Processes of Reminding and Requesting in Supporting People with Special Needs: Human Practices as Basis for Modeling a Virtual Assistant?

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1. Project Background

- **Virtual assistant as a daily companion** for people with mild cognitive impairments and dementia
  

- **Interactional Linguistics**: Modeling of interactional procedures and strategies, focus on multi-modal interaction, practices of everyday life and influence of technology, ethical implications of human-machine-interaction

1. Time Management, Reminding & Requesting

- Research on individual forms of **assistance and autonomy** in supported living provided by support networks
  
  [Cyra et al. (2016)]

- Multi-modal forms of **reminders essential to keep up** important tasks and **everyday routines**
  
  [McGee-Lennon et al. (2011), Cyra et al. (2016)]

- Verbal modeling of reminders as requests: idea of **‘simple’ reminders**
  
  [Wunderlich (1984)]

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1. Research questions

A. How can we describe the activity of reminding and the actual requests in every day practice be described?

B. How are reminders established in a meaningful way, so that their intent and consequences are understood and followed by meaningful activities?

C. (How) Could the reminding and requesting practices be implemented into an assistive technology and how could an ECA as a daily-assistant be integrated into the social and institutional network that encompasses people with special needs?

2. Method & Data

• Data collection: **Focused ethnographic research** in an institution for supported living

• Data analysis of video data based on **Conversation Analysis**

• Understand and reconstruct **micro-sequential processes of interactions**, the process of reminding and the interaction order

3. Reminding as a process

Coordination by an assistive and institutional network

Case Study 1

Successive Reminders

Case Study 2

Acute Reminder

3. Case Study 1: Personal Successive Reminders

- Conversational practices provide **security, planning certainty** and **reliability** for the client —> social function

- Joint planning = the basis for **meaningful and transparent** establishment of upcoming reminders

- Individual information about appointment **context**, help to **anticipate** acute reminders

3. Case Study 1: Personal Successive Reminders

3. Case Study 2: Acute Reminder

- **Requests are contextualised** (no isolated requests/utterances, but embedded in a request context); impact of the participants’ knowledge about consequences and meaningful activities

- **Complex interplay of getting attention / securing contact** and applying a subtle reminder upgrade strategy

- The **reminder process** is **highly adaptive and flexible** and allows to react to changing circumstances within social situations based on close observation (or monitoring) practices.

3. Case Study 2: Acute Reminder

4. Implications for Assistive Technology

• **Reminding** = highly complex, adaptive and individual process in situated interaction

• **Verbal structures** and knowledge about *context* to produce meaningful reminders, provide security & reliability

• Exact **timing and multimodal monitoring** to accurately apply verbal strategies in dialogue-based interaction

• **Classification** of participant and attention status, differentiation of social interactions and context

4. Ethical Considerations

- Which **role and task(s)** should the virtual assistant have in the support network (social, organizational)?

- How can virtual assistants be **legitimized to request and provide meaningful reminders**?

- **System access** and **system transparency** to understand the origin/context of appointment entries

- Research for and with a **special user group** to tackle specific tasks and challenges on the basis of specific competences

Thank you for your attention!

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