

# At the intersection of context and intra-speaker variation: Virtual reality as an elicitation instrument in sociolinguistic and psycholinguistic research

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# Language as a “Complex Dynamic System”

The **Dynamic Turn** in SLA and sociolinguistics (de Bot 2015; Kretzschmar 2015)

Language is **not (meaningfully) separable** from (a) its inherent **social function** or (b) **agents/individuals** (Beckner et al. 2009; DeKeyser 1991; Sanz, 2014; Serafini 2017)

- E.g., ‘person-in-context relational’ view of L2 motivation (Ushioda 2009)
- E.g., ‘person-environment fit’ of learners’ L2 engagement (Reschly & Christenson 2012)

## Evolving methodologies

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1. Conceptualizing and operationalizing ‘context’?
2. Participant perspectives help identify aspects of context that seem salient to particular individuals
3. Focus on the interaction between learner and environment
4. Capture ‘adaptivity’ and changing systems within and across environments
5. Context-dependent **elicitation instruments**

## Overarching PhD project

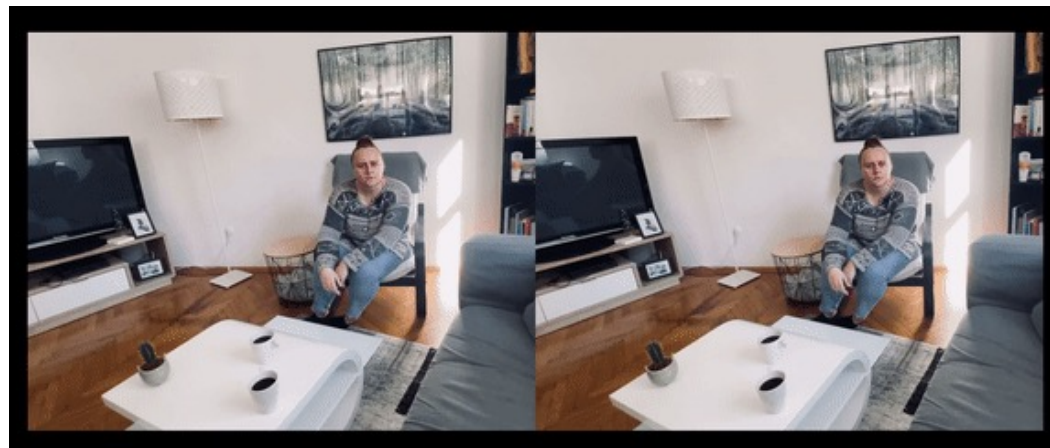
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### **Sociolinguistic competence in adult second language acquisition. Dynamics of linguistic, socioaffective and cognitive factors in sociolinguistic development**

RQ: What are the **linguistic, socioaffective and cognitive factors** that **predict the acquisition of sociolinguistic competence** in adult L2 German learners?

Supervisory team:  
**Andrea Ender**  
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**Simone Pfenninger**

# Combination of **discourse completion tasks (DCTs)** with **virtual reality** (idea introduced in Vanrell et al. 2018)



DCT can be **administered orally** and/or in writing

DCTs provide **background information** about the current **context** and information on the **social distance** between interlocutors (Kasper/Dahl 1991; Vanrell et al. 2018; Nurani 2009)

# **RQ1: What is the nature of the immersive environment provided by this virtual reality configuration?**

## 21 L2 German speakers

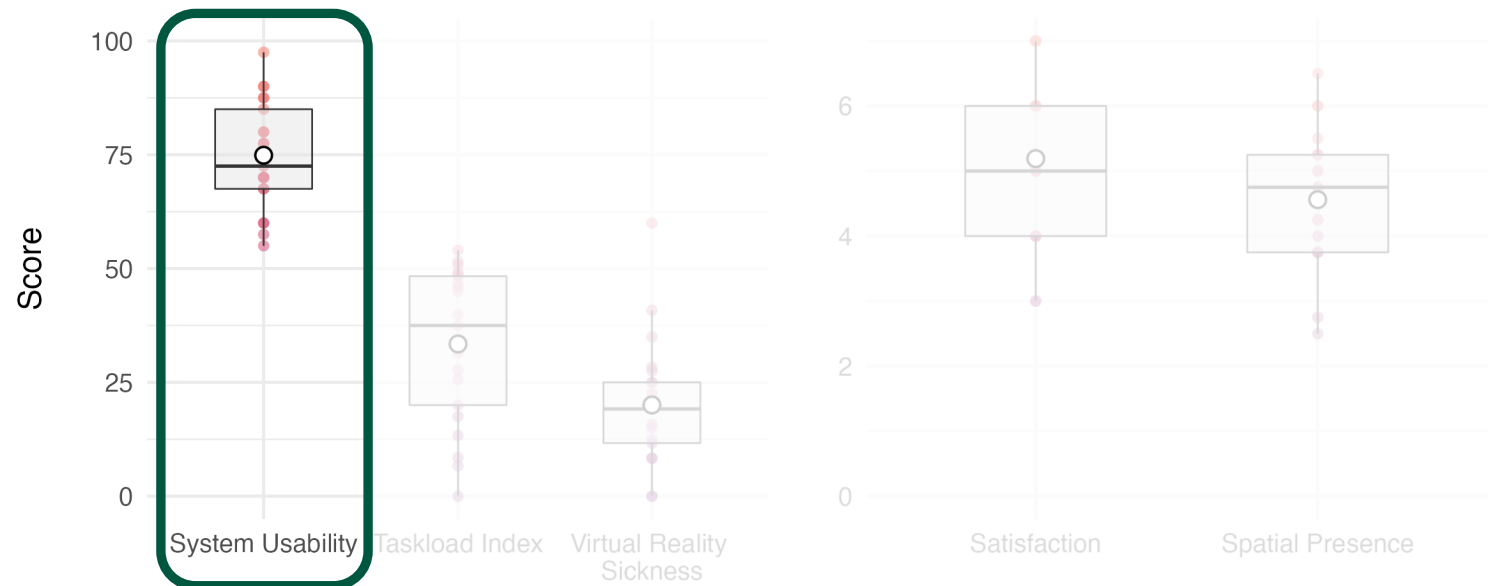
- L1 English
- Central Bavarian area (Salzburg/Upper Austria)
- Age:  $M = 30.3$ ;  $SD = 8.97$
- Length of residence:  $M = 3.81$ ;  $SD = 3.27$
- Highly educated
- Std. proficiency between A2–C1



## User experience: **System usability**

**System usability:** Ease of use of the instrument

- Higher = better
- System Usability Scale (Brooke 1996)



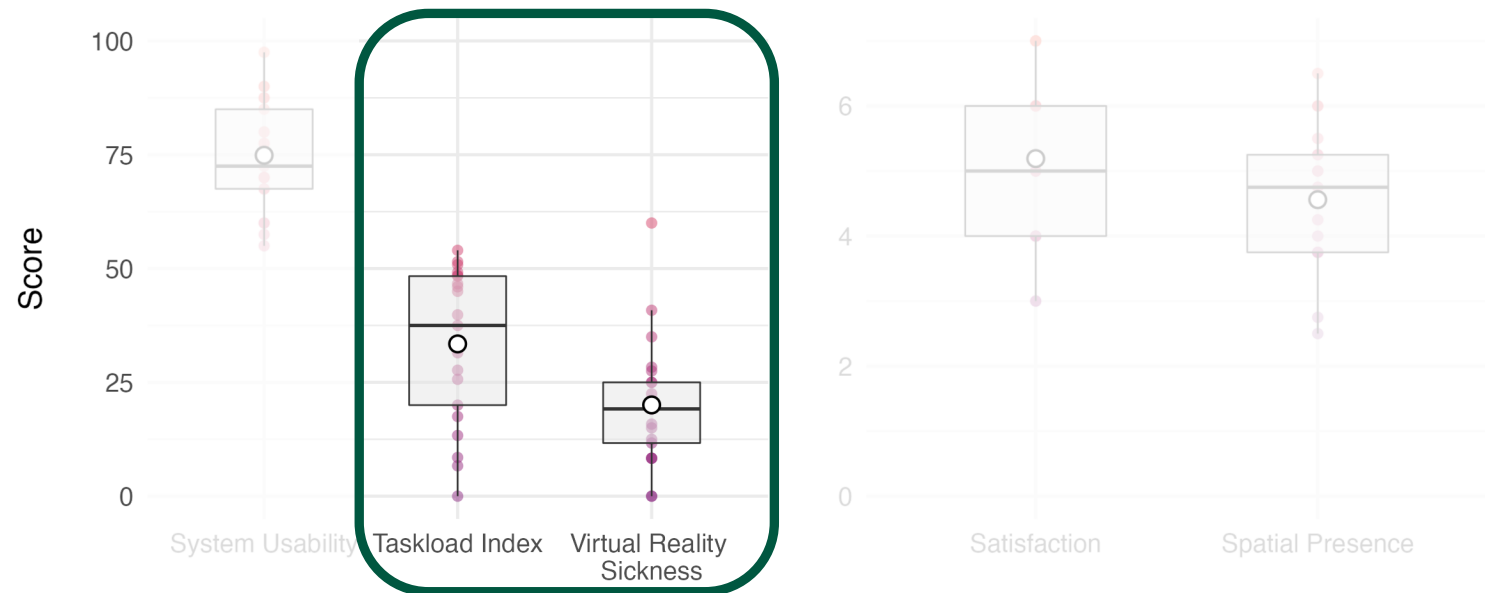
## User experience: Taskload index and VR sickness

**Taskload:** Physical and mental effort required for task

- Lower = better
- Task Load Index (Hart 2006)

**VR Sickness:** Oculomotor and disorientation symptoms

- Lower = better
- VR Sickness Questionnaire (Kim et al. 2018)



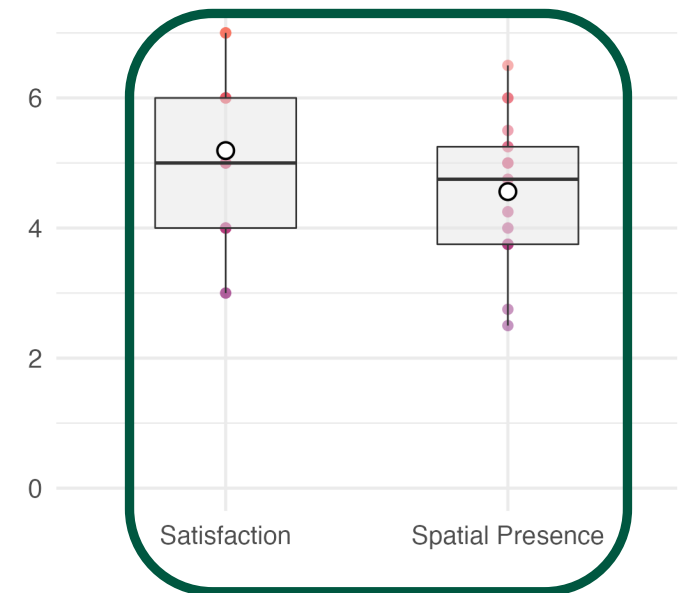
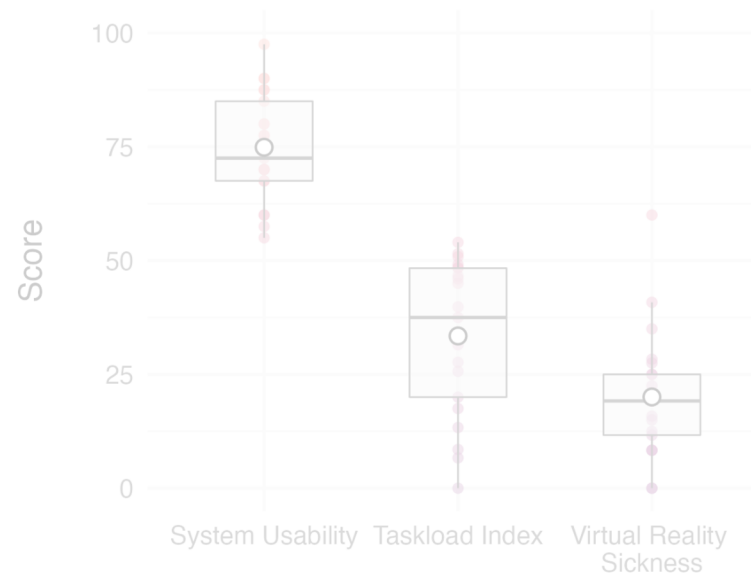
## User experience: Satisfaction and spatial presence

**Satisfaction:** Overall satisfaction with VR

- Higher = better
- Satisfaction item (Papachristos et al. 2017)

**Spatial presence:** Immersiveness regarding field of view/visual quality

- Higher = better
- Temple Presence Inventory (Lombard et al. 2009)



**RQ2: To what extent do L1 German speakers converge to the standard German and dialect variety of the VR interlocutor?**

**RQ3: To which aspects of the VR environment do the participants attribute the observed group-level patterns of varietal behavior?**

## Participants and analysis

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### 9 L1 German speakers

- Central Bavarian area in Austria
- $M = 25.8$  years (24–28),  $SD = 1.2$
- High standard German and dialect proficiency
- College education

### Equal-status concurrent mixed-methods design

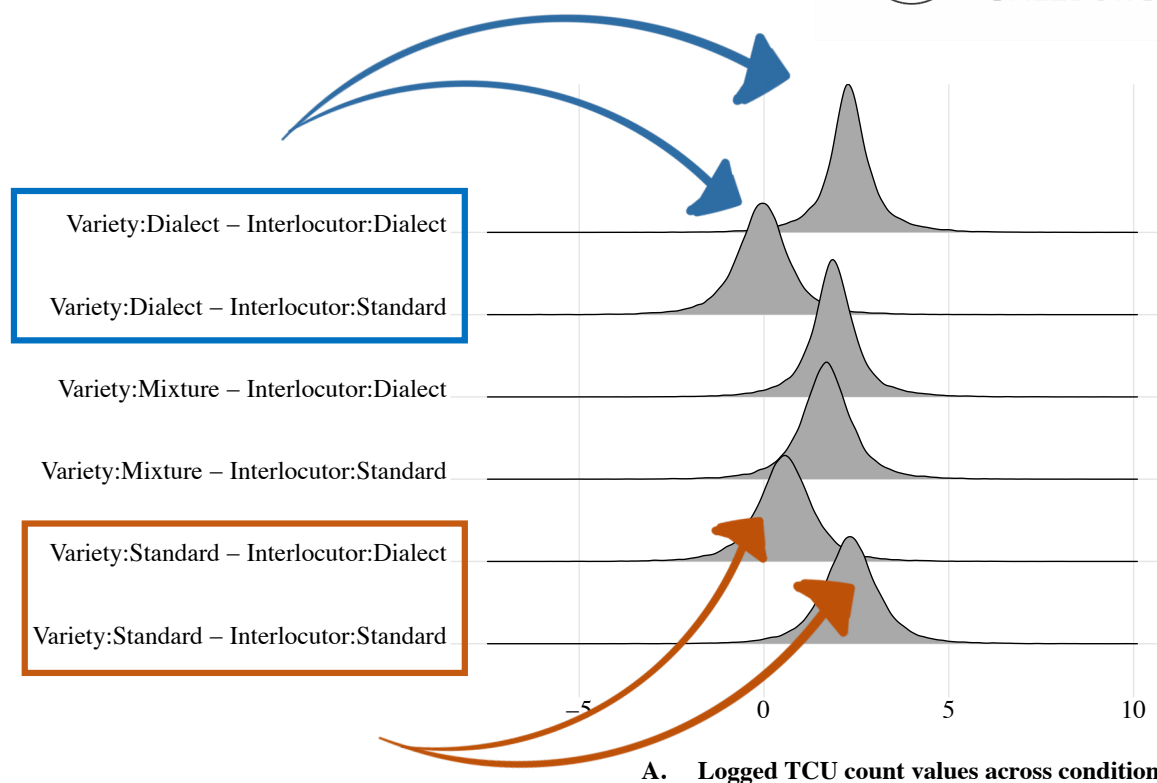
- Bayesian mixed-effects models (due to small sample size)
- Qualitative content analysis

## Group patterns of intra-speaker variation

Clear trends of convergence:

- **Dial. variety** reduced w/ std. interlocutor
- **Std. variety** increased w/ std. interlocutor

(Wirtz, under review)



## Qualitative content analysis

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Austrian speakers prefer dialect (Ender & Kaiser, 2009);  
participants not required to ‘change’ their everyday  
language w/ dialect speaker:

- “[W]hen I spoke dialect, it just came so naturally [in the VR]”  
(Lars, 01:37)
- “If the other person speaks a similar or a strong dialect, then  
you reflect that, because that’s the most convenient” (Leo, 01:15)

## Qualitative content analysis

Tendencies of **convergence** towards standard German variety were **socially motivated**:

- “Since [NAME] spoke standard German to me, I spoke back in standard German because I thought she would otherwise not understand me in dialect” (Lili, 01:35)
- “[I]f someone doesn’t [speak Austrian dialect], then you switch [to standard German] for better understandability, so more as a consideration for the counterpart [...].” (Leo 01:29)



## Moving forward

- Task-based elicitation methodology can **accommodate longitudinal designs** and provides a task primed to elicit and **capture learners' dynamically changing subsystems**
- New possibilities for exploring how **context-dependent IDs** and sub-components dynamically **interact with the external environment**
- Allows for analyses beyond CALF, i.e., a method to **investigate learners' developing socio-cultural and interactional skills** across realistic contexts

# Thank you for your interest!

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