Cripping assistive tech design

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What is a wheelchair’s purpose?

A wheelchair's purpose

Allow people to move

Expand access

Most importantly : improve **autonomy** (including the freedom to move around)

Why don’t wheelchairs have USB ports to charge phones?

A wheelchair's purpose

Difference between *normal* and *radical* design (Poel and van Gorp)

We seek new solutions to a problem (lack of mobility)

We work on common metrics (distance travelled, speed, safety, cost)

We seldom ask if we can improve on non-existing metrics

Models of disability

One historically central opposition:

- Medical model $\Longrightarrow$ impairment is something to be fixed and the cause of disability
- Social model(s) $\Longrightarrow$ impairment is (partially) caused by interactions between user and environment (including social norms)

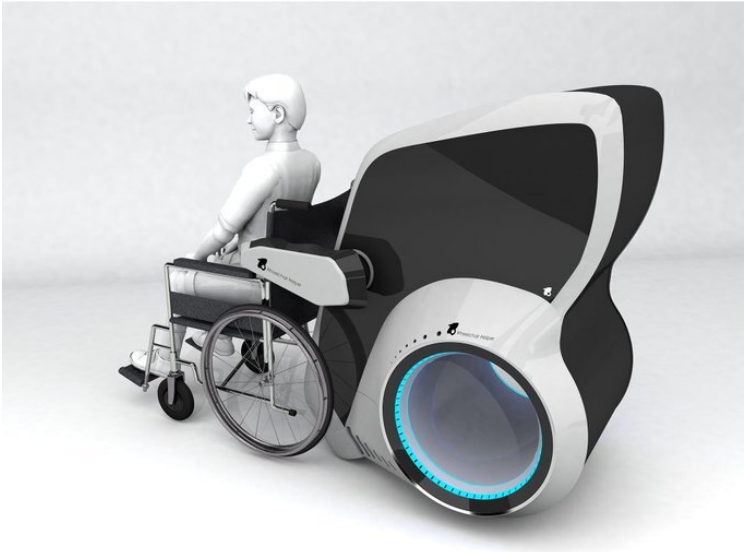
Crip theory: framework to look at normal/abnormal and abled/disabled dichotomies

Let’s play a design game!

Bad designs

Bad designs

Bad designs



Bad designs

Bad designs

How do we avoid this?

Designing for autonomy

User studies to test products are not enough

Imagining oneself as disabled (or doing disability simulations) also isn't enough

Even disabled designers can be bad (especially when they don't consider the variability in disability)

Thankfully, a quarter of the population is disabled, so there are solutions.

Improving autonomy

Current biggest threats to autonomy

Limited **fault-tolerance**

No **maintainability**

Supply chain issues

Optimised for less-relevant metrics

Good designs can be provocative

Aggressive designing

Designs can be artistic

Artistic recuperation

Artistic recuperation

What next, then ?

What next, then ?

General design:

- include reflections on autonomy;
- consult with multiple users at all stages;
- pre- and post-hoc analysis of what could be added (outside the box): ask **what next?**

Check the paper if you want to read:

- more (analysed) examples of bad designs;
- too many references;
- how this applies to genital reconstruction surgery;
- how all of this is tied to transhumanism