

A: ‘The boy didn’t eat the sandwich.’ B: ‘What do you mean? Not even a bite or...?’

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According to traditional analyses [*inter alia* 1, 2, 3], telic predicates, such as *mangiare il panino* (‘to eat the sandwich’), denote events with inherent endpoints. When combined with the perfective aspect, the sentence is expected to entail that the event has reached the culmination point. Therefore, a sentence such as *La bambina ha mangiato il panino* (‘The girl ate the sandwich’) should be used to describe only an event in which the sandwich has been eaten completely. This is known as culmination entailment. Nevertheless, cross-linguistic research has shown that many languages allow telic-perfective sentences to describe incomplete events, a phenomenon known as non-culmination [*inter alia*, 4]. In a previous study, we not only demonstrated that Italian adult native speakers accepted telic-perfective sentences as descriptions of non-culminating events, but we also found that verbs showed varying acceptance rates of non-culmination [5]. Therefore, findings from our study suggest that culmination is not uniformly required by all telic predicates. This challenges traditional analyses that treat culmination as an entailment, part of the truth condition of such sentences, and supports the idea that culmination is pragmatically derived via implicature, since it can be cancelled [6]. The present study investigates the interpretation of telic-perfective sentences from a novel perspective, namely by testing how the functional category of negation interacts with telicity. In propositional logic, negation is defined as the abstract operator reversing the truth-value of propositions to which it applies. When ‘p’ is true, ‘not-p’ is false, and vice versa [7]. To the best of our knowledge, no previous study has investigated how adults interpret negative telic-perfective sentences. We propose that experimentally investigating how native speakers interpret negative telic-perfective sentences will shed light on the current debate of whether culmination is part of the truth condition of these sentences, thereby constituting an entailment, or whether the culmination inference arises via pragmatic implicature. 148 adults aged between 20 and 69 (F = 82; M = 66; Mean Age = 35.01; SD = 11.84) participated in our experiment. We designed a novel Truth-Value Judgment Task (TVJT), presenting a 3×2 design with two variables manipulated within-subjects. The first variable is cluster, structured into three levels: Cluster 2, Cluster 3, and Cluster 4 (these levels are derived from the verbs’ classification resulting from a cluster analysis in our previous work – Table 1). The second variable is polarity, which is built on two levels: positive and negative. Trials were divided into two blocks: a block containing only affirmative sentences and another block containing only negative sentences. We balanced the order of presentation of blocks during administration. Participants were presented with a total of 54 trials: 36 experimental items, which were shown only in association with incomplete events, and 18 controls, which were shown either with complete events or ‘no result’ events. Their task was to say whether the target sentence accurately described the picture. We expect the distribution of response patterns across conditions (i.e., positive vs. negative sentences) to reveal whether culmination is semantically encoded or pragmatically derived. Indeed, if culmination is a semantic entailment encoded in the lexical meaning of telic-perfective sentences, participants should reject the non-culminating reading in both positive and negative sentences, yielding the mismatch_F_T pattern. This would show that culmination is part of the truth condition of such sentences and cannot be canceled by negation. Conversely, if culmination arises via pragmatic implicature, participants should accept the non-culminating reading for both sentences, favoring the mismatch_T_F pattern. Mixed patterns (i.e., match_TRUE, match_FALSE) should be less frequent but may still reveal individual differences or truth-value gaps in incomplete scenarios. Our findings reveal that, in all clusters, adult participants accepted, above chance level, positive telic-perfective sentences

as descriptions of partially completed events, while rejecting, above chance level, their negative counterparts in the same context (Figure 1). Mismatch_T_F resulted in the predominant pattern (Figure 2). By judging ‘the girl ate the sandwich’ TRUE when only half of the sandwich was eaten, and rejecting the negative sentence ‘The girl did not eat the sandwich’, in the same context, participants treated culmination as a defeasible inference. Furthermore, the gradual increase in acceptance of non-culminating readings from Cluster 2 to Cluster 4 supports our previous findings, namely that verbs are distributed along a ‘culmination continuum’ rather than forming a homogeneous class.

FIGURES AND TABLES.

Figure 1. Interaction polarity and cluster: TRUE vs. FALSE responses.

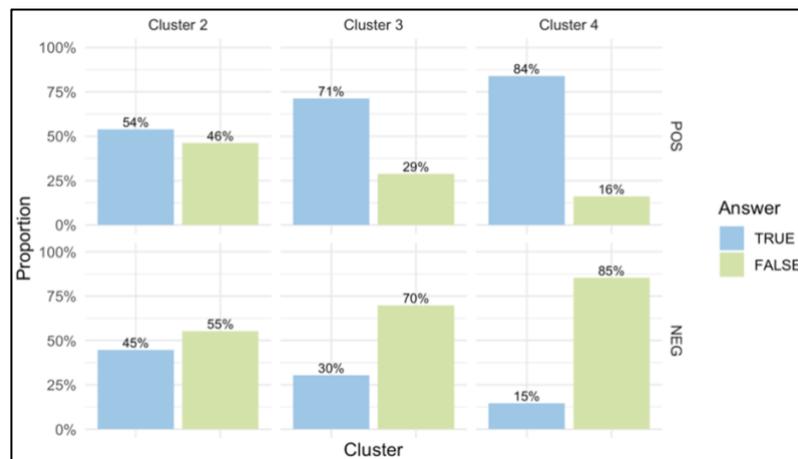


Figure 2. Distribution of response pattern across clusters.

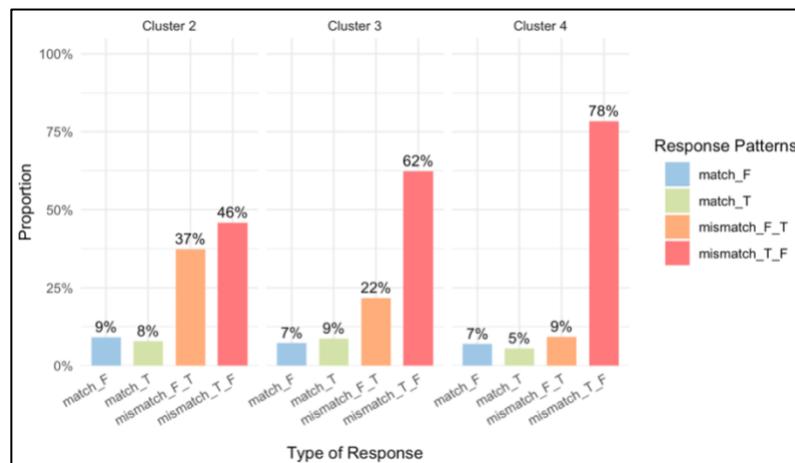


Table 1. List of verbs divided by cluster

CLUSTER	VERBS
Cluster 2	<i>costruire</i> (lit. to build), <i>riempire</i> (lit. to fill), <i>pulire</i> (lit. to clean), <i>aggiustare</i> (lit. to fix), <i>svuotare</i> (lit. to empty)
Cluster 3	<i>sciogliere</i> (lit. to melt), <i>gonfiare</i> (lit. to blow up), <i>cucire</i> (lit. to sew), <i>pelare</i> (lit. to peel), <i>disegnare</i> (lit. to draw), <i>allacciare</i> (lit. to button)
Cluster 4	<i>dipingere</i> (lit. to paint), <i>colorare</i> (lit. to color), <i>cancellare</i> (lit. to erase), <i>mangiare</i> (lit. to eat), <i>tagliare</i> (lit. to cut), <i>bere</i> (lit. to drink), <i>bruciare</i> (lit. to burn)

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