Sheffield Hallam University

Electric mountain bikes, ableism, and 'enwheelment' in outdoor leisure.

CHERRINGTON, James

Citation:

Copyright and re-use policy

Cherrington, Jim (2024). Electric Mountain Bikes, Ableism, and 'Enwheelment' in Outdoor Leisure. In '*Inclusion and Equity in Outdoor Leisure: Who's Body Belongs?*'. Wallingford, UK, CABI.

Electric Mountain Bikes, Ableism, and 'Enwheelment' in Outdoor Leisure.

Dr. Jim Cherrington, Academy of Sport and Physical Activity, Faculty of Health and Wellbeing, Sheffield Hallam University, Collegiate Hall, Collegiate Crescent, Sheffield, S10 2BP.

Electric Mountain Bikes, Ableism, and 'Enwheelment' in Outdoor Leisure.

Abstract

Electric mountain bikes combine user pedalling with electronic and motorised assistance to propel riders within off-road landscapes. Physically, this reduces the amount of effort required on behalf of the user, whilst allowing riders to cover longer distances in shorter amounts of time. This case study on electric mountain bikers in England analyses objections to electric mountain bike use, arguing that these are often constructed in ways that exclude disabled bodies. In light of these criticisms, the case provides an alternative perspective which shows how, through a process of 'enwheelment' (Monforte et al, 2019), disabled e-mountain bike users develop affirmative relationships with cycling technologies and environments that can help make outdoor leisure more inclusive and accessible.

Introduction

Electric mountain bikes combine user pedalling with electronic and motorised assistance to propel riders within off-road landscapes (Chaney et al, 2019). Physically, this reduces the amount of effort required on behalf of the user, whilst allowing riders to cover longer distances in shorter amounts of time. This has led to concerns regarding the social, ecological, and political implications of this emerging technology. For example, environmentalists have accused electric mountain bikers of accentuating the damage inflicted upon surfaces, flora, and fauna (Mitterwallner et al, 2021), whilst health experts have warned that they promote lazy, selfish, and irresponsible relationships with sport and physical activity (Chaney et al, 2019).

It is the contention of this case study that, when viewed through the lens of disability studies (see Brighton et al, 2021), these concerns are both reductionist and short-sighted. Here, a critical lens is applied to conservative attitudes towards nature, technology, and outdoor recreation, which, it is argued, are constructed in ways that exclude disabled bodies. The case provides an alternative perspective which shows how, through a process of 'enwheelment' (Monforte et al, 2019), disabled e-mountain bike users develop affirmative relationships with cycling technologies and environments that can help make outdoor leisure spaces more inclusive and accessible.

E-Mountain Bikes and the Question of Who (or What) Belongs in the Outdoors?

In contemporary Western societies, a key motivator for participation in outdoor leisure is a desire to immerse oneself within pristine 'natural' environments. Here, nature is positioned as being no more than the sum of its parts; a series of universal, observable, and quantifiable laws (i.e. cycles of weather and the seasons, that every action has an equal and opposite re-action, that everything and everyone has a pre-designated place in the cosmos) and objects

(i.e. trees, rocks, birds, air, soils) that act as an objective and inanimate backdrop for human activity. Accordingly, both the perception of nature, and its allure as a site of recreation, are imbued with a form of natural or biophysical determinism which grants 'determinate authority to environmental, ecological or biological forces in the shaping of social life' (White et al, 2016: 17). Consequently, outdoor recreation has been discursively constructed alongside values of virtue, well-being, and the common good, which are said to be generated through exposure to these idealised objects and properties.

However, such assumptions belie the contested and contradictory meanings that condition people's experiences of outdoor recreation (Dashper and King, 2021). To paraphrase Henri Lefebvre ([1974]1991), (natural) space is wrongly perceived as something abstract and transparent, something to be looked at passively and from a distance, rather than something that is to be experienced and lived. In the process, nature is reduced to a 'one size fits all' ideal, in which all participants are said to benefit evenly from its influence, without recourse to the material, structural or institutional factors through which nature is or isn't being accessed.

For example, disabled e-mountain bike users report three interrelated stigmas that are attached to their bodies and bikes. Riders describe the frequent, and sometimes aggressive way in which walkers challenge them on the environmental damage that their ('artificial') bikes are inflicting upon supposedly 'natural' landscapes (i.e., flora and fauna, disrupting local habitats, and, contributing to above normal levels of surface erosion). The 'whooshing' of the electric motor and clanging of the components are also purported to disrupt the peace and quiet that is typically associated with the countryside. Finally, there are suggestions that the glossy frames and jagged-edged tyres are not in keeping with the aesthetic imperative of the rural idyl.

The *assistance* provided by the motor also unsettles ideological notions of health and fitness, particularly those relating to (in)appropriate levels of technological intervention. Indeed, riders suggest that it is common for friends, family and other trail users to describe electric mountain bike users as 'lazy' or 'cheats' because of their use of (or reliance upon) motorised assistance. In my interviews with disabled e-mountain bike riders, individuals suggested that this attitude is caused by people 'not wanting to appear weak' (William), whilst others attributed this to men wanting to conform to a (hegemonic) form of masculinity (Mary). Though a more detailed explanation for these micro aggressions is beyond the scope of this case study, obvious links can be made here with mountain biking's increasing legitimacy as a formal, institutionalised sporting practice and the stigmas that are attached to assistive technologies and abject bodies within these athletic, able-bodied spaces. As such, e-mountain bikers are doubly stigmatised, in that as well as contravening the aesthetic imperative that configures recreation in 'natural' environments, they are also held to neoliberal notions of health and fitness, which exclude any-body that is not deemed to be competitive, independent, and self-disciplined.

The E-Mountain Biker as Socio-Natural and Socio-Technical Hybrid

Increasingly, however, philosophers of technology and 'nature' are showing how this world view is not only ethically problematic but empirically and historically false. For instance, in revisiting the origins of humanity, Bernard Stiegler (1998) has argued that the divide between humans and technology is more complicated than previous sociologists and anthropologists would have us believe. Instead, Stiegler suggests the historical transition from impulsive, animalistic drives to a mental state where we reflect on our own mortality was directly facilitated by the fashioning of tools such as weapons, eating vessels, and bicycles, that over time became an essential part of our evolution. This way of thinking has the potential to be incredibly powerful in the context of disability studies, as it can serve to address the idea that 'those appropriately performing able-bodiedness comfortably use technology, and those who fail to perform able-bodiedness (the disabled) are uncomfortably dependent upon technology' (Sparkes and Brighton, 2018:152).

Of particular interest here in the context of electric mountain biking, is how disabled users align themselves with other (disabled and non-disabled) consumers. Here, e-mountain bikes are positioned as a way of different people realising their shared sense of (physical) inadequacy and bodily imperfection. E-mountain bikes are described as a 'physical leveller' that allow users to dissociate with typical physiological competencies such as strength, power and cardiovascular endurance whilst developing new, techno-social identities. One of my participants (Joe) touched upon this when he joked: 'it doesn't matter whether your fat, skinny, short, or tall, ebikes allow everyone to have a go at riding their bike, which is the most important thing'. Another (Dianne) added that 'when we're on our bikes out there we are all pathetic losers in need of a bit of assistance, but we're not bothered at all because we're out in nature having fun with our friends'. Rather than e-mountain bikes helping to remedy their physical 'disability' or help to rehabilitate their bodies back to 'normal', these accounts illustrate how they help riders to recognise that we are all, to a certain extent, not fully human, and that, to a greater or lesser degree, we are all reliant on technology.

Having adopted this attitude, riders seek to replace their perceived lack of physical capital with a form of technological capital (Carlson, 2017) that (re)validates their identity as a mountain biker. Indeed, though the technical composition of their bodies and movements is perceived as being visibility different from other users of the outdoors, their enthusiasm for, and understanding of, components and accessories is also seen as a way of regaining a sense of authenticity within a (sub)culture that is dominated by the consumption of new technologies. Two aspects of the electric mountain bike experience stand out in this respect. Firstly, riders talk about regulating the battery power according to the steepness and technicality of the route ahead to ensure they can return to their original starting point without running out of power. This is deemed especially important for those with more debilitating physical disabilities (such as multiple sclerosis or spinal cord damage), as ineffective battery management could lead to users being stranded in exposed and unpredictable environments. The efficient use of electric mountain bikes requires riders to judge exactly when it is appropriate to pedal, and to ensure that the level of assist being offered is sufficient to negotiate steep trails and the technical obstacles that they comprise. In contrast to what participants see as an ignorant view of electric mountain bikes, individuals such as Rob conclude that it is naïve to think that you can just 'jump on' electric mountain bikes and ride, as this ignores the relationship between bodies, place, and space, that e-mountain bike riders are required to understand.

Towards More Positive and Integrated Forms of 'Outdoor Enwheelment'

In challenging ableist and reductive understandings of technology in 'natural' spaces, interview data highlights the diverse and multifarious ways that disabled electric mountain bike users become 'enwheeled' in outdoor spaces. Here, participants describe the process of 'accepting the… [*emtb*]… as an extension and integral part of one's body and its habitual actions' (Monforte et al, 2019: 1 *emphasis added*). Specifically, emphasis is placed on the role that electric mountain bikes play in facilitating forms of outdoor mobility. For instance, Becky - who is unable to stand effectively on a traditional push bike due to multiple sclerosis- told me that her bike allows her to sit down and pedal up hills. Brendan, Chris and James, on the other hand, describe how it made up for a lack of static power in their legs, and Betty and Andy suggest that the assistance of the motor helps to offset the pain that would normally be incurred by heavy pedalling, both during and after a ride.

Though it is easy to think of these benefits as being exclusively physiological, it is also interesting to hear participants describe the social benefits that accrue through e-mountain bike use. For example, Linda suggested that 'it's made a massive difference to me, but what I really love is the knock-on impact that it's had on, you know, loads of other people around me and that gives me quite a nice warm feeling inside'. Teresa similarly explained that 'when E-Bikes came out it was exciting for me to be able to feel like I could get out and do a sport with my husband…so we've now regained that connection'. This was also evident in a conversation with Mandy and Neville, who detailed how they had set up a riding group for older riders who were looking to get back into mountain biking after a period of absence, and Rob, who said that his electric mountain bike enabled him to re-establish a relationship with his son, who is able-bodied.

What is clear from this analysis is that both the assistance provided by the motor, and the sense of (physical and social) connectivity that participants experience with e-mountain bike technology, allows users to explore alternative narratives of disability that are more empowering, affirmative, and positive, than those that are typically associated with disabled users of the outdoors. This mirrors findings by Brown (2014), who suggests that the enrolment of a prosthesis can play a positive role in generating differential modes of mobility and alternative tactics for negotiating movement through space.

However, this research also shows that significant issues remain in enabling and celebrating these forms of behaviour. The question now is whether, and if so, how conventional attitudes will change and adapt, and who is responsible for implementing this change? As a mobility aid, electric mountain bikes undoubtedly offer a range of empowering possibilities for disabled exercisers in outdoor environments, yet the evidence for this is still largely anecdotal. As such, what is urgently needed are thorough, empirical, and global assessments of this emerging technology that are supported by the various political institutions, national park authorities, and other bodies responsible for the management and governance of outdoor leisure. Such investments will allow us to better understand the ways that e-mountain bike technologies – for better or worse – are shaping the future of outdoor spaces, and the steps

that need to be taken to ensure that electric mountain bikes and other assistive technologies are utilised to their full potential.

References

Brighton, J., Townsend, R., Campbell, N., and Williams, T. (2021). Moving Beyond Models: Theorizing Physical Disability in the Sociology of Sport. *Sociology of Sport Journal. 38, 386-398.*

Brown, K. (2014). Spaces of Play, Spaces of Responsibility: Creating Dichotomous Geographies of Outdoor Citizenship. Geoforum, **55**, 22-32.

Carlson, A., and Isaacs, A. (2018) Technological Capital: An Alternative to the Digital Divide. *Journal of Applied Communication Research.* **46** (2). 243-265.

Chaney, R.A., Hall, P.C., Crowder, A.R., Crookston, B.T., and West, J.H. (2019). Mountain Biker Attitudes and Perceptions of eMTBs (Electric-Mountain Bikes). *Sport Sciences for Health.* **15**. 577-583.

Dashper, K., and King, J. (2021). The Outdoors as a Contested Leisure Terrain. *Annals of Leisure Research* [online first]. https://doi.org/10.1080/11745398.2021.1899832

Lefebvre, H. ([1974]1991). *The Production of Space.* Oxford: Blackwell.

Mitterwallner, V., Steinbauer, M., Besold, A., Dreitz, A., Karl, M., Machsmuth, N., Zugler, V., and Audorff, V. Electrically Assisted Mountain Biking: Riding Faster, Higher, Farther in Natural Mountain Systems. *Journal of Outdoor Recreation and Tourism* [online first]. https://doi.org/10.1016/j.jort.2021.100448

Monforte, J., Smith, B., and Pérez-Samaniego, V. (2019): 'It's Not a Part of Me, but it is What it is': The Struggle of Becoming En-Wheeled After Spinal Cord Injury. *Disability and Rehabilitation.* **43**(1):1-7.

Sparkes, A., Brighton, J., and Inckle, K. (2018). It's Part of Me: An Ethnographic Exploration of Becoming a Disabled Sporting Cyborg Following Spinal Cord Injury. *Qualitative Research in Sport, Exercise, and Health.* **10** (2). 151-166.

Stiegler, B. (1998). *Technics and Time, volume 1: The fault of Epimetheus.* California: Stanford University Press.

White, D., Rudy, A.P., and Gareau, B.J. (2016). *Environments, Natures and Social Theory.* New York: Palgrave