

Tech start-ups

A crash course in technology for ageing and infirm bodies

From 'seeing' apps for blind people to exoskeletons, new tech is transforming lives

Jonathan Margolis



This powered exoskeleton suit designed by Honda helps people to walk © Bloomberg

NOVEMBER 9, 2016 by: **Jonathan Margolis**

Twenty years ago the internet was young. I went on an assignment to Cannock in Staffordshire in the UK, and then on to Huntsville in Alabama in the US, to write about two women, both in their eighties and housebound, who had become friends on the internet.

The idea of oldies hanging out online was sufficiently unusual at that time for a magazine to splash out a lot of money on sending me to cover it.

After spending time with the women, I pointed out the irony. The internet was shaping up to be youth-orientated and cool. Surely the old and disabled would gain more than the young from having the world brought to a screen?

I cannot say I have pursued this line of thought much since then, save for an interview last year with Jake Dyson, son of Sir James, in which he, being deaf, talked about Dyson possibly making an affordable hearing aid one day. Such is his fury at the price of hearing aids.

But I had a crash course this week in how technology is helping those whose bodies malfunction, and how the market for “assistive technology” is exciting — for the people it helps, for investors and for tech companies.

My eye-opener started at a discussion at Google’s Campus in London, hosted by Beit Issie Shapiro, an Israeli disability charity, which runs an incubator for assistive technology start-ups.

Jean Judes, executive director of BIS, explained a couple of things I had not thought about. The vibrate feature on mobile phones, predictive text and touch screens, she said, were all originally developed for disabled people.

Longer lifespans, she added, meant more of us were “acquiring disabilities” — a disturbing phrase to describe the inevitable accumulation of health problems as we live into our eighties and beyond.

Hence the growth in the market for assistive technology. Furthermore, we learnt that the disposable income of disabled people in the UK is estimated by campaign groups to be £80bn. Their spending power, for reasons about which no one is clear, is referred to as “the purple pound”.

Another speaker, Steve O’Hear, the disabled technology journalist, talked about smart home technology, which, if tech fans are honest, is still pretty much a gimmick. But the Hive phone app that Mr O’Hear uses means he can control his central heating properly for the first time in his life. He used to do it by bashing his boiler controls with a stick.

Ms Jude added that the driverless car — again, still a bit of a geek dream — will be life-changing for disabled people.

Haqueeq Bostan, a City communications director and wheelchair user who contracted polio as a child in rural Pakistan, also spoke. He told us how in the 1980s when he was 10, a doctor at St James’s Hospital in Leeds told him: “Don’t worry, technology will one day solve these problems for you.” This is starting to be the case.

We were shown a BIS video of disabled people telling how technology is improving their lives. I recommend it to anyone becoming blasé or bored with tech.

The next day, I spent the morning online researching the assistive technology I have missed in my exploration of the latest and greatest hi-fi, photography, mobile devices, fitness trackers and the rest.

Lifeware is an example of the kind of product that would never normally have come on to my radar. The website is as cool and modern as any other. The company is in Mountain View, California, alongside Google, Mozilla, Symantec and hundreds of tech frontrunners.

It is a cutlery holder for people with hand tremor. It contains sensors, motors and a computer that detects and counteracts the shaking caused by diseases such as Parkinson’s.

Then there is Be My Eyes, an app developed in Denmark. It uses the camera on blind people’s smartphones to connect them to volunteers ready to help with everyday tasks, from checking food labels to navigating unfamiliar surroundings.

From Israel, there is the Sesame touch-free smartphone, as featured in the BIS video, and OrCam intelligent glasses, which help blind people by reading text, recognising faces and identifying objects

Companion robots, powered exoskeleton suits, prosthetic limbs that read your thoughts through a chip on the motor cortex, optical prosthetics to replace non-working eyes and hundreds of other assistive products are in development all over the world.

Such things probably matter less to some people than cat videos on YouTube or new ways to abuse others on social media, but they do shed light on a prescient passage in an IBM training manual from 1991. It said: “For people without disabilities, technology makes things easier. For people with disabilities, technology makes things possible.”

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