Why Are Glasses Perceived Differently Than Hearing Aids?

All bodies are getting assistance from technology all the time, yet some are stigmatized. *Abler* is one woman's quest to rectify this.

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DEC 3, 2013 | **TECHNOLOGY**

A common example of assistive technology (Patrick Murphy/Flickr)

Without technology, the human body is a pretty limited instrument. We cannot write without a pen or pencil, nor eat hot soup without a bowl and, perhaps, a spoon.

And yet, only certain technologies are labeled "assistive technologies": hearing aids, prostheses, wheelchairs. But surely our pens and pencils, bowls and spoons assist us as well. The human body is not very able all on its own.

My curiosity about how we think about these camps of "normal" and "assistive" technologies brought me to Sara Hendren, a leading thinker and writer on adaptive technologies and prosthetics. Her wonderful site, *Abler*, was recently syndicated by *Gizmodo*. I talked to her about why crutches don't look cool, where the idea of "normal" comes from, and whether the 21st century might bring greater understanding of human diversity.

You have written and spoken extensively about the idea that "all technology is assistive technology." What do you mean?

Scholars working in disability studies have called attention to this as a redundancy in technical terminology before me, and I'm trying to bring it to tech journalism: What technology would not be called assistive? And yet that term stands for a set of devices that are seen as set apart.

"Assistive technologies" have largely taken their points of departure from medical aids, primarily because in industrialized cultures, people with atypical bodies and minds have been thought of as medical "cases," not as people with an expanded set of both capacities and needs. So a lot of the design attention to things like crutches, wheelchairs, hearing aids, and the like have followed the material look and structure of hospital gear. And accordingly, designers and people working in tech have "read" them as a branch of medical technologies and, usually, uninteresting.

Scholars and people who are activists for disability rights have spent a lot of energy in the last decades showing that disability is not about the state of a human body; it's about the built environment, structures, and institutions that make life possible and meaningful—or conversely, impossible and meager—for certain kinds of bodies and minds. In other words, disability studies has worked to transition an understanding of disability from a "medical model" to a "social model." A social model of disability opens up the discussion to consider how design and

technologies might be re-imagined for all kinds of bodies, not "assigned" to those with medicalized conditions.

By returning "assistive technology" to its rightful place as just "technology"—no more, no less—we start to understand that all bodies are getting assistance, all the time. And then design for everyone becomes much more interesting.

I think what stands out to me about rethinking technology in this way is not so much what it says about disability and how we think about people with unusual needs, but how it pushes us to rethink "normal" abilities.

Right. It's a myth that there's a normative set of capacities anyway! What I want people to see is that *starting* with design and disability actually opens up interesting design questions with many, many bodies and uses in mind.

Tell me more about that myth.

The "normal curve" is a very recent historical way of measuring human capacity—it dates to the early 19th century, with the invention of social sciences, meaning methods for measuring humans as populations, people's qualities relative to one another. So "normal" capacities are statistical averages, but of course those change over every single person's lifetime. So even if at some age you occupy a normative, able-bodied way of hearing, seeing, etc., your body over the lifespan will move in and out of relatively independent and much more interdependent stages. Aging being the profound universal, of course—but also temporary injury, an unexpected change in capacities, and so on.

Beyond that, though, it's useful to consider all the many, subtle, unvoiced "needs" that all of us are meeting via our technologies and extensions. Social needs, political needs, all kinds of things. Using your phone to avoid an awkward lull in a conversation. Using your headphones to create a kind of sphere of anonymity on the subway. Technology is nothing if not assistive! Its designed assistance is integral to its very coming into being.

What I'm interested in is seeing technologies that have thus far been labeled for "special needs" get the kind of design attention that mainstream technologies do; I'm also interested in designers and technology developers seeing needs— interdependence—as a fundamentally human social state on a universal continuum.

Consider the case of eyeglasses. Graham Pullin, in his book "Design Meets Disability," shows how eyeglasses have moved culturally from being a medical aid to a fashion accessory. People who use them are getting "assistance" in a very dependent way, but their cultural register has no stigma attached to it, the way that hearing aids still do.

One idea I return to a lot is that the 20th century saw a sort of consolidation of a variety of institutions, which meant in some ways that the needs of the "mainstream" were more easily met than those of people who for whatever reason preferred or needed something more particular. It was an age of "bigs": big business, big religion, big government, big journalism (even though we don't call it that). Today we see smaller, niche markets and projects flourishing, both online and off. Do you think that we are changing our attitudes about "normalness"? Are we getting any better at meeting the needs of people who don't fit those statistical averages you mentioned before?

I'd add big science, of course, to your list. And yes, that consolidation is also at the heart of structured, medical notions of "normalcy" that gave us special schools and institutions for people whose bodies and cognitive capacities weren't seen as productive, in the biological and economic sense.

With respect to today—it's hard to say. It depends on how global your perspective is. On the one hand, in this country, we're coming up on the 25-year anniversary of the Americans with Disabilities Act, which legally has guaranteed rights and inclusion in so many settings. It's also the era of inclusion in schools; there are policies in place that demand mainstream settings for all kinds of students. But: routine institutionalization of people with autism, Down syndrome, and other

atypical minds—not diseases—is still present in a number of parts of the world. Inclusive schooling—schooling at all—for students who are deaf, for example, or using wheelchairs is still rare in many places.

But I do see the niche efforts you're describing! 3D-printed, low-cost prosthetics, and hearing aid jewelry, and gorgeous, bespoke artificial limbs. High- and low-tech designs, made by big manufacturers and DIY makers. All of these practices start to undo other more pernicious cultural ideas about bodily difference and help foster meaningful cultural and political participation.

You've chronicled some of these innovations on your site, Abler. Can you talk a little bit about what you've seen from your perch there—the feedback your site gets—and what you are trying to get across to those who come visit your site?

Abler is written for a tech-loving reader, and its purpose is twofold. It's meant to bring that design attention I mentioned before to prosthetic technologies—ways that designers are reconsidering sensory augmentations, but also social technologies for affective needs, and other kinds of unusual prosthetics.

But it's not enough to make "better technologies"—I'm also interested in linking together design and art works that investigate the very notion of normal and abnormal function. It's one thing to make a prosthetic limb that's beautifully painted; they're gorgeous! It's another, though, to seek out designs that raise and suspend questions about human capacities, about the functionality of technologies, about all the ways humans engage with machines for all kinds of needs. I'm interested in productive uncertainty, in so many ways. I want technology designers to ask more questions—both of their intended users and inside their own assumptions—when figuring out who needs which device for what.

Abler is newly a channel at *Gizmodo*. I'm happy about that, because it means seeing these technologies right up alongside the much more talked-about innovations in technologies of all kinds.

ABOUT THE AUTHOR

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