Repeating the complementizer THAT can help comprehenders understand the complement clause in verb-complement structures when the subject of the embedded clause is displaced from the first complementizer by a long adverbial (Staum Casasanto and Sag, 2008). We proposed that rather than being generated by the grammar, extra complementizers are a production strategy for reducing processing difficulty by reactivating syntactic expectations for a complement clause and its constituents immediately before the embedded subject appears. This extra THAT could be interpreted as a repetition of the original complementizer. However, extra THAT also sometimes appears before the subjects of clauses that were originally introduced by other complementizers: It seems like, theoretically, that it would be possible to travel along in the middle of a tornado and survive (Google). In these cases, the extra THAT is also ungrammatical, but it cannot be interpreted as a repetition -- it must be independently generated. Is this extra complementizer also motivated by reducing processing difficulty in the embedded clause? A moving-window self-paced reading experiment investigated whether an extra that would help comprehenders read the embedded clause even when it did not match the original clause-introducer.

The results of this experiment suggest that, rather than being a repetition of the original complementizer, an extra complementizer may be independently generated to reduce difficulty in the embedded clause. Extra THAT increases the activation of the syntactic representation of an upcoming embedded clause, thus making the subject of this clause more predictable when it appears, and causing a reading time advantage following the extra complementizer. Because any complementizer can fulfill this function, the original clause-introducer does not need to be repeated, and THAT, the most common complementizer, will suffice. Thus, although it is not licensed by standard grammars, an extra THAT may be generated in response to processing pressure because it is an effective strategy for reducing difficulty in the embedded clause. In order to account for this behavior, a model of language production must allow function words to be generated not just by the grammar but in response to a combination of grammatical and processing constraints. These results are not compatible with a model of production in which all possible utterances are output by the grammar, and processing pressures can only further constrain this set of utterances; rather, processing pressures contribute to the structure-building stage of utterance planning.