	1982
9	1:55.19	Mutola	Mozambique	1994
10	1:55.19	Ceplak	Slovenia	2002
26	1:55.45	Semenya	South Africa	2010

form of what Felshin (1974) referred to as the "apologetic", a rationalization that leads female athletes to overcompensate for the masculine demands of their sport. To reference Mariah Burton Nelson (1995), not only has there been an increase in the cultural longing for manliness to be affirmed on the stage of high contact sports like football in reaction to women becoming stronger, there is also the attendant expectation that the stronger women get, the more they need to employ the trappings of conventional "prettiness".

There is a growing body of literature on the degree to which female athletes strive to satisfy the requirements of cultural ideals of femininity and the politics of appearance (Daniels, 2009; Kayoung & Sagas, 2010; Krane, Choi, Baird, Aimar, & Kauer, 2004; Musto, 2010; Williams, 2010). As Krane and colleagues point out, female athletes are challenged to "live the paradox".

In a study of the representations of softball players in media guides, Riemer (2011) found that hair and makeup are becoming part of the dress code, with the ponytail being a requisite signature of feminine standing. Increasingly, the power of the ponytail to hold sway when it comes to gender credibility and averting gender crises cannot be underestimated. In turn, while the cultural focus on the female face is documented as a center of importance of softball players, Alison Watt's (2011) interviews with female athletes reveals their consciousness about the body. For the women she interviewed, their ambivalence about the signifiers of strength create calculated decisions on the part of heterosexual female athletes to suppress their workouts to avoid being too muscular while lesbian and bisexual athletes appear to have discarded those prohibitions, embracing the beauty of being physically powerful.

And what does this illuminate about the culture of sport and women's place within it? On one hand, the intersections between race and gender highlight how Black women in sport are seen, or more appropriately, not seen. If we pause for a moment and look at the juxtaposition of Semenya with one of her competitors in the World Championship, British runner Jenny Meadows, we recreate the picture that some were viewing.<sup>3</sup> Both are women—one black, one white. Is one really more muscular than the other? Is one really more focused, more intense? Does one have more feminine features than the other? If so, according to whose standards? (Fig. 1).

To return to Susan's paper, she draws upon Kessler and McKenna's understanding that "...once a gender attribution is made, people filter almost any information, no matter how dissonant, through the male or female lens they first select" (p. 10). While this helps us to understand the source of the reaction to Semenya, it does not take into account the racism that serves as both subtext and pretext.

Noted author, bell hooks (1981) wrote about the societal position of Black women in this way:

No other group in America has had their identity socialized out of existence as have Black women. We are rarely recognized as a group of separate and distinct as Black men, or a part of the larger group of "women" in this culture. . . . When Black people are talked about the focus tends to be on Black men and when women are talked about the focus tends to be on White women (p.7).

As Watts reported in her presentation at the Colloquium, one of the African-American basketball players she interviewed observed the difference in the way that White teammates fix their hair while Black players wore their hair in cornrows.





**Figure 1** — Caster Semenya (South Africa) and Jenny Meadows (Great Britain) *The Independent*, August 21, 2009. <http://www.independent.co.uk/sport/general/athletics/semenya-holds-head-high-as-meadows-rallies-in-support-1775138.html>

The persecution of Caster Semenya attests to the multiple layers of oppression that get brought to bear on Black female athletes and the complex worlds in which they navigate. As Nyong'o (2010) notes, "world class female athletes have long made people anxious, particularly gorgeously muscle-bound black ones" (n.p.).

Are facets of Semenya's treatment found closer to home? In a case study examining barriers that African-American women at a predominantly white institution confronted, Terri Stratta (1998) found that players failed to meet their full potential because the pressures associated with being treated differently as a result of their race led to premature retirement and systemic elimination at all levels of the sport socialization process.

These findings echo later in the story of Jennifer Harris, an African-American basketball player who alleged that she had been subjected to gender orientation discrimination, sexism, and racism while participating on the Pennsylvania State University (Penn State) team under head coach, Maureen (Renee) Portland. In a case that ultimately settled in 2007, with Portland resigning shortly after that settlement was reached, Harris believed that she was forced out at Penn State because of Portland's pointed accusations that Harris was a lesbian and a belief that Harris was disrespectful because she failed to abide by a more feminine standard of dress and appearance. Numerous public accounts confirm Portland's policy of "no drinking, no smoking, no lesbians" which led to inquiries about players' sexuality. Under those rules, suspicions of being a lesbian could result in revocation of an athletic scholarship (Mosbacher & Yacker, 2009).

According to the complaint, Jennifer believed that the events leading up to her dismissal from the Penn State team, including loss of playing time and eventual revocation of her athletic scholarship, were due in part to Coach Portland's views on player appearance. Allegedly, the coach was frustrated with Jennifer because she would not stop wearing her hair in cornrows and the coach disapproved of what Jennifer wore because it was not "feminine" enough (Harris v. Portland, 2006). As Newhall and Buzuvis (2008) point out, the unprecedented media coverage about the case focused on the issue of sexual orientation discrimination while covering over or dismissing the possibility that the charges of racism may have been valid. They note, "By interrogating the standards of appearance and behavior that Portland required of her players and revealed them as norms for White, heterosexual femininity, we can better understand the racist overlay in Portland's harassment, demotion, and termination of Jennifer Harris" (p. 349).

Some scholars have argued that the intersection of multiple oppressions associated with race, class, gender, and sexuality creates a circumstance where Black female athletes experience multiple jeopardy within sport (McDowell & Cunningham, 2009; Staurowsky, in press). When considered in that light, the inability of sport media to grasp the plausibility of the racial undercurrent in the Harris case is also seen in the depictions of arguably the two most publicized African-American female athletes, tennis stars Serena and Venus Williams.

In their examination of mainstream media coverage of the Williams sisters, McKay and Johnson (2008) point out that while the physical prowess of Serena and Venus foreclosed opportunities to present their athleticism within familiar frames of female inferiority and weakness, media engaged in "...new ways to disparage the powerful and 'uppity' African-American sportswomen" (p. 492) while positioning their bodies as simultaneously sexually grotesque and pornographically erotic. While often subtle and encoded, this frame was expressed outright on the airwaves in April of 2007, when long-time radio talk show host Don Imus referred to the Rutgers women's basketball team as "nappy headed hos" following their appearance in the NCAA championship game that year (Cooky, Wachs, Messner, & Dworkin, 2010).

While the barriers to Black female athlete acceptance appear to soften periodically, as seen in the transcendence of figures such as USA track athlete Wilma Rudolph, who rose to national acclaim following her unparalleled performance at the Rome Olympics in 1960 where she became the first woman to win three gold medals, it appears that the effects of multiple jeopardy play out in a variety of ways. Another figure who garnered comparisons to Rudolph during the height of her racing career, American track star Marion Jones (Rutledge, 2000), would face condemnation and jail time after admitting to steroid use before her record setting performance at the 2000 Sydney Olympic Games and perjury charges.

We might ask if the response to African-American female athletes who get in trouble is proportional to the offense, with Marion Jones being a case in point. As scholar Todd Balf (2008) observed in an opinion piece, "The demonizing of Jones is a troubling, hard-to-watch affair" (n.p.). The public assault upon her character, while not wholly unwarranted given the fact that she did use performance enhancing drugs and was involved in a check cashing scheme, was of a caliber different from that of her male athletic peers charged with similar offenses, including former New York Yankee pitcher Roger Clemens and San Francisco



Giants slugger Barry Bonds. While Clemens and Bonds remain at large for the time being, Jones served time in a federal prison in Texas, receiving no leniency for eventually coming forward to tell the truth. Those following the case noted that U.S. District Judge Kenneth Karas appeared overly aggressive in his approach to sentencing, entertaining the idea of imposing a jail term longer than the one recommended by the prosecutors and settling on the maximum sentence. Explaining his decision, Karas said he wanted to send a message of deterrence to athletes. It remains to be seen if a similar standard will be applied to other high profile male athletes found guilty of using performance enhancing drugs after lying to protect their records and their good name. However, if the sentiment of former Senator George Mitchell, author of the *Mitchell Report* which chronicled the use of performance enhancers among Major League Baseball players is any indication, MLB officials should not consider punishing the players for their transgressions (Balf, 2008).

In closing, the paradox to which Susan refers may ultimately be seen in the distortion of just how many Black women participate in athletics at all. While our discussion has centered on the racialized and sexualized dilemmas writ large in the Semenya case, the discussion has assumed that opportunities for female athletes to participate are not racialized. And this is also not true. As law professor Deborah Brake (2010) points out in her examination of the impact of Title IX in promoting a sports revolution for girls and women in the United States, she writes, "Title IX's successes are too often discussed without attention to race as if female athletes have no race or at least no racial divisions or disparities among them" (p. 113). Identifying a pattern of racial segregation among sports offered for women at NCAA institutions, Cheslock (2008) reported that 68% of African-American women athletes participate in just three sports—basketball, indoor track and field, and outdoor track and field. While sport opportunities have grown for women at the college level, the growth areas have been in sports predominantly played by White female athletes.

While the world wide assault on Caster Semenya will go down in history as one of the most shameful chapters in mistreatment of women, the lesson should not be lost that the politics that produced the moment operate for Black women in sport across the globe, on a daily basis, limiting their prospects to participate and presenting obstacles to the fulfillment of their dreams. When considering how to seek justice for women athletes, we may need to be mindful that women's choices are never easy but neither are they all the same.

## Notes

1. A record high of 3,172,637 girls participating in high school varsity sports in 2009–2010 compared with 274,015 in 1971–1972 according to the National Federation of State High School Associations and 179,095 participating in NCAA schools during the 2008–2009 academic year, up from the roughly 27,000 female athletes playing college sport in 1971–1972 (Howard & Gillis, 2010; Zgonc, 2010).
2. The author wishes to thank colleague Jay Coakley, Professor Emeritus, Sociology Department, University of Colorado at Colorado Springs, for providing specific feedback on this section of the paper.
3. According to Turnbull (2009), Jenny Meadows was very supportive of Caster Semenya.

## References

- Adams, W.L. (2009, August 21). Could this woman's world champ be a man? *Time*. Retrieved from [www.time.com/time/world/article/0,8599,1917767,00.html](http://www.time.com/time/world/article/0,8599,1917767,00.html)
- Balf, T. (2008, February 15). Demonizing Marion Jones. *Los Angeles Times*. Retrieved from <http://articles.latimes.com/print/2008/feb/15/opinion/oe-balf15>
- Brake, D. (2010). *Getting in the game: Title IX and the women's sports revolution*. New York, NY: New York University Press.
- Burton-Nelson, M. (1995). *The stronger women get, the more men love football*. Minneapolis, MN: Quill Publishers.
- Cahn, S. (1998). *Coming on strong: Gender and sexuality in twentieth-century women's sports*. Cambridge, MA: Harvard University Press.
- Cahn, S. (2011, January 12). Testing sex, attributing gender: What Caster Semenya means to women's sports. Paper presented at the NCAA Scholarly Colloquium, San Antonio, TX.
- Cameron, J., & Landau, J. (Co-Producers) & Cameron, J. (Director). (1997). *Titanic*. United States of America: 20th Century Fox, Paramount Pictures, Lightstorm Entertainment.
- Cheslock, J. (2008). Who's playing college sports? Money, race and gender. Retrieved from <http://www.womenssportsfoundation.org>.
- Cooky, C., Wachs, F.L., Messner, M., & Dworkin, S.L. (2010). It's not about the game: Don Imus, race, class, gender, and sexuality in contemporary media. *Sociology of Sport Journal*, 27, 139–159.
- Daniels, D. (2009). *Polygendered and Ponytailed: The dilemma of femininity and the female athlete*. International Press Publications Inc.
- Dixon, R. (2009, August 21). Runner Caster Semenya has heard the gender comments all her life. *The Los Angeles Times*. Retrieved from <http://www.latimes.com>
- Dworkin, S. (2009). Intersex female athletes: Critical reflections on sex, gender, and sexual inequality. *Sexuality & Society*. Retrieved from <http://thesocietypages.org/sexuality/2009/10/12/intersexual-female-athletes-critical-reflections-on-sex-gender-and-sexuality-injustice-in-sport/>
- ESPN. com News Services. (2010, August 20). Semenya wins 800 meters. *ESPN.com*. Retrieved from <http://sports.espn.go.com/oly/news/story?id=4409318>
- Felshin, J. (1974). The triple option...for women in sport. *Quest*, 11–16.
- Hart, S. (2009, August 19). World athletics: Caster Semenya 800m medal overshadowed by gender controversy. *The Telegraph*. Retrieved from <http://www.telegraph.co.uk/sport/othersports/athletics/6057676/World-Athletics-Caster-Semenya-800m-gold-medal-overshadowed-by-gender-controversy.html>
- Howard, B., & Gillis, J. (2010, September 8). High school sports participation tops 7.6 million sets record. Retrieved from <http://www.nfhs.org/content.aspx?id=4208>
- Kayoung, K., & Sagas, M. (2010). Athletes' body images in *Sports Illustrated's* swimsuit issues. Paper presented at the North American Society for Sport Sociology, San Diego, CA.
- Krane, V., Choi, P.Y.L., Baird, S.M., Aimar, C.M., & Kauer, K.J. (2004). Living the paradox: Female athletes negotiate femininity and muscularity. *Sex Roles*, 50, 315–329.
- Larsson, P. (2011, January 14). Women's 800-meter all-time best times. Accessed January 14, 2001; [http://www.alltime-athletics.com/w\\_800ok.htm](http://www.alltime-athletics.com/w_800ok.htm)
- Lenskyj, H. (1998). *Out of bounds: Women, sport, and sexuality*. Toronto, Ontario, CA: Women's Press.
- Levy, A. (2009, November 30). Sports, sex, and the case of Caster Semenya. *The New Yorker*. Retrieved from [http://www.newyorker.com/reporting/2009/11/30/091130fa\\_fact\\_levy](http://www.newyorker.com/reporting/2009/11/30/091130fa_fact_levy)
- Martinez-Patino, M., Mateo-Padorno, C., Martinez-Vidal, A., Mosquera, A.M., Soidan, J.L., Pereira, M., et al. (2010). An approach to the biological, historical and psychological repercussions of gender verification in top level competitions. *Journal of Human Sport & Exercise*, 5(3), 307–321.



- McDowell, J., & Cunningham, G.B. (2009). Personal, social, and organizational factors that influence black female athletic administrators' identity negotiation. *Quest*, 61, 202-222.
- McKay, J., & Johnson, H. (2008). Pornographic eroticism and sexual grotesquerie in representation of African-American sportswomen. *Social Identities*, 14, 491-504.
- Mosbacher, D., & Yacker, F. (Producers/Directors). (2009). *Training rules*. San Francisco, CA: Woman Vision Films.
- Musto, M. (2010). What's up with the ponytails? Female athleticism and the politics of appearance. Paper presented at the North American Society for Sociology Conference, San Diego, CA.
- Newhall, K. E., & Buzuvis, E. E. (2008). (e) Racing Jennifer Harris: Sexuality and race, law and discourse in *Harris v. Portland*. *Journal of Sport and Social Issues*, 32 (4), 345-368.
- Nyong'o, T. (2009). The unforgivable transgression of being Caster Semenya. *Bully Bloggers*. Retrieved from <http://bullybloggers.wordpress.com/2009/09/08/the-unforgivable-transgression-of-being-caster-semenya/>
- Riemer, B. (2011, January). Ponytails and diamonds: The female apologetic in collegiate softball. Paper presented at the NCAA Scholarly Colloquium, San Antonio, TX.
- Rutledge, R. (2000). *Track and field's new wave*. Brookfield, CT: Millbrook Press.
- Scott-Dixon, K. (1998). Cyborgs in the gym: The technopolitics of female muscle. Paper presented at the Discipline and Deviance: Genders, Technologies, Machines Conference, Duke University, Durham, NC.
- Staurowsky, E.J. Is multiple jeopardy the name of the game for black women in sport? In B. Hawkins & F. Polite (Eds.), *Sport, Race, Activism, and Social Change: The Impact of Dr. Harry Edwards' Scholarship and Service*.
- Stratta, T. (1998). Barriers facing African-American women in college sports: A case study approach. *Melpomene Journal*, 17(1), 19-26.
- Travers, A. (2008). The sport nexus and gender injustice. *Studies in Social Justice*, 2(1), 79-101.
- Turnbull, S. (2009, August 21). Semenya holds head high as Meadows rallies support. *The Independent*. Retrieved from <http://www.independent.co.uk/sport/general/athletics/semenya-holds-head-high-as-meadows-rallies-in-support-1775138.html>
- Veblen, T. (1899). *The theory of the leisure class*. Accessed January 12, 2011, <http://www.gutenberg.org/files/833/833-h/833-h.htm>
- Watts, J.A. (2011). Walking the (end) line: Women athletes negotiating gender and the body. Paper presented at the NCAA Scholarly Colloquium, San Antonio, TX.
- Williams, C.M. (2010). Vanity has its benefits: Running skirts and the hetero- normalization of the active female body. Paper presented at the North American Society for the Sociology of Sport, San Diego, CA.
- Zgonc, E. (2010, February). *NCAA sports sponsorship and participation rates report: 1981-1982 - 2008-2009*. Indianapolis, IN: NCAA. Retrieved from <http://www.ncaapublications.com/productdownloads/PR2010.pdf>