If You Want A Quick Kiss, Make It Count:
How Choice Of Syntactic Construction Affects Event Construal

When people talk to each other about what happened, they usually don't need to specify how long it took. Everybody knows from experience that a kiss lasts a few moments, a conference talk may carry on for about twenty minutes, and giving professional advice takes maybe half an hour, so there is typically no need to explicitly mention the duration. Duration is also usually not encoded grammatically. However, grammatical cues in event descriptions often significantly influence other aspects of event representations in listeners. It would be all the more interesting, thus, if very subtle grammatical choices were to reliably affect how long listeners think an event takes.

In this paper, we explore how encoding event descriptions in simple verbs (*to kiss, to advise*) versus count or mass noun light verb constructions (*to give a kiss, to give advice*) has repercussions on the temporal encoding of these events. Based on the fundamental observation that the reference properties of syntactic objects can change the reference properties of the whole predicate (Krifka, 1992; also see Quine, 1969; Verkuyl, 1972), we predict that nominalizing an event can help dividing experience into countable units, influencing duration estimates in a way that is systematically predictable from the interaction of verb semantics and nominal syntax.

A previous study has found that using count syntax but not mass syntax affects how events are quantified; and that punctive events are more readily quantified by counting over individual subevents than durative events. This is in line with the Number Asymmetry hypothesis (Barner and Snedeker, 2006): whereas count syntax specifies individuation, mass syntax is underspecified. We ask whether using a verb versus a noun in mass/count syntax affects how people judge event duration. The Number-Asymmetry hypothesis would predict that it would. However, if lexemes are ontologically linked to the same event structure, their syntax should not make a difference (Harley, 2003).

We used punctive (*hug*) and durative verbs (*advise*, *talk*) in either a transitive (*John hugged Mary*) or in a ditransitive frame with the bounded verb *give* (*give a hug*), which introduces a distinction between count (*give a hug/talk*) and mass syntax (*give advice*). We expected count syntax to force event individuation in punctives, such that, when asked about duration, people should judge the same event to be shorter in the ditransitive than in the transitive frame. For duratives, the same pattern was predicted for mass, but not count syntax: Since there are no distinctive subevents that can be counted, applying count syntax to duratives should not lead to differences in duration. Instead, it should open the door to different event construals, orthogonal to changes in temporal structure.

STUDIES 1 & 2: Duration Estimates. 100 English native speakers answered questions like *When they met up, Natasha hugged Cynthia. How long do you think that took?* Responses were transformed into log-seconds and analyzed with a mixed-effect model using maximal random effects structure. As predicted, punctive count syntax and durative mass syntax (βs>.34, ts>1.8, ps<.05), but not durative count syntax (β>.19, ts>1.1, ps>.25), led to shorter event construal (Figure A). Study 2 was a replication with verb type as between-subjects factor, yielding the same pattern of results.

STUDY 3: Duration Categorizations. To ensure that the pattern obtained by free duration estimates was not due to unreliable time estimates (Kruger & Evans, 2004), we provided 100 participants with pre-defined time bins as choices. The choices were each transitive/ditransitive pair's individual quartiles obtained in Study 1 as possible answers, e.g.: *When they met up, Natasha hugged Cynthia. How long did this take? a) up to 10 seconds, b) between 10 seconds and 30 seconds, c) between 30 seconds and 10 minutes, d) more than 10 minutes*. For punctive count pairs, there was a significant difference in categorizations depending on construction. For durative count and durative mass items, this difference was not significant; however, the effect of construction went in opposite directions for durative count items (β=-.29, p>.26), compared to punctive count (β=0.81, p<.03) and durative mass items (β=0.61, p>.14): whereas the ditransitive construction resulted in more "shortest" categorizations for punctive count and durative mass items, this effect was absent (numerically: reversed) for the durative count items (Figure B).

STUDIES 4 & 5: Event Repetition. 80 participants read each sentence and then noted how many events they imagined. Mean count of events was lower for ditransitive light verb constructions in each event category. For punctive count events, using a ditransitive light verb construction instead of the transitive verb reduced the mean count from 2.3 to 1.8 (χ^2=7.18, p<0.007). These effects were also numerically present for durative count and durative mass items, but variances in these constructions were higher (χ^2s<1.1, ps>0.29, Figure C). Study 5 was a replication asking for the specific event in question (e.g., how many kisses), yielding similar results.

STUDY 6: Event Similarity. We asked 100 English native speakers to rate event similarity between transitive and ditransitive frames on a 7-point Likert scale (1="same event"). As predicted, differences between frames were smaller in punctive verbs with count syntax (*to hug* vs *to give a hug*, mean rating: 1.55) and durative verbs with mass syntax (*to advise* vs *to give advice*; mean rating: 1.56) than in durative verbs with count syntax (*to talk* vs *to give a talk*; mean rating: 2.17; βs>.6, ts>4.8, ps<.0001; mixed-effect model with maximal random effects structure; Figure D).

SUMMARY: Describing an event with mass/count syntax affects event construal in a way that is systematically predictable from the interaction of mass/count syntax and semantics: *give a hug/advice* are imagined as taking less time than *hug/advise*; this does not apply to (*give a*) *talk*, supporting the Number-Asymmetry hypothesis, but not a hypothesis in which lexemes have the same ontology, independent of syntax, and complementing studies suggesting that people conceptualize events differently depending on subtle choices among alternations (Johnson & Goldberg, 2012; Wittenberg & Snedeker, 2014).