"Complexity cues or attention triggers? Repetitions and editing terms for native speakers of French"

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Abstract

Objective: This study investigates experimentally whether lexical repetitions affect listeners' perception of the complexity of upcoming utterances (NP's) in French. While studies have proved that people prefer fluently processed stimuli, a recent stream of research suggests that (dis)fluent elements act as cognitive roadblocks that signal a need for deeper processing (Alter 2013:440; Clark and Fox Tree 2002:88). Thus, the presence of disfluencies may facilitate processing: by allowing extra time for speech planning, they inform listeners of the speakers' mental attitudes or planning difficulties. As such, they act as a tool for conceptual priming of a complex entity (Arnold, Fagnano, and Tanenhaus 2003:32-35; Watanabe et al. 2008:84). Experiment: Studies on filled pauses tend to assume that all disfluency types are probabilistic cues of the onset of relatively large and/or complex constituent (Bailey 2003:196-197). However, with the exception of the work of Fox Tree (1995), M...

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Complexity cues or attention triggers? Repetitions and editing terms for native speakers of French

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Objective: This study investigates experimentally whether lexical repetitions affect listeners’ perception of the complexity of upcoming utterances (NP’s) in French. While studies have proved that people prefer fluently processed stimuli, a recent stream of research suggests that (dis)fluent elements act as cognitive road-blocks that signal a need for deeper processing (Alter 2013:440; Clark and Fox Tree 2002:88). Thus, the presence of disfluencies may facilitate processing; by allowing extra time for speech planning, they inform listeners of the speakers’ mental attitudes or planning difficulties. As such, they act as a tool for conceptual priming of a complex entity (Arnold, Fagnano, and Tanenhaus 2003:32-35; Watanabe et al. 2008:84).

Experiment: Studies on filled pauses tend to assume that all disfluency types are probabilistic cues of the onset of relatively large and/or complex constituent (Bailey 2003:196-197). However, with the exception of the work of Fox Tree (1995), Moniz, Trancoso, and Mata (2009) and Watanabe et al. (2008), little experimental evidence exists on the hypothetical fluent function of disfluency devices such as repetitions, false starts or reformulation. Moreover, these assumptions have not been tested on native French listeners.

Inspired by Watanabe et al. (2008), the design invited participants to listen once to sentences describing both a simple and a compound shape presented visually on a computer screen (complexity factor). Their task was to press a key as soon as they identified the shape corresponding to the description (e.g. “Bring me the uh the red triangle that is in the office”, “Bring me the blue circle that is in the room”). The shapes in the sentences where either preceded by a repetition including (1) a filled pause, (2) a silent pause of same duration, (3) no pause, or (4) no repetition at all (fluency factor).

Hypotheses: According to the above findings and to the fact that noncomplex stimuli (i.e. a simple shape versus a compound one) are inherently more fluent (as they are the simplest exemplar of a target category they are easier to process) (Alter and Oppenheimer 2009:226), we predict that overall Response Time (RT) to simple shapes would be shorter than to compound ones. Secondly, we hypothesize that RT to compound shapes would be shorter when there is a repetition than when there is no repetition, whereas RT to simple shapes might even be longer with a repetition than without. When doing so, we assume that repetition, especially including a filled pause, gives a cue to the speaker’s planning difficulty and allows some time to predict the content of the upcoming speech (Watanabe et al. 2008:84). Thirdly, it is not known what effect the absence of pauses or filled pauses in repetition has on native listeners. However, due to filled pauses relative distinctiveness we predict that repetition containing an editing term will result in quicker response than simple repetitions.

Preliminary results: The first results of the ongoing pilot study carried out on twenty participants appear to confirm these hypotheses. Analysis of variance already revealed significant main effects of the complex and the fluency factor perform on z-score of RT.
(respectively $F(1,1973)=75.89, p<0.01$ and $F(3,1971)=2.77, p<0.05$). Interaction between the complexity-fluency factors were also found significant ($F(4,1970)=21.19, p<0.01$).

**References**


