Why Giving A Kiss Is More Complicated Than Just Kissing: It’s All In The Mapping

Behavioral and neurolinguistic studies have shown that light verb constructions such as “Andrew gave Janet a kiss” are processed differently than non-light constructions such as “Andrew gave Janet a present”\(^1\)-\(^4\). We consider three hypotheses about the source of this processing difference:

Hypothesis-1: Light and non-light constructions have different syntactic structures.

Hypothesis-2: They have the same syntax, leading to unusual conceptualizations of events described by light verb constructions (kissing as a transfer of a kiss involving three participants: [GIVE[ANDREW,JANET,KISS]]).

Hypothesis-3: They have the same ditransitive syntax, which in the case of a light verb construction maps onto conceptual structure in a noncanonical way, namely as a two-participant event ([KISS[ANDREW,JANET]]) instead of a three-participant event ([GIVE[ANDREW,JANET,KISS]]).

We test these hypotheses using a standard syntactic priming task\(^5\) and a new task probing conceptual structure.

Prior studies show that production priming primarily reflects surface syntax of an utterance. Thus Hypothesis-1 predicts that priming from light to non-light constructions will be absent or reduced compared to priming within non-light constructions. In the first structural priming experiment, we primed non-light picture descriptions with light or non-light double-object sentences. Both light and non-light double-object sentences elicited more double-object picture descriptions than prepositional-object sentences. Experiment 2 replicates this finding for non-light targets and extends it to light targets, demonstrating symmetric priming within and across light and non-light constructions in both directions. These findings show that the light and non-light datives share a common syntactic structure ruling out Hypothesis-1. However, if structural priming is solely based on syntactic structure, then they have no bearing on Hypothesis-2 and Hypothesis-3.

We used a sorting task to disentangle these hypotheses. Hypothesis-2 predicts that light verb constructions are conceptualized as three-participant events, while Hypothesis-3 predicts that they are conceptualized as two-participant events. Participants were trained to sort pictures according to the number of roles/participants in the event. In the testing phase, participants were also confronted with light verb constructions (“give a kiss”), their base verb counterparts (“to kiss”), and non-light transitive and double-object constructions. Results show that, despite being syntactically identical to double-object constructions, light verb constructions were consistently sorted as two-role events (Experiment 3). Preliminary data suggest that this is true independent of the number of entities for each semantic role (Experiment 4). These results favor Hypothesis-3, suggesting that what is driving the difference in light verb processing is truly a mapping operation at the syntax-semantics interface.

Taken together, our results can explain reaction times and processing patterns\(^1\)-\(^4\) in light and non-light constructions and make a contribution to the research on the relationship between syntactic and conceptual structure.