BACKGROUND: Omaki et al. (2011) on “hyperactive gap filling”

**AIM OF CURRENT STUDY:** The reading time disruptions arise for different reasons: semantic incongruity with transitive verbs, but subcategorization violation with intransitive verbs. The aim of the current study was to test the prediction that different ERPs should accompany the reading disruptions for transitive vs. intransitive verbs.

**Predictions:** Semantic incongruity in the case of transitives (e.g. “The author wrote a city” should elicit an N400, as in Garson et al. 1989). Subcategorization violations have been observed to elicit a bi-phasic N400-P600 (Osterhout et al. 1994), LAN (Rosler et al. 1993), as well as only N400 (Frisch and Schleswsky 2001; Frish et al. 2004). However, we did not expect semantic integration effects with intransitives in the current paradigm. We reasoned that the most likely response would be a P600 caused by encountering an unexpected syntactic category (the relative clause operator trace) after the intransitive verb.

**METHOD:** 25 University of Delaware undergraduates participated (in return for course credit) in a replication of Omaki et al.’s Experiment 1. 4 subjects were rejected due to experimenter error, leaving N=21. Subjects read 28 sentences per condition and 36 filler sentences word-by-word self-paced. Words were centered on the screen to avoid eye movement artifacts. Subjects answered a comprehension question after each trial (mean: 76%). ERPs were time-locked to the onset of the critical verb as well as the following adverb.

**FINDING:** Both transitive and intransitive verbs elicited an Anterior Negativity, indicative of dependency completion at the verb. ANOVA revealed no interaction with laterality. Further analysis of left and right electrodes combined revealed a main effect of gap-filling and no interaction with verb type. Orthogonal contrasts revealed a significant effect of gap-filling in time windows 0-200 to end. **CONCLUSIONS**

The study provided mixed evidence for gap-filling after intransitive verbs. Whereas both verb types elicited an anterior negativity at the verb, the effect was descriptively larger for transitives, and significantly greater at the adverb. Both verbs elicited a P600.