

Exoskeletons: From Other Perspectives

Think about this: Do exoskeletons help everyone?

There are about 3.6 million people in the United States who use wheelchairs. Right now, there is only one exoskeleton (the ReWalk) that is approved for use by the Food and Drug Administration. You can use this exoskeleton only if you:

- Are between 5'3" and 6'2"
- Weigh under 220 pounds
- Have control of your arms
- Have enough bone density to stand and walk
- Don't have certain conditions (like multiple sclerosis, cerebral palsy, or ALS)

Think about this: Does everyone want an exoskeleton?

From William Peace, paralyzed since the age of 18:

"Typical news stories consider the exoskeleton a 'miracle' that enables paralyzed people to walk again. The message is not subtle: walking is the best means of locomotion. Using a wheelchair is inherently bad. [But] from my perspective, I think a wheelchair is a phenomenal invention. It makes my life go. A wheelchair is a powerful symbol of empowerment."

From Kim Sauder, graduate student in Disability Studies who has cerebral palsy:

"I have absolutely no issue with the existence of exoskeletons in general. What I take issue with is ... this idea that something is more meaningful if it's done while standing up. [For example] crossing the stage at graduations, like somehow the accomplishment is being able to walk across that stage and not the fact you got a university degree which probably took you years and so much more work than just the 10 seconds it took to walk across that stage. The walking should not have ever been considered the accomplishment in that scenario."

From Rose Eveleth, writer, designer and producer:

"Why are we excited about exoskeletons and not really high quality wheelchairs? A lot of the time, this [is because] devices are produced and marketed without the input of the target audience themselves. In this case, disabled people. When you talk to people who use wheelchairs you find that in fact, many of them don't really care about walking."

From Sara Hendren, researcher who specializes in assistive-design projects:

"Putting too much focus on [exoskeletons] can also create the idea that there is a 'successful' disabled person: that someone who can use an exoskeleton to walk, or a prosthetic limb to run, has succeeded more than someone who cannot."

Think about this: Many paralyzed people have medical complications caused by a very sedentary lifestyle. What other approaches could help them?

From William Peace, paralyzed since the age of 18:

“Provide an extended rehabilitation experience ... Provide your typical paraplegic with a state-of-the-art and well fitted wheelchair. Design an exercise program for this person and expose them to a host of different adaptive sports programs.

“Let’s do a little basic math. Exoskeleton \$60,000 ... Contrast this with ... the following: \$11,000 wheelchair, \$500 wheelchair cushion, a \$5,000 hand-cycle, a \$4,000 sit-ski ... Total material costs are a little over \$20,000. I would be willing to bet a newly paralyzed person that received this sort of support would thrive. I bet an extreme sedentary lifestyle would be unimaginable. The sort of program I suggested can change lives for the better after a spinal cord injury.”

Think about this: How could we make spaces more accessible?

From Kim Sauder, graduate student in Disability Studies who has cerebral palsy:

“[People may think that we] don’t need to deal with inaccessibility anymore because people [with exoskeletons] can walk and we don’t need to worry about ramps or stairs. A lot of the narrative gets couched around ‘Isn’t [the exoskeleton] so inspiring?’ But also this lets us off the hook of having to do anything about accessibility.”

From Rose Eveleth, writer, designer and producer:

“It’s perhaps most important to think about why many people seem more interested in hoisting someone out of their wheelchair than they are in making spaces accessible to that chair ... I talked to [a policy analyst] while she was at a disability-rights conference. I asked her whether there was any city that was set up well for people with disabilities, and people in wheelchairs specifically. She laughed and turned to a nearby group to ask them what they thought. They couldn’t come up with a single one.

“This is not to say anyone should reject the ReWalk, or stop designing technology that can give people the kinds of mobility they might desire. But the future needs both ... It needs people to think not just about cool futuristic devices, but also about the future of cities, of architecture, of infrastructure, and of transportation.”

Sources:

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