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Psycholinguistic Studies of Modern Greek: L1 Acquisition and L1/L2 Sentence Processing. (= *Essex Research Reports in Linguistics*, 39.)
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Reviewed by C. Anton Rytting (The Ohio State University)

Psycholinguistic research on Greek is hardly unknown, but it still has significant room for growth, particularly in the fields of acquisition of Greek morphology and syntax. This special issue in the Essex series, subtitled *Psycholinguistic Studies of Modern Greek: L1 Acquisition and L1/L2 Sentence Processing*, makes a promising contribution to advancing both of these subfields of Greek psycholinguistics, and it is a fine sample of good things coming from Essex. Note that two of these papers have pre-publication status, and a version of the last paper will appear in *Studies in Second Language Acquisition* 25.501–528 (2003).

First-language acquisition of Greek morphology and syntax naturally owes a great debt to work over the past twenty years by Demetra Katis (e.g. Katis 1992) and Ursula Stephany, particularly Stephany's (1997) contribution to the CHILDES database (MacWhinney & Snow 1985). The first two articles, both by Theodore Marinis, make good use of this corpus in investigating aspects of the acquisition of syntax, within the framework of parameter-setting models of L1 acquisition.

Greek sentence processing, however, and particularly on-line studies of Greek second-language processing, seems to be something altogether new. The last article, by Despina Papadopoulou and Harald Clahsen, undertakes a comparison of the on-line parsing mechanisms of native and non-native speakers of Modern Greek (MG) with regard to the attachment strategies used in syntactic ambiguous sentences. It is indeed just the tip of the iceberg, as a number of related studies have recently become available from Clahsen's lab, pushing this work even further.

In this review, I treat the three articles in turn, and then comment briefly on recent work that draws on insights from these papers.

Article 1: "Acquiring the left periphery in Modern Greek DP"

Applying the notion of an easily-learned Core Domain and more difficult Left Periphery (e.g. Rizzi 1997) to Determiner Phrases, M[arinis] claims that NPs (bare noun stems) should be acquired first, followed by inflected nouns and canonical *possessum* > *possessor* phrases, which constitute the Core Domain of Greek DPs. Later the Left Periphery is acquired: 'reversed' *possessor* > *possessum* phrases, Determiner Spreading (DS), and Clitic Left Dislocation (CLLD) on verb phrases.

M tests these claims by examining data from four children from the Stephany (1997) Corpus, augmented with the Christofidou Corpus (Christofidou & Stephany 1997). The predictions are confirmed generally for each of the children for which the relevant data is available, barring some inter-child inconsistency in the acquisition of CLLD. Of course, M recognizes that consistency of observational data with a theory is not sufficient to prove the theory. He suggests an alternate explanation for the acquisition order observed: the pragmatics appropriate to the *possessor* > *possessum* ordering, DS, and CLLD may be more difficult to learn than those of the simpler structures.

However, M seems to overlook a still simpler explanation: the relative frequency of child input. If relative frequencies of the relevant structures in the

corpora's child-directed speech (CDS) explain the acquisition order, then other explanations may be unnecessary. M has already hinted at pragmatic complexity as an alternate explanation, and *a priori* one would expect pragmatically marked constructions to show up less frequently in CDS (particularly the *possessor* > *possessum* ordering; see Holton et al. 1997:264). A good test case for the input-frequency explanation would be the input frequency and acquisition timing of the genitive plural across inflectional classes. While genitive plural forms are no less frequent than expected in written MG corpora (see Sims 2003), and no more 'complex' than any other case-number combination, they are reported to be avoided in spoken MG (Holton et al. 1997:264) and hence predicted to be infrequent both in CDS and child speech.

Article 2: "Subject-object asymmetry in the acquisition of the definite article in Modern Greek"

In MG, articles are required in argument positions, even for proper names. Applying Chierchia's (1998) *Nominal Mapping Parameter*, M[arinis] asserts that MG is parameterized [-arg, +pred], and that proper names and kinship terms provide an unambiguous 'trigger' for [-arg] for L1 learners. However, determiners are 'more mandatory' for subjects than for objects, for there are occasions (such as after verbs of accomplishment, certain common verbs, and pre-verbally when focused) where bare singular count nouns (BSCNs) are also licensed. This asymmetry complicates acquisition of the single parameter.

Using the Christofidou Corpus (Christofidou & Stephany 1997), consisting of 69 transcribed, weekly interviews of a single child (age 1;7–2;8), M traces the acquisition of determiners, the [-arg] parameter, and particularly the subject-object asymmetry. M identifies four stages:

1. (1;7) pre-acquisition [no articles used at all];
2. (1;8–11) lexical [use of articles with specific words only];
3. (2;0–5) productive [optional use of articles with many words];
4. (2;6–8) acquired [use of articles > 90% in obligatory contexts].

With the exception of the lexical stage, all of these match M's predictions (and the lexical stage does not specifically contradict any prediction). This oversimplification is corrected at 2;3, when the child starts using BSCNs with a larger number of words and starts using determiners optionally after the verbs in question. This is shortly before the use of determiners in mandatory object

positions exceeds 90% (M's cutoff point for full acquisition). For subjects, the 90% mark does not come till 2;7. However, use of 'grammatical' BSCN objects remains very frequent and subject to fluctuation.

These findings are interesting so far as they go. However, since they are based on just one child, it is not clear either how statistically significant M's findings are, or the degree to which we would expect them to generalize to other Greek-learning children. Some of the details that M claims, such as a cessation of article use (called a 'U-shaped curve') at (1;11.10–19) — just as the lexical approximation gives way to productive usage — seem difficult to distinguish from random noise in the relatively sparse corpus data. Still, despite these deficiencies, the study breaks new ground in L1 acquisition of MG syntax.

Article 3: "Parsing strategies in L1 and L2 sentence processing: A study of relative clause attachment in Greek"

P[apadopoulou] & C[lahsen] explore differences between L1 & L2 on-line sentence processing with regard to attachment strategies. L1 attachment strategies have been explored in a number of languages. The results of these studies show that theta-role bearing prepositions like "with" bias to low attachment in all languages tested, but genitive case and "of" show language-specific differences, with English, Swedish, Arabic, etc. showing low attachment, but Spanish, German, Russian, etc. showing high attachment bias.

P & C replicate the general finding of low attachment bias for *me* "with" in both L1 and L2 MG speakers, consistent with Frazier & Clifton's (1996) Construal theory (among others). They also find L1 speakers strongly biased to high attachment for the genitive construction [$DP_1 DP_{2,GEN} + RC$]. P & C argue that this is consistent with the *Recency* + (language specific) *Predicate Proximity* model (e.g. Gibson & Schütze 1999), but not with *Attachment Binding* (e.g. Hemforth et al. 2000). The *Tuning Hypothesis* (e.g. Mitchell et al. 1995) cannot be properly evaluated due to lack of suitably tagged corpus data. However, L2 speakers show no such bias for the genitive, suggesting that while L2 speakers use broad strategies such as Construal, they do not learn or import language-specific strategies such as Predicate Proximity, even when their own L1 shares the same biased strategy.

P & C suggest that the L2 finding is evidence against the Tuning Hypothesis, but they do not make a strong case for this. This is a shame, for the Tuning Hypothesis, while admittedly harder to test than the others (requiring a

properly tagged corpus from which to extract statistics) is intriguing from the point of view of statistical learning mechanisms. A related hypothesis relies not on ‘tuning’ for RC attachments, but for prosody patterns in disambiguating these sentences. Fodor’s (2002) Implicit Prosody Hypothesis claims that the typical use of prosody in a language carries over even into the written domain. Jun (2003) has already built on P & C’s work in exploring L1 use of prosody in RC disambiguation, and has shown a connection between the two that accounts also for native speaker variation.

It is possible that prosody is acquired and processed very differently by L2 speakers, and that prosodic cues (or in the case of written stimuli, projected ‘default’ readings), rather than parameterized strategies, differ between L1 and L2 speakers of MG. However, given the solely written design of the experiments, this cannot be adequately tested here. Future work integrating this research with Jun (2003) would be welcome indeed.

Conclusion

Given the relative sparseness of psycholinguistic work on Modern Greek language acquisition, it is welcome to see these promising additions to the literature. Each of the papers makes a contribution to both acquisition issues and Modern Greek linguistics. Expanded versions of these works would be quite at home with other works in L1 and L2 acquisition, particularly works studying similar phenomena in other languages. Indeed, P & C’s research has already begun to fulfill its promise, as evidence by its citation both in Jun (2003) and in additional (soon-to-be-published) research (e.g. Papadopoulou & Clahsen 2003).

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Phoevos Panagiotidis. *Pronouns, Clitics and Empty Nouns*. (= *Linguistik Aktuell/Linguistics Today* 46.) Amsterdam & Philadelphia: John Benjamins, 2002. 214, x pages. ISBN 1 58811 103 2. \$95.00.

Reviewed by Elena Anagnostopoulou (University of Crete)

1. The main proposal

The main claim of *Pronouns, Clitics and Empty Nouns* is that all pronominal types, e.g. demonstratives, personal pronouns, strong, weak, and clitic pro-