

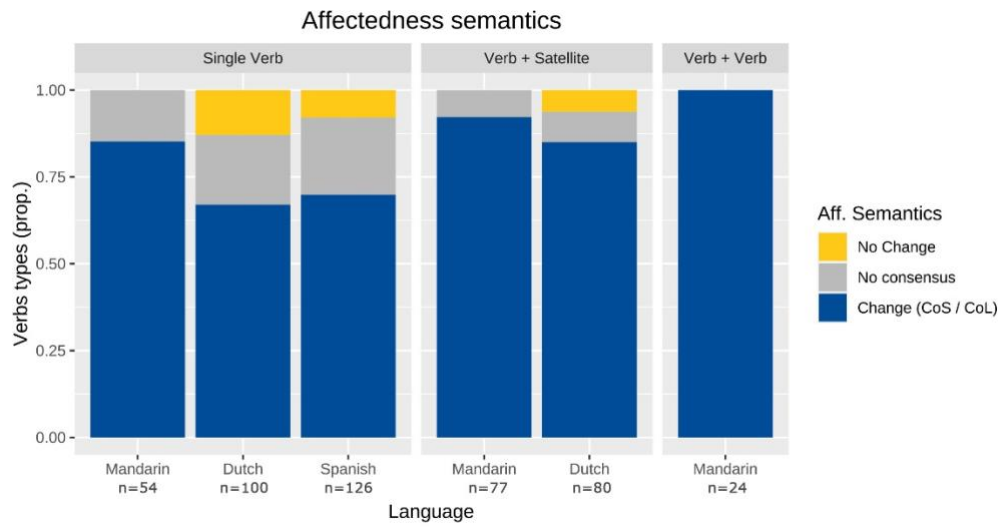
## What the fuzz is an event result? Affectedness and telicity in the meaning of verbs across languages

In Cognitive Semantics, Talmy's (2000, 2016) typology classifies languages depending on how typically the result of events (i.e., the change in the location or state of an event participant) is expressed in the main verb, or rather outside of it in a satellite marker (e.g., in particles and verbal complements). In verb-framed languages, results are typically expressed in single verbs (e.g., in Spanish: *salir* 'to exit', *destruir* 'to destroy'), whereas in satellite-framed languages results are typically expressed in satellites (e.g., particles in Dutch: *uit-gaan* 'out-go', *kapot-maken* / 'broken-make', and verbal complements in Mandarin Chinese: *Zǒu-kāi* 'go-open', *sī-suì* 'tear-smithereens'). The intuitiveness of this typological distinction has inspired many important cross-linguistic studies (e.g. Gerwien & von Stutterheim, 2018; Montero-Melis et al., 2017; Papafragou et al., 2008). Nevertheless, its intuitiveness conflates two different components of event results that have been thoroughly examined in semantic theories of verb meaning and scalar change: affectedness and telicity (cf. Beavers, 2011; Fillip, 2012; Kennedy & McNally, 2005; Rappaport Hovav & Levin, 2010). While affectedness refers to change in a participant to an unspecified degree (i.e. atelic change), telicity refers to change up to a particular endpoint (i.e., telic change). At present, it is not clear whether the notion of result, which is at the heart of Talmy's typology, reflects affectedness or telicity.

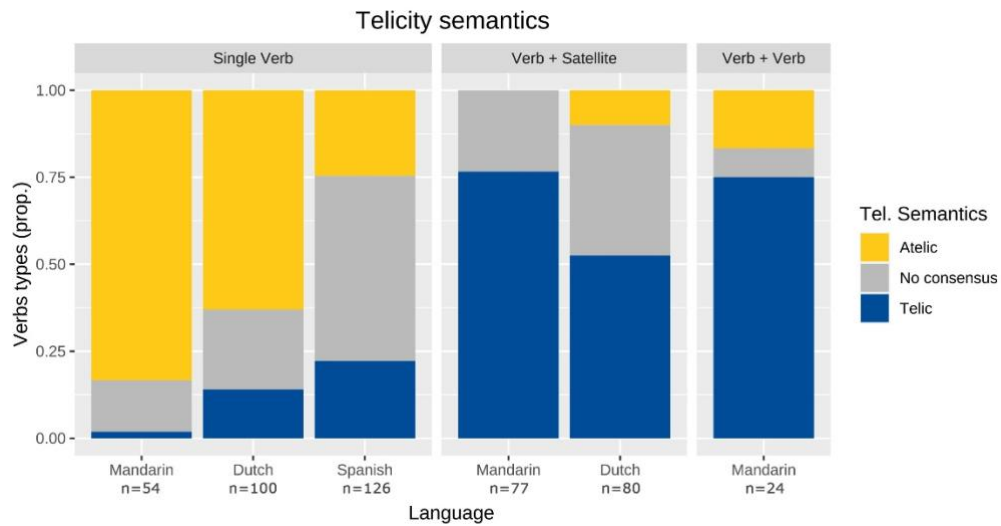
Here, we investigated this question by examining the extent to which verbs in Spanish (a verb-framed language) and in Mandarin and Dutch (two satellite-framed language) express affectedness and/or telicity. Rather than assessing the lexical semantics of verbs by means of conventional linguistic diagnostics such as the *in/for an hour* test (which have the disadvantage to be sensitive to other elements in a sentence), we developed an experimental approach to assess the meaning of verbs in isolation. The goal was to obtain a nuanced picture of the extent to which telicity and affectedness are expressed in different verb forms across language types. First, a native speaker of each language assembled a list of verbs by naming different phases of events portrayed in 40 short videos showing change-of-state events. The clips showed how an agent changed the state of an object until a natural endpoint was reached (e.g., a paper was cut in half). This resulted in 126 verbs in Spanish, and 155 verbs in Mandarin and 180 in Dutch. After classifying verbs according to their form (either single verb, verb + satellite or serial verb) they were used in an web-based questionnaire to test the intuitions of native speakers of Spanish (N=69), Mandarin (N=71) and Dutch (N=91). In each trial, participants saw a verb in the infinitive form and answered two multiple choice questions about the action expressed by the verb: Q1) at the end of the action, must the state or the location of an object needs to be different, or neither of them? (probing affectedness), and Q2) must the action reach a particular endpoint or not? (probing telicity). For each question, the proportion to which each of the given choices was chosen was calculated per verb and then tested against chance level ( $\alpha = 0.05$ ). When a given response was chosen above chance level, the corresponding verb was labeled either as change-of-state verb (CoS), change-of-location verb (CoL), or no-change verb (regarding affectedness; Q1), and either as telic or atelic (with respect telicity; Q2). When no option was clearly preferred, verbs were label as "no consensus" for the corresponding dimension.

The verb classification revealed that while single verbs across language types are greatly used for expressing change (i.e., affectedness; Figure 1.a), they are used to a lesser extent for expressing the endpoint of events (i.e., telicity; Figure 1.b). Nevertheless, it showed that the lexical semantics of verb-satellite constructions in Mandarin and Dutch solely differed from single verbs with respect the expression of telicity. Further, results suggest that the proportion of telic and telicity-ambiguous verbs increases as the proportion of clearly telic satellites decreases. To be properly addressed, Talmy's typology must be considered in relation to crosslinguistic differences in the expression of telicity, and not of affectedness.

a)



b)



**Figure 1.** Proportion of verbs (by verb form) labeled either as “Change” (either CoS or CoL), “No change” or “No consensus” with respect the dimension of affectedness across languages (1.a), and either as “Telic”, “Atelic” or “No consensus” with respect the dimension of telicity (1.b).