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## Concrete contexts of morphosyntactic change: Evidence from Later Medieval Greek.

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# Concrete Contexts of Morphosyntactic Change: Evidence from Later Medieval Greek

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## 1 Introduction

During the past decade the work of Kroch and his students has put forth the proposal that the contexts of morphosyntactic change are abstract in nature. For example, in Kroch (1989) the rise of periphrastic *do* is explained as the consequence of the loss of V-to-I raising for main verbs between Middle and Modern English. In Santorini (1993) there is a discussion of the change in the order of constituents in Yiddish as the result of the original INFL-final phrase structure being replaced by an INFL-medial structure. In Fontana (1993) the change from second position clitics in Old Spanish to preverbal clitics in Modern Spanish is explained as the consequence of a series of several abstract grammatical changes, the most significant of which is the loss of the Verb-second status of the language. Pintzuk (1995) discusses the surface position of the finite verb in Old English main and subordinate clauses as the result of grammatical competition between an INFL-medial and an INFL-final underlying structure. Kroch himself has re-enforced his arguments in articles published in (1994) and (1997). The thrust of this position can be seen in the following quote from Kroch (1989: 201):

Our results show that the grammatical analysis that defines the contexts of a change is quite abstract. We see that the set of contexts that change together is not defined by the sharing of a surface property, like the appearance of a particular word or morpheme, but rather by a shared syntactic structure, whose existence can only be the product of an abstract grammatical analysis on the part of the speakers.

In this article, however, I present evidence from the history of Greek that does not conform to this proposition. Instead, the facts concerning the change in the position of weak object pronouns in Later Medieval Greek (LMG) show that surface-based morphosyntactic change is also possible.

## 2 Weak object pronoun placement in LMG

In the demotic texts of LMG (11<sup>th</sup>–16<sup>th</sup> century), weak object pronouns appear either before or after the verb, as can be seen in (1)–(4).

- (1) *pale sas lalo*  
 again you–IO pl WP say–1sg Pres  
 ‘again I say to you’ (*Moreas* 715)<sup>1</sup>
- (2) *palin leyo sas*  
 again say–1sg Pres you–IO pl WP  
 ‘again I say to you’ (*Digenēs* 1750)
- (3) *o ðuks tus apoðexθikēri*  
 the duke–Nom sg they–DO sg WP receive–3sg Past  
 ‘the duke received them ...’ (*Phlōrios* 304)
- (4) *kj o vasilefs eðexθin tus*  
 and the king–Nom sg receive–3sg Past they–DO sg WP  
 ‘and the king received them ...’ (*Phlōrios* 939)

It has been recognized for almost 15 years now that this phenomenon is quite similar to what is known as the Tobler-Mussafia-law in Old Romance languages, and that, at least from a descriptive perspective, the position of the weak pronoun seems to correlate to the nature of the element that immediately precedes the verb pronoun (or pronoun verb) complex. A list of these elements and their effect was first compiled by Rollo (1989), and Mackridge (1993). Each of these accounts, however, suffers from certain methodological problems, in so far as the collection and interpretation of the data is concerned. Rollo relies heavily on Cypriot data, while Mackridge’s focus in the 1993 article is the epic poem of *Digenēs Akritēs*. Pappas (2001a), on the other hand, is a variationist study of the phenomenon, based on a database of 8,272 tokens of weak pronoun placement found in 35,000 lines of text from some 30 works. The works were selected according to the philological analysis of Beck (1993) and Horrocks (1997) and provide the best representation of the vernacular of the period, an important distinction since there are also many texts which were written in an archaizing style.

Figures 1a and 1b present a summary of the most important findings of the study. As Figure 1a indicates, the pronoun appears categorically in post-verbal position in three environments.

<sup>1</sup> A list of all primary sources can be found in Pappas (2001a).

- When the verb is clause-initial, as in example (5).
- When the verb is immediately preceded by a co-ordinating conjunction, as in example (6).
- When the verb is immediately preceded by a reduplicated object, as in example (7).

(5) *yelas tus ke ðjavenis*  
 laugh-2sg Pres they<sub>IO</sub> pl WP and pass-2sg Pres  
 'you laugh at them and pass by' (*Poulologos* 304)

(6) *ke exases ta*  
 and lose-2sg Past they-DO pl WP  
 'and you lost them' (*Poulologos* 121)

(7) *ton zomon ekxei ton*  
 the juice-Acc sg pour-3sg Pres it-DO,sg WP  
 'the juice, he pours it' (*Ptōkhprodromos* III 300)

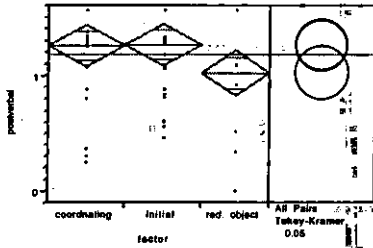


Figure 1a: Postverbal placement

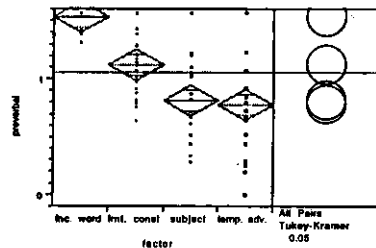


Figure 1b: Preverbal placement

Figure 1b illustrates the remaining two major patterns. First there are those environments in which the pronoun appears in preverbal position almost categorically:

- When the verb is immediately preceded by what I have pre-theoretically labeled 'function word', including, subjunctive, hortative and negative markers, wh-phrases and complementizers, as in example (8).
- When the verb is immediately preceded by a 'fronted constituent', a cover term for a prepositional phrase, a non-temporal adverb, or a non-reduplicated direct or indirect object as in examples (9) and (10). These constituents canonically appear after the verb.

(8) *yja na to ksekðikisi*  
 in order.to it-DO sg WP avenge-3sg Pres  
 'in order to avenge it' (*Rimada* 84)

- (9) kato tin apoθeti  
 down she-DO sg WP set-3sg Pres  
 'he sets her down' (*Digenēs* 937)
- (10) spaθean mian me eðoken  
 sword-Acc sg one-Acc sg I-IO sg WP give-3sg Past  
 'he hit me once with the sword' (*Digenēs* 1248)

Second, there are those contexts in which the pronoun appears to be unconstrained with respect to its placement, a situation which arises when the verb is immediately preceded by a subject, as in examples (11) and (12) or by a temporal adverb, as in examples (13) and (14).

- (11) i γitones su m ipasi  
 your neighbors-Nom pl I-IO sg WP tell-3pl Past  
 'your neighbors told me' (*Katalogia* 102)
- (12) to prosopon su to γlikin ekatafloγise me  
 your face-Nom sg sweet-Nom sg inflame-3sg past I-DO  
 'your sweet face has inflamed me' (*Katalogia* 118)
- (13) tora me ðiðis  
 now I-IO sg WP give-2sg Pres  
 'Now you give me' (*Phlōrios* 1152)
- (14) efθis esusumjazi ton  
 immediately recognize-3sg Pres he-DO sg WP  
 'he recognizes him immediately' (*Phlōrios* 1415)

In addition to these major patterns of distribution, there are further observations which complicate the picture. The most important of these are:

- As in (15) and (16), the archaic negative marker /u/ 'not' is associated with postverbal placement while the innovative /ðen/ is associated with preverbal placement.
- Although preceding reduplicated objects are associated with postverbal placement (cf. ex. 7), there is a particular construction in which the adjective /olos/ 'all', when reduplicated, is associated with preverbal placement of the pronoun, as seen in example (17).

- (15) uk emaxen to  
 not learn-3sg Past it-DO sg WP  
 'he did not learn it' (*Belisarios* 269)

- (16) ðen tus esozen  
 not they-DO sg WP suffice-3sg Past  
 'it was not enough for them' (*Digenēs* 248)
- (17) tes xores ... oles tes afanizi  
 the-countries ... all them destroy-3sg Pres  
 'my countries all around, all he destroys them' (*Rimada* 1308)

Finally, it must also be noted here that these results hold true only when the verb form is finite, either in main or subordinate clauses. The pattern of weak pronoun placement with the infinitive, the gerund or the imperative is even harder to discern, partly because the number of tokens is too small in these cases. For example, the results in Table 2 show that even though there is variation between preverbal and postverbal placement of the weak pronoun when the verb form is imperative, this pattern of distribution is clearly different from the one observed with finite verb forms (cf. Pappas 2001b).

Envrn.	Preverb Env.		Postverb Env.		Neutral Env.	
	PRE V	PST V	PRE V	PST V	PRE V	PST V
TOTAL	15	17	2	263	8	25

Table 1: Raw counts concerning the interaction between imperative verb form and pronoun placement.

### 3 Discussion

#### 3.1 The absence of a descriptive generalization

This pattern of weak pronoun placement in LMG cannot be captured by a descriptive generalization. This becomes very clear when one considers the explanations that have been put forward concerning this problem and the very limited success that these have had (cf. Philippaki-Warbuton 1995, Horrocks 1997, and Condorabdi and Kiparsky, to appear). There are three sources of difficulty:

- Syntactic accounts, which rely on some Verb-movement mechanism to account for a change in the position of the pronoun, are hard pressed to define the characteristic that unifies the category of elements which I have labeled 'function words', since this group contains both complementizers and *wh*-phrases.
- Phonological accounts, which aspire to make use of Halpern's (1996) Prosodic Inversion, have to assume that the pronouns are enclitics. This is a controversial assumption since it seems more possible that the pro-

nouns were always attached to the verb, either as proclitics or as enclitics.

- For both types of accounts, the fact that pronoun placement is unconstrained in the environment of preverbal subjects and, especially, preverbal temporal adverbs, is an intractable problem.

This unavoidable conclusion is probably disturbing for those working in synchronic analysis, but it should not surprise historical linguists as much. In fact, even within the boundaries of Kroch's proposal, the suggestion can be made that our inability to account for the data with one generalization is a result of competition between two (at least) abstract grammatical options within a subcomponent of the grammar. A different perspective, the one that Kroch specifically has contradicted in his research, would view this variable system of pronoun placement as the result of analogical change, during which the new pattern (whatever we decide this is) spreads from context to context propelled by surface or concrete parameters and not abstract ones. How can one decide which of the two is a more probable hypothesis for the facts of LMG?

Before tackling this question, a clarification needs to be made. As Kroch is quite well known for his proposal of the Constant Rate Effect, i.e. that a particular change spreads within every context at a constant rate, some have mistakenly regarded the demonstration of CRE within the discussion of a particular case of morphosyntactic change as proof of the abstract nature of the mechanism that is the cause of that change. However, and as Kroch himself maintains (1997: 143), the crucial evidence in establishing the abstract nature of the context of change is not found in the logistic transformation but in the presence or absence of the change in various contexts.

In other words once we adopt the logistic model we can only choose between the two opposed interpretations if we have information in addition to the relative frequencies of the innovative form in the different contexts. As mentioned above, in the present case Ellegård gives good evidence that *do* appeared simultaneously in all contexts; and this evidence, in conjunction with the CRE effect, leads to the conclusion that there is no spread of *do* from context to context over time.

Thus, in the case of LMG, the pertinent question is whether or not the pattern of variation in pronoun placement is the result of a change that arose simultaneously in all contexts or if it spread from one context to another. Determining the answer to this question is not a straightforward task. The main challenge lies in the fact that the bulk of textual evidence comes to us



from documents of uncertain chronology. Since there is no direct way to track the development of the change, I have tried to deduce it based on the facts presented below.

### 3.2 Development of the change

We can begin by looking at weak pronoun placement in the Late Hellenistic Koiné and Early Medieval Greek (4<sup>th</sup>–10<sup>th</sup> century). According to Horrocks (1990, 1997), the textual records of this era show that the pronouns appear in postverbal position as in example (18). Thus, the pattern seen in Later Medieval Greek must have occurred via a change in the language which gave rise to preverbal pronoun placement.

- (18) tu: ynu u eyrapse: my  
 the wine-Gen sg which-Gen sg write-2sg Past I-Dat sg  
 'the wine of which you wrote me' (*P. Oxy.* 1220—Horrocks 1990: 44).

The next step in this argument involves the evidence found in two documents from the island of Cyprus, which were written during the 14<sup>th</sup> and 15<sup>th</sup> centuries, but are most likely indicative of the state of vernacular Medieval Greek around the period 8<sup>th</sup>–10<sup>th</sup> century (cf. Pappas 2001a for a justification of this claim). These documents differ from those from the rest of the Byzantine territories in that they show a very different pattern of pronoun placement. This difference is clearly illustrated in Table 2 and in examples (19)–(24), and can be summarized as follows:

- The pronoun appears postverbally in all situations except when the verb complex is immediately preceded by a 'function word'.

Text→ Factor↓	<i>Makhairas</i>		<i>Boustrōnios</i>	
	PRE V	POST V	PRE V	POST V
'initial'	0	103	0	105
'reduplicated object'	0	9	0	6
'function word'	43	2	58	1
'fronted constituent'	1	10	0	4
'subject'	0	23	0	6
'temporal adverb'	1	4	0	3
TOTAL	45	166	58	133

Table 2: Pronoun placement in the Cypriot Chronicles.

- (19) *ke* *esfikse* *ton*  
 and compell-3sg Past he-DO sg WP  
 'and he compelled him' (*Makhairas*, §313)
- (20) *ke kinos* *eðoken* *ton*  
 and that one-Nom sg give-3sg Past he-DO sg WP  
 'and that one gave him' (*Makhairas*, §315)
- (21) *o kuvernuris* *mon-* *eminisen* *to*  
*afta*  
 The regent at once transmit-3sg Past it-DO sg WP  
 'the regent at once sent word' (*Makhairas*, §313)
- (22) *kata to paleon siniθin* *eðoken* *tu* *ton*  
 by the old custom gave-3sg he-IO sg he-DO sg WP  
 'according to the old custom he gave him to him' (*Makhairas*, §313)
- (23) *ta xartia* *ta* *tu* *eðoken*  
 the papers-DO which-Acc pl he-IO sg WP give-3sg Past  
 'the papers which he gave to him' (*Makhairas*, §313)
- (24) *na* *tu* *ðosun* *thanato*  
 Subjun. marker he-IO sg WP give-3pl Pres death-DO sg  
 'let them give him death' (*Makhairas*, §313)

If indeed my suggestion that the Cypriot data reflect an earlier state of Medieval Greek than what is found in Later Medieval Greek texts is correct, then they are a clear indication that the change in pronoun placement did not appear simultaneously in all contexts. As a consequence, it is impossible to maintain that the change involves competition between different abstract grammatical options, as Kroch would have it.

### 3.3 A surface-based model of change

As mentioned earlier, an alternative to Kroch's position is one in which the variation is viewed as the result of an ongoing change that spreads from one context to another. However, any account that refers to analogical change as an explanation needs to establish two things: the model upon which the analogical process was based, and the existing surface similarities that allowed speakers to extend the model to other contexts. The subjunctive marker /*na*/ appears to be the most likely candidate as the source of the change from postverbal to preverbal pronoun placement. Unlike other elements which introduce subordinate clauses in Medieval Greek, /*na*/ is in a sense bound to the verb since only the negative marker /*min*/ and the weak pronouns can appear between it and the verb. Furthermore, as the phono-

logical distinction between the indicative and the subjunctive was lost due to regular sound changes, /na/ seems to assume this role of distinguishing feature and, consequently, also assumes the unique quality of finely shading the mood of the verb into subjunctive, hortative, conditional or even future meanings (cf. Joseph 1981, 1983, Horrocks 1995, 1997: 167, 208-211, 230). These two characteristics, and especially the second one, could mean that in the /na/-verb cluster the verb is no longer the head (see Figure 2). Thus, if one accepts Horrocks' description of Early Medieval Greek pronoun placement as being post-head, then the preverbal placement of the pronoun when the complex is preceded by /na/ can be explained as an instance of canonical post-head placement. What has changed is that the head of the VP is not the verb, but /na/. Due to the greater frequency of /na/ constructions in the language (cf. Pappas 2001a, chapter 4) this pattern would have gained prominence rather quickly.

Early Medieval			Later Medieval	
/na/	[verb...]	→	[na	verb]
conjunction	Head		Head	

∴ /na/ verb pronoun > /na/ pronoun verb

Figure 2: Schema for the reanalysis of /na/

If one makes the reasonable assumption that the string /na/-pronoun-verb was the model that influenced the preverbal placement in other contexts, there remains the question of how it came to be the norm when negative markers, complementizers, and *wh*-expressions immediately preceded the verb complex, as in the Cypriot data. One very plausible explanation can be based on Kathol's (2000: 62-3) account for the appearance of verbal morphology on complementizers and fronted *wh*-expressions in embedded questions in certain Dutch and German dialects. Kathol proposes that the appearance of verbal morphology on the complementizers and *wh*-expressions is due to analogical change, and that the link upon which the analogical extension travels is the linear position of the elements in question.

... the emergence of special morphology on complementizers has to be thought of as an analogical process in which the shape alternations seen with verbs in frontal position end up being associated not with particular syntactic categories, but rather with the *linear* position itself ... these shape alternations that originally only made

proper sense as part of verbal morphology ... get carried over to other elements occupying the same linear position.

A similar case can be made for the spread of preverbal pronoun placement between Early and Later Medieval Greek. Since the negative markers /ðen/ and /min/ also become attached to the verb, it is most likely that negative constructions were the next step in the change to preverbal placement. From this stage it is foreseeable that the pattern would be generalized to include other elements that were both similar in shape (i.e., short) and typically appeared immediately before the verb. This is the pattern found in the Cypriot chronicles. A further development would have led to the preverbal placement of pronouns when the complex was preceded by 'larger' elements as well. The final step would have been the preverbal placement of pronouns in all situations, even when the verb was clause-initial. It is hypothesized here that the alternation in pronoun position between affirmative and negated main clauses (e.g., /ðino to/ 'I give it' vs. /ðen to ðino/ 'I do not give it') must have played a crucial role in this final extension of preverbal pronoun placement.

This proposal also accounts for the fact that imperative constructions are predominantly associated with postverbal placement (cf. Table 1). Since imperatives tend to be in clause-initial position, I presume that this gave the postverbal placement pattern much more prominence in these circumstances than in cases where the verb-form was finite (indicative or subjunctive). It is equally important that, in contrast to these latter verb forms, the imperative cannot be negated so there would have been no alternation between preverbal and postverbal imperative constructions. The lack of a robust preverbal pronoun pattern must have led to the weaker presence of preverbal pronouns with imperative verb forms. Ultimately the change never took hold; in most dialects of Modern Greek, pronouns are always in postverbal position with imperatives.

The above analysis is a rather brief outline of the Pappas (2001a) proposal for the variation in weak object pronoun placement in LMG. My point about the existence of surface-based contexts of morphosyntactic change can be strengthened, however, by examining a much smaller set of data within this larger issue. As mentioned above, one of the more noticeable exceptions to the patterns described in section 2 is the placement pattern of doubling pronouns when the reduplicated element is the adjective /olos/ 'all'. A doubling pronoun or reduplicated object construction is a construction in which the object (direct or indirect) is repeated by a coindexed weak pronoun, as in example (25). In figure 1a (repeated here as 3a) these constructions are depicted as following the same pattern as the other contexts in which pronoun

placement is categorically postverbal. This, however, is the pattern that we get only after the /olos/ constructions are removed from the database. This was done for good reason since, in 24 of 38 available tokens of reduplicated /olos/, the pronoun is preverbal, while for the other 80 tokens of doubling pronouns, only 15 are preverbal. As figure 3b and Table 3 clearly show, there is interaction between /olos/ and the placement of doubling pronouns.

(25) to diaðiman perni to  
 the crown-DO sg take-3sg Pres it-DO sg WP  
 'The crown, he takes it' (*Belisarios*, 42).

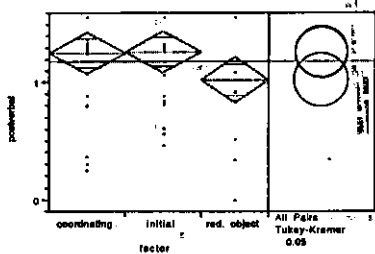


Figure 3a: Reduplicated object constructions without /olos/

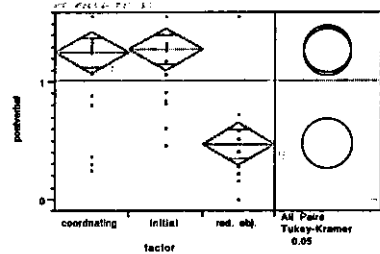


Figure 3b: Reduplicated object constructions with /olos/

The most probable explanation for the distinction of the pattern with /olos/ is the existence of a partitive construction in which the weak pronoun is not an argument of the verb but a possessive pronoun attached to the adjective. The only time this ambiguity can arise is with the /tus/ form of the pronoun, which can be either a genitive or an accusative plural. Thus, in example (26) /tus/ functions as a possessive pronoun to /olos/, yielding the meaning 'all of them', while in (27) it is an argument of the verb and is interpreted as 'they will kill them'. The difference between the two constructions in both form and meaning is very slight, and is indicated mostly by accent markings in the texts.

Red. Object	with /olos/		without /olos/	
	PRE V	POST V	PRE V	POST V
TOTAL	39	79	15	65

Table 3: Interaction between the presence of /olos/ and pronoun placement.

- (26) ke olus tus enikise  
 and all-DO pl they-PS pl WP win-3sg Past  
 'and he defeated all of them' (*Rimada* 322)
- (27) olus tus θελun kopsi  
 all-DO pl they-DO pl WP want-3pl Pres cut-Inf.  
 'all; they will kill them' (*Tokkoi* 626)

Based on this evidence, it is reasonable to hypothesize that in constructions such as (26), the weak pronoun /tus/ became reanalyzed as an object pronoun, and that this gave rise to a new pattern in which the doubling pronoun of /olus/ was associated with preverbal pronoun placement. The crucial aspect of this reanalysis is that the possessive pronoun is of the same gender, number and case as the adjective, as indeed would have been the case for a weak object pronoun that is coindexed with /olos/. Thus, the shift to doubling pronoun constructions with /olos/ in which the pronoun is placed preverbally was based on a four-part analogy—illustrated below—which gave rise to examples like the one seen in (17).

olus	:	tus	::	oleś	:	X
				∴		X = tes

This exceptional pattern of pronoun placement provides further evidence that syntactic change can proceed on a context by context basis, and furthermore shows how certain surface similarities can favor the spread of change within specific subcomponents of a grammar.

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Department of English  
 Texas A&M University  
 College Station, TX 77843-4227  
 pappas@english.tamu.edu