

Mental representation and processing of Italian nominal compounds

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Although compound-word processing has long been studied in psycholinguistics and aphasiology, some aspects of this process are still under debate; for example, there is contrasting evidence about the effect of semantic transparency (Libben, 1998). Moreover, most studies on compounds were performed in English and Dutch; as these languages admit only head-final compounds, the effect of headedness might have been confounded with that of constituent position (but see Jarema et al., 1999). Italian is ideally suited to address this issue, as Noun-Noun compounds can be either head-initial or head-final, with neither structure being clearly dominant over the other. The present study aims at disentangling the roles of semantic transparency, headedness and constituent position in the processing of Italian compound nouns.

Thirty-two neurologically intact subjects participated in a priming experiment (SOA=300ms) with a lexical decision task. Forty-eight Noun-Noun compounds were selected as probes; they were either transparent or opaque (e.g., *fotocopia*, photocopy, vs *boccaporto*, hatch, lit. mouth+harbour) and head-initial or head-final (e.g., *fotocopia* vs *capobanda*, ring-leader, lit. chief+gang). The four groups of probes were matched for length, surface frequency and stem frequency. Each compound probe was primed by both its initial and its final constituent in separate runs; constituent primes were matched with orthographically similar control words

(e.g., *capo*, chief vs. *caso*, chance) for length, surface frequency, stem frequency and orthographic neighbourhood.

The ANOVA showed a first-level priming effect, with no significant interaction. The planned-comparison t-tests showed a facilitation effect with all types of compounds, which however is modulated by headedness and constituent position, i.e. there is no difference when the head or the modifier were primed in head-initial compounds, while the head elicited a greater effect in head-final compounds (see Figure).

The presence of a priming effect with all kinds of targets suggests that constituents of Italian Noun-Noun compounds are automatically accessed, independently of semantic transparency, constituent position and headedness. However, the latter two factors do modulate constituent priming, with greater effects elicited by the morphological head in head-final compounds; this indicates that while head-final compounds have a hierarchical head-modifier representation, head-initial compounds do not. This suggests a different representation of the two types of compounds, with the head-final compounds being genuinely morphological and internally structured at lexical level, and the head-initial compounds deriving from the simple juxtaposition of two words.

REFERENCES

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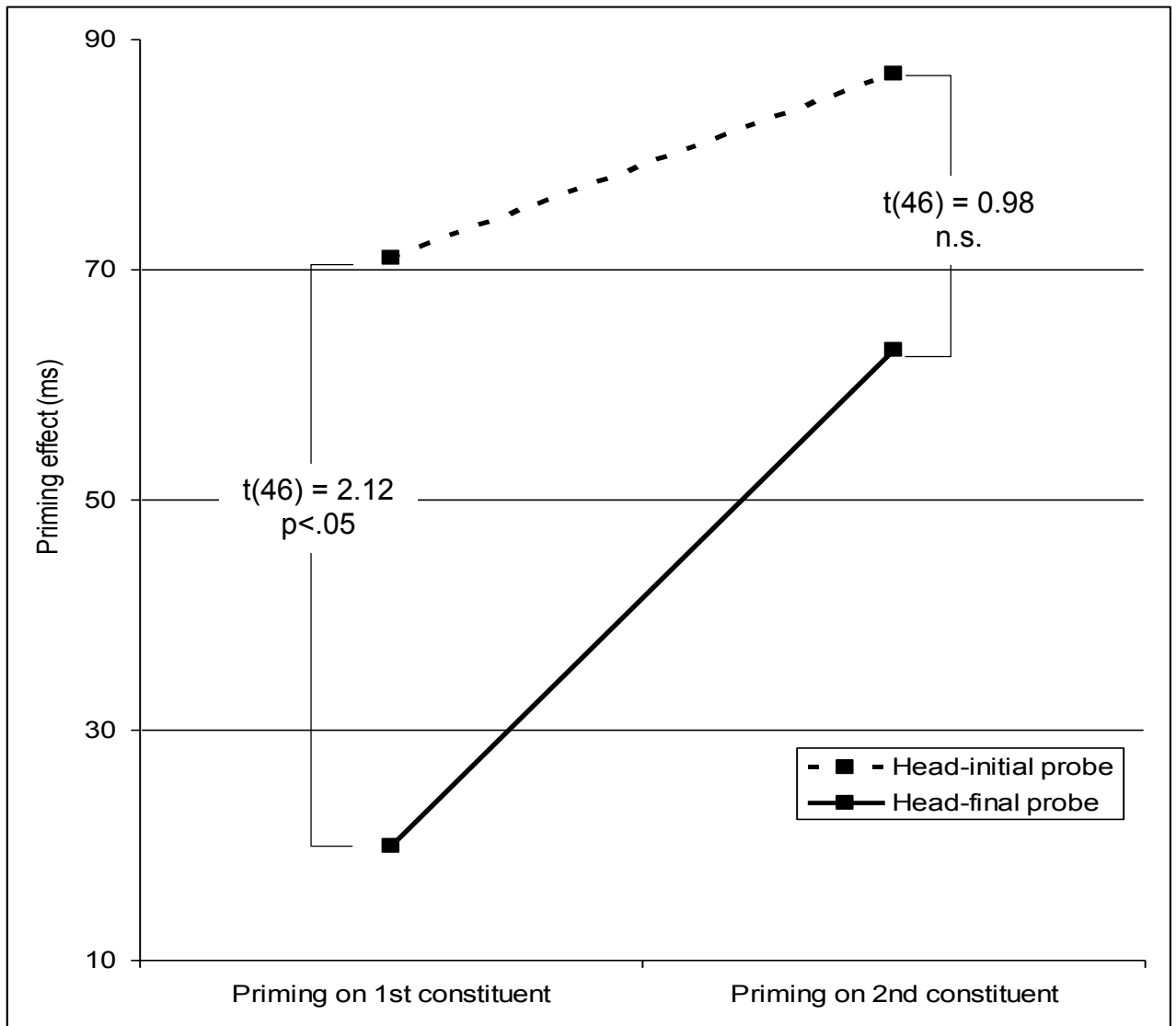


Figure: Priming effect on the first and second constituent of head-initial and head-final probes. The priming effect (Y axis) is plotted against the position of the primed constituent (X axis) and the compound type (head-initial vs. head-final probes). When the first constituent is primed, the facilitation is significantly larger with the head-initial compounds (i.e., when the head is primed). This does not hold when the second constituent is primed: in this case, no difference emerges between head-initial and head-final compounds (i.e., priming the head vs. priming the modifier).

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