BodyTalk

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Using dance to explore design qualities of wearable technology

Where we started:

Exoskeletons have an **ableist history** in their funding, research, and design (Shew 2020).

Wearable devices have potential as support for mobility of elderly people. While interested, a large percent don't see themselves as needing it currently (Jung & Ludden 2019).

We used **dance and movement memories of everyday activities** (Dokumaci 2017) to explore an alternate narrative, looking to the **felt experience** for important **qualities in wearable technology design**.

The journey:

Attempting to recruit participants 50+, in particular with mobility restrictions in the summer in Stockholm.

Changing the workshops to be open to anyone 20+.
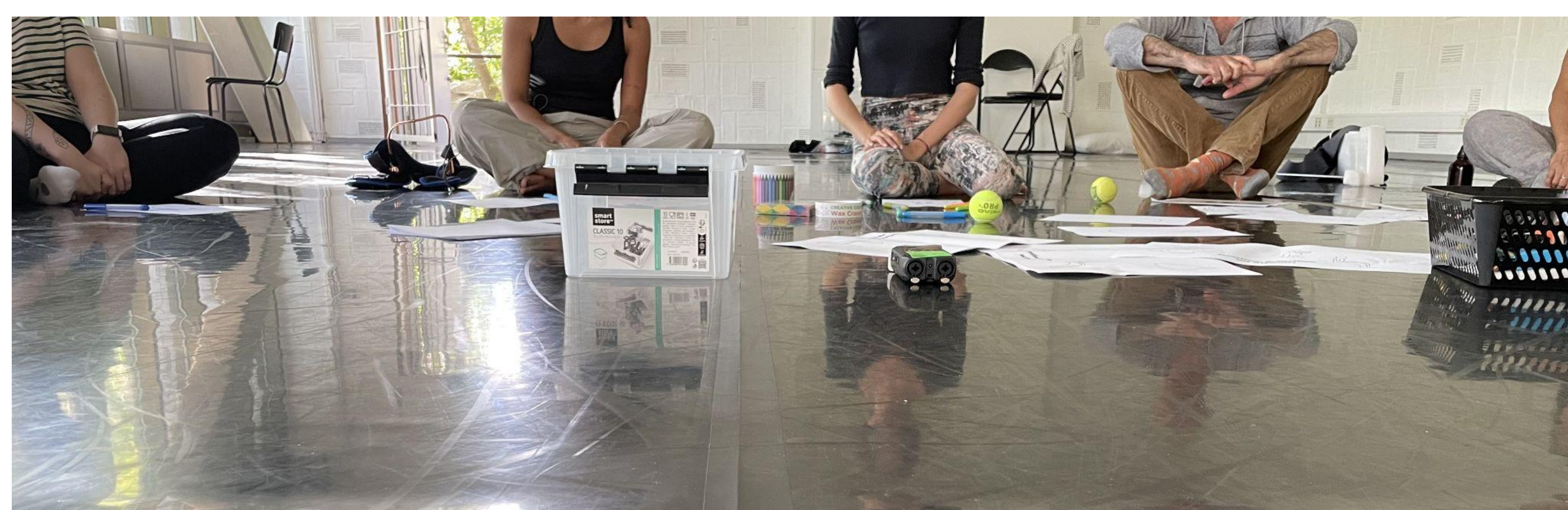
Warm-up:	Workshop 1: Memories of Moving	Workshop 2: My Body/Not My Body	Workshop 3: Playful Opposition
Brushing	Favorite Walk (change the quality)	Clay (paired activity)	Strings and Tension (paired activity)
Body Scan	Mundane Task (use another body part)	Co-exploring low-fi wearables	Counterbalance (with wearables)
Giants	Recovering from Injury (connection strings)	Sharing key movements	Pouring Water (with wearables)
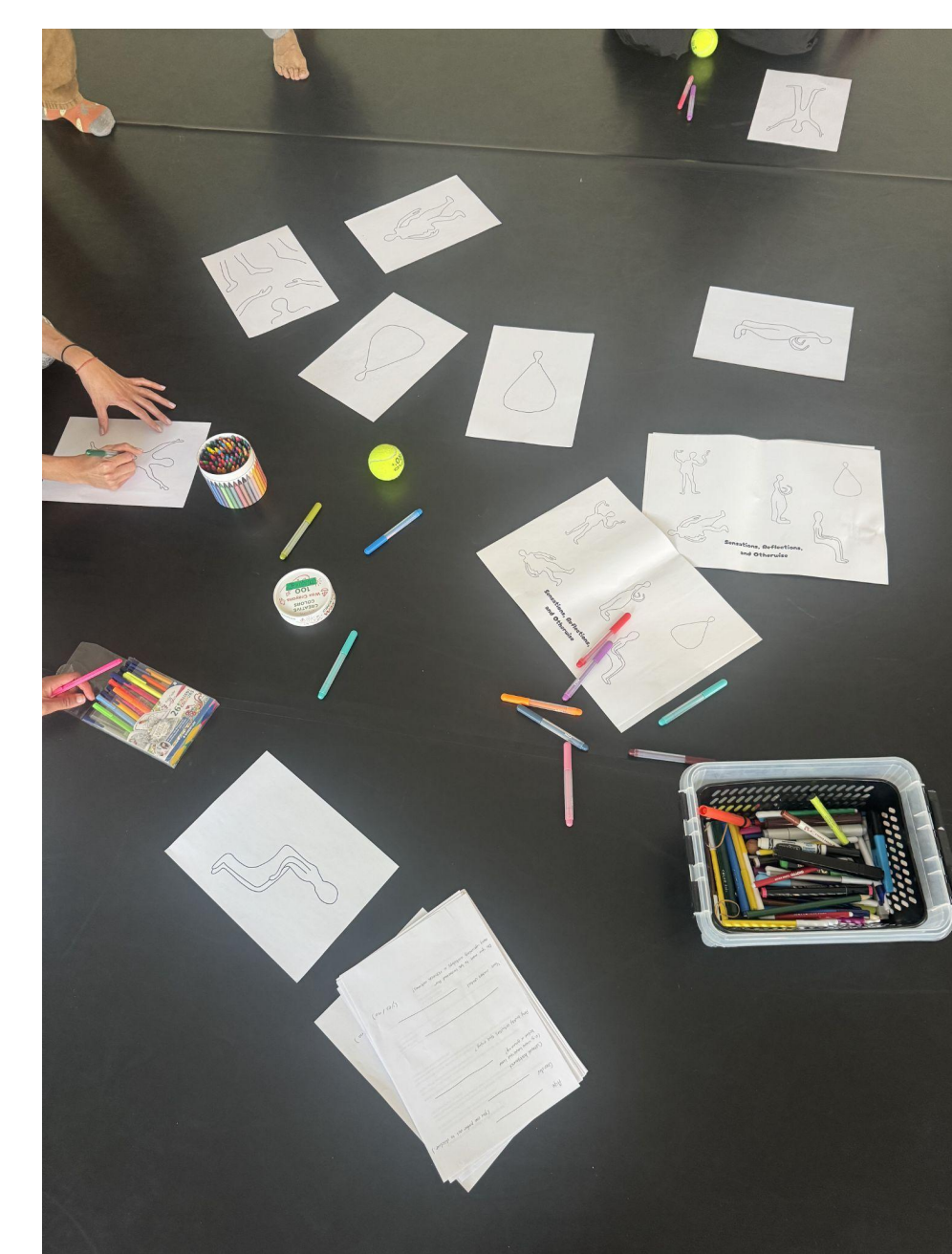
What came out of it:

- **Vibration** feedback blended more into the background
- **Weight** facilitated awareness of the area it was worn as well as body centerline and balance
- **Hugging sensations** and **weight** gave a sensation of comfort and support
- **Sound** has a potential to inspire playfulness
- Light elastic **tension** makes certain actions easier, while also preserving agency
- **Tension** is not enough to show intent
- When people interacted with each other the main focus was a careful treatment of the **shared space**, making **dynamic decisions** about movement based on the felt context → Thus there is potential in making wearable tech that changes the type/amount of interaction based on the situation or activity of the wearer
- A realization that what creative practice and people need is at odds with the systemic research agenda

References:

Dokumaci, A. (2017). Vital affordances, occupying niches: an ecological approach to disability and performance. Research in Drama Education: The Journal of Applied Theatre and Performance, 22(3), 393–412. https://doi.org/10.1080/13569783.2017.1326808

Jung, M. M., & Ludden, G. D. (2019). What do older adults and clinicians think about traditional mobility aids and exoskeleton technology?. ACM Transactions on Human-Robot Interaction (THRI), 8(2), 1-17.

Shew, A. (2020). Ableism, technoableism, and future AI. IEEE Technology and Society Magazine, 39(1), 40-85.