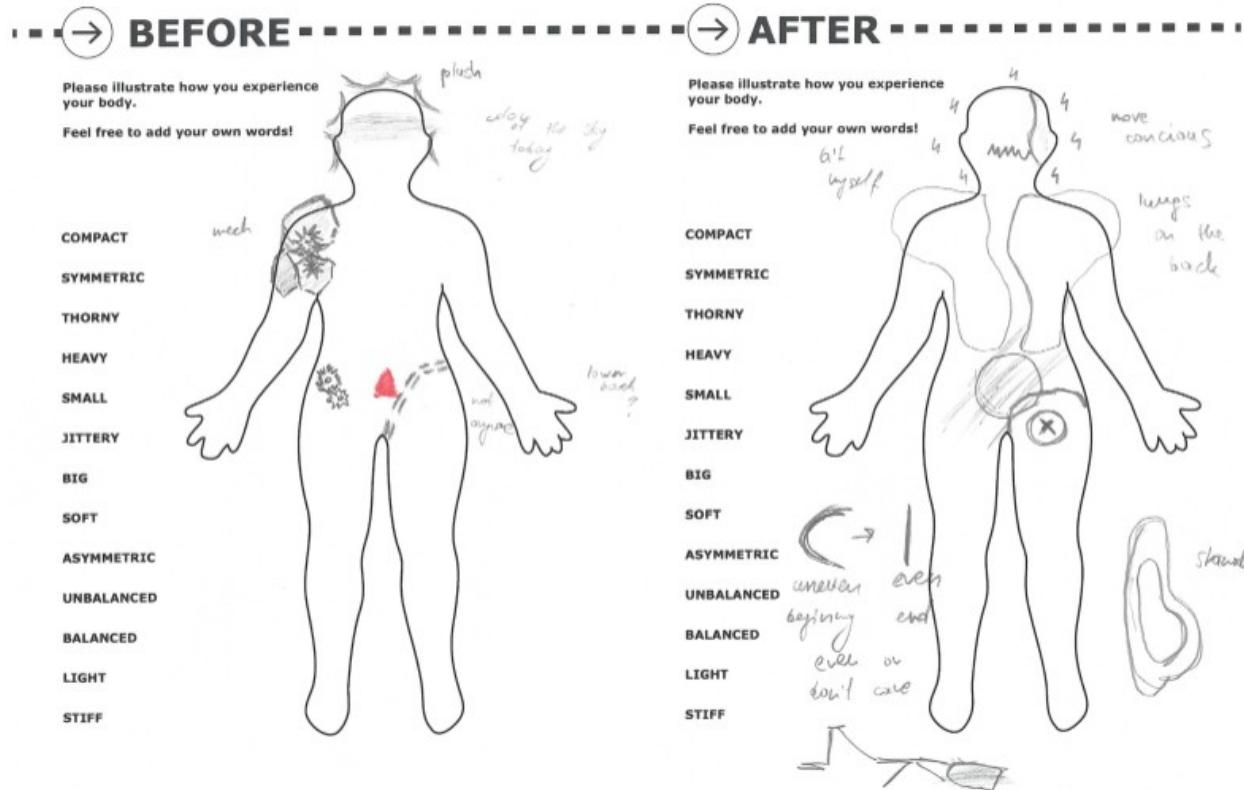


## Soma Bits

**Description:** Soma Bits was an exploratory project, which culminated into construction of a design toolkit for facilitating soma design activities with the units expressing different types of actuation. The design process started with doing various physical activities, which were considered to be beneficial for affective well-being (Feldenkrais, slow walks in the forest), as well as the evocative physical activities (trampoline jumping, inversion therapy) and the ones, in which we saw the potential for interpersonal interaction (Contact Improv). Engaging with these physical activities allowed to increase somatic awareness of the research team, as well as to select three experiential design qualities (out of numerous less relevant) associated with affective well-being: feeling connected, feeling embraced, being in a correspondence relationship with someone else. The qualities were encapsulated in Soma Bits, combining the technical artifact — heat, vibration, shape-changing actuator with tangible plush shapes. The Soma Bits allow to achieve the extracted design qualities, but in an easy-to-use and compact form. Several iterations of the bits have been developed, improving on functionality, robustness and usability.



*Participating in Contact Improv session*



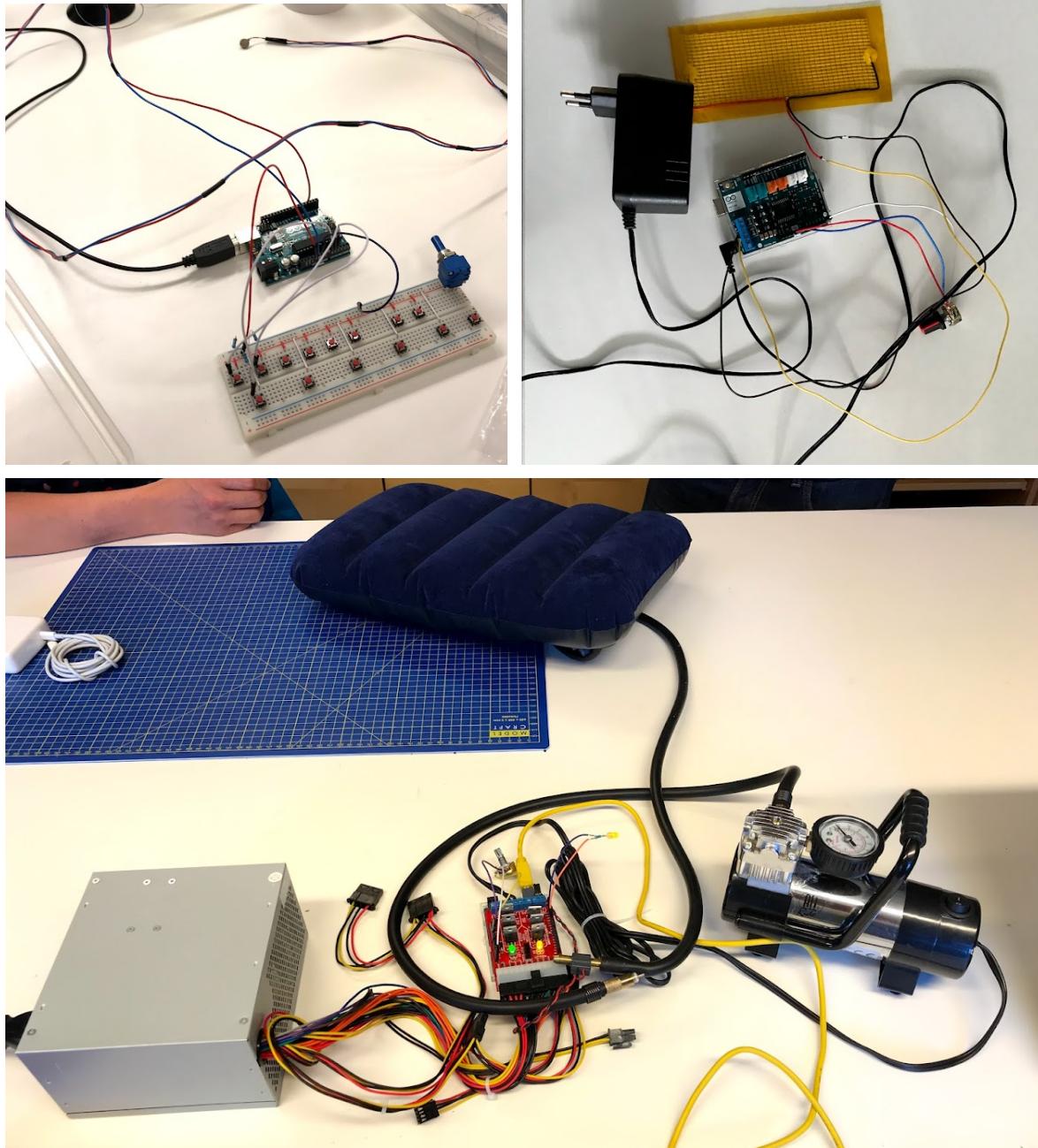
*Body maps before / after doing Feldenkrais exercises*



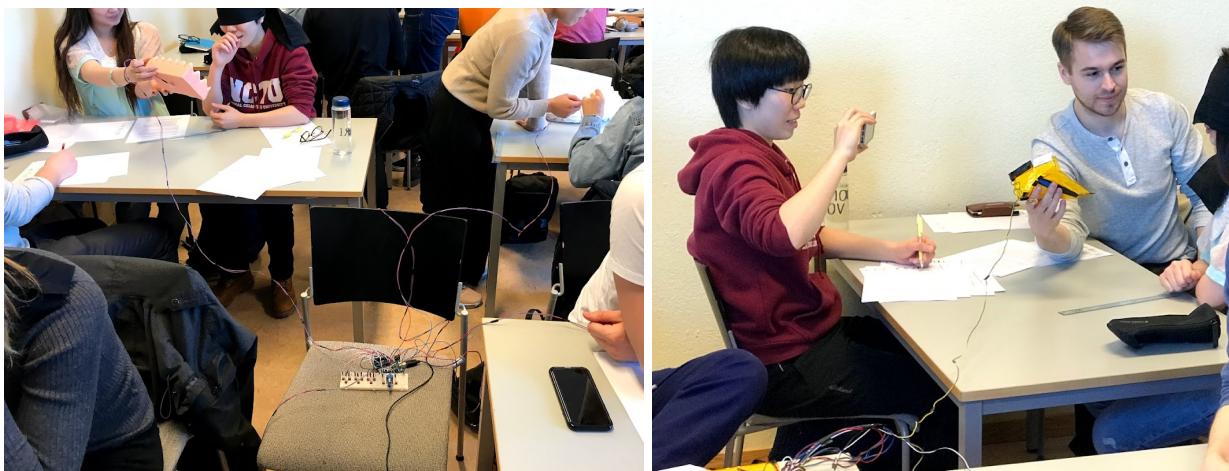
*Slow walking in the forest*



**Transferring / mapping discovered qualities to non-interactive materials**



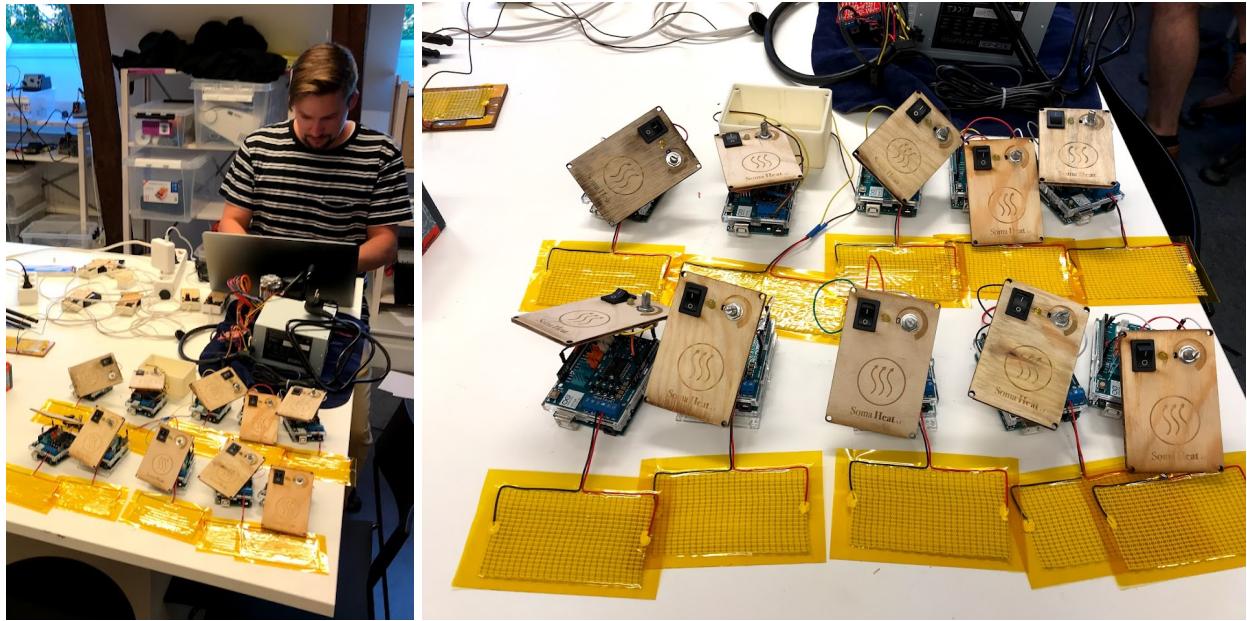
***First prototypes of vibration, heat and shape-changing actuators***



*Testing first prototypes of vibration and heat actuators*



*Testing first prototypes of shape-changing actuator*



**First iteration of Soma Bits design toolkit**



**Second iteration of Soma Bits design toolkit**

**Methods Used:** Embodied sketching such as bodystorming, body maps, prototyping (low to high fidelity), user testing.

**Technology Used:** Arduino

**My Role:** I participated in group design work and concept development, and later developed several iterations of Soma Bits' hardware and firmware; participated in several user tests for further design re-iterations.

**Publication:** Charles Windlin, Anna Ståhl, Pedro Sanches, Vasiliki Tsaknaki, Pavel Karpashevich, Madeline Balaam, and Kristina Höök. 2019. Soma Bits: Mediating technology to orchestrate bodily experiences. RTD Conference (RTD'19)