

The Effects of Interrupting Behavior on Interpersonal Attitude and Engagement in Dyadic Interactions



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Focus

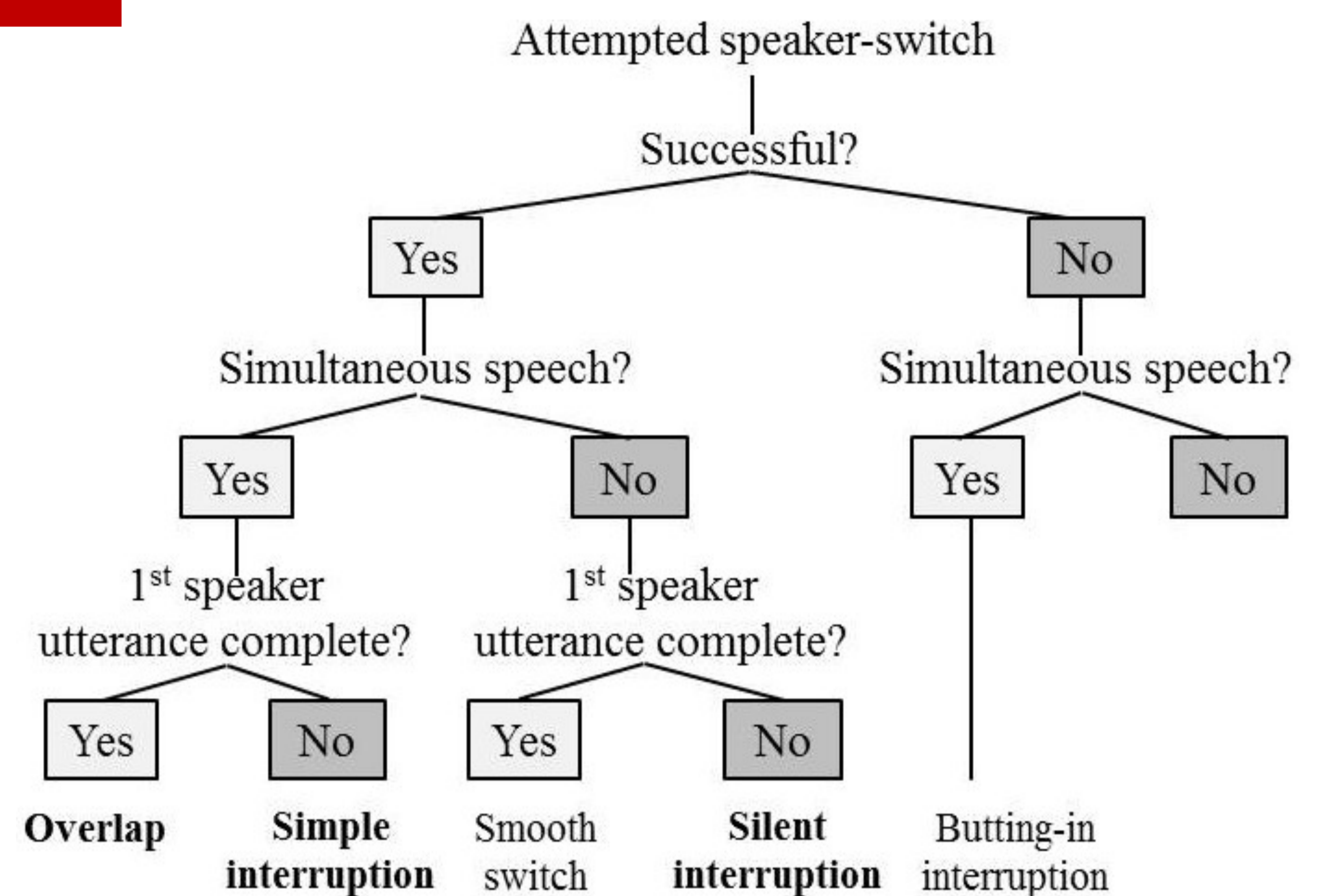
New look at interruptions in agent-agent and human-agent interaction:

1 Strategy: cooperative vs. disruptive

2 Type: amount of speaker's overlap

Context (adjacency pairs):

- a) **Question:** clarification vs. misunderstanding
- b) **Opinion:** agreement vs. disagreement
- c) **Partner communication:** completion vs. tang.
- d) **Topic:** elaborate vs. change

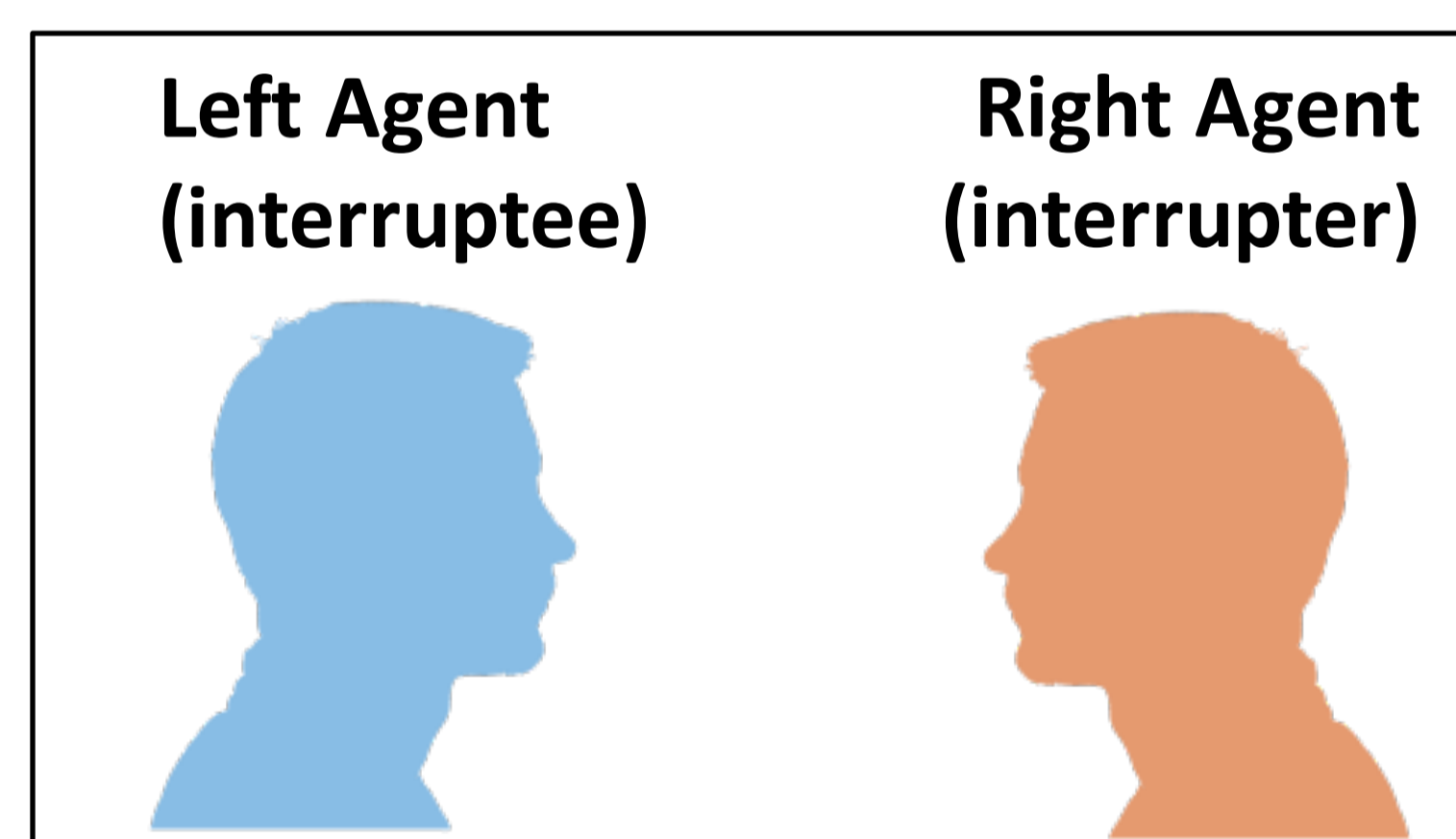


Study

4 Trials: Question, Opinion, Partner, Topic

2x3 repeated measures design:

- **Type:** no overlap vs. short vs. long
- **Strategy:** cooperative vs. disruptive



Controlled aspects:

- **Gender:** male vs. male
- **TTS:** no prosody change
- **Timing** of interruption
- Stereo sound and subtitles

Measurements:

- **Attitude:** dominance and friendliness
- **Engagement and Involvement**

Type: You know I've read the story Alice in Wonderland.
no overlap It tells an amazing story **(0.2)**
short overlap It tells an amazing story **[about]**
long overlap It tells an amazing story **[about a little girl.]**

Strategy:
cooperative Do you mean the book written by Lewis Carrol?
disruptive When were you in the Wonderland theme park?

Results

Trial	Left Agent (interruptee)			Right Agent (interrupter)		
	Type (↗ overlap)	Strategy (disr. -> coop.)	Type AND Strategy (when type: no overlap)	Type (↗ overlap)	Strategy (disr. -> coop.)	Type OR Strategy (disr. -> coop.)
QUESTION	↗ Dominance ↘ Friendliness	n.s.	↗ Involvement (when type: no overlap)	↗ Dominance	↗ Involvement	↗ Friendliness ↗ Engagement
OPINION	n.s.	n.s.	↗ Friendliness (when type: no overlap)	n.s.	↗ Friendliness ↗ Engagement ↗ Involvement	n.s.
PARTNER	n.s.	↗ Dominance	n.s.	↗ Dominance	↗ Engagement ↗ Involvement	↗ Friendliness
TOPIC	n.s.	n.s.	n.s.	↘ Friendliness	n.s.	n.s.

Type (more overlap):

- **Interruptee** more dominant / less friendly
- **Interrupter** too!

Strategy (cooperative):

- **Interrupter** more involved and engaged

Future work:

- **Detect** user interruptions
- Agent model **managing** interruptions