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Greek Infinitive-Retreat versus Grammaticalization: An Assessment

Abstract: In the transition from Postclassical Greek into Medieval and Modern Greek, the Greek language underwent a major morphosyntactic change involving the replacement of infinitives by fully finite να (*na*)-clauses, marked for person and number of the subject. I argue here that under the definition of grammaticalization in Haspelmath (2004: 26) — 'a diachronic change by which the parts of a constructional scheme come to have stronger internal dependencies' — this development represents an instance of degrammaticalization, in that it involves a weakening and not a strengthening of the bonds between a controlling verb and its complement. In this way, it is argued to constitute another counterexample to the claim that grammatical change is unidirectional, always in the direction of greater grammaticalization (for Haspelmath: 'stronger internal dependencies'). This degrammaticalization is shown to hold not only in general for the process of infinitival replacement but also for a particular case involving the Medieval Greek future tense formation with the verb θέλω (*t*^{h}*elō*) 'want'.

Keywords: degrammaticalization, future tense, grammaticalization, Greek, infinitive, infinitive-loss

1 Introduction

It is well known that a significant characteristic of the Modern Greek verbal system and thus of the syntax of the language is that it has no infinitive. By "*infinitive*" here is meant a verbal form that from the perspective of morphosyntax lacks person and number marking and from the perspective of function is used in complementation and in various ways as an adjunct, e.g., in the expression of purpose.[1]

1 This definition is close to what is found in traditional accounts; the Oxford English Dictionary (s.v., www.oed.com, last accessed 25 August 2018), for instance, defines "*infinitive*" as "that form of a verb which expresses simply the notion of the verb without predicating it of any subject. . . . a substantive with certain verbal functions, esp. those of governing an object, and being qualified by an adverb," and Haspelmath (2002: 271) calls it "a nonfinite form used for clausal complements." It may be noted that several studies of the infinitive, e.g. Duffley (2016), Egan (2008), Los (2005), to name just a few, do not define the term per se, taking it as

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Instead of such a form, Modern Greek uses fully finite verb forms, marked for person and number and generally also tense and aspect. This characteristic represents a divergence from the situation in earlier stages of the language, and turns out to be a contact-related feature that it shares with its neighboring languages in the Balkans, especially Albanian, Aromanian, Bulgarian, Macedonian, Romani, and Romanian.[2] This reshaping of the Greek verbal system as to both its morphology and its syntax represents a significant grammatical change in the language. As such, it is of great potential relevance to the study of grammatical change within the framework of grammaticalization theory, and indeed this development provides an important testing ground for various claims made within that general approach to language change.

In what follows, the angle on grammatical change afforded by the Greek infinitive is pursued, and the ways in which the loss and replacement of the Greek infinitive test grammaticalization are examined. In order for this investigation to be pursued properly, first some facts are provided about infinitives in general and about the Greek infinitive in particular, followed by some discussion of the specific aspects of grammaticalization theory that are at issue here.

2 Some Necessary Background on Infinitives in General and Infinitives in Greek

By way of laying the necessary foundations, let it first be noted that infinitives are handy grammatical elements. They have an interesting syntactic/semantic nature that makes them very useful. In particular, infinitives effect a "streamlining" of the syntax of complementation; while they can have overt subjects, they do not need to – they are analyzed as occurring with a phonologically null "PRO" subject in Government and Binding Theory (Chomsky 1981), for instance – but rather can gain their subject-reference from other nominals in the sentence.

understood what the forms are in English that deserve this label. Difficulties with developing a cross-linguistically suitable definition of *infinitive* are discussed in Joseph (2009: chap. 2), where a definition comparable to the one given here is adopted.

2 See Joseph (2009) on the fate of the infinitive in the various Balkan languages, as well as Friedman & Joseph (Forthcoming 2020: ch. 7). Much of what is said here about Greek infinitival developments and grammaticalization could be replicated for the other Balkan languages, a point returned to briefly in footnote 15 and in §6. Still, no more is said here about the general Balkan situation, interesting though it may be.

Thus infinitives are dependent elements that generally do not stand alone, a property that becomes important in later discussion. There are constructions, such as prohibitions in some Romance languages, that occur with seemingly independent infinitives (e.g., Italian *non fumare!* 'Do not smoke!') and similarly (affirmative) infinitival commands in some Slavic languages (e.g., Russian *molčat'* 'shut up!'). However, such infinitives can be argued to be dependent elements, in prohibitions controlled by the negation marker and in positive commands dependent on an implicit higher controlling verb, so that they are not really stand-alone elements per se. This latter suggestion would work as well for the special, very likely literary-only, uses like the historical infinitives of Latin, where an infinitive is used in the place of a past-tense finite verb; that is, such infinitives could be seen as controlled by an understood higher verb, thus giving a type of implicit indirect discourse, as argued by Lakoff (1968). More generally, such infinitives could perhaps be subsumed under the rubric of "insubordination", defined by Evans (2007: 367) as "conventionalized main clause use of what, on prima facie grounds, appear to be formally subordinate clauses".[3]

Despite their utility, there are two key historical developments within Greek, as noted in §1, that affected the viability of the infinitive:

- the receding of the infinitive, as to both its syntax, i.e. its uses, and its morphology, i.e. the number of distinct forms it took, leading ultimately to its complete loss
- replacement of the infinitive by finite, i.e. person-and-number marked, verbs, generally introduced by the subjunctive mood marker Modern Greek να (*na)*.

Although these two developments unfolded over several centuries, as indicated below, they can be illustrated by data such as the following from different versions of the same text. In particular, the Medieval Greek *Chronicle of Morea*, in its 14th–15th century Copenhagen manuscript version (H), shows an infinitive, in the passage in (1a), whereas the same line, (1b), from the 15th–16th century Paris version (P), shows a finite replacement for the infinitive, the same sort of construction as in the Modern Greek[4] example in (1c):[5]

3 See also Evans & Watanabe 2016 for a full cross-linguistic view of insubordination.

4 I present all non-Modern Greek forms in both their Greek alphabetic form and an Ancient-Greek-based transliteration that is not reflective of the pronunciation at the time; see Horrocks (2010) for an overview of the facts of pronunciation at various stages of Greek historical phonology. Modern Greek forms are given in Greek orthography and a roughly phonemic transcription.

5 There is lexical replacement at work between the Medieval Greek of (1ab) and the Modern Greek of (1c), and some irrelevant differences of voice, but the root of the main verb 'begin' is the same (earlier ἀρχ- (*ark^h*-), modern αρχ- (*arx*-)) across the eras.

(1) a. (*Chronicle of Morea* 7118[H])

ὁ	ρῆγας	ἄρξετον	λαλ-εῖν
ho	*rēgas*	*arxeton*	*lal-ein*
DEF.NOM.SG	king.NOM	began.3SG	speak-INF

'The king began to speak'

b. (*Chronicle of Morea* 7118[P])

ὁ	ρῆγας	ἦρξεν	νὰ	λαλ-ῇ
ho	*rēgas*	*ērxen*	*na*	*lal-ēi*
DEF.NOM.SG	king.NOM	began.3SG	SBJV	speaks-3SG

'The king began to speak' (literally: 'The king began that he-speaks')

c.

ο	βασιλέας	άρχισ-ε	να	μιλά-ει
o	*vasileas*	*arxis-e*	*na*	*mila-i*
DEF.NOM.SG	king.NOM	began-3SG	SBJV	speak-3SG

'The king began to speak' (literally: 'The king began that he-speaks')

These two developments, though generally presented as paired, are actually logically independent since there are other means by which the infinitive could be replaced. For instance, deverbal nouns can serve the function of infinitives, as happens occasionally in late Medieval/early Modern Greek, as in (2):[6]

(2) (*Erotokritos* II.1316)[7]

τὸ	τρέξιμο	ν'	ἀρχίσ-ουν
to	*treksimo*	*n'*	*ark^{h}is-oun*
DEF.NOM.SG	running.NMLZ.N	SBJV	begin-3PL

'They will begin to run' (literally: "begin [the] running")

Hence the linkage of retreat of the infinitive with the ascension of finite verbal complementation in Greek is significant, as other means of replacing the infinitive were available.

The loss of the infinitive in Greek has been noted by scholars for centuries;[8] (relatively) recent work includes Burguière (1960) and Joseph (1978/1990, 2009).

6 This is admittedly somewhat ironic when stated this way, since infinitives, for Indo-European languages at least, derive from case forms of verbal nouns that have come to be embedded in the verbal system. These verbal nouns cited here are fully nominal as to their morphosyntax, appearing with full inflectional paradigms.

7 *Erotokritos* is an epic poetic romance written in the Cretan dialect in the early 1600s by Vitsentzos Kornaros.

8 The earliest relevant observation I know of comes in the grammar of contemporary demotic Greek written by Nikolaos Sophianos in the first half of 16th century (see Legrand (1874) and

The process unfolded over more than a millennium but clearly began in the Koiné Greek period, with signs evident particularly in New Testament Greek, where one can find both infinitival complements and finite complement clauses headed by ἵνα (*hina*), the source of the Modern Greek subjunctive marker να (*na*), co-occurring as conjoined elements:

(3) (*1Corinthians* 14:5)

θέλω	δὲ	πάντας	ὑμᾶς	λαλεῖν	γλώσσαις,
t^{h}elō	*de*	*pantas*	*hymas*	*lalein*	*glōssais*
want.1SG	but	all.ACC	1PL.ACC	speak.INF	tongues.DAT
μᾶλλον	δὲ	ἵνα	προφητεύητε		
mallon	*de*	*hina*	*prop^{h}ēteuēte*		
rather	but	that	prophesy.2PL.SBJV		

'now I want you all to speak in tongues, but even more that you prophesy'

The loss of the infinitive spread through the lexicon, affecting some verbs and verb classes, defined both semantically and structurally,[9] and some adjectival predicates earlier than others. For instance, in the New Testament and early Christian Greek, as Blass et al. (1961: §392) observe, the infinitive "is used with verbs meaning 'to wish, strive, avoid, ask, summon, make, allow, permit, hinder, be able, have power [. . .] verbs meaning 'to be able, know how to', etc. are used only with the infinitive, as are those expressing obligation, custom, and the like". Thus, such verbs as ἐπιθυμῶ (*epithymō*) 'desire', πειράζω (*peirazō*) 'attempt', and δύναμαι (*dynamai*) 'be able' all obligatorily occur with infinitives as their complements, as do ἄρχομαι (*ark^{h}omai*) 'begin', τολμῶ (*tolmō*) 'dare', and μέλλω (*mellō*) 'be about to', which is used with an infinitive in a tense-like construction that "expresses imminence (like the future)" (Blass et al. 1961: §356). Some verbs are attested only with a finite ἵνα (*hina*)-complement, such as ἀγαλλιῶ

the reprint edited by Papadopoulos (1977) for editions of this grammar). Sophianos lists under the category of "απαρέμφατα" (*aparemphata*), 'infinitives', the finite inflected forms νὰ γράψω, νὰ γράψεις etc. (*na grapsō*, *na grapseis*, etc.) 'that I write', 'that you write', etc., thus recognizing the demise of the infinitive and its functional replacement by finite forms.

9 The boundaries between syntax and semantics with these groups of verbs are not entirely clear, nor does it necessarily matter how the classes are constituted. For example, the observation below concerning same-subject verbs favoring an infinitive could be a matter of their syntax (e.g., verbs denoting an attempt require an infinitive with a "PRO" as subject) or of their semantics (e.g., the act of attempting typically focuses on an action that one does oneself, thus with a complement-verb subject understood as identical with the main-verb subject).

(*agalliō*) 'rejoice',[10] whereas others, such as ζητῶ (*zētō*) 'seek' and ἐρωτῶ (*erōtō*) 'ask', occur optionally with an infinitive or with a finite complement headed by the subordinating conjunction ἵνα (*hina*). While same-subject contexts, those in which the main clause subject is identical to the complement clause subject, favor infinitives as the complement, infinitives are not a requirement in such a construction, as shown by examples from Koiné-era texts from a few centuries later than the New Testament itself:

(4) (*Acta Pilati* II.2.5 [4th ct. AD])

θέλουσιν	οἱ	Ἰουδαῖοι	ἵνα	φονεύουσιν	αὐτόν
t^{h}elousin	*hoi*	*Ioudaioi*	*hina*	*p^{h}oneuousin*	*auton*
want.3PL	DEF.NOM.PL	Jews.NOM.PL	that	murder.3PL	3SG.ACC

'The Jews want to murder him'

This same observation holds with predicates like ἄξιος (*axios*) 'worthy' and ἱκανός (*hikanos*) 'sufficient', which already in the New Testament occur with infinitives or with finite complements, as illustrated well by these parallel passages from the Gospels:

(5) (Acts 13:25)

οὗ	οὐκ	εἰμὶ	ἄξιος	τὸ	ὑπόδημα	τῶν	ποδῶν	λῦ-σαι
hou	*ouk*	*eimi*	*aksios*	*to*	*hypodēma*	*tōn*	*podōn*	*ly-sai*
REL.GEN.SG	NEG	be.1SG	worthy	DEF	sandal.ACC	DEF	feet.GEN	loosen-INF

'. . . whose sandal on his feet I am not worthy to loosen'

(6) (John 1:27)

οὗ	οὐκ	εἰμὶ	ἄξιος	ἵνα	λύσ-ω	αὐτοῦ	τὸν	ἱμάντα	τοῦ
hou	*ouk*	*eimi*	*aksios*	*hina*	*lys-ō*	*autou*	*ton*	*himanta*	*tou*
whose	not	am	worthy	that	loosen-1SG	his	DEF	strap.ACC	DEF

ὑποδήματος
hypodēmatos
sandal.GEN

'. . . whose sandal-strap I am not worthy to loosen'

10 Admittedly, this particular verb occurs only once in the New Testament, but in that one instance, it has a finite complement.

There was also some expansion of the use of the infinitive, in particular in the expression of purpose with verbs of motion, though a finite verb with ἵνα "can again represent this infinitive" (Blass et al. 1961: §390).

An important observation about the infinitive-replacement process as it unfolded over centuries in Greek is that those verbs and predicates that obligatorily take the infinitive in New Testament Greek turn out to be the very ones that in Medieval Greek occur optionally with an infinitival complement or with a (ἵ)να-complement. Such is the case, for instance, with τολμῶ (*tolmō*) 'dare', δύναμαι (*dynamai*) 'be able' and its more prevalent innovative lexical replacement ημπορώ (*ēmporō*), and αρχάζω (*ark^{h}azō*) 'begin', among others. These hangers-on, these last verbs to retain infinitives in Medieval Greek, are precisely those with which a complement infinitive constitutes a single event. That is, in a sentence with 'be able' governing an infinitive, there is no separate event of ability; rather the ability (as expressed in the main verb) and the action (as expressed in the infinitive) merge, as it were, to express a single event describing the subject's ability to perform a particular action. Moreover, with those verbs that optionally governed infinitives in New Testament Greek, e.g., ζητῶ (*zētō*) 'seek', infinitives were no longer possible in Medieval Greek.

This parallelism in the classes of verbs grouped as to their control of infinitives suggests that there was an orderly progression to the realization in the lexicon of the replacement of infinitival complementation by finite complementation; that is, all verbs essentially reduced their infinitival usage by one degree, from optionally possible infinitives to no longer possible, and from obligatory infinitives to optionally possible.

This replacement process continued, in what may be viewed as an analogically driven diffusion through the lexicon, ultimately affecting all infinitive-controlling verbs in the lexicon for most of Greek. This last qualification is needed because the infinitive does remain in outlying dialects of Greek: the Pontic of Asia Minor (Sitaridou 2014) and the Grico and Grecanico of southern Italy (see most recently Baldissera 2012). The dialects that retain infinitives do so with a relatively small number of controlling verbs, e.g., *sozo* 'can' in Southern Italy, as in (7) from Bova (Pellegrini 1880, Rohlfs 1958):

(7) *de sonno ciumiθi*
NEG can.1SG sleep.INF
'I can't sleep'.

The verbs that retain the infinitive, just like the verbs that are the last to retain infinitival complementation in Medieval Greek, tend to be those with which an infinitive constitutes a single event.

Thus after several centuries of moribundity, by the 16th to 17th centuries, what may be considered early Modern Greek, the infinitive was highly restricted in use, and was effectively gone from the language in general as a verbal category, surviving with just a few controlling verbs. In its place were fully finite verb forms. This transition from nonfinite complementation with no specified subject to finite complementation necessarily with a specified subject indicated on the verb itself was thus a significant grammatical change, whether one focuses on the specifics of the transition with particular verbs or on the spread of the innovative finite constructions throughout the language and their ultimate generalization.

3 Remarks on Grammaticalization and Degrammaticalization

As a preliminary to the examination of how the infinitive-replacement developments challenge aspects of grammaticalization theory, a definition of "grammaticalization" must be adopted. This is not just a trivial exercise in semantic hair-splitting, but rather it constitutes an essential part of understanding just what is at issue. While it has become quite common to invoke Meillet (1912) and Kuryłowicz (1965) and to define grammaticalization in terms of movement from lexical to grammatical and/or from less grammatical to more grammatical,[11] I adopt here the particular formulation of what grammaticalization is that is proposed by Haspelmath (2004: 26): "A grammaticalization is a diachronic change by which the parts of a constructional schema come to have stronger internal dependencies". Haspelmath's definition thus takes grammaticalization to entail the *tightening* of bonds between elements within phrases and within words. This definition is fully consistent with the Meillet/Kuryłowicz approach in that Haspelmath's "stronger internal dependency" is typical of grammatical material: an affix, for instance, is tightly bound to the stem or root it attaches to, and similarly, a clitic is typically bound to its host in some way, but with a

11 Meillet (1912: 131) talks of grammaticalization in terms of "l'attribution du caractère grammatical à un mot jadis autonome", while for Kurylowicz (1965: 69), it involves "an increase of the range of a morpheme advancing from a lexical to a grammatical or from a less grammatical to a more grammatical status".

greater degree of freedom than an affix. Thus the movement from clitic status to affixal status would represent a "tightening of bonds between elements". Moreover, in line with increased interest in the emergence of constructions, akin in many ways to studies of grammaticalization,[12] the same can be said about words that come to be "frozen" into constructional schemata.

In a sense, then, this definition draws on what is known about grammatical boundaries – phrasal boundaries, word boundaries or morpheme boundaries, for instance – and thus gives a precise way of assessing the grammaticalization of any particular element in question. Understanding grammaticalization in terms of the establishment of a different kind of boundary thus replaces the vaguer criteria of the Meillet/Kuryłowicz approach of greater or lesser grammatical status with a criterion that is more readily measurable, via an appeal to boundaries. Moreover, it removes the need for a disjunct of "lexical to grammatical" or "less grammatical to more grammatical" that one gets from taking both Meillet and Kuryłowicz together, and generalizes well to constructional schemata. I proceed in what follows, therefore, with Haspelmath's characterization as the operative notion for identifying grammaticalization.

Haspelmath's definition of grammaticalization intersects in a very specific way with the question of whether there are cases of grammatical change in which movement occurs which is opposite to that seen in grammaticalization, what is best referred to as "degrammaticalization" (cf. Norde 2009). Some proponents of grammaticalization have taken the viewpoint that it is unidirectional, moving only in the direction of greater grammatical status for a given element or pattern. This is sometimes referred to as the "Unidirectionality Hypothesis" and is seen by some as a principle that is both absolute and inviolable; others admit that there are some instances of degrammaticalization but nonetheless dismiss it as statistically insignificant or only occurring under special circumstances or unsystematic ways.[13]

Haspelmath's particular characterization of grammaticalization, even if not standard (though accepted by, e.g., Norde 2009, as among the commonly circulating definitions of grammaticalization), presents a highly testable way of considering the unidirectionality hypothesis. In particular, one can look for cases involving grammatical change that have at least some of the hallmarks of "grammaticalization", e.g., shift in semantics towards broader ("bleached")

12 For more on constructionalization – the diachronic emergence of constructions – see, *inter alia*, Bergs & Diewald (2008), Traugott & Trousdale (2013), and Barðdal et al. (2015).

13 See Joseph (2014) regarding statistics and degrammaticalization and the general issue of how to count an instance of grammaticalization, or degrammaticalization for that matter. See also §6 below.

more abstract meaning, wider range of use, and/or phonological reduction, and then see if they show movement towards tighter or looser internal dependencies/bonds, as measured for instance by assessing the nature of the boundary involved (as suggested in Joseph 2014). If any cases show looser internal dependencies after the change, then they would constitute counterexamples to the Unidirectionality Hypothesis and thereby extend the case for degrammaticalization being a real kind of change.

4 Haspelmathian (De-)grammaticalization versus Greek Infinitive-Retreat

The Greek infinitival developments provide precisely a case of degrammaticalization based on Haspelmath's definition, as the following subsections show.

4.1 Greek Infinitive-Retreat as Grammaticalization

The infinitive in Ancient Greek thus gives way to a finite complement marked with να (*na*), the source of which is from the earlier final/purpose conjunction ἵνα (*hina*) 'so that'. This mode of infinitival replacement, as opposed to the sporadic use of verbal nouns, shows two grammaticalization-like traits. First, there is the widening of the meaning of the marker να, a kind of bleaching that is characteristic of elements involved in grammaticalization. That is, να (*na*) is not just a final/purpose conjunction, as its source ἵνα (*hina*) was, but is a grammatical "connector" with an abstract function. Second, in some instances there is phonetic reduction of να. In particular, one finds νάσαι ([náse]) from να είσαι (*na íse*) 'that you be' even though /a/ does not usually contract with /i/; compare καλά είσαι (*kalá íse*) 'well you-are', which does not contract to *καλάσαι ([kaláse]) – rather, this becomes [kalájse]. The key element involved in the Greek retreat of the infinitive, the marker να (*na*), thus shows some hallmark characteristics of grammaticalization.

4.2 How Infinitival Developments Show a Loosening of Internal Dependencies

Despite the result of the previous section, there are ways in which infinitival replacement in Greek shows traits of degrammaticalization. As seen in §2,

infinitives can be viewed as dependent elements, and such is the case for Greek. Greek infinitives generally did not stand on their own and did not determine a sentence by themselves; rather they occurred as complements to main verbs.

Moreover, they cohere semantically in terms of event structure with at least some verbs. Thus, with μπορώ (*mporō*) 'can', the ability to perform an act and the act itself do not represent distinct events, and such is the case also with αρχάζω (*ark^{h}azō*) 'begin', in that an action and the onset of that action are not distinct when viewed as events; rather carrying out the act implies that the ability was there, and any action necessarily has a beginning.

Furthermore, with some main verbs, as argued by Krapova & Cinque (2018), infinitives appear to have combined syntactically in such a way as to suggest a sort of fusion, in that the combination is essentially monoclausal; in particular, one finds Clitic Climbing in the Greek of Southern Italy with *sozo/sonno* 'can', as Krapova & Cinque (2018) note, offering these examples from Baldissera (2012) and Chatzikyriakidis (2010):

(8) a. *sa sòzzane insultètsi*
you.CL.ACC can.3PL.PST insult.INF
'They could insult you' (Baldissera 2012: 61)

b. *To sotzi vorasi? Ne, sotzi*
it.CL.ACC can.3SG buy.INF yes can.3SG
'Can he buy it? Yes, he can' (Chatzikyriakidis 2010, ex. (43))

Infinitival complementation is thus interpretable (as above in §2) as a kind of streamlining of multi-clausal syntax that tightens the dependencies between the main clause and the subordinate clause, in such a way that the clauses are semantically and even syntactically fused in some cases.

By contrast, να (*na*)-clauses can stand on their own and determine a sentence, in perfectly colloquial and ordinary usage, as in:[14]

(9) a. νάσαι καλά
nάse kalá
SBJV.be.2SG well
'may you be well; thank you'

14 See Ammann & van der Auwera 2004 on such uses in Balkan languages more generally, including Greek.

b. να πληρώσω τώρα
na *pliróso* *tóra*
SBJV pay.1SG now
'May/should I pay now?'

These clauses, therefore, have some independence and integrity of their own, a property that infinitives did not. Admittedly, να-clauses fuse semantically with controlling verbs in the same way that infinitives do, but infinitives show syntactic cohesion with their governing verbs in ways that να-clauses do not. It is fair to say, therefore, that there is a looser grammatical relationship between main verbs and their complement να (*na*)-clauses.

In this regard, the shift in Greek from somewhat tightly cohesive infinitival complementation to less tightly cohesive finite complementation shows a development that can be construed as a degrammaticalization. That is, this diachronic development involves movement away from the tight bond constituted by the matrix-verb-plus-infinitive combination, whereby the infinitive does not stand on its own, to a looser bond of two separate elements (matrix-verb plus να (*na*)-finite-verb), where each element can in principle stand alone. Each element in the latter case has an integrity and an independence that the infinitive at least is lacking in the former case. In the replacement of the infinitive by finite complementation with a DMS-clause, there is thus a development in which, to give the opposite of Haspelmath's characterization of grammaticalization, "the parts of a constructional schema come to have" weaker, i.e. looser, not "stronger internal dependencies", therefore a degrammaticalization.[15]

15 Given that there are parallels across the Balkan languages to the Greek infinitive-retreat, it is worth considering if these parallels might represent a case of "contact-induced grammaticalization" (Heine & Kuteva 2005), with the same *processes* of grammaticalization being replicated across languages. Such processes would include the introduction of a modal marker (paralleling Greek να [*na*]), the semantic bleaching of this marker, its increased grammatical value, and so on. If, however, such is the case, despite the caveats voiced in, e.g., Joseph (2011: §6), then given the interpretation in §4.2, what is seen here in the Balkans is also equally "contact-induced *de*grammaticalization".

5 A Further View on Grammaticalization – Back to the Future

The argument given in §4 about the relevance of the replacement of infinitival complements by fully finite complements in Greek for claims about unidirectionality that have been made under the rubric of grammaticalization theory might conceivably be countered by saying that the structural changes noted in §4 involve abstractions and generalizations over structural types, and do not involve changes in individual tokens of said structures, in individual constructions. That is to say, in this line of counter-argumentation, it is not that one structure (with infinitives) followed a degrammaticalizing pathway and directly turned into the other (with finite complementation), but rather that very *general* rearrangements of structural patterns occurred. In that way, the change would be viewed as a large-scale one of overall grammatical structure, rather like a shift from synthetic to analytic structure, and not really a development running counter to a very specific grammaticalization pathway.

While perhaps reasonable, this admittedly may not be the most compelling counter-interpretation possible.[16] However, even if we were to grant it and give it some weight, there are other similar developments with the replacement of the infinitive that affect specific constructions along specific pathways of grammatical change. As such, they would seem to be impervious to this sort of counter-argumentation.

In particular, one development in the Greek future involves the reworking of an infinitival complement in a specific constructional context in the direction of yielding a structure with looser bonds between a governing element and the complement. In this way, it is a counter-directional grammatical development, one that goes specifically against the claim that grammaticalization always proceeds from lexical to grammatical or from less grammatical to more grammatical. "More" and "less" grammatical may be taken, as suggested above in §4, to mean, respectively, stronger and looser bonds between elements. Unidirectionality would mean movement only towards stronger bonds whereas a counter-directional development would show movement towards looser bonds.[17]

16 I say this largely because if a general shift in a language of synthetic to analytic structure were to be deemed a case of degrammaticalization, then the numerous instances of such shifts within Indo-European, e.g. in Romance and Slavic languages, and elsewhere would surely have struck down any principle of unidirectionality of grammatical development right from the start of interest in this notion.

17 See Joseph (2006) for some discussion of different interpretations of what unidirectionality could mean; the example here would be problematic under any interpretation of unidirectionality.

The relevant facts from the Greek future that bear on these claims are as follows. The Medieval Greek future tense formation consisting of the verb *t^{h}elō* (θέλω) 'want' with an infinitive, e.g., θέλω γράφει (*t^{h}elō grap^{h}ei*) 'I will be writing', was reanalyzed in the 3rd person singular as consisting of two finite (i.e. person-marked) 3rd person forms paratactically combined. This reanalysis could happen because, due to the regular sound change of the loss of word-final *-n*, the infinitive came to converge with the 3rd person singular present indicative form;[18] the reanalysis is evident from the occurrence of fully inflected non-3rd person singular forms. The three stages in these developments are shown in Figure 1:

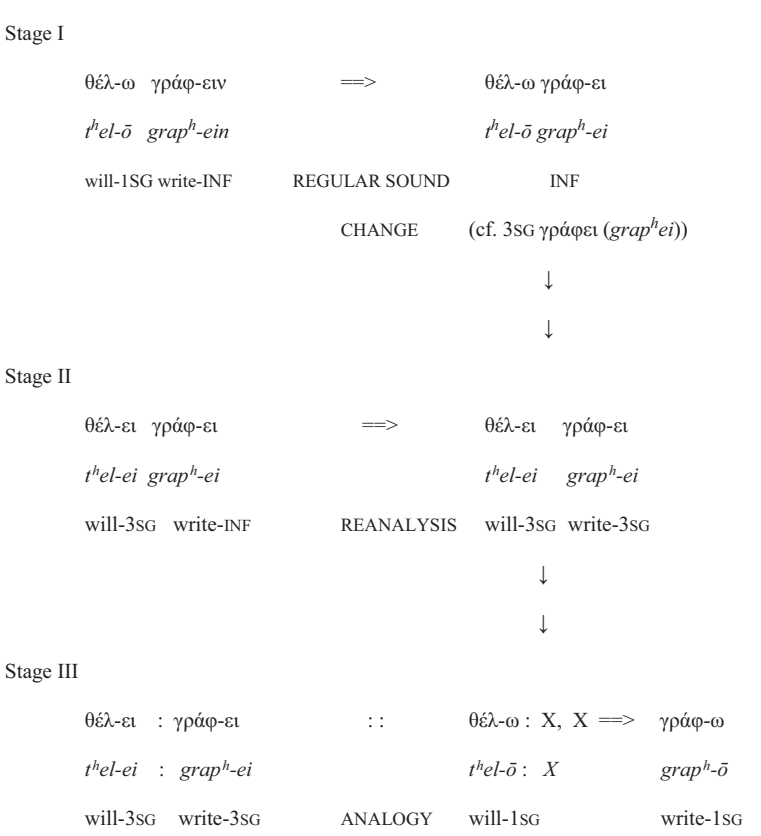

Figure 1: Reanalysis of the Greek θέλω (*t^{h}elō*) future.

18 By the time these developments occurred, *ei* (<ει>) was pronounced [i] in Greek (and *ou* (<ου>) was [u]); among the consonants, *t^h* (<θ>) and *p^h* (<φ>) were [θ] and [f], respectively, and *g* (<γ>) was [γ].

Thus a full paradigm became possible with a doubly-inflected future, with inflected θέλω (*thelō*) as a future auxiliary concatenated with a matching inflected form of a main verb, with no subordinating element, no particle να (*na*) or the like, connecting them; for instance, one can find in Medieval Greek all of the person-number forms given in (10):

(10) Doubly inflected paratactic future tense with θέλω (*t^{h}elō*)

1SG	θέλω	γράφω	(*t^{h}elō grap^{h}ō*)
2	θέλεις	γράφεις	(*t^{h}eleis grap^{h}eis*)
3	θέλει	γράφει	(*t^{h}elei grap^{h}ei*)
1PL	θέλομε	γράφομε	(*t^{h}elome grap^{h}ome*)
2	θέλετε	γράφετε	(*t^{h}elete grap^{h}ete*)
3	θέλουν	γράφουν	(*t^{h}eloun grap^{h}oun*)

The relevance of these developments for the claim of unidirectionality should be clear. Since forms like γράφω, γράφεις (*grap^{h}ō* 'I write', *grap^{h}eis* 'you write'), etc. in (10) can stand alone as present indicative forms and thus have considerable independence and integrity as verbal forms, the change shown here in Figure 2 takes a verbal construction in which there is a dependent element, an infinitive, that is tightly connected, bonded in a sense, to a governing element — the future auxiliary verb θέλω (*t^{h}elō*) — and changes it into a looser construction, one that is paratactic instead of hypotactic. This loosening of the internal bonds, in which the bound dependent infinitive has become an independent finite form, is contrary to the dictates of the Unidirectionality Hypothesis, as it means that a construction with a tight bond, Haspelmath's "strong internal dependency", between its elements has turned into one with a looser bond, a weaker "internal dependency".

6 Conclusion

The developments chronicled here with the infinitive in Greek therefore pose a significant challenge to claims of directionality in grammatical change, as embodied in the Unidirectionality Principle. It is important to note that while some accounts of unidirectionality in grammaticalization treat it as exceptionless, others recognize that there can be exceptions to it. Haspelmath (2004), for instance, acknowledges that there are eight (and only eight) known instances of degrammaticalization, i.e. of counter-directionality to the claim of one-way movement in grammatical change, and Heine (2003) notes there are exceptions but says they "are few compared to the large number of examples that confirm the hypothesis." Joseph (2011, 2014, 2017) suggests other examples, and there

are yet others in the literature; it is in that spirit that the case of infinitive-retreat in Greek should be added to the record.

But there is more to say here. The replacement of the infinitive took place over some 1500 years, as documented here, and thus in a very real sense is not just one event, not just a single instance of finite forms substituting for an earlier infinitive. Even though similar pressures and influences, both internal and external, that led to the retreat of the infinitive were present throughout this millennium and a half period, and no doubt played a role at each step along the way to the ultimate demise of this verbal category, clearly different populations of speakers were involved. This means that the controlling-verb-by-controlling-verb replacement of infinitival syntax happened repeatedly over those 1500 years. Rather than this being a single case of degrammaticalization, then, it must be admitted that literally hundreds of instances of degrammaticalization occurred during that stretch of time, essentially one for every controlling verb that relinquished the tight control of an infinitive to the looser control of a finite complement. Thus for researchers interested in directionality of grammatical change, the Greek infinitive represents a bonanza of data that must be taken seriously as a counterweight to the claims of the preponderance of movement in the direction of greater grammatical status, tighter internal bonds, in Haspelmath's formulation. Moreover, if this analysis is multiplied across the several Balkan languages that show a similar replacement of the infinitive, the import and value of this development for our understanding of directionality in grammatical change are thus multiplied as well.

Abbreviations

The glosses follow Leipzig Glossing rules.[19] Additionally, the following gloss has been adopted:

CL clitic status.

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19 https://www.eva.mpg.de/lingua/pdf/Glossing-Rules.pdf

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