

## **Variation in the encoding of prominence: A view from referential strategies in bilingual children**

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When analyzing the expression of prominence in language, one is faced with a constellation of individual adaptations of prominence (different linguistic phenomena and inter- and intra-individual variation), a fact that challenges the view of prominence as a unifying principle. In the paper we aim to capture individual differences, considering factors that are external to prominence and interact with it. In particular, the study of prominence-management by bilinguals allows to identify linguistic and cognitive principles interacting with prominence and to distinguish them from each other. We consider bilingual reference production and comprehension as case studies for prominence-management. However, our theory of individual differences should apply to other prominence-related linguistic phenomena as well.

Forty Greek-Italian bilingual children (age-range: 8.00-11.8, M: 9.5) – living in Athens and attending a Greek-Italian bilingual school – took part in the study. We designed an experimental battery for the assessment of their prominence-management skills: i) two sentence repetition tasks (SRT) tapping the syntactic representations of the language-specific referential systems; ii) a Theory-of-Mind task (Silent movies, Devine & Hughes, 2013); iii) an updating task (on-line monitoring and manipulation of information); iv) a narrative production task (Schneider et al., 2005) eliciting referring expressions (REs) in Italian; v) a reference comprehension task: the children watched a video and had to associate subtitles in Italian to the actions performed by a character, choosing between two sentences that differed only in the presence of a null vs. full noun.

For the analysis of the narratives, we coded REs for factors affecting the prominence of their referent (Arnold, 2010) – Table 1. Then, we identified referential configurations indicating an overspecific use of REs (e.g., a definite determiner phrase (DEFDP) in subject position when the antecedent is a subject, with no intervening character) and an underspecific use (use of a null when the antecedent is an object, with or without intervening characters). For the comprehension task, we tapped into overspecification and probed how many null forms a child accepted before choosing a full DP.

We distinguished two groups based on the SRT-scores (greater syntactic proficiency in Italian vs. Greek). The analysis of REs in the narrative-task shows that cognitive variables (updating and ToM) affects prominence-management in the two groups differentially. The Greek-dominant group tends to use overspecific REs in Italian, as an effect of unbalanced language proficiency, while the cognitive variables did not motivate variation. In the Italian-dominant group, we found instances of both underspecific and overspecific REs. Our analysis reveals that the former are an effect of low ToM and the latter of low updating. In comprehension, the two groups perform similarly: the tendency towards overspecification correlates with low updating.

By differentiating two groups – based on language-specific syntactic mastery of REs – we were able to tease apart linguistic and cognitive factors in prominence-management: if the linguistic options for reference are not fully mastered, cognitive variables make no difference. Moreover, the interaction between language and cognitive variables operates differentially in production and comprehension. Task design and analysis both tapped into how a discourse referent's prominence was assessed by the participants, something that happened independently of the RE actually used. In this way, we are able to show that prominence emerges as the

unifying principle for the observed variations involving language, cognition and mode.

	CHARACTER	TYPE_RE	CLAUSE	GRAMMATICAL_ROLE	CLAUSE_ANT	GRAMMATICAL_ROLE_ANT	CHARACTERS	
<b>CH_002: Italian dominant; ToM (6/12) Updating (14/20).</b>								
il graffino ha detto [the little giraffe said ]								
di non prenderlo [not to take it ]	B	clitic	subordinate	object	--	--	--	
e lei giocava ancora [and she was playing still ]								
e poi è caduto in acqua. [and then fell in the water ]	B	null	main	subjec	subordinate	object	ID	underspecific
<b>CH_033: Italian dominant; ToM (8/12) Updating (6/20).</b>								
La cagnolina era molto arrabbiata [The the doggie was really angry ]								
e il coniglio molto triste [and the rabbit really sad ]	R	full DP	main	subject	--	--	--	
Ehm il coniglio vide un vecchio coniglio [then the rabbit saw an old rabbit ]	R	full DP	main	subject	main	subject	0	overspecific
<b>CH_003: Greek dominant; ToM (8/12) Updating (6/20).</b>								
Però se ne è andato il palloncino [But went away the balloon ]								
E la cagnolina si è arrabbiata tanto con lui [and the doggie got angry very much with him ]	D	full DP	main	subject	--	--	--	
E poi la cagnolina si è arrabbiata e urlava [and then the doggie got angry and screaming ]	D	full DP	main	subject	main	subject	ID	overspecific
<b>CH_013 Greek dominant; ToM (2/12) Updating (19/20)</b>								
E lui impaurito non sapeva [And he scared didn't know ]	R	overt pron	main	subject	--	--	--	
che cosa dirle [what to tell her ]								
Il coniglio vide un vecchio coniglio con tantissimi palloncini [the rabbit saw an old rabbit with many balloons ]	R	full DP	main	subject	main	subject	ID	overspecific

**Table 1:** Excerpts from narratives and analysis of (a selection of) referring expressions. We coded each RE for its features (corresponding referent, type, syntactic position – main or subordinate clause – grammatical role – subject or object), features of its antecedent (syntactic position, grammatical role of the antecedent) and number of intervening characters between the RE and its antecedent, of same (S) or different (D) gender. For each child, the Table reports data concerning dominance (SRT) and the performance in ToM and updating. Among the Italian dominant children, the use of underspecific or overspecific REs is affected by cognitive factors (i.e., relatively low ToM and relatively low updating, respectively). In the Greek-dominant group, the production of overspecific forms depends on low proficiency in Italian and not on cognitive factors: it appears in association with relatively low updating and high ToM in CH\_003 as well as low ToM and high updating in CH\_013.

## References

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