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INVESTIGATING L2 FLUENCY

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L2 SPEECH FLUENCY

- An aspect of oral proficiency associated with smoothness and effortlessness (e.g., Chambers 1997)
 - Narrow sense of fluency / low-order fluency (Lennon 1990, 2000)
 - Distinct from complexity and accuracy (on the CAF-framework, see e.g., Housen, Kuiken & Vedder 2012)
- Three dimensions (e.g., Skehan 2009, 2014)
 - Speed
 - Pausing
 - Repair



THREE ASPECTS OF FLUENCY (SEGALOWITZ 2010)

1. Utterance fluency

- Corresponds to Lennon's narrow sense of fluency
- Fluency-related features of an utterance

2. Perceived fluency

- Listener's judgment of fluency, based on impressions created by features in a speech sample

3. Cognitive fluency

- Efficient cognitive processing (psycholinguistics)

→ Depends on your research question



CHALLENGES IN OPERATIONALIZING L2 (UTTERANCE) FLUENCY

- Studies mostly quantitative (e.g., Iwashita *et al.* 2008, De Jong *et al.* 2015)
- “[D]espite several decades of work, researchers have not discovered universally applicable, objective measures of oral fluency.” (Segalowitz 2010: 39)
 - Variation in the used measures
- Inferences made based on statistical significance, but not all fluency-related features are equally well suited for a quantitative examination
 - Speed and pauses obligatory elements, filled pauses and repair voluntary



UTTERANCE FLUENCY MEASURES

I. Speed / Temporal fluency

1. Speech rate (syllables per minute)
2. Articulation rate (syllables per minute of speaking time [excluding pauses])
3. Phonation-time ratio (proportion of speaking time of total duration)
4. Mean length of run (average number of syllables between silent pauses)

II. Pausing / Breakdown fluency

4. Silent pause (SP) frequency
5. SP Location (mid-clause / clause or AS-unit boundary)
6. SP Duration
7. Type: Non-lexicalized filled pauses (*uh*, *um*) counted separately
8. Context: Hesitation groups (Riggenbach 1991: disfluency chunks)

III. Repair fluency (Foster & Skehan 1999)

9. False start
10. Repetition
11. Replacement
12. Reformulation

(Peltonen & Lintunen 2016;
see also e.g., Kormos 2006: 163,
De Jong 2016: 212)



FLUENCY IN DIALOGUE (Peltonen 2017a)

- Fluency in interaction rarely studied (but see Riegenbach 1991; more recently Witton-Davies 2014, Tavakoli 2016)
 - Individual fluency = within-turn contributions
 - Interactional = (collaborative) between-turn aspects
 - Shared responsibility of maintaining the flow of speech across turn boundaries (*confluence*)
(McCarthy 2010: 7, see also Sato 2014, Galaczi 2014)

(see also Peltonen 2017b)



MEASURING DIALOGUE FLUENCY (Peltonen 2017a)

- Some (monologue) utterance fluency measures were adapted for the purposes of dialogue analysis and additional measures were used for capturing dialogue fluency
 - **Average turn length** (Syllables divided by the number of turns; cf. MLR in monologue)
 - The number of turn pauses
 - The length of turn pauses
 - The number of other-repetitions
 - The number of collaborative completions (Turns completed by the interlocutor)



Take-home messages

- Be precise with wordings and conceptualisations
- Choose measures according to research questions
- Common measures are good starting points, but a critical eye is needed
- Some fluency features are better approached from a qualitative perspective; for a comprehensive analysis both approaches needed
- L1 tendencies should be noticed
- Analysing monologues is important, but usually spoken communication consists of dialogues



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