Media and Disability – Part I: Organizing between bodies and technologies

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"The future is disabled" headlines techno-society scientist Ashley Shew in their introduction for the MIT Technology Review issue "All Access" (2023). By advocating for "all-access thinking and disabled expertise", Shew (2023) sees a "more livable world" for every member of society in the future: "We need more ways to be. Part of that involves looking to alternative ways of sensing, processing, moving, understanding, and communicating, and seeing those ways as good and worthwhile." Based on the accounts of disability-related technologies, Shew discusses the hype around "enabling" technologies — usually propagated as positive — which, after all, do not address the actual problem and "fail to understand that these communities may pursue their own desires rather than those reflected in the dominant culture" (Shew, 2023). Or, to put it differently: The real problem is not solely the media technology itself, but its strange entanglement with the dominant culture from which it emerges. What does this mean?

According to sound studies scholars Mara Mills and Jonathan Sterne (2017), media technologies are built around an understanding and a definition of "the natures of human subjects and bodies" (p. 371). This is in line with media scientist Friedrich A. Kittler's work, who argues in *Optische Medien* [Optical Media] that (early) media technologies were developed by and for disabled people (2002, p. 158). In other words, a particular idea of a human body is — or was — understood as "norm-al", leading to the formulation of a "norm" from which media technologies are derived. This relationship also applies vice versa: Not only do technologies emerge based on supposed normal bodies, but the technology itself generates the norm through its operations (Friedrich, 2021).

Take, for instance, the audiometer. An audiometer is a technological device to measure "normal hearing". By providing the test subject with an audio signal via headphones, the audiologist generates an individual audiogram based on the feedback provided by the subject. Depending on the feedback given, the audiologist defines the degree of hearing compared to

a statistical average value, which is considered as "normal hearing" (Hirsch, 1952). Now, it could be argued that the audiogram calls for normalizing hearing. However, the audiometer must be technologically calibrated so that the "normalization" of the test subject via the audiogram remains correct. And what is the calibration based on? An arbitrarily measured threshold, defined as "normal ears," obtained from a large group of test subjects aged between 18 and 30 years old (Hirsh, 1952, p. 304). Even though the specifications for audiometers were last updated in 2018 (American National Standard Institute ANSI S3.6-2018), the crucial point is that they result from a "concept of the body" which derives from a dominant culture. The audiometer technology is therefore entangled with the statistical data of the audiogram, which is based on a certain understanding of a "healthy" body to define the norm of hearing.

The relationship between media and disability is therefore deep and complex. Media formats occupy sites where disability is defined and constructed, not only because media representations give certain images of disability, but also because media operations embed images of the user which assume certain abilities and norms. Media such as assistive technologies also produce regimes of visibility for certain impairments – as happens with hearing-impairment or speech-impairment – thus intersecting issues of social representation and stigma (Sterne, 2021). As highlighted by groundbreaking disability media studies (Ellcessor et al., 2017), the media perspective also reconfigures and complicates the classic dichotomy between a medical model – which defines disability "as an individual defect lodged in the person, a defect that must be cured or eliminated if the person is to achieve full capacity as a human being" (Siebers, 2008: 3) – and a social model of disability, inspired by disability activists, which defines disability "not as an individual defect but as the product of social injustice, one that requires not the cure or elimination of the defective person but significant changes in the social and built environment" (ibid). This neat distinction, in fact, is questioned by the consideration that impairments and individual defects are also socially constructed, as they are measured, diagnosed and assessed through the use of medical devices which constitute media in themselves.

This set of considerations, together with a growing interest in embodiment, intersectionality and interdependence, is inspiring perspectives which are more radical than the social model. One of these is crip theory, that, recalling queerness, focuses on other possible ways to be, engaging with counter-culture and harnessing technoscience to activate alternative world-building (Hamraie and Fritsch, 2019). In the same vein, contributions to the fields of history of technology and media archaeology, such as Robert Stock's *Blindness, Acoustic Environing and Sensing Technologies (ca. 1950-1980)* which opens this volume, highlight that users with disabilities are often at the forefront of innovation in media systems that transform the idea of perceiving, sensing, communicating and organizing – although those innovations often end up leaving those very disabled users behind.

This volume provides an investigation into how disability is not only constructed by and through media (Napolitano, 2022). Inspired by physicist and feminist studies scholar Karen Barad (2012), we suggest that disability is a phenomenon produced by a material-discursive apparatus

> "where the differential constitution of the human and the nonhuman […] are enfolded and reworked in the ongoing reconfiguring of apparatuses and the reconstitution of boundaries, and what [is] defined as an object (or subject) and what gets defined as an apparatus are intra-actively constituted through specific practices." (p. 206)

Adopting this point of view, we consider disability as the result of an entangled relationship: our understanding of the human body is produced by and through media technologies, while those technologies are in turn built on the idea of the (statistically) "normal" body they produce. Or, by borrowing Mills and Sterne's words: "[D]isability [is] a constituting dimension of media, and media [is] a constituting dimension of disability" (2017: 366). Accordingly, we would extend Shew's headline to encompass the simultaneity of culture-historical *techné* and operation-natural *lógos* in the sense proposed by media scientist Wolfgang Ernst (2021): *The future is disabled, and the past has always been*.

This entangled relationship, which Mills and Sterne (2017) call *Dismedia*, was this edition's initial point of departure. In the contributions that constitute this issue, the topic is articulated in various ways. Following Stock's media archaeological research, Jason Archer explores how media technologies play a crucial role in defining disability as such and vice versa, in his *The da Vinci: A (Dis)abling Machine of 21st Century Medicine*. By shaping societal perceptions of what is considered as norm, the entangled relationship between media and disability impacts academic fields beyond media studies. Issues of inclusion and accessibility, in fact, have now become a main concern of organizational studies (Adamson et al., 2021). This perspective is clearly presented in the contribution of Ilaria Faranda, *Mapping Access: A Tool for Social Change*. Here, assistive media technologies such as maps and navigation apps are explored for their impact on the organization of access and its consequences in terms of inclusion and social justice. Along the same line of enquiry, Kathryn Locke et al., in their *Reinscribing Accessibility in Higher Education: The Case for the Inclusion of Automated Captions in Universities*, investigate the potential inherent in the use of automatic speech recognition in higher education, focusing on combinations of and relationships between technologies, policies and educational strategies. In light of the extensive use of media technologies for both disabled people and general users to access services in schools, universities and health organizations – usually provided by private corporations who have property on use data and metadata – these contributions raise further issues relating to privacy and the impact of corporations on public services (Alexander, 2020), as well as the interaction between technological, political, organizational and legal factors (Napolitano et al., 2023). Moreover, prosthesis and gaming peripherals technologies enact complex embodiments which are located between gamification and personalization, as explained by Silvio Ripetta and Alessandro Silvestri in their *Exploring the Embodiment Experience of Disabilities in First Person Shooter eSports: An Empirical Study*. All this has an impact on the vision of a future for and with disability. Emma May, in *Disability and Technological Practices of Refusal: Locating "Crip Futurity" in the Remote Access Archive*, guides us between mainstream narratives of "overcoming" and the counter-practices which can open new paths for imagining a world with disability in it.

This volume is therefore dedicated to the relationship between media and disability from different and multidisciplinary perspectives. The aim is not to reinvent the field of disability-related technologies and media. Instead— in the spirit of Shew— the aim is to provoke and/or maintain a discourse that conveys alternative approaches and invites a reimagination of disability, media and the associated organizational efforts.

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