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Non-nominative subjects in Latin and Ancient Greek

Applying the subject tests on early Indo-European languages

Abstract: This article responds to a call for research, made by Hock (1990) more than 30 years ago, on the subject behavior of potential non-nominative subjects in the early Indo-European languages. Hock's call was made in the wake of research into behavioral properties of non-nominative subjects in several modern languages. Since then, comprehensive studies have been carried out on the subject behavior of non-nominative subjects in the early Germanic languages, including Gothic, Old English, Old Saxon, Old High German, Old Norse-Icelandic, etc. Some preliminary work has been undertaken on Latin, while work on Ancient Greek is almost non-existent. We gather the Latin data provided so far, adding complementary evidence; we also present a complete dataset from Ancient Greek not figuring in the earlier literature. These data, pertaining to six established subject tests, show that potential non-nominative subjects behave syntactically as nominative subjects in both Latin and Ancient Greek, while an analysis in terms of object is excluded.

Keywords: Grammatical relations, case marking, non-nominative subjects, subject behavior, subject tests, Latin, Ancient Greek

1 Introduction

Verbs and predicates selecting for non-nominative subjects in the languages of the world have, by now, become a well-known phenomenon in linguistics. Particularly for the Indo-European languages, such structures have been documented in language after language, although opinions vary on the exact syntactic analysis of the potential non-nominative subject in some languages; it has been shown beyond doubt that such potential non-nominative subjects behave syntactically as subjects in some of the relevant languages, while for others, standpoints differ on

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whether to analyze these as subjects or not. Indo-European languages belonging to the first category are Icelandic and Faroese from the Germanic branch, Romanian from the Italic branch, and Bengali, Hindi-Urdu and others from the Indo-Iranian branch. Indo-European languages belonging to the second category are German from the Germanic branch, Lithuanian from the Baltic branch, Czech from the Slavic branch and Spanish from the Italic branch, to mention only a few.

However, structures of this type, involving potential non-nominative subjects, are by no means restricted to the modern Indo-European languages, but are also found in the early and ancient languages, as shown in (1) below.

(1) a. Latin
cui *placet*
whom.DAT likes

b. Ancient Greek
sphi *hḗndane*
them.DAT liked

c. Gothic
galeikan ***imma***
liked him.DAT

d. Old Irish
maith ***les***
likes him.DAT

e. Old Albanian
atī *pëlqenjënë*
him.DAT likes

f. Old Russian
ougodisę ***emou***
likes him.DAT

g. Old Lithuanian
iemus *patinka*
them.DAT likes

h. Tocharian B
cäñcaṃ- ***ne***
likes- him.OBL

The examples in (1) above represent eight different Indo-European branches. A verb with the meaning 'like', selecting for a potential non-nominative subject, in this instance in the dative case, is found across several of the branches. The relevant verbs are not cognates, but are instead reflexes of seven different Indo-European etyma (with the Albanian form being a borrowing from Latin *placet*).

Hock (1990: 121) points to the existence of such structures in early Indo-European languages, while, at the same time, calling their subject behavior into question:

> True oblique experiencer constructions are found in other early Indo-European languages, such as Latin, Greek, and early Germanic. But there is no evidence that they originally had subject properties.

At the time of Hock's statement, research on the subject status of potential non-nominative subjects in, for instance, Latin and Ancient Greek had not even begun. Since then, solid investigations have shown that potential non-nominative subjects, oblique experiencers in Hock's terminology, behave syntactically as subjects in the early Germanic languages (see references in §2). This holds for both accusative

and dative subjects. Research on Latin and Ancient Greek has, since then, also taken off, indeed suggesting that potential non-nominative subjects exhibit some subject behavior, although conclusive evidence has not been put forward to this end so far. The goal of the present article is, first, to establish subject properties for Latin and Ancient Greek, taking as point of departure the subject properties in the modern Indo-European languages that exhibit such structures; and second, to build up clinching evidence needed for rejecting an object analysis of potential non-nominative subjects in Latin and Ancient Greek, and to corroborate instead the validity of a subject analysis of the relevant non-nominative arguments. In other words, our aim is to present evidence that excludes any other analysis but a subject analysis for potential non-nominative subjects in Latin and Ancient Greek.[1]

This article is structured as follows. Section 2 provides a brief overview of earlier research on subjecthood and non-nominative subjects, both for modern languages and some early Indo-European languages. In §3 we put forward our definition of subject. This includes our view of how the different arguments of the argument structure of each verb map onto grammatical relations. Section 4 zooms in on five behavioral properties of subjects, documented as valid subject tests in several modern Indo-European languages, showing that these properties do, indeed, distinguish between syntactic subjects and objects in Latin and Ancient Greek. We review the evidence suggested so far and provide additional corroborating examples where needed. We devote a special section, §5, to the sixth behavioral property, word order distribution, where we present new word order counts for both Latin and Ancient Greek; we establish a baseline for ordinary nominative subjects and compare the frequencies with potential non-nominative subjects for both languages. In §6 we present our conclusions, including positioning our findings in a broader Indo-European comparison, arguing that the combined evidence from Germanic, Latin and Greek indeed make it possible to reconstruct not only subject behavior for Proto-Indo-European, but also the behavioral properties of non-nominative subjects.

1 The discussion in this article is confined to the syntactic behavior of potential non-nominative subjects in the early Indo-European languages, focusing in particular on Latin and Ancient Greek. For an overview of the relevant semantics involved, we refer the reader to Barðdal, Smitherman, et al. 2012; Viti 2017 and Johnson et al. 2019 on the situation in the early Indo-European languages in general, Dahl & Fedriani 2012 on the situation in Latin, Ancient Greek and Vedic Sanskrit, in addition to Cennamo 2009, Fedriani 2011, 2014 and Cennamo & Fabrizio 2022 for Latin, Danesi 2014 for Avestan, Barðdal, Arnett, et al. 2016 for the early Germanic languages, Luraghi 2010 and Dardano 2018 for Hittite, Danesi, Johnson & Barðdal 2018, and Luraghi 2020 for Ancient Greek, to mention only a few relevant references.

2 Earlier research on subjecthood

Forty-seven years have passed since Keenan's (1976) publication "Towards a Universal Definition of Subject" appeared, and since then major inroads have been made in the way the scholarly community identifies and defines subjects in languages. One of the most important tasks within this research has been to diagnose behaviors that are specific to subjects, i.e., syntactic behaviors that clearly distinguish between subjects and objects in language use. This task has been successfully carried out for many languages and even language families, even though not all subject properties are shared across all languages (cf. Dryer 1997; Croft 2001; Culicover & Jackendoff 2005; Van Valin 2005; Barðdal 2006; Bickel 2011; Barðdal, Eythórsson & Dewey 2019; Witzlack-Makarevich 2019).

During the upsurge of research on subjecthood in the 1970's, the issue of non-nominative subjects became one of considerable interest, starting with Andrews 1976 and the work of Thráinsson 1979 on Icelandic and the work of Masica 1976; Kachru, Kachru & Bhatia 1976 and Klaiman 1980 on South Asian languages. Since then, research on the subject status of potential non-nominative subjects in the languages of the world has flourished, demonstrating that non-nominative case marking is accompanied by a host of syntactic properties also found with ordinary nominative subjects and not with objects.

To give examples of modern languages which exhibit structures where the non-nominative argument shows uncontroversial subject behavior, we may mention Icelandic (Thráinsson 1979; *inter alia*), Faroese (Barnes 1986); Russian (Moore & Perlmutter 2000); Japanese (Shibatani 1999), Korean (Yoon 2004), Hebrew (Landau 2009; Pat-El 2018), and Romanian (Ilioaia 2021; Ilioaia & Van Peteghem 2021), not to mention language families like the Quechuan languages (Hermon 1985), the Dravidian languages (Verma & Mohanan 1990), the Dardic languages (Steever 1998), the Tibeto-Burman languages (Bickel 2004) and Cariban languages (de Castro Alves 2018).

Most work on subjecthood so far has been geared towards living languages, where native speakers exist and subject tests are easily applied either through the linguist's own introspection, through data elicitation or through grammaticality judgments. For corpus languages, however, like the early and ancient Indo-European languages, the situation is notoriously more difficult. The reason for that is twofold: first, there are no native speakers to consult and, second, the nature of the preserved texts may not necessarily be of the type where non-nominative subjects are expected in abundance.

An early attempt at applying the subject tests on a corpus language is Hock's (1990) study of Classical Sanskrit, where two types of potential non-nominative

subjects are distinguished. On the one hand, there are oblique experiencers (see §1), and on the other, there are dative possessive constructions of the type DAT-'is'-NOUN. Hock argues that the subject properties divide unevenly across the two constructions and that dative experiencers in Sanskrit are not syntactic subjects, while dative possessors of possessive constructions, which were in the process of developing into genitives at this point in time, indeed show some behavioral properties of subjects.

One of the most prominent book-length studies of subjecthood in historical context, conducted using the analytical tools and machinery of modern linguistic frameworks, is Allen's (1995) extensive and thorough investigation of non-nominative subjects in Old and Early Middle English. Allen's findings suggest that potential non-nominative subjects in Old and Early Middle English should be analyzed as syntactic subjects during these stages of the English language on the basis of a set of subject tests, most of which are valid for the Germanic languages in general (see §3 below). See also von Seefranz-Montag 1983 for an early comparison between Old and Middle English and Old and Middle High German, also employing the subject tests provided by general linguistic studies of subjecthood at the time, tests that are still being used today.

Contemporaneous with Allen's meticulous work on Old and Early Middle English, several studies were carried out on Old Norse-Icelandic in particular, and on the earlier Germanic languages in general. The first of these were presented in a series of articles by Rögnvaldsson 1991, 1995; 1996, where it was established that potential non-nominative subjects in Old Norse-Icelandic show all expected behavioral properties of subjects in that language. Rögnvaldsson also demonstrated that not all the subject properties that are valid for Modern Icelandic are relevant for Old Norse-Icelandic, due to changes in the grammar between the two periods of the Icelandic language. As a follow-up to Rögnvaldsson's work, providing further data and arguments for the proposed subject analysis of potential non-nominative subjects, including more examples of control infinitives, we may mention Barðdal's two studies on Old Scandinavian (2000a, 2000b) and Barðdal and Eythórsson's articles on the early Germanic languages (Barðdal & Eythórsson 2003; 2012; Eythórsson & Barðdal 2005).

In particular, Barðdal & Eythórsson (2012a) gather evidence not only from Old Norse-Icelandic, Old Swedish, Old and Early Middle English, Old Saxon and Old High German, but more importantly, also from Gothic, the earliest attested Germanic language. This evidence includes an example of a control infinitive in Gothic, involving a verb selecting for the Acc-Gen case frame, *luston* 'lust', reproduced in (2) below (for a further discussion of control infinitives, see §4.5 below).

(2) *hvazuh saei saihviþ qinon [**du** ___ **luston** izos]*
whoever who.NOM sees woman.ACC to PRO.ACC lust.INF her.GEN
'whoever looks at a woman in order to lust for her.'
Matthew 5:28, cited from Barðdal & Eythórsson 2012a: 386

This example shows clear deviations from the original Greek text, where the source verb occurs with the Nom-Dat case frame, instead of the Acc-Gen case frame in Gothic. The fact that the verb *luston* 'lust' occurs in a control infinitive in Gothic shows that Wulfila, when translating the relevant passage from Greek to Gothic, equated the accusative of the Acc-Gen case frame of *luston* with the nominative of the Nom-Dat case frame of the Ancient Greek source verb. What is more important, though, is that this Gothic example instantiates a control infinitive, where the accusative is left unexpressed, a behavior which is confined to syntactic subjects and is not found with objects. As such, this particular example testifies beyond doubt to the subject status of potential non-nominative subjects in Gothic, the earliest attested Germanic language.

In their work, Barðdal & Eythórsson (2012a) and Barðdal (2023) not only successfully reconstruct grammatical relations for Proto-Germanic on the basis of evidence in the daughter languages, they are also able to reconstruct non-nominative subjects for that same proto-stage. As part and parcel of this process, Barðdal & Eythórsson (2012a) and Barðdal (2023) reconstruct argument structure constructions containing non-nominative subjects on the one hand, and the set of syntactic constructions that function as subject tests across the Germanic languages on the other. On the basis of their model of the grammar of Proto-Germanic, the subject properties simply fall out automatically.

A recent study on Old Norse-Icelandic is Jónsson's (2018) investigation of word order, where it is shown that the different word order distributions of nominative and non-nominative subjects, indeed, and not unexpectedly, favor a subject analysis of the latter. It is certainly true that the word order is considerably freer in Old Norse-Icelandic than in Modern Icelandic, yet Jónsson shows, by focusing on the relative order of pronouns in the midfield, that non-nominative subjects behave syntactically as nominative subjects in this respect in opposition to how objects behave, again confirming the already established subject analysis of non-nominative subjects in Old Norse-Icelandic.

Another study of word order is Le Mair et al.'s (2017) research on Old Irish, an ancient Indo-European language which has a stable VSO word order. Le Mair and colleagues establish a baseline for neutral word order, grounded in ordinary nominative subjects and accusative objects, which they compare with the word order distribution found for potential non-nominative subjects (see §5.3 below). Their comparison shows that potential non-nominative subjects in Old Irish indeed

behave like nominative subjects with regard to word order distribution. Hence, the facts of Old Irish word order speak for a subject analysis of potential non-nominative subjects and refute an object analysis.

Luraghi (2010) discusses the behavior of syntactic subjects in Hittite, confining her analysis to word order and conjunction reduction. She claims that there are no reliable behavioral subject tests in Hittite, as the word order is quite free and conjunction reduction is not restricted to subject antecedents, but may also be found with object antecedents. It is thus not surprising that Dardano, in recent work (2017; 2018), mostly limits her discussion to Keenan's coding properties, in particular case marking and agreement. However, Dardano also argues, contra Luraghi, that word order may be used to confirm a subject analysis for potential non-nominative subjects, since these typically occur in first position in the clause, exactly like nominative subjects.

With regard to the Old Romance languages, some research has been carried out on Old French (Mathieu 2006), Old Spanish and Old Catalan (Fischer 2010). These studies reveal that potential non-nominative subjects in these early languages show many behavioral properties of syntactic subjects, and even more behavioral properties than they do in their corresponding modern languages. Examples of control infinitives, however, have only been documented for Old French by Mathieu (2006), but no such examples have been reported so far for Old Spanish or Old Catalan.

Moving closer to the topic of this article, some preliminary work has been carried out on possible subject properties of potential non-nominative subjects in Latin. This includes Michaelis's (1992); Baños Baños's (2003) and Fedriani's (2009; 2014) work where some evidence has been presented in favor of a subject analysis of potential non-nominative subjects, as well as some unpublished work by Dahl (2012) and Fabrizio (2016). On the basis of the evidence provided in the literature, scholars like Matasović (2013) indeed assume a subject analysis of potential non-nominative subjects for the Latin language. While this initial research has been very important, especially for demonstrating that potential non-nominative subjects in Latin show some behavioral properties of subjects, it has not been successful in establishing beyond doubt that there are non-nominative subjects in Latin, as no examples of unambiguous control infinitives have been documented so far. We present such examples from Latin below.

For Ancient Greek, even less work has been devoted to the issue of the subject status of potential non-nominative subjects than in Latin. One particular line of research is Conti's (2008; 2009) work on the use of the partitive genitive in subject position. The partitive genitive, however, is an optional morphosyntactic device found with either subjects or objects (Luraghi 2003b: 60–62), as such being different in nature from potential non-nominative subjects which are lexically selected

by the relevant predicates. In a later paper, however, Conti (2010) indeed discusses some subject properties of potential non-nominative subjects, in particular involving potential dative subjects in Ancient Greek. Our presentation below is partly based on Conti's discussion and partly on our own data (Danesi 2015; Barðdal 2017; Cattafi 2018), which have not figured so far in the published literature.

More recently, Danesi, Johnson & Barðdal (2018: 49–51) briefly touch upon the issue of subjecthood in Ancient Greek, presenting examples of potential non-nominative subjects behaving syntactically in the same way as nominative subjects in control infinitives. Evidence of this type, which by many scholars has been taken as the ultimate proof of subject status, in particular for corpus languages (cf. Rögnvaldsson 1996: 49–51; Falk 1997: 38; Moore & Perlmutter 2000; Faarlund 2001), is not found to date in the earlier literature on Ancient Greek. We provide further such examples from Ancient Greek below.

In addition, two very recent publications address the issue of subjecthood in Ancient Greek. The first one is Benedetti & Gianollo 2020, which focuses in particular on control within participial clauses as a subject test in Ancient Greek, a prospective subject behavior not discussed in the literature on Germanic, most likely due to the scarcity of such structures in the everyday language (perhaps with the exception of modern English and scientific German). The second recent discussion of subjecthood in Ancient Greek is provided by Cotticelli & Dahl (2022: 80–87), who claim that the category of subject is considerably less well developed in Ancient Greek than in Latin, as there are much fewer subject tests found in that language, according to them, than in Latin. The problem with this claim is that it appears to be based on very limited research into the structures relevant for subjecthood in Ancient Greek.

Cotticelli & Dahl's (2022) analysis is also more or less confined to the behavior of nominative subjects, and they argue that only ellipsis in imperatives and control infinitives are valid subject tests in Ancient Greek. It should be noted here that the imperative test generally excludes non-nominative subjects for the simple reason that the relevant predicates are not agentive enough, as has repeatedly been pointed out in the literature on Germanic (Barnes 1986: 25; Rögnvaldsson 1996: 48; Barðdal 2002: 68; Barðdal 2006: 54). As we show below, the claim that the category of subject is less developed in Ancient Greek than in Latin is unfounded, as potential non-nominative subjects in both languages pass several subject tests in addition to the ones discussed by Cotticelli & Dahl.

To conclude, contrary to several modern and medieval languages, no comprehensive study of the subject status of potential non-nominative subjects in the ancient Indo-European languages exists in the literature, as also pointed out by Benedetti & Gianollo (2017: 1) who state that "for some ancient Indo-European languages – Ancient Greek among them – the research has not gone beyond a

pioneering stage, and an in-depth definition of criteria for subjecthood is still missing." The ultimate goal of the present article is indeed to provide a comprehensive discussion of two of these ancient Indo-European languages, Latin and Ancient Greek, including establishing proper subject tests, taking as a point of departure the syntactic behavior of unambiguous nominative subjects.

3 The Subject Concept

In §§4–5 below, we discuss six behavioral subject tests that have been proposed in the literature as distinguishing between subjects and objects in one of the modern Indo-European languages that is best known for having non-nominative subjects, namely Icelandic (Andrews 1976; Thráinsson 1979; Zaenen et al. 1985; Sigurðsson 1998; Jónsson 1996; Barðdal 2001a; *inter alia*). These tests have also been used in cross-linguistic research on subjecthood (see references in §2 above), some of which have been successfully applied to the early Germanic languages, including Gothic, Old Saxon, Old and Middle English, Old and Middle High German, Old Norse-Icelandic, Old Swedish and Old Danish. These tests involve:

- Conjunction reduction
- Long-distance reflexivization
- Raising-to-object (AcI)
- Raising-to-subject
- Control
- Word order

An additional test, clause-bound reflexivization, has also been used as a subject test cross-linguistically, but since the Latin and the Ancient Greek data are exceptionally complicated (cf. Bertocchi & Casadio 1980; Puddu 2005; Kiparsky 2012; Zheltova 2016; Haug 2017), basically requiring a research article of their own, we refrain from discussing that syntactic behavior here.

It should be noted, however, that even though some of the subject tests listed above may be cross-linguistically valid in the sense that they isolate subjects from objects in several unrelated languages, our reason for applying these tests here is due to their validity for both the early and modern Germanic languages and not because of their potential cross-linguistic validity. In other words, we chose to apply these tests to early Indo-European languages such as Latin and Ancient Greek because these tests have already shown themselves to be applicable within the Germanic branch of the Indo-European family. Several of these tests are also

valid for Modern Romanian (cf. Ilioaia 2021; Ilioaia & Van Peteghem 2021), another Indo-European language stemming from the Eastern Romance branch of the Indo-European language family.

This, however, does not mean that we believe that a subject test in one language is automatically applicable within a related language; on the contrary, this must be established on a case-by-case basis, which is exactly what we do below. Still, we certainly believe that the chances that subject tests from one language also work in a different but related language are higher than if the two languages were unrelated. Therefore, established subject tests in one language or one language branch are perfectly legitimate as a point of departure for further exploratory research within other languages or language branches of that family.

Our working definition of *subject* is that it is the first argument of the argument structure of each verb or predicate (cf. Eythórsson & Barðdal 2005; Barðdal & Eythórsson 2012a; 2018; Barðdal, Eythórsson & Dewey 2019 and Barðdal 2023). We put this subject definition forward after decades of cumulative work on the subject behaviors listed above. Thus, we have arrived at our working definition through a bottom-up approach, as we have found that the verbal argument that systematically passes the subject tests is the first argument of the argument structure (see the paragraphs below for a further explanation of this). In other words, generalizing across the subject tests singles out the first argument of the argument structure and not, say, the second argument. We believe that our working definition of subject captures the empirical core of the subject concept, to be integrated into each reader's preferred theoretical framework, as this empirical core must in general be integrated into all theoretical frameworks dealing with grammatical relations by their practitioners.

Moreover, due to our subject definition, we are able to put forth a hypothesis that the first argument of potential non-nominative subject verbs may pass the subject tests in Latin and Ancient Greek and not, for instance, the second argument:

> **Hypothesis**: The first argument of the argument structure of Latin and Ancient Greek verbs will show behavioral properties of subjects, irrespective of whether the first argument is case-marked in the nominative, accusative or dative.

This hypothesis is, in principle, falsifiable; what is needed to falsify it is data and examples showing that it is, in reality, not the first argument of the argument structure that passes the subject tests, but another argument. Observe, moreover, that our conclusions below are not based on our definition of subject, but on the fact that the first argument of the argument structure of the relevant verbs in Latin and Ancient Greek passes the subject tests, as we show in the next sections.

Our definition of subject and our succeeding hypothesis raise the follow-up question of how to decide on the order of the arguments of the argument structure. As a matter of fact, we take the order of the arguments of the argument structure to be a derivative of event structure and the force dynamics (Talmy 1985; 1988) found to hold between the participants of the event (Croft 1998; 2012; Barðdal 2001a; 2023; Eythórsson & Barðdal 2005; *inter alia*). In simple terms, this means that the initiator of the event is manifested as the first argument of the argument structure, since it is the entity transmitting force upon another entity. The endpoint of the event is manifested as the second argument, as it is the entity upon which force is transmitted. As such, this force-dynamic description captures the argument structure of causative verbs, involving events where an initiator transmits force upon an endpoint, as with the verb 'hit,' in English, Icelandic, Latin and Ancient Greek, shown in the top rows in Table 1.

Table 1: Argument structure of 'hit', 'pester' and 'like'

Language	Verb	Argument Structure
English	*hit*	[ARG1, ARG2]
Icelandic	*slá*	[$ARG1_{nom}$, $ARG2_{acc}$]
Latin	*percutio*	[$ARG1_{nom}$, $ARG2_{acc}$]
Ancient Greek	*týptō*	[$ARG1_{nom}$, $ARG2_{acc}$]
English	*pester*	[ARG1, ARG2]
Icelandic	*plaga*	[$ARG1_{nom}$, $ARG2_{acc}$]
Latin	*remordeo*	[$ARG1_{nom}$, $ARG2_{acc}$]
Ancient Greek	*ochléō*	[$ARG1_{nom}$, $ARG2_{acc}$]
English	*like*	[ARG1, ARG2]
Icelandic	*líka*	[$ARG1_{dat}$, $ARG2_{nom}$]
Latin	*libet*	[$ARG1_{dat}$, $ARG2_{nom}$]
Ancient Greek	*handánō*	[$ARG1_{dat}$, $ARG2_{nom}$]

The verb 'hit' selects for two arguments in these four languages, i.e., a nominative first argument and an accusative second argument. Since 'hit' is a causative verb, the initiator maps onto the first argument and is realized as a subject, while the endpoint maps onto the second argument and is realized as an object. The same is true for the active verb 'pester' in the middle rows in Table 1, the initiator maps onto a nominative subject and the endpoint onto an accusative object. The verb 'pester' is also a causative verb, even though the initiator is not necessarily animate, as it probably is with 'hit' in the majority of cases.

Table 2: The argument structure of the Latin and Ancient Greek verbs selecting for potential non-nominative subjects in §4 below

Latin			Ancient Greek		
Verb	**Translation**	**Case Frame**	**Verb**	**Translation**	**Case Frame**
libere	'like'	[Dat-Nom]	*deîn*	'need'	[Acc/Dat-Nom]
miserere	'pity'	[Acc-Gen]	*dokeîn*	'seem'	[Dat-Nom]
miserescere	'pity'	[Acc-Gen]	*exeînai*	'be allowed'	[Dat-Nom]
paenitere	'regret'	[Acc-Gen]	*lysiteleîn*	'profit'	[Dat-Nom]
pigere	'disgust'	[Acc-Gen]	*mélein*	'care'	[Dat-Gen]
placere	'please/like'	[Dat-Nom]	*metamélein*	'repent'	[Dat-Gen]
pudere	'be ashamed'	[Acc-Gen]	*meteînai*	'have a share'	[Dat-Gen]
taedere	'be disgusted'	[Acc-Gen]			

With psychological verbs, however, the situation is quite different, as these are generally stative and not causative, and as such may be conceptualized in two different ways, namely as i) with the stimulus affecting the experiencer ('frighten' construal) or as ii) with the experiencer directing his/her attention to the stimulus ('fear' construal), as is outlined by Croft (1998; 2012: 233–236). Clearly, the first of these construals, the one with the stimulus affecting the experiencer as in the case of 'frighten', is realized syntactically in the same way as 'hit' and 'pester' in Table 1, with the stimulus mapping onto the first argument of the argument structure and the experiencer mapping onto the second argument of the argument structure.

In contrast, verbs like 'like', which are construed as having the experiencer directing his/her attention towards a stimulus as in the case of 'fear', are realized syntactically as in the set of bottom rows in Table 1, with the experiencer mapping onto the first argument of the argument structure and the stimulus mapping onto the second argument of the argument structure, irrespective of case marking. We concur with Croft (1998) in his conclusions that whether psychological verbs are associated with the 'frighten' or the 'fear' construals really is a lexical property of each predicate, not derivable from the verbal semantics of psychological verbs in general.

In Table 2, we outline the argument structure of each of the relevant Latin and Ancient Greek verbs used in §4 below in our documentation of the subject behavior of the first argument of the argument structure in Latin and Ancient Greek. Our analysis of the argument structure of these verbs stems from their general syntactic behavior and is not based on any *ad hoc* interpretations or translations of individual examples.

Recall that the order of the arguments in the argument structure is a derivative of event structure and the causal conceptual structure of each predicate, as outlined

above. A subset of the Latin verbs select for a Dat-Nom case frame while the remainder of the Latin verbs selects for an Acc-Gen frame. The hypothesis to be tested in this article is whether the first argument of the argument structure, as listed in the third column in Table 2, the dative for the relevant Dat-Nom verbs and the accusative for the relevant Acc-Gen verbs, behaves syntactically as a subject with regard to the subject tests. The same is true for the Ancient Greek verbs listed in Table 2, although the relevant case frames there are Dat-Nom and Dat-Gen, shown in the last column in the table.

The more observant reader may have noticed that a consequence of our approach is that the nominative of Dat-Nom verbs is hypothesized to behave syntactically as an object, as it is the second argument of the argument structure. This is in line with what has been shown for Modern Icelandic and Modern Faroese (see references in §2), where nominatives of Dat-Nom verbs show indisputable object behavior, despite agreeing with the verb in person and sometimes in number. Another consequence of our approach is that there can be no "impersonal" verbs in either Latin or Ancient Greek, in the sense of 'subjectless', as the only non-nominative argument of one-place verbs falls under our definition of subject, since it is the first, and thus the only, argument of the argument structure. Therefore, only verbs with no argument, like some weather verbs, would count as impersonal under our line of reasoning.

Our view of the subject concept stands in stark contrast to the traditional Latin school-grammar definition of subject as being in the nominative case and controlling subject-verb agreement. As is well known from Keenan's (1976) research, nominative case and verb agreement are *coding* properties of subjects. For that reason, nominative case and verb agreement are not listed in the bullet-point overview above, as including these would immediately exclude potential non-nominative subjects from even being considered as behavioral, while our goal is rather to uncover the *behavioral* properties of such arguments. Clearly, coding properties should not qualify as decisive subject criteria when investigating behavioral properties. See Barðdal 2000b for a discussion of some of the methodological problems arising in earlier historical research on subjecthood, in particular of how the axiomatic truth that the subject must be in the nominative case has blurred the scholarly discussion, resulting in methodological inconsistencies and nihilism.

4 Subject properties of potential non-nominative subjects in Latin and Ancient Greek

In this section, we demonstrate on the basis of Latin and Ancient Greek data that potential non-nominative subjects in these two languages show a clear affinity with nominative subjects with regard to the subject properties listed in §3, thus confirming our hypothesis above. We discuss five of these in their own subsections below, starting with conjunction reduction. We postpone the discussion of word order distribution until §5, due to its length. We present the Latin data first, before proceeding to the Ancient Greek data.

4.1 Conjunction reduction

Starting with conjunction reduction, generally in the modern Indo-European languages only syntactic subjects may be left unexpressed in coordinated clauses on identity with the subject of the first conjunct. The example in (3) below from Modern English serves as a representative case:

(3) ***He***$_i$ *revealed the truth about the conflict and* ___$_i$ *did Israel a service.*

Here, the subject of the second conjunct, corresponding to 'he', is left unexpressed on identity with *he*, the subject of the first conjunct. The ability to be left unexpressed on identity with an argument of the first conjunct does not apply to objects in English (cf. Ross 1967).

It has been argued, however, for several early North Germanic languages that conjunction reduction is not a secure test in these languages, as it does not distinguish between subjects and objects (cf. Bernódusson 1982; Sigurðsson 1984; Faarlund 1990; 2001; Rögnvaldsson 1991; 1996; Mørck 1992; Kristoffersen 1994, and Barðdal 2000a for Old Norse-Icelandic, and Falk 1997 for Old Swedish). In contrast, for Old and Early Middle English, Allen (1995: 54–56) argues that there is a major statistical difference between omission in second conjuncts on the basis of subjects or objects of first conjuncts, with omission on identity with objects only occurring in 1% of the target cases. Corresponding statistics for nominative and potential non-nominative subjects yield the numbers 80% vs. 50–60%, respectively. Thus, Allen argues, on the basis of these differences in statistics, that potential non-nominative subjects in Old and Early Middle English behave syntactically as subjects and that conjunction reduction can indeed be used to argue for a subject analysis of potential non-nominative subjects in that language.

We now turn to conjunction reduction in Latin and Ancient Greek and the syntactic behavior of the arguments relevant to that test.

4.1.1 Latin

Consider the following example from Latin, where the potential accusative subject of *piget* 'be ashamed' is left unexpressed in the second main clause, on identity with the prodropped nominative of *cogitat* 'think' in the first main clause:[2]

(4) *Num cogit**at***$_i$ *quid dicat? num* ___$_i$ *facti piget?*
PTC thinks.**3SG** what says.3SG PTC ∅.ACC deed.GEN is.ashamed.3SG
Does he think about what he says? Is [he] ashamed of what he has done?'
Ter. *An.* 5.3, cited from Dahl 2012: 13

This example clearly demonstrates that the potential accusative subject of *piget* 'be ashamed' behaves syntactically in the same way as a nominative subject does, as only arguments of the same category may be left unexpressed on identity (see below). The example in (4) above contains two independent juxtaposed main clauses (a.k.a. *asyndetic coordination*).

Consider now another example of juxtaposed main clauses; in this case with the potential accusative subject of *miseret* 'feel pity' in a second conjunct being left unexpressed on identity with the potential accusative subject of the same verb, *miseret*, in the first conjunct.

(5) *Miseret* ***te***$_i$ *aliorum, tui nec* ___$_i$ *miseret nec pudet*
feel.pity.3SG you.ACC others.GEN you.GEN neither ∅.ACC feels.pity.3SG nor feels.shame.3SG
'You have pity on others, for yourself you have neither pity nor shame'
Plaut. *Trin.* 431, cited from Fedriani 2014: 131

Note that there is a third verb in (5), *pudet* 'feel shame' in the second main clause, which lacks both its potential accusative subject and its genitive object. Instead, *pudet* shares the fronted genitive object *tui* 'you' and the unexpressed potential accusative subject with *miseret*. Therefore, *pudet* might be analyzed as a *conjoined VP headed by* the finite verb *miseret* 'feel pity' (cf. Sells 2019: 555). As a consequence, we are not calling upon the status of *pudet* as evidence here. Still, there is no

2 The glosses of the Latin and Ancient Greek examples are ours, while the translations are mostly taken from the Loeb Classical Library (https://www.loebclassics.com). Some of the translations may be slightly modified to better reflect the argument structure in the relevant examples.

doubt that the potential accusative subject of *miseret* in the second conjunct is left unexpressed on identity with the potential accusative subject of the same *miseret* in the first conjunct.

When comparing (5) with (4) above, it is clear that the potential accusative subject of *miseret* in the first conjunct in (5) behaves in the same way as the pro-dropped nominative subject of *cogitat* 'he thinks' in (4). Both of these may function as antecedents of identity required for the subject of the second conjunct to be left unexpressed. Therefore, the example in (5) further strengthens our claim that potential accusative subjects in Latin behave syntactically as nominative subjects.

Let us now turn to some examples of conjoined clauses (a.k.a. *syndetic coordination*), as opposed to juxtaposed main clauses. The examples in (6)–(7) below involve potential non-nominative subjects being left unexpressed in combined clauses in Latin, potential accusative subjects in (6) and a dative one in (7).

(6) a. *Mal**o**$_i$ **me**$_i$ meae fortunae paeniteat, quam ___$_i$ victoriae pudeat*
prefer.1SG I.ACC my.GEN fate.GEN would.repent.3SG than ∅.ACC victory.GEN
would.be.ashamed.3SG
'I prefer that I repent my fate rather than [that I] be ashamed of victory'
Curt. *Hist*. 4.13.9, cited from Fedriani 2014: 124

b. *proicit **ipse**$_i$ sua deductas fronte coronas, … et ___$_i$ pudet in tristi laetum consurgere turba*
throws.down.3SG he.NOM his removed.ACC forehead.ABL crowns.ACC … and ∅.ACC is.ashamed in sad joyful appear.INF crowd.ABL
'he tears the removed crowns from his forehead … and is ashamed to appear joyful in so disconsolate a crowd' Ov. *Her*. 21.165–168

(7) *huius consilium **plerisque civitatibus**$_i$ displicebat et in terra dimicari ___$_i$ magis placebat*
his.GEN plan.NOM many.DAT states.DAT disliked.3SG and on land.ABL fight.INF ∅.DAT more liked.3SG
'many of the states disliked his plan, but preferred to fight on land'
Nep. *Them*. 3.1

Observe that the examples in (6)–(7) do not involve two conjoined VPs. Instead, these are two full *finite* clauses combined by a coordinating conjunction, *quam* 'rather than' in (6a), and *et* 'and' in (6b) and (7). In (6a) the potential accusative subject of *pudeat* 'would be ashamed' in the comparative clause is left unexpressed on identity with the potential accusative subject of *paeniteat* 'would repent' in the matrix clause (also coreferential with the prodropped nominative subject of *malo* 'I prefer'). In other words, these two clauses share the same subject, i.e. *me* in the first conjunct. In (6b) the potential accusative subject of the same verb, *pudet* 'be

ashamed', is left unexpressed on identity with the nominative subject, *ipse* 'he' of the first conjunct.

In (7) the potential dative subject of *placebat* 'liked' in the second conjunct is left unexpressed on identity with the potential dative subject, *plerisque civitatibus* 'many states', of *displicebat* 'disliked' in the first conjunct. These examples therefore show that both potential accusative and potential dative subjects may be left unexpressed in conjoined clauses in Latin.

A further complicating factor, pointed out by Dahl (2012), is that objects may also be left unexpressed in conjoined clauses in Latin, as shown in the following example:

(8) *senatus* ***haec***$_i$ *intellegit, consul* ___$_i$ *videt*
senate.NOM **those.ACC** understands.3SG consul.NOM ∅.ACC sees.3SG
'the senate understands those things, the consul sees [them]'
Cic. *Cat*. 1.2., cited from Luraghi 1997: 239

However, syntactic objects may only be left unexpressed on identity with coreferential syntactic objects in the first conjunct in Latin, as Luraghi (1997) argues, and not on identity with coreferential syntactic subjects.

In order to support Luraghi's claims, we have carried out a small count of omissions in conjoined clauses in the first 17 chapters of Cicero's *On the Orator*. The count is based only on conjoined finite main clauses, excluding subordinate clauses and participle clauses. As is shown in Table 3, which also includes (4)–(8) above, the total number of examples involving omission is 33, of which 19 have nominative subjects omitted in second conjuncts on identity with a nominative subject in the first conjunct. Objects, direct and indirect ones, may also be left unexpressed, but they only do so on identity with a referent in the first conjunct which shares the same grammatical relation, i.e. direct objects on identity with direct objects in eight cases and indirect objects on identity with indirect objects in one case.

Table 3: Type of identity relations in conjunction reduction in Latin

	Unexpressed Argument				
Antecedent	**Nom. Subject**	**Obl. Subject**	**Direct Object**	**Indir. Object**	**Total**
Nominative Subject	19	2			21
Oblique Subject		3			3
Direct Object			8		8
Indirect Object				1	1
Total	19	5	8	1	33

What is also particularly noteworthy in Table 3 is that potential non-nominative subjects may also be left unexpressed on identity with nominative subjects, which happens twice in our material, indeed speaking for the subject status of potential non-nominative subjects. We realize, of course, that the numbers are low, but we still believe that they show a clear tendency supporting Luraghi's (1997) claims that omission only takes place on identity with arguments sharing the same grammatical relation.

Hence, the fact that objects may also be left unexpressed on identity with other objects does not invalidate the conjunction reduction test in Latin. Potential non-nominative subjects may be left unexpressed on identity with either nominative subjects or other potential non-nominative subjects, as shown above, but never on identity with objects. This holds irrespective of case marking.

To conclude, given the combined evidence from the different structures in (4)–(7) above, supported by the statistics in Table 3, the syntactic behavior of potential non-nominative subjects in Latin indeed calls for a subject analysis and excludes both a case matching analysis and an object analysis of potential non-nominative s ubjects.

4.1.2 Ancient Greek

Benedetti & Gianollo (2020: 36f.) present examples of conjunction reduction in Ancient Greek involving conjoined clauses where the subject of the first conjunct is in the dative case, coreferential with an elliptic nominative in the second conjunct:

(9) *édokse dè* ***toîsi Peloponnēsíoisi***$_i$ *taûta eînai poiētéa kaì* ___$_i$ *étamon hórkion*
seemed.3SG PTC the.DAT Peloponnesians.DAT this.NOM.PL be.INF to.be.done and ∅.NOM took.3PL oath.ACC.SG
'The Peloponnesians thought that this should be done and [they] swore a compact.' Hdt. 9.26, cited from Benedetti & Gianollo 2020: 36

We agree with Benedetti & Gianollo (2020) that such examples indeed speak for a subject analysis of the dative.

In addition, we present the example in (10) below of the potential dative subject of *éxesti* 'is allowed' in the second conjunct being left unexpressed on identity with the dative of the same verb, *éxesti*, in the first conjunct:

(10) *ássa dé* ***sphi***$_i$ *poiéein ouk éxesti* ___$_i$ *taûta oudè*
anything.ACC PTC **they.DAT** do.INF not is.allowed.3SG ∅.DAT these.ACC not.even
légein éxesti
speak.INF is.allowed.3SG
'Of what they are not allowed to do, [they] are not allowed to speak, either'
Hdt. 1.138

Furthermore, examples where a potential non-nominative subject is left unexpressed on identity with a nominative subject, like the Latin ones in (4)–(7) above, are also found in Ancient Greek. This is shown in (11) below, where the potential accusative subject of *deî* + Inf 'needs' is left unexpressed on identity with the nominative subject *hoi ánthrōpoi* 'the men' of the first conjunct:

(11) *én tini phrourâi esmen* ***hoi ánthrōpoi***$_i$ *kaì* ___$_i$ *ou deî dḕ*
in certain prison.DAT are.1PL **the men.NOM** and ∅.ACC not needs.3SG indeed
heautòn ek taútēs lýein
self.ACC from it.GEN set.free.INF
'We men are in a kind of prison and [we] must not set ourselves free from it'
Pl. *Phd*. 62b

Another potential interpretation of this example would be to analyze the reflexive *heautòn* as an accusative subject of *lýein* 'set free, unfasten' instead of being its object. However, on such an analysis, *lýein* would be missing an object, which would be contrary to the active meaning of *lýein* and would not be compatible with the overall interpretation of the sentence. Thus, in our view, the only viable analysis of this example is that the accusative of *deî* 'need' is left unexpressed on identity with the nominative subject of the first conjunct.[3]

3 Observe the lack of number agreement between the plural nominative subject *hoi ánthrōpoi* 'the men' in the first conjunct and the singular reflexive *heautòn* 'self' in the second conjunct. Certainly, one would expect a plural form here, *heautoús* 'selves', instead of the singular form on the assumption that the potential accusative subject of *deî* 'need' is coreferential with *hoi ánthrōpoi* 'the men'. However, as pointed out by Luraghi (2014) for conjoined clauses in Ancient Greek, examples are indeed found containing a mismatch in number between two conjoined clauses, without this affecting the coreferentiality of the unexpressed subject of the second conjunct. Due to that, the singular form of the reflexive is not a major problem for our analysis. In addition, there is no other candidate for a coreference than the nominative subject *hoi ánthrōpoi* 'the men' in the context. The only other analytical option is to assume a literal interpretation of the singular *heautòn* 'self', which would then be coreferential with the unexpressed subject of *deî* 'need' in the second conjunct. On such an analysis, this unexpressed accusative would have to refer to a generic indefinite 'one', which in essence corresponds to the generalizing meaning of 'we, the men'. Either way, this example is a valid example of conjunction reduction in Ancient Greek, speaking for a subject analysis of the potential accusative subject and against an object analysis.

Conti (2010: 261), however, claims that conjunction reduction is not a valid subject test in Ancient Greek, as objects may also be left unexpressed on identity with arguments in the first conjunct. Conti presents examples like the following to illustrate this, in which the object of *edḗioun* 'ravage' in the second conjunct is left unexpressed on identity with *tḕn Epidaurían* 'the land of Epidaurus', which is the syntactic object of *esébalon* 'make assault' in the first conjunct:

(12) *esébalon es* ***tḕn Epidaurían***$_i$ *kaì edḗioun* ___$_i$
make.an.assault.3PL to **the (land)of.Epidaurus.ACC** and ravage.3PL ∅.ACC
'invaded Epidaurus and proceeded to ravage [it]'
Thuc. 5.54.3, cited from Conti 2010: 261

Conti is perfectly right, of course, that objects may be left unexpressed in conjoined clauses (cf. Luraghi 2003a), but, again, as argued by Luraghi (2014), conjunction reduction in Ancient Greek only affects arguments which share the same grammatical relation, irrespective of morphological marking, exactly as discussed above for Latin. This is shown in (13) below, where the accusative object of the second conjunct is left unexpressed on identity with a dative object of the first conjunct:

(13) *háma dè têi hēmérāi*$_i$ ***têi pólei***$_i$ *prosékeito oúsēi ou*
at.the.same.time PTC the.DAT day.DAT **the city.DAT** assaults.3SG being.DAT not
megálēi kaì ___$_i$ *haireî*
big.DAT and ∅.ACC grasps.3SG
'At daybreak he assaulted the town, which is not a large one, and took [it]'
Thuc. 7.29, cited from Luraghi 2014: 362

Again, in order to corroborate Luraghi's (2014) claims, we have carried out a small count of omissions in coordinated clauses in Ancient Greek, this time based on Herodotus' Histories. The count involves coordinated clauses in the first 31 chapters of Book I and four chapters in Book IX (90–93). The dataset consists of finite main clauses only, as conjunction reduction is confined to coordinated main clauses, leaving subordinate and participial clauses aside.

The numbers for Ancient Greek, given in Table 4, which also include examples (9)–(13) above, show exactly the same tendencies as in Latin. Omission in second conjuncts takes place on identity with arguments in the first conjunct which share the same grammatical relations. Objects are left unexpressed on identity with objects in six cases, of which two examples do not involve shared case marking, but dative or genitive in the first conjunct and an accusative in the second conjunct. Also, nominative subjects are left unexpressed on identity with other nominative subjects in 16 cases, while nominative subjects are left unexpressed on identity with potential non-nominative subjects in three cases. What is more, in one case a potential non-nominative subject is left unexpressed on identity with a

nominative subject. These last facts indeed corroborate our claim that potential non-nominative subjects behave syntactically as nominative subjects.[4]

Table 4: Type of identity relations in conjunction reduction in Ancient Greek

	Unexpressed Argument				
Antecedent	**Nom. Subject**	**Obl. Subject**	**Direct Object**	**Indir. Object**	**Total**
Nominative Subject	16	1			17
Oblique Subject	3	1			4
Direct Object			6		6
Indirect Object					
Total	19	2	6		27

In sum, the fact that the potential dative subject in the first conjunct in (9) licenses the omission of the nominative subject of the second conjunct, as well as the fact that the potential accusative subject of *deî* 'need' in (11) is left unexpressed on identity with the nominative subject of the first conjunct, shows that potential non-nominative subjects indeed pattern with unambiguous subjects and not with objects.

To conclude, the syntactic behavior of potential non-nominative subjects in Ancient Greek calls for a subject analysis of these arguments and excludes both a case matching analysis and an object analysis, exactly as discussed above for Latin.

4.2 Long-distance reflexivization

Both Latin and Ancient Greek are known for allowing so-called long-distance reflexivization (Humbert 1954; Kühner & Stegmann 1955; Kühner & Gerth 1955; Smyth & Messing 1963; Clements 1975; Bertocchi & Casadio 1980; Benedicto 1991; Puddu 2005; Viti 2010; Pinkster 2015), exactly as their younger cousin, Old Norse-Icelandic (cf. Rögnvaldsson 1991; 1995; 1996; 2007; Barðdal 2000a; Barðdal & Eythórsson

4 It should be mentioned here that Haug (2012) has investigated on which bases objects may be left unexpressed in New Testament Greek, and he observes a few examples of objects being left unexpressed on identity with subjects. However, there are two problems here with comparability: a) Haug's data are much later than our data, as our examples are confined to Classical Greek, while his are from the Hellenistic period, and b) Haug investigates all instances of argument omission in the New Testament, irrespective of whether they are found in conjoined clauses or not. His results can therefore not be compared with ours and they can certainly not be used to draw conclusions on the nature of omission in conjoined clauses in Classical Greek.

2003; Eythórsson & Barðdal 2005). Also, one example involving long-distance reflexivization has been reported in Gothic (Harbert 1978: 38). In long-distance reflexivization, a reflexive in a subordinate clause is bound by an antecedent in the main clause, as shown in the Modern Icelandic example in (14) below, where *sér* 'self' in the subordinate clause is bound by the nominative subject *nefndin* 'the committee' in the matrix clause:

(14) *Nefndin*$_i$ *lagði fyrir bæjarstjórnina að hún gæfi* ***sér***$_i$ *umboð.*
committee.the.NOM laid before city.council.the.ACC that she.NOM gave **self** mandate
'The committee suggested to the city council that they gave it a mandate.'

Long-distance reflexivization is also well known from Modern Faroese and West Norwegian dialects (Strahan 2003; 2007; Lødrup 2009), in addition to Modern Icelandic, but is generally assumed to be altogether absent from West Germanic, including English and German. Binding of long-distance reflexives is taken to be confined to subject arguments in the languages where such a reflexivization strategy is found (cf. Sigurðsson 1990: 311; Thráinsson 1991: 55; Rögnvaldsson 1996: 63; 2007: 11).

As far as we are aware, only one exception to the rule that the antecedent for long-distance reflexives must be the subject has been documented in the literature, and this exception involves instances of reported speech (Kumo 1975; Clements 1975). One such example from Modern Icelandic is given in (15) below.

(15) *Hann*$_i$ *heyrði nefndina*$_j$ *leggja fyrir bæjarstjórnina*$_k$ *að hún*$_k$ *gæfi* ***sér***$_{i/j}$ *umboð.*
he heard committee.the.ACC laid before city.council.the.ACC that she gave **self** mandate
'He heard the committee suggest to the city council that they gave him/it a mandate.'

In this example the reflexive of the subordinate clause *sér* may either be bound by the subject *hann* 'he' or the accusative *nefndina* 'the committee' in the preceding clause. Note, however, that the relevant structure involves raising-to-object/AcI, which in turn means that the accusative object of the matrix verb, *nefndina* 'the committee', is, at the same time, the subject of the infinitive. Examples of this type therefore do not involve unambiguous objects. What is more, none of our examples below of long-distance reflexivization in Latin and Ancient Greek are of this type.

Several languages also make use of reflexives in logophoric function. In such languages a reflexive refers back to an antecedent outside of its simple clause or outside complex clauses containing a main clause and its subordinate clause (see Pollard & Xue 1998 for Chinese and Kiparsky 2012 for Ancient Greek). In contrast, all the examples we present below are true examples of long-distance

reflexives, not involving logophoric uses, as the antecedent is always the potential non-nominative subject of the relevant main clause.

We now turn to long-distance reflexivization in Latin and Ancient Greek, where examples involving non-nominative subjects may indeed be found.

4.2.1 Latin

Regarding potential non-nominative subjects' ability to control reflexives in long-distance contexts, all the examples presented in the literature so far involve reflexives in infinitive clauses (cf. Dahl 2012) instead of in subordinate clauses. Reflexivization into infinitival clauses is taken by some scholars as clause-bound reflexivization and not long-distance reflexivization (cf. Rögnvaldsson 1996). In order to avoid ambiguity, we prefer to work with the best type of evidence here, namely binding of reflexives *into* subordinate clauses.

Consider the following example from Latin, where the reflexive *suae* 'own' is bound by the potential dative subject, *nemini* 'nobody'.

(16) *dum nemini*$_i$ *nostrum libet scire, quid saluti* ***suae***$_i$ *opus sit*
while nobody.DAT us.GEN likes.3SG know.INF what.NOM welfare.DAT **own.DAT** need would.be.3SG
'While none of us likes to know what is necessary for one own's welfare.'
Plin. *HN* 29.6, cited from Dahl 2012: 10

This example clearly involves long-distance reflexivization, as *saluti suae* 'own's welfare' is the object of *opus sit* 'be needed' in a subordinate clause headed by *quid* 'what', indeed bound by the potential dative subject *nemini nostrum* 'none of us' in the main clause. Thus, this example shows that potential non-nominative subjects in Latin behave syntactically as nominative subjects do with respect to long-distance reflexivization. No examples of unambiguous objects controlling long-distance reflexives in Latin have been documented in the literature (cf. Puddu 2005: 126; Viti 2010: 362–364).

4.2.2 Ancient Greek

Exactly as in Latin, examples of long-distance reflexivization involving potential non-nominative subjects in Ancient Greek have hitherto been confined to reflexive binding in infinitival clauses (cf. Benedetti & Gianollo 2020: 34). Again, we prefer

to work with the most conclusive evidence, which involves reflexive binding into subordinate clauses.

Two such examples are presented below, stemming from the same paragraph in Plato's *Republic*:

(17) a. *hótōi$_i$ lysiteleî ek toútou toû lógou chrysíon lambánein*
anyone.DAT profits.3SG from this the thought.GEN gold.ACC accept.INF
adíkōs eíper toiónde ti gígnetai lambánōn tò chrysíon
unjustly if such.as this becomes.3SG accepting the gold.ACC
*háma katadouloûtai tò béltiston **heautoû**$_i$ tôi*
at.the.same.time is.enslaved.MP.3SG the best.NOM **of.himself** the
mochthērotátōi?
worst.DAT
'Can any man profit in the light of this thought from accepting gold unjustly if the result is that by accepting the gold the best of himself is enslaved by the worst?' Pl. *Resp*. 589d

b. *ouk àn autôi$_i$ elysitélei … ei dè tò **heautoû**$_i$ theiótaton hypò*
not would him.DAT profited.3SG if PTC the **of.himself** most.divine.NOM by
tôi atheōtátōi te kaì miarōtátōi douloûtai
the godless.DAT PTC and abominable.DAT be.enslaved.MP.3SG
'he would not profit … if the most divine part of himself be enslaved by the most despicable and godless part' Pl. *Resp*. 589e

The two subordinate clauses are headed by *eíper* 'if indeed' in (17a) and *ei* 'if' in (17b). In both examples a reflexive in a subordinate clause, *heautoû* 'of himself, is bound by the potential dative subject of 'profit', *hótōi* 'anyone' (17a) and *autôi* 'him' (17b), in the two matrix clauses. Observe that the reflexive in both cases is a part of the larger nominative subject of the subordinate clauses, headed by the mediopassive 'be enslaved'. The relevant nominative subjects are *tò béltiston heautoû* 'the best of himself' in (17a) and *heautoû theiótaton* 'the most divine part of himself' in (17b). The subordinate verbs are in the mediopassive form, *katadouloûtai* and *douloûtai*, respectively, occurring with a Nom-Dat construction in (17a), but a Nom-PP in (17b).

These case marking facts, in turn, suggest that *katadouloûtai* in (17a) is a middle, while *douloûtai* in (17b) is a passive, as the relevant PP of the Nom-PP construction is headed by the preposition *hypò* 'by', which is known for governing the demoted agent in passive constructions in Ancient Greek (cf. Luraghi 2000: 281f.; Barðdal & Danesi 2014). Therefore, there is no doubt that the reflexives in the subordinate clauses in (17) are bound by the dative subjects in the matrix clauses, showing that potential non-nominative subjects participate in long-distance reflexivization in Ancient Greek, exactly as they do in Latin.

Examples of potential non-nominative subjects controlling reflexivization across clause boundaries have not been presented in the earlier literature on subjecthood in Ancient Greek. These examples therefore show that potential non-nominative subjects in Ancient Greek, exactly as in Latin, behave syntactically as nominative subjects do with respect to long-distance reflexivization. As far as we are aware, no examples of unambiguous objects binding reflexives into subordinate clauses have been documented for Ancient Greek (Puddu 2005: 172). Thus, the ability to bind long-distance reflexives is clearly a subject behavior.

4.3 Raising-to-Object

Yet another syntactic behavior of subjects is their ability to occur in so-called raising-to-object constructions, also known as AcI constructions in traditional terminology. For elucidation purposes, an example of such a construction in Modern English is given in (18) below.

(18) *I let **her** leave.*

It is assumed in the generative literature that the subject of the infinitive of *leave* behaves syntactically as the object of the matrix verb *let*, evident from the object case marking, i.e. *her* instead of *she* in (18) above. We use the established term *raising-to-object* here, irrespective of the type of technical analyses available for this kind of structures, i.e. irrespective of whether one assumes that the object has been "raised" upwards to the object position in the structure or not.

What matters instead is that the subject of a corresponding finite clause shows up here in the accusative case, assigned by either the matrix verb or the AcI construction itself. That is, the fact that predicates selecting for potential non-nominative subjects may be embedded in AcI constructions shows that the potential non-nominative subject behaves syntactically in the same way as nominative subjects do, irrespective of whether it is analyzed theory-internally as "raising", Exceptional Case Marking, or whatever else.

For languages with proper case morphology, like Icelandic, we also find predicates selecting for non-nominative subjects instantiating such "raising-to-object" constructions (cf. Andrews 1976; Thráinsson 1979; Zaenen et al. 1985; *inter alia*), cf. example (19).

(19) Icelandic
*Þeir … létu **sér** nægja einfalda umgjörð.*
they.NOM let **themselves.DAT** suffice.INF simple.ACC surroundings.ACC
'They … let it suffice with simple surroundings for themselves.'

The non-finite verb in the attested Icelandic example in (19) above, *nægja* 'suffice', selects for a Dat-Nom case frame in finite structures. When predicates selecting for non-nominative subjects are embedded under causatives like 'let', the non-nominative subject maintains its case marking, be it accusative or dative. This can be seen with the reflexive *sér* 'themselves' in (19), which is in the dative case, corresponding to the dative subject of *nægja* 'suffice' in finite clauses. This, however, is only evident for predicates selecting for dative subjects, since accusative is the case found in these (AcI) constructions anyway, as is shown in examples (20a)–(20b) from Modern Icelandic.

(20) a. Nominative
Ég lét ***hana*** *fara.*
I.NOM let **her.ACC** go.INF
'I let her go.'

b. Accusative
Þetta lét ***hana*** *langa í ís með bláberjum.*
this.NOM let **her.ACC** long.INF in ice.cream with blueberries
'This made her long for ice cream with blueberries.'

In (20a) the subject of *fara* 'go' occurs in the accusative case, *hana*, instead of the nominative *hún* 'she' in finite clauses, as is expected in AcI constructions. Verbs selecting for accusative subjects, like *langa* 'long for' in (20b), maintain their accusative case in such structures, exactly as verbs selecting for dative subjects maintain their dative case, shown in (19) above.

We turn to the Latin and Ancient Greek in the following two subsections.

4.3.1 Latin

Before diving into the Latin AcI data relevant for the subject properties of potential non-nominative subjects, it should be mentioned that the generative "raising" analysis for AcI constructions has been consistently rejected by contemporary Latin scholars. Bolkestein (1979), Jøhndal (2012) and Haug, Jøhndal & Solberg (2019), for instance, all point out that AcI infinitives in Latin may be ungoverned in the sense that there is not necessarily any matrix verb selecting for the AcI infinitive to assign accusative case to the nominative subject of the lower verb, yet it shows up in the accusative. This, in turn, excludes an analysis of the accusative argument corresponding to a nominative subject in finite structures as being "raised" to the object position of the matrix verb.

While we applaud an analysis according to which it is the AcI construction itself that assigns the accusative case to the subject argument of the lower verb,

this technical issue has no bearing on the subject behavior of either nominative subjects or potential non-nominative subjects in AcI constructions. All that matters are the empirical facts, in this case how nominative subjects in finite structures fare when occurring in AcI constructions and whether potential non-nominative subjects do the same or not. That, in itself, is the subject test.

Thus, turning to the ultimate empirical reality relevant for subject behavior, when ordinary nominative subject verbs occur embedded in AcI constructions, the argument that corresponds to the nominative subject in finite structures shows up in the accusative case, as is shown in (21) below (from Bolkestein 1979: 19f.):

(21) a. ***te*** *venire video*
you.ACC come.INF I.see
'I see you come'

b. *cogo* ***te*** *venire*
I.force **you.ACC** come.INF
'I force you to come'

These examples are exactly parallel to the English and Icelandic examples in (18) and (20a) above. Now, this change from a nominative to an accusative of the subject of the non-finite lower verb takes place irrespective of whether the relevant AcI construction is governed by a matrix verb or not. Relevant matrix verbs in Latin are, for instance, verbs of believing, verbs of saying, perception verbs and causative 'let'-verbs (cf. Riemann 1935: 319; Ernout & Thomas 1964: 321; Leumann, Szantyr & Hofmann 1972: 355; Pinkster 2021: 157ff.).

Given these facts, the question arises as to how potential non-nominative subject verbs fare with respect to the ability to occur in AcI constructions in Latin. Do they behave syntactically in the same way as nominative subject verbs do or not? In order to address this issue, consider the following two scenarios:

i) If potential non-nominative subject predicates embed under AcI constructions in the same manner as nominative subject verbs do, then the non-nominative subjects of these verbs show exactly the same syntactic behavior as nominative subjects.
ii) If, in contrast, the potential non-nominative subject case marking of the relevant predicates is not compatible with AcI constructions, that should result in a clash between the two, ultimately preventing potential non-nominative subject verbs from embedding under AcI constructions in Latin.

In order to decide this issue, consider the following examples of AcI constructions involving predicates selecting for potential non-nominative subjects. It turns out that such examples are easily found in Latin and have so far been discussed by Michaelis (1992); Baños Baños (2003); Fedriani (2009; 2014); Dahl (2012) and

Fabrizio (2016). Below we present additional examples, not appearing so far in the literature:

(22) a. *Ecquid videtis adeo etiam sermonis patrii* ***Philotan*** *taedere?*
PTC see.2PL so.much even language.GEN fatherly.GEN **Philotas.ACC**
loathe.INF
'Do you not see how Philotas loathes even the language of his fatherland?' Curt. *Hist*. 6.9

b. *recitem denuo, ut sciant* ***me*** *eorum non pigere*
read.out.1SG again so.that know.3PL **me.ACC** them.GEN not be.ashamed.INF
'I will read mine out again so that those people know that I am not ashamed of them' Apul. *Apol*. 9

c. *simul me piget parum pudere* ***te***
at.the.same.time I.ACC grieves.3SG too.little be.ashamed.INF **you.ACC**
'at the same time, I grieve that you have so little shame' Plaut. *Trin*. 35

All three examples in (22) contain verbs selecting for potential accusative subjects in Latin, i.e. *taedere* 'loathe', *pigere* 'be ashamed' and *pudere* 'be ashamed'. As expected, their potential accusative subjects, *Philotan*, *me* and *te*, maintain their accusative case marking when embedded under the "raising" verbs *videtis* 'see', *sciant* 'know' and, interestingly, *piget* 'grieves', which is itself a verb selecting for a potential non-nominative subject. Note that it is of no relevance here whether the accusative of *Philotan*, *me* and *te* is assigned by the matrix verb or the AcI construction itself; what matters is that this accusative is entirely compatible with the accusative found in AcI constructions in Latin. This, in turn, shows that this accusative behaves syntactically in the same way as nominative subjects do.

One might now argue that these examples do not show anything, since the case marking of the subject of the lower verb is the same as that assigned by the AcI construction itself, i.e. accusative, whereas for ordinary nominative subject verbs, one can indeed see that this nominative subject is manifested as an accusative in the AcI construction. However, we argue that the issue here is not the change in case marking, but rather the fact that verbs selecting for potential non-nominative subjects in Latin may occur in this construction. In that sense, the potential accusative subjects of *taedere* 'loath', *pigere* 'be ashamed' and *pudere* 'be ashamed' are treated in the same way as the nominative subject of nominative subject verbs by speakers of the Latin language. In other words, the fact that verbs selecting for potential non-nominative subjects may be embedded in AcI constructions, thus showing up in the infinitive and maintaining the accusative case, is indeed the relevant subject behavior.

Consider, now, the following example from Dahl (2012: 12) involving a verb selecting for a potential dative subject, as opposed to the examples in (22) above which all contain verbs selecting for potential accusative subjects.

(23) *Ne ego, inquam, si itast, velim* ***tibi*** *eum placere quam maxume.*
not I.NOM says.1SG if so.it.is would.want.1SG **you.DAT** him.ACC please.INF than most.favourably
'In that case, certainly I should wish you to like him as much as possible.'
Cic. *Brut*. 249.5

In (23) above the matrix verb is *velim* 'want', taking *placere* 'like' as its complement in the infinitive with the potential dative subject *tibi* 'you' maintaining its dative case, as in corresponding constructions in Icelandic in (19) above. Thus, not only verbs selecting for potential accusative subjects may occur in raising-to-object constructions, but also verbs selecting for potential dative subjects in Latin.

Let us now consider an alternative analysis for the structures in (22)–(23) above, involving an object analysis of these potential non-nominative subjects as opposed to a subject analysis. All four examples contain lower verbs selecting for potential accusative or dative subjects in Latin, i.e. *taedere*, *pigere*, *pudere*, and *placere*, respectively. On the traditional analysis of *Philotan*, *me*, *te,* and *tibi* in finite clauses, these would simply be viewed as the objects of their non-finite verbs. However, there are major problems with such an analysis, discussed in the following.

On an object analysis of the potential non-nominative subjects in (22)–(23) above, it follows that there must be another argument in these utterances that is the subject of *taedere*, *pigere*, *pudere* and *placere*. For (23) one could of course argue that the accusative *eum* of *placere* is the subject, but no such alternative analysis is available for the examples in (22). The three verbs, *taedere*, *pigere* and *pudere*, select for the Acc-Gen argument structure, of which the genitive is expressed in two examples through the noun phrases *sermonis patrii* 'fatherly language' and *eorum* 'them'. In the third example, no genitive object is present, with the adverb *parum* 'too little' modifying the verb *pudere*.

To conclude, there is simply no alternative candidate but the accusative that could be analyzed as the subject of the lower verbs in (22), unless one would like to entertain an analysis involving control infinitives. In such structures the subject of the lower verb is generally left unexpressed on identity with an argument of the matrix verb or an argument retrievable on the basis of the context (see §4.5 below). However, there are two major problems with analyzing the examples in (22) above as control infinitives. The first one is that the matrix verbs in (22a–b), *videtis* 'see' and *sciant* 'know', are perception verbs which generally select for AcI infinitives

and not control infinitives. The second problem is that under a control analysis, at least *taedere* and *pigere* must be assumed to occur here in a Nom-Acc-Gen construction with the nominative subject being left unexpressed, since that is how subjects in finite structures behave in control infinitives. Yet, since these verbs are not three-place verbs in Latin, to assume three arguments for these verbs only in these examples in order to argue for a control analysis as opposed to an AcI analysis would be entirely *ad hoc* and not based on scientific method. The only goal of such an analysis would be to rescue an object analysis of the accusatives, *Philotan* and *me*, instead of the proposed subject analysis, demonstrating the absurdity to which an object analysis of potential non-nominative subjects in Latin AcI constructions would lead.

In sum, the considerations above simply exclude a control analysis of the structures in (22)–(23), favoring instead an AcI/raising-to-object analysis. Also, on a raising-to-object analysis, these potential accusative and dative subjects indeed behave as is expected of syntactic subjects and in exactly the same manner as corresponding arguments do in Modern Icelandic.

4.3.2 Greek

Exactly as for Latin, it has been argued in the contemporary scholarship for Ancient Greek that the generative "raising analysis" does not hold for AcI constructions in that language. Phillippaki-Warburton & Catsimali (1990) argue for Ancient Greek that the accusative is neither assigned by the matrix verb, nor by a null operator *à la* generative grammar, but is instead assigned by the infinitive as a default case (see also Keydana 2017 on the existence of unembedded AcI constructions in the earliest Ancient Greek stratum).

In addition, Sevdali (2007: 93–95) argues, drawing on Bolkestein (1979), that the accusative case in AcI constructions is not assigned by the matrix verb, demonstrating this with examples of verbs which do not assign accusative case to their objects at all, when used as main verbs. Therefore, in such examples, the accusative case of the subject of the lower verb cannot stem from the matrix verb, but is instead assumed to be assigned by the AcI infinitive itself (*non-finite T* in Sevdali's terminology).

As we argued for Latin in the preceding section, it is of no importance for the empirical status of this subject test how AcI constructions are analyzed within different theoretical frameworks. What matters instead is whether or not verbs selecting for potential non-nominative subjects may occur in AcI constructions, which would then mean that potential non-nominative subjects illustrate the same behavior as ordinary nominative subjects in that same construction. Therefore,

consider the following examples of verbs selecting for potential non-nominative subjects embedded in AcI constructions in Ancient Greek, exactly as in Latin:

(24) a. *tẽi* ***týchēi*** *d' oîmai mélein toûde xỳn hēmîn*
the **fortune.DAT** PTC think.1SG care.INF this.GEN with us.DAT
'and I think fortune cares for this result as much as we do' Eur. *IT*. 909

b. *ề tách'* ***hymîn*** *phēmi metamelḗsein*
or quickly **you.DAT** say.1SG will.regret.INF
'or I predict you will soon regret (it)' Ar. *Pax*. 1315

c. *oîmai dè* ***soì*** *taûta metamelḗsein*
think.1SG PTC **you.DAT** these.ACC will.regret.INF
'I think you will regret it' Ar. *Nub*. 1113

The matrix verbs are *oîmai* 'think' in (24a) and (24c) and *phēmi* 'say' in (24b), verbs of believing and saying, respectively, well known in the literature for selecting AcI infinitives. In addition, all the lower verbs in (24) above select for potential dative subjects. This includes *mélein* 'care' in (24a) and *metamelḗsein* 'will regret' in (24b)–(24c), whose datives behave in the same way as nominative subjects do when embedded in AcI constructions. In this respect, the examples in (24) are exactly parallel to the Icelandic example in (19) above where a Dat-Nom verb is embedded in an AcI construction. Notice that exactly as in Icelandic, the fact that potential dative subjects maintain their case marking when the verb is embedded in an AcI construction is indeed the relevant subject behavior.

We have thus demonstrated that raising-to-object/AcI constructions exist in Ancient Greek where potential non-nominative subjects behave syntactically as ordinary nominative subjects, exactly as in Latin.

4.4 Raising-to-Subject

Constructions of the type involving raising-to-subject have also been used to distinguish between syntactic subjects and objects in the literature. In such constructions the subject of the lower verb, i.e. the non-finite verb, takes on the subject behavior of the finite verb. This behavior is, of course, only found with matrix verbs that are low enough in semantic content not to select for their own subject. Some examples from English include the following:

(25) a. *It started to rain.*
b. *She began to eat.*

(26) a. *He seems to like the fish.*
b. *The child appears to enjoy the milk.*

The examples in (25) are aspectual verbs, in this case inceptive verbs expressing the beginning phase of an event. Such verbs typically do not select for a subject of their own (see, however, Barðdal 2001b, for exceptions to this in Modern Icelandic). The verbs in (26) are evidential verbs with the meaning 'seem' and 'appear', which normally do not select for a subject of their own, although this may vary from language to language and from construction to construction.

Weather verbs like 'rain' and 'snow' in (25a) are generally taken not to select for subjects of their own (cf. Eriksen, Kittilä & Kolehmainen 2015, although see Holland 1993 for exceptions to this in several early Indo-European languages, and Sigurðardóttir & Eythórsson 2019 specifically for Icelandic). In English such verbs systematically occur with an expletive, *it*. As is evident from (25a), this expletive behaves syntactically as the subject of inceptive auxiliaries like *start* and *begin*, occurring in clause-initial position preceding the finite inceptive verb. The same is true for the evidential verbs in (26), although this is more difficult to illustrate for English than for a case language like German or Icelandic, since English does not have non-nominative subjects. Thus, compare the German and Icelandic examples (27)–(28).

(27) German

a. ***Der Bube*** *scheint vor der ganzen Szene zu*
the.NOM boy.NOM seems.3SG for the.DAT whole.DAT scene.DAT to
erschrecken.
be.startled.INF
'The boy seems to be startled by the whole scene.'

b. ***Dem Buben*** *scheint vor der ganzen Szene zu ekeln.*
the.DAT boy.DAT seems.3SG for the.DAT whole.DAT scene.DAT to be.disgusted.INF
'The boy seems to be disgusted by the whole scene.'

(28) Icelandic

a. ***Guttinn*** *virðist hafa beyg af öllu atriðinu.*
boy.the.NOM seems.3SG have.INF fear of whole.DAT scene.the.DAT
'The boy seems to be startled by the whole scene.'

b. ***Guttanum*** *virðist bjóða við öllu atriðinu.*
boy.the.DAT seems.3SG be.disgusted.INF with whole.DAT scene.the.DAT
'The boy seems to be disgusted by the whole scene.'

Starting with the German example in (27b), there is no doubt that this word order with the dative *Dem Buben* 'the boy' preceding the raising verb *scheinen* 'seem' represents neutral word order, ruling out both a topicalization and a scrambling analysis of this example. The same is true for the corresponding Icelandic example in (28b).

The verbs 'be startled' and 'be disgusted' in German and Icelandic select for different case frames. All four verbs select for a prepositional object, governed by *vor* 'before, by' in German and *af* 'of' or *við* 'with' in Icelandic, respectively. The difference between the two synonymous verb pairs is that 'be startled' occurs with a nominative subject, while 'be disgusted' occurs with a dative subject in both languages. This is also clear from (27)–(28) above, where 'seem' occurs with a nominative subject when the lower verb is 'be startled', but a dative one when the lower verb is 'be disgusted' in both languages. Therefore, for the examples in (27)–(28), the case marking of the subject of the finite 'seem' in both languages, nominative in (27a) and ()28a) vs. dative in (27b) and (28b), reveals that 'seem' is indeed a raising-to-subject verb.

Having illustrated the nature of raising-to-subject constructions, we move to the Latin and Ancient Greek data in the subsections below.

4.4.1 Latin

Examples of raising-to-subject constructions involving verbs selecting for potential non-nominative subjects have already been documented in Latin (cf. Baños Baños 2003; Fabrizio 2016).

(29) a. *nec vero paenitere potest* ***rem publicam*** *me …*
and.not truly repent.INF can.3SG **thing.ACC public.ACC** me.ACC …
spopondisse
promised.INF
'nor can the state regret my … having given a guarantee'
Cic. *Ad Brut*. 1.18, cited from Baños Baños 2003: 66

b. *etsi solet* ***eum****, cum aliquid furiose fecit, paenitere*
even.if be.accustomed.3SG **him.ACC** when something mad did.3SG repent.INF
'However, this is how he is accustomed to repent when he has done something intemperate'
Cic. *Att*. 8.5.1, cited from Baños Baños 2003: 66

c. *quod non potest* ***tibi*** *ista res contingere aliter quam si*
that not can.3SG **you.DAT** this.NOM thing succeed.INF otherwise than if
te *pudere desierit*
you.ACC be.ashamed.INF cease.3SG
'that you could only be successful in practicing this style by losing your sense of shame' Sen. *Ep*. 40

The raising-to-subject verbs in (29) above are *potest* 'can' in (29a), *solet* 'be accustomed to' in (29b), and *potest* 'can' and *desierit* 'cease' in (29c). Three of these occur with potential accusative subjects, selected for by the lower verbs, *paenitere* in

(29a)–(29b) and *pudere* in the second conjunct in (29c), while one occurs with a potential dative subject, selected for by the lower verb *contingere* 'be successful' in the first conjunct in (29c). These examples clearly demonstrate that raising-to-subject constructions occurring with verbs selecting for non-nominative subjects are found in Latin and that the potential non-nominative subjects behave syntactically as subjects of the finite verb, exactly as ordinary nominative subjects do.

However, on an alternative analysis of these examples, one might perhaps argue that the potential accusative subjects of *paenitere* and *pudere*, namely *rem publicam* 'the state', *eum* 'him' and *te* 'you' and the potential dative subject *tibi* 'you' of *contingere* 'be successful', are not the syntactic subjects of the raising-to-subject verbs *potest* 'can' in (29a) *solet* 'be accustomed to' in (29b), and *desierit* 'cease' in (29c), but are instead non-elliptical subjects of the infinitive complements. On such an analysis, the structures in (29) would involve AcI/raising-to-object of the type discussed in §4.4 above, and not raising-to-subject.

It is well established in the literature that modal and aspectual verbs are often raising-to-subject verbs, exactly like ordinary temporal auxiliaries, although this varies of course from language to language and even from verb to verb. However, the finite verbs in (29) above, *potest* 'can', *solet* 'be accustomed to', and *desierit* 'cease', are not known to be AcI/raising-to-object verbs in Latin. In addition, if one entertains a control verb analysis, these potential accusative and dative subjects would not be explicit, but would be left unexpressed, as is shown in §4.5 below for control verbs. Yet, on all three analyses, the relevant potential accusative and dative subjects show clear behavioral properties of subjects in Latin.

4.4.2 Greek

Consider now the following examples from Ancient Greek, which all involve raising-to-subject constructions:

(30) a. *ei khrḕ meteînaí* ***moi*** *tês póleōs*
if is.necessary.3SG take.part.INF **I.DAT** the city.GEN
'if I can (continue to) enjoy citizenship' Isoc. 16. 46

b. *khrḕ d' agathàn elpíd'* ***andrì*** *mélein*
is.necessary.3SG PTC good.ACC hope.ACC **man.DAT** care.INF
'A man should cherish good hope' Pind. *Isthm*. 8.15

c. *hốsper eîpon,* ***soì*** *mélein gynaîka khrḗ*
as said.1SG **you.DAT** care.INF woman.ACC is.necessary.3SG
'as I said, you should find it necessary to care for the woman'
Eur. *Alc*. 1034

In these examples the matrix verb is *khrḗ* 'should', which selects for a potential accusative subject when occurring with a subject of its own. Two such examples are presented below (Danesi, Johnson & Barðdal 2018: 59):

(31) a. *Ou mén* ***se*** *khrè* *ét'* ***aidoûs***
not indeed **you.ACC** is.necessary further **awe.GEN**
'You do not need to feel awe any further' Hom. *Od*. 3.14

b. *koudé tí* ***se*** *khrè* *nēleès* *êtor* ***ékhein***
not.even what **you.ACC** is.necessary ruthless.ACC heart.ACC **have.INF**
'You do not need to have a ruthless heart at all' Hom. *Il*. 9.497

The one in (31a) instantiates the Acc-Gen case frame with *se* 'you' being the potential accusative subject and *aidoûs* 'awe' the genitive object. In (31b) we find the same potential accusative subject, *se*, now co-occurring with an infinitive. This latter example is a control infinitive (see §4.5 below), as the nominative subject of *ékhein* 'have' is left unexpressed on identity with *se*, the potential accusative subject of *khrḗ*. This means that when *khrḗ* is not an independent verb as in (31a), it is a control verb in Ancient Greek. Only in a few cases, as in (30) above, does *khrḗ* behave as a raising-to-subject verb. For parallels in Old Norse-Icelandic, see examples (37)–(38) below; for parallels in Modern Icelandic, see Andrews 1990: 206 and Barðdal & Eythórsson (2003; 2006: 165f.); and for parallels in Old Saxon, see Barðdal 2023: §4.2.6.

Returning to our examples in (30) above, in all three instances, *khrḗ* occurs with a dative instead of the expected potential accusative subject as in (31a)–(31b). At the same time the potential dative subjects of the lower verbs, *meteînaí* 'take part' and *mélein* 'care', are missing. Thus, the most reasonable analysis of these examples is that the dative occurring here with *khrḗ* 'should' is selected by the lower verbs, but behaves syntactically as the subject of the finite verb. Thus, in our analysis, *khrḗ* is not a control verb in (30a)–(30c) but a raising-to-subject verb.

On an alternative analysis of the examples in (30a)–(30c), one might perhaps argue that the datives are controlled by an impersonal *khrḗ*. In essence, this would mean that the datives are the objects of *khrḗ* in all three examples. One problem with such an analysis is that verbs cannot both select for objects and infinitive clauses at the same time, at least not unless they are AcI verbs. This, however, is not the case for verbs of necessity like *khrḗ*, as we have shown above. Instead, it is verbs of believing, saying, perception and causation which instantiate AcI constructions.

To conclude, these examples show that potential non-nominative subjects in Ancient Greek behave syntactically as subjects with regard to the raising-to-subject test, exactly as shown above for equivalent examples in Latin.

4.5 Control infinitives

As already stated above, control constructions are by many scholars taken to be the most conclusive evidence for the subject status of potential non-nominative subjects in corpus languages. This is because this test cannot be discredited in the same manner as both raising-to-subject and raising-to-object have been discredited in the literature due to word order variation (cf. Faarlund 1990; 2001; Falk 1997; Haider 2005). In order to demonstrate the validity of the control infinitive test, consider the following examples from German, Icelandic and English:

(32) Finite clauses

a. *Wilhelm kühlt sich ab.*
William.NOM cools.3SG himself.ACC off

b. *Vilhjálmur kælir sig niður.*
William.NOM cools.3SG himself.ACC down

c. *William cools (himself) down.*

(33) Control infinitives

a. *Wilhelm verspricht, ____ sich abzukühlen.*
William.NOM promises.3SG PRO.NOM himself.ACC off.to.cool.INF

b. *Vilhjálmur lofar að ____ kæla sig niður.*
William.NOM promises.3SG to PRO.NOM cool.INF himself.ACC down

c. *William promises to ____ cool (himself) down.*

The examples in (32) demonstrate the finite uses of 'cool down' in German, Icelandic and English, showing that 'cool down' selects for an ordinary nominative subject in German and Icelandic. In the control constructions in (33), 'cool down' is embedded under the control verb 'promise', thus showing up in the infinitive. The nominative subject, moreover, is left unexpressed on identity with the subject of the matrix verb 'promise'.

In contrast, objects cannot be left unexpressed in such control constructions, as shown in (34)–(36) below, either on their own (34a, 35a, 36a) or together with the subject (34b, 35b, 36b):

(34) a. **Wilhelm verspricht, Wilhelm ____ abzukühlen.*
William.NOM promises.3SG William.NOM ∅.ACC off.to.cool.INF

b. **Wilhelm verspricht, ____ ____ abzukühlen.*
William.NOM promises.3SG PRO.NOM ∅.ACC off.to.cool.INF

(35) a. **Vilhjálmur lofar að Vilhjálmur kæla ___ niður.*
William.NOM promises.3SG to William.NOM cool.INF ∅.ACC down

b. **Vilhjálmur lofar að ____ kæla ___ niður.*
William.NOM promises.3SG to PRO.NOM cool.INF ∅.ACC down

(36) a. **William promises to William cool ____ down.*
b. *William promises to ____ cool ____ down.*

Observe that the only example that is grammatical here is (36b) from English, where both the subject and the object are left unexpressed, the reason being that the reflexive is optional with 'cool down' anyway in English, as indicated by the brackets in (32c) and (33c) above. In other words, control constructions do not involve object omission, only subject omission; if the object is left unexpressed, as in (36b), it is for different reasons and then such omission will not be confined to control infinitives, but instead will be found across clause types, including different types of finite clauses.

Thus, to understand the subject behavior found in control constructions, such constructions need to be compared with corresponding finite clauses. The argument left unexpressed in control constructions corresponds to the subject of the same verb in finite clauses, in this case the nominative of 'cool down'. Note further that the unexpressed subject of a control infinitive does not necessarily require a human subject in the matrix clause, even though our examples above are all of that type. Subjects may also be left unexpressed on identity with an object of a preceding clause, like *I helped him to ___ leave*, where the subject of *leave* is left unexpressed on identity with the object *him* in the matrix clause. Subjects may also be left unexpressed on identity with a generic subject, retrievable on the basis of the context, like *It is good to ___ be the king*, where the unexpressed subject may, for instance, correspond to the speaker of such an utterance. The subject behavior here is therefore *not* the ability to control omission in control infinitives, i.e. being the subject of the matrix clause, but rather being the argument left unexpressed in the infinitive clause itself.

Verbs like 'promise' and other control verbs differ from raising-to-subject verbs in that they select for a subject of their own, while raising-to-subject verbs do not. For this reason, one always finds the same case marking with the matrix subject of control verbs, while with raising-to-subject verbs, the case marking of the subject of the finite verb differs depending on the case marking of the subject of the lower verb.

Yet, one issue that complicates the analysis of control vs. raising verbs is that some matrix verbs appear to be able to instantiate either control constructions or raising-to-subject constructions. These are verbs that are at the borderline of being semantically rich enough to have their own subjects, something that control verbs otherwise have. This has been documented for certain infinitive-selecting verbs in Modern Icelandic, Old Norse-Icelandic (cf. Andrews 1990: 206; Barðdal & Eythórsson 2003; 2006: 165f.) and Old Saxon (Barðdal 2023). To exemplify this, consider the following examples from Old Norse-Icelandic:

(37) Raising-to-subject
honum *kvaðst það illa* ***þykja*** *að …*
him.DAT said.REFL.3SG it.NOM badly feel.INF that
'He said that he felt that it was bad that …' Reykdæla saga, ch. 13

(38) Control infinitive
Snorri kvaðst [___ einsætt ***þykja****] að …*
Snorri.NOM said.REFL.3SG PRO.DAT obvious think.INF that
'Snorri said that he found it obvious that …' Laxdæla saga, ch. 67

In (37) the verb *kveðast* 'say of oneself' functions as a raising verb with the dative subject of the lower verb, *þykja* 'find, think, seem', behaving syntactically as the subject of *kveðast*. The relevant lower verb *þykja* is a Dat-Nom verb in Old Norse-Icelandic, occurring with a dative subject and a nominative object. In contrast, in (38), *kveðast* is a control verb with a nominative subject, *Snorri*, while the dative subject of *þykja* is left unexpressed. These facts rule out a raising analysis for this example. This discussion will be relevant for the analysis below.

We now proceed to the Latin and Ancient Greek data.

4.5.1 Latin

As far as we are aware, only one example of a verb selecting for a potential non-nominative subject in a control infinitive has been documented in the literature until now, with the non-nominative left unexpressed, namely (39) below involving the verb *miseret* 'feel pity'. Here the potential accusative subject of *miseret* is left unexpressed on identity with the nominative subject *ipsa* 'she' of *coepit* 'begin', while the genitive *mei* 'me' is expressed.

(39) *et ipsa flere vehementius coepit* ***mei****que* ____ *misereri*
and she.NOM cry.INF loudly began.3SG **me.GEN**.and **PRO.ACC** feel.pity.INF
'she began to weep loudly and to feel compassion with me' Petron. *Sat*. 137

This example was originally documented by Dahl (2012: 11) who, however, also points out that the verb *miseret* can occur with a nominative subject instead of the more common potential accusative subject, as in the following example:

(40) ***ipse*** *sui miseret*
he.NOM self.GEN pities.3SG
'He feels sorry for himself' Lucr. 3.881

Examples of nominative subjects with *miseret* are very rare during the classical period (cf. Gildersleeve & Lodge 1903: 242; see also Fedriani 2014: 154–165), but given the fact that they still exist, the example in (39) above is indeed ambiguous

between a nominative and an accusative reading of the ellipsis. That is, it is unclear whether the unexpressed argument in the infinitive in (39) corresponds to a nominative or an accusative in finite use.

Moreover, Dahl (2012) also mentions that not only *miseret* occurs with a nominative experiencer subject, but also *pudet* 'be ashamed' and *paenitet* 'regret' show such variation. As a matter of fact, Dahl's examples of *pudet* are exactly of that type involving a nominative experiencer subject, although the only example he presents with *paenitet* is undeniably of a different kind:

(41) *et me quidem haec condicio nunc non paenitet*
and me.ACC indeed this.NOM situation.NOM now not make.regret.3SG
'This situation is not regrettable to me' Plaut. *Stich.* 51

On Dahl's account, examples like (41) make the use of *paenitet* problematic, since the subject would here be in the nominative case, not involving a potential accusative subject of the type that we are investigating. However, (41) represents a causative event with a Nom-Acc case frame, which is a different case frame than the one we are investigating. This is further confirmed by the evidence provided by Lewis & Short (1879: 1289), as all examples in their dictionary of a nominative with *paenitet* involve a causative usage. This is therefore not an example of variation in the case marking of the potential subject, as Dahl maintains, accusative vs. nominative, but a different argument structure. To conclude, examples with *paenitet* 'regret' can not be discredited in the same way as examples with *miseret* 'feel pity' and perhaps *pudet* 'be ashamed'.

In our own research on control infinitives in Latin, we have come across several examples of *paenitet* 'regret' instantiating such control constructions, with the potential accusative subject being left unexpressed. Four examples of *paenitet* 'regret' are presented in examples (42)–(43), three from Classical Latin and one from Late Latin.[5]

(42) Classical Latin

a. *neque mihi umquam* ***veniet in mentem*** *Crasso invidere neque*
not.and I.DAT ever **will.come.3SG in mind** Crassus.DAT envy.INF not.and
____ ***paenitere*** *quod a me ipse non desciverim.*
PRO.ACC **repent.INF** that from me.ABL I.NOM not degenerated.1SG
'for it will never occur to me to envy Crassus nor to regret that I have not been false to myself.' Cic. *Att.* 2.4

5 Examples (42b)–(43) are also discussed by Baños Baños (2003: 67), although from a somewhat different perspective.

b. *sapientis est enim proprium nihil quod* ____
wise.GEN is.3SG indeed particular.NOM nothing.ACC which.ACC PRO.ACC
paenitere possit *facere*
repent.INF **would.can.3SG** do.INF
'therefore, it is proper for the wise man to do nothing of which he can repent' Cic. *Tusc*. 5.81

c. *cum* ***coeperis*** *sero* ____ ***paenitere***
when **begin.2SG** too.late PRO.ACC **repent.INF**
'when you begin to repent too late' Apul. *Met*. 5.6

(43) Late Latin
Sed Athenienses, sicuti primi defecerant, ita primi ____ ***paenitere***
but Athenians.NOM as first.NOM defected.3PL thus first.NOM PRO.ACC **repent.INF**
coeperunt
began.3PL
'but as the first of the Athenians withdrew, thus they were the first to begin to repent' Just. *Epit*. 11.3.3

In (42a) the matrix predicate is *veniet in mentem* 'come to mind', which itself selects for a potential dative subject, here taking a control infinitive as its complement. The potential accusative subject of *paenitet* 'regret' is thus left unexpressed on identity with the dative of *veniet in mentem* 'come to mind'. In (42b), the matrix verb is *possit* 'can', occurring here with a prodropped nominative subject, on identity with which the potential accusative subject of *paenitet* is left unexpressed. In the remaining two examples (42c)–(43), the matrix verb is *coeperis/coeperunt* 'begin'. In (42c) *coeperis* selects for a prodropped nominative subject, *tu* 'you', evident by the 2nd person agreement on the verb, while in (43), the nominative *Athenienses* 'the Athenians' is the subject of *coeperunt* 'begin'. In both these cases, a potential accusative subject of *paenitet* is left unexpressed on identity with the prodropped *tu* 'you' and *Athenienses*, respectively.

The more observant reader may have noticed two issues: first, the matrix verb in (42b) *possit* 'can' also occurs as a matrix verb in §4.4.1 above on raising-to-subject in Latin. Second, the control verbs in (42c)–(43), 'begin', belong to the same semantic verb class of aspectual verbs, which also occur as raising-to-subject verbs ('begin', 'stop') in §4.4.1.

Starting with *possit* 'can', this simply means that *possit* may either be a raising-to-subject verb or a control verb. We do not consider this problematic, since parallels with *kveðast* 'say' in Old Norse-Icelandic have been documented in the literature, as we discuss in the preceding section. With regard to aspectual verbs, it has also been shown in the literature that verbs from the same semantic aspectual class may instantiate either control or raising-to-subject constructions. In Modern Icelandic, for instance, there are five different 'begin' verbs, of which three

are raising-to-subject verbs while two are control verbs (Barðdal 2001b). Whether aspectual verbs are raising-to-subject or control verbs is a lexical idiosyncrasy of each verb.

Returning to our examples in (42)–(43) above, we conclude that these four examples show that the verb *paenitet* 'regret', selecting for a potential non-nominative subject, could embed under control verbs in Latin, and hence that its potential accusative subject behaves syntactically as nominative subjects do.

However, not all our examples of control infinitives involve *paenitet*. Below we introduce two more examples, this time with *pigere* 'repent' and *miserescere* 'feel pity', which are only documented with potential accusative subjects and not with nominative subjects in Classical Latin.

(44) a. *pudere quam* ____ ***pigere*** *praestat*
be.ashamed.INF than PRO.ACC **repent.INF** is.superior.3SG
'to be ashamed is preferable to repenting' Plaut. *Trin.* 345

b. *immite ut nostri* ***vellet*** ____ ***miserescere*** *pectus*
cruel.NOM so.that us.GEN wish.3SG PRO.ACC **feel.pity.INF** heart.NOM
'so that a cruel heart **might want to pity** us' Catull. 64. 138

The example in (44a) contains two conjoined infinitives, *pudere* 'be ashamed' and *pigere* 'repent'. Given the fact that *pudere* may occasionally occur with a nominative subject, we do not assign any weight to the first conjoined infinitive, only to the one with *pigere*. Here the potential accusative subject of *pigere* is left unexpressed on identity with a generic referent, retrievable on the basis of the context. In (44b), however, the matrix verb is *vellet* 'wish', occurring with a nominative subject, *immite pectus* 'cruel heart'. The lower verb, *miserescere* 'feel pity', selects for a potential accusative subject which is here left unexpressed on identity with *immite pectus* 'cruel heart', while the genitive object *nostri* 'us' is indeed expressed, exactly like the accusative objects in the modern German and Icelandic examples in (33a)–(33b) above.

It should be noted here that both the *Oxford Latin Dictionary* and the *Thesaurus Linguae Latinae* assume that *immite pectus* 'cruel heart' is the nominative subject of the lower verb, *miserescere* 'feel pity'. This is a problematic analysis for at least two reasons. First of all, examples with the Nom-Gen case frame do not occur until Augustan Latin, as is documented by Fedriani (2014: 159), while (44b) is from Classical Latin. This fact shows that the analysis offered by the dictionaries simply cannot be correct. Second, even if the two dictionaries were right, it would mean that (44b) were an example of raising-to-subject and not a control infinitive. However, a raising-to-subject behavior of the verb *volo* 'want, desire' is unattested in Latin, according to Pinkster (2021: 12–13 and elsewhere) who only documents AcI and prolative infinitives with this verb. On a closer inspection, it turns out that

Pinkster's examples of prolative infinitives are, in fact, control infinitives, exactly like (44b) above.

All our Latin examples so far involve potential accusative subjects and not dative subjects. Such examples also exist, as is shown in (45) below from Classical Latin, with the Dat-Nom verb *placere* 'please, like'.

(45) ***edixerit****que* *mulieres* *ante horam quintam venire in theatrum*
declared.3SG.and women.NOM/ACC before hour.ACC fifth.ACC come.INF to theatre.ACC
____ *non* ***placere****.*
PRO.DAT not like.INF
'and declared that he does not like women coming to the theater before the fifth hour.' Suet. *Aug*. 44.3

In this example the matrix verb is *edixerit* 'he declared' which selects for the control infinitive *non placere* 'not be pleased', occurring in clause-final position. That *placere* is a control infinitive is evident from the fact that the potential dative subject of *placere* is here left unexpressed on identity with the prodropped nominative of *edixerit*. This structure is extraordinary in the sense that verbs of saying, like *edixerit*, usually select for AcI infinitives and not control infinitives. However, as we show in (38) above, verbs of saying can also select for control infinitives in other early Indo-European languages, like Old Norse-Icelandic. The second infinitive in (45), *venire* 'come', is a prolative infinitive selected for by *placere*, either an AcI infinitive (cf. Pinkster 2021: 182 for another example of *placet* selecting for an AcI) or perhaps an NcI infinitive (cf. Pinkster 2021: 194–200 on NcI infinitives in general), which would be natural given the Dat-Nom case frame of *placere* (for such structures in Modern Icelandic, see Thráinsson 2007: 440–443; *inter alia*).

To summarize, the seven examples of *paenitere* 'regret, *pigere* 'repent', *miserescere* 'feel pity' and *placere* 'please, like' in (42)–(45) above demonstrate beyond dispute that potential non-nominative subjects in Latin, be they accusative or dative, behave syntactically in the same way as nominative subjects do in control infinitives. This means that they show the same ability as nominative subjects to be left unexpressed in control infinitives, a behavior confined to syntactic subjects and not found with objects.

4.5.2 Greek

In her research on the subject properties of potential non-nominative subjects in Ancient Greek, Conti (2010: 263) argues that examples like (46) below show that the dative is not left unexpressed in control infinitives. The problem with the example that she uses to demonstrate this is that it is an example of raising-to-object (AcI)

where the dative behaves syntactically as the object of the higher verb, while the genitive is the object of the infinitive verb.

(46) *prospoioúmenos dè tôn protérōn metamélein autôi*
pretending.MP.NOM PTC the earlier.things.GEN repent.INF him.DAT
'pretending to repent of his former course' Plut. *Vit. Arist.* 4.5

Therefore, this example does not show that potential non-nominative subjects are left *expressed* in control constructions as ordinary objects do, since this example does not represent a control infinitive. This is also acknowledged by Conti (2010: 263), who indeed points out that examples of control infinitives involving potential non-nominative subjects may of course exist, even though she has not been able to locate any such examples.

In this context, we would like to draw the reader's attention to two such examples, published in a recent article by Danesi, Johnson & Barðdal (2018: 51). In those examples, given in (47) below, a potential non-nominative subject selected by *deî* 'need' is left unexpressed on identity with *tis* 'anyone', the subject of *oíētaí* 'thinks', in (47a) and a pro-dropped 'we' in (47b), respectively.

(47) a. *hótan en tǭ toioútǭ kairǭ̃ "Theaítēton" gráphōn tis thẽ̃ta*
when in the such moment "Theaetetus" writing anyone.NOM θ
kaì eî ***oíētaí*** *te* ____ ***deîn*** *gráphein kaì grápsẹ̄*
and E **think.3SG** both PRO.ACC/DAT **need.INF** write.INF and write.3SG
'When at such a stage in his progress a person in writing "Theaetetus" thinks he ought to write, and actually does write, θ and E' Pl. *Tht.* 207e

b. *dià lógōn pou* ***éphamen*** ____ ***deîn*** *krínesthai*
through words.GEN doubtless **said.1PL** PRO.ACC/DAT **need.INF** decide.MP.INF
'We said that we must doubtless take judgments by means of words' Pl. *Resp.* 9. 582d

However, these are not the only examples of potential non-nominative subjects being left unexpressed in control infinitives. Two more examples, also involving *deî* 'need' are shown in (48) below.

(48) a. *taût' autòs* ***oíomai*** ____ ***deîn*** *prôtos poieîn*
these.ACC I.NOM **think.1SG** PRO.ACC/DAT **be.in.need.INF** first.NOM do.INF
'I myself think I should be the first to do these things' Dem. *Ep.* 1.10

b. *Âr' oûn ho eidỗs hōs deî toùs theoùs timân ouk*
PTC then he.NOM knowing.NOM.SG that must.3SG the gods.ACC worship.INF not
állōs ***oíetai*** ____ ***deîn*** *toûto poieîn ề hōs oîden*
differently **thinks.3SG** PRO.ACC/DAT **must.INF** this do.INF than that knew.3SG
'Then does he who knows how he must worship the gods think that he must do so according to his knowledge, and not otherwise?' Xen. *Mem.* 4.6.3

In (48a)–(48b) the matrix verbs are *oíomai* and *oíetai* 'think', occurring with the nominative subjects *autòs* 'I' and *ho* 'he', respectively, on identity with which the potential accusative/dative subject of *deî* is left unexpressed.

In addition to *deîn* 'need', we have also come across examples of *mélein* 'care', *lysiteleîn* 'profit' and *meteînai* 'have a share', which all select for a potential dative subject, here embedded under control verbs in Ancient Greek:

(49) a. *toútou soi* ***deî*** ____ ***mélein***
this.GEN you.DAT **must.3SG** PRO.DAT **care.INF**
'You must take care of this' Xen. *Cyr*. 1.6.16

b. ____ ***lysiteleîn*** *gàr dḕ* ***oíetai*** *pâs anḕr polỳ mâllon*
PRO.DAT **profit.INF** in.fact. PTC **believes.3SG** every man.NOM far more
idíāi tḕn adikían tês dikaiosýnēs
personally the.ACC injustice.ACC the.GEN justice.GEN
'For every man believes that there is far more profit for him personally in injustice than in justice.' Pl. *Resp*. 360d

c. *toútōn mèn tôn arkhôn oudèn* ***deîtai*** *ho*
these.GEN PTC the.GEN magistracies.GEN not.at.all **want.MP.3SG** the.NOM.SG
dêmos ____ ***meteînai***
people.NOM.SG PRO.DAT have.a.share.INF
'of these magistracies the people claim (want to have) no share'
Xen. *[Ath. Pol.]* 1.3

The matrix verbs are *deî* 'need', *oíetai* 'believe' and *deîtai* 'want', respectively, of which the first one occurs with a potential dative subject *soi* 'you', while the remaining two occur with a nominative subject which is expressed, i.e. *pâs anḕr* 'every man' and *ho dêmos* 'the people'. The potential dative subjects of *mélein* 'care', *lysiteleîn* 'profit' and *meteînai* 'have a share', are all left unexpressed, the first one on identity with the dative of *deî* 'need', the other two on identity with the nominative subjects of *oíetai* 'believe' and *deîtai* 'want', respectively.

In sum, we have presented here seven examples involving four different verbs, *deîn* 'need', *mélein* 'care', *lysiteleîn* 'profit' and *meteînai* 'have a share', all selecting for potential non-nominative subjects in the grammar of Ancient Greek, embedded in control infinitives with the potential non-nominative subject being left unexpressed on identity with the subject of their relative matrix verbs. This behavior is well known in the literature as being confined to subjects, thus corroborating our claims that these data from Ancient Greek are only compatible with a subject analysis of potential non-nominative subjects, exactly as discussed for Latin in the subsection above.

4.6 Interim Summary

In this section, we have discussed five different behavioral properties of subjects which are applicable in several modern Indo-European languages. We have applied these tests to Latin and Ancient Greek and found that the relevant behavioral properties are also valid for both of these ancient Indo-European languages. Starting with conjunction reduction, in both Latin and Ancient Greek either subjects or objects may be left unexpressed in conjoined or juxtaposed clauses. However, an ellipsis in a second conjunct must always be controlled by an argument in the first clause which belongs to the same syntactic category. In other words, only subjects can be left unexpressed on identity with subjects and the same is true for objects. In both Latin and Ancient Greek may potential non-nominative subjects only be left unexpressed on identity with either nominative subjects or potential non-nominative subjects, but never on identity with objects. Therefore, in this respect, potential non-nominative subjects behave unanimously as syntactic subjects in both Latin and Ancient Greek.

Turning to long-distance reflexivization, there is a consensus in the literature on both Latin and Ancient Greek that only syntactic subjects may control reflexives across clause boundaries. We have presented examples here from both Latin and Ancient Greek, demonstrating that potential non-nominative subjects also exhibit the property to bind reflexives over clause boundaries, exactly as nominative subjects do. Hence, in this respect, the Latin and Ancient Greek data are only compatible with a subject analysis and exclude an object analysis of potential non-nominative subjects in these languages.

The three remaining tests are raising-to-object, raising-to-subject and the ability to be left unexpressed in control infinitives. With regard to all these behaviors, potential non-nominative subjects behave syntactically in the same way as nominative subjects do and not like objects. In other words, the Latin and Ancient Greek data involving these three types of infinitives speak for a subject analysis and exclude an object analysis of potential non-nominative subjects.

Data involving conjunction reduction, long-distance reflexivization, and raising-to-object have been presented in the earlier literature on the syntactic status of potential non-nominative subjects in Latin. To this discussion we have added examples of raising-to-subject and control infinitives, of which the latter one is by many syntacticians taken to be the most conclusive evidence for subject status of potential non-nominative subjects in corpus languages. Turning to Ancient Greek, only data involving conjunction reduction have been presented in the earlier literature on potential non-nominative subjects in that language. To this we have added examples of long-distance reflexivization, raising-to-object, raising-to-subject, and last but not least, control infinitives, examples which demonstrate

beyond dispute that potential non-nominative subjects behave syntactically as nominative subjects in Ancient Greek.

We now turn to word order in Latin and Ancient Greek in the next section. In particular we compare the distribution of potential non-nominative subjects with the distribution of nominative subjects. The relevant distribution and frequencies are also juxtaposed with corresponding distribution and frequencies for accusative and dative objects in Latin and accusative, dative and genitive objects in Ancient Greek.

5 Word order

While the word order in both Latin and Ancient Greek is considerably freer than in many modern Indo-European languages known for having fixed word order, our basic assumption, and one implicit in our approach to subjecthood above, is that both Latin and Ancient Greek have a clause structure where internal constituency may be discerned. We side with Croft (2001; 2006) in his view that the relation between the elements in a phrase is in essence semantic, i.e. the elements that belong together semantically are the ones that make up a phrase. On this view, the syntactic properties of phrases indeed follow from the semantic relation holding between the elements constituting a phrase. In modern languages like English and French, this is manifested syntactically by adjacency in word order. Discontinuous phrases also share this semantic relation; hence, discontinuous phrases are also constituents. However, the syntactic manifestation of this semantic relation presents discontinuous phrases differently from continuous ones, namely through lack of adjacency, which in turn is based on different information structure properties found with discontinuous phrases (cf. Siewierska 1984). In other words, lack of adjacency does not necessarily entail lack of phrase structure; it only shows that the relation between clause structure and information structure is different in Latin and Ancient Greek than it is in English or French. We refer the interested reader to Rögnvaldsson 1995, where it is established that, despite the freedom in word order, Old Norse-Icelandic clearly has internal clause structure.

We now turn to word order in Latin and Ancient Greek.

5.1 Latin

The Latin language exhibits great freedom in word order and the general consensus in the field is that this word order variation is governed by information structure,

the potential weight and complexity of the arguments, genre, etc. (Pinkster 1991; Devine & Stephens 2006; Spevak 2010; Skopeteas 2011; Ledgeway 2012; Danckaert 2015; *inter alia*). Pinkster (1991: 72) offers some statistics on the relative word order of nominative subjects, the verb and accusative objects, as shown in Table 5. His count is based on Caesar's texts only, a total number of 568 sentences.

Pinkster's counts show a clear preponderance for SOV, i.e., 63%, while SVO represents only 4% of the relevant word orders. The remaining word order constellations are all relatively infrequent, except for OSV, which amounts to as much as 21% of the total. This word order appears to be motivated by the high frequency of argument focus, where the object argument is placed in first position, indicating either contrastive or new information (cf. Lambrecht's (1994; 2000; 2001) and Dahlström's (2003) concepts of argument focus and Barðdal, Bjarnadóttir, et al.'s (2013) application of that concept on early Indo-European material).

Table 5: The order of the subject, object and verb in Caesar (adapted from Pinkster 1991: 72, cf. also Skopeteas 2011: 172) *Gall*.1–7 + *Civ*

	SOV		**SVO**		**VSO**		**OSV**		**OVS**		**VOS**	
	N	f	N	f	N	f	N	f	N	f	N	f
Nominative	360	63%	22	4%	6	1%	120	21%	33	6%	27	5%

In a more recent study, Spevak (2010) introduces some word order counts of Nom-Acc verbs from three different classical authors, Caesar, Cicero and Sallust. Spevak's dataset is considerably smaller than Pinkster's (and our own, see below), only consisting of 60 clauses in which both arguments are present. Unfortunately, Spevak does not present a full list of the verbs used, making it difficult to compare her category of Nom-Acc verbs with ours (see below). However, as is evident from Table 6, the tendencies observed by Pinkster clearly emerge in Spevak's dataset as well, despite its smallness. The most telling difference between the two is that SVO orders are 8.4% of Spevak's total but only 4% of Pinkster's total. This increase of SVO orders occurs at the cost of OVS and VOS orders, which are less frequent in Spevak's dataset than in Pinkster's. However, given the small size of Spevak's study, it is difficult to draw any conclusions on how meaningful the lower numbers for OVS and VOS are.

For the purpose of comparing the order of arguments across nominative subjects and potential non-nominative ones, we have carried out our own counts of the relative order of the three elements in Classical Latin, the subject, the object and the finite verb. Our counts are based on 20 verbs selecting for nominative subjects and accusative objects and 19 selecting for nominative subjects and dative

Table 6: The order of the subject, object and verb in Caesar, Cicero and Sallust (adapted from Spevak 2010: 18)

	SOV		SVO		VSO		OSV		OVS		VOS	
	N	f	N	f	N	f	N	f	N	f	N	f
Nominative	40	66.7%	5	8.4%	0	0%	13	21.7%	1	1.6%	1	1.6%

objects, i.e. Nom-Acc and Nom-Dat, respectively. Our original goal was to extract the first ten instances of every eligible token of the relevant verbs occurring with both arguments, a total of 200 tokens per case frame. However, due to data sparsity, this has turned out not to be attainable. Thus, we have complemented the dataset in this section and the next one with either more verbs, more tokens, or both.

Only examples where the arguments are expressed either as nouns or pronouns are included, while examples involving clitics are excluded. Discontinuous phrases are included and are categorized on the basis of the placement of the head noun. The relevant examples are extracted from several Classical Latin prose texts in the PDL and PHI databases and are restricted to finite contexts, leaving aside participle clauses, infinitive clauses, and relative clauses (in which either of the arguments is relativized). The 20 Nom-Acc and 19 Nom-Dat verbs, respectively, are the following (the number of tokens extracted for each verb is given in brackets):

- **Nom-Acc:** *laudo* 'to praise' (10), *vinco* 'to win' (10), *desidero* 'to desire' (10), *video* 'to see' (10), *amo* 'to love' (10), *audio* 'to hear' (10), *iacio* 'to throw' (10), *lego* 'to read' (10), *facio* 'to do' (10), *duco* 'to lead' (10), *moneo* 'to warn' (10), *cognosco* 'to recognize' (10), *invenio* 'to find' (10), *interrogo* 'to question' (10), *timeo* 'to fear' (10), *voco* 'to call' (10), *deleo* 'to destroy' (10), *accipio* 'to obey' (10), *caedo* 'to chop' (10), *gero* 'to bear' (10)
- **Nom-Dat:** *faveo* 'to support' (15), *ignosco* 'to forgive' (10), *nubo* 'to marry' (10), *obsto* 'to hinder' (10), *pareo* 'to obey' (10), *studeo* 'to support' (10), *credo* 'to believe' (10), *respondeo* 'to answer' (10), *confido* 'to believe/trust' (10), *fido* 'to trust' (5), *minor* 'to threaten' (10), *invideo* 'to envy' (10), *parco* 'to spare' (10), *persuadeo* 'to persuade' (10), *diffido* 'to distrust' (5), *servio* 'to be a slave to somebody' (19), *succurro* 'to help' (14), *supplico* 'to supplicate' (10), *subvenio* 'to rescue' (12)

Our statistics are given in Table 7. The word order constellations are the same as Pinkster's and Spevak's in Tables 5 and 6, respectively.

Note that there are some differences between our numbers and Pinkster's and Spevak's. The first is that our SOV numbers are considerably lower than theirs, namely 49–52.5%, as opposed to their 63 and 67%, respectively. These lower SOV

Table 7: The order of Nom-Acc and Nom-Dat relative to the verb in Latin texts

	SOV		SVO		VSO		OSV		OVS		VOS	
	N	f	N	f	N	f	N	f	N	f	N	f
Nom-Acc	98	49%	26	13%	11	5.5%	33	16.5%	14	7%	18	9%
Nom-Dat	105	52.5%	26	13%	8	4%	37	18.5%	10	5%	14	7%

numbers are found at the advantage of both SVO and VSO orders in our counts. Starting with SVO orders, these are 13% of our examples, while in Pinkster's count they only represent 4% of the total. This is most likely a consequence of the fact that Caesar's style is conservative, showing a clear preference for V-final structures, as Skopeteas (2011: 172) has argued. This assumption is confirmed by Spevak's count, where 8.7% of the examples are SVO, which is twice the occurrences found by Pinkster, but yet it is somewhat lower than our numbers (13%) for SVO orders.

Turning to VSO orders, these are also considerably higher in our counts, namely 4–5.5%, respectively, while they are 1% of Pinkster's total and nonexistent in Spevak's study. Again, this most likely reflects a higher proportion of V-final orders in Pinkster's and Spevak's datasets, while in our dataset, there are proportionally more verb-medial and verb-initial structures. As in Pinkster's and Spevak's counts, all remaining word order constellations are relatively infrequent, except for OSV orders which amount to 16.5–18.5% in our counts and 21–22% in Pinkster's and Spevak's counts.

When it comes to potential non-nominative subjects in Latin and their position relative to the verb and the object, the only count that we are aware of is that found in Fedriani (2009: 165), where it is argued that potential accusative subjects of verbs like *pudet* 'be ashamed' occur in first position and precede the verb in 64% of the cases. Notice that this number is almost identical to the relative number for SVO structures with nominative subjects in Pinkster's counts.

While we have no knowledge of the raw frequencies behind Fedriani's count, we still believe that it may be a worthy exercise to verify the accuracy of her statistics, especially with regard to more verbs and a proper comparison with nominative subjects. Hence, we have carried out a count of our own, using the same criteria as for our counts of Nom-Acc and Nom-Dat verbs in Latin, as reported in Table 7. Again, the examples are extracted from Classical Latin prose texts from PDL and the PHI database. However, due to the lower type frequency of Dat-Nom and Acc-Gen verbs, we provide statistics for eight Dat-Nom verbs and nine Acc-Gen verbs. The latter category includes four prefixed variants of three of the simple Acc-Gen verbs, all listed below (the number of tokens extracted for each verb is given in parentheses):

- **Dat-Nom:** *accido* 'to occur' (20), *contingo* 'to happen' (18), *desum* 'to miss' (30), *doleo* 'to feel pain' (6), *placeo* 'to please' (47), *sufficio* 'to suffice' (25), *prosum* 'to benefit' (30), *displiceo* 'to displease' (24)
- **Acc-Gen:** *misereo* 'to pity' (12), *paeniteo* 'to regret' (88), *suppaeniteo* 'to regret' (1), *pigeo* 'to disgust' (14), *pudeo* 'to be ashamed' (39), *suppudeo* 'to be ashamed' (1), *dispudeo* 'to be ashamed' (1), *taedeo* 'to be disgusted' (15), *pertaedeo* 'to be disgusted' (5)

Our data collection, including our choice of verbs, is limited by availability, as not all of the relevant verbs are equally readily found in Classical Latin texts with the two arguments realized as noun phrases, as opposed to being realized as subordinate clauses or infinitives.

Table 8: The order of Dat-Nom and Acc-Gen relative to the verb in Latin texts

	SOV		SVO		VSO		OSV		OVS		VOS	
	N	f	N	f	N	f	N	f	N	f	N	f
Dat-Nom	60	30%	31	15.5%	22	11%	59	29.5%	21	10.5%	7	3.5%
Acc-Gen	86	48.9%	15	8.6%	36	20.5%	32	18.2%	4	2.3%	3	1.7%

The statistics presented in Table 8 are based on 200 tokens for Dat-Nom verbs, but only 176 tokens for Acc-Gen verbs (due to data scarcity), a total of 376 tokens. Starting with Acc-Gen verbs, the same tendencies are found as with nominative subject verbs in all respects except for one. The relative frequency for VSO orders is 20.5% as opposed to 4–5.5% with nominative subject verbs. In fact, there may be an explanation for this aberrant behavior of potential accusative subjects in Latin with regard to VS word orders; it has been noted in the literature that so-called "object-like" subjects tend to be located post-verbally. These are typically subjects of unaccusative verbs and passives (Linde 1923: 160; Adams 1976: 122–127; Pinkster 1991: 78; *inter alia*, here quoted from Ledgeway 2012: 232).

Interestingly, the same tendency has been observed for Old Norse-Icelandic by Rögnvaldsson (1991: 375–377) who points out that non-nominative subjects are similar to subjects of unaccusatives in that the subject referent is not an agent but instead a participant affected by the event expressed by the verb. Hence, subjects of unaccusative verbs and non-nominative subjects pattern together, both showing a greater tendency than nominative agentive subjects to occur post-verbally in Old Norse-Icelandic. As we will see below, this tendency is also found for Ancient Greek.

Turning to the frequencies for Dat-Nom verbs, here we find some clearer deviations from the nominative subject prototype in Table 7. This first and foremost

involves OSV and OVS orders, which are considerably higher than with nominative subjects. The OSV orders are 29.5% for Dat-Nom verbs, while they are only 16.5–18.5% for the nominative subject prototype. OVS orders are also considerably higher for Dat-Nom verbs than for nominative subjects, namely 10.5% vs. 5–6%. Apart from these deviations, the tendencies are the same as for nominative subjects, with SOV being considerably higher than SVO, i.e., 30% vs. 15.5%.

In other Indo-European languages where Dat-Nom verbs also exist, it has been noted that these verbs seem to alternate between two diametrically opposed argument structure constructions, namely Dat-Nom and Nom-Dat. The subsequent analysis is that when such verbs occur in the Dat-Nom construction, it appears as if the dative takes on the subject properties and the nominative the object properties, while when they occur in the Nom-Dat construction, it appears as if the nominative takes on the subject properties and the dative the object properties (cf. Barðdal 2023: §3). Such an analysis has been suggested for Dat-Nom verbs in Modern Icelandic (Bernódusson 1982; Jónsson 1997–1998; Barðdal 2001a; Rott 2013; Wood & Sigurðsson 2014; Barðdal, Eythórsson & Dewey 2019; Somers & Barðdal 2022), Modern Faroese (Barnes 1986) and Modern German (Eythórsson & Barðdal 2005; Barðdal, Eythórsson & Dewey 2019). The same analysis has also been suggested for Old and Early Middle English (Allen 1995) and the history of the Scandinavian languages (Barðdal 1998).

We have also come across verbs and predicates that seem to alternate between Dat-Nom and Nom-Dat case frames in Sanskrit, Russian and Lithuanian, in addition to Latin and Ancient Greek, although a systematic investigation of this behavior across the Indo-European phylum awaits future research. We let it suffice to point out that the high frequency of the OSV and OVS orders with Dat-Nom verbs is consistent with an alternating analysis of these verbs. Hence, a subject analysis of the nominative and an object analysis of the dative would yield 29.5% SOV (the reverse of OSV) and 10.5% for SVO (the reverse of OVS).

Finally, summarizing the statistics for nominative subjects and potential non-nominative subjects in Latin certainly reveals a clear tendency with regard to the relative order of subjects and objects, shown in Table 9. The nominative subject is located before the object in approximately 67–69% of the cases and, conversely, the object is located before the subject in 30.5–32.5% of the cases. The frequencies for Acc-Gen verbs are entirely consistent with a subject analysis of the accusative, with 78% of the accusatives occurring before the genitive and only 22% of the genitives occurring before the accusatives.

What is more, the figures in Table 9 definitely exclude an object analysis of potential accusative subjects in Latin. The corresponding figures for Dat-Nom verbs also follow this pattern, with the dative preceding the nominative in 56.5% of the cases (SO word order), and the nominative preceding the dative in only 43.5% of

the cases (OS word order). While the statistics for Dat-Nom predicates are less decisive than the statistics for Acc-Gen, Dat-Nom predicates still show the same statistical tendency as Nom-Acc and Nom-Dat predicates in Latin.

Table 9: SO and OS word orders in Latin

	SO	OS
Nom-Acc	67.5%	32.5%
Nom-Dat	69.5%	30.5%
Dat-Nom	56.5%	43.5%
Acc-Gen	77.8%	22.2%

Observe that the difference between Nom-Acc and Nom-Dat is not significant when running a chi-square test. However, the difference between Nom-Acc and Dat-Nom is significant at the $p < .05$ level, with p-value < .023437, and the same is true for the difference between Nom-Dat and Dat-Nom, except that the p-value is considerably lower in this case, namely < .00709, suggesting an even greater difference. A comparison between Nom-Acc and Acc-Gen yields a p-value of < .025301, which is also statistically significant. Not unexpectedly, the difference between Dat-Nom and Acc-Gen is even more significant with p-value <.000012.

However, the fact that the differences between Nom-Acc and Dat-Nom, on the one hand, and Nom-Acc and Acc-Gen, on the other, are significant does not invalidate a subject analysis of potential non-nominative subjects; it only suggests that there may be some differences in the word order preferences of non-nominative subjects as opposed to nominative subjects; as is mentioned above, for instance with respect to non-agentive subjects' higher preference for postverbal position than nominative subjects'. Clearly, this is a topic worthy of further investigation.

Notice also that on a subject analysis of the nominative in Dat-Nom constructions, which would yield 43.5% SO and 56.5% OS (the reverse of what Table 9 specifies for Dat-Nom on a subject analysis of the dative), the difference between Dat-Nom and Nom-Dat (69.5% vs. 30.5%) is highly significant, with a p-value of < .00001, which is a considerably lower p-value than between the Nom-Dat and the Dat-Nom constructions on a subject analysis of the dative (p-value < .00709, significant at the $p < .05$ level), as discussed above. This means that the nominative in Dat-Nom constructions is statistically much more unlikely to be the subject than the dative is, and, as its corollary, it is statistically more likely to be an object, given a comparison with ordinary nominative subjects and ordinary accusative and dative objects in Latin.

We now turn to word order in Ancient Greek.

5.2 Ancient Greek

Word order is also a highly debated topic in Ancient Greek (Dover 1960), exactly as in Latin, due to its relative freedom and pragmatically and information-structurally induced word orders (Dik 1995; 2007; Matić 2003; Celano 2013). While we agree that word order in Ancient Greek may be affected by pragmatic considerations, there is no reason to assume, a priori, that such pragmatic properties do not affect nominative subjects and potential non-nominative ones alike.

For the sake of consistency, we have made the same type of counts for Ancient Greek as described for Latin above. The five argument structure constructions investigated for Ancient Greek are Nom-Acc, Nom-Dat and Nom-Gen, as well as Dat-Nom and Dat-Gen. As with Latin, we have collected 200 tokens for each of the five argument structure constructions from 49 different finite verbs found in Classical Greek prose of 5th–4th century BC (until Aristotle). Hence, our Ancient Greek dataset consists of exactly 1,000 tokens. The examples are extracted from the Thesaurus Linguae Graecae (TLG) and stem from as many as 23 different authors. In that sense, the dataset is well stratified, further ensuring reliable statistical results. The relevant Nom-Acc, Nom-Dat and Nom-Gen verbs are the following (the number of tokens harvested for each verb is given in brackets):

- **Nom-Acc:** *apokteínō* 'to kill' (20), *bláptō* 'to hurt' (20), *deídō* 'to fear' (20), *epístamai* 'to know' (20), *ktáomai* 'to acquire' (20), *lambánō* 'to receive' (20), *leípō* 'to leave' (20), *lýō* 'to loosen' (20), *pémpō* 'to send' (20), *phylássō* 'to guard' (20)
- **Nom-Dat:** *boēthéō* 'to help' (23), *douleúō* 'to serve' (20), *hépomai* 'to follow' (20), *homologéō* 'to agree with' (20), *orgízō* 'to irritate' (18), *pisteúō* 'to trust' (20), *hypēretéō* 'to serve' (19), *phthonéō* 'to envy' (20), *kharízomai* 'to gratify' (20), *khráomai* 'to use' (20)
- **Nom-Gen:** *aisthánomai* 'to perceive' (18), *akoúō* 'to hear' (24), *ameléō* 'to neglect' (23), *háptomai* 'to grasp' (25), *árkhō* 'to rule' (47), *kratéō* 'to prevail' (40), *phrontízō* 'to take thought for' (13), *psaúō* 'to touch' (10)

As shown in Table 10, the word order variation between SOV and SVO is greater in Ancient Greek texts than in Latin texts in that the proportions between the two are more even, although there is a clear preponderance for SVO over SOV in Ancient Greek texts, which is the opposite of the situation in Latin. The remaining word orders exhibit approximately 4–12% of the total, with some internal variation between the three different nominative subject constructions, variation which may or may not be marginal.

Table 10: The order of Nom-Acc, Nom-Dat and Nom-Gen relative to the verb in Ancient Greek texts

	SOV		SVO		VSO		OSV		OVS		VOS	
	N	f	N	f	N	f	N	f	N	f	N	f
Nom-Acc	60	30%	77	38.5%	15	7.5%	19	9.5%	18	9%	11	5.5%
Nom-Dat	72	36%	70	35%	13	6.5%	16	8%	14	7%	15	7.5%
Nom-Gen	62	31%	79	39.6%	8	4%	11	5.5%	16	8%	24	12%

Exactly as with Latin, we know of one earlier study of word order for four Dat-Gen verbs, carried out by Conti (2010). She analyzes the word order of 90 Ancient Greek examples of verbs of interest and finds that the order Dat-Gen-V makes up 27.8% of the tokens, while the order Dat-V-Gen makes up 23.4% of the tokens. On a subject analysis of the dative, this amounts to 27.8% SOV orders and 23.4% SVO orders. Comparing Conti's findings with our findings for the nominative subject construction (see Table 10), her count reveals approximately 51% combined SOV and SVO orders, while for the nominative subject construction above, the frequencies are 68.5%, 70% and 70.5% respectively. There is thus a considerable difference between nominative subjects in our counts and potential dative subjects on Conti's counts. This discrepancy definitely calls for a further investigation of the word order properties of potential non-nominative subjects in Ancient Greek.

The following Dat-Nom and Dat-Gen verbs were used for our word order counts of potential non-nominative subjects in Ancient Greek (the number of tokens harvested for each verb is given in brackets):

- **Dat-Nom:** *apokhráō* 'to have enough' (9), *aréskō* 'to like' (32), *ekkhráō* 'to have enough' (1), *empíptō* 'to happen' (1), *éneimi* 'to have' (36), *epérkhomai* 'to happen' (4), *exarkéō* 'to be satisfied' (15), *handánō* 'to like' (2), *hypárchō* 'to have' (25), *lysiteléō* 'to profit' (4), *méteimi* 'to have a share' (18), *prosístēmi* 'to happen' (3), *symbaínō* 'to succeed' (30), *sympíptō* 'to happen' (20)
- **Dat-Gen:** *déō* 'to need (3)', *endéō* 'to need' (4), *mélō* 'to care' (66), *metamélō* 'to repent' (13), *méteimi* 'to have a share' (54), *prosdéō* 'to need' (22), *prosḗkō* 'to be concerned with' (38)

Again, exactly as with our Latin data collection, our choice of verbs is limited by their availability in the texts, and how often these verbs occur with both arguments realized as noun phrases, as opposed to with subordinate clauses or infinitives. This part of our dataset consists of 14 Dat-Nom verbs and seven Dat-Gen verbs.

The frequencies presented in Table 10 deviate only slightly from Conti's findings in that SOV and SVO orders amount to 44.5–47.5% for Dat-Nom and Dat-Gen predicates, respectively, which is somewhat less than Conti's 51%. As

a consequence, the frequencies for VSO, OSV and OVS are also considerably higher than for nominative subject verbs. There is no doubt, however, that potential non-nominative subjects pattern more like the nominative of Nom-Acc, Nom-Dat and Nom-Gen than like the accusative, dative and genitive objects, even though the exact frequencies show this variation between the two categories of (potential) subjects.

Table 11: The order of Dat-Nom and Dat-Gen relative to the verb in Ancient Greek texts

	SOV		SVO		VSO		OSV		OVS		VOS	
	N	f	N	f	N	f	N	f	N	f	N	f
Dat-Nom	49	24.5%	41	20.5%	37	18.5%	37	18.5%	29	14.5%	7	3.5%
Dat-Gen	35	17.5%	60	30%	38	19%	41	20.5%	22	11%	4	2%

As observed for Latin in §5.1 above, there is also a higher tendency for non-nominative subjects to occur post-verbally in Ancient Greek, i.e. in VSO structures, than for nominative subjects. Again, this may be explained by a tendency for non-agentive subjects to occur post-verbally, as has been observed for Old Norse-Icelandic.

In addition, comparing the relative order of the two arguments, the subject and the object argument, Table 11 shows that ordinary nominative subjects precede the object in 74–76% of the cases in Ancient Greek, while potential non-nominative subjects do so in 63–66% of the cases. While this difference is considerable, we do not find that potential non-nominative subjects pattern with ordinary objects at all. Instead, they pattern with ordinary nominative subjects, even though the statistics are not identical. Therefore, the frequencies that we have presented here indeed speak for a subject analysis of the dative and an object analysis of the second argument, the nominative and the genitive, respectively.

Exactly as in Latin, the difference between Nom-Acc and Nom-Dat is not significant when running a chi-square test. The same is also true for the difference

Table 12: SO and OS word orders in Ancient Greek

	SO	OS
Nom-Acc	76%	24%
Nom-Dat	77.5%	22.5%
Nom-Gen	74.5%	25.5%
Dat-Nom	63.5%	36.5%
Dat-Gen	66.5%	33.5%

between Nom-Acc and Nom-Gen, as well as for the differences between all three subconstructions of the nominative subject construction. In contrast, the difference between Nom-Acc and Dat-Nom is significant at the $p < .05$ level, with p-value < .006503, and the same is true for the difference between Nom-Acc and Dat-Gen with p-value < .035817, although the p-value is considerably higher in this case, which reflects a smaller difference. Also, when comparing the Nom-Gen construction, which is the least skewed of the three nominative subject constructions, with the Dat-Gen one, the p-value is < .079393, which yields a non-significant difference between the two. Needless to say, the difference between Dat-Nom and Dat-Gen is not significant either.

Yet, as is already discussed above in relation to Latin, these differences, whether statistically significant or not, do not invalidate a subject analysis of non-nominative subjects, as they may simply be taken to suggest that there are differences in word order preferences across nominative and non-nominative subjects, irrespective of their subject status. For instance, on the assumption that grammatical relations are not only language-specific but also construction-specific (cf. Croft 2001; Barðdal 2006; 2023; Barðdal & Gildea 2015), it is predicted that subjects of different constructions may not show uniform behavior.

For the purpose of this statistical exercise, let us compare the frequencies between the ordinary Nom-Dat construction and the Dat-Nom construction, first on a subject analysis of the dative and an object analysis of the nominative, which is the analysis we are pursuing here, and then on a subject analysis of the nominative and an object analysis of the dative in the Dat-Nom construction, which is the traditional analysis. A Chi-Square calculation reveals that the difference between the first two is significant, yielding a p-value of < .002141. In contrast, the second calculation is highly significant, with a p-value of < .00001. Even though both calculations reveal a difference which is statistically significant, the numbers still confirm that the difference is considerably more extensive between the ordinary Nom-Dat construction and the Dat-Nom construction, given a subject analysis of the nominative, than the difference between the ordinary Nom-Dat construction and the Dat-Nom construction on a subject analysis of the dative.

5.3 Interim conclusion and discussion

A comparison of the similarities and differences between Latin and Ancient Greek, given in Table 13, reveals exactly the same pattern across the two languages. The word order distribution between the accusative and the genitive of Acc-Gen constructions and the dative and the nominative of Dat-Nom constructions in Latin is the same as the word order distribution between ordinary nominative subjects, on

the one hand, and accusative and dative objects, on the other. The statistics are not as decisive for Dat-Nom constructions as for Acc-Gen constructions, although the tendency remains the same, i.e. with subjects preceding objects in the clear majority of the cases.

Table 13: SO and OS word orders in Latin and Ancient Greek

	Latin		Ancient Greek	
	SO	OS	SO	OS
Nom-Acc	67.5% (135)	32.5% (65)	76% (152)	24% (48)
Nom-Dat	69.5% (139)	30.5% (61)	77.5% (155)	22.5% (45)
Nom-Gen			74.5% (149)	25.5% (51)
Acc-Gen	77.8% (137)	22.2% (39)		
Dat-Nom	56.5% (113)	43.5% (87)	63.5% (127)	36.5% (73)
Dat-Gen			66.5% (133)	33.5% (67)

The same tendency is found in Ancient Greek, with an even greater preponderance for SVO order than in Latin. Again, the dative of Dat-Nom and Dat-Gen verbs behaves in the same way as the nominative of Nom-Acc, Nom-Dat and Nom-Gen verbs even though the frequencies are not identical. Generally, SO word order is higher in Ancient Greek than in Latin, and, as its corollary, OS word order is also lower in Ancient Greek than in Latin.

To conclude, the differences in frequencies between subjects and objects in both Latin and Ancient Greek are striking, demonstrating that potential non-nominative subjects pattern with unambiguous subjects and not with unambiguous objects in either language. Hence, word order distribution favors a subject analysis over an object analysis of potential non-nominative subjects, exactly as with the other behavioral tests discussed in §4 above.

Before finalizing our presentation and comparison of word order frequencies in Latin and Ancient Greek, a few words are in place on corresponding frequencies in languages with fixed word order. Such statistics exist for two other Indo-European languages, namely Old Irish (Le Mair et al. 2017) and Icelandic (Barðdal & Eythórsson 2012a).

Starting with the Icelandic frequencies, given in Table 14, two of the word order combinations found in Latin and Ancient Greek are ungrammatical in Icelandic, i.e., SOV and OSV, i.e. verb-final orders. For SVO orders, the subject is located in its canonical subject position, immediately preceding the verb, while VSO orders, representing subject-verb inversion, are found with questions, narrative inversion,

Table 14: Word order variation in Icelandic texts

	SOV		SVO		VSO		OSV		OVS		VOS	
	N	f	N	f	N	f	N	f	N	f	N	f
Nominative	0	0	2.327	66.9%	554	16%	0	0	578	16.6%	17	0.5%
Oblique	0	0	96	64.9%	42	28.4%	0	0	6	4%	4	2.7%

etc. VOS orders are used when the subject is either heavy or indefinite, while OVS orders are found when the object has been topicalized to first position, with subsequent inversion of the subject with the verb.

The frequencies in Table 14 are extracted from the IcePaHC corpus, which contains data spanning from Old Norse-Icelandic, i.e. dating back to the late 12th century, and almost ten centuries forward, to the modern Icelandic language. The differences between the individual periods are so nugatory that the periods have been collapsed into one for statistical purposes.

Further, Table 14 shows clearly that non-nominative subjects in Icelandic pattern in the same way as nominative subjects, in that they occupy the first position, immediately preceding the verb, in 65% of the cases, which is approximately the same rate found for nominative subjects in this position, 67%.

The differences between nominative and non-nominative subjects in Icelandic, however, lie in the different proportions between VSO and OSV, with nominative subjects occurring 16% of the time in both VSO structures and OVS structures, while non-nominative subjects occur in VSO structures approximately 28% of the time and in OVS structures 4% of the time. As a consequence, there is also a considerable difference between VSO orders for nominative and non-nominative subjects, with non-nominative subjects occurring post-verbally in 28.4% of the cases, while the corresponding numbers for nominative subjects are only 16%. This greater tendency for non-nominative subjects to occur post-verbally was also observed above in both Latin and Ancient Greek, most likely due to the non-agentivity of the subject argument.

Table 15: SO and OS word orders in Icelandic

	SO		OS	
	N	f	N	f
Nominative	2.881	82.9%	595	17.1%
Oblique	138	93.3%	10	6.7%

When collapsing the SO orders and the OS orders into one category each (cf. Table 15), it turns out that non-nominative subjects in Icelandic occur in SO orders in approximately 93% of the cases, while the corresponding numbers for nominative subjects is 83%.

Turning to Old Irish, which is also a language with fixed word order with the verb in first position, word order counts for that language only contain two of the word orders used here, namely VSO and VOS (cf. Table 16). The reason is that, upon excluding relativization and cleft constructions in Old Irish, nominative and non-nominative subjects only occupy the two aforementioned word order slots anyway. For Old Irish, Le Mair et al. (2017) show that in their material, collected in the same way as the data for Latin and Ancient Greek above, potential non-nominative subjects occur in SO position 100% of the time, while corresponding numbers for ordinary nominative subjects are 91%. It should be noted that the raw frequencies in the Old Irish dataset are considerably lower than for Latin, Ancient Greek and Icelandic, consisting of 34 nominative subject examples and 39 non-nominative subject examples.

Table 16: SO and OS word orders in Old Irish (Le Mair et al. 2017: 128)

	SO		**OS**	
	N	f	N	f
Nominative	31	91%	3	9%
Oblique	39	100%	0	0

To conclude, both Icelandic and Old Irish show a clear predominance of SO orders over OS orders for non-nominative subjects, with 93% SO for Icelandic and 100% for Old Irish. This is exactly the same tendency as is found for potential non-nominative subjects in Latin and Ancient Greek, with 56.5–78% SO in Latin and 63.5–66.5% SO in Ancient Greek. Surely, the numbers for Latin and Ancient Greek are lower than for Icelandic and Old Irish, but this is certainly expected given that the former are "free" word order languages, while the latter are "fixed" word order languages. It is not surprising that languages with free word order show a distribution over more word order options than languages with fixed word order, with subsequent lower numbers for the most dominant pattern than found in languages with fixed word order.

To summarize the main findings presented in this section, potential non-nominative subjects in both Latin and Ancient Greek behave like nominative subjects in their respective languages, even though the proportions between SO and OS are not identical. In Latin, Acc-Gen behaves in the same way as Nom-Acc and

Nom-Dat, while Dat-Nom shows some deviations. In Ancient Greek, the percentages for SO orders are a little lower for potential non-nominative subjects than for nominative subjects, while still manifesting the same tendency for potential non-nominative subjects to align with unambiguous nominative subjects. A comparison with languages like Icelandic and Old Irish reveals precisely the same tendency even though the exact frequencies vary from language to language, generally being higher for fixed word order languages than for languages with free word order.

6 Conclusions in the context of the early Indo-European languages

We have shown above that potential non-nominative subjects in Latin and Ancient Greek behave syntactically in the same way as nominative subjects do with respect to a host of subject properties. These include conjunction reduction, long-distance reflexivization, raising-to-object, raising-to-subject, control infinitives and, finally, word order. As mentioned in §2 above, several of these tests have also been applied to the early Germanic languages, and it is incontrovertible that potential non-nominative subjects in Gothic (Barðdal & Eythórsson 2012a), Old and Early Middle English (von Seefranz-Montag 1983; Allen 1995), Old Swedish (Barðdal 2000a; Barðdal & Eythórsson 2003; Eythórsson & Barðdal 2005; Barðdal 2023), Old Danish (Barðdal 2000a; Barðdal 2023), Old Norse-Icelandic (Rögnvaldsson 1991; 1995; 1996; Barðdal 2000a; Barðdal & Eythórsson 2003; 2012a; Eythórsson & Barðdal 2005), Old Saxon and Old High German (Barðdal & Eythórsson 2012a; Barðdal 2023) exhibit behavioral properties of subjects. The relevant early Germanic data are only compatible with a subject analysis of potential non-nominative subjects, excluding an object analysis.

Of these tests for subject status, control infinitives are by many historical linguists taken to be the most conclusive evidence for corpus languages, particularly due to freedom in word order in the earlier stages of most Indo-European languages (cf. Rögnvaldsson 1996: 49–51; Falk 1997: 38; Faarlund 2001). This is particularly relevant since this freedom in word order may make it difficult to properly analyze the word order in constructions involving raising-to-object and raising-to-subject. Furthermore, such control infinitives containing verbs selecting for non-nominative subjects have also been documented in Gothic, Old Saxon, Early Middle English, Old Norse-Icelandic, Old Swedish and Old Danish (for an overview see Barðdal 2023). Thus, it is indisputable that not only may the category of subject be reconstructed for Proto-Germanic, but also the subcategory of non-

nominative subjects is reconstructable for that proto-stage (for a proper modeling of such a reconstruction, cf. Barðdal & Eythórsson 2012a; Barðdal 2023: §5).

The data presented here from Latin and Ancient Greek also corroborate our hypothesis put forward in §3 above, that it is indeed the first argument of the argument structure that passes the subject tests, behaving syntactically as a subject. This hypothesis is based on our working definition of subject being the first argument of the argument structure. This definition, moreover, is not based on data from Latin and Ancient Greek, but on data from Germanic during earlier research. Our assumptions about the internal order of the arguments in the argument structure, in turn, are based on event structure which we take to be a derivative of causal conceptual structure and force dynamics, and thus independently motivated.

Together with the Latin and Ancient Greek evidence presented in this article, which overwhelmingly speaks for a subject analysis of potential non-nominative subjects in these early Indo-European languages, there are certainly solid grounds for assuming that not only the argument structure found with verbs selecting for non-nominative subjects may be reconstructed for a common proto-stage (cf. Barðdal & Eythórsson 2012a; Barðdal & Smitherman 2013; Barðdal, Bjarnadóttir, et al. 2013; Barðdal 2015; Barðdal & Eythórsson 2020; Barðdal, Kulikov, et al. 2020; Eythórsson & Barðdal 2016; Danesi, Johnson & Barðdal 2017; Dunn et al. 2017; Johnson et al. 2019; Pooth et al. 2019; Frotscher, Kroonen & Barðdal 2022), but also the behavioral properties of non-nominative subjects. In other words, a subject analysis has now been independently corroborated for the early languages of three different Indo-European branches, first for Germanic during the last decade or so, but now also for Latin and Ancient Greek. More research is needed into the subject properties of further early Indo-European languages to decide which particular behavioral properties of subjects should be reconstructed for Proto-Indo-European, a task outside the scope of this article.[6]

At this juncture, it is appropriate to emphasize that both Latin and Ancient Greek are very early Indo-European languages. Examples from Cicero date from the 1st century BC and examples from Plato are from around 400 BC. Therefore, the control infinitives in Ancient Greek, for instance, discussed in §4.5.2 above, are 700–800 years older than corresponding control infinitives in Gothic (see Barðdal & Eythórsson 2012a and Barðdal 2023 for examples), given that the Gothic Bible

6 Another issue, also outside the scope of this article, relates to the role of non-nominative subjects for the reconstruction of the morphosyntactic alignment system of Proto-Indo-European, a topic first brought up by Pedersen (1907: 134–148), as far as we are aware. Later, the role of non-nominative subject constructions for the reconstruction of alignment was taken up by Kortlandt (1983: 321); Bauer (2000); Patri (2007); Barðdal & Eythórsson (2009; 2012b), Cennamo (2009); Luraghi (2010); Matasović (2013); Pooth et al. (2019) and most recently by Cotticelli & Dahl (2022).

is from the 4th century AD. By the same token, the Latin control infinitives are ca. 400 years older than corresponding control infinitives in Gothic. Also, compared to Old Norse-Icelandic, the language spoken in Iceland and Norway during the 13th century AD, in which several control infinitives have been documented, the Ancient Greek control infinitives are more than one and a half millennia older. Thus, in historical terms, through the research presented in this article, we bring to the table even stronger evidence for the antiquity of the category of non-nominative subjects and their subject behavior in the early Indo-European languages than provided, for instance, for the older Germanic languages in the existing literature.

Returning to Hock's (1990: 121) early statement that "there is no evidence [that true oblique experiencers] originally had subject properties," we have now shown, thirty-three years later, that there is indeed plentiful evidence to be harvested from the early Indo-European languages, provided, of course, that there is enough scholarly interest in the community to undertake such an enterprise.

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Abbreviations

IcePaHC	Joel C. Wallenberg, Anton K. Ingason, Einar F. Sigurðsson & Eiríkur Rögnvaldsson (2011). *Icelandic Parsed Historical Corpus*. Version 0.9. URL: http://www.linguist.is/icelandic_treebank.
Lewis & Short	Charlton T. Lewis & Charles Short (1879). *A Latin Dictionary*. Founded on Andrews' edition of Freund's Latin dictionary. Oxford: Clarendon.
PDL	*Perseus Digital Library* (n.d.). URL: http://www.perseus.tufts.edu/.
PHI	*PHI Latin Texts* (n.d.). URL: https://latin.packhum.org/.
TLG	Maria Pantelia, ed. (2021). *Thesaurus Linguae Graecae. A Digital Library of Greek Literature*. URL: http://stephanus.tlg.uci.edu (visited on 12/13/2021).

Bibliography

Adams, James (1976). *The Text and Language of a Vulgar Latin Chronicle (Anonymus Valesianus II)*. University of London: Institute of Classical Studies.

Allen, Cynthia L. (1995). *Case Marking and Reanalysis. Grammatical Relations from Old to Modern English*. Oxford: Oxford University Press.

Andrews, Avery D. (1976). "The VP complement analysis in Modern Icelandic". In: *North Eastern Linguistic Society* 6, 1–21.

Andrews, Avery D. (1990). "Case structures and control in Modern Icelandic". In: *Modern Icelandic Syntax*. Ed. by Joan Maling & Annie Zaenen. San Diego: Academic Press, 187–234.

Baños Baños, José Miguel (2003). "*Paenitet* y los verbos impersonales de sentimiento en latín. Sintaxis y pragmática del acusativo personal". In: *Praedicativa. Estudios sobre complementación verbal en griego y latín*. Ed. by José Miguel Baños Baños, Concepción Cabrillana, María Esperanza Torrego & Jesús de la Villa. Santiago de Compostela: Universidad de Santiago de Compostela, 51–77.

Barðdal, Jóhanna (1998). "Argument structure, syntactic structure and morphological case of the impersonal construction in the history of Scandinavian". In: *Scripta Islandica* 49, 21–33.

Barðdal, Jóhanna (2000a). "Oblique subjects in Old Scandinavian". In: *NOWELE* 37, 25–51.

Barðdal, Jóhanna (2000b). "The subject is nominative! On obsolete axioms and their deep-rootedness". In: *17th Scandinavian Conference of Linguistics*. Ed. by Carl-Erik Lindberg & Steffen Nordahl. Odense: Institute of Language and Communication, 93–117.

Barðdal, Jóhanna (2001a). "The perplexity of Dat-Nom verbs in Icelandic". In: *Nordic Journal of Linguistics* 24, 47–70.

Barðdal, Jóhanna (2001b). "The role of thematic roles in constructions? Evidence from the Icelandic inchoative". In: *Proceedings of the 18th Scandinavian Conference of Linguistics 2000*. Ed. by Arthur Holmer, Jan-Olof Svantesson & Åke Viberg. Lund: Department of Linguistics, 127–137.

Barðdal, Jóhanna (2002). ""Oblique subjects" in Icelandic and German". In: *Working Papers in Scandinavian Syntax* 70, 61–99.

Barðdal, Jóhanna (2006). "Construction-specific properties of syntactic subjects in Icelandic and German". In: *Cognitive Linguistics* 17.1, 39–106.

Barðdal, Jóhanna (2015). "Syntax and syntactic reconstruction". In: *The Routledge Handbook of Historical Linguistics*. Ed. by Claire Bowern & Bethwyn Evans. London: Routledge, 343–373.

Barðdal, Jóhanna (2017). "Subject status of oblique subjects in the Early Indo-European Languages". Plenary talk at the 23rd International Symposium on Theoretical and Applied Linguistics, Thessaloniki.

Barðdal, Jóhanna (2023). *Oblique Subjects in Germanic. Their Status, History and Reconstruction*. Berlin: Mouton de Gruyter.

Barðdal, Jóhanna, Carlee Arnett, Stephen Mark Carey, Thórhallur Eythórsson, Gard B. Jenset, Guus Kroonen & Adam Oberlin (2016). "Dative subjects in Germanic. A computational analysis of lexical semantic verb classes across time and space". In: *STUF – Language Typology and Universals* 69.1, 49–84.

Barðdal, Jóhanna, Valgerður Bjarnadóttir, Serena Danesi, Tonya K. Dewey, Thórhallur Eythórsson, Chiara Fedriani & Thomas Smitherman (2013). "The story of 'woe'". In: *Journal of Indo-European Studies* 41.3–4, 321–377.

Barðdal, Jóhanna & Serena Danesi (2014). "Construction Grammar and Greek". In: *Encyclopedia of Ancient Greek Language and Linguistics*. Ed. by Georgios K. Giannakis, Vit Bubenik, Emilio Crespo, Chris Golston, Alexandra Lianeri, Silvia Luraghi & Stephanos Matthaios. Vol. 1. Leiden, Boston & New York: Nijhoff & Brill, 375–379. URL: http://www.brill.com/encyclopedia-ancient-greek-language-and-linguistics.

Barðdal, Jóhanna & Thórhallur Eythórsson (2003). "The change that never happened. The story of oblique subjects". In: *Journal of Linguistics* 39.3, 439–472.

Barðdal, Jóhanna & Thórhallur Eythórsson (2006). "Control infinitives and case in Germanic. 'Performance Error' or marginally acceptable constructions". In: *Case, Valency and Transitivity*. Ed. by Leonid Kulikov, Andrej Malchukov & Peter de Swart. Amsterdam: Benjamins, 147–177.

Barðdal, Jóhanna & Thórhallur Eythórsson (2009). "The origin of the oblique-subject construction. An Indo-European comparison". In: *Grammatical Change in Indo-European Languages*. Ed. by Vit Bubenik, John Hewson & Sarah Rose. Amsterdam: Benjamins, 179–193.

Barðdal, Jóhanna & Thórhallur Eythórsson (2012a). "Hungering and lusting for women and fleshly delicacies. Reconstructing grammatical relations for Proto-Germanic". In: *Transactions of the Philological Society* 110.3, 363–393.

Barðdal, Jóhanna & Thórhallur Eythórsson (2012b). "Reconstructing syntax. Construction grammar and the comparative method". In: *Sign-Based Construction Grammar*. Ed. by Hans C. Boas & Ivan A. Sag. Stanford: Center for the Study of Language and Information, 257–308.

Barðdal, Jóhanna & Thórhallur Eythórsson (2018). "What is a subject? The nature and validity of subject tests". In: *Non-Canonical Subjects. The Reykjavík-Eyjafjallajökull Papers*. Ed. by Jóhanna Barðdal, Na'ama Pat-El & Stephen M. Carey. Amsterdam: Benjamins, 257–273.

Barðdal, Jóhanna & Thórhallur Eythórsson (2020). "How to identify cognates in syntax. Taking Watkins' legacy one step further". In: *Reconstructing Syntax*. Ed. by Jóhanna Barðdal, Spike Gildea & Eugenio R. Luján. Leiden: Brill, 197–238.

Barðdal, Jóhanna, Thórhallur Eythórsson & Tonya K. Dewey (2019). "The alternating predicate puzzle. Dat–Nom vs. Nom–Dat in Icelandic and German". In: *Constructions and Frames* 11.1, 107–170.

Barðdal, Jóhanna & Spike Gildea (2015). "Diachronic construction grammar. Epistemological context, basic assumptions and historical implications". In: *Diachronic Construction Grammar*. Ed. by Jóhanna Barðdal, Elena Smirnova, Lotte Sommerer & Spike Gildea. Amsterdam: Benjamins, 1–50.

Barðdal, Jóhanna, Leonid Kulikov, Roland Pooth & Peter A. Kerkhof (2020). "Oblique anti-causatives. A morphosyntactic isogloss in Indo-European". In: *Poznan Studies in Contemporary Linguistics* 56.3, 413–449.

Barðdal, Jóhanna & Thomas Smitherman (2013). "The quest for cognates. A reconstruction of oblique subject constructions in Proto-Indo-European". In: *Language Dynamics and Change* 3.1, 28–67.

Barðdal, Jóhanna, Thomas Smitherman, Valgerður Bjarnadóttir, Serena Danesi, Gard B. Jenset & Barbara McGillivray (2012). "Reconstructing constructional semantics. The dative subject construction in Old Norse-Icelandic, Latin, Ancient Greek, Old Russian and Old Lithuanian". In: *Studies in Language* 36.3, 511–547.

Barnes, Michael (1986). "Subject, nominative and oblique case in Faroese". In: *Scripta Islandica* 38, 3–35.

Bauer, Brigitte L. M. (2000). *Archaic Syntax in Indo-European. The Spread of Transitivity in Latin and French*. Berlin: de Gruyter.

Benedetti, Marina & Chiara Gianollo (2017). "Criteria for Subjecthood and Non-Canonical Subjects in Ancient Greek". A presentation delivered at ICHL 23, San Antonio, TX.

Benedetti, Marina & Chiara Gianollo (2020). "Criteria for subjecthood and non-canonical subjects in Ancient Greek". In: *Historical Linguistics 2017*. Ed. by Bridget Drinka. Amsterdam: Benjamins, 30–48.

Benedicto, Elena (1991). "Latin long-distance anaphora". In: *Long-Distance Anaphora*. Ed. by Jan Koster & Eric Reuland. Cambridge: Cambridge University Press, 171–184.

Bernódusson, Helgi (1982). *Ópersónulegar setningar*. MA thesis. University of Iceland.

Bertocchi, Alessandra & Claudia Casadio (1980). "Conditions on anaphora. An analysis of reflexive in Latin". In: *Journal of Latin Linguistics* 1, 1–46.

Bickel, Balthasar (2004). "The syntax of experiencers in the Himalayas". In: *Non-Nominative Subjects*. Ed. by Peri Bhaskararao & Karumuri V. Subbarao. Vol. 1. Amsterdam: Benjamins, 77–111.

Bickel, Balthasar (2011). "Grammatical relations typology". In: *The Oxford Handbook of Linguistic Typology*. Ed. by Jae Jung Song. Oxford: Oxford University Press, 399–444.

Bolkestein, A. Machtelt (1979). "Subject to object raising in Latin?" In: *Lingua* 48, 15–34.

De Castro Alves, Flavia (2018). "Sujeito dativo em Canela". In: *Boletim do Museu Paraense Emílio Goeldi: Ciências Humanas* 13.2, 377–403.

Cattafi, Eleonora (2018). *'You Must Take Care of This'. Non-Nominative Subject Constructions in Ancient Greek*. MA thesis. University of Pisa.

Celano, Giuseppe G. A. (2013). "Argument-focus and predicate-focus structure in Ancient Greek. Word order and phonology". In: *Studies in Language* 37, 241–266.

Cennamo, Michaela & Claudia Fabrizio (2022). "Non-nominative arguments, active impersonals and control in Latin". In: *Alignment and Alignment Change in the Indo-European Family*. Ed. by Eystein Dahl. Oxford: Oxford University Press, 188–220.

Cennamo, Michela (2009). "Argument structure and alignment variations and changes in Late Latin". In: *The Role of Semantic, Pragmatic and Discourse Factors in the Development of Case*. Ed. by Jóhanna Barðdal & Shobhana L. Chelliah. Amsterdam: Benjamins, 307–346.

Clements, George N. (1975). "The logophoric pronoun in Ewe. Its rule in discourse". In: *Journal of West African Languages* 10.2, 141–177.

Conti, Luz (2008). "Synchronie und Diachronie des altgriechischen Genitivs als Semisubjekt". In: *Historische Sprachforschung* 121, 94–113.

Conti, Luz (2009). "Weiteres zum Genitiv als Semisubjekt im Altgriechischen. Analyse des Kasus bei impersonalen Konstruktionen". In: *Historische Sprachforschung* 122, 182–207.
Conti, Luz (2010). "Análisis del dativo en construcciones impersonales. Los conceptos de sujeto y de semisujeto en griego antiguo". In: *Emerita* 78.2, 249–273.
Cotticelli, Paula & Eystein Dahl (2022). "Split alignment, mixed alignment, and the spread of accusative morphosyntax in some archaic Indo-European languages". In: *Alignment and Alignment Change in the Indo-European Family*. Ed. by Eystein Dahl. Oxford: Oxford University Press, 64–122.
Croft, William (1998). "Event structure in argument linking". In: *The Projection of Arguments. Lexical and Compositional Factors*. Ed. by Miriam Butt & Wilhelm Geuder. Stanford: Center for the Study of Language and Information, 1–43.
Croft, William (2001). *Radical Construction Grammar. Syntactic Theory in Typological Perspective*. Oxford: Oxford University Press, 151–173.
Croft, William (2006). "A Radical Construction Grammar analysis of noun phrase structure". Presented in Plenum at the 7th Meeting of the High Desert Linguistics Society, Albuquerque, New Mexico.
Croft, William (2012). *Verbs. Aspect and Causal Structure*. Oxford: Oxford University Press.
Culicover, Peter W. & Ray Jackendoff (2005). *Simpler Syntax*. Oxford: Oxford University Press.
Dahl, Eystein (2012). "Aspects of the Morphosyntax of Subjecthood in Latin". Presented at the 14th Fachtagung der Indogermanischen Gesellschaft, Copenhagen.
Dahl, Eystein & Chiara Fedriani (2012). "The argument structure of experience. Experiential constructions in Early Vedic, Homeric Greek and Early Latin". In: *Transactions of the Philological Society* 110.3, 342–362.
Dahlström, Amy (2003). "Focus constructions in Meskwaki (Fox)". In: *Proceedings of the LFG03 Conference*. Ed. by Miriam Butt & Tracy Holloway King. Stanford: CSLI, 144–163.
Danckaert, Lieven (2015). "Studying word order changes in Latin. Some methodological remarks". In: *Perspectives on Historical Syntax*. Ed. by Carlotta Viti. Amsterdam: Benjamins, 233–250.
Danesi, Serena (2014). "Accusative subjects in Avestan. 'Errors' or noncanonically marked arguments". In: *Indo-Iranian Journal* 57.3, 223–260.
Danesi, Serena (2015). "Modality, subjecthood and semantic change. A case study on modal verbs in Ancient Greek". A talk presented at ICHL 22, Naples.
Danesi, Serena, Cynthia A. Johnson & Jóhanna Barðdal (2017). "Between the historical languages and the reconstructed language. An alternative approach to the gerundive + 'dative of agent' construction in Indo-European". In: *Indogermanische Forschungen* 122, 143–188.
Danesi, Serena, Cynthia A. Johnson & Jóhanna Barðdal (2018). "Where does the modality of Ancient Greek modal verbs come from? The relation between modality and oblique case marking". In: *Journal of Greek Linguistics* 18.1, 45–92.
Dardano, Paola (2017). "La marcatura non canonica del soggetto in ittito. Note sul verbo *naḫḫ*- 'temere, provare timore reverenziale'". In: *Miscellanea Indogermanica*. Festschrift für José Luis García Ramón zum 65. Geburtstag. Ed. by Ivo Hajnal, Daniel Kölligan & Katharina Zipser. Innsbruck: Institut für Sprachwissenschaft, 105–120.
Dardano, Paola (2018). "Zur Subjektmarkierung im Hethitischen. Syntaktische und semantische Fragen". In: *100 Jahre Entzifferung des Hethitischen. Morphosyntaktische Kategorien in Sprachgeschichte und Forschung*. Ed. by Elisabeth Rieken, Ulrich Reupel & Therese M. Roth. Wiesbaden: Reichert, 259–274.
Devine, Andrew M. & Laurence D. Stephens (2006). *Latin Word Order. Structured Meaning and Information*. Oxford: Oxford University Press.

Dik, Helma (1995). *Word Order in Ancient Greek. A Pragmatic Account of Word Order Variation in Herodotus*. Amsterdam: Gieben.
Dik, Helma (2007). *Word Order in Tragic Dialogue*. Oxford: Oxford University Press.
Dover, Kenneth J. (1960). *Greek Word Order*. Cambridge: Cambridge University Press.
Dryer, Matthew S. (1997). "Are grammatical relations universal?" In: *Essays on Language Function and Language Type Dedicated to T. Givón*. Ed. by Joan Bybee, John Haiman & Sandra A. Thompson. Amsterdam: Benjamins, 117–143.
Dunn, Michael, Tonya Kim Dewey, Carlee Arnett, Thórhallur Eythórsson & Jóhanna Barðdal (2017). "Dative sickness. A phylogenetic analysis of argument structure evolution in Germanic". In: *Language* 93.1, e1–e22.
Eriksen, Pål K., Seppo Kittilä & Leena Kolehmainen (2015). "The world is raining. Meteorological predicates and their subjects in a typological perspective". In: *Subjects in Constructions. Canonical and Non-Canonical*. Ed. by Marja-Liisa Helasvuo & Tuomas Huumo. Amsterdam: Benjamins, 205–228.
Ernout, Alfred & François Thomas (1964). *Syntaxe Latine*. 2nd ed. Paris: Klincksieck.
Eythórsson, Thórhallur & Jóhanna Barðdal (2005). "Oblique subjects. A common Germanic inheritance". In: *Language* 81.4, 824–881.
Eythórsson, Thórhallur & Jóhanna Barðdal (2016). "Syntactic reconstruction in Indo-European. State of the art". In: *Veleia* 33, 83–102.
Faarlund, Jan T. (1990). *Syntactic Change. Toward a Theory of Historical Syntax*. Berlin & New York: Mouton de Gruyter.
Faarlund, Jan T. (2001). "The notion of oblique subject and its status in the history of Icelandic". In: *Grammatical Relations in Change*. Ed. by Jan T. Faarlund. Amsterdam: Benjamins, 99–135.
Fabrizio, Claudia (2016). "Non-nominative subjects in Latin". A presentation delivered at SLE 49, Naples.
Falk, Cecilia (1997). *Fornsvenska upplevarverb*. Lund: Lund University Press.
Fedriani, Chiara (2009). "The "Behavior-Before-Coding-Principle". Further evidence from Latin". In: *Archivio Glottologico Italiano* 94, 156–184.
Fedriani, Chiara (2011). "Experiential metaphors in Latin. Feelings were containers, movements and things possessed". In: *Transactions of the Philological Society* 109.3, 307–326.
Fedriani, Chiara (2014). *Experiential Constructions in Latin*. Leiden: Brill.
Fischer, Susann (2010). *Word-Order Change as a Source of Grammaticalisation*. Amsterdam: Benjamins.
Frotscher, Michael, Guus Kroonen & Jóhanna Barðdal (2022). "Indo-European inroads into the syntactic-etymological interface. A construction of the PIE verbal root *$menk^{w}$- 'to be short; to lack' and its argument structure". In: *Historische Sprachforschung* 133(2020), 62–96.
Gildersleeve, Basil L. & Gonzalez Lodge (1903). *Gildersleeve's Latin Grammar*. London: Macmillan.
Haider, Hubert (2005). "How to turn German into Icelandic and derive the OV-VO contrast". In: *Journal of Comparative Germanic Syntax* 8, 1–53.
Harbert, Wayne (1978). *Gothic Syntax. A Relational Grammar*. PhD thesis. University of Illinois.
Haug, Dag T. T. (2012). "Syntactic conditions on null arguments in the Indo-European Bible translations". In: *Acta Linguistica Hafniensia* 44.2, 129–141.
Haug, Dag T. T. (2017). "Backward control in Ancient Greek and Latin participial adjuncts". In: *Natural Language & Linguistic Theory* 35.1, 99–159.

Haug, Dag T. T., Marius Jøhndal & Per Erik Solberg (2019). "An unexpected root clause". In: *Linguistic Inquiry* 50.3, 649–661.
Hermon, Gabriella (1985). *Syntactic Modularity*. Dordrecht: Foris.
Hock, Hans H. (1990). "Oblique subjects in Sanskrit?" In: *Experiencer Subjects in South Asian Languages*. Ed. by Manindra Verma & Tara Mohanan. Stanford: Center for the Study of Language and Information, 119–139.
Holland, Gary (1993). "Transitivity, causativity, and surface case in Old Norse". In: *Arkiv för Nordisk Filologi* 108, 19–37.
Humbert, Jean (1954). *Syntaxe grecque*. Paris: Klincksieck.
Ilioaia, Mihaela (2021). *Non-Canonical Subjects in Romanian. The Status and Evolution of the* MIHI EST *Construction*. PhD thesis. Ghent University.
Ilioaia, Mihaela & Marleen Van Peteghem (2021). "Dative experiencers with nominal predicates in Romanian. A synchronic and diachronic study". In: *Folia Linguistica Historica* 42.2, 255–290.
Jøhndal, Marius L. (2012). *Non-Finiteness in Latin*. PhD thesis. University of Cambridge.
Johnson, Cynthia A., Peter Alexander Kerkhof, Leonid Kulikov, Esther Le Mair & Jóhanna Barðdal (2019). "Argument structure, conceptual metaphor and semantic change. How to succeed in Indo-European without really trying?" In: *Diachronica* 36.4, 463–508.
Jónsson, Jóhannes Gísli (1996). *Clausal Architecture and Case in Icelandic*. PhD thesis. University of Massachusetts at Amherst.
Jónsson, Jóhannes Gísli (2018). "Word order as a subject test in Old Icelandic". In: *Non-Canonical Subjects. The Reykjavík-Eyjafjallajökull Papers*. Ed. by Jóhanna Barðdal, Na'ama Pat-El & Stephen M. Carey. Amsterdam: Benjamins, 135–154.
Jónsson, Jóhannes Gísli (1997–1998). "Sagnir með aukafallsfrumlagi". In: *Íslenskt mál og almenn málfræði* 19–20, 11–43.
Kachru, Y., B. P. Kachru & T. K. Bhatia (1976). "The notion 'subject'. A note on Hindi-Urdu, Kashmiri and Punjabi". In: *The Notion of Subject in South Asian Languages*. Ed. by M. K. Verma. Madison: University of Wisconsin.
Keenan, Edward L. (1976). "Towards a universal definition of subject". In: *Subject and Topic*. Ed. by Charles N. Li. New York: Academic Press, 303–333.
Keydana, Götz (2017). "'Finite' infinitives in Ancient Greek". In: *Indo-European Linguistics* 5, 49–76.
Kiparsky, Paul (2012). "Greek anaphora in cross-linguistic perspective". In: *Journal of Greek Linguistics* 12, 84–117.
Klaiman, M. H. (1980). "Bengali dative subjects". In: *Lingua* 51.4, 275–295.
Kortlandt, Frederik H. H. (1983). "Proto-Indo-European verbal syntax". In: *Journal of Indo-European Studies* 11, 307–324.
Kristoffersen, Kristian E. (1994). "Passiv i norrønt og nyislandsk. Ei samanlikning". In: *Norsk Lingvistisk Tidsskrift* 12, 43–69.
Kühner, Raphael & Bernard Gerth (1955). *Ausführliche Grammatik der griechischen Sprache. Satzlehre*. 4th ed. Hannover: Hahnsche Buchhandlung.
Kühner, Raphael & Carl Stegmann (1955). *Ausführliche Grammatik der lateinischen Sprache. Satzlehre*. 3rd ed. Leverkusen: Gottschalk.
Kumo, Susumu (1975). "Pronominalization, reflexivization and direct discourse". In: *Linguistic Inquiry* 3.2, 161–195.
Lambrecht, Knud (1994). *Information Structure and Sentence Form. Topic, Focus, and the Mental Representations of Discourse Referents*. Cambridge: Cambridge University Press.

Lambrecht, Knud (2000). "When subjects behave like objects. An analysis of the merging of S and O in sentence-focus constructions across languages". In: *Studies in Language* 24, 611–682.
Lambrecht, Knud (2001). "A framework for the analysis of cleft constructions". In: *Linguistics* 39, 463–516.
Landau, Idan (2009). *The Locative Syntax of Experiencers*. Cambridge, MA: MIT Press.
Le Mair, Esther, Cynthia A. Johnson, Michael Frotscher, Thórhallur Eythórsson & Jóhanna Barðdal (2017). "Position as a behavioral property of subjects. The case of Old Irish". In: *Indogermanische Forschungen* 122, 111–142.
Ledgeway, Adam (2012). *From Latin to Romance. Morphosyntactic Typology and Change*. Oxford: Oxford University Press.
Leumann, Manu, Anton Szantyr & Johann Hofmann (1972). *Lateinische Syntax und Stilistik II*. Vol. 2. München: Beck.
Linde, Paul (1923). "Die Stellung des Verbs in der lateinischen Prosa". In: *Glotta* 12, 153–178.
Lødrup, Helge (2009). "Animacy and long distance binding in Norwegian". In: *Nordic Journal of Linguistics* 32, 111–136.
Luraghi, Silvia (1997). "Omission of the direct object in Latin". In: *Indogermanische Forschungen* 102, 239–257.
Luraghi, Silvia (2000). "Spatial metaphors and agenthood in Ancient Greek". In: *125 Jahre Indogermanistik in Graz*. Ed. by Michaela Ofitsch & Christian Zinko. Graz: Leykam, 275–290.
Luraghi, Silvia (2003a). "Definite referential null objects in Ancient Greek". In: *Indogermanische Forschungen* 108, 167–195.
Luraghi, Silvia (2003b). *On the Meaning of Prepositions and Cases*. Amsterdam: Benjamins.
Luraghi, Silvia (2010). "Experiencer predicates in Hittite". In: *Ex Anatolia Lux*. Anatolian and Indo-European studies in honor of H. Craig Melchert on the occasion of his sixty-fifth birthday. Ed. by Ronald I. Kim, Norbert Oettinger, Elisabeth Rieken & Michael Weiss. Ann Arbor & New York: Beech Stave, 249–264.
Luraghi, Silvia (2014). "Conjunction reduction". In: *Encyclopedia of Ancient Greek Language and Linguistics*. Ed. by Georgios K. Giannakis, Vit Bubenik, Emilio Crespo, Chris Golston, Alexandra Lianeri, Silvia Luraghi & Stephanos Matthaios. Vol. 1. Leiden, Boston & New York: Nijhoff & Brill, 362–363. URL: http://www.brill.com/encyclopedia-ancient-greek-language-and-linguistics.
Luraghi, Silvia (2020). *Experiential Verbs in Homeric Greek. A Construction Approach*. Leiden & Boston: Brill.
Masica, Colin P. (1976). *Defining a Linguistic Area. South Asia*. Chicago: University of Chicago Press.
Matasović, Ranko (2013). "Latin *paenitet me, miseret me, pudet me* and active clause alignment in PIE". In: *Indogermanische Forschungen* 118, 93–110.
Mathieu, Eric (2006). "Quirky subjects in Old French". In: *Studia Linguistica* 60.3, 282–312.
Matić, Dejan (2003). "Topic, focus, and discourse structure. Ancient Greek word order". In: *Studies in Language* 27, 573–633.
Michaelis, Laura A. (1992). "On deviant case-marking in Latin". In: *Advances in Role and Reference Grammar*. Ed. by Robert D. van Valin. Amsterdam: Benjamins, 311–373.
Moore, John & David M. Perlmutter (2000). "What does it take to be a dative subject?" In: *Natural Language & Linguistic Theory* 18, 373–416.
Mørck, Endre (1992). "Subjektets kasus i norrønt og mellomnorsk". In: *Arkiv för nordisk filologi* 107, 53–99.

Pat-El, Na'ama (2018). "The diachrony of non-canonical subjects in Northwest-Semitic". In: *Non-Canonical Subjects. The Reykjavík-Eyjafjallajökull Papers*. Ed. by Jóhanna Barðdal, Na'ama Pat-El & Stephen M. Carey. Amsterdam: Benjamins, 159–184.

Patri, Sylvain (2007). *L'alignement syntaxique dans les langues indo-européennes d'Anatolie*. Wiesbaden: Harrassowitz.

Pedersen, Holger (1907). "Neues und nachträgliches". In: *Zeitschrift für Vergleichende Sprachforschung* 40, 129–257.

Phillippaki-Warburton, Irene & Georgia Catsimali (1990). "Accusativus cum infinitivo sta Arhea Elinika". In: *Studies in Greek Linguistics* 10, 89–108.

Pinkster, Harm (1991). "Evidence for SVO in Latin?" In: *Latin and the Romance Languages in the Early Middle Ages*. Ed. by Roger Wright. London: Routledge, 69–82.

Pinkster, Harm (2015). *The Oxford Latin Syntax*. Vol. 1: *The Simple Clause*. Oxford: Oxford University Press.

Pinkster, Harm (2021). *The Oxford Latin Syntax*. Vol. 2: *The Complex Sentence and Discourse*. Oxford: Oxford University Press.

Pollard, Carl & Ping Xue (1998). "Chinese reflexive *ziji*. Syntactic reflexives vs. nonsyntactic reflexives". In: *Journal of East Asian Linguistics* 7.4, 287–318.

Pooth, Roland, Peter Alexander Kerkhof, Leonid Kulikov & Jóhanna Barðdal (2019). "The origin of non-canonical case marking of subjects in Proto-Indo-European. Accusative, ergative, or semantic alignment". In: *Indogermanische Forschungen* 124, 245–263. DOI: https://doi.org/10.1515/if-2019-0009.

Puddu, Nicoletta (2005). *Riflessivi e intensificatori. Greco, latino e le altre lingue indoeuropee*. Pisa: ETS.

Riemann, Othon (1935). *Syntaxe latine*. 7th ed. Paris: Klincksieck.

Rögnvaldsson, Eiríkur (1991). "Quirky subjects in Old Icelandic". In: *Papers from the Twelfth Scandinavian Conference of Linguistics*. Ed. by Halldór Á. Sigursson. Reykjavík: Institute of Linguistics, University of Iceland, 369–387.

Rögnvaldsson, Eiríkur (1995). "Old Icelandic. A non-configurational language?" In: *NOWELE* 26, 3–29.

Rögnvaldsson, Eiríkur (1996). "Frumlag og fall að fornu". In: *Íslenskt mál og almenn málfræði* 18, 37–69.

Rögnvaldsson, Eiríkur (2007). "Reflexives in Older Icelandic". Unpublished manuscript.

Ross, John R. (1967). *Constraints on Variables in Syntax*. PhD thesis. Massachusetts Institute of Technology.

Rott, Julian A. (2013). "Syntactic prominence in Icelandic experiencer arguments. Quirky subjects vs. dative objects". In: *STUF – Language Typology and Universals* 66.2, 91–111.

Von Seefranz-Montag, Ariane (1983). *Syntaktische Funktionen und Wortstellungsveränderung. Die Entwicklung 'subjektloser' Konstruktionen in einigen Sprachen*. München: Fink.

Sells, Peter (2019). "Shared objects in conjoined VPs in Germanic". In: *The Sign of the V*. Papers in Honour of Sten Vikner. Ed. by Ken Ramshøj Christensen, Henrik Jørgensen & Johanna L. Wood. Århus: Department of English, School of Communication & Culture, Aarhus University, 545–571.

Sevdali, Christina (2007). *Infinitival Clauses in Ancient Greek. Overt and Null Subjects, the Role of Case and Focus*. PhD thesis. University of Cambridge.

Shibatani, Masayoshi (1999). "Dative subject constructions twenty-two years later". In: *Studies in the Linguistic Sciences* 29.2, 45–76.

Siewierska, Anna (1984). "Phrasal discontinuity in Polish". In: *Australian Journal of Linguistics* 4, 57–71.
Sigurðardóttir, Sigríður Sæunn & Thórhallur Eythórsson (2019). "Stability and change in Icelandic weather verbs. Syntax, semantics and argument structure". In: *The Determinants of Diachronic Stability*. Ed. by Anne Breitbarth, Miriam Bouzouita, Lieven Danckaert & Melissa Farasyn. Amsterdam: Benjamins, 69–100.
Sigurðsson, Halldór Á. (1984). *Um frásagnarumröðun og grundvallarorðaröð í fornískensku ásamt nokkrum samanburði við nútímamál*. Reykjavík: Institute of Linguistics, University of Iceland.
Sigurðsson, Halldór Á. (1990). "Long-distance reflexives and moods in Icelandic". In: *Modern Icelandic Syntax*. Ed. by Joan Maling & Annie Zaenen. San Diego: Academic Press, 309–346.
Sigurðsson, Halldór Á. (1998). *Verbal Syntax and Case in Icelandic*. PhD thesis. Lund: Lund University.
Skopeteas, Stavros (2011). "Word order in Latin locative constructions. A corpus study in Caesar's *De bello gallico*". In: *STUF – Language Typology and Universals* 64.2, 170–190.
Smyth, Herbert Weir (1963). *Greek Grammar*. Ed. by Gordon Myron Messing. Cambridge: Harvard University Press.
Somers, Joren & Jóhanna Barðdal (2022). "Alternating Dat–Nom/Nom–Dat verbs in Icelandic. An exploratory corpus-based analysis". In: *Working Papers in Scandinavian Syntax* 107, 83–110.
Spevak, Olga (2010). *Constituent Order in Classical Latin Prose*. Amsterdam: Benjamins.
Steever, Sanford B., ed. (1998). *The Dravidian Languages*. London: Routledge, 1–39.
Strahan, Tania E. (2003). *Long-Distance Reflexives in Norwegian. Quantitative Study*. Munich: Lincom.
Strahan, Tania E. (2007). "Norwegian long-distance reflexives. Lectal variation and speaker attitudes". In: *Selected Papers from the 2006 Annual Meeting of the Australian Linguistic Society, St. Lucia, Australia*. Ed. by I. Mushin & M. Laughren. Australian Linguistic Society, 1–13.
Talmy, Leonard (1985). "Force dynamics in language and thought". In: *Chicago Linguistic Society* 21, 293–337.
Talmy, Leonard (1988). "Force dynamics in language and cognition". In: *Cognitive Science* 12.1, 49–100.
Thráinsson, Höskuldur (1979). *On Complementation in Icelandic*. New York: Garland.
Thráinsson, Höskuldur (1991). "Long-distance reflexives and the typology of NPs". In: *Long-Distance Anaphora*. Ed. by Jan Koster & Eric Reuland. Cambridge: Cambridge University Press.
Thráinsson, Höskuldur (2007). *The Syntax of Icelandic*. Cambridge: Cambridge University Press.
Van Valin, Robert D. (2005). *Exploring the Syntax–Semantics Interface*. Cambridge: Cambridge University Press.
Verma, M. K. & K. P. Mohanan, eds. (1990). *Experiencer Subjects in South Asian Languages*. Stanford: Center for the Study of Language and Information.
Viti, Carlotta (2010). "On long-distance reflexivity in Latin". In: *Latin Linguistics Today*. Ed. by Peter Anreiter & Manfred Kienpointner. Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft, 355–366.
Viti, Carlotta (2017). "Semantic and cognitive factors of argument marking in ancient Indo-European languages". In: *Diachronica* 34.3, 368–419.

Witzlack-Makarevich, Alena (2019). "An introduction". In: *Argument Selectors. A New Perspective on Grammatical Relations*. Ed. by Alena Witzlack-Makarevich & Balthasar Bickel. Amsterdam: Benjamins, 1–38.

Wood, Jim & Halldór Á. Sigurðsson (2014). "*Let*-causatives and (a)symmetric DAT-NOM constructions". In: *Syntax* 17.3, 269–298.

Yoon, James H. (2004). "Non-nominative (major) subjects and case stacking in Korean". In: *Non-Nominative Subjects*. Ed. by Peri Bhaskararao & Karumuri V. Subbarao. Vol. 2. Amsterdam: Benjamins, 265–314.

Zaenen, Annie, Joan Maling & Höskuldur Thráinsson (1985). "Case and grammatical functions. The Icelandic passive". In: *Natural Language & Linguistic Theory* 3, 441–483.

Zheltova, Elena (2016). "Latin reflexive pronouns at the crossroads of syntax and pragmatics". In: *Pallas* 102, 211–218.