

## Background

The prevailing discourse around sporting abilities is based on species-typical abilities, but advances in therapeutic assistive devices and in other science and technology products increasingly open the door for beyond species-typical abilities. The cheetah prostheses of double-leg below the knee runner, Oscar Pistorius, are one example of how human performance enhancement technologies in sport have challenged the hierarchy of athletes competing outside of their acceptable classification and exceeding their species-typical counterpart. The World Anti-Doping Agency classifies doping as the hidden use of performance enhancing products with the purpose of obtaining an unfair advantage [1], but classification of therapeutic enhancements as a form of techno doping is misinformed because species-typical sporting disciplines that use special equipment, in almost all winter sports (for example luge) and in summer sports (such as pole vaulting), are not labelled as doping. Thus, beyond this question is the equal treatment of assistive (as also used by nondisabled athletes in species-typical sports) and therapeutic assistive devices. With equal treatment, disabled athletes competing in sport alongside nondisabled athletes is a trivial issue and the question of which assistive devices in a particular sport are given entry into the Olympics becomes more important. The possibility of leg prostheses fused to a ski or snowboard worn by an athlete competing against the species-typical skier or snowboarder is just one example of the potential infrastructural changes that envision a technological enterprise of new sport.

Given the important role of the media to transmit discourses to the public and the perception of importance of the NYT (New York Times) we investigated a) visibility of technology enhancing products b) imagery of technology in the Paralympics and perception of attachment of therapeutic assistive devices (liberation tools) to disabled athletes c) views and hopes of athletes with disabilities.

## Research Method

A frequency and content analysis was conducted of the NYT to investigate historical and contemporary media constructions and discourses surrounding the Paralympics. The NYT were searched for articles covering the Paralympics from the ProQuest database (University of Calgary provided) for articles from 1851-2006 and the latest East Coast Edition (1980-2011). 217 documents were obtained. Canadian Newsstand was also researched to provide insight into Canadian coverage of the Paralympics

Keywords	Number of articles (Name of ProQuest database)		
	NYT 1851-2007	NYT 1980-2011	Canadian Newsstand (1980-2011)
<b>Paralympic</b>	122	208	20,999
<b>Olympic</b>	162,208	38,267	570,099
<b>Paralympics</b>	146	177	10,709
<b>Olympics</b>	50,810	28,607	426,860

Table 1. Overall visibility between Paralympic(s) and Olympic(s) in the New York Times and the Canadian Newsstand (which composes 300 newspapers) is comparatively the same, resulting in far less visibility in print media coverage of Paralympic(s).

Therapeutic Assistive Device	Number of Articles
<b>Wheelchair (i.e. rugby, push-rim, hand-cycle)</b>	36
<b>Prosthetic Leg</b>	14
<b>Prosthetic Arm</b>	No Data
<b>Prosthetic Hand</b>	No Data
<b>Sled (sled/sledge hockey)</b>	5
<b>Tandem Bike</b>	2

Table 2. Wheelchair and prosthetic therapeutic assistive devices were most visible in the NYT

Liberation Tool	Positive Perception (number of articles)	Negative Perception (number of articles)
<b>Wheelchair (n=36)</b>	17	19
<b>Prostheses (n=14)</b>	14	-

Table 3. Glorified in the NYT were prosthetic leg devices through their forthcoming expectation to "open up the world" for their wearers. A 1988 article described the feeling as "Freedom. Being unchained. Unlocking the door and walking into the sunshine. Exhilarating". Wheelchair assistive devices were at the bottom of the hierarchy receiving negative perception around their attachment to their users. Moreover, articles discussed athletes "getting out of the chair" and returning to their previous bodily form.

Paralympic Athlete	Year Competed in Olympics	Number of Articles
<b>George Eyser</b>	1904	2
<b>Neroli Fairhall</b>	1982	4
<b>Marla Runyan</b>	2000	7
<b>Natalya Partyka</b>	2008	3
<b>Natalie Du Toit</b>	2008	9
<b>Oscar Pistorius</b>	2012	22

Table 4. Karoly Takics and Liz Hartel who are known to have competed in the Olympics were not mentioned in NYT at all

## Conclusion

The Paralympics were shown in the NYT as a stepping stone to the Olympics for Paralympians who wanted to compete against athletes without disabilities. With bodily enabling assistive devices to mimic the species-typical body structure and body function, this reality for more Paralympians does not seem far away. Paralympic skier Kevin Bramble anticipates this movement

"I identify more with somebody like Laird Hamilton, Matt Hoffman or Tony Hawk (a big-wave surfer, a BMX pioneer and a skateboard guru). Guys that have taken their sport to a place it had never been". [8]

## References

1. World Anti-Doping Agency (WADA).2010. About WADA. WADA <http://www.wada-ama.org/en/About-WADA/>. Accessed 15 December 2011
2. R. Dicker, "New Equipment Stirs Division within Wheelchair Ranks," New York Times, 2000.
3. Howe 2011, "Cyborg and Supercrip: The Paralympics Technology and the (Dis) Empowerment of Disabled Athletes," 868-82.
4. Berger, "Disability and the Dedicated Wheelchair Athlete," Journal of Contemporary Ethnography," 647-78.
5. S. Holden, "These Gladiators on Wheels Are Not Playing for a Hug," New York Times, 2005.
6. "Out-Box; [List] ," New York Times, 2008.
7. Vecsey, "Still Living on the Line."
8. A. Berg, "Disabled Skier Designs His Way to Be a Daredevil," New York Times, 2006.

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## Discussion

42 (19.35 %) articles mentioned Paralympians wanting or having had the opportunity to compete in the Olympics. 20 (9.22 %) articles discussed devices used by the athletes. Historical representations in the NYT have shown therapeutic assistive devices to be constantly evolving. As for the evolution from the push-rim wheelchair to the hand-cycle, Helene Hines stated "The next few years you will have some arguing about it" [...] "It might be two separate divisions, but I think eventually wheelchair people will move into a hand-crank because they will want to keep enjoying racing and that's where the longevity of the sport is". [2] Hand-cycling is now included in the disabled world cycling championships and in the cycling portion of the Paralympics.

For Paralympic track and field athletics the closer a body is to a cyborg the more capital it holds [3] . Paralympian wheelchair racers and prosthetic-wearing athletes are the most explicit examples of cyborgification in sport today. There is a hierarchy of 'acceptable' impairment within the community of athletes. Moreover, the more minimally impaired a wheelchair athlete is, the more likely that they will become the embodiment of a supercrip [4] as wheelchair rugby athletes were described as **combatants outfitted like warriors but without helmets, strapped into armored, custom-made wheelchairs that collide in a kind of human demolition derby**. [5]

Less visible narrative coming from the athlete was the positive attachment to the liberation tool of the disabled person as part of their identity "Axle width, wheel tilt, seat angle, height—Paul Schulte [...] Paralympic basketball player, can examine an empty chair and immediately discern its owner's style, strengths and moves". [6]

The theme of Paralympians wanting to compete in the Olympics (19.35% n=42 articles) (n=13 articles being of Pistorius) is common in the NYT. Wheelchair basketball player Bill Demby (1988) reasoned that the same level of skill is required between Paralympians and Olympians "I went to Australia and they had their national amputee games at the same time as some of their Olympic qualifying events. You could run a 100-meter dash for the able-bodied and then a 100-meter dash for the disabled. You could have everybody throw the shot at the same time. The logistics would be difficult, but you could do it [...] We all go through the same muscle strains, the same torn ligaments, the same training". [7]

