Fluency in language testing

Lessons from four research disciplines

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LLRC
TOOLS FOR LANGUAGE TEACHERS & STUDENTS

ICLON

Current realization of fluency in testing

IELTS, ACTFL-OPI, TOEFL, PTEA:

As part of their assessment of speaking proficiency

*Judges have instructions to consider as disfluent speech:*

- Occurrence of (unnatural) filled and unfilled pauses

- Slow (or unnatural, staccato) pace

Overview

- Applied linguistics
- Psycholinguistics
- Conversation analysis
- Sociolinguistics

Talk largely based on:

De Jong, N. H. (2018). Fluency in second language testing: Insights from different disciplines. *Language Assessment Quarterly*, 15(3), 237-254.
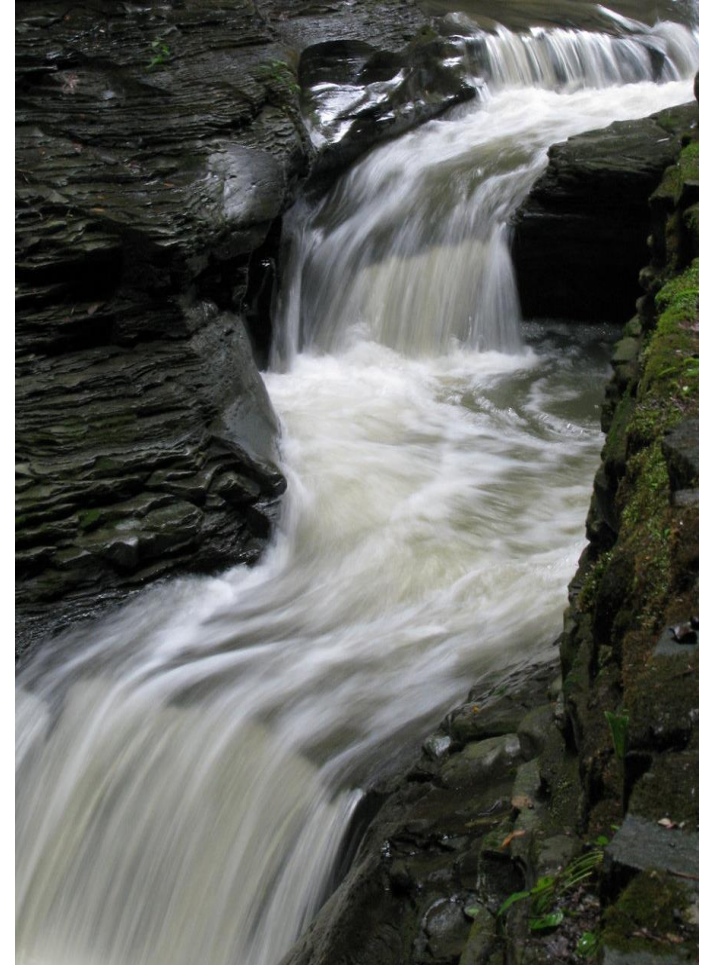
Relating objective measures to subjective ratings

Instructed judges rate *fluency:*

- 84% of variance explained by objective measures in speech

Manipulated speed (speech rate and articulation rate):

- Same effect on ratings of native and nonnative speech

Bosker et al., 2013; Bosker et a., 2014

Fluency part of speaking ability?

• Theoretical basis

(e.g. Bachman & Palmer, 1990; Canale & Swain, 1980; Celce-Murcia, 2007)

+

• Empirical basis?

Communicative speaking competence: KNOWLEDGE OF

1. Words and chunks;
2. Morphosyntax;
3. Pronunciation;
4. Nonverbal gestures;
5. Pragmatic knowledge;
6. Strategies for speaking;
7. Rules for interaction.

Egypt: „Be patient"

Italy: „What do you mean?"

Greece: „That's just perfect!"

Communicative speaking competence: SKILLS IN

Fast access to:

1. Words and chunks;

2. Morphosyntax;

3. Pronunciation;

4. Nonverbal gestures;

5. Pragmatic knowledge;

6. Strategies for speaking;

7. Rules for interaction.

Empirical basis:
Focus on 'linguistic' knowledge and skills

Knowledge and fast access to:

1. Words and chunks;

2. Morphosyntax;

3. Pronunciation;

4. Nonverbal gestures;

5. Pragmatic knowledge;

6. Strategies for speaking;

7. Rules for interaction.

Relating L2 fluency to L2 linguistic knowledge & skills

METHOD

8 speaking tasks to measure aspects of L2 fluency

6 tasks to measure L2 knowledge & skills

RESULTS differed per fluency aspect

- **Articulation rate**: strong relation with L2 knowledge and skills
- **Silent and filled pauses**: medium relation with L2 knowledge and skills
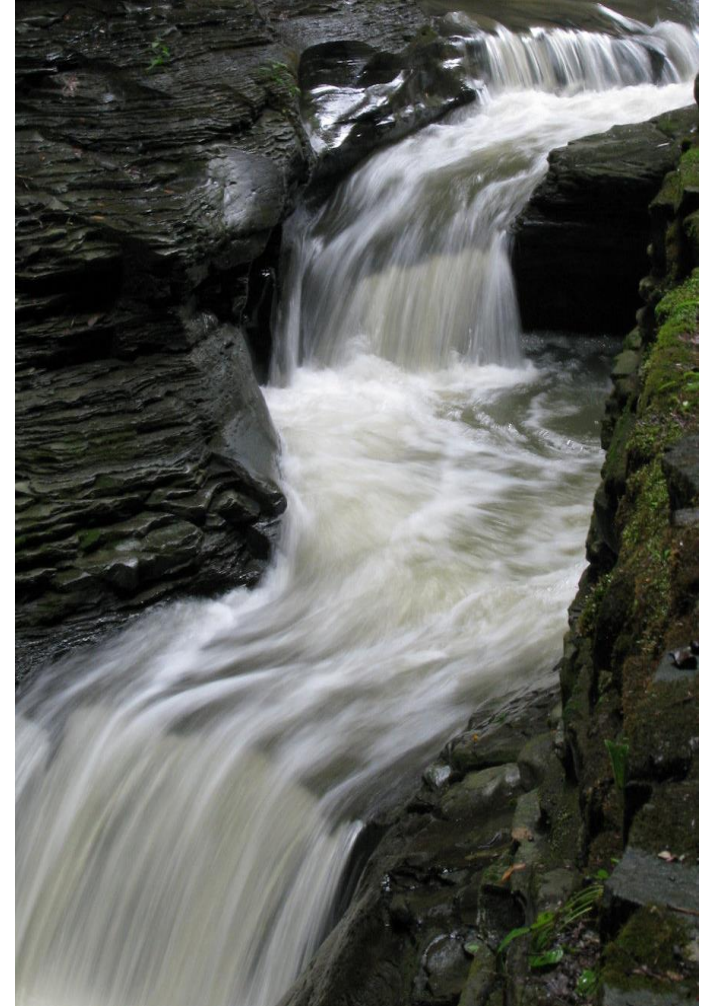- **Duration of pauses**: weak relation with L2 knowledge and skills

De Jong et al., 2013

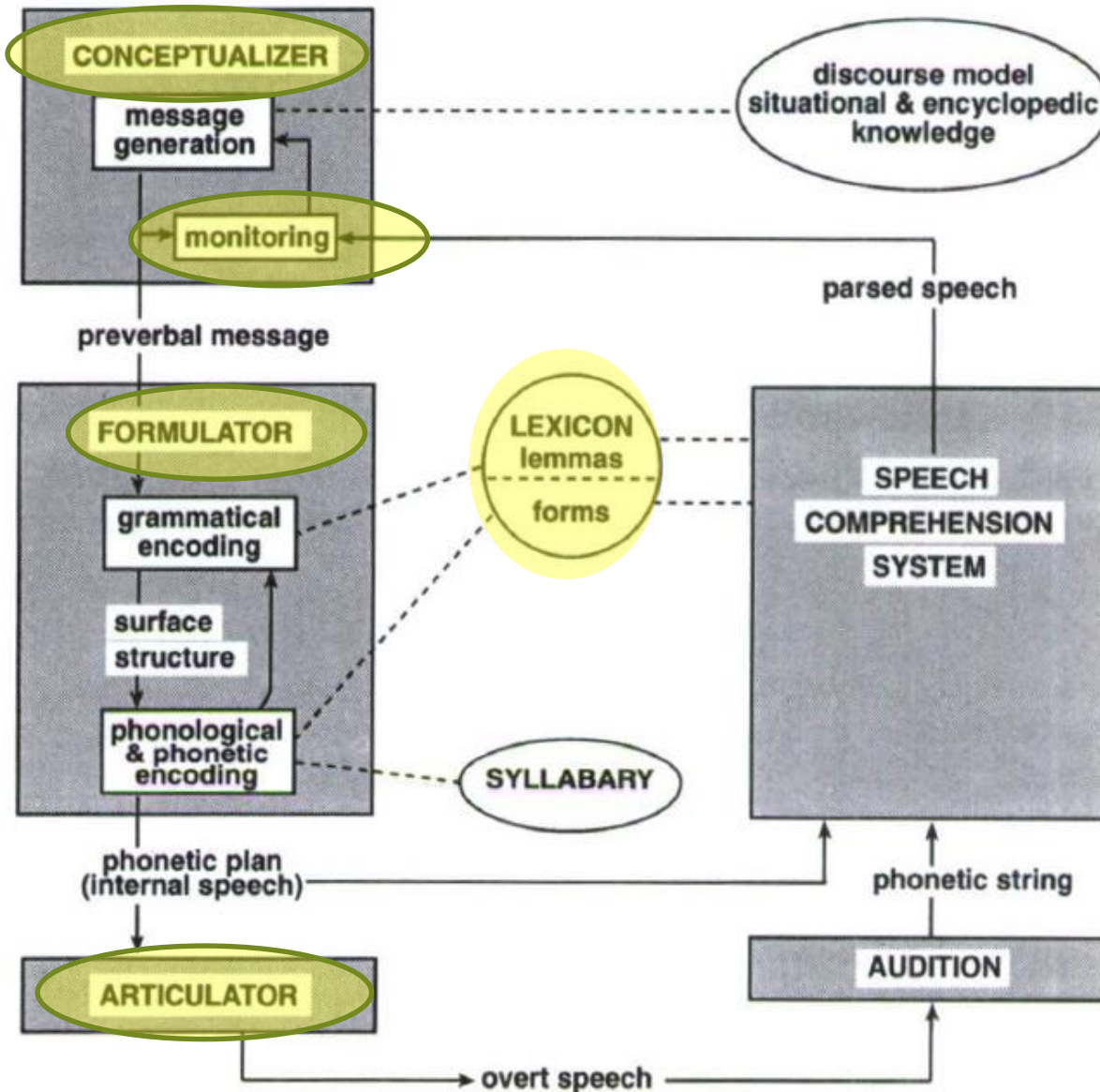# Viewpoints on fluency

- **Applied linguistics**
  - Speaker: linguistic knowledge and skills
  - Listener: ratings based on objective measures

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Psycholinguistics: speech production model

Willem Levelt

Speed of speech

- 3.5 words per second

- 4.5 syllables per second

- 11 sounds per second

disfluencies in the L1

- "uh(m)" is the most frequent "word"
- Up to half of speech can be filled with
  - Silent pauses
  - Filled pauses ("uhm"'s)
  - Lengthenings
  - Repetitions
  - Repairs
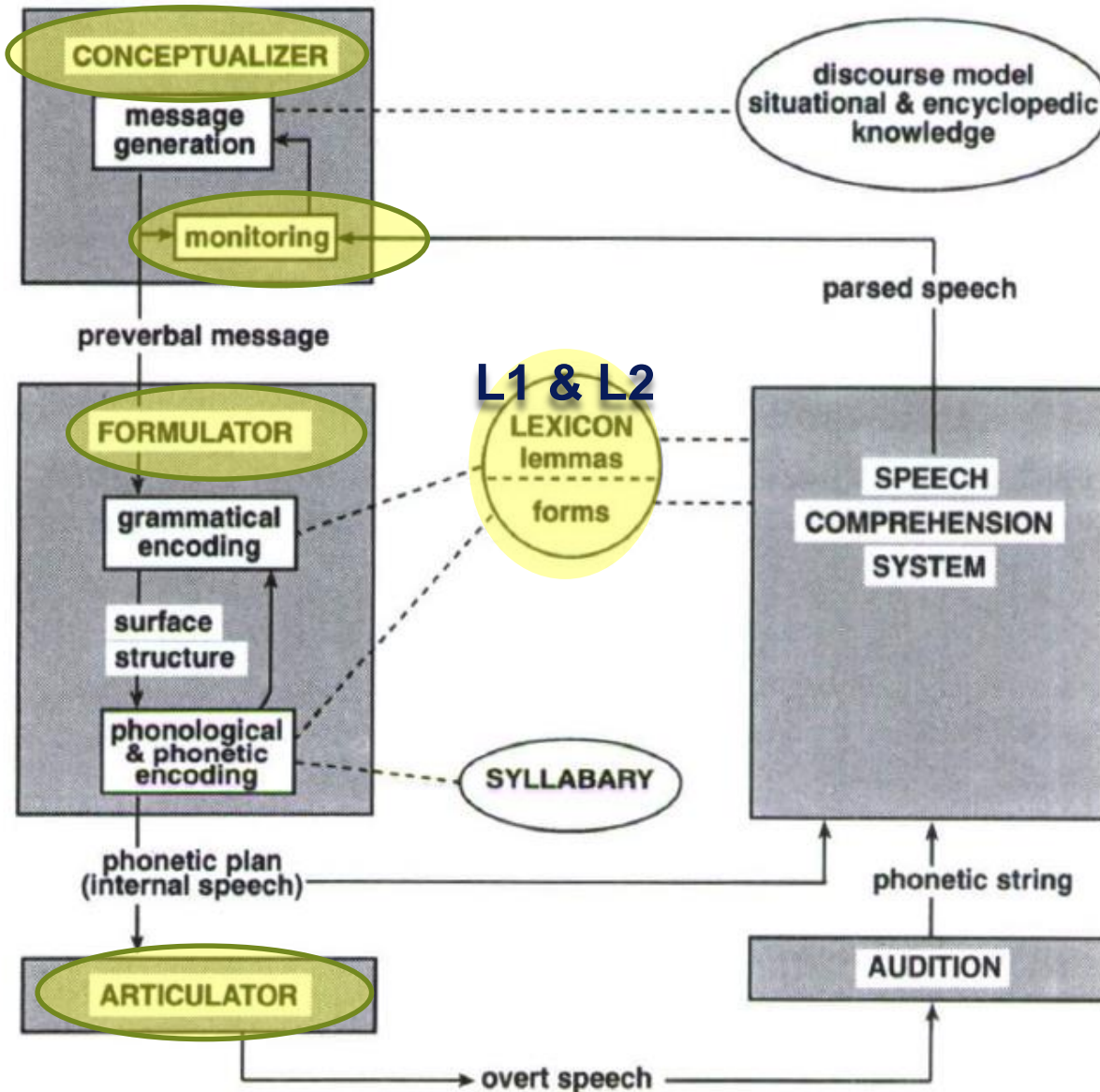
e.g., Goldman-Eisler, 1968

Speaking in L2:

Kees De Bot (1992)

Judit Kormos (2006)

Norman Segalowitz (2010)

Viewpoints on fluency

- **Applied linguistics**

  - Speaker: linguistic knowledge and skills

  - Listener: ratings based on objective measures

- **Psycholinguistics**

  - Speaker: conceptualizing, formulating, articulating, monitoring

Remember research on
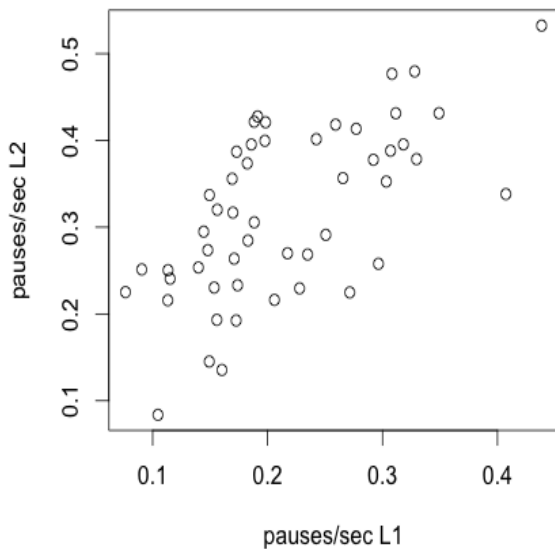# L2 fluency and L2 linguistic knowledge & skills

RESULTS

- **Articulation rate**: strong relation with L2 knowledge and skills

- **Silent and filled pauses**: medium relation with L2 knowledge and skills

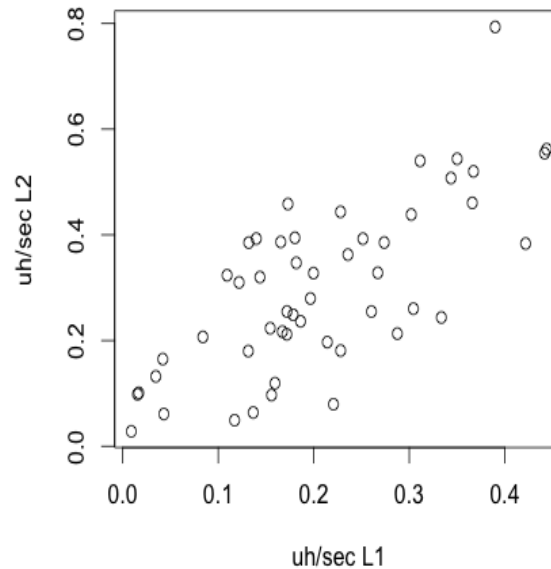- **Duration of pauses**: weak relation with L2 knowledge and skills
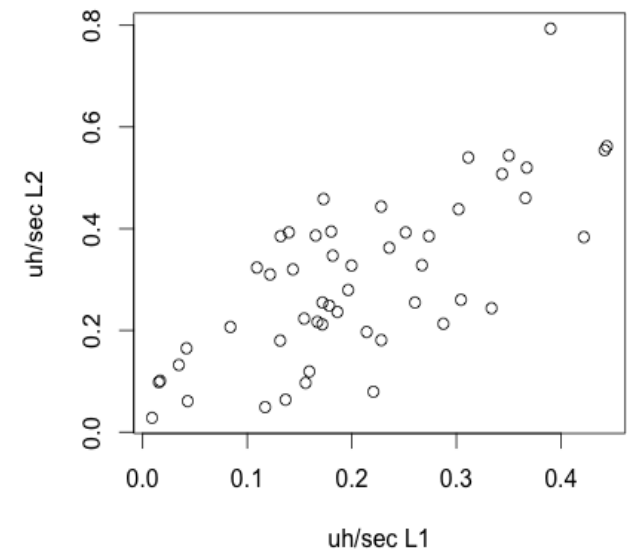
De Jong et al., 2013

Correlations between L1 and L2:

silent pauses **filled pauses** **duration of pauses**

Derwing et al., 2009; De Jong et al., 2015; Bradlow et al., 2017

Pausing just speaking style?

*NO, also note **location** of pauses*

Between utterances:

L2 = L1

Within utterances/clauses:

L2 speakers pause more often and longer than L1 speakers

e.g., Tavakoli, 2011; De Jong, 2016
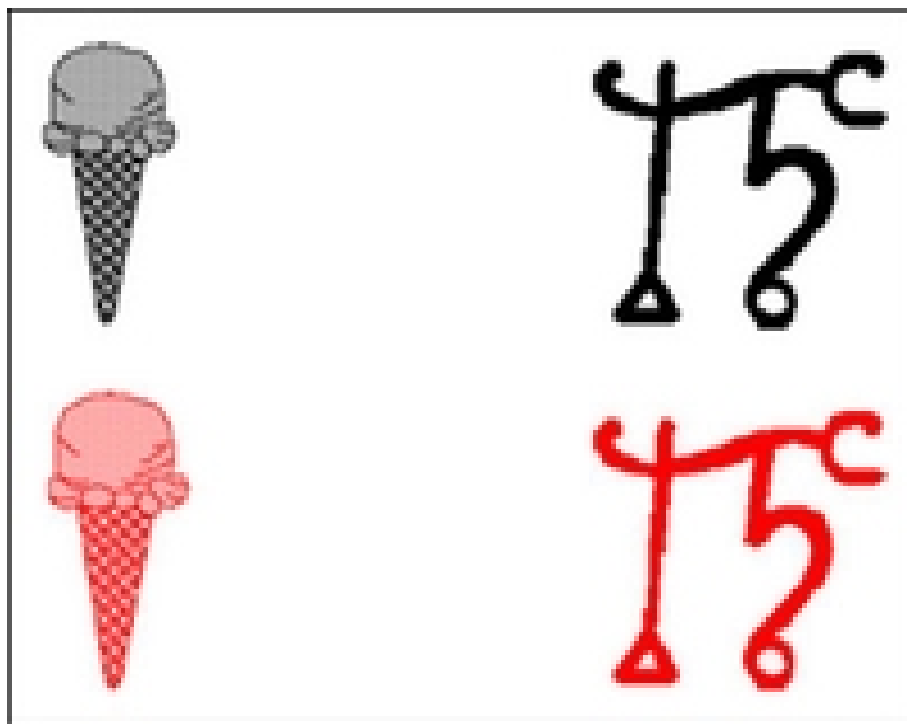
Viewpoints on fluency

- **Applied linguistics**
  - Speaker: linguistic knowledge and skills **+ individual style**
  - Listener: ratings based on objective measures

- **Psycholinguistics**
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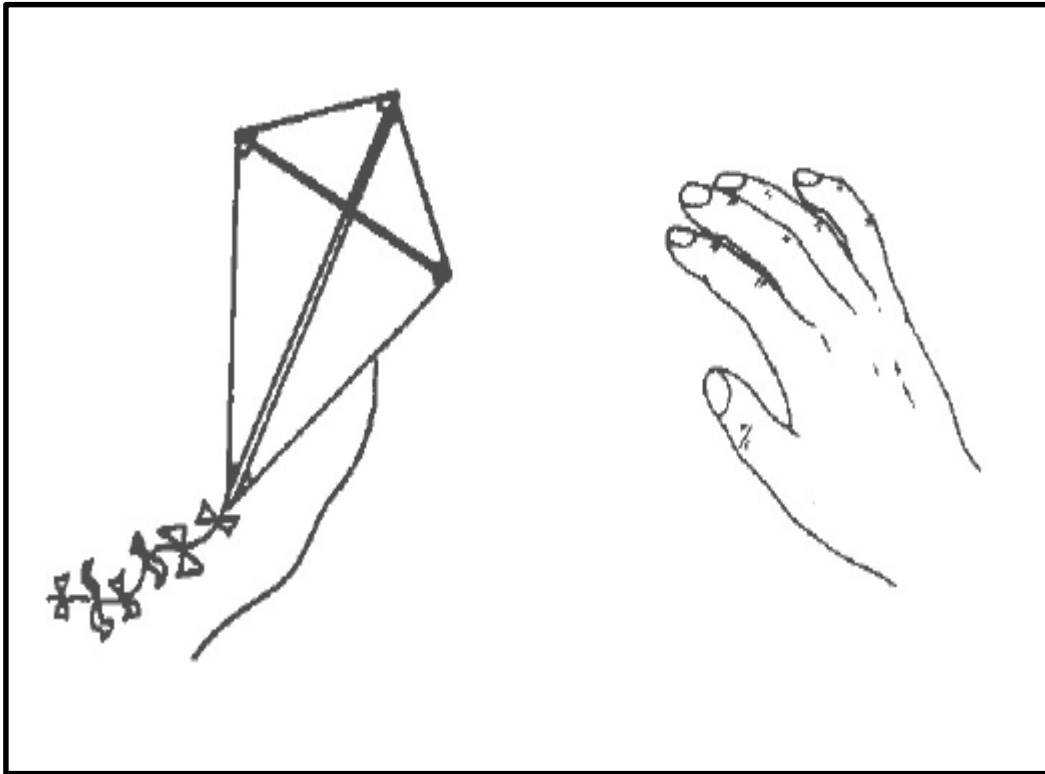 - Listener?

Effect on the listener

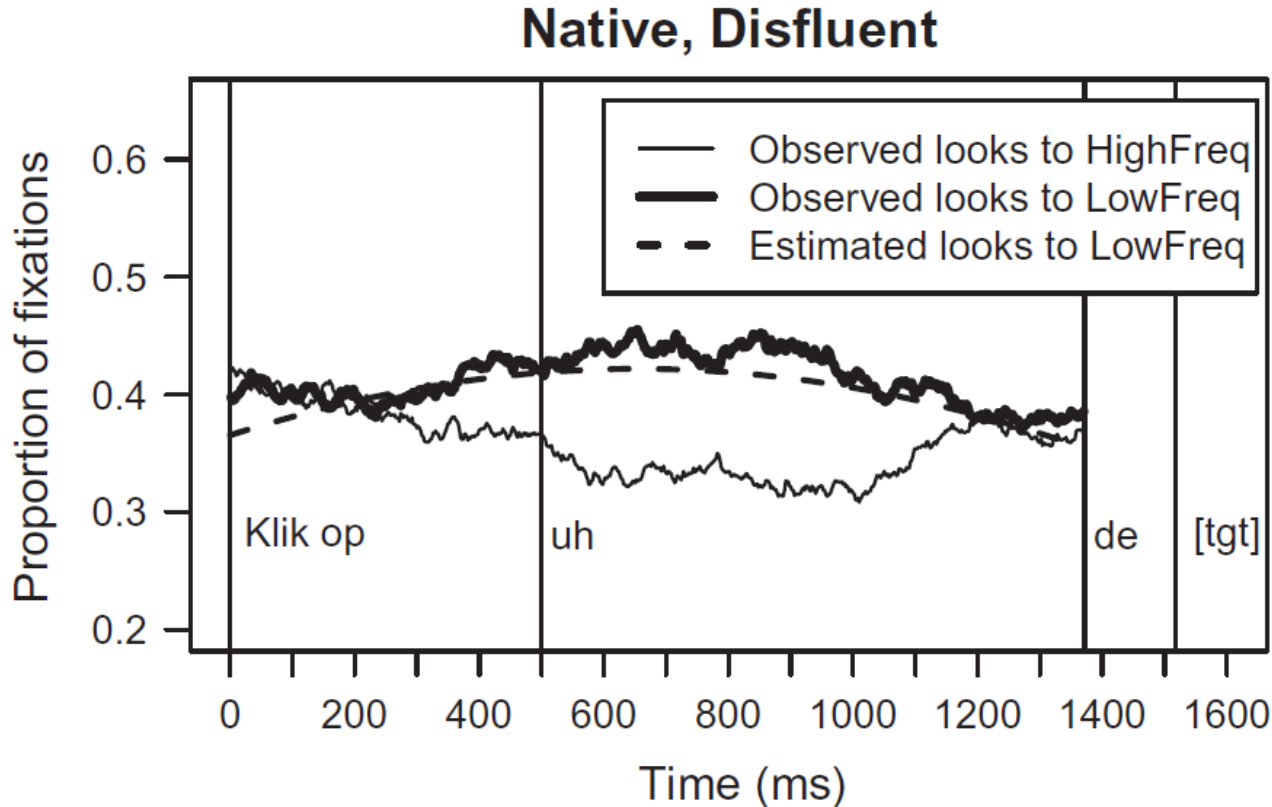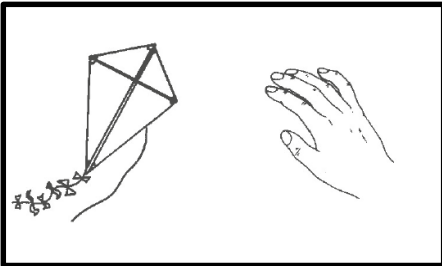

"CLICK ON UH THE RED …"

Arnold et al., 2007

Effect on the listener

"CLICK ON UH THE ... "

Bosker et al., 2014

Effect on the listener

Native, Disfluent

Bosker et al., 2014

Viewpoints on fluency

- **Applied linguistics**
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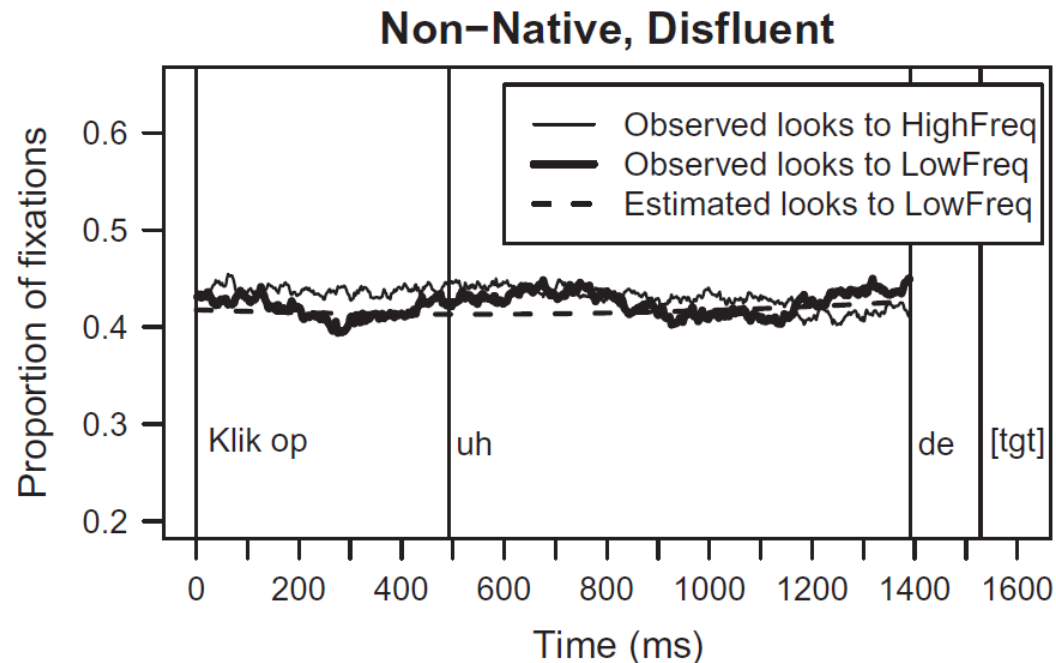 - Listener: ratings based on objective measures

- **Psycholinguistics**
  - Speaker: conceptualizing, formulating, articulating, monitoring
  - Listener: disfluency signals upcoming 'difficult' speech

However, a disfluency is *not a signal* when it is non-native speech?
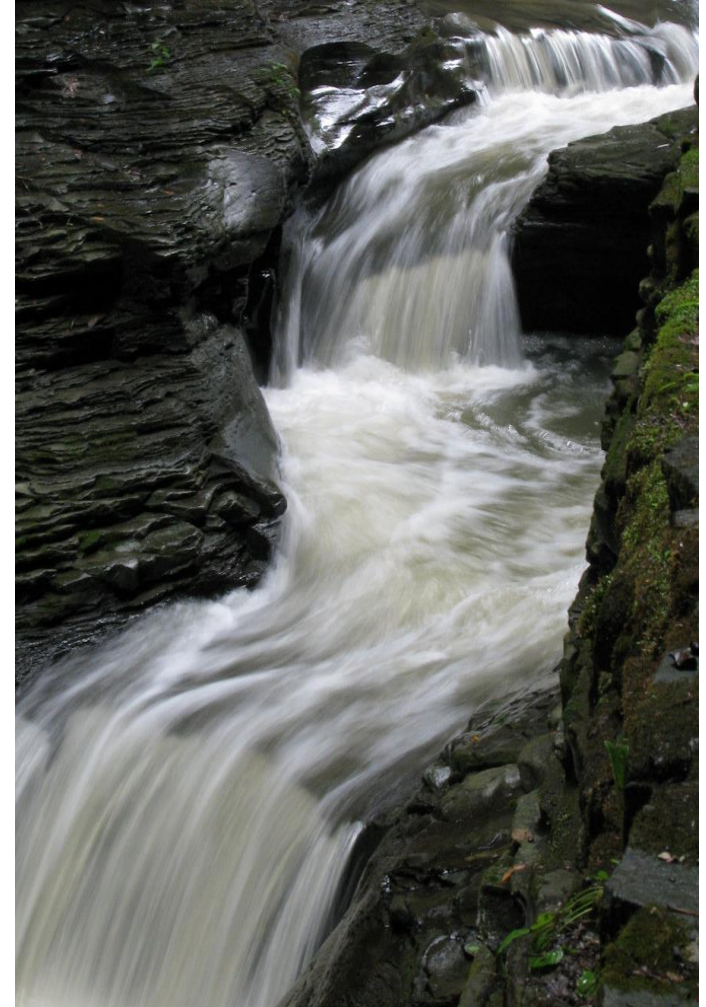
For instance,

• Bosker et al. (2014) "kite" not expected after NNS-uhm:

Bosker et al., 2014, 209; Hanulíková et al., 2012

Overview

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- Sociolinguistics

Discourse analyses / CA

Example 1:

- Tim: "Will you be coming to my party next Friday?"

- Marjory: "Sounds great!"

Example 2:

- Tim: "Will you be coming to my party next Friday?"

- Diane: "Uhm…

        I already have another appointment"

Pomerantz, 1984

Communicative meaning

Hesitations signal to the listener:

- Complex language is coming up

- A dispreferred answer is coming up

- Turn-taking regulations

e.g., Clark, 2002; Schegloff, 2010

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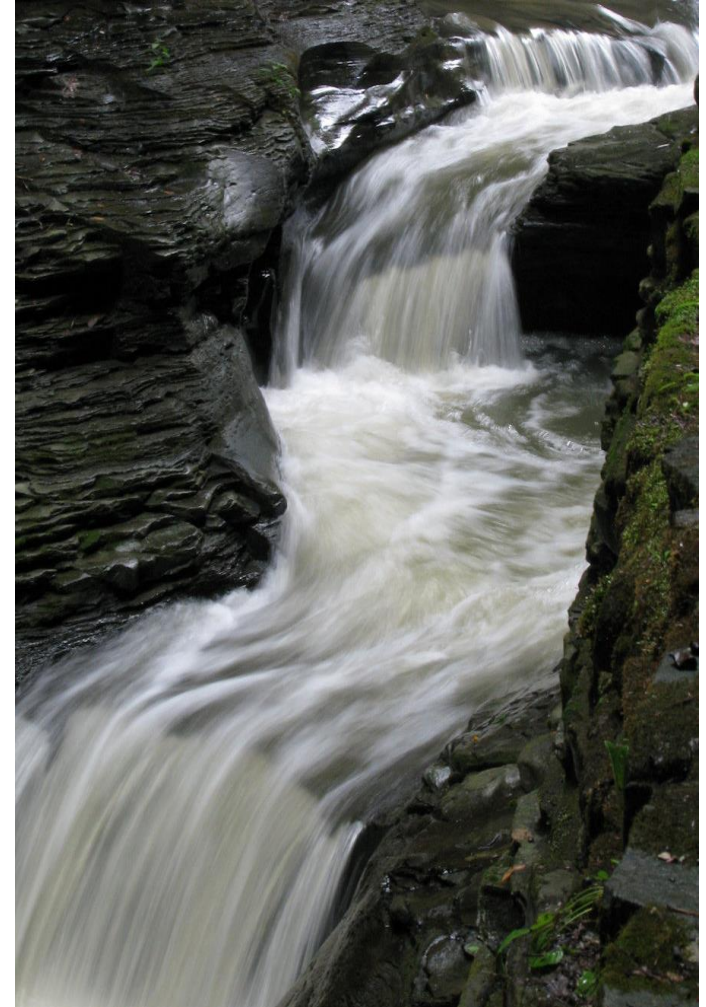
- **Psycholinguistics**

  - Speaker: conceptualizing, formulating, articulating, monitoring

  - Listener: disfluency signals upcoming 'difficult' speech (*at least in native speech)*

- **Discourse analyses**

  - Speaker & Listener: Part of successful communication (turn-taking, repairs, …)

Overview

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Sociolinguistics: alignment

- Interactive-alignment (Giles et al., 1991): interlocutors mimic or align their speech

  - speech rate (Street, 1984; Wilson & Wilson, 2005)

  - pausing frequency and duration (Jaffe & Feldstein, 1970)

  - inter-turn interval duration (Ten Bosch et al., 2004)

  - grammar and wording (Pickering & Garrod, 2004).

Sociolinguistics: powerless language

- Speaking styles influence the way speakers are perceived and judged

  - Robin Lakoff (1973): 'powerless' language includes hesitations
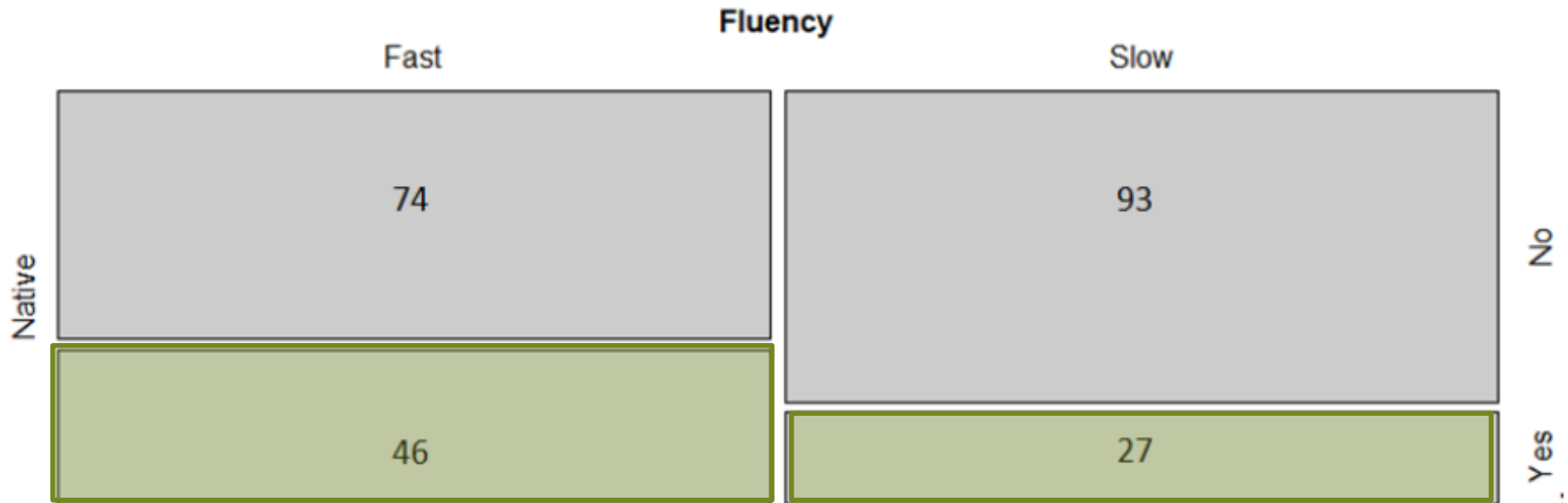
Hesitations and speech rate associated with:

- *competence, intelligence, attractiveness, trustworthiness, certainty, persuasion*

But does this hold for non-native speech?
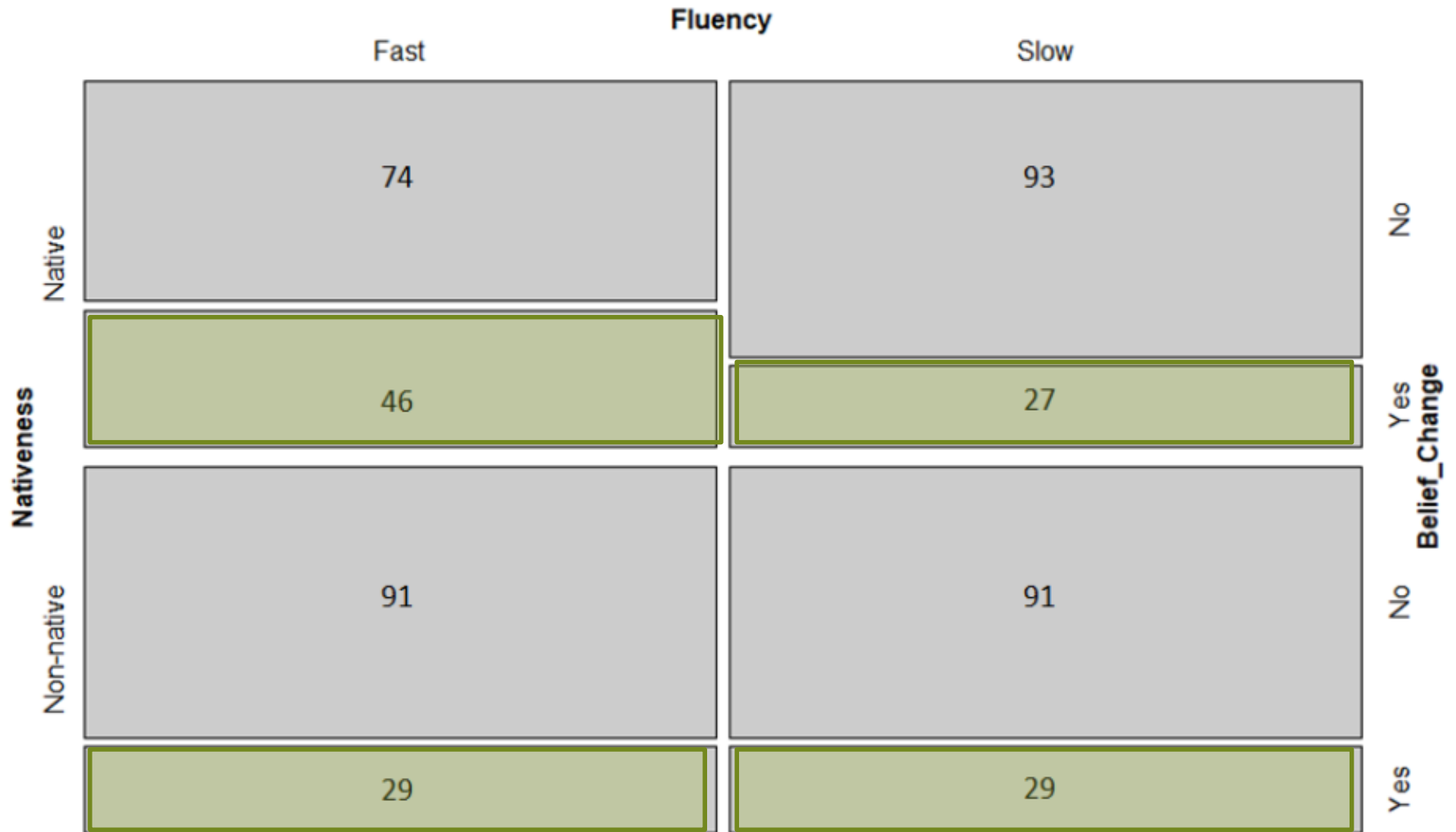
Benki et al., 2011; Blankenship and Holtgraves, 2005; Smith et al., 1998

Fluency and belief change for native speech

Branum (MA-thesis 2019)

Fluency and belief change for native and non-native speech

Branum (MA-thesis 2019)

Viewpoints on fluency

- **Applied linguistics**

  - Speaker: linguistic knowledge and skills + individual style

  - Listener: ratings based on objective measures

- **Psycholinguistics**

  - Speaker: conceptualizing, formulating, articulating, monitoring

  - Listener: disfluency signals upcoming 'difficult' speech (*at least in native speech)*

- **Discourse analyses**

  - Speaker & Listener: Part of successful communication (turn-taking, repairs, …)

- **Sociolinguistics**

  - Speaker & Listener: part of successful communication (alignment)

  - Listener: judgements on e.g., intelligence, persuasion

Current realization of the notion of fluency in language testing

IELTS, ACTFL-OPI, TOEFL, PTEA:

Judges have instructions to consider as disfluent speech:

- Occurrence of (unnatural) filled and unfilled pauses

- Slow (or unnatural, staccato) pace

Some lessons for testing

- Not every aspect of objective and judged fluency has to do with proficiency: fluency is in part personal speaking style

- Disfluencies are not only signals of trouble in formulating but are also helpful signals for the listener

- Disfluencies are part of successful communication

- Pairing participants in assessments can be unfair (alignment)

We need to find out how to distinguish between 'proficiency'-fluency and communicative fluency

Research in collaboration with:

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How to hesitate

Cross-linguistic differences

- Dutch: "uh", "en-uh", "dus-uh"

- English: "uhm", "theee uhm"

- German: "ähm"

- French "euh"

- Spanish: "eh" ("este")

- Chinese: "那个(nà gè)" and "这个(zhè ge), "uh", "mm"

- Japanese: "eto", "ano", "ma", ...

e.g., De Leeuw, 2007; Watanabe et al., 2006