

Proceedings of the  
Fifteenth Annual UCLA  
Indo-European Conference

Los Angeles  
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Journal of Indo-European Studies, Vol. 32, No. 1  
2004

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Journal of Indo-European Monograph Series, No. 49  
Institute for the Study of Man  
Washington, DC  
2004

## Null Objects in Latin and Greek and the Relevance of Linguistic Typology for Language Reconstruction

Silvia Luraghi  
Università di Pavia

Omission of referential direct objects is common in most ancient Indo-European languages, but virtually absent in others. Based on previous research on Latin and Greek, this paper aims at showing that the syntax of Null Objects (NOs) can be better understood in connection with other types of anaphoric devices (pronouns, clitics), and that it must be described in relation to the syntax of other null arguments (notably Null Subjects [NSs]). Typological comparison allows interesting generalizations on both types of null arguments, as well as provide further evidence for the reconstruction of PIE NOs.

### Introduction

The existence of NOs in ancient Indo-European languages is often taken for granted. That referential direct objects could be omitted is common knowledge to whoever has experience working with languages such as Latin, Greek, or Sanskrit; however, little research has been devoted to the conditions under which NOs occur. As a result, one often has the impression that NOs occur randomly, or at best that their occurrence is always conditioned by pragmatic or stylistic factors. In a number of papers devoted to NOs in Latin and Greek (see Luraghi 1997, 1998a, and 2003), I have tried to show that this is not the case. In the present paper, I would like to set the issue of NOs in a broader framework and show how NOs relate to other types of pronominals. Through typological comparison, I will show that NOs are a quite widespread phenomenon across languages, that they undergo a number of syntactic restrictions, both in the ancient Indo-European languages as in other typologically unrelated languages, and that their occurrence crucially depends on the type of pronominal system of each specific language. Furthermore, I will argue that the conditions under which NOs occur are better understood if one also takes into account the conditions

of occurrence of of NS, rather than study them in isolation. Being two types of null arguments, NOs and NSs may be expected to occur in similar syntactic conditions, as they indeed often do. Finally, I will address the question of reconstructability of NOs in Proto-Indo-European, on the evidence of the Indo-European languages and of typological comparison.

### 1.0 What are Referential NOs?

Not all occurrences of a transitive verb without a direct object can be taken as occurrences of referential NOs; as is well known, many transitive verbs can be used intransitively, and denote an activity, rather than an achievement.<sup>1</sup> Consider for example the following occurrence of the verb 'eat' in English:

(1) *What's the boy doing? he's eating.*

In such cases we may argue that, based on our knowledge of events, the boy must be eating something, but from the point of view of syntax there is no need to presuppose that a direct object (DO) has been left out. I am not going to survey these types of occurrence in this paper.

Referential NOs can be definite, as in (2), or indefinite as in (3). Since English does not allow definite referential NOs in such contexts, one must supply pronominal objects in the English translation:

(2) τοῖον γάρ οἱ πομπὸν ὀπάσσομεν Ἀργειφόντην,  
ὃς ὄξει θι ἥος κεν ἄγων θι Ἀχιλῆϊ πελάσσει.  
αὐτὰρ ἐπὶν ἀγάγησιν ἔσω κλισίην Ἀχιλῆος, οὐτ'  
αὐτὸς κτενέει θι

such a guide will we give *him*, Argeiphontes,  
who shall lead *him*, until in his leading he brings *him* to Achilles.  
And when he shall have led *him* into Achilles' hut, neither shall  
Achilles himself slay *him* ..., (*Iliad* 24.153-156);

(3) *Voco, quaero, ecquid litterarum, Negant. "Quid ais? - inquam - nihilne a Pomponio? Perterriti voce et vultu confessi sunt se accipisse θ<sub>i</sub>, sed θ<sub>i</sub> excidisse in via*

<sup>1</sup> For this terminology, see Van Valin (1990).

I ask (the servants) if they have found any letters. They say they haven't. "What? – I say – not even from Pomponius?" Scared in their voice and in their expression, they confessed they had taken *some*, but had lost *them* on their way, (Cicero, *Epistulae ad Atticum* 2.8).<sup>2</sup>

On the other hand, not all instances in which conditions for the occurrences of NOs are met contain NOs. There are verbs which can be used transitively or intransitively with quite different meanings; with such verbs, the occurrence of NOs is more constrained than with other verbs (see Luraghi 1997 for discussion on this topic). Sometimes, transitive verbs can be used intransitively with some semantic restrictions. For example, the Latin verb *convenire* may mean 'come together and be monovalent' or 'meet' and be bivalent. Possible occurrence of a direct object makes clear which one of the meanings must be activated, as shown in (4):

(4) ... *legatos de deditone ad eum; miserunt. Qui cum eum; in itinere convenissent, ...*

they sent him ambassadors that should negotiate the terms of surrender. When the ambassadors met **him** on their way, ... (Caesar, *de bello Gallico* 1.27.23).

## 2.0 Previous Studies on NOs in Latin and Greek

In the last two decades, NOs in different languages have been studied mostly in the framework of Government and Binding (GB) theory. Emphasis has been put in particular on the nature of NOs (null variables or null pronouns), but it is very hard to find descriptions of the conditions that constrain their occurrence, because examples are mostly given and discussed out of context.<sup>3</sup>

The first study entirely devoted to NOs in Latin is Johnson (1991), which deals with the evolution from Latin to Romance and the disappearance of NOs. Johnson's work is certainly valuable, but it sometimes fails to keep referential NOs consistently separated from intransitive uses of transitive verbs, so some of the changes described should better be regarded as changes in transitivity. An analysis of some Latin data in a discourse perspective can be found in Mulder (1991). Mulder reaches the conclusion that NOs occur in contexts of high topic

<sup>2</sup> This example is discussed in Luraghi (1997).

<sup>3</sup> The literature on NOs written in the GB framework is very wide, and I cannot survey it here; a list of relatively recent works can be found in the references of van der Wurff (1997).

continuity but does not provide any hint to whether they can be syntactically conditioned. Van der Wurff (1994) tries to determine the nature of Latin NOs in a GB theory. In a later study, he handled the issue of NOs in Indo-European, again discussing some Latin data, along with data from Greek and from some other ancient languages (van der Wurff 1997, see below §2).

In Luraghi (1997, 2003), I have shown that Latin and Greek NOs can be discourse conditioned, or syntactically conditioned, i.e. that there are syntactic environments that trigger the omission of (weak) direct objects. Discourse conditioned NOs convey highly topical and non-foveal information; examples are given in (2) and (3) above for both languages. I have discussed at length such occurrences in Luraghi (1997, 1998a, b, and 2003), where I have also shown the communicative difference between NOs and weak pronouns (clitics) in similar contexts, especially in Greek. Syntactically conditioned NOs occur in a well identifiable set of constructions, which also appear to be found frequently in other languages. They are described in detail in section 4.

## 3.0 NOs, Language Typology, and Language Reconstruction

Outside the GB framework, surprisingly little attention has been paid to NOs by typologists, and there have been no attempts, to my knowledge, to determine the actual diffusion of NOs. As I hope to show in this paper, the possible occurrence of NOs is closely related to a number of other typological features, connected with the type of pronouns and other anaphoric devices on which a language relies. In this connection, it is necessary to define the types of pronouns/anaphora that I will refer to later.

Languages usually make a distinction between accented, or emphatic pronouns, and unaccented, or de-emphatic ones. Accented and unaccented pronouns are distinct in their communicative status, the latter being mostly used to convey highly topical information. Unaccented forms usually have less positional freedom than accented forms (e.g. they cannot occur in sentence initial position, or they must be immediately adjacent to the verb or to some other specific constituent). Unaccented pronouns are commonly referred to as clitics. At least since Zwicky (1977), there has been recognition that there is a difference between simple de-emphatic variants of accented pronouns and "special clitics," which do not share the distribution of accented pronouns. To mention a well known example, which is also relevant under several respects to the present discussion, the Romance clitics are special clitics, because they do not share the distribution of free pronouns: for example, they are

obligatory when a topicalized direct object is placed preverbally, as shown in the following Italian example:

- (5) *ieri ho comprato quel libro / quel libro l'ho comprato ieri*  
yesterday I bought that book/that book I bought yesterday

The same sentence, without clitic, is possible only with contrastive intonation:

- (6) *quel libro ho comprato ieri (non quell'altro)*  
**that book** I bought yesterday (not that other one)

It is not a function of free pronouns to clarify grammatical relations when a sentence displays non-basic word order (see further Bossong 1998, for a thorough discussion of the highly grammaticalized functions of Romance clitics). In such cases, clitics in the Romance languages mark agreement of the verb with the left dislocated direct object (see further below, §6); consequently, on a scale of grammaticalization, Romance clitics rank higher than de-emphatic forms such as English non-accented object pronouns; they do not only fulfill the anaphoric function typical of pronouns but share some of the properties of morphological affixes.

On a higher level of grammaticalization, we find obligatory affixes such as those of incorporating languages (e.g. Basque, see §7). Reference to a direct object can be made through more generic agreement markers, such as the so-called "objective conjugation" of Hungarian, described below, §7. Note that all devices listed display an increasing reduction of their phonological weight. At the end of the reduction scale, we find NOs such as those of Latin and Greek, languages that have no types of morphological object markers on the verb.

So the phonological reduction scale can be set up as follows:

- a) NP/emphatic pronoun
- b) unaccented pronoun
- c) special clitic
- d) incorporated pronoun/affix

- e) objective conjugation<sup>4</sup>
- f) zero

As I remarked in Luraghi (2003), from the point of view of the organization of discourse this scale is reminiscent of the scale of phonological size for more or less topical elements in Givón (1983:18). I will show in the final section of this paper that this scale partly coincides with a grammaticalization scale of object marking. At the two extremes, e.g. that of languages which only have (a) and (b), such as English, and languages with (a), (b), and (f), such as Latin and Greek, one cannot speak of any sort of object marking on the verb. It would be interesting to find out what other typological feature relates with the occurrence or non-occurrence of NO's in such languages. I am going to tentatively suggest a possible answer to this question in §8.

On the side of linguistic reconstruction, interest in NOs has been drawn by van der Wurff (1997), who, in a more general discussion of the possibility of syntactic reconstruction, adduces (very scanty) data from Latin, Greek, Germanic, Sanskrit, and Old Persian, and reconstructs NOs for PIE on the basis of comparative evidence alone. Van der Wurff's paper reaches a conclusion that appears highly plausible; however, his methodology does not look very sound. There is no systematic survey of the Indo-European languages, no attempt at defining the factors that allow NOs; furthermore, his sample of languages is reduced, and does not contain counter-examples. As I will show below, there are ancient Indo-European languages that behave in a quite different way regarding NOs.

In the final section of this paper, I would like to show how the same result, i.e. the reconstructability of NOs for PIE, can be reached on a more solid theoretical basis, if the Indo-European data is set within the framework of linguistic typology, in spite of contrasting evidence from some of the Indo-European languages.

#### 4.0 Syntactically Conditioned NOs in Latin and Greek

In the present section I will illustrate the conditions that trigger the occurrence of NOs in Latin and Greek. As a preliminary remark, I would like to draw attention to the fact that Latin and especially Greek do have various pronominal clitics, which to some extent also undergo special placement rules, but that these clitics do not display the signs of

<sup>4</sup> The position of the so-called "objective conjugation" on this scale is lower than the position of pronominal affixes because the objective conjugation only cross-references third person objects and has no number agreement. See further §7.

grammaticalization of the Romance ones; they can be hosted by any constituent, and, more important, only have the reference functions of pronouns.

In order to highlight common features of NOs and other types of null anaphoras, I will systematically compare the Latin and Greek data with occurrences of NSs in null subject languages, and show that the conditions for omission of a referential direct object are very much the same as the conditions for omission of a referential subject.

#### 4.1 Coordinated clauses

In coordinated clauses that share the same direct object, the latter is normally omitted after the first clause:

- (7) *Caesar exercitum, reduxit et ... in hibernis*  $\emptyset_i$  *conlocavit*

Caesar led his army back and ... lodged **it** in the winter camp, (Caesar, *de bello Gallico* 3.29.3);

- (8) *καί μιν Ἀθηναῖοι δημοσίῃ τε ἔθαψαν αὐτοῦ τῇ περ ἔπεσε καί  $\emptyset_i$  ἐτίμησαν μέγανως.*

the Athenians buried him at public expenses on the place where he had fallen, and honored **him** greatly, (Herodotus, *Histories* 1.30.4).

In occurrences where the direct object is expressed with an overt pronominal, coreferential with the direct object of the first clause, the direct object itself is emphatic, or it bears contrastive focus (relevant examples are discussed in Luraghi 1997 and 2003).

Omission in coordinated clauses, sometimes regarded as a type of gapping, owes to coordination reduction, a widespread phenomenon, that in various languages especially affects subjects. In particular, languages that allow NSs for pragmatic reasons, can only have NSs in coordinated clauses with normal intonation:

- (9) *Maria<sub>i</sub> è uscita di casa correndo e lei<sub>i</sub> è scivolata sul marciapiede*

Mary left her house running and **she** slipped on the sidewalk.

In the Italian example, repetition of the subject is ungrammatical, unless the repeated subject bears some particular emphasis or contrastive stress, much in the same way as the object in the Latin and Greek examples above. (Of course, sentence (9) would be perfectly acceptable,

without any special intonation, if the two subjects were not co-referential.) In the English translation, on the other hand, a co-referential subject in the second clause is most often omitted, but it can also be repeated without generating ungrammaticality: in fact, if the subject is repeated, the preferred interpretation is the one in which the two subjects are co-referential. In this connection, it is also interesting to observe that a French translation of (10) only allows the co-referential subjects interpretation:

- (10) *Marie est sortie de chez soi en courant et elle est tombée sur le trottoir.*

Marie left her house running, and she fell on the sidewalk.

Note that the French subject pronoun in (10) is a special clitic, and has the function of marking verbal agreement; as such it has less autonomy than English subject pronouns.

#### 4.2 Participles

So-called conjunct participles are participles that have the same subject of their governing verb. Although they are adnominal forms, they rather fulfill an adverbial function, similar to that of gerunds, or converbs (Latin and Greek have no adverbial verb forms). In the case that a conjunct participle of a transitive verb has the same direct object as the governing verb, the object is only expressed once:

- (11) *τούς μὲν παῖδας, διασώσας τοῖς γονεῦσιν ἀπέδωκεν  $\emptyset_i$*

and having rescued the children, he restored **them** to their parents. (Isocrates, *Helen* 29.1).

NOs in such contexts are connected with argument sharing and owe to the high degree of interlacing of the clause constituted by the participle with the governing clause. It has been noted that the distribution of conjunct participles in Greek is similar to the distribution of adverbial verb forms (converbs) occur in other languages (see Haspelmath 1995). English equivalents of such constructions are gerunds; in fact, it can be argued that the high frequency of conjunct participles in Greek is a way to cope with the absence of an adverbial verb form (see Luraghi 2001). Again a comparison can be made with obligatory omission of the subject in English with gerunds sharing the same subject:

(12) *saying this, John went out / John went out saying this / \*John<sub>i</sub> went out, he<sub>i</sub> saying this / \*John<sub>i</sub> saying this, he<sub>i</sub> went out*

Another construction involving the participle can be used in the case that the subject of the participle and the subject of the governing verb are not co-referential, the so-called genitive absolute. Scherer (1975:186) mentions the following example:

(13) *convocatis suis clientibus<sub>i</sub>, facile incendit Ø<sub>i</sub>*

[Vercingetorix] summoned together his dependents, and easily excited them. (Caesar, *de bello Gallico* 7.4.1).

#### 4.3. Yes/no questions (Verb Phrase [VP] ellipsis)

As shown in Dressler (1971), examples of direct object omission in yes/no questions are common in all ancient Indo-European languages:

(14) *θῶμεν οὐω βούλει, ἔφη, δύο εἶδη, τῶν ὄντων, τὸ μὲν ὀρατόν, τὸ δὲ αἰδέε; θῶμεν, ἔφη*

"now,..., shall we assume two kinds of existence, one visible, the other invisible?" "Let us assume them," (Plato, *Phaedrus* 79a);

(15) *novistine hominem? novi Ø<sub>i</sub>*

do you know the man? I do. (Plautus, *Bacchides* 837).

Van der Wurff (1997) argues that such examples are syntactically different from the ones treated earlier, because they are cases of partial omission of the VP, which is possible also in languages that do not allow null objects elsewhere. A different pattern of VP omission is constituted by English answers, where only the auxiliary occurs, such as the translation of (15) above.

#### 5.0 Some Disagreeing Evidence

Regarding Hittite direct objects, Friedrich (1960:131) writes: "*Die pronominalen Akkusative ... können vor allem in der Sprache der hethitischen wie anderer indogermanischer Gesetze ausgelassen werden.*"<sup>5</sup> Outside the Laws, however, NOs are by no means frequent,

<sup>5</sup> "Pronominal accusatives... can be omitted mainly in the language of the Hittite (as well as other Indo-European) laws."

and are mostly limited to sentences that contain the clause introducing the particle *ta*, originally a pronoun, which is usually thought of as partly fulfilling an anaphoric function in Old Hittite. In Luraghi (1990:39-40) I have provided countings relative to the frequency of omission, according to which only two referential NOs in the entire Old Hittite *corpus*. One of them is contained in (16b):

(16a) *š= uš ID-a tarraš*  
conn. 3pl.acc. river-dir. leave-3sg.pret.

b) *ID-š= a ANA A.AB.BA KUR<sup>uru</sup> zalpuwa pedas*  
river-nom. conn. to sea country Z. carry-3sg.pret. god-nom.pl.

c) *DINGIR<sup>DIDLI</sup> -š= a DUMU<sup>meš</sup> -uš A.AB.BA= az šara dair*  
god-n.pl. conn. boy-acc.pl. sea-abl. outside take-3pl.pret.

d) *š= uš šallanuškir*  
conn. 3pl.acc. bring-up-3pl.pret.

she abandoned them [sc. her children] to the river. The river took them to the sea, in the country of Zalpuwa. The gods took the children out of the sea and bought them up, (*StBoT* 8:17, obv. 1-5, Otten and Souček 1969).

Note that a NO occurs in (16b), with subject/topic shift, while in (16d) where the same subject is continued and not overtly expressed, we find a clitic =*us*, in a context where omission would be the standard occurrence in Latin and Greek, as shown in §4.1.

Occurrences as (16b) with a NO appear to preserve an ancient feature in the field of null arguments, in which Hittite is particularly innovative. In the first place, we find innovation in the field of NSs: whereas the other ancient Indo-European languages appear to agree in allowing NSs, Hittite presents us with a different picture. Before showing the relevant examples, I will first survey the system of enclitic personal pronouns.

Hittite has a large number of enclitic personal pronouns, some of them not corresponding to enclitic pronouns in other Indo-European languages. For first and second person we only find oblique forms, =*mu* and =*ta*/=*du* in the singular and =*naš*/=*šmaš* and =*šmaš* in the plural.<sup>6</sup> Like Greek and Sanskrit, Hittite has no nominative forms for first and

<sup>6</sup> All forms are used both for direct and for indirect object; forms given as alternative are either conditioned by the phonological context (2<sup>nd</sup> sg.), or by the age of the sources (1<sup>st</sup> pl.).

second person enclitics, furthermore, NSs are allowed for first and second person with both transitive and intransitive verbs. The absence of subject enclitics is connected with the communicative nature of enclitic pronouns: they convey highly topical information; in languages which allow NSs highly topical subjects are usually unexpressed and accented forms of pronouns are used when the subject needs to be stressed, mostly if it bears contrastive focus.

However, if we turn to third person subjects, we find that a set of enclitics exists in Hittite, which are consistently used with intransitive verbs when no full noun phrase occurs as subject:

- (17a) *nu= kan INA KUR URU arzauwa paranda paun*  
 conn. ptc. in country A. upwards go-1sg.pret.
- b) *nu INA URU apaša ANA URU LIM šA muḫḫa-LÚ andan paun*  
 conn. in A. to city of U. into go-1sg.pret.
- c) *nu= mu muḫḫa-LÚ-iš UL mazzašta*  
 conn. 1sg.obl. U.-nom. not resist-3sg.pret.m/p.
- d) *n= aš= mu= kan ḫuwaiš*  
 conn. 3sg.nom. 1sg.obl. ptc. escape-3sg.pret.
- e) *n= aš= kan aruni paranda guršawanza pait*  
 conn. 3sg.nom. ptc. sea-d/l. toward island-dir. go 3sg.pret.
- f) *n= aš= kan apiya anda ešta*  
 conn. 3sg.nom. ptc. there in be-3sg.pret.

I went up to the country of Arzawa. In the city of Apasa I went into Uhhaziti's quarters and Uhhaziti did not make any resistance. He escaped me and went to the island and remained there, *Die Annalen des Mursilis* 50.28-32 (Goetz 1933).

In other words, Hittite does not allow third person NSs with intransitive verbs, as argued in Luraghi (1990) (see further Garrett 1996). Transitive verbs, in their turn, can have NSs even with third person, but they only very infrequently occur with NOs; if the object is not a noun phrase, then we find an enclitic, as in:

- (18a) *šallanun= war=an kuit ammuk*  
 promote:1sg.pret. ptc. 3sg.acc. because 1sg.nom.
- b) *nu= war=an ḫuwappi DI-ešni ḫuwappi DINGIR<sup>LIM</sup>-ni UL para*  
 conn. ptc. 3sg.scc. bad:d/l tribunal:d/l bad:d/l god:d/l neg. prev.  
*UL kuwapikki tarnahhun*  
 never hadle:1sg.pret.
- c) *kinuna=ya= war=an karapmi*  
 now conj. ptc. 3sg.acc. take:1sg.pres.

- d) *nu= war=an ANA<sup>D</sup>UTU<sup>URU</sup>TUL-na AŠŠUM<sup>LÚ</sup>SANGA-UTTIM*  
 conn. ptc. 3sg.acc to sungod Arinna for priesthood  
*tittanumi*  
 install:1sg.pres.

because I promoted him, I never handled him over to a bad tribunal or to a bad god; and now I will take him and make him priest for the sun goddess of Arinna, (*StBoT* 24 IV 11-15, Otten 1981).

If one compares the coordinated clauses in the above example with the occurrences of NOs in coordination quoted from Greek and Latin in examples (7) and (8), one can see that the syntax of pronominal direct objects in coordination in Hittite is completely different. Note further that with transitive verbs we still find another restriction: no third person subject enclitic can ever occur with transitive verbs, either if the object is itself an enclitic, or if it is a noun phrase.

To sum up, whereas the Indo-European languages in the preceding sections allow for omission of both the subject, with all types of verbs, and the object, Hittite almost never allows for omission of the direct object, and it has the restriction that omission of the subject is not allowed for third person subjects of intransitive verbs.

Disagreeing evidence also comes from Old Irish. In Old Irish, we find no object pronouns; object affixes are used instead. They are highly grammaticalized and occur obligatorily, not allowing for NOs, even in coordinated clauses. Later on, in Middle Irish, object pronouns are created and affixes are dropped. According to Roma (2000:67), in contexts of high topic continuity where the direct object is coreferential with the direct object of the preceding clause, objects pronouns can be omitted, and NOs occur. I have not inquired further into the Old and Middle Irish situation, but the chronology discussed in Roma (2000) apparently shows that the occurrence of NOs does not depend on antiquity of the language, but rather, as predictable, on the type of pronominals found at each given language stage.<sup>7</sup>

## 6.0 The Diachrony of NOs

In New Testament Greek, as well as in the Latin *Vulgate*, NOs are infrequent; they only occur in syntactically conditioned context, and even

<sup>7</sup> Joe Eska points out to me that occasionally pronominal affixes for definite referential direct objects may be missing in Old Irish. It would be interesting to see the extent of this phenomenon and compare it with possible object-drop at later stages in the history of Irish.

there one can often find overtly expressed anaphoras, as shown in example 19:

(19) *colligite primum zizania et alligate ea in fasciculos*

συλλέξατε πρώτον τὰ ζιζάνια καὶ δήσατε αὐτὰ εἰς δεσμά

First, gather up the darnel, and bind them in bundles. (Matthew 13.30).

Note that the change seems to be going on in the two languages independently, as shown by the fact that deemphatic direct objects do not always match each other in the Greek and Latin texts of the New Testament:

(20) *et interrogavit eum unus ex eis legis doctor tentans eum*

καὶ ἐπηρώτησεν εἰς ἕξ αὐτῶν πειράζων αὐτόν (Matthew 22.35).

I took **him** to your pupils, and they could not heal **him** (Matthew 17.16).

Modern Greek and modern Romance languages, for the most part, do not allow NOs even in such contexts. In Medieval Italian, some syntactically conditioned NOs still occur, in a context where they would be impossible in Modern Italian:<sup>8</sup>

(21) *or non avestú la torta;? Messer sí: Ø, ebbi*

didn't you have the cake? Yes Sir, I had **it**, *Novellino* 79 (Lo Nigro 1963);

(22) *e molto ricoverò lo 'mperio, e Ø, ridusse in buono stato*

he greatly helped the empire and brought **it** back to a good condition, (Villani 1989, 1991:3.6.32).

As I have already remarked in §3, in Italian, French, and Spanish, the direct object clitic is obligatory if a nominal direct object occurs in preverbal position and marks verbal agreement with a direct object which is not placed in unmarked post-verbal position (see examples (5) and (6) above).

<sup>8</sup> In Modern Italian (as in Modern French) NOs occasionally occur with verbs that express repetition see Luraghi (1998b).

Many scholars have pointed out that in Portuguese the syntax of NOs is considerably different from the picture sketched above (see for example Raposo 1986). In particular, in Portuguese NOs occur in answers to yes/no questions:

(23) *você viu o filme 'E tudo o vento levou'? Sim, vi.*

have you seen the film "Gone with the Wind"? Yes, I have (Portuguese)

Interestingly, clitic doubling is not obligatory in Portuguese with left dislocated direct objects, even with non-contrastive intonation:

(24) *ese livro nunca ofreci ao João*

"this book I've never given John"

The distribution of clitics in the Portuguese examples point in the direction of a lower grammaticalization of Portuguese clitics, with respect to clitics in the other Romance languages. Together with the evidence from the New Testament and Medieval Italian, these data show that NOs must have disappeared first in contexts in which they were discourse conditioned, while they proved more resistant in syntactically conditioned contexts.

In this connection, it may be interesting to briefly survey some data from Germanic.

Regarding Germanic in particular, van der Wurff relies on data from Old English, where by his admission NO's are rather infrequent. In fact, one of his examples appears to be syntactically conditioned:

(25) [anno 880] *her for se here of Cirenceastre on East-Engle ond gesæt þæt lond ond gedælde* (Plummer 1892:76).

In this year the army went from Cirencester to East Anglia and occupied the land and divided it (Garmonsway 1953).

Note that van der Wurff explicitly remarks that coordinated clauses are one of the typical contexts for NOs in Old English. The other example involves NOs with the verbs *geræcean*, 'to reach', and *gehrinan*, 'to touch', where to my mind one cannot rule out the possibility that the two verbs are used in a monovalent predicate frame.<sup>9</sup>

<sup>9</sup> Van der Wurff also quotes Koopman, according to whom a NO can occur in Old English with ditransitive verbs where an indirect object is overtly expressed. I have no



More evidence for the existence of NOs in the early Germanic languages comes from Old Icelandic, as shown in Sigurðsson (1993), in passages such as:

(26) *dverginn mælti, at sá baugr, skyldi vera hverjum hofuðsbani, er atti Ø<sub>i</sub>*

The dwarf said that *that ring* should bring death to anybody who possessed *it* (from Sigurðsson 1993:248).

Given the fact that the modern Germanic languages do not normally allow NOs, one can interpret the data from Old Icelandic and Old English as showing that NOs were possible at an early stage, then became limited to syntactically conditioned contexts, and later disappeared. This development matches the development from Latin to Romance, as outlined above.

#### 7.0 Clitics, Incorporated Pronouns, Agreement, and NOs Outside Indo-European<sup>10</sup>

In the present section, I will discuss examples from a number of genetically unrelated languages, which also display a considerable typological variation. NOs do not occur, even in coordination, in languages with highly grammaticalized pronominal forms, while they occur normally elsewhere. An interesting pattern is constituted by the so-called objective conjugation of Hungarian, which can be considered to build a special case of NO language.

In Arabic, as in the other Semitic languages, we find pronominal clitics which can never be omitted, as shown in

(27) *'Alī qar'a r-risālah. Ba'damā qara'ahā, tabbaqahā*  
*A.-nom. read-3sg.m.past the-letter:acc. after read:3sg.m.past-it fold-*  
*3sg.*  
*m.past-it*  
*then*

*thumma wada'ahā fī sondūqin*  
*put-3sg.m.past-it into drawer-gen*

data of my own, but it would be interesting to find out whether there is a relation between the occurrence of a weak pronominal indirect object and a NO, because such a correlation still holds in Modern English, where one cannot say “\*I give him it.” If this were the case in Old English as well, such examples would provide evidence for the incompatibility of several weak pronouns, rather than for the antiquity of NOs.

<sup>10</sup> I would like to thank my informants, Soufian Razgui, Kuniko Shirane, and Veli Tören for providing me with the data from Classical Arabic, Japanese, and Turkish respectively.

Ali read the letter. After reading it, he folded it and put it into a drawer.

In coordination, omission leads to ungrammaticality, and it is not even marginally possible, as in the Romance languages:

(28) *ākhudhu l-kitaba wa-'aqra'uhū*  
*take:1sg. the book:acc and read:1sg.-it*  
 I take the book and read it;

Left dislocated, direct objects trigger clitic doubling in much the same way as in Italian, Spanish, and French:

(29) *'Alī ra'aytuhu 'ams*  
*Ali see:1sg. past-him yesterday*  
 Ali I saw yesterday.

This shows that in Arabic, too, clitics do not share the distribution of free pronouns; free pronouns do not have the function of doubling left dislocated constituents. Semitic clitics are highly grammaticalized forms, sharing some of the properties of affixes.

In incorporating languages such as Basque, the direct object (as well as other sentence constituents), is marked on the verb through an “incorporating” pronominal affix, even when it is overtly expressed through an NP:

(30) *zuhaitz-a ikus-ten dut*  
*tree:det. see-habit 3sg.aux.:1sg.*

I see the tree

(31) *zuhaitz-ak ikus-ten ditut*  
*tree:det.-pl. see habit 3pl.aux.1sg.*

I see the trees

Romance linguists have repeatedly remarked that Romance clitics often come very close to the incorporating pronominal affixes of Basque, and have argued that the Romance languages are developing in the direction of an incorporating type. The following example from spoken French is from Tesnière (1959:175):

(32) *Il la lui a donné, à Jean, son père, la moto.*

He gave it to him, to Jean, his father, the moto.

The fact that NOs are not a rare occurrence across languages becomes clear if one turns to languages that do not rely on highly grammaticalized clitics. Languages that only have a distinction between stressed pronouns and their de-emphatic variants normally allow NOs in coordination and with converbs. Examples can be quoted from Turkish and Japanese:

(33) *Hasan görüyor ve selamlıyorum*  
*H.-acc. see and greet-1sg.prs.*

*Hasan görüyor ve onu selamlıyorum.*  
*H.-acc. see and him greet-1sg.prs.*

I see Hasan and greet him.

(34) *Raftan kitabı alıyor ve okuyorum*  
*shelf-abl. book-acc. take and read-1sg.prs.*

I take the book from the shelf and read it.

In (33), a pronominal de-emphatic direct object with a human referent in coordinated clauses can be overtly expressed, or it can be left out; omission is most frequent in sentences like (34), where the direct object is inanimate. Example (35) contains a converb; in this case too, one normally finds a NO. The example can be compared with (11) from Greek, where the NO is triggered by the occurrence of a conjunct participle:

(35) *Hasan mektubu okudu, kapatıp bir çekmeceye koydu*  
*H. letter:acc read:3sg.past having-sealed one drawer:dat. put:3sg.past*

Hasan read the letter. After sealing it, he put it into a drawer.

In Japanese, de-emphatic direct objects are mostly omitted in coordination, as in (36); they can be overtly expressed but are more frequently omitted also with converbs, as shown in (37):

(36) *Hiroshi ga Mariko ni deai aisatsusimashita*  
*H. subj M. dat. meet greet-past*

Hiroshi met Mariko and greeted her.

(37) *Hiroshi ga tegami o yomimashita. Yomiwatte kara*  
*H. subj. letter obj. read:past read-conv. after*  
*otte hikidashi ni shimaimashita*  
*fold-conv. drawer in put-past*  
*Hiroshi ga tegami o yomimashita. Yomiwatte kara*  
*H. subj. letter obj. read:past read:conv. after*  
*sore o otte hikidashi ni shimaimashita*  
*it obj. fold:conv. drawer in put:past*

Hiroshi read the letter. Having read it, he folded it and put it into a drawer

NOs are common in Hungarian, especially for the third person. In Hungarian, transitive verbs have two different sets of endings, one of which is used when the verbs denote an activity (i.e. they have no definite direct object), or with indefinite direct objects, as in (38):

(38) *János olvasott (valamit)*

John read/was reading (something).

The verb form in (39) belongs to the so-called indefinite conjugation. The definite conjugation, on the other hand, is used when the verb has a definite third person direct object:

(39) *János olvasta a könyvet*

John read the book.

Hungarian has no weak pronouns for the third person; in sentences where anaphoric reference is made by the direct object, if the latter is not strongly accented for pragmatic reasons, a NO occurs in conjunction with the definite conjugation, which alone points toward the existence of a definite direct object:

(40) *Ismered a nyelvet? Igen, ismerem (def., def.)*

Do you know (Are you familiar with) the language? Yes, I know it (Yes, I do).

Note that the endings of the definite conjugation are only partly similar to agreement markers, since they indicate that the verb has a definite third person direct object but do not agree with it in number.<sup>11</sup>

### 8.0 Typological Evaluation of the Data

In relation to Hittite subject clitics, Halpern (1996) sets up the following scale, in which the word 'clitic' is used in the sense of "special clitic" (i.e. not sharing the distribution of free pronouns):

	<b>syntactic arguments</b>	<b>morphology</b>
pronominal clitics	yes	clitic
incorporated pronoun	yes	affix
agreement affix	no	affix

The scale can be adapted for direct object marking on the verb, considering the definite conjugation of Hungarian as consisting of agreement affixes. Languages with NOs, such as Latin and ancient Greek, Turkish, and Japanese do not display any of these strategies, but simply have either free pronouns (accented or unaccented) or NO, in cases of coordination reduction, argument sharing or, more restricted, recoverability from the context.

The syntax of NOs in languages such as Latin or Greek is only partly similar to the syntax of NSs. On the one hand, the same syntactic conditions that trigger NOs normally also trigger NSs; on the other hand, agreement on the verb always refers to the subject, even when that is omitted. NOs in their turn have no corresponding marking on the verb. So a scale that shows the degrees of grammaticalization of object marking on the verb must also include zero:

	<b>syntactic arguments</b>	<b>morphology</b>
pronominal clitics	yes	clitic
incorporated pronoun	yes	affix
agreement affix	no	affix
NOs	yes	-

<sup>11</sup> According to Sauvageot (1971), the endings of the definite conjugation possibly originated from nominal possessive suffixes. Note that first and second person direct objects, which are inherently definite, pattern with indefinite objects. See den Dikken (2004) for details.

At the upper edge of the scale, we find languages like the Modern Romance languages (with the exception of Portuguese), and the Semitic languages, in which direct objects are co-referenced on the verb in cases where they are not post-verbal (i.e. are not in their unmarked position). These languages normally do not allow NOs anywhere; note that the Semitic languages are on a slightly higher level of grammaticalization than the Romance languages, because NOs are not even marginally possible in coordination (see above, fn. 7). Similarly in Hittite, direct objects are obligatory, and when not expressed by full noun phrases, one finds clitics, which have the additional function of making verbal valency explicit. Incorporated pronouns occur in Basque, where pronominal affixes obligatorily co-reference all arguments of a predicate, while agreement affixes occur in Hungarian, where a definite referential direct object is always co-referenced on the verb in case of third person. Each of these marking devices implies less complex and "lighter" morphological means, thus corresponding partly to the scale of phonological reduction seen in §3. At the lower edge of the scale, we find the highest possible phonological reduction, i.e. NOs. The languages that have been discussed can be placed as follows on the scale:

Romance, Arabic, Hittite	special clitics
Basque	incorporation
Hungarian	agreement
Latin, Greek, Turkish, Japanese	no object marking on the verb; NOs

### 9.0 NOs and Reconstruction

The evidence discussed thus far shows that possible reconstruction of NOs for Proto-Indo-European does not rest on relative antiquity of attestations. Hittite, the most ancient attested Indo-European language, for example, would not support the reconstruction of NOs. Furthermore, comparison of the Indo-European data with data from non-Indo-European languages shows that NOs occur exactly where they can be reasonably expected to occur, i.e. in cases of coordination reduction and argument sharing, in languages that have no grammaticalized means for cross-reference of referential direct objects on verbs. The conditions in which NOs occur are, as one can expect, similar to the conditions of occurrence of NSs; languages that have NS in discourse conditioned contexts, such as all Romance languages except for French, also have NS in syntactically conditioned ones. The same is true for NOs. However, NOs are more restricted than NSs, because they must be fully

recoverable from the context, since their recoverability cannot rely on verbal agreement.

As a conclusion, one can still wonder why languages such as English and German, that have no grammaticalized devices such as the Romance clitics, do not allow NOs. This should be the topic of different research. However, I would like to point out that these languages do not have NSs. If more evidence of this type could be adduced, one could think of a constraint based on an implication scale:

Null Object > Null Subject

In other words, it is plausible that if one type of null argument occurs in a language, this should be NS, and only languages with NSs can possibly also have NOs.

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silvia.luraghi@unipv.it

## From Discourse to Syntax: The Case of Compound Interrogatives in Indo-European and Beyond<sup>1</sup>

Olav Hackstein

Martin-Luther-Universität Halle-Wittenberg

This study examines the syntacticization of textual (mono-, bi-, and tricausal) discourse structures involving interrogative clauses. In particular, it is short rhetorical and focal interrogative clauses that often undergo desententialization and develop into function words (§1). While it is typical for rhetorical questions to develop into conjunctions, focal interrogative clauses can be shown to be among the typical source constructions for interrogative particles and pronouns. The pertinent pathway of development leads from what looks like pleonastic interrogative constructions to new fused interrogatives having the outward appearance of pronominal clusters (§§2, 2.1). The desententialization of interrogative clauses permits a new analysis of constructions containing an interrogative plus a coreferential demonstrative. In many IE languages, these constructions occur either in the guise of juxtaposed interrogatives and demonstratives (Latin, Greek, Indic) or as fused new interrogatives (e.g., Slavic, Albanian). Also among the latter cases are the Tocharian interrogatives (e.g. TB *mäksu* 'of what sort') built on the PIE interrogative stem *\*mo-* 'of what sort [sg.]' and likewise hinting at an earlier clausal value (§2.2). The resulting etymologies shed new light on the integration of *\*mo-* into the PIE system of pronouns. PIE *\*mo-* can be shown to have formed part of a recurrent scheme of functionally alternating pronominals: *\*mo-*, *\*k<sup>w</sup>o-*, *\*Hjo-*, *\*so/to-* (§§2.2.2ff.). In most branches of IE outside of Anatolian and Tocharian, *\*mo-* has been superseded by *\*k<sup>w</sup>o-*.

<sup>1</sup>I am grateful to Brent Vine, Raimo Anttila, Vjacheslav Ivanov, Stephanie Jamison, and others for inviting me to present this lecture at the UCLA Indo-European conference, and I gratefully acknowledge the support of the UCLA Program in Indo-European Studies and the UCLA graduate student association. Also I am indebted to Hans Henrich Hock, Jared Klein, Mark Southern, Brent Vine, and Calvert Watkins for helpful discussion. Many thanks also to Craig Melchert for commenting (per litteras) on a draft version of this paper. Naturally, the responsibility for the ideas expressed in the present article remains entirely my own.