

Broken Bones, Independent Living, and Wheelchairs:

An Exploration of Murderball

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You have probably never heard of Ryley Batt, Mandip Sehmi, and Tomas Hjert, three of the best athletes in a virtually unknown sport.¹ Lightning fast dodges; long, arcing passes across the court; a tight grip on a sturdy rubber ball -- and all played in wheelchairs. Incorporating elements of football, basketball, and handball, this sport, wheelchair rugby, was developed in Winnipeg, Canada in 1977.² Since then, it has blossomed into the most popular Paralympic sport in the world, with over 40 participating countries.³

Wheelchair rugby is colloquially known as murderball due to its extremely aggressive and violent play. And although Great Britain's wheelchair rugby captain Steve Brown himself admits that "not that many murders" occur in matches, he observes that it certainly can be dangerous: in one incident, he broke his sternum and seven ribs, not an uncommon occurrence in a sport like this.⁴



fig. 1

In fact, a 2015 study by the Journal of Human Kinetics found that players are injured approximately once every three days.⁵

Considering the physical strain these players face, their equipment must be top notch in order to keep up. So although their wheelchairs are similar to the ones you would see out on the

¹ "Seven Wheelchair Rugby Stars Named Ones to Watch," Paralympic Games, , accessed July 30, 2019, <https://www.paralympic.org/news/seven-wheelchair-rugby-stars-named-ones-watch>.

² "Introduction to Wheelchair Rugby," International Wheelchair Rugby Federation: About Our Sport, accessed July 30, 2019, https://www.iwrf.com/?page=about_our_sport.

³ "Introduction to Wheelchair Rugby," International Wheelchair Rugby Federation: About Our Sport, accessed July 30, 2019, https://www.iwrf.com/?page=about_our_sport.

⁴ "How Dangerous Is 'murderball'?" Facebook Watch, accessed July 29, 2019, <https://www.facebook.com/C4Paralympics/videos/1162584027098744/>.

⁵ Joanna Bauerfeind et al., "Sports Injuries in Wheelchair Rugby – A Pilot Study," *Journal of Human Kinetics* 48, no. 1 (2015): 123, doi:10.1515/hukin-2015-0098.

street -- two big wheels bookending a sturdy chair -- even a cursory glance reveals numerous differences: angled tires to prevent tipping; front-facing pickbars and metal wings to knock opponents away; spoke guards to block holds.⁶ And these features are just the standard design -- there are also offensive chairs, built for speed and mobility, and defensive ones, built with bumpers and hooks to slow down opponents.⁷

The custom-made wheelchairs used in murderball are far from ubiquitous; there are only a few companies that sell them. One such company is Melrose: led by paralyzed former powerboat racer Philip Melrose, the business started when, unsatisfied with the chairs available on the market, Melrose built his own from titanium. This garage-headquartered company has grown over the last 16 years into two factories in New Zealand and the USA, and alongside other like companies, it provides thousands of disabled people specialized equipment to more actively engage in sports.⁸



fig. 2

Anita Perr, an occupational therapist at the New York University Ability Project, says that this represents an important shift in design for disabled people. She notes that while the able bodied have “always had tennis shoes and basketball shoes and dancing shoes,” for a long time,

⁶ “Rugby,” Melrose Wheelchairs USA, accessed July 29, 2019, http://www.melrosewheelchairs.com/index.php?main_page=page&id=2.

⁷ “Wheelchair Rugby: Equipment,” International Wheelchair Rugby Federation, accessed July 29, 2019, <http://www.wheelchairrugbyready.com/?module=1&ion=3&subsection=41>.

⁸ “Melrose Staff.” Melrose Wheelchairs USA, accessed July 29, 2019, http://www.melrosewheelchairs.com/index.php?main_page=page&id=6&zenid=4535476467adab32418dedd8fd70853f.

“the biggest decision you made about you wheelchair was whether you wanted black, red, or blue.”⁹ But with the increased focus on customization, wheelchair users are getting their own tennis, dance, and dress shoes: “a motorized chair for their daytime stuff, a manual chair when they’re going someplace that they can manage propelling themselves, and then the rugby chair when they’re gonna go out and crush everybody else.”¹⁰ Customization means that it is easier for disabled people to transport themselves and participate in more varied activities, thus making it easier to live on their own.

This independence through customization is an impact seen most clearly in wheelchair rugby players. According to researcher Nathan Perkins, while “activities of daily living are very problematic for a majority of individuals with physical disabilities, [those] who participate in wheelchair rugby have high self-efficacy... in performing [said activities].”¹¹ Seeing oneself as an athlete is a significant horizon-broadening perspective shift: the thought that “If I can play rugby in this chair, what stops me from going to the grocery store on my own?” For people in wheelchairs, independence in sports like murderball scaffolds independence in other activities of daily life.

Admittedly, wheelchair rugby is not empowering for all wheelchair users -- while the sport *is* coed, only about 5% of players are female.¹² This is in part due to physiological differences between men and women that make it harder for them to play. A study by the National Center for Biotechnology Information found that the average woman’s shorter arms and

⁹ Anita Perr, "A Conversation at the NYU Ability Project," interview by author, July 23, 2019.

¹⁰ Anita Perr, "A Conversation at the NYU Ability Project," interview by author, July 23, 2019.

¹¹ Nathan Perkins, "Positive Impact of Participation in Wheelchair Rugby: A Review of the Literature," abstract, *Palaestra* 32, no. 2 (2018): 18.

¹² “Hitting Like Women,” *New Mobility*, January 14, 2017, accessed July 30, 2019, <http://www.newmobility.com/2016/05/womens-wheelchair-rugby/>.

narrower shoulder girdles resulted in more relative work by women to go the same distance in a wheelchair, and up to 96% greater shoulder torque in men.¹³ With this in mind, a redesign that puts less emphasis on arm strength for wheelchair movement might make the sport fairer and thus more accessible for women, allowing everyone to experience the same benefits.

But beyond the cultural and physiological implications of the sport, the bottom line is that wheelchair rugby is *fun*. Fun, sure, for the players, but also for you and me to watch. And when you consider the chairs' design, promising customization and independence, alongside the excitement of wheelchairs careening across the court with manic speed, jousting for control of the ball, the sport looks even better. There aren't too many sports like this, even for able-bodied people -- American football, the most popular sport in the country, dropped 10% in viewership last year, and the numbers of players have dropped too due to health concerns.¹⁴ Wheelchair rugby, though, is markedly absent of these drawbacks. So when 2020 rolls around and you find yourself flicking through the Tokyo Olympic sports feed, make sure not to forget that days after comes the Paralympics, and with it a sport just as nail-bitingly, blood-pumpingly thrilling: murderball.

fig. 1: Murderball match in action.¹⁵

fig. 2: Murderball wheelchair designed and built by Melrose.¹⁶

¹³ Patricia E. Hatchett et al., "Impact of Gender on Shoulder Torque and Manual Wheelchair Usage for Individuals with Paraplegia: A Preliminary Report," *Topics in Spinal Cord Injury Rehabilitation*, September 29, 2009, accessed July 30, 2019, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2894710/>.

¹⁴ Jonathan Berr, "The NFL's Ratings Probably Will Continue to Decline," *Forbes*, August 28, 2018, accessed August 1, 2019, <https://www.forbes.com/sites/jonathanberr/2018/08/28/the-nfls-ratings-probably-will-continue-to-decline/#6e0bb38e6666>.

¹⁵ Meagan Rowe, "How to Host a Wheelchair Rugby Tournament," *National Center on Health, Physical Activity, and Disability*, accessed August 3, 2019, <https://www.nchpad.org/1648/6716/How~to~Host~a~Wheelchair~Rugby~Tournament>.

¹⁶ "Introduction to Wheelchair Rugby," *International Wheelchair Rugby Federation: About Our Sport*, accessed July 30, 2019, https://www.iwrf.com/?page=about_our_sport.

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