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If you want a quick kiss, make it count: How choice of syntactic construction affects event construal

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ABSTRACT

When we hear an event description, our mental construal is not only based on lexical items, but also on the message's syntactic structure. This has been well-studied in the domains of causation, event participants, and object conceptualization. Less studied are the construals of temporality and numerosity as a function of syntax. We present a theory of how syntax affects the construal of event similarity and duration in a way that is systematically predictable from the interaction of mass/count syntax and verb semantics, and test these predictions in six studies. Punctive events in count syntax (*give a kiss*) and durative events in mass syntax (*give advice*) are construed as taking less time than in transitive frame (*kiss* and *advise*). Durative verbs in count syntax (*give a talk*), however, result in a semantic shift, orthogonal to duration estimates. These results demonstrate how syntactic and semantic structure together systematically affect event construal.

Introduction

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, such as causation, event structure, and the semantic roles of event participants (Fausey & Boroditsky, 2010; Johnson & Goldberg, 2013; Wittenberg & Snedeker, 2014). 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 article, 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), 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.

This hypothesis was inspired by a previous study on how events are individuated, depending on mass and count syntax. Barner, Wagner, and Snedeker (2008) found that using count syntax *(to do climbs)*, but not mass syntax *(to do climbing)*, affects how events are quantified; and that atomic,punctive events (*kissing, kicking*) are more readily quantified by counting over individual subevents (*kisses, kicks*) than non-atomic,durative events. This is in line with the Number Asymmetry hypothesis (Barner & Snedeker, 2006): whereas count syntax specifies individuation, mass syntax is underspecified.

If it is true that mass and count syntax contribute to event individuation, then we should expect predictable influences

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of mass or count syntax also on estimates of event duration. We distinguish between two types of events: Atomic, telic, mostly punctive events, like kissing or kicking; and non-atomic, atelic, mostly durative events, like talking or advising (Dowty, 1991; Vendler, 1957, see Footnote 1).

Punctive events are distinct from durative events not only in that they are conceptually short and bounded by a natural end point (telic), but also in that sentences in which they appear are often conventionally understood to describe several instances of the same punctive event, that is, they are understood iteratively (Barner et al., 2008; Kim & Kaiser, 2015; Paczynski, Jackendoff, & Kuperberg, 2014): For instance, you may find that *John kissed Mary* evokes the image of not one, but multiple kisses, each of which can be categorized as a subevent of kissing. Thus, punctive events can have a distinct substructure. Durative events, in contrast, are atelic and, they do not possess a distinct substructure, and they do not receive an iterative reading, even if the duration of the event is explicitly extended beyond a conventionally accepted time frame (cf. *Senator Cruz talked all night*).

Many of the aforementioned events, like *kiss, advise* or *talk*, can either be expressed as transitive verbs, or as so-called light verb constructions. In light verb constructions, the verb contributes little semantics beyond tense, number agreement, and aspect, while the meaning of the expression comes from the deverbal noun (Brugman, 2001; Butt, 2003; Butt, 2010; Jackendoff, 1974; Jespersen, 1954; Wiese, 2006). These light verb constructions appear either with count syntax, such as *to give a kiss* and *to give a talk*, or mass syntax, such as *to give advice*. Thus, light verb constructions offer us an opportunity to study the interaction of verb type and mass versus count syntax with an existing alternation, as opposed to unusual constructions such as *to do climbs* (Barner et al., 2008), or using novel lexical items (Wellwood, Hespos, & Rips, 2016): Light verb constructions, like *to give a kiss*, and their full verb counterparts, like *to kiss*, are in a relationship of syntactic alternation with minimal difference in meaning (Allerton, 2002; Glatz, 2006). In our study of punctive and durative events, we use light verb constructions with *give*, which is itself telic (Newman, 1996).

The mass–count distinction and verbal aspect

Ever since Bach (1986), linguistic theory has been fascinated by the parallels between kinds of objects vs. substances on the one hand, and kinds of atomic vs. non-atomic events on the other hand (Casati & Varzi, 2008; Hale & Keyser, 1993; Harley, 2005; Jackendoff, 1991; Krifka, 1992; Quine, 1969; Rothstein, 2008; Verkuyl, 1972). One of the defining differences between objects and materials is that labels for objects denote atomic units, which cannot be partitioned arbitrarily: Only a whole apple, not a piece of an apple, can be described with the count noun *an apple*. A piece of an apple, on the other hand, will need to be further described with a quantifier or specific expression, such as *slice of an apple*, or *apple core*. Objects can also be individuated and counted (*three apples*). Materials, however, are non-atomic, and can be partitioned in an arbitrary fashion: a quart of applesauce can be divided into many portions, yet each individual portion still denotes *applesauce* (Bale & Barner, 2009; Rips & Hespos, 2015, and many others). Introducing individuability to mass nouns, however, is easily accomplished when they are quantized (*a bottle of wine, a quart of applesauce*; see Krifka, 1992; Wiese & Maling, 2005).

Events have the property of atomicity or non-atomicity, too: Some events are atomic, and some events are non-atomic. For example, if Mary kissed John, then she stopped just for a moment, and then started kissing him again, the post-interruption kiss would be a new event, even if the people and location are the same: an event of kissing is atomic in that it cannot be broken apart. (Note also that the character of the start and end points is constitutive of the event: if there is not contact between a set of lips and a surface, with a clearly defined onset and a clearly defined, voluntary or involuntary, offset, the term *kiss* does not apply.) This not true for all events (or processes, see Wellwood et al., 2016): If the president talked to a crowd, stopped for a moment, and started talking again, it could still be the same event of talking. Similarly, advising can be partitioned and spread over many advising sessions, but the overarching event of advising is the same, as long as there is some degree of spatial or character continuity (Anderson, Garrod, & Sanford, 1983; Magliano & Zacks, 2011; Zacks & Tversky, 2001). Talking and advising are thus non-atomic: they can thus be broken up and still count as the same talking and advising events.

The atomicity and non-atomicity of events is highly correlated with notions of telicity, boundedness, and aspect in verbs or predicates, as well as the distinction between events and processes in some approaches.[1] For

[1] Telic events are said to involve some kind of natural endpoint (Andersson, 1972; Bauer, 1970; Garey, 1957; Klein, 1994; Vendler, 1957, among others). This definition covers accomplishments, like *to draw a circle*, but not all punctive events. The classical definition of punctive events is that they only take a moment in time. How long this moment takes, however, is underspecified: The duration of *to sneeze* depends entirely on the sneezer; *to explode* can conceptually take more than a few seconds; and the event described by *to break* might last for a few minutes. Thus, temporal properties make up one part of the diagnostics; the other part is contributed by the intuition that there is a natural endpoint to a given event.

Linguistic diagnostics, such as test for aspectual types, are of limited help. Even the classic test for a durative, namely using a temporal *for*-PP to detect atelic events, is not entirely reliable: *John talked for an hour* is understood as one continuous event and thus classified as durative; *John sneezed for an hour* is understood as iterated, and thus classified as punctive. But the time frame defined by the prepositional phrase matters immensely: *John kissed Mary for a minute* is understood as continuous, and thus classified as durative; *John kissed Mary for an hour* is likely understood as iterated, and would thus be classified as punctive (note, in contrast, the unavailability of an iterative reading for achievements: ∗*John discovered the error for an hour*, e.g. Bott, 2010). Further complicating the grammatical picture is that iterated punctive events pattern with (durative) activities in some tests (such as allowing for nonsubcategorized objects in reflexive resultatives or in *out*-prefixation, or in some tense entailment relationships). When punctive events are understood non-iteratively, they pattern with (durative) achievements in some other tests (such as in onset repair readings; Kearns, 2000).

Thus, there are at least two world-knowledge factors at play in defining the aspectual class of a verb describing an event: the existence of a natural endpoint of an event and connected to that, the inherent duration of an event; and an event's tendency to occur several times in a row and so its availability for an iterative interpretation. In addition, linguistic diagnostics are not always straightforward and might involve pragmatic inferences that are beyond the lexical semantics of the verb.