Talking (to) Things

An investigation of voice assistants and their
conversational aspect in the context of
inclusion and lifeworlds

Adrian Demleitner, BFH HKB Master Design Colloquium 3, November 2021

Introduction

— Development since colloquium 2

— Discussion of research proposal

- 2.1 Current state of research in the research area

- 2.2 Status of own research

- 2.3 Objectives, data and methods

- 2.5 Relevance of the research

- Funding

Changes in approach and focus

Changes in approach and focus

Until colloquium 2

— Ecological perspective on electronic media

— Animism as a way of relating to things

— Focus on voice assistants within entertainment industry

Changes in approach and focus

After the feedback from colloquium 2

— (Social) relevance?

— Voice assistants in therapeutical settings?

  • Maybe not...

— Voice assistants as assistive technologies!

Changes in approach and focus

Additional research

— Prototyping

— Even more literature review

- Human Computer Interaction for people with disabilities

- Design and inclusion

— Interviews

- Voice assistants as interface to lifeworlds

- Focus on people with disabilities

Changes in approach and focus

Interviews

— Head of technological project at SBV

— Acquaintance with tetraplegia after accident

— Former Superflux designer with critical view on voice assistants

Changes in approach and focus

Final form

— ~~Animism~~

— Relationality, ontological design and postphenomenology

— Voice assistants as assistive technologies
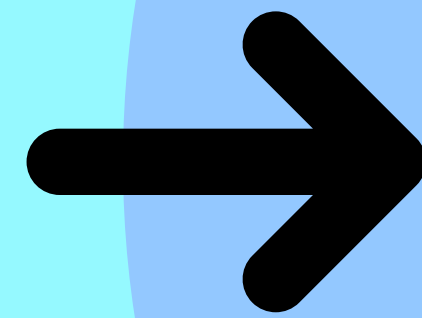 (Amazon Echo, Siri, Google Home)

Research Proposal

2.1

Current state of research in the research area
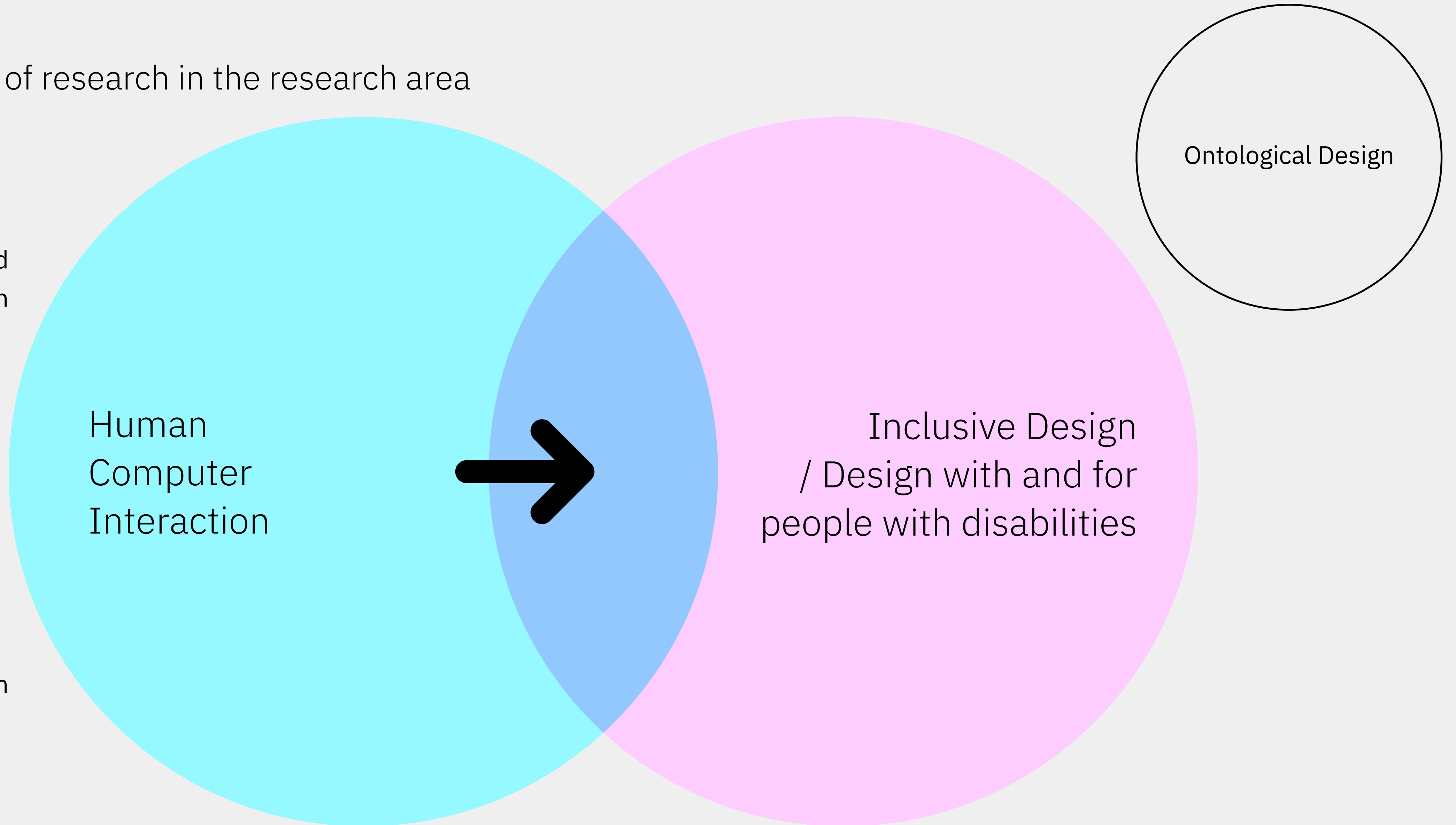
User-Experience and
Interaction Design

Conversation Design

Ontological Design

Human
Computer
Interaction
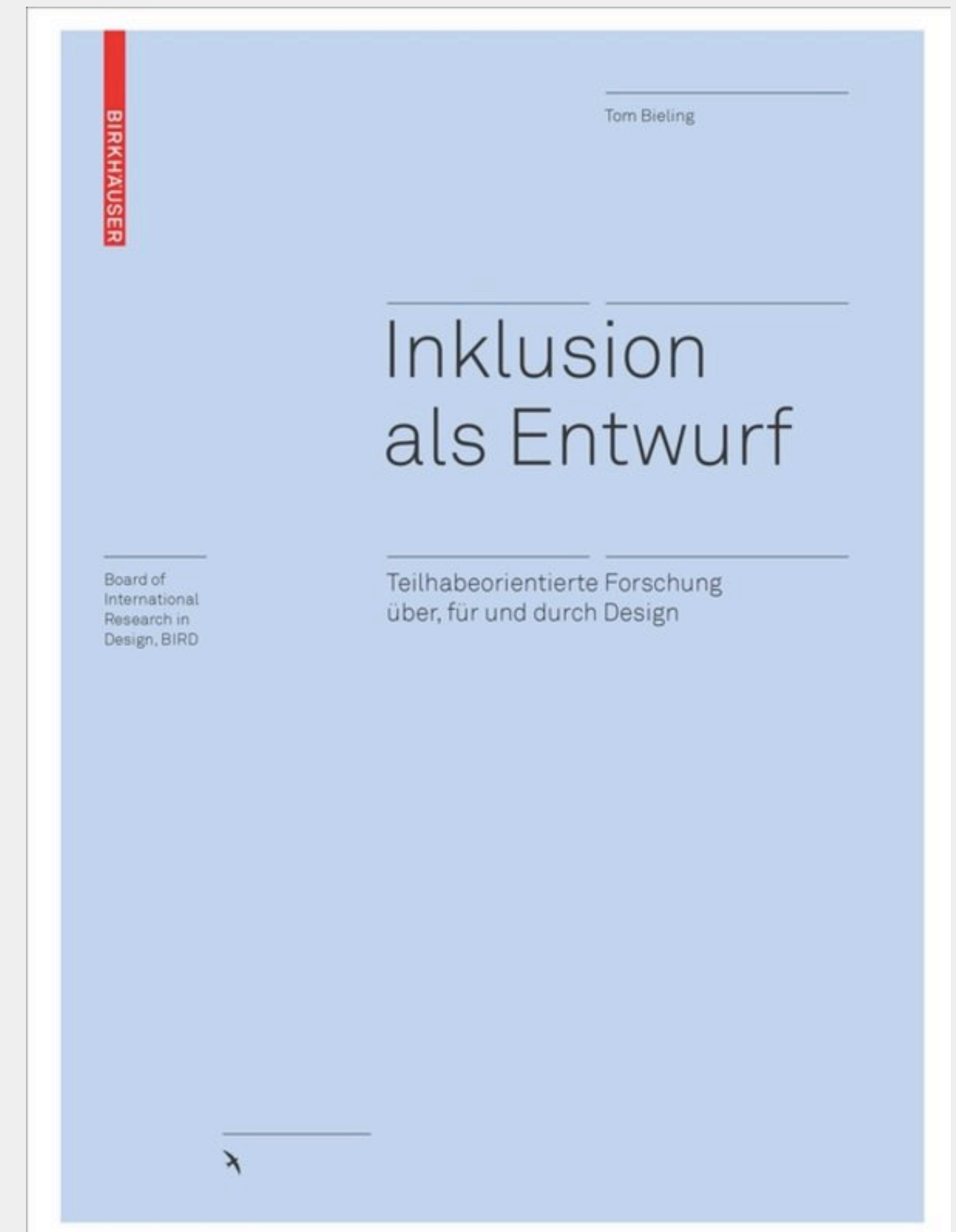
→

Inclusive Design
/ Design with and for
people with disabilities

2.1

Starting point and basis for the planned investigation

— Established within
medical information studies

— VA-PEPR at HSLU
(What are VAs actually doing to us)

— Design Justice
(Nothing about us without us)

— Inklusion als Entwurf, Tom Bieling
(Design as the border area between inclusion and exclusion)

2.1

Where and why is there a need for research

User Experience Design

Ontological design of assistive voice assistants

Medical Information Technologies

2.2
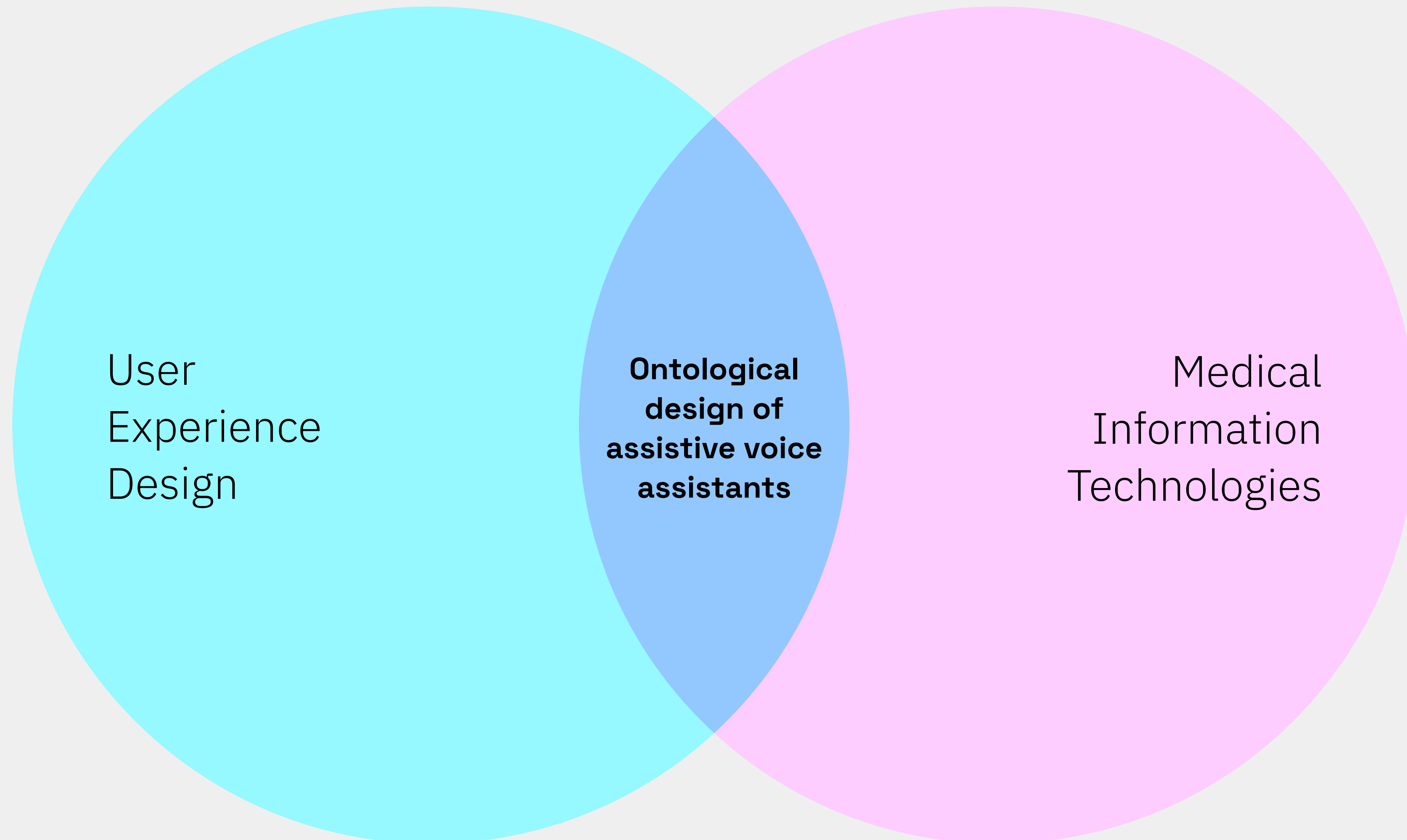
Status of own research

— Manufacturers have a limited view on user experience

— From within ontological design and postphenomenology

— Deep reading user experience through thematic analysis

— Unique perspective from design/technology

2.3

Objectives, data and methods - Hypotheses and assumptions

— Voice assistive technologies as workarounds
  to access lifeworlds and content designed for
  abled-bodied and neuro-typical people

— Voice assistants could be disability-first interfaces
  but the current research doesn't trickle down

"How must voice assistants and the interaction with them be designed so that these technologies become a disability-first interface for people with visual or mobility impairments?"

2.3

Objectives, data and methods - Concrete objectives

— Scientific dissemination

— Low-threshold guide about inclusive design of voice assistants

- Designers and developers of voice assistants

- Disability advocates and consultancies

— Includes code, blueprints and tutorials

2.4

Timetable and milestones

— Phase 1 - Literature study; 6 months

— Phase 2 - Qualitative evaluation and needs analysis; 6 months

— Phase 3 - Workshop series / focus group / prototyping; 12 months

— Phase 4 - Evaluation and finalisation; 6 months

— Phase 5 - Publication; 6 months

— Scientific relevance

- bridging HCI, design research and disability studies

- expanding ontological design into
  pragmatic applications

— Social relevance

- existential applications of voice assistants
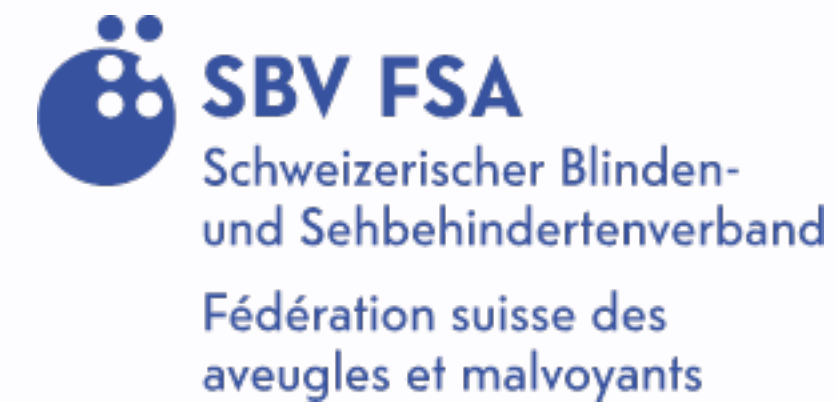
- curb cut effect

Budget and funding

SNF and Alternatives

— Make Sense PhD program in Basel/Linz

— Technology-partners like

- i.E. SBV, CARU

— Call for projects or residencies

- i. E. FRH Innovation Booster

Q&A

~~"Accessibility Came by Accident"~~

— Improve the design of voice assistants
  for people with disabilities

— Research the ontological design of voice assistants

Pradhan, A., Mehta, K., & Findlater, L. (2018). 'Accessibility Came by Accident': Use of Voice-Controlled Intelligent Personal Assistants by People with Disabilities. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems* (pp. 1–13). Association for Computing Machinery. https://doi.org/10.1145/3173574.3174033

Voice assistants vs. voice assistive tech

— Voice assistants as assistive technologies
(Amazon Echo, Siri, Google Home)

— ... vs. voice assistive technologies
(Dragon Speech Recognition)