

Metrical structure and sentence comprehension: heads and boundaries in Italian

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Italian is a SVO language, but its word order is quite flexible. Subjects can appear either preverbally or postverbally, and focused objects can be fronted without involving a resumptive clitic. It has been proposed that *Rightmostness* (of the prosodic heads of phrasal level) in Italian is inviolable and postfocal discourse-given elements undergo extraposition to become prosodically invisible [1,2]. In this paper, we address the metrical representation of postfocal constituents in Italian and the role of boundaries and heads in sentence comprehension.

A **production experiment** was carried out to assess the metrical status of postfocal constituents (10 speakers, 436 utterances). The stimuli (Table 1), presented an infinitival verb in three conditions: A] in a broad focus sentence; P] following a focused subject; H] following a focused subject and preceding a right dislocated (RDed) object. Consider Table 2. In A] and P], the infinitive does not qualify as a phrasal head, since it is phrased along with object. In H], instead, the RDed object calls for an intonational phrase (i) boundary at its left edge, which is cued by pre-boundary lengthening of the final syllable of the infinitive. *Invitare* in H] was thus the rightmost element within a prosodic constituent. We found that because of its structural position, *invitare* in H] is realized with a higher degree of prominence than in P] and A]: the infinitive's 'V shows longer duration, more extreme formant trajectories and higher spectral emphasis. The infinitive in H], though discourse-given, is assigned a phrasal head. These results indicate that postfocal constituents undergo phrasing and postfocal constituents must be headed.

A **comprehension experiment** was carried to investigate the role of postfocal boundaries and heads in sentence comprehension, we carried out an experiment with manipulated stimuli. We lengthened/shortened the duration of the stressed syllable and/or the final syllable of the infinitive to induce/remove the durational cues of the head and the boundary that signal the DP2 as RDed. In Italian, RDed objects (unlike RDed subjects) require clitic doubling. Accordingly, by deleting the clitic from the sentence in H], we obtain a sentence in which the prosodic cues signal DP2 as RDed, but since no clitic occurs, the sentence should be interpreted as O_FVS_{RDed} since only this interpretation is compatible with the prosodic and the morpho-syntactic properties. If we further manipulate the verb by "removing" the head and/or the boundary on *invitare*, the sentence should then be interpreted as $S_FVO_{in situ}$. Analogously, a S_FVO sentence from P] should be interpreted as $O_{CF}VS_{RDed}$ if we induce the occurrence of the head and/or the boundary on the infinitive.

We tested the role of boundaries and heads with a factorial forced-choice experiment in which 65 Italian native speakers identified the subject in 128 manipulated sentences (4 speakers*8 conditions*4 items). The results (see Fig. 2) showed that the mere occurrence of the boundary is not sufficient to shift the interpretation; in contrast the occurrence of a phrasal head is salient enough to reverse it.

We will discuss the consequences of this analysis for a model of prosody and its interface with syntax and information structure. Overall, our findings argue for a central role of prosodic phonology: small duration differences in relevant positions lead to a specific metrical representation and this, in turn, leads to a specific syntactic interpretation.

References

- [1] Szendrői, K. 2002. "Stress-focus correspondence in Italian." *Romance Languages and Linguistic Theory 2000*. Amsterdam: John Benjamins.
 [2] Vallduví, E. 1992. *The informational component*. New York: Garland.

	DP1 (=proper name)	Vfinite	Infinitive	DP2 (=proper name)
A	[Germanico <i>Germanico</i>	vorrebbe invitare	Pierangela]	BroadFocus
P	[Germanico] _F <i>Germanico</i>	vorrebbe invitare	Pierangela	
H	[Germanico] _F la <i>Germanico</i>	vorrebbe invitare	[Pierangela] _{RDed} <i>her.CL would like to invite Pierangela</i>	

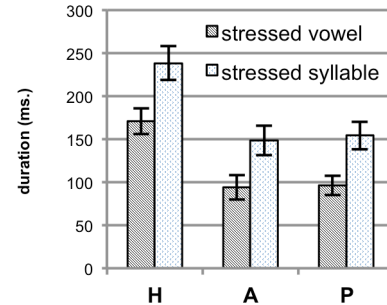


Fig. 1. Production experiment: length of the stressed syllable and vowel of the infinitive.

A BF	{ * } _v
	[*] _l
	(*) _φ (*) _φ Germanico vorrebbe invitare Pierangela
P initial F	{ * } _v
	[*] _l
	(*) _φ (*) _φ [Germanico] _{CF} vorrebbe invitare Pierangela
H initial F, RD _{ed} O	{ * } _v
	[*] _l [*] _l
	(*) _φ (*) _φ (*) _φ [Germanico] _{CF} la vorrebbe invitare [Pierangela] _{RDed}

From	head	boudary	Table 3. Comprehension experiment: stimuli
H]	+head (unmanipulated)	+boundary (unmanipulated)	{ * } _v [*] _l [*] _l (*) _φ (*) _φ (*) _φ [Germanico] _{CF} la vorrebbe invitare Pierangela
H]	+head (unmanipulated)	-boundary (removed)	{ * } _v [*] _l [*] _l (*) _φ (*) _φ (*) _φ [Germanico] _{CF} la vorrebbe invitare Pierangela
H]	-head (removed)	+boundary (unmanipulated)	{ * } _v [*] _l [*] _l (*) _φ (*) _φ (*) _φ [Germanico] _{CF} la vorrebbe invitare Pierangela
H]	-head (removed)	-boundary (removed)	{ * } _v [*] _l [*] _l (*) _φ (*) _φ (*) _φ [Germanico] _{CF} vorrebbe invitare Pierangela

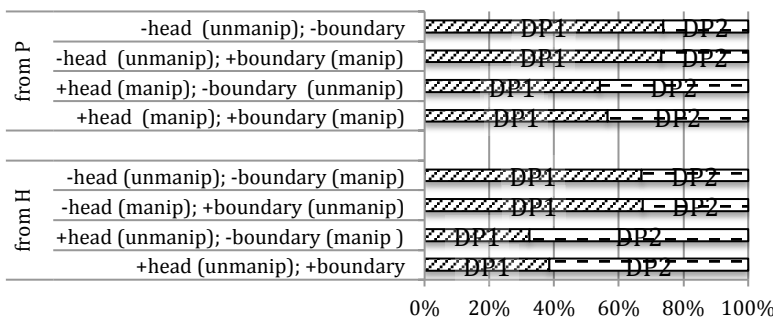


Fig. 2. Comprehension experiment: percent subject identification.