

CONCEPT DRIVEN INTERACTION DESIGN RESEARCH

FRAMING RESEARCH-THROUGH-DESIGN

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Today

- Framing Current IxD Research
 - Fundamentals
 - The emerging Mess: types research in IxD
- Concept Driven IxD
- An example
- Exercise

Some Fundamentals

What is the difference between

Qualitative Research and

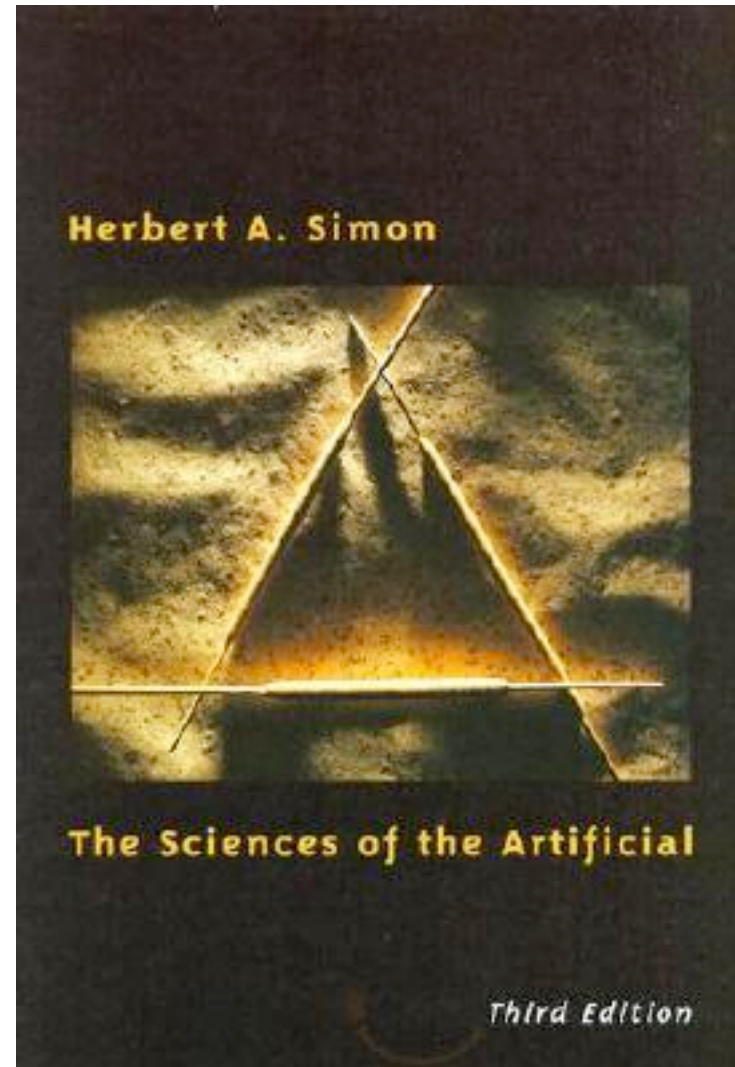
Research-through-design?

Some Fundamentals

- A change perspective
- Design as a reflective practice
- Knowledge produced through the *creation of artifacts*

Change Perspective

Design as moving the present
state / situation to
desirable states / situations



Design as a Reflective Practice

- Frame experiments
- Conversation with the materials
- Back-talk from the situation

The Reflective Practitioner

*How Professionals
Think in Action*

Donald A. Schön

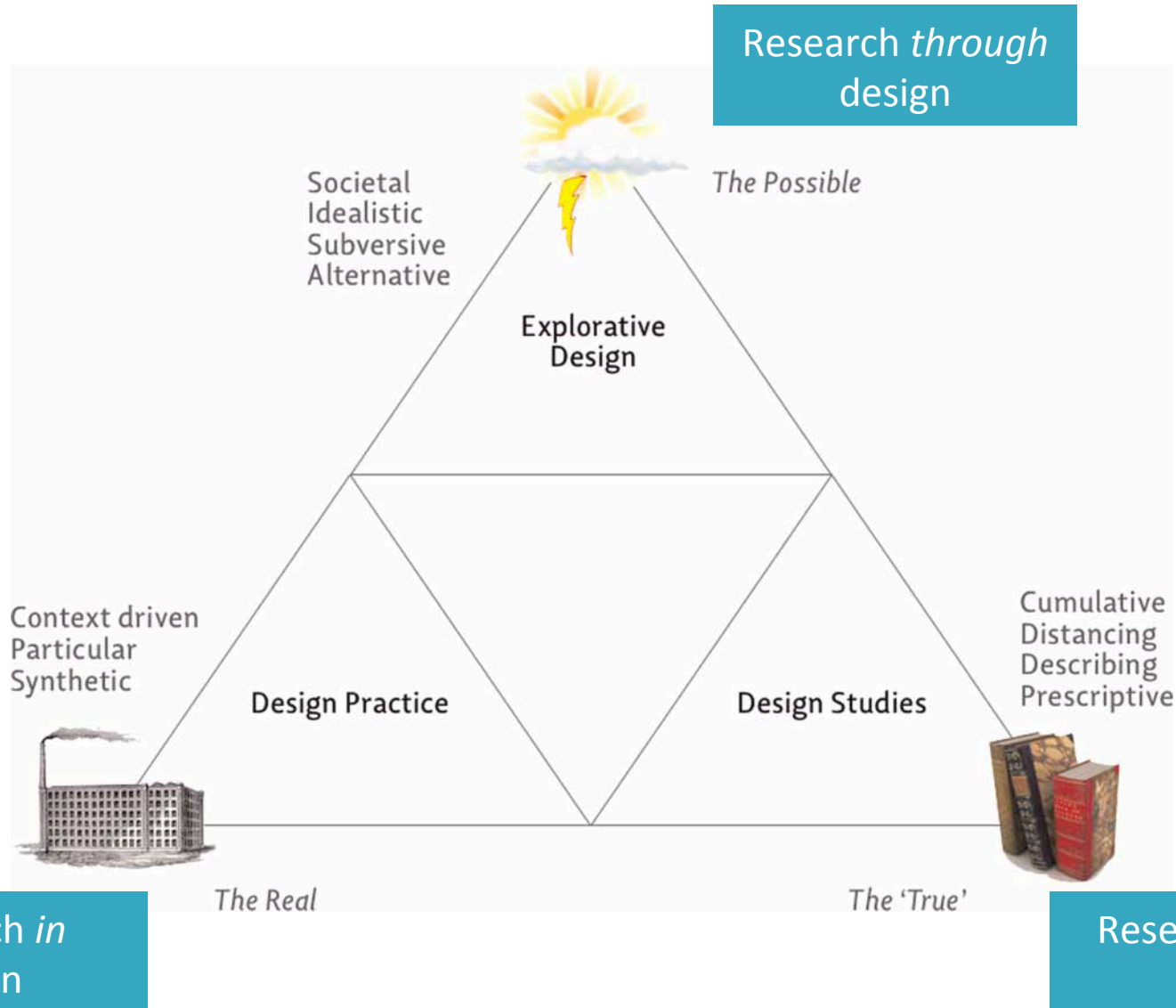
Creation of Artifacts

- Sketching as exploring the space of possibilities
- Artifacts as holders of knowledge
 - Of experience
 - Of aesthetics

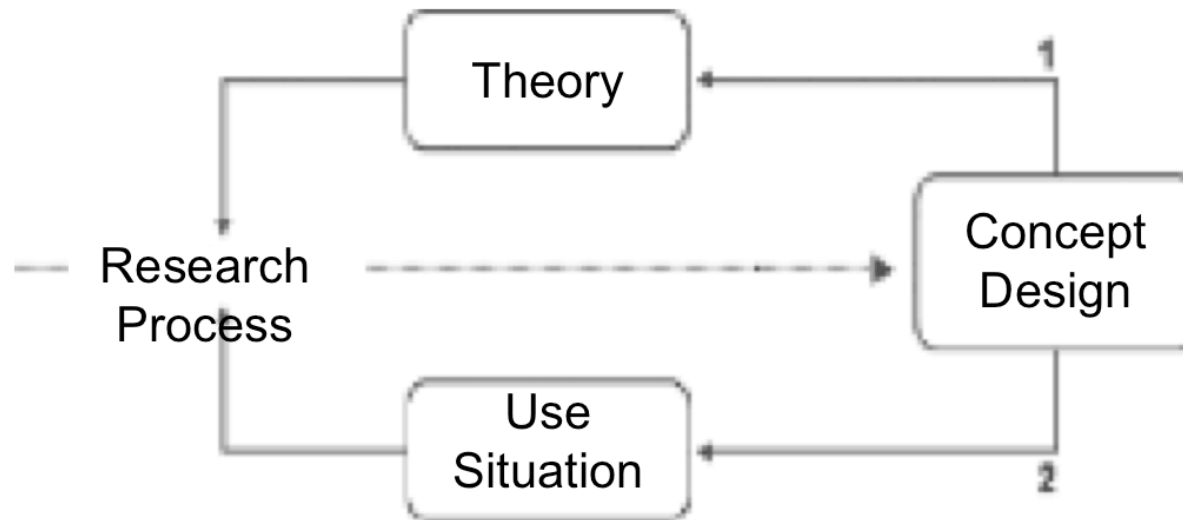
The Mess

- Research *through* design, *about* design, *in* design
 - (Frayling, C. *Practice-Based Doctorates in the Creative and Performing Arts and Design*, Council for Graduate Education/CEDAR University of Warwick, U.K., 1997.)
- The Interaction Design Research Triangle
 - (Fallman, D. 2008. The Interaction Design Research Triangle of Design Practice, Design Studies, and Design Exploration, *Design Issues*, vol. 24, No.3, pp. 4-18. DOI= 10.1162/desi.2008.24.3.4, 2008)
- *Situation Driven* Research / *Concept Driven* Research
 - (Stolterman, E. & Wiberg, M., 2010. Concept-Driven Interaction Design Research. *Human-Computer Interaction*, 25(2), pp.95-118.)

Ways to Sort the Mess



Ways to Sort the Mess

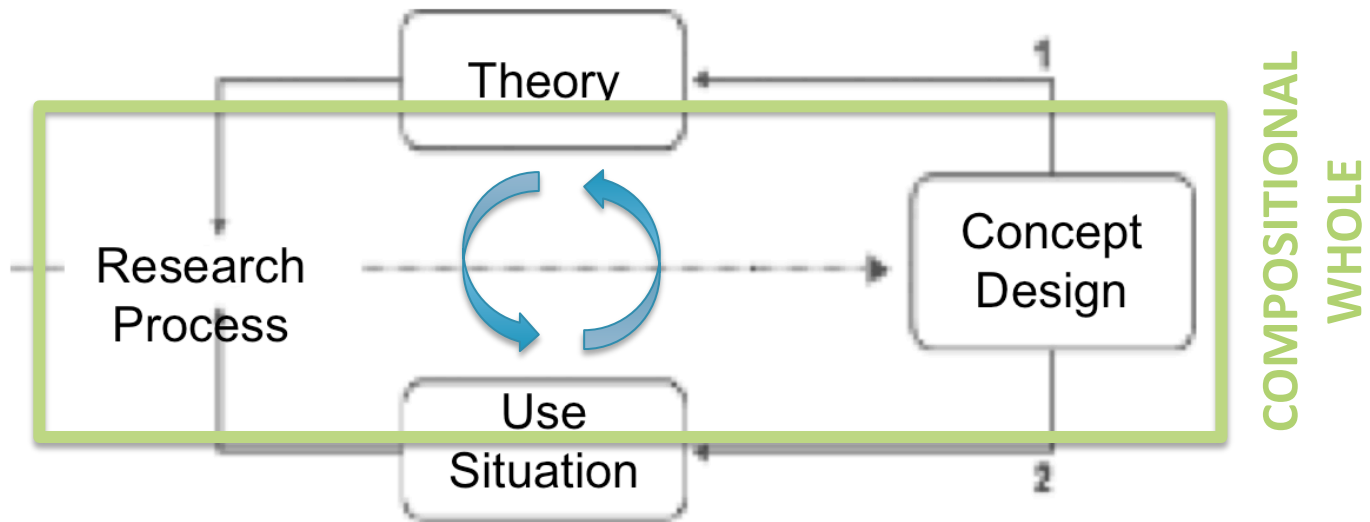


EXPLORING THE MAGIC-MIRROR-SPIRAL

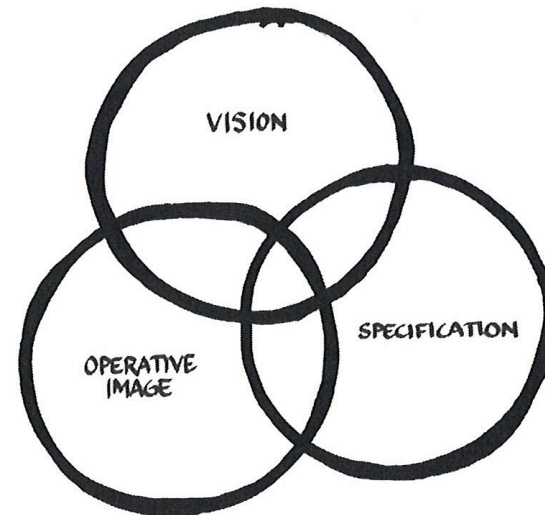
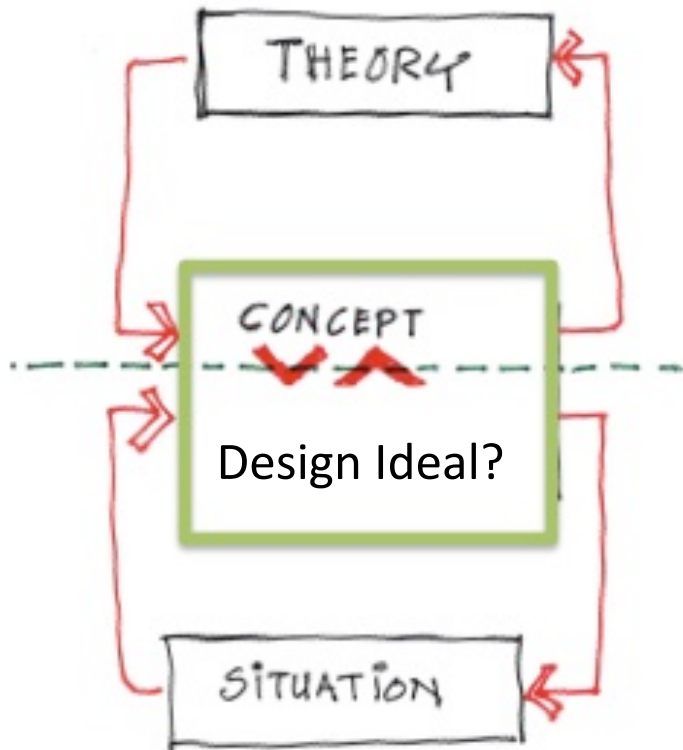
ROLE OF 'DESIGN IDEAL' IN INTERACTION DESIGN RESEARCH PROJECTS

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Concept-Driven IxD Research



Introducing the Design Ideal



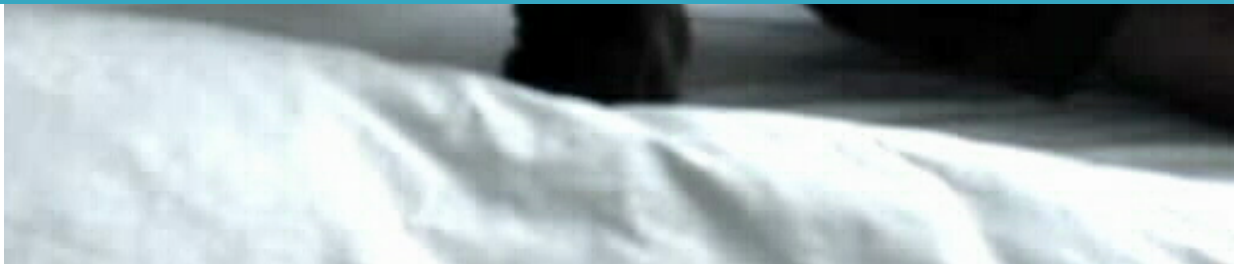
Design Vision

Background: Inspiration



Concept: Embodied Self-Monitoring.

- Embodied Interaction – Phenomenological theory about interaction
- Role of self-monitoring in physiotherapy



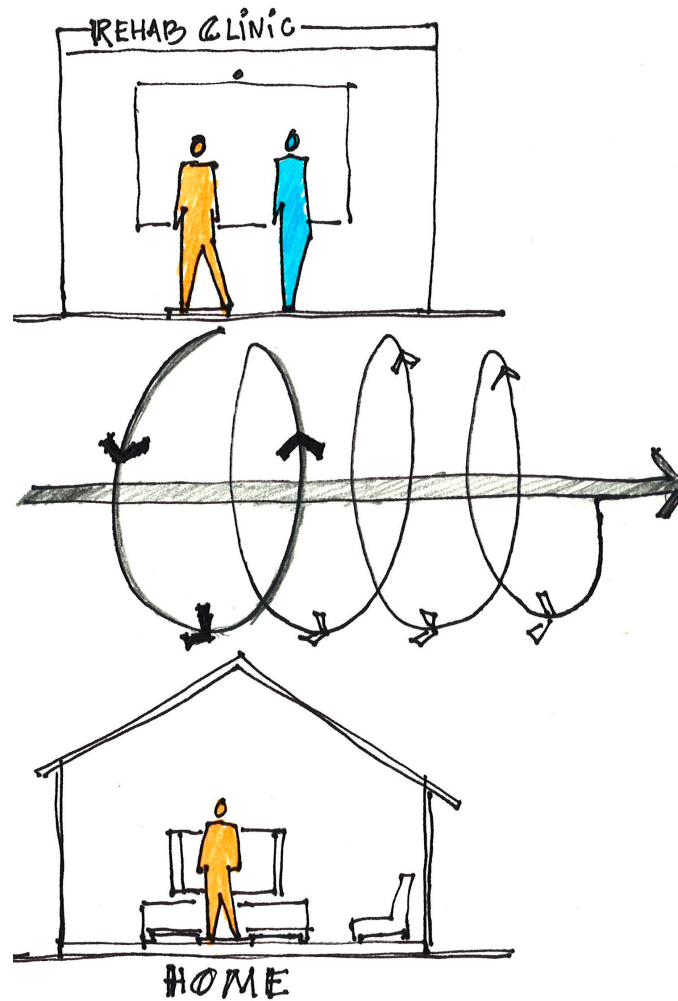
Background: Inspiration 2



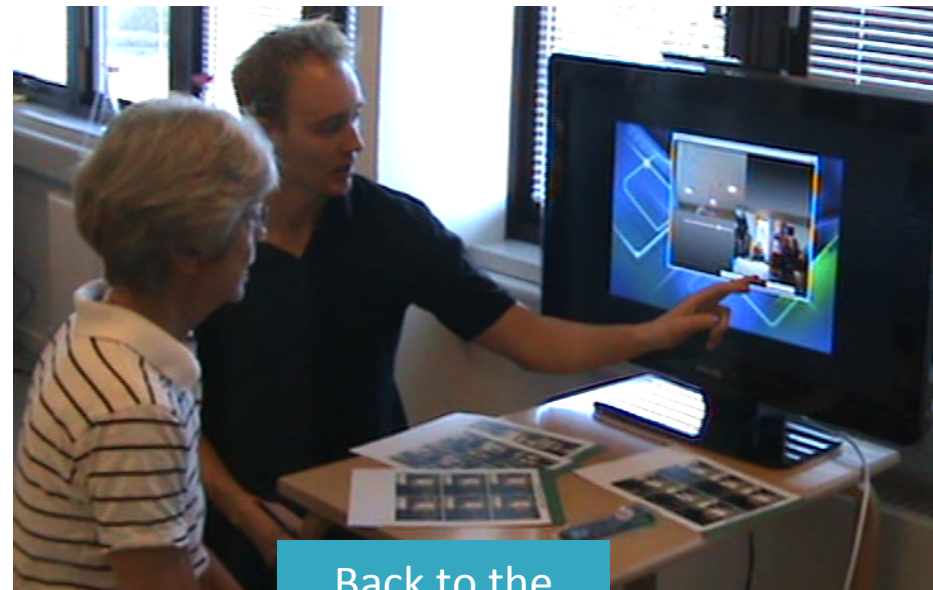
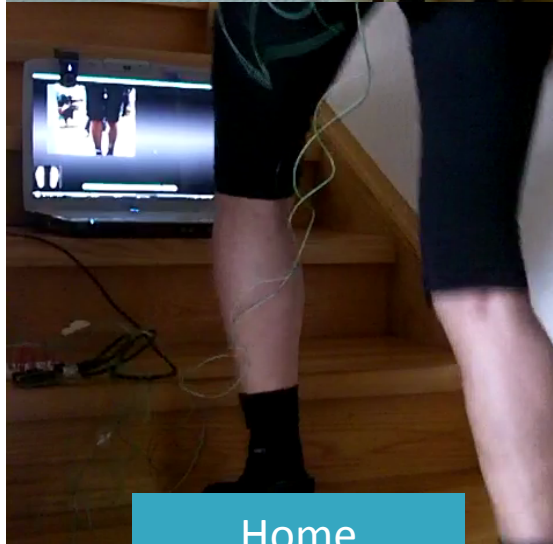
Entering a Design Situation

- Initial Understanding of Self-Monitoring as:
 - Feedback while exercising,
 - Look at embodied-self as an 'idol' / 'ideal',
 - Recorded self-monitored data leads to increased awareness and engagement,
 - Consider the therapists need to have face-to-face meetings.
- Design Situation
 - Rehabilitation after Hip-Replacement surgery
 - Six-week therapy, with visits to the clinic twice a week

Design Ideal: Magic-Mirror-Spiral



Sketching and co-exploring the design space



The Rehab
Clinic

Home

Back to the
Rehab Clinic

A Designed Artifact: MyReDiary



Webcam to video record exercises

Overview of Daily activity

Quantitative data from the wearable sensors

Recorded Videos

Space for related Audio Notes, Picture annotations

E-Patch sensor

Pressure sensor in the shoes

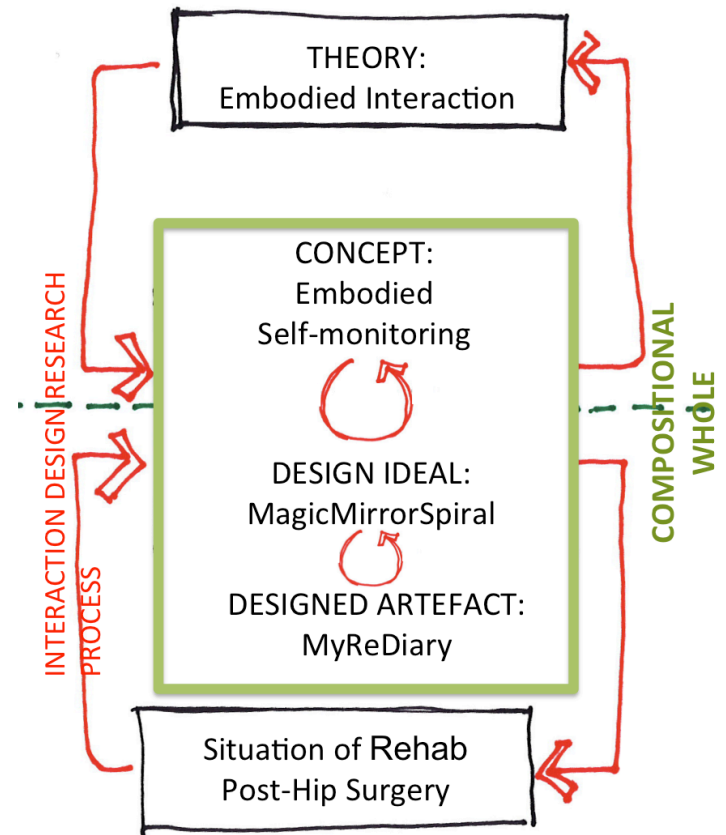


Designed Artifact: MyReDiary

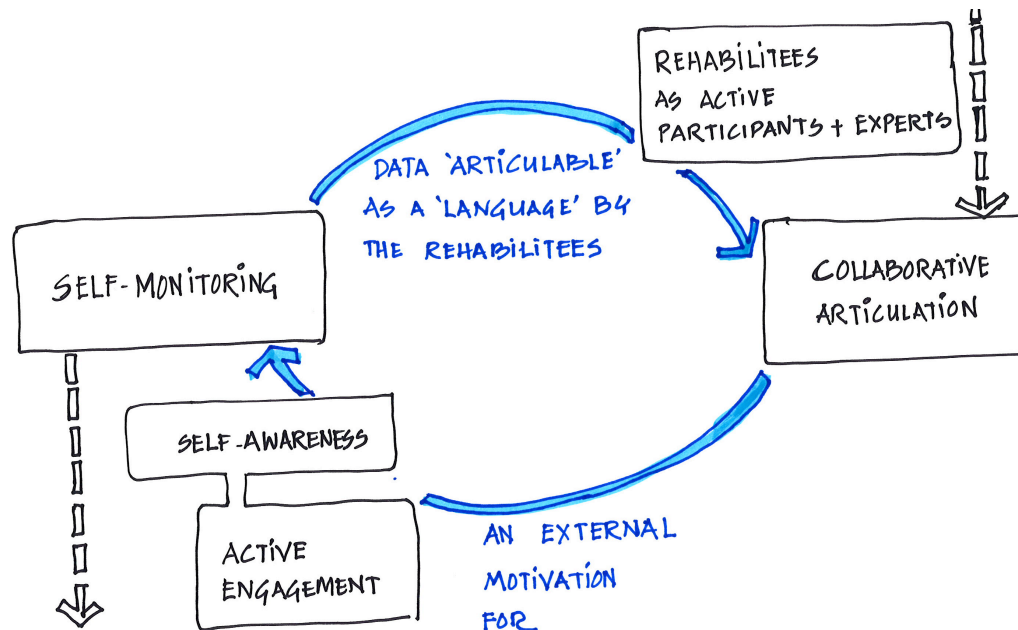
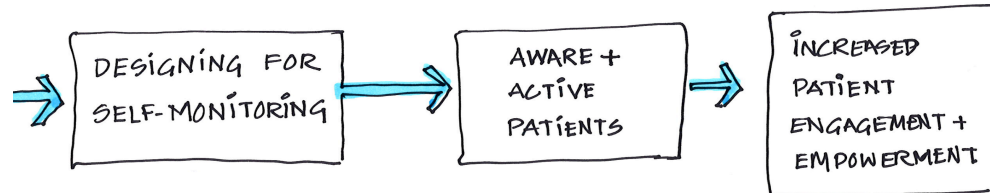


Design Ideal as an interface: MagicMirror as Example Exploration

- Advancing the concept: theorizing
 - Articulation of Embodied Self-monitoring: Immediate + reflective + mobile + situated
 - Pointing to ways that digital tech. can be designed for Emb. SM.
- Advancing the situation
 - Pointing to ways that digital tech. can support the rehabilitees to share their SM data to Collaborate
 - Giving concrete design solutions for funding application



Theoretical Concept: Embodied Self-Monitoring



Summarizing Concept-Driven IxD

- Driven by expanding the range of theory
 - Formulated in the form of a theoretical concept
- Designing as making manifestations of the concept
 - Exploring the possibilities of facilitating the concept in different design situations
- Reflecting on the explorations with the aim of theorizing
 - Not to model a theory
 - Expanding the 'range' by providing examples of possibilities

Question-time

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Exercise statement

Discuss the differences, if any, between the research approaches of a situation driven and a concept driven IxD.

Use examples of relevant research work to make your arguments.