Aspect in Greek Future Forms*

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Abstract

Medieval Greek had three future periphrases making use of a finite verb and an infinitive: μέλλω + INF, ἔχω + INF, θέλω + INF. Given the parallel nature of the periphrases as well as the fact that the infinitive existed in both a perfective and an imperfective version, it might be expected that these future-referring forms developed aspectual distinctions in similar ways. However based on papyrological evidence from AD I and AD VI this article shows that this was not the case. Rather, each future periphrasis seems to follow its own path towards the aspectual distinction which is a hallmark of the Modern Greek verbal system: μέλλω + INF has a much higher ratio of imperfective infinitives than the two other periphrases especially in AD I, ἔχω + INF starts out using only the perfective infinitive when referring to the future, and θέλω + INF distinguishes for aspect before it gains future meaning. The difference in aspectual usage is explained both by the semantics of the respective auxiliaries and by different oppositional relations (modal and temporal) that the periphrases enter into.

Keywords

Aspect – future tense – future periphrases – infinitive – papyri – Hellenistic-Roman Greek – Byzantine Greek

* In this paper I use the following abbreviations (in alphabetical order): A (aoristic, see footnote 3), AG (Ancient Greek, i.e. Greek from Homeric to Koiné), AINF (aoristic infinitive), APTC (aoristic participle), BG (Byzantine Greek), CG (Classical Greek), DDBDP (Duke Databank of Documentary Papyri), EBG (Early Byzantine Greek), FTR (future time reference), HNC (Hellenic National Corpus), HomG (Homeric Greek), HRG (Hellenistic-Roman Greek), INF (infinitive), L2 (second language), LBG (Late Byzantine Greek), MG (Modern Greek), P (presential, see footnote 3), PINF (presential infinitive), PPTC (presential participle), PTC (participle). I would like to thank two anonymous JGL reviewers for helpful and constructive comments on an earlier draft of this article.

1 Introduction

Standard grammars and histories of Greek have assumed that the existence of periphrastic future forms equaled overt expression of aspectual meaning in the category of future (see Robertson 1919: 889; Blass-Debrunner-Rehkopf 1990: 277; Horrocks 2010: 130; Browning 1983: 31). This assumption is a logical consequence of the fact that the periphrases made use of the infinitive (INF)¹ which existed in both an aoristic² and a presential form. However, it seems that the paths that each of these periphrases took towards overt aspectual distinction were influenced by different linguistic mechanisms, and therefore differed considerably. This means that some of the periphrases started out their existence as future referring forms *without* overtly distinguishing between imperfective and perfective aspectual meaning.

In what follows, the implementation of an aspectual distinction in the Greek future tense is discussed and documented by linguistic evidence from the Hellenistic-Roman and Early Byzantine periods. The investigation focuses on the three infinitival periphrases: μέλλω + INF, ἔχω + INF, and θέλω + INF, since it is in these forms that the aspectual distinction develops, but also briefly touches upon the role of the other future forms of Hellenistic-Roman Greek (HRG) and Early Byzantine Greek (EBG).

In order to explain the difference in implementation of aspect in the future forms it is necessary to understand the nature of the aspectual distinction in Greek. This is outlined in section 2. Section 3 defines future tense meaning. Section 4 presents the future forms of HRG and EBG as well as the empirical investigation of aspectual usage in the three infinitival periphrases; section 5 concludes the investigation.

1 Additionally, the periphrasis ἔσομαι + PTC can be found, but it never developed an aspectual distinction parallel to that of the infinitival periphrases, and furthermore, its use was limited primarily to biblical Greek (see section 4.2.1).

2 The adjectival denominations 'aoristic' and 'presential' are used here, because the terms 'aorist' and 'present' are ambiguous; in the literature, the present is sometimes used to refer to the present *tense* and sometimes to the imperfective aspectual category, and the aorist is sometimes used to refer to the perfective *past tense* and sometimes to the perfective *aspectual* category. In applying denominations that refer to the traditional terminology without however being identical with it, I hope to facilitate the understanding of these concepts without causing ambiguity.

2 Aspect in Greek

This article adheres to the view inherited from structuralism that linguistic units take meaning from the oppositions to which they contribute. In terms of aspectual semantics this means that any given aspectual meaning is dependent on its counterpart, and also that when aspectual meaning changes it does so along analogical lines in accordance with binary structures (cf. Jakobson & Waugh 1988: 93; Jakobson 1984: 59–103).

Thus, according to the view taken here, the Greek aspectual system is binary, a claim that goes for both Classical Greek (CG) and later stages of the language, and consists of a perfective/imperfective distinction expressed by the use of either aoristic or presential verbal forms (for Modern Greek (MG), cf. Holton et al. 2012: 130, 284–285; Hedin 1995: 233; Hesse 2003: 24; Thumb 1912: 115–126; for CG, cf. Humbert 1960: 111). However, many linguists have analyzed the perfect as an aspectual category on a par with the perfective and imperfective (for MG, see e.g. Mackridge 1985: 102–103, Clairis & Babiniotis 2009: 435–444; for New Testament Greek, see e.g. Moulton 1906: 108–110; Robertson 1919: 823–826; for CG, see references in Binnick 1991: 162).

Further, scholars have been concerned with the developments in the aspectual system from CG to MG, discussing both the internal relationship between the perfective and the imperfective, as well as the relation to the perfect (Hedin 2000; Gerö & Ruge 2008) and the relation to Aktionsart/viewpoint aspect (Napoli 2006, 2007; Mozer 2008).³

It is not impossible to conceive of a tripartite system within a binary framework, but then the relation of the perfect to the perfective/imperfective must exist on another level (see Ruipérez 1982 (1954): 51, 75 for this analysis). Within this scenario, meaning is still dependent on binary relations, which, according to the view taken here, is the only reasonable way to understand the aspectual system.

3 Apart from the works on the changes in the use of aspect in Greek, aspect is studied from a variety of starting points, such as literary studies (Allan 2007 and Buijs 2007, on Ancient Greek (AG)), child language (Stavarakaki & Clahsen 2009 on MG), and Greek as L2 (Papadopoulou 2005 on MG). There is also extensive literature on synchronic aspect in all stages of Greek from HomG to MG. New Testament Greek has attracted attention, not just from linguists but also from biblical scholars, because the understanding of verbal aspect has consequences for the interpretation of instructions in the New Testament (on aspect in New Testament Greek, see Porter 1989; Fanning 1990; McKay 1985, 1992). Also the study of MG aspectual usage has been very fruitful (see e.g., Chila-Markopoulou & Mozer 2001; Kitis & Tsangalidis 2005; Mozer 1994; Tsimpli & Papadopoulou 2006).

The perfective/imperfective distinction is commonly seen as a distinction between outside vs. inside perspective, as in the definition given by Comrie (1981: 4): “the perfective looks at the situation from outside, without necessarily distinguishing any of the internal structure of the situation, whereas the imperfective looks at the situation from inside, and as such it is crucially concerned with the internal structure of the situation”. This definition is compatible with much of the aspectual usage throughout the history of the Greek language. However, I prefer the definition of the perfective/imperfective opposition given by Eva Hedin (2000), both because it does better justice to the *variation* in aspectual usage, as exemplified by the use of the imperfective in ex. 1, which is not easily explained by Comrie’s definition, and because it emphasizes the difference in how the two aspects relate to tense; this difference is important in the analysis of aspectual usage in section 4.2.4. Hedin explains the imperfective/perfective opposition in terms of a type/token distinction. She argues (p. 228):

The Imperfective is used when reference is made to situations as types, when they are considered in a non-temporal perspective as abstractions not existing in time but corresponding to the denotative content of some verbal expression (...). The Perfective, on the other hand, is used when reference is made to situations as tokens, as instantiations of situations in time. (...) Even if a situation can be located at some unique point in time and could thus be referred to as a concrete situation token, the speaker may still choose to consider it in a non-temporal perspective as an abstract situation type. This is possible even if the temporal localization is explicitly made by the context.

Examples 1–3 illustrate the difference between the basic meanings of the perfective and the imperfective aspects. A prototypical function of the imperfective is the expression of generic meaning; the generic interpretation prevails in cases like the following from MG (Hedin 2000: 231 has a similar example):

- (1) Λένε πως ο καημένος ο Γιώργος έπινε
 say-3PL that ART poor ART Giorgos drink-P-PAST-3SG
 ‘They say that poor Giorgos drank.’

The verb in (1), *έπινε*, does not refer to any single event, but rather describes a characteristic of Giorgos: ‘Giorgos was an alcoholic’. It is irrelevant *when* the events of drinking occur, what is relevant is the type of event (drinking) which points to a certain characteristic of Giorgos (that of being an alcoholic). This

particular use of the imperfective is not easily explained by Comrie's definition of the imperfective given above as "concerned with the internal structure of the situation", but is highly compatible with Hedin's definition of the imperfective as referring "to situations as types, when they are considered in a non-temporal perspective". Similarly, time is irrelevant in the following example, which again expresses imperfective meaning, but which makes use of a different nuance of the imperfective:

- (2) Όταν μπήκα στο μπάρ ο Γιώργος έπινε
 When enter-1SG-A-PAST PREP bar ART Giorgos drank-3SG-P-PAST
 το ουισκάκι του
 ART little-whiskey PRON
 'When I entered the bar Giorgos was drinking his whiskey.'

Here the imperfective aspect is used, not to characterize Giorgos, but to characterize an event, i.e., the event of drinking. This use of the imperfective is highly compatible with both Hedin's and Comrie's definitions: the event is considered in a non-temporal perspective (it is irrelevant when the drinking begins and when it ends) *and* the focus is on the internal structure of the situation (i.e., on the unfolding of the act of drinking).

Ex. 3 expresses perfective meaning:

- (3) Ο Γιώργος ήπιε ένα μπουκάλι ουίски
 ART Giorgos drink-A-PAST-3SG ART bottle whiskey
 'Giorgos drank a bottle of whiskey.'

Contrary to ex. 1, ex. 3 does refer to a single event in time, namely the event of Giorgos drinking a bottle of whiskey, and contrary to ex. 2, it is also concerned with the endpoint of the action: the action was completed at the moment when the bottle was empty.

An important additional point needs to be tied to the theoretical discussion of aspect, namely the point that aspectual dichotomies relate analogically⁴ to both modal and temporal parameters (Hopper & Thompson 1980: 252). This means that an aspectual form may be used to convey meanings that belong to the spheres of tense and modality, as in the case of the Russian

4 'Analogically' is here to be understood in the broadest sense, i.e., as a relation of similarity, in accordance with the description given in Anttila 2003.

perfective non-past which is used with future meaning; examples of this usage of aspectual forms is given in 4.2.3.

It is unlikely that mode and tense are nothing more than implicatures of aspect, but it may be argued that mode, tense and aspect have common functions. Thus, according to the approach taken here, the perfective and the imperfective are fuzzy semantic categories with basic meanings of token ('instantiations of situations in time') vs. type ('non-temporal perspective'), but relating analogically to a wide variety of usage types, among these temporal and modal dichotomies.

3 Future Tense

The future is rarely referred to without a modal stance. Östen Dahl says "Normally, when we talk about the future, we are either talking about someone's plans, intentions or obligations, or we are making a prediction or extrapolation from the present state of the world. As a direct consequence, a sentence which refers to the future will almost always differ also modally from a sentence with non-future time reference" (Dahl 1985: 103). However, as Dahl says, it is the faculty of expressing future time reference (FTR⁵) and not the modal meanings that defines the future tense; and therefore it is appropriate that the category of the future should be defined as a temporal rather than a modal category (Dahl 1985: 106–107).

Nevertheless, it is difficult, semantically, to distinguish forms with FTR from modal expressions that also point to the future. The future and the different modalities are not discrete categories but rather fuzzy concepts.

In the analyses in 4.2.2–4.2.4, all AD I and AD VI occurrences of the selected infinitival periphrases appearing in the papyrological material (see 4.1) are included, whether they express FTR or modal meanings, because what is in focus here is the development of an aspectual opposition in the forms with FTR, not the meaning of FTR itself. In two of the periphrases (θέλω + INF and μέλλω + INF), the development of aspect seems to proceed regardless of the modal/temporal nuance of the forms, and with regard to ἔχω + INF, it is interesting to note the difference in aspectual pattern between instances that are primarily modal and instances that are primarily temporal.

5 The acronym FTR is used by Dahl in the Eurotyp project to indicate *future semantics*, i.e., a form with FTR is a form that refers to the future in a particular instance, whether or not this form has another (primary) use (cf. Dahl 2000). FTR, then, is a label pertaining to meaning, not to form.

4 Empirical Evidence

In order to select the empirical material and a method of assessing it, a number of decisions have been made; these are outlined in 4.1. Section 4.2 introduces the Hellenistic-Roman and Byzantine future forms, starting with three forms that do not overtly distinguish for aspect, namely the synthetic future, the present indicative, and ἔσομαι + participle (PTC) in 4.2.1, and moving on to θέλω + INF (4.2.2), ἔχω + INF (4.2.3), and μέλλω + INF (4.2.4). Even though the temporal/modal nuances of the future forms are not the primary object of interest in this article, the sections in 4.2 will include some comments on these developments, both because the future forms are the *frame* within which the aspectual developments are observed, and because the development of FTR may have had an influence on the aspectual pattern of one of the forms (ἔχω + INF), both of which make it relevant to discuss when the periphrases developed FTR.

4.1 *The Source Material*

The purpose of this empirical investigation is to study changes in vernacular Greek. This means that the literary texts so amply handed down to us from the Greek past are of little value here, since these are generally written in an archaizing standard. Instead, the investigation builds on documentary papyri written in Greek; the bulk of these papyri were written and found in Egypt.⁶ The investigation is limited primarily to papyri from AD I and VI, both because these two centuries display aspectual usages different from one another and from CG and MG respectively (both of which are occasionally used as standards of reference in the investigation), and because these differences in usage can be documented by sufficient source material.

The corpus that is used in all the primary searches in 4.2.2–4.2.4 is the Duke Databank of Documentary Papyri (DDbDP). The DDbDP is an electronic corpus of published Greek and Latin documents written, for the most part, on papyrus. Strictly speaking, the data only document the linguistic developments that took place in the communities they represent, i.e., the Greek communities in Egypt. Nevertheless, evidence from both later and contemporary sources suggests that overall, the language of the papyri does reflect the general

6 Only three of the documents used here (i.e., three of the documents from the relevant periods containing future periphrases) come from the Greek-speaking community in Petra (in present-day Jordan).

developments in Greek from BC IV to AD VIII, i.e., during the period when papyrus was used as writing material (Horrocks 2010: 160, 327; Dickey 2009: 150; Verhoogt 2010: 62–64, Mandilaras 1973: 45–53).

There are considerable differences in the use of language across the different genres of documents, though. Thus the papyri containing private and business letters often reflect vernacular Greek better than the official documents and private legal documents do (Mandilaras 1973: 46; Dickey 2009: 150). However, since the private and business letters do not contain enough tokens of each periphrasis to make a reliable comparison of the two centuries AD I and AD VI, all types of papyrological documents have been admitted into the investigation.

The searches for the periphrases were conducted as lemmatized searches for the individual auxiliaries⁷ $\theta\acute{\epsilon}\lambda\omega$, $\xi\chi\omega$, and $\mu\acute{\epsilon}\lambda\lambda\omega$. Subsequently, the instances where the auxiliaries form part of a periphrasis were selected and analyzed. The counts concentrate on the single INFs: i.e., in cases where a single auxiliary is followed by more than one INF, each INF counts on its own. The decision to count INFs rather than periphrastic constructions is rooted in the observation that a single auxiliary may be followed by INFs with differing aspect. Furthermore, all tenses of the auxiliaries $\theta\acute{\epsilon}\lambda\omega$, $\xi\chi\omega$, and $\mu\acute{\epsilon}\lambda\lambda\omega$ are permitted in the counts; this is due to the fact that the future meaning of the periphrases is embedded either in the stem of the verb (in the case of $\mu\acute{\epsilon}\lambda\lambda\omega$) or in the entirety of the periphrasis (in the cases of $\theta\acute{\epsilon}\lambda\omega$ and $\xi\chi\omega$)—in either case the future meaning is still expressed by the periphrasis when the auxiliaries occur in tenses or modes other than the future indicative.

Finally, it should be noted that the individual search results, e.g., the frequency of $\theta\acute{\epsilon}\lambda\omega$ + INF, cannot be used as indications of the frequencies of the forms because it is not possible to extract the total number of words that were searched (i.e., the number of words in, for instance, all AD I documents in the DDbDP). On the whole, then, the search results are valuable primarily in relation to each other, e.g., the ratio of $\theta\acute{\epsilon}\lambda\omega$ + aoristic INF (AINF) in AD I vs. the ratio of $\theta\acute{\epsilon}\lambda\omega$ + presential INF (PINF) in AD I.

4.2 *Future Forms*

4.2.1 Future Forms without Overt Aspectual Distinction

Apart from the future periphrases formed with an INF, three other future forms were used in CG, HRG, and Byzantine Greek (BG). These were the synthetic

7 For the status of $\theta\acute{\epsilon}\lambda\omega$, $\xi\chi\omega$, and $\mu\acute{\epsilon}\lambda\lambda\omega$ as auxiliaries, see Markopoulos (2009); Lucas (2012: 37–39). See further Basset (1979) for the status of $\mu\acute{\epsilon}\lambda\lambda\omega$ in Homeric Greek (HomG) and Wakker (2006) for the status of $\mu\acute{\epsilon}\lambda\lambda\omega$ in Plato.

future, the present indicative, and ἔσομαι + PTC. None of these forms distinguishes overtly for aspect (except perhaps for the synthetic future with regard to a few verbs in CG, see the following), but this does not mean that language users have been unconscious about aspectual meaning when using these forms. The ways in which these forms relate to aspectual meaning are discussed in the following.

Until its demise in HRG, the synthetic future was the primary future referring form. The present indicative and the aoristic subjunctive (both in its older synthetic form and in the modern form of $\nu\alpha^8$ + aoristic non-past⁹) have also been used on occasion with FTR even up to the present day.¹⁰ Until it merged with the synthetic future, from as early as BC II, the synthetic aoristic subjunctive was used primarily with modal meaning, though, expressing either the will of the agent (as, e.g., in prohibition) or probability (Smyth 1920: 403), and therefore it is not a contestant to the forms with FTR.

Ἔσομαι + PTC is an innovation of HRG, used almost exclusively in biblical Greek (Gerö & Ruge 2008: 121; Janse 2007: 652; Aerts 1965: 52; Fanning 1990: 319), as well as by later authors wishing to give biblical connotations to their work (Aerts 1965: 56; Lucas 2011).

The CG synthetic future does not systematically distinguish aspect, nor does the future morpheme convey any particular aspectual meaning. Rather, the synthetic future relates to aspectual meaning only by virtue of the lexical aktionsart of the individual lexeme or by means of pragmatic factors.

That being said, in CG a group of medio-passive verbs do distinguish formally between two ‘categories’ in the future by means of different formal representation: -σομαι and -θήσομαι. It has been argued that the semantic content determining the choice of form with these verbs is aspect (Jannaris 1968 (1897): 441), but also other factors, among these metric considerations and the need

8 When used in the function of subordinator, $\nu\alpha$ may have a variety of modal meaning but may also “have the function of a semantically null—“merely relational”—element” (Tsangalidis 2004: 198).

9 The aoristic non-past is the form, which Holton et al. (2012: 290–292) refer to as ‘the dependent’, but in order to emphasize the paradigmatic relation of this form with its presential counterpart (presential non-past), I prefer the more descriptive term ‘aoristic non-past’.

10 In Late Byzantine Greek (LBG) $\nu\alpha$ + non-past was used as a regular FTR form in main clauses (Horrocks 2010: 351), but in MG it is only used in main clauses with FTR in combination with ‘speaker-oriented modality’ (cf. Bybee et al. 1994: 179 for this notion), i.e. in directives, permissions and similar expressions (Tsangalidis 2004: 198–199).

to distinguish passive and middle forms seemed to play a role in the choice of form (Schwyzer/Debrunner 1950: 265–267; Wackernagel 2009 (1920–1924): 1, 35).¹¹

During HRG the synthetic future was merging with the synthetic aoristic subjunctive and it is reasonable to imagine that, once the merger had begun, the aspectual neutrality of the synthetic future must have been severely challenged by the aspectual meaning inherent in the aoristic subjunctive.

The present indicative does not distinguish for aspect. It is a presential form without an aoristic counterpart, but it does not seem to be more compatible with imperfective than with perfective meaning, when conveying FTR. Rather than reflecting a particular aspectual meaning, the present indicative seems to add modal nuances to the future. Thus, it is used primarily to refer to the planned future (for CG, see Wackernagel 2009: 1, 27,¹² Smyth 1920: 421–422, Goodwin 1897: 11; for MG, see Mackridge 1985: 126–127), for example, when discussing travels that the agent has planned (see examples from the papyri in Lucas 2012: 107–109). Occasionally it expresses certainty about what is being said or it envisages a future event more vividly than other future forms might (Wackernagel 2009: 1, 27; Fanning 1990: 221–226).

Ἔσομαι is the synthetic future form of εἰμί ('I am'), and ἔσομαι + PTC is used in much the same way as εἰμί or ἦν + PTC. They all may express a recurring event, a progressive event (with activity verbs), or a state (with stative verbs) when containing a presential PTC (PPTC).

Ἔσομαι + PPTC does not have a perfective counterpart even though the use of ἔσομαι + aoristic PTC (APTC) in HRG and BG might indicate that it does (Lucas 2012: 178–187). Based on papyrological evidence, it is clear that whenever ἔσομαι combines with an APTC it has the meaning of future perfect, parallel to ἔσομαι + perfect PTC, a fact which is not surprising given that the aoristic and the perfect forms were merging in HRG and BG, both functionally and formally.¹³

11 Also the verb ἔχω ('have') had a double future form in CG consisting of ἔξω and the much rarer σχήσω. Liddell & Scott 1996: s.v. note that these forms indicate duration and momentary action respectively. However, this analysis is doubtful; Wackernagel (2009: 1, 35) states that σχήσω, too, occurs with durative meaning.

12 The verbs that are used to refer to future trips are, says Wackernagel, really perfective in nature; they do not refer to the actual walking or traveling, but rather to the endpoint—the destination. Consequently, even though these verbs are formally presential, they have a perfective meaning, which naturally transfers a non-past action to the future.

13 Bentein (2012) has demonstrated that both ἦν + perfect PTC and ἦν + APTC were relative tenses in vernacular HRG and EBG, but that there is a functional differentiation in that

Thus, none of the three future forms described in this section (synthetic future, present indicative, $\xi\sigma\omicron\mu\alpha\iota$ + PTC) ever developed a formal aspectual distinction. They all made use of a single form to express FTR, whether this single form could be used to express both imperfective and the perfective meaning (as seems to be the case with the synthetic future and the present indicative) or only one aspect (the imperfective, in the case of $\xi\sigma\omicron\mu\alpha\iota$ + PPTC).

The following three sections consider the forms that do develop a formal distinction between the perfective and the imperfective aspects.

4.2.2 $\theta\acute{\epsilon}\lambda\omega$ + INF

Seen from a MG perspective the development of FTR in $\theta\acute{\epsilon}\lambda\omega$ + INF has particular interest because this periphrasis develops into the MG $\theta\alpha$ -future. The periphrasis has volitive meaning from HomG until LBG, when the substitution of the infinitive by a finite phrase after volitive $\theta\acute{\epsilon}\lambda\omega$ had been completed (a development that began in HRG (Joseph & Pappas 2002: 252; Markopoulos 2009: 164–208)). The periphrasis began to take on the additional meaning of FTR in HRG/EBG. There have been claims about a future meaning in $\theta\acute{\epsilon}\lambda\omega$ + INF right from CG, most recently in Markopoulos (2009) and Lee (2010) but also in the standard CG dictionary, Liddell & Scott (1996). However, there does not seem to be sufficient evidence for $\theta\acute{\epsilon}\lambda\omega$ + INF with FTR before AD III (see Lucas 2012: 115–119).

$\theta\acute{\epsilon}\lambda\omega$ in and of itself does not have FTR, but is dependent on the presence of an INF for the future meaning to become effective. Ex. 4 contains one of the early instances of $\theta\acute{\epsilon}\lambda\omega$ + INF with FTR:

- (4) $\sigma\acute{\upsilon}\nu$ $\Theta\epsilon\acute{\omega}$ $\gamma\acute{\alpha}\rho$ $\theta\acute{\epsilon}\lambda\omega$ $\kappa\alpha\tau\alpha\pi\lambda\epsilon\upsilon\sigma\alpha\iota$ $\epsilon\nu$ η $\acute{\eta}\mu\acute{\epsilon}\tau\epsilon\rho\omicron\nu$.
 with God-DAT for want-1SG sail-down-AINF in ? our
 $\mu\grave{\eta}$ $\acute{\alpha}\pi\omicron\tau\acute{\upsilon}\chi\omega$ $\delta\grave{\epsilon}$ $\epsilon\iota\varsigma$ $\tau\omicron\upsilon\tau\omicron$ $\theta\alpha\rho\rho\acute{\omega}\nu$
 in-case fail-SUBJ-1SG but in this daring-PPTC
 ‘God willing, I shall sail down in In case I fail daring this, ...’
 p.cair.masp.1.67068, official letter, AD VI

$\acute{\eta}\nu$ + perfect PTC was used predominantly as a resultative, whereas $\acute{\eta}\nu$ + APTC focused on the past event prior to the result. It is not unlikely that the same functional difference may have obtained between $\xi\sigma\omicron\mu\alpha\iota$ + perfect PTC and $\xi\sigma\omicron\mu\alpha\iota$ + APTC. However, despite a possible specialization within the category of future perfect between $\xi\sigma\omicron\mu\alpha\iota$ + perfect PTC and $\xi\sigma\omicron\mu\alpha\iota$ + APTC, $\xi\sigma\omicron\mu\alpha\iota$ + APTC does not function as anything else than future *perfect* in the papyri, i.e., never as a true perfective future form.

Θέλω + INF distinguishes for aspect as early as CG, i.e., long before the periphrasis gained FTR. However, the ratio of PINFs and AINFS, respectively, changed remarkably during the history of the periphrasis. In CG, the PINF was much more frequent than the AINF in this periphrasis; in a rather large corpus of a variety of CG texts, Markopoulos (2009: 42) counts approximately 70% PINFS after θέλω and 30% AINFS. During HRG the AINF became the preferred INF after θέλω. The development from HRG onwards is illustrated by table 1 below; column 3 contains the ratio of the MG future, θα + INF, which is the descendant of θέλω + INF with regard to both form and meaning.¹⁴ The numbers in column 3 are based on searches of the 1. and 2. sg. non-past¹⁵ of 19 selected verbs¹⁶ preceded immediately by θα:

TABLE 1 *θέλω + AINF/PINF and θα + aoristic/presential non-past from AD I to MG¹⁷*

	θέλω + INF AD I papyri	θέλω + INF AD VI papyri	Θα + non-past with FTR HNC
AINFS	20 (80%)	95 (95%)	1242 (96%)
PINFs	5 (20%)	5 (5%)	48 (4%)

- 14 The development of the MG future from θέλω + INF passes through the following stages: θέλω + INF > θέλω + νά + non-past finite verb (substitution of INFs by finite phrases) > θε + νά + non-past finite verb (phonetic reduction) > θε + νά + non-past finite verb (phonetic reduction) > θα + νά + non-past finite verb (vowel assimilation) > θα + non-past finite verb (phonetic reduction) (Joseph & Pappas 2002; Markopoulos 2009: 186–209).
- 15 The reason for not including 3. sg. forms in the count is that these are more likely to have inferential meaning after θα when occurring in the presential aspect than the 1. and 2. sg. forms, since usually speakers do not need to infer when it comes to 1. and 2. sg. forms. Inferential aspect is not incompatible with 1. and 2. sg. forms, it is just quite rare in these contexts. Descriptions of θα + presential non-past with inferential meaning can be found in e.g. Tsangalidis (1999); Roberts & Roussou (2003: 59–60); Giannakidou (2012).
- 16 The 19 verbs have been selected because they appear relatively frequently in the periphrases (μέλλω/θέλω/ἔχω + INF) in the AD I and VI papyri, and thus the patterns of complementation may be more easily compared. The verbs are: αγοράζω, απαιτώ, βάζω, βοηθάω, γίνομαι, δέχομαι, δίνω, εκδίδω, κόβω, έρχομαι, ζητώ, καταλαβαίνω, παίρνω, παραδίνω, παρακαλώ, πεθαίνω, πληρώνω, πουλάω, στέλνω.
- 17 The Hellenic National Corpus (HNC) corpus includes a variety of texts, literary and non-literary and thus matches the variation found in the papyri.

The percentages vary throughout the two millennia, but the aoristic forms remain by far the more frequent of the two, contrary to the situation in CG. Between AD I and AD VI the aspectual patterns are still quite different though, and indeed statistically so ($\chi^2(1) = 6.11413$, $p = 0.0134$).¹⁸ Between AD I and MG, the difference in aspectual pattern is also statistically significant ($\chi^2(1) = 16.8027$, $p = 0.00004$). With regard to AD VI and MG, though, the ratios in percentage is very similar, and indeed the difference between them not statistically significant ($\chi^2(1) = 0.41398$, $p = 0.5199$).

Statistics thus imply that the ratio of AINFS and PINFS in this context changed radically until EBG, from which time on the pattern has remained relatively stable.¹⁹

What is remarkable about the numbers in table 1 is the fact that the semantic change of the periphrasis from volition to FTR does not seem to have had an impact on the aspectual pattern. The changes to the aspectual pattern happened long before the periphrasis took on FTR, probably as an effect of a widespread increase in aoristic verbal forms at the expense of presential forms. This increase affected the INF, as well as the past tense, the subjunctive, and the imperative (see Robertson 1919 (1914): 1080; Mandilaras 1972: 39; Lucas 2012: 189–192), but not the present indicative or the PTC, as the former does not distinguish for aspect and, with regard to the latter, the aspectual dichotomy is not comparable to that of the rest of the verbal system since the APTC usually refers to anterior action, and therefore the difference between the APTC and the PPTC is ultimately one of time rather than of aspect.²⁰

There is a difference in the increase of the aoristic aspect in the category of INF and in the past tense, though. Fig. 2 shows the difference in complementation pattern between past tense forms and INFs (in any context) in CG literature, AD I papyri and AD VI papyri.

18 For all the statistical calculations in this article, chi-square tests for equality of proportions were used and the borderline of statistical significance is a p-value of 0.05. The degree of freedom in all tests is 1, as marked by (1) in the test results.

19 A small survey of future referring $\theta\acute{\epsilon}\lambda\omega$ + INF in the oldest version of 14th century vernacular text *The Chronicle of Morea* (the Copenhagen manuscript) shows a similar pattern with 97% AINFS (38 occurrences) and 3% PINFS (1 occurrence) (Lucas 2012: 141).

20 Further, in MG the presential aspect has been strengthened in the domain of modality, where it serves as the sole form, without aoristic counterpart, to express counterfactuality (see Iatridou 2000 for details about the presential aspect in this context).

TABLE 2 *Aspectual distribution of past tense forms and INFs in CG,²¹ AD I, and AD VI*

	CG	AD I (papyri)	AD VI (papyri)
Past tense aor.	71%	95%	97%
Past tense pres.	29%	5%	3%
AINF	33%	66%	82%
PINF	67%	34%	18%

As table 2 shows, the ratio of the aoristic aspect in the central verbal category ‘past tense’ also increased from CG to AD I and AD VI, but the aoristic past was the most frequent past tense form already in CG. It is very likely, then, that the aspectual pattern in the past tense influenced the aspectual pattern of the INF in HRG and EBG, and accordingly the change in ratio of the aoristic/presential INFs can be seen as an analogical process whereby aoristic forms gradually took over some—but not all—the functional domains of presential forms, a process that began in the finite forms and later spread to the INFs.

Based on the numbers, the aoristic aspect was the unmarked member and the presential the marked member of the aoristic/presential dichotomy in HRG. Further, the finite forms seem to have been the unmarked forms vis-à-vis the nonfinites, since the finite forms outnumber the nonfinites (cf. Porter & O’Donnell 2001 on New Testament Greek) and were in the process of taking over the domain of the nonfinites (cf. Joseph 1983 on the INF, Horrocks 2010: 79–188). Therefore, it is not surprising, given the principle of *markedness agreement*, by which unmarked units tend to pair with other unmarked units and marked units with other marked units (cf. Andersen 2001: 28 and Hopper & Thompson (1980)²²), that the frequency of the unmarked aoristic aspect should initially be the largest in the unmarked finite forms.

4.2.3 Ἐχῶ + INF

When appearing on its own, ἔχῶ retains the lexical meaning ‘to have’ (possession) from HomG to MG. Further, ἔχῶ may have a series of modal and/or

21 The searches for CG are conducted in the works of Aristotle, Plato, Thucydides, and Xenophon, using a set of 31 selected verbs, (cf. description in Lucas 2012, appendix).

22 Hopper & Thompson (1980) do not use the term ‘Principle of Markedness Agreement’, but describe the same phenomenon.

temporal meanings when appearing as an auxiliary in the context of an infinitival periphrasis (cf. Markopoulos 2009: 33–38, 60–73, 140–164; Aerts 1965; Joseph 1983: 62–64).

Like $\theta\acute{\epsilon}\lambda\omega$ + INF, $\xi\chi\omega$ + INF was first used with FTR in the Hellenistic-Roman period (Markopoulos 2009: 60–73), but contrary to $\theta\acute{\epsilon}\lambda\omega$ + INF, which was not widely used with FTR before the Late Byzantine period, $\xi\chi\omega$ + INF proliferated as a future form in the Early Byzantine period (ibid.: 94).²³

In the CG, $\xi\chi\omega$ + INF has the meaning of root possibility²⁴ (Liddell & Scott 1996: 750; Markopoulos 2009: 33–38²⁵), and this meaning persists in later Greek until the Late Byzantine period side-by-side with the future meaning (Markopoulos 2009: 140–156). Furthermore, the periphrasis appears in the Early Byzantine period with the meanings of *obligation* (that which one *must* do) (Markopoulos 2009: 60–73; 99–101) and *permission* (that which one *may* do) (Lucas 2012: 151–153).

Like $\theta\acute{\epsilon}\lambda\omega$, $\xi\chi\omega$ is dependent on an INF for the future semantics to become effective, in other words it is the periphrases $\theta\acute{\epsilon}\lambda\omega/\xi\chi\omega$ + INF rather than the single auxiliaries $\theta\acute{\epsilon}\lambda\omega/\xi\chi\omega$ that have grammaticalized into FTR-constructions (for the significance of constructions in grammaticalization, cf. Bybee et al. 1994: 11; Traugott 2003).

There are three possible occurrences of the periphrasis $\xi\chi\omega$ + INF in the AD I papyri, one containing a FutINF and two containing a PINF. In the AD VI papyri,

- 23 Scholarly opinions differ with regard to the path $\xi\chi\omega$ + INF took towards the expression of FTR. Bybee et al. document that typologically FTR-constructions may rise directly out of constructions indicating possession, but it may also pass through an intermediate stage of obligation (Bybee et al. 1994: 260–263) or of root possibility (ibid.: 266). In the case of $\xi\chi\omega$ + INF, Jannaris (1968 (1897): 253) and Aerts (1965) claim that the construction passed through the stage of obligation before taking on FTR, whereas Markopoulos (2009: 267–270) argues, that it passed through the stage of root possibility (cf. footnotes 25 and 26 for the terminology). Both these paths are plausible (cf. the discussion in Lucas 2012: 142–146), and further both may have been reinforced by the Latin FTR-construction *habeo* + INF and/or by intransitive $\xi\chi\omega$ with an adverb of manner (e.g. *ἑτοιμῶς ξχω ...* = *I am prepared/willing to ...*), cf. ex. 6. Originally the construction was used to describe the subject's disposition, but when it appeared in the context of an INF it may have been reanalyzed as a periphrasis consisting of $\xi\chi\omega$ and an INF, with a somewhat looser connection to the adverb, and referring to the future (ibid.: 144–146).
- 24 Root possibility “reports on general enabling conditions and is not restricted to the internal condition of ability, but also reports on general external conditions, such as social or physical conditions” (Bybee et al. 1994: 178).
- 25 Markopoulos refers to *root-possibility* as *ability* and Liddell & Scott describe the category as involving “means or power to do, to be able”.

there are 23 occurrences of $\xi\chi\omega + \text{INF}$. Of these, one contains a perfective INF ($\epsilon\acute{\iota}\delta\acute{\epsilon}\nu\alpha\iota$) and has root possibility meaning. The remaining 22 occurrences all contain an AINF; one of these has root possibility meaning, three are ambiguous as to root possibility and FTR, four have the meaning of permission, one has obligation and/or FTR, two indicate future in the past, and 11 have FTR as in the following example:

- (5) εἶπέν μοι γὰρ ὅτι ἐὰν ποιῇ τὰς ἀποκρίσεις
 say-3SG-A-PAST me-DAT for that if make-3SG-PRES ART affair-PL
 μου ἐν Ἀλεξανδρείᾳ ὁ πατήρ σου οὐκ ἔχει μου
 my in Alexandria ART father your not has-3SG me-GEN
 ἀχαριστήσαι.
 is-ungrateful-AINF
 ‘for he said to me, “if your father makes payments to me in Alexandria he will not show me ingratitude”’²⁶
 sb.18.13116, private letter, AD V–VI

The count shows clearly that the AINF is by far the most common INF in $\xi\chi\omega + \text{INF}$, and the PINF is not attested even once in this connection in the AD VI papyri. With regard to $\xi\chi\omega + \text{INF}$ as a future referring form, this pattern seems to hold generally in EBG; I have not found any instances of $\xi\chi\omega + \text{PINF}$ with FTR in the papyri in any century. The quantitative analysis, thus, confirms a claim by Aerts (1965), Babiniotis (1985), and Mandilaras (1973),²⁷ who state that when used with FTR, $\xi\chi\omega + \text{INF}$ always contains an AINF. Jannaris has several examples of $\xi\chi\omega + \text{PINF}$ from HRG and EBG (Jannaris 1968 (1897): 554), but these either employ the INF $\epsilonἶναι$, which does not have an aoristic counterpart, or $\xi\chi\epsilon\iota\nu$, of which the aoristic counterpart is extremely rare. Other than these, Jannaris has two more examples of $\xi\chi\omega + \text{PINF}$ with FTR, of which the first is not a real future periphrasis, but rather an example of $\xi\chi\omega$ and the INF occupying separate roles in the phrase, as illustrated by the fact that the adverb $\epsilon\tau\acute{o}\iota\mu\omega\varsigma$ modifies only $\xi\chi\omega$:

- 26 This translation appears in the DDbDP, except for the tense of the periphrasis ‘ $\xi\chi\epsilon\iota$ μου ἀχαριστήσαι’ which DDbDP translates with the meaning of perfect: ‘your father has not shown ingratitude towards me’; an odd choice, since first, the future meaning makes good sense in this context and second, the letter was written several centuries before $\xi\chi\omega + \text{INF}$ is presumed to have gained perfect meaning.
- 27 And contradicts the claim by Browning (1983: 31) and Horrocks (2010: 130) who state that this future periphrasis distinguishes aspect right from the outset.

- (6) Σοὶ μὲν ἑτοιμῶς ἔχω συνοδεύειν
 you-DAT but readily-ADV have-1SG travel-with-PINF
 'But I am ready to travel with you'

CLEMENS ROMANUS, *Homiliae* 1,17,1, 4, AD I

The second example is referred to as *Euseb. Alex. 400 B* σὺ ἀφείν με ἔχεις, but the phrase is nowhere to be found in Eusebius's *Epistula ad Alexandrum Alexandrinum*.

Now the question remains: what caused the aspectual patterns of ἔχω + INF in AD I and AD VI. In AD I, the frequency of the periphrasis is really too low to allow for any type of generalization regarding the absence of AINFS. Considering the fact there are examples of ἔχω + AINF in CG (with root possibility meaning (Liddell & Scott 1996 (1843): 750)), as well as in BG, it is very likely that the absence of ἔχω + AINF in AD I is due to the general low frequency of ἔχω + INF in AD I, rather than to any incompatibility of root possibility ἔχω with the AINF. Additionally, the two AD I occurrences with PINFS make perfect sense from a semantic point of view; i.e., they could not easily have been replaced by AINFS.

More interesting is the question of why future referring ἔχω + INF seems never to occur with a PINF in EBG. It might be tempting to conclude that the imperfective aspect is malsuited for FTR, since there are languages where the primary meaning of the perfective non-past is FTR, the best known being the Russian example. However, typological studies show that this assumption does not hold (Bybee et al. 1994: 275–279); there are ample examples of imperfective forms denoting FTR (Ultan 1978: 106–107). In the case of Greek, the present indicative often refers to the future—in both CG, MG, and the intermediate period—(cf. section 4.2.1), and also the FTR periphrasis μέλλω + INF, which is discussed in section 4.2.4, often contains a PINF.

There are no apparent oddities in the usage of the AINFS after ἔχω in AD VI: i.e., in every instance of ἔχω + AINF, the choice of this particular INF may be explained by the semantics of the aoristic aspect as it seems to have developed in HRG and EBG. But still, the extreme preference for the AINF in ἔχω + INF demands an explanation beyond mere chance, and a possible explanation may lie in the semantic change of the periphrasis from root possibility to futurity.

When the new meaning of futurity began to take over, the differentiation between the old and the new meaning may have been helped along by the difference in aspectual complementation pattern. Thus, in contrast to the root possibility meaning of ἔχω + INF, which was compatible with both AINFS and PINFS, the new meaning of futurity was expressed exclusively by ἔχω + AINF.

This dichotomy makes good sense when taking into account the semantics of root possibility versus FTR. Root possibility “reports on general enabling conditions” (Bybee et al. 1994: 178, see footnote 25), which will often, though not always include a description of a *type* of action e.g., ‘I can’t dance, I have two left feet’. What is referred to here is dancing in general, not any particular instantiation of the action of dancing. Root possibility may also refer to particular instantiations of an action, though, as in the following example: ‘I can’t dance when you keep stopping the music!’ which may account for the fact that both PINFs and AINFS occur in $\xi\chi\omega + \text{INF}$ with root possibility meaning. In contrast to these meanings, the future meaning will often refer to an instantiation of a situation in time and therefore be more compatible with the token-referring AINF. From a structuralist point of view then, it is not surprising that these different functions of $\xi\chi\omega + \text{INF}$, which make up an oppositional relation of (mostly) type-reference versus (mostly) token-reference, will find different expression in $\xi\chi\omega + \text{PINF/AINF}$ versus $\xi\chi\omega + \text{AINF}$. Compare the two following examples:

- (7) ἐπὶ τῶν ἀρχαίων βασιλέων οὐκ ἔχω λέγειν
 PREP DA ancient kings NEG have speak-PINF
 ‘about the ancient kings I cannot speak’
 p.lond.6.1912, letter from the emperor, AD 41
- (8) καὶ ἐλπίζω εἰς τὸν θεὸν ὅτι ἐκάτερον ἔχει
 and hope-1SG PREP ART God that each have-3SG
προβῆναι.
 come-forward-AINF
 ‘and I hope by God that each will come forward’
 p.grenf.1.64, official letter, AD VI/VII

Ex. 7 illustrates the general enabling conditions of root possibility: the emperor was not present in the country during the reign of the Ptolemies and that impedes him from speaking, in general, about the ancient kings (the Ptolemies). Ex. 8 refers to future instantiations of the action of coming-forward.

From around the 7th–9th centuries AD, instances begin to appear of $\xi\chi\omega + \text{PINF}$ with FTR (see the examples in Markopoulos 2009: 102; Bekker 1838: 697; Moravcsik 1967: 208). However, by this time, $\xi\chi\omega + \text{INF}$ with root possibility meaning is quite rare (Markopoulos 2009: 100–104); therefore, there is no longer any need to distinguish formally between FTR and root possibility. Thus, it is plausible that the development of an aspectual dichotomy in $\xi\chi\omega + \text{INF}$ with FTR was helped along by the increasing rarity of $\xi\chi\omega + \text{INF}$ with root possibility

meaning. It is not likely that the causality process was the reverse, i.e. that the expression of aspect in $\epsilon\chi\omega$ + INF with FTR caused the root possibility construction to decrease in frequency, since the process of decrease had begun as early as AD V (cf. Markopoulos 2009: 63, 67, 101).

However, the development of aspect in $\epsilon\chi\omega$ + INF with FTR is by no means surprising, since the aspectual dichotomy is a general feature of the Greek verbal system. The surprising fact was the *lack* of presential forms in this periphrasis in EBG.

4.2.4 Μέλλω + INF

Μέλλω + INF was the first of the three future periphrases discussed in this article to gain FTR. It was used extensively with this meaning from HomG until EBG and can be found in later texts too, primarily in texts using a classicizing standard of Greek (Markopoulos 2009: 90, 121; Joseph 1983: 58).

The meaning of the periphrasis does not seem to change radically from the AD I to the AD VI papyri. In both periods, μέλλω + INF has FTR, frequently with the meaning of 'being about to' as in example 9, and occasionally with an additional nuance of intention.

- (9) καὶ μέλλων τελευτᾶν ὁ πατήρ μου ἐκέλευσεν ...
and is-about-to-PPTC die-PINF ART father my ordered
'and as my father was about to die he ordered ...'
p.oxy.1.131, private letter, AD VI–VII

A count of the different INFs gives the following numbers:

TABLE 3 Μέλλω + AINF/PINF in
AD I and VI

	Aoristic	Presential
AD I	7 (23 %)	24 (77 %)
AD VI	17 (63 %)	10 (37 %)

The increase in frequency between AD I and VI in the use of the AINF in μέλλω + INF at the expense of the PINF is quite dramatic and statistically significant ($\chi^2(1) = 9.70165$, $p = 0.00184$). An interesting additional fact about the pattern of complementation of μέλλω is that, not only does the use of aspect change over time, it also changes with the type of document in which the form is

found, i.e., with the kind of language—official or vernacular—used in the texts (see Markopoulos 2009: 53–59, 88–93 for this observation). Thus, the PINF is more frequent in documents written in an official standard than it is in the vernacular documents, in both AD I and VI, which suggests that the increase in frequency of the aoristic aspect is a bottom-up type of change, starting among the less educated and only later finding its way to the scribes of the documents containing more official and/or archaic language. Fig. 4 shows the distribution of AINFs and PINFs in private and business letters only, in each AD I and AD VI:

TABLE 4 *Μέλλω + AINF/PINF in private and business letters (AD I and AD VI)*

	Aoristic	Presential
AD I	6 (29%)	15 (71%)
AD VI	5 (71%)	2 (29%)

Despite the higher ratio of AINFs in private and business letters compared to official documents, the ratio of AINFs still remains much lower in μέλλω + INF than in both ἔχω + INF and θέλω + INF. What could account for the extreme difference between the aspectual preferences of μέλλω + INF on the one side and ἔχω + INF and θέλω + INF on the other?

I propose that the answer to this question lies in the particular semantics of μέλλω. Unlike θέλω and ἔχω which are both dependent on their infinitival complements for the meaning of FTR to become effective, μέλλω contains FTR in and of itself. Accordingly, the function of the INF is simply to denote the action that will take place in the future, i.e., the content of the lexeme which the INF represents. This function of the INF is clearly type-referring, which makes μέλλω highly compatible with the presential aspect. Ex. 10 shows this usage of μέλλω + INF:

- (10) ὁ δὲ τῆς Βακχιάδος ἀρχέφοδος Πασίων καὶ οἱ πρὸς τῇ
 ART but ART Bacchias-GEN archephodos Pasion and ART PREP ART
 πύλῃ ἐκώλυσαν ἡμᾶς ἥδη μελλόντων τοὺς αἰτίους
 gate prevent-A-PAST us just is-about-to-PPTC ART culprit
 καταλαμβάνειν παρ' ἑαυτοῖς
 take-PINF PREP themselves

‘but the archepodos of Bacchias, Pasion, and the guards stationed at the gate prevented us just as we were about to take the culprits in their own home’²⁸

p.mich 6.421, petition, AD 41–54

Μελλόντων in and of itself indicates FTR (with the special nuance of ‘being about to’). *Καταλαμβάνειν*, then, does not relate to time, but merely denotes ‘taking’ as a timeless action.

However, as noted, there are several instances of μέλλω + AINF, such as the following:

- (11) τὰς δοκοὺς τῆς ἐξέδρας, ἐὰν μέλλητε δοκῶσαι
 ART rafters ART hall if is-about-to-2PL furnish-with-rafters-AINF
 λίβα ἐπ’ ἀπηλιώτην βάλετε
 west PREP east put-IMPER-2PL
 ‘And if you are going to furnish the roof with rafters, then put them west to east’

p.oxy.67.4624, private letter AD I

Over all, there does not seem to be any specific patterning at work to distinguish the use of μέλλω + PINF from μέλλω + AINF on the basis of e.g., different modal meanings of the periphrasis. Rather, the aspectual pattern of the periphrasis seems in many ways to follow the same principles as those of θέλω/ἔχω + INF, except for the mentioned fact that due to semantic differences μέλλω is more compatible with PINFs than θέλω or ἔχω is. The reason for the AINF in ex. 11, then, would be that the writer refers to a certain action in time (of furnishing a hall with rafters), and that he does not feel that the semantics of μέλλω weighs heavy enough for the AINF to be substituted by a PINF.

The subsequent increase in frequency of μέλλω + AINF at the expense of μέλλω + PINF, verifiable in AD VI, follows the pattern of the general increase in frequency of aoristic forms at the expense of presential (see 4.2.2), only, with regard to μέλλω + INF the increase is more dramatic. By AD VI, the particular semantics of μέλλω, i.e. the meaning ‘being about to’ may have been opaque to some language users. Thus, the Greek-writing governor of Egypt Qurrah ben Sharik (in office 709–715 AD) is responsible for 29 instances of μέλλω + AINF in AD VIII, none of them with the meaning ‘being about to’. Nevertheless, in

28 Translation from DDBDP at <http://www.papyri.info/ddbdp/p.mich;6;421>.

AD VI/VII, several language users were still conscious of the nuance ‘being about to’ in μέλλω + PINF (cf. ex. 9) as well as in μέλλω + AINF:²⁹

- (12) οἱ ζυγοστάτοι ὥς ἐνταῦθα μέλλοντες πάλιν παραδοῦναι
 ART public-weighers thus here is-about-to-PTC again give-AINF
 τὰ χρήματα
 ART money
 ‘As the public weighers were thus about to give money here’
 Business letter, SB.6.9285, AD 550–599

Thus the reason behind the increase of AINFs at the expense of PINFs in μέλλω + INF is most likely the analogical process set off by the general increase in aoristic forms in the Greek verbal system (cf. 4.2.2). The increase was delayed several centuries in this particular periphrasis because of the semantics of μέλλω, but even though μέλλω + INF does not seem to have undergone any significant semantic reduction by AD VI compared to CG, the numbers in tables 3 and 4 reveal that by this period even μέλλω + INF had bowed—at least to some degree—to the pressure of the aoristic forms.

5 Conclusions

The overall picture of aspectual usage in the HRG and EBG future periphrases is as a series of heterogenic patterns: the developments of obligatory aspectual distinctions in the periphrases proceed along very different paths just as the chronology of the implementation of aspectual distinction is very different.

Μέλλω + INF was the first of the three periphrases to adopt FTR, but it did not reflect the perfective/imperfective opposition in the same manner as the later future periphrases θέλω + INF and ἔχω + INF. Unlike these latter two, μέλλω was frequently followed by the PINF, a fact that was explained by the particular semantics of μέλλω: the central meaning of μέλλω is FTR, thus, μέλλω is not dependent on an infinitive for the FTR to become effective. Accordingly,

29 For μέλλω + AINF with the nuance of *be about to* see also the following AD VI papyri: p.cair.masp.1.67096, p.cair.masp.3.67353, p.lond.3.1037, p.lond.5.1682, p.muench.1.6 (2 occurrences), psi.1.76 (2 occurrences), sb.6.9616. For μέλλω + PINF with the nuance of *be about to* see the following AD VI papyri: p.ant.3.198, p.oxy.1.131, p.petra.1.3, p.petra.1.4, p.petra.1.5 (2 occurrences), psi.8.872.

the function of the infinitive complementing μέλλω is not to express FTR, but merely to denote the action inherent in the lexeme of the infinitive; and for this purpose the type-referring PINF is highly suitable.

Ἐχω + INF develops FTR in HRG. However, it does not seem to distinguish aspect until LBG, but invariably uses the AINF for FTR, possibly to separate different meanings of ἔχω + INF, i.e., those instances that focus on tense (the instances with FTR), and those meanings that do not (the instances expressing root possibility). Thus, I hypothesize that, in EBG, when the periphrasis indicates FTR it always contains an AINF, but when it indicates root possibility it *either* contains an AINF or a PINF.

Θέλω + INF appears with FTR in EBG, but already distinguished aspect in CG when the periphrasis carried the meaning of volition. With regard to both θέλω + INF and μέλλω + INF, an increase in the number of AINFs at the expense of PINFs took place from CG to AD I and from AD I to AD VI. This increase was explained as part of the general aspectual shift, where aoristic forms in the infinitive, the past tense, the subjunctive, and the imperative increased their ratio vis-à-vis presential forms, a change that is likely to have begun in the finite forms and later spread to the INFs.

Based on the diverse paths which these three seemingly parallel periphrases followed towards overtly distinguishing between a perfective and an imperfective meaning, it is not possible to link FTR to either the presence or the absence of aspect, nor to any particular aspect; even though FTR is all about placing events in time, language users sometimes adopt future referring constructions that call for type-referring modes of expression.

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