

## THE PERIPHRASTIC PERFECT IN ANCIENT GREEK A DIACHRONIC MENTAL SPACE ANALYSIS\*

### ABSTRACT

In the present article, I apply Fauconnier's *Mental Spaces Theory* to the diachronic analysis of the Ancient Greek periphrastic perfect. I argue that the periphrastic construction started out as a 'resultative' perfect, with FOCUS and EVENT located in the same mental space. I show that, contrary to what is sometimes believed, the construction was not limited to a purely stative meaning, but underwent the cross-linguistically attested semantic shift from resultative to anterior, whereby an additional non-FOCUS EVENT-space was constructed. In fourth-century Classical Greek, we witness the further extension of the periphrastic construction with regard to semantics, morphology and discourse context. I close the article with some remarks on the possible aoristicization of the periphrastic perfect.

**Keywords:** Ancient Greek, periphrasis, perfect, diachrony, *Mental Spaces Theory*

### 1. INTRODUCTION

#### 1.1. The periphrastic perfect

The past decade has seen a renewed interest in the Ancient Greek perfect, resulting in the publication of several important articles and monographs dealing with both synchronic and diachronic aspects. Mention can be made, among others, of Drinka 2003; Gerö & von Stechow 2003; Ruijgh 2004; Haug 2004, 2008 and Orriens 2009. As Gerö & von Stechow (2003:251) indicate, we have good reason for studying the Ancient Greek perfect: as is well known, Ancient Greek, with its long history of written sources, offers a unique opportunity for extensive diachronic research of linguistic phenomena. Surprisingly, however, the Ancient Greek perfect has – up until recently – somewhat escaped the attention of modern linguistic research.

The present paper is not so much concerned with perfects of the type *λέλυκα* "I have released", which are commonly called 'synthetic' perfects, but rather with those of the type *λελυμένος ἐστίν* "he is released",<sup>1</sup> consisting of a form of the verb *εἰμί* "I am" and the perfect participle. The latter type, known as the 'periphrastic'<sup>2</sup> (or 'analytic') perfect, has

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\* Parts of this paper were presented at the *6th Athens Postgraduate Conference* (Athens, May 13-5, 2011). I would like to thank Wolfgang de Melo, Mark Janse and three anonymous referees of *Transactions of the Philological Society* for their insightful comments. Thanks are also due to Gilbert Bentein for his help with the database. My work was funded by the *Special Research Fund* of Ghent University (grant nr. 01D23409).

<sup>1</sup> The reference grammars indicate that the periphrastic perfect is suppletive in the third person plural of the medio-passive indicative perfect and pluperfect of consonant-final root verbs, and the medio-passive subjunctive and optative perfect. As we will see, it could also be used with other types of verbs, in other persons, tenses and moods, and with the participle in the active voice.

<sup>2</sup> There has been quite some discussion about the identification of verbal periphrasis and its definition as a grammatical concept, both with regard to Ancient Greek and cross-linguistically (cf. Haspelmath 2000; as for participial periphrasis in Ancient Greek, contrast e.g. Porter 1989, who only accepts constructions with *εἰμί* as periphrastic, with Dietrich 1973, who describes a broad range of 'periphrastic' constructions with a variety of finite verbs such as *γίγνομαι* "I become", *ἔρχομαι* "I go", *ἔχω* "I have", *τυγχάνω* "I am, happen to be"). Following Bentein (2011a), I consider verbal periphrasis a prototypically organized category, with some constructions constituting central or 'prototypical' members, and others more peripheral ones (some key criteria being 'conceptual integration', 'syntactic contiguity' and 'paradigmatic integration'). From a

been surprisingly little studied as a construction in its own right. It has, however, a long history, going back at least to eighth-century Homeric formations such as μειγμένον ἔστιν “it is mixed” (Hom., *Od.* 8.196). From a cross-linguistic point of view, it is certainly not uncommon for the perfect to be expressed periphrastically (cf. e.g. Dahl 1985:129; Lindstedt 2000:368). While much has been written about the subject, it should be noted that most modern linguistic studies have concentrated almost exclusively on (active) HAVE-perfects.

When it comes to the diachronic semantics of the periphrastic perfect in Ancient Greek, the *communis opinio* seems to be that the construction with εἰμί primarily had a ‘stative’ meaning (Aerts 1965 uses the term ‘situation-fixing’; Berrettoni 1972 ‘funzione primaria’; Gerö & von Stechow 2003 ‘resultative meaning’; Ruijgh 2004 ‘toestandsfacet’). In his classic grammar, Smyth (1984[1920]:599) for example notes that “such forms ... in general denote state rather than action” (cf. also Aerts 1965:51; Goodwin 1966[1889]:14; Ruijgh 2004:28). Consider, however, perfect forms such as ἀπολωλεκὼς εἶη “he had killed” in (1) and εἶσιν εἰργασμένοι “they have done” in (2).<sup>3</sup> Here, a stative characterization is much less appropriate: in (1) reference is made to an event which happened at an earlier time and in (2) to an event that occurred repeatedly in the past.

(1) Μαθὼν δὲ ὡς μάτην ἀπολωλεκὼς εἶη τὸν ἀδελφεόν, ἀπέκλαιε Σμέρδιν (Hdt. 3.64.2)

“And perceiving that he had killed his brother without cause, he wept bitterly for Smerdis”.

(2) ἕτεροι δὲ τῶν τοιούτων ἀμελοῦντες πολλὰ κάγαθα ὑμᾶς εἶσιν εἰργασμένοι (Lys. 16.19)

“But others who are careless of such things have done you many a valuable service”.

Such examples suggest that a more complex analysis of the periphrastic perfect is needed. In fact, the following observation made by Gerö & von Stechow (2003:272) on the synthetic perfect seems to hold true for the periphrastic perfect as well: “we have already mentioned that the proponents of traditional Greek grammar look upon the resultative use of the Perfect as more or less the *only* meaning of this tense in Posthomeric, Classical Greek. ... To be sure, the Greek Perfect during the classical period often yields a resultative reading. After closer inspection of the classical texts, however, we find practically all the different readings that are commonly associated with e.g. the English Perfect”.

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diachronic point of view, the constructions considered periphrastic in the secondary literature correspond to different degrees of grammaticalization. Note that I concentrate on the use of εἰμί as a finite verb.

<sup>3</sup> Here as in the remainder of my paper, the Greek text follows the online *Thesaurus Linguae Graecae* (<http://stephanus.tlg.uci.edu/>). The translations are largely taken from the Loeb series, sometimes slightly modified.

## 1.2. Methodology

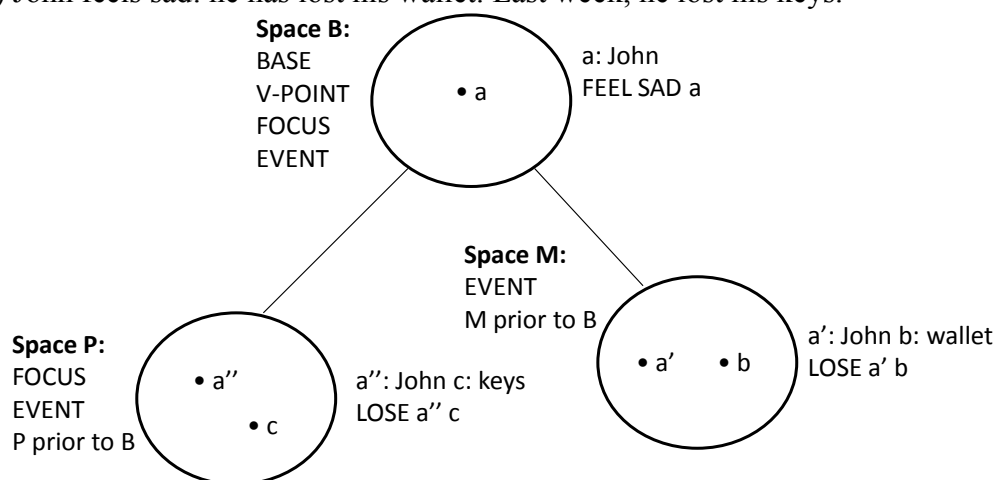
In the present paper I adopt the theoretical framework of *Mental Spaces Theory* (henceforth MST), a highly influential cognitive theory of which Gilles Fauconnier is the leading proponent (e.g. Fauconnier 1985, 1997). Since most classical philologists will probably not be familiar with the theory, I briefly introduce some key concepts, focusing on the following issues: (a) how mental spaces relate to meaning construction, (b) the specific ‘architecture’ of MST (how mental spaces are set up, what their internal structure looks like and how they are interconnected), and (c) the role of tense and aspect. I close this section by considering the main advantages of adopting this framework.

MST is a theory of how meaning is constructed (during discourse) at the cognitive level (a level independent of both language and the real world, Cutrer 1994:75). The theory posits the existence of so-called ‘mental spaces’, complex but temporary conceptual domains which are assembled as a result of ongoing discourse (Evans & Green 2006:363), providing a cognitive ‘substrate’ for reasoning and interfacing with the world (Fauconnier 1997:34). The fundamental insight behind this view is that meaning is partitioned into distinct conceptual regions (Evans & Green 2006:368), which are interconnected in various ways. Linguistic expressions give instructions for the construction of these cognitive configurations, but meaning is underdetermined (linguistic expressions have ‘meaning potential’, rather than inherent meaning): the meaning construction process is additionally guided by background knowledge and contextual information. As we will see, the fact that multiple configurations may be consistent with the linguistic information of a given utterance is important from both synchronic and diachronic points of view.

Moving on to the architecture of MST, during discourse new mental spaces are typically set up by so-called ‘space-builders’, which take on a variety of grammatical forms such as prepositional phrases, complement-taking clauses or adverbials, e.g. “in 1993”, “I believe that ...”, “actually”, ... (Fauconnier 1997:40). For example, a prepositional phrase such as “In 1993 ...” sets up what may be called a ‘time-space’, containing what happened in that period of time (e.g. “[In 1993] John wrote a great novel”). Each mental space has an internal structure, provided by the linguistic information in a sentence. In our example, the proper noun “John” and the noun phrase “a great novel” set up two new elements. Such mental space elements are connected by the lexical information in a sentence to corresponding semantic frames, which form part of the speaker’s background knowledge (Cutrer 1994:61). In our specific case, the verb form ‘wrote’ invokes a semantic frame from background knowledge with two semantic roles, one for the writer (the agent) and one for what is written

(the theme). When a new mental space is constructed, it will be subordinate ('daughter') to another so-called 'parent' space. Since each mental space can itself serve as a parent, and a parent can have multiple offspring, typically an elaborate network of interconnected mental spaces is set up. Crucial in this regard are four so-called 'discourse primitives', 'BASE', 'FOCUS', 'V-POINT' and 'EVENT', which indicate the status of a mental space at a given point in discourse: a BASE-space can be defined as the initial space or deictic center, a V-POINT-space as the space from which others spaces are built or accessed, a FOCUS-space the space about which the sentence is intended to say something, and an EVENT-space as the space in which the event encoded by the verb takes place (Cutrer 1994:71-5; note that one space often serves multiple purposes, e.g. with FOCUS and EVENT coinciding). Consider the mini-discourse in (3):<sup>4</sup> we start from BASE-space B, which also contains the other discourse primitives, and is structured by the expression "feel sad". While this space is kept in FOCUS, information is added through a past EVENT-space that John has lost his wallet. In the third sentence, the space builder "two years ago" constructs a past EVENT-space P, to which FOCUS, the centre of our attention, also shifts. V-POINT, however, remains in B:<sup>5</sup> the event (John losing his keys) is viewed from an exterior perspective.

(3) John feels sad: he has lost his wallet. Last week, he lost his keys.



The discussion of example (3) already shows the importance of the tense-aspect system: tense and aspect play a fundamental role with regard to the organization and construction (in the absence of explicit space-builders) of mental spaces (Cutrer 1994:67). Cutrer (1994) recognizes a number of putatively universal tense and aspect categories, 'present', 'past', 'future', 'perfect', 'progressive', 'imperfective' and 'perfective', which she characterizes in

<sup>4</sup> For ease of reference each mental space is given a capital letter, but there is no convention as to which capitals are used.

<sup>5</sup> While in this particular example the V-POINT-space and BASE-space are identical, this need not necessarily be the case. Adding an imperfective past to the discourse (e.g. "[last week, he lost his keys] when he was jogging") would cause an additional shift of V-POINT.

terms of the constraints they impose on the space configurations built during discourse (Cutrer 1994:68). In summary, the tense categories present, past and future put a space in FOCUS and indicate certain relational (temporal) properties vis-à-vis V-POINT (not-prior, prior or posterior to V-POINT) (in (3) the past tense of “lost” (the second “lost”, that is) indicates that P is in FOCUS and prior to B). The aspectual categories perfect, progressive, imperfective and perfective, on the other hand, do not put a space in FOCUS (for which they rely on the tense category with which they combine), but give information about the arrangement of V-POINT and FOCUS: imperfective and perfective indicate that a FOCUS-space does or does not contain V-POINT (in (3) the imperfective “feels sad” indicates that B contains V-POINT). Perfect and progressive cue construction of an EVENT-space, which does not contain FOCUS, and whose time is prior to or includes a parent V-POINT (in (3) the perfect “has lost” cues construction of an EVENT-space M, which is not in FOCUS and which is prior to the V-POINT in parent-space B).<sup>6</sup>

I conclude this section by pointing out the main advantages of an MST-approach for studying the Ancient Greek periphrastic perfect: (a) it uses a conception of tense and aspect which is implicit in some of the major studies of the perfect (both cross-linguistically and specifically with regard to Ancient Greek), most importantly Maslov (1988), who refers to ‘temporal spaces’, and Ruijgh (2004) who discusses so-called ‘facets’; (b) it offers a precise and comprehensible terminology for a fine-grained analysis of tense, aspect, and their function at both the sentence and discourse level; (c) while it has never been applied for this purpose, MST is well-suited for diachronic research of tense-aspect systems, offering an insightful alternative perspective to well-known phenomena such as ‘reanalysis’ and ‘persistence’, and in general to the semantic development of tense-aspect markers (which follows the discourse organization principles recognized by MST, cf. Cutrer 1994:76-8).

### 1.3. Corpus

My corpus covers all the examples given by the major studies on the Ancient Greek periphrastic perfect (La Roche 1893; Kontos 1898; Harry 1905, 1906 and Aerts 1965),<sup>7</sup> amounting to a total number of 784 examples.<sup>8</sup> Taken together, these studies comprise a large part of Ancient Greek literature, both prose and poetry.<sup>9</sup>

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<sup>6</sup> As we will see below, however, the time of the EVENT-space cued by the the perfect does not necessarily need to be prior to the entire period represented by the parent V-POINT-space (cf. Cutrer 1994:91).

<sup>7</sup> It goes beyond the limits of this paper to give an exhaustive analysis of the entire Archaic and Classical Greek literature, so I have decided to rely on these studies rather than to analyze a selective sub-corpus myself.

<sup>8</sup> Not included are: (1) examples with ellipsis of a form of the verb εἶμι (which are not discussed by the studies mentioned under §1.3; moreover, it is not entirely unproblematic whether we are dealing with ‘ellipsis’ in all

## 2. THE SEMANTICS OF THE PERFECT<sup>10</sup>

Before embarking on the diachronic analysis of the periphrastic perfect, it is worth discussing the semantics of the perfect as an aspectual category.<sup>11</sup> With regard to the two main aspectual categories, perfective and imperfective aspect, scholars have proposed various ‘functions’ (also called ‘interpretations’, ‘meanings’, ‘readings’, ‘uses’, ‘values’ ... ; I follow Haspelmath 2003:212 in using ‘function’ as a neutral term). One insight which has been repeatedly brought forward in recent years is that the Ancient Greek perfect also displays a variety of functions, similar to those of the better-known English perfect (cf. Gerö & von Stechow 2003:269, 274; Ruijgh 2004:24; Haug 2008:291-4).<sup>12</sup> While some scholars heavily emphasize that ‘stativity’ is the main value of the perfect (e.g. Sicking & Stork 1996:136-7; Rijksbaron 2006:1), others have argued that it is possible to make (other and/or) more fine-grained semantic distinctions, which may be quite significant for the way particular examples are translated/interpreted. Rijksbaron (2006:36), for example, translates (4) as a ‘stative’ perfect with “Of this too the same Thucydides from Athens is the author”. Haspelmath (1992:190), on the other hand, notes that γέγραφε is a perfect in the cross-linguistic sense of the word, expressing a past event with current relevance, which he translates with “Thucydides himself has written this”.

(4) Γέγραφε δὲ καὶ ταῦτα ὁ αὐτὸς Θουκυδίδης Ἀθηναῖος (Thuc. 5.26.1)

“The history of this period has been also written by the same Thucydides”.

The specific impetus for this alternative (and, as I believe, complementary) perspective seems to have been recent advancements in cross-linguistic research on tense and aspect, especially the landmark studies of Dahl (1985); Bybee & Dahl (1989) and Bybee, Perkins & Pagliuca (1994). As Haspelmath (1992:193) indicates with regard to the Homeric perfect,

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cases); (2) examples which have been edited otherwise in the TLG-text; (3) examples which I myself do not consider periphrastic (on contextual grounds). As for the third point, I do consider examples with so-called ‘adjectival’ participles periphrastic (cf. Bentein 2011b).

<sup>9</sup> For the purposes of this investigation, the corpus can be subdivided as follows: *Archaic Greek*: Homer, Callinus, Hesiod, Homeric Hymns; *fifth-century Classical Greek*: Aeschylus, Andocides, Antiphon, Aristophanes, Euripides, Herodotus, Lysias, Pindar, Sophocles, Theognis, Thucydides; *fourth-century Classical Greek*: Aeschines, Anaxilas Comicus, Antiphanes Comicus, Aristophon Comicus, Aristotle, Demades, Demosthenes, Hyperides, Isaeus, Isocrates, Lysurgus, Plato, Xenophon.

<sup>10</sup> Note that I use the term ‘perfect’ (as a cross-linguistic category) in a broader sense than Cutrer (1994), who limits herself to what I call the ‘anterior’ perfect (cf. *infra*).

<sup>11</sup> To call the perfect an aspectual category (cf. Cutrer 1994:100) is not entirely unproblematic (for discussion, cf. e.g. Comrie 1976:52). As we will see, the anterior perfect in particular displays both aspectual and temporal characteristics, as it gives information about the arrangement of V-POINT and FOCUS, but at the same time specifies certain relational properties between parent-daughter spaces.

<sup>12</sup> It should be noted that these functions are not ‘exclusive’, by which I mean that they can be expressed by other tenses as well. The synthetic aorist, for example, can also express repetition of an event in the past, e.g. when combined with the adverb πολλάκις “often” (as in Lys. 12.41).

adopting such a cross-linguistic perspective may shed new light on questions which have concerned classical philologists since Wackernagel and Chantraine, and beyond.

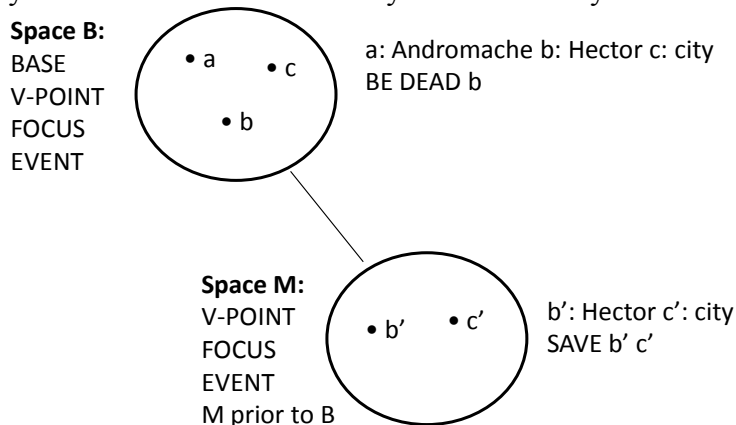
The main semantic distinction made in cross-linguistic research of the perfect is that between a so-called ‘resultative’ and ‘anterior’ perfect. Maslov (1988:64), who uses the terms ‘statal’ and ‘actional’ instead, explains that the perfect in general includes two temporal planes: that of precedence and that of sequence. When the emphasis is on the latter, we have a statal perfect, and when it is on the former, we have an actional perfect. This distinction corresponds to the traditional observation that the perfect has two components, which Duhoux (2000:429) calls the ‘composante passée’ and the ‘composante actuelle’. In what follows, I will discuss the resultative and anterior functions more in detail. My illustrations come from Ancient Greek, but are restricted to the synthetic perfect, as the periphrastic perfect will be discussed in greater detail in the third part of my paper.

## 2.1. The resultative perfect

Bybee, Perkins & Pagliuca (1994:63) define the resultative (‘statal’) perfect as follows: “A resultative denotes a state that was brought about by some action in the past”, as in “The door is closed”. This state typically concerns the subject: as Carey (1996:30) notes, the subject constitutes the ‘locus of relevance’. As an example, consider (5).

(5) ἦ γὰρ ὄλωλας ἐπίσκοπος, ὅς τέ μιν αὐτήν/ ῥύσκει (Hom., *Il.* 24.729-30)

“For you who watched over the city are no more - you who were its savior”.



In this well-known scene, Andromache stands besides Hector’s body. In BASE-space B, we have Andromache, Hector and the city (mentioned in the previous sentence). In her lamentation, Andromache first uses the resultative ὄλωλας to qualify Hector, the subject of the sentence, as dead (emphasized by ἦ) in the present space B. Thereafter, a second space is set up, to which V-POINT, FOCUS and EVENT are shifted, specifying that Hector in past time was the saviour of the city (cf. the pronoun μιν αὐτήν).

At this juncture, three observations must be made: firstly, it is important to note that what distinguishes the resultative perfect from other functions, is that the resultant state holds at ‘reference time’ (cf. Mittwoch’s 2008:324 ‘Perfect Evaluation Point’). Bybee, Perkins & Pagliuca (1994:63) illustrate with English “he is gone” and “he has gone”: only in the former case can we be certain that the resultant state still holds. Secondly, it must be stressed that the resultative perfect as defined here does not correspond to what the classic studies of Wackernagel (1904) and Chantraine (1927) call ‘resultative’ (underlining the state of the object rather than that of the subject).<sup>13</sup> Thirdly, some scholars distinguish between a ‘stative’ and a ‘resultative’ function. Nedjalkov (2001:928) notes that “the resultative differs from derived statives in that the latter express a state of an entity without implying a previous event” (cf. Nedjalkov & Jaxontov 1988:6). It can be hard, however, to make such a strict distinction, as Nedjalkov (2001:928) himself indicates referring to Ancient Greek. Nedjalkov & Jaxontov (1988:7) therefore propose to speak of the resultative in a ‘narrow sense’ and in a ‘broad sense’ (the latter including the stative and the resultative in a narrow sense). I will use the term ‘resultative’ in the latter way.<sup>14</sup>

In his recent overview article, Nedjalkov (2001:928) discusses several types of resultatives. The main distinction is that between ‘object-oriented resultatives’, “whose subject corresponds to the direct object (patient) of the base verb”, and ‘subject-oriented resultatives’, “retaining the underlying subject” (Nedjalkov & Jaxontov 1988:9 use the terms ‘subjective resultative’ and ‘objective resultative’). The distinction between these two main types is commonly (though not necessarily) reflected morphologically, in that the subject-oriented resultative takes active endings, and the object-oriented resultative passive ones. Two other types of resultatives that are relevant for Ancient Greek, as Haspelmath (1992:201-5) has shown, are the ‘possessive resultative’ and the ‘quasi-resultative’. The first type can actually be considered a transitive subtype of the subject-oriented resultative (which is mostly intransitive) (Nedjalkov 2001:928). Homeric examples are *λέλογχα* “I have obtained”, *κέκευθα* “I keep concealed” and *κέχανδα* “I contain”. The second type occurs with lexically stative verbs (mostly emotive verbs, and verbs of physical contact (Nedjalkov

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<sup>13</sup> That the term ‘resultative’ has come to be used in cross-linguistic studies to denote the opposite of what it means in several seminal works on the Greek perfect is very unfortunate. One option would be to use another term for resultative (e.g. ‘stative’, which has, however, other implications), but I believe the benefits of avoiding confusion do not outweigh those of terminological uniformity with the major recent works. When the term is used in the Wackernagel-Chantraine sense, this will be explicitly indicated.

<sup>14</sup> Drinka (1998:120-1, 123) argues that the Homeric perfect should be considered stative, rather than resultative. I will not go further into this matter here. On the semantics of the synthetic perfect in Homeric Greek, see Haspelmath 1992; Gerö & von Stechow 2003; Haug 2004, 2008 and Romagno 2005.



& Jaxontov 1988:205)), as in Homeric δέδοικα “I am afraid”, μέμηλα “I am concerned” and γέγηθα “I am glad”.

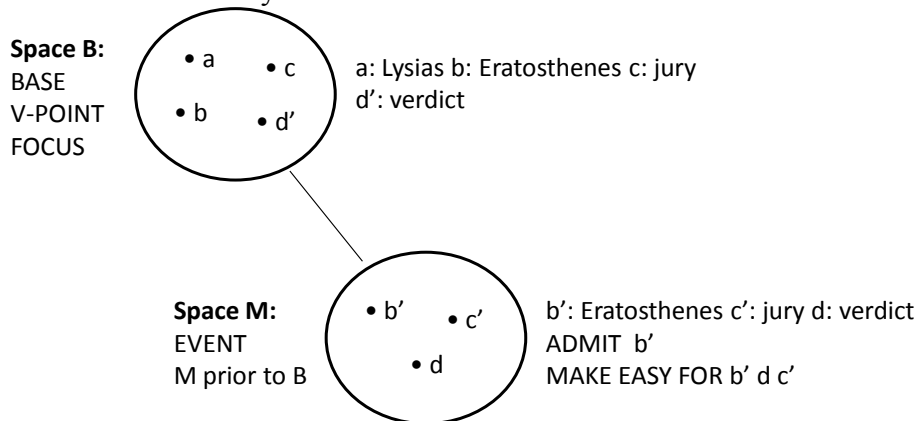
## 2.2. The anterior perfect

### *The perfect of current relevance*

Contrary to what we have seen with the resultative perfect, with the perfect of current relevance (also called ‘perfect of result’)<sup>15</sup> the ‘locus of relevance’ is not the subject, but rather the here-and-now of the discourse context. As Carey (1996:39) notes, “the ‘result’ in the case of the perfect is any present effect that the speaker construes as related to the anterior events” (with Carey 1995:85 we can call this a ‘broad result’, in contrast with the ‘narrow result’ of the resultative perfect; cf. also Dahl 1985:135). Gerö & von Stechow (2003:272) illustrate with “I have lost my glasses”, indicating that the effect of an underlying event still holds. Clearly, the perfect of current relevance is much less stative than the resultative. In MST-terms a separate EVENT-space is set up, which is temporally prior to the FOCUS-space.<sup>16</sup> Consider example (6), from Lysias’ twelfth oration.

(6) οὗτος δὲ ὠμολόγηκεν ἀδίκως συλλαβεῖν, ὥστε ῥαδίαν ὑμῖν τὴν διαψήφισιν περὶ αὐτοῦ πεποιήκε (Lys. 12.34)

“But he has admitted that he laid hands on him unjustly, so that he has made your verdict on himself an easy matter”.



<sup>15</sup> To avoid confusion with the resultative perfect, I have adopted the term ‘perfect of current relevance’ (cf. Schwenter 1994b; Lindstedt 2001) rather than ‘perfect of result’ or the like. It should be kept in mind that ‘current relevance’ (i.e. the (subjective) relevance of (an) anterior event(s) to the current discourse situation) is characteristic for all the perfect functions discussed in §2.2. With the experiential perfect and the perfect of persistence, however, there is relatively more emphasis on the subject as a locus of relevance, whereby the anterior event is less salient, while with the perfect of recent past the anterior event is much more salient, as a consequence of which the present result/effect is less emphasized (see Carey 1996 and Dahl & Hedin 2000 for current relevance as a graded concept).

<sup>16</sup> This does not mean that an EVENT-space is fully absent with the resultative, which would contradict the definition given by Bybee, Perkins & Pagliuca (1994:63) (cf. *supra*). With the resultative, however, such an event space is *implicit*, rather than explicit. Compare Keil (1963:11) and Carey (1996:33).

In BASE-space B we have, among others, Lysias himself, Eratosthenes, and the Athenian jury. The example contains two synthetic perfects: ὁμολόγηκεν “he has admitted” and πεποίηκε “he has made”. Both events occur in a past EVENT-space M, which is not further temporally specified (though in fact, Lysias refers to §25). Rather than specifying a property of the subject, these two perfects indicate that the past events are currently relevant at the time of the lawsuit against Eratosthenes.

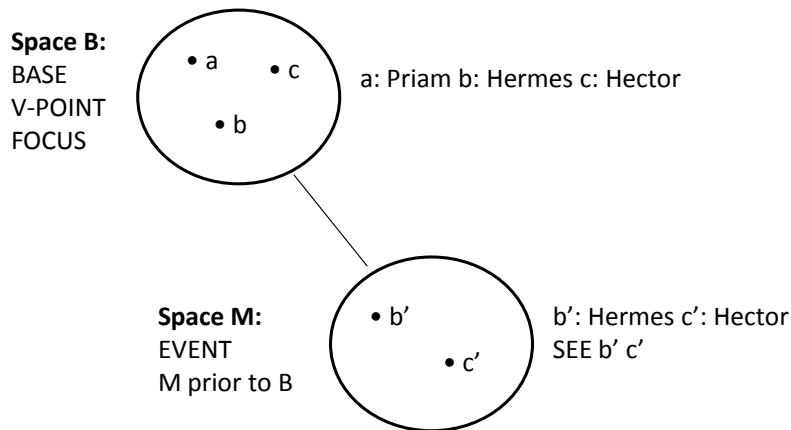
### *The experiential perfect*

The experiential perfect (also called ‘perfect of indefinite past’) indicates that certain qualities or knowledge of an agent are due to past experiences (Bybee, Perkins & Pagliuca 1994:62), as in “Matthew has heard this lecture five times”. Dahl (1985:141) defines the experiential as asserting that “an event of a certain type took place at least once during a period up to a certain point in time” (cf. Comrie 1976:58). Though these two definitions may seem quite similar, the first definition is narrower, as it presupposes an animate agent (Lindstedt 2000:369). In the context of this paper, I will use the broader definition (as such, a label such as ‘quantificational perfect’ would be more suitable; cf. Mittwoch 2008:326).

The experiential function of the perfect is well-known to grammarians of Ancient Greek. Rijksbaron (2006:37), for example, calls this the ‘totalizing’ value of the perfect, which “implies that the state is the result of a series of occurrences of the preceding state of affairs”, as in ἠδίκηκας “you are the perpetrator of a number of misdeeds” versus the aorist ἠδίκησας, “you have done a misdeed”, referring to one single misdeed. One may compare this to what Smyth (1984[1920]:435) calls the ‘empiric perfect’, Gerö & von Stechow (2003:274) the ‘generic perfect’ and Ruijgh (1991:209) ‘l’emploi totalisant-itératif du parfait’. An early example of the experiential perfect is given by Slings (1994:241) in (7) (cf. also Berrettoni 1972:113).

(7) τὸν μὲν ἐγὼ μάλα πολλὰ μάχη ἔνι κυδιανείρη / ὀφθαλμοῖσιν ὄπωπα (Hom., *Il.* 24.390-1)

“Many times have I set eyes upon him in battle, where men win glory”.



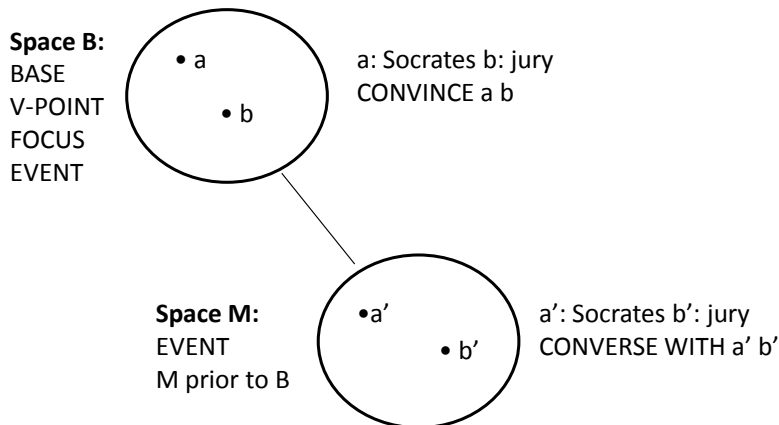
In BASE-space B we have Priam and the messenger Hermes. I assume that Hector can also be located in space B, as he has been previously mentioned (though he is no longer alive). When Priam asks Hermes who he is and from what parents, the latter answers that he has seen Hector many times in battle. This seeing-event can be located in a past EVENT-space M. Though this example might seem similar to (6), it differs in so far as Hermes does not refer to a single seeing-event that is currently relevant at the time of FOCUS-space B, but rather to a number of seeing-events, as explicitly indicated by the quantifier *μάλα πολλά* “many times”. This can well be accommodated within an MST-analysis. Cutrer (1994:207) notes with regard to the time period represented by a given EVENT-space: “since the EVENT space is a time space, the time period represented in the EVENT space may vary in size. It may represent any prior time period up until V-POINT”.

### *The perfect of persistence*

The perfect of persistence (also called ‘continuative’) indicates that an event which started in the past continues into present time, as for example in “John has been coughing since Tuesday”, where the coughing started on Tuesday, but is still true at the time of speaking. Ruijgh (1991:211) calls this ‘l’emploi totalisant-continuatif’ (comparing it with the ‘intensive’ perfect). The perfect of persistence is quite similar to the experiential perfect in that it does not refer to a temporally fixed past event. Consider example (8) (from Gerö & von Stechow 2003:274).

(8) ἀλλὰ ὑμᾶς τοῦτο οὐ πείθω· ὀλίγον γὰρ χρόνον ἀλλήλοις διειλέγεμεθα (Pl., *Apol. Socr.* 37a)

“But I cannot convince you of this, for we have been conversing with each other only a little while”.



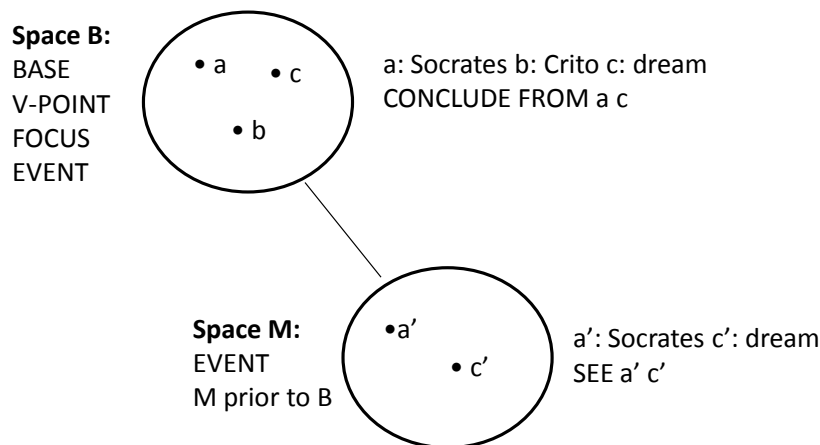
In BASE-space B, we have Socrates speaking to the Athenian jury. Socrates notes that he does not seem able to convince the jury. He goes on to explain that this is because they have only been conversing for a short while (ὀλίγον χρόνον). The conversing-event, while having started in the past, represented by EVENT-space M, is still ongoing at the time of BASE-space B. As to the temporal relationship between B and M, Cutrer (1994:207) notes that a given EVENT-space does not necessarily have to be prior to the whole time period represented by the parent FOCUS-space.

### *The perfect of recent past*

Finally, mention must be made of the perfect of recent past (also called ‘hot news perfect’), which is used to indicate that an event has just occurred, thus implying a certain emphasis, as in “the volcano has (just) erupted!” (cf. Bybee, Perkins & Pagliuca 1994:62). This function is similar to what Smyth (1984[1920]:435) calls the ‘perfect of dated past action’. An example that is often given in this context is (9), where the past event is explicitly identified by means of the adverbial ὀλίγον πρότερον ταύτης τῆς νυκτός “a little while ago in the course of this night” (cf. Slings 1994:245; Sicking & Stork 1996:156; Gerö & von Stechow 2003:252; Orriens 2009:224).

(9) τεκμαίρομαι δὲ ἔκ τινος ἐνυπνίου ὃ ἑώρακα ὀλίγον πρότερον ταύτης τῆς νυκτός  
(Pl., *Cri.* 44a)

“And my reason for this is a dream which I had a little while ago in the course of this night”.



Here, Crito and Socrates are talking about the arrival of the ship that preludes Socrates' death. Socrates believes the ship will not come on that day but rather the day after, on the basis of a dream he had. The present tense *τεκμαίρομαι* structures BASE-space B. Socrates' dream is further specified in EVENT-space M, occurring prior to B. What is especially noteworthy in this example is the adverbial *ὀλίγον πρότερον ταύτης τῆς νυκτός*, which specifies the time of occurrence of the seeing. Such temporal specification detracts attention from the present result and focuses rather on the time of the past event (Dahl & Hedin 2000:395; cf. also Cutrer 1994:71, 209 for the relationship between precise time specification and the notion of FOCUS).

### 2.3. Difficulties of differentiation

As is most often the case with linguistic categorization, the differentiation of the proposed functions is not always straightforward. To quote McKay (1965:4), "grammatical categories merge into one another. There is no question of clear-cut categories with a 'no man's land' of usage surrounding them". These are some of the specific difficulties of differentiation one encounters when studying the semantics of the (periphrastic) perfect as proposed above:

- a. *Resultative perfect versus perfect of current relevance.* It is often difficult to distinguish between these two functions, because the perfect of current relevance may give rise to a resultative inference (Haug 2008:294). Various suggestions have been made to distinguish these two functions, most notably co-occurrence with adverbs of unlimited duration such as "still", next to lexical restrictions (resultative perfects being restricted to telic predicates) (cf. Nedjalkov & Jaxontov 1988:15).
- b. *Resultative perfect versus perfect of persistence.* The resultative perfect and the perfect of persistence have a lot in common. In many cases, the resultative perfect also seems to imply that a given situation persists. Most often, the two can be distinguished on the

basis of lexical aspect: with telic verbs we are commonly dealing with the resultative perfect (cf. also Slings 1994:245).

- c. *Perfect of current relevance versus experiential perfect.* While at first sight these two functions may appear to be quite different, in practice it is often difficult to decide whether we are dealing with an experiential perfect (consisting of several well-distinguished subevents). It has been suggested that plural subjects and objects call for the experiential function (Schwenter & Cacoullos 2008:16, referring to Langacker 1996:301: “plurality reflects multiple instances of the event type”), but in some cases this seems rather artificial (e.g. δεινὰ πέπονθα “I have received a terrible treatment” or εἰς τοῦτο τόλμης ἀφίγμεθα “we have arrived at such a degree of audacity”). The latter is due to a propensity of the human mind to construe separate entities as part of a larger whole (cf. Croft 2001:337 for ‘the principle of good continuation’ in Gestalt psychology).<sup>17</sup>
- d. *Experiential perfect versus perfect of persistence.* There may be some overlap between these two functions in case of a series of events persisting up to the time of speaking (such examples will be classified as perfects of persistence).
- e. *Perfect of current relevance versus perfect of recent past.* It has been noted by a number of scholars that there seems to exist considerable overlap between these two functions (cf. Dahl 1985:133), due to the fact that there is a natural connection between the perfect of current relevance and recency (Comrie 1976:60; Dahl 1984; Dahl 1985:136). With regard to English, Michaelis (1998:157) notes that it is difficult to distinguish the two functions, and therefore only takes into account the perfect of current relevance. Haug (2008:293) similarly does not recognize the ‘perfect of recent past’ in his study of the Ancient Greek synthetic perfect. I will return to this issue at the end of my paper.

One of the strongest arguments for recognizing the functions as discussed above is the fact that they also entail different discourse functions. This perspective is adopted by Schwenter (1994b:1000-6), who convincingly argues in favour of recognizing the ‘hot news’ perfect (= perfect of recent past) because of the way it is used in discourse. The following quote elucidates his position (Schwenter 1994b:1002):

“In addition to the resultative perfect, the other functions of the perfect ... also hold very different relations to the present, when these relations are compared with that of the hot news function. The experiential perfect, for instance, focuses on the ascription

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<sup>17</sup> See also Cruse (2010:305), who notes that some verbs are intuitively classified as iterative, whereas others are not (e.g. “wiggle” versus “walk”). Both types, however, denote repeated action.

of some present property to an agent... . The continuative perfect focuses on the aspectual presentness of a situation, emphasizing that this situation persists until, or continues through, speech time. The current relevance perfect focuses on a past event that is relevant to some segment of the current, preexisting discourse situation. Thus, all of these perfect functions differ from hot news in that they highlight some type of present result, while hot news highlights an event that is ‘judged to be relevant simply on the basis of its immediacy and perceived significance’ (Carey 1991:6)”.

### 3. THE PERIPHRASTIC PERFECT IN ANCIENT GREEK<sup>18</sup>

#### 3.1. Archaic Greek<sup>19</sup>

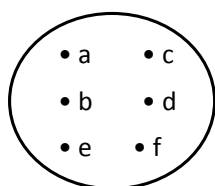
##### *The resultative perfect in Homer*

As already indicated, the periphrastic perfect has a long history, going back at least to Homer. We can hardly speak, however, of a grammaticalized periphrastic formation in this period of the Greek language (Keil 1963:44; Berrettoni 1972:110-1): the periphrastic construction constitutes what Harris & Campbell (1995:72-5) refer to as an ‘exploratory expression’.<sup>20</sup> As Drinka (2003:109) as well as many other authors indicate, the Homeric examples mostly have a ‘stative’ or in our terminology resultative character (according to Berrettoni 1972:110 the periphrastic forms would have been chosen when the author wanted to stress “una pura e semplice condizione, indipendentemente dal processo che ne è stato la causa”). By way of illustration, consider (10).

(10) καί κ’ ἀλαός τοι, ξεῖνε, διακρίνειε τὸ σῆμα / ἀμφοφόων, ἐπεὶ οὗ τι  
μεμιγμένον ἐστὶν ὁμίλῳ, / ἀλλὰ πολὺ πρῶτον (Hom., *Od.* 8.195-7)

“Even a blind man, stranger, could distinguish this mark, groping for it with his hands, for it is in no wise confused with the throng of the others, but is far the first”.

**Space B:**  
BASE  
V-POINT  
FOCUS  
EVENT



a: Athena b: Odysseus c: Euryalus  
d: blind man e: mark f: throng  
COULD DISTINGUISH d e  
BE CONFUSED WITH e f

In BASE-space B we have, among others, Odysseus, Athena and the Phaeacian youth Euryalus. Challenged by the latter, Odysseus throws the discus, and Athena (having taken the appearance of a man) responds joyfully. She notes that even a blind man could

<sup>18</sup> In their 2003 paper, Gerö & von Stechow (2003:288-9) suggest that “periphrastic constructions ... require a different semantic analysis than the synthetic Perfect”. In my opinion the ‘special meaning’ they are hinting at must be sought in the realms of markedness and information structure. With Cook (2001:121), I assume that “universal paths exist within broad semantic domains along which relevant forms develop”.

<sup>19</sup> I take into account three periods in the history of the Greek language, referred to as ‘Archaic Greek’ (8<sup>th</sup> – early 6<sup>th</sup> c. BC), ‘fifth-century Classical Greek’ and ‘fourth-century Classical Greek’. Obviously, some authors are at the intersection of two periods. Cf. note 9 for a proposal of classification.

<sup>20</sup> Cf. Harris & Campbell (1995:73): “by exploratory expressions we mean expressions which are introduced through the ordinary operation of grammar and which ‘catch on’ and become fixed expressions and eventually are grammaticalized”.

distinguish Odysseus' mark, noting that it is not at all confused with the throng. The periphrastic construction *μειγμένον ἔστιν* "it is confused" does not set up an additional space: it is used to structure BASE. Its resultative character is quite clear, as a property of the mark is indicated.

Other examples where the perfect participle is co-ordinated with an adjective well illustrate the resultative character of the construction, e.g. *ἀλλὰ φίλος φρονέων πεφυλαγμένος εἶναι* "be wise, my son, and on your guard" (Hom., *Il.* 23.343); *λευγαλέοι τ' ἔσόμεσθα καὶ οὐ δεδαηκότες ἀλκὴν* "we will be found wretched and knowing nothing of valour" (Hom., *Od.* 2.61). In such examples, *εἶμί* as a finite verb has a strong lexical value and the participle comes close to expressing an adjective-like quality. In the terminology of Croft (2001:260-8), *εἶμί* is the *primary information-bearing unit* (PIBU) (cf. also Dik 1987; Keil 1963:45 notes that the origin of the resultative construction must lie in the use of *εἶμί* as *verbum existentiae* with a conjunct participle or an adjective).

Most perfect participles that are combined with *εἶμί* in Homer have the morphologically younger medio-passive endings (Aerts 1965:38-9). As Dahl (1985:135) notes, the resultative is typically associated with the passive voice. In this context, it is interesting to note that in some cases the passive participle receives a modal meaning (a cross-linguistically attested tendency, cf. Haspelmath 1994:156-7): *εἰ δύναμαι τελέσαι γε καὶ εἰ τετελεσμένον ἔστιν* "if I am able to accomplish it and if it can be accomplished" (*Il.* 14.196; cf. also *Il.* 18.427; *Od.* 5.90; Ameis & Hentze 1920:154 suggest translating the participle with "erfüllbar") (note that this modal value may have been triggered by the conditional structure).

Quite remarkably, more than half of the Homeric examples of the resultative perfect occur with the telic verb *τελέω* "I accomplish" (e.g. *Il.* 1.212, 2.257, 8.286). We are dealing here with an idiomatic or 'prefabricated'<sup>21</sup> expression, which may have served as a basis for analogy for novel utterances (cf. Bybee 2010, ch. 4, who argues that the use of novel items in an existing pattern may be based on specific stored exemplars). With regard to the idiomaticity of the expression, it is important to note that it was not morphosyntactically fixed.<sup>22</sup> Looking at the tense of *εἶμί*, for example, we find (out of twenty indicative forms) four times the present tense, two times the imperfect, and fourteen times (!) the future.

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<sup>21</sup> Cf. Bybee (2010:35): "I will hereafter use the term 'prefab' (prefabricated expression) to refer to any conventionalized multi-word expression".

<sup>22</sup> As one of the referees points out, this periphrastic perfect does seem to be metrically fixed: it always occurs before a disyllabic form of *εἶμί* (e.g. *ἔστιν, ἦεν, εἶη*), occupying the same place in the line (i.e. from the hepthemimeral caesura to line end). Contrast, however, with what we find in examples (10), (11) and (12).

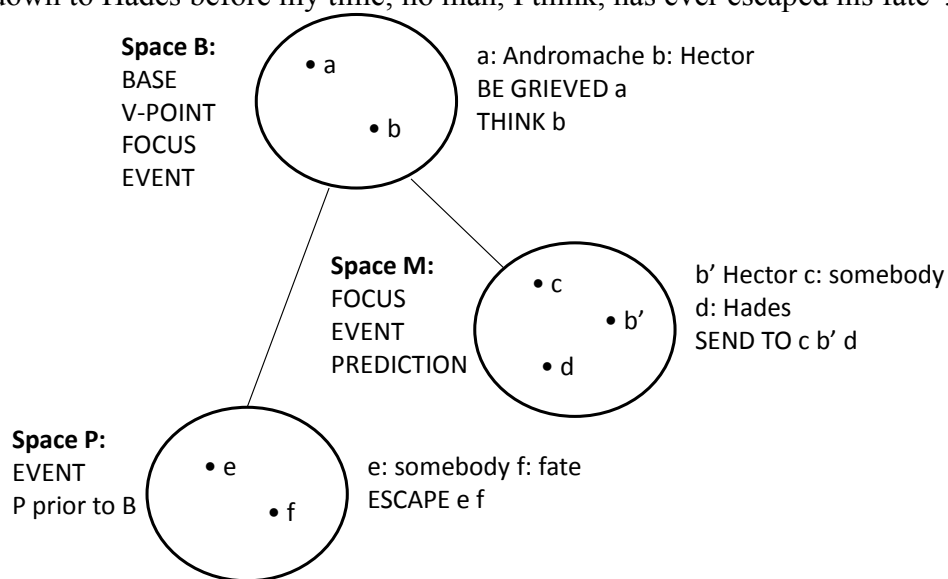


### *Anterior perfects in Archaic Greek?*

As already noted, scholars such as Slings (1994:241-3), Duhoux (2000:426-30) and Ruijgh (2004:30-3) have found early evidence of synthetic perfects with a more agentive, anterior, function in Archaic Greek (cf. Wackernagel 1953[1904]:1006-7). What about the periphrastic perfect? It would seem that in this period too, examples with an anterior perfect function can be found, though they are rare. Consider example (11).

(11) δαίμονή μῆ μοί τι λήην ἀκαχίζεο θυμῷ / οὐ γάρ τις μ' ὑπὲρ αἴσαν ἀνὴρ Ἄϊδι  
προΐάψει / μοῖραν δ' οὐ τινά φημι πεφυγμένον ἔμμεναι ἀνδρῶν (Hom., *Il.* 6.486-8)

“My own wife, do not take these things too bitterly to heart. No one can hurry me down to Hades before my time; no man, I think, has ever escaped his fate”.



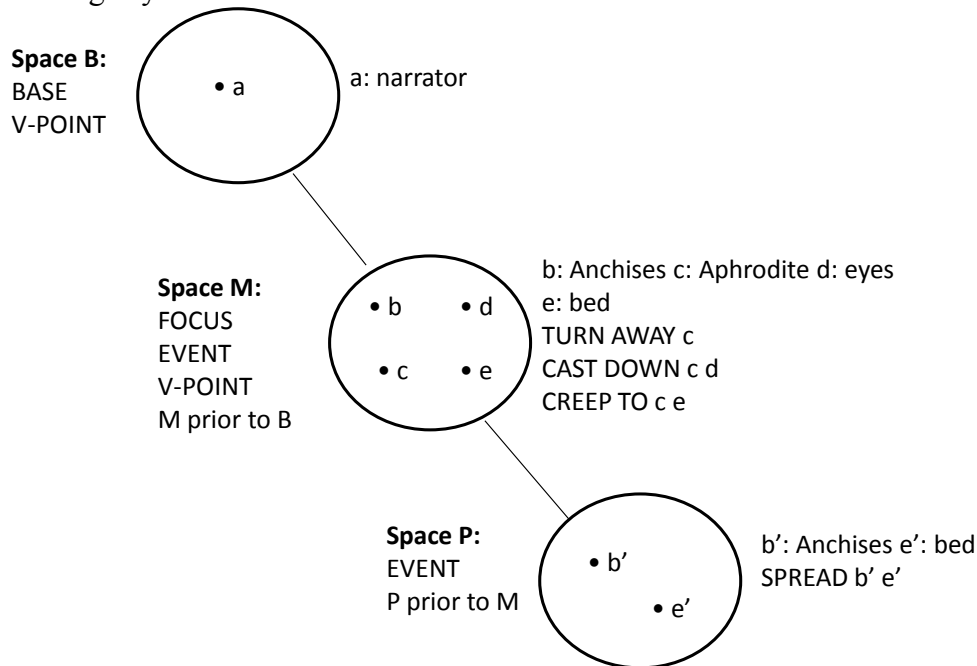
In this well-known scene, Hector speaks to Andromache, in an attempt to console her. The first verb form that structures BASE-space B is the imperative μῆ ... ἀκαχίζεο: Andromache should not be grieved too much. Two spaces are used to elaborate this statement: firstly FOCUS-space M, which contains the future form προΐάψει, indicating a prediction: nobody will send him (Hector) to Hades beyond his fate. Secondly, and in connection with this, Hector notes that nobody “has ever escaped his fate”, using an experiential perfect (πεφυγμένον ἔμμεναι). As discussed before, this type of perfect sets up an EVENT-space, which represents a time period during which the event denoted by the participle occurred a number of times prior to the time of BASE-space B. Obviously, we are confronted here with a less prototypical example, as the negation explicitly indicates that the denoted event has not (yet) occurred.<sup>23</sup>

<sup>23</sup> Alternatively, one could interpret πεφυγμένον ἔμμεναι as a perfect ‘des erreichten Zustandes’, as Ameis & Hentze do (1922:134). Compare with *Od.* 1.18 and 9.455, the latter of which could also be taken as a perfect of persistence.

For a different anterior function, the perfect of current relevance, let us have a look at example (12), where Anchises takes Aphrodite by the hand and leads her to bed.

(12) φιλομειδῆς δ' Ἀφροδίτη / ἔρπε μεταστρεφθεῖσα κατ' ὄμματα καλὰ βαλοῦσα /  
 ἐς λέχος εὔστρωτον, ὅθι περ πάρος ἔσκεν ἄνακτι / χλαίνησιν μαλακῆς ἐστρωμένον  
 (Hymn. Hom., *In Ven.* 155-8)

“And laughter-loving Aphrodite, with face turned away and lovely eyes downcast, crept to the well-spread couch which had already been laid with soft coverings by the hero”.



Evelyn-White (1914:417) seems to suggest a resultative interpretation for the periphrastic form ἔσκεν ... ἐστρωμένον: “the well-spread couch which was already laid with soft covering for the hero”. This interpretation crucially depends on the following two elements: (a) ἄνακτι would be a dative of interest rather than a dative of agent, and (b) πάρος would receive a stative meaning of “already” rather than an indefinite past meaning of “before, afortime”. Other authors, however, do not share these assumptions: Crudden (2001:70) does interpret πάρος as “already”, but with an anterior perfect: “it had already with blankets been softly spread” (cf. Faulkner 2008:226 for πάρος with iterative ἔσκεν (as in Hom., *Il.* 11.669 and Hymn. Hom., *In. Ven.* 238)), and Faulkner (2008:226) writes that it is best to take ἄνακτι as a dative of agent.<sup>24</sup> If we take it that the example contains a dative of agent and an indefinite past time adverbial, we get a three-space configuration as shown below. In BASE-space B we can locate the narrator, telling us about the events in a past FOCUS-space M: after turning her face away and casting her eyes down, Aphrodite creeps to the bed.

<sup>24</sup> One referee suggests, however, that there might be a contextual argument not do so: it is perhaps more likely that someone would have prepared the bed for the king rather than that the king would have done it himself.

About the bed, the narrator specifies that it had been spread before by Anchises, whereby the spreading-event is to be located in the time-period represented by EVENT-space P.

### 3.2. Fifth-century Classical Greek

#### *A morpho-phonological trigger*

In Classical Greek, we witness a general increase in frequency of the periphrastic perfect. The construction is ‘catching on’, to use the terminology of Harris & Campbell (1995). This development must have been – at least partially – morpho-phonologically motivated (Jannaris 1897:180 speaks of a ‘phonopathic cause’, next to an expressive one), as indicated by the data in table 1, figuring the distribution of periphrastic perfects with regard to person and number: almost all examples occur with the third person singular and plural<sup>25</sup> (note, however, that with Lysias this is less so the case; cf. §3.3. for more discussion).

*Table 1: distribution of the periphrastic perfect (person/number)<sup>26</sup>*

Author	Dates	Total	1S	1PL	2S	2PL	3S	3PL
Aeschylus	c. 525/4 – 456/5 BC	16	0	1	1	0	12	2
Sophocles	c. 496/5 – 406 BC	14	2	0	0	0	8	4
Herodotus	c. 485 – 424 BC	71	0	0	0	0	29	42
Euripides	c. 485/0 – 406 BC	17	1	2	2	0	7	5
Thucydides	c. 460/55 – c. 400 BC	31	0	0	0	0	8	23
Aristophanes	c. 460 – 386 BC	20	1	0	0	1	12	6
Lysias	?459/8 – c. 380 BC	33	2	1	1	6	6	16

Let me briefly recapitulate this well-known development in the formation of the medio-passive perfect and pluperfect. The person/number endings of the medio-passive synthetic perfect and pluperfect (perfect: -μαι (1S), -σαι (2S), -ται (3S), -μεθα (1PL), -σθε (2PL), -νται (3PL)/ pluperfect: -μην (1S), -σο (2S), -το (3S), -μεθα (1PL), -σθε (2PL), -ντο (3PL)) are used in the other tenses as well, but there they are attached to the verb stem with the help of an intervening vowel (ε and ο in the present/imperfect/future and α in the aorist). In the perfect and pluperfect, on the other hand, these endings are attached directly to the verb stem, as shown in the left side of table 2 for the vowel-final root verb τιμάω “I honour”.

<sup>25</sup> Observe that four out of seven authors have the periphrastic perfect more often in the singular than in the plural, and furthermore that these four authors are all poets. As one of the referees remarks, it would be worth examining to what extent periphrastic perfects behave differently in fifth-century prose vs. poetry.

<sup>26</sup> Authors are arranged from oldest to youngest on the basis of birth year. The dates, which are often uncertain, largely follow the *Oxford Classical Dictionary* (third edition). In general, authors with only a few examples were left out for reasons of space.

Table 2: Medio-passive perfect paradigms of the verbs τιμάω and τρέπω

	<u>τιμάω</u>	<u>τρέπω</u>
1S	τετίμημαι	τέτραμμαι
2S	τετίμησαι	τέτραψαι
3S	τετίμηται	τέτραπται
1PL	τετιμήμεθα	τετράμμεθα
2PL	τετίμησθε	τέτραφθε
3PL	τετίμηνται	τετράφαται

In the third person plural of consonant-final root verbs such as τρέπω, however, the endings -νται/-ντο became -αται/-ατο, as the regular result of the vocalisation of the nasal phoneme in interconsonantal context (Smyth 1984[1920]:16, 155): maintaining them would have resulted in a consonantal accumulation (\*τετραπνται) to which the Ancient Greeks had “an unmistakable aversion” (Jannaris 1897:91) (for the other euphonic changes in the τρέπω-paradigm, cf. Smyth 1984[1920]:24ff.). In the Homeric poems the endings -αται/-ατο can also be found after stems ending in -υ (εἰρύαται “they draw”, Hom., *Il.* 1.239) and especially after those ending in -ι (κεκλίαται “they remain”, *Il.* 16.68) and diphthong with -ι (κατακείαται “they are set on”, *Il.* 24.527) (Chantraine 1991[1945]:306).

As Chantraine (1991[1945]:306) notes, however, in Attic Greek “la désinence -νται -ντο s’est, en effet, développée aux dépens de -αται, -ατο”.<sup>27</sup> Forms such as λέλυνται, κέκλινται, κέκρινται were constantly employed, and periphrastic expressions came to be used as an alternative formation in the third person plural (Duhoux 2000:404, 436). While in early (Ionic) writers such as Herodotus the -αται/-ατο endings<sup>28</sup> and periphrasis still co-exist (e.g. with τάσσω “I assign”: προσετέταχτο “they were appointed” (1.192.4) vs. ἦσαν τεταγμένοι “they were posted” (9.49.3)), by the end of the fifth century BC the use of periphrasis with consonant-final root verbs had become the only possibility (cf. Aerts 1965:41; Rijksbaron 2006:129, based on the Attic inscriptions). The use of periphrasis also spread to vowel-final root verbs, and to the third person singular. That periphrastic forms are almost unattested in the other persons/numbers, may be taken as an indication that it was not the construction εἰμί

<sup>27</sup> Chantraine (1991[1945]:306) remarks that Ionic diverges from Attic in the sense that several examples are attested where the -αται ending has extended to vowel-final root verbs (e.g. πεπονέαται “they are occupied with” (Hdt. 2.6.3); κεκλέαται “they are called” (Hdt. 2.164.1); ἐμμενάτο “they had remembrance” (Hdt. 2.104.1); see already cases such as Homeric βεβλήατο “they had been struck” (*Il.* 14.28)). Here too periphrasis was used as an alternative formation. Compare, for example, ἐκεκοσμέατο “they were included” (Hdt. 3.91.2) with κεκοσμημένοι ἦσαν “they were ordered” (Hdt. 7.212.2).

<sup>28</sup> For additional examples, cf. La Roche (1893:218-9).

“I am” (without specification of person/number) + perf.part. that served as a basis for analogy, but specifically εἰσί/ἦσαν “they are/were” (3PL) + perf.part., which goes well with Bybee’s recent proposal for an exemplar-based theory of language change (Bybee 2010).

### *The resultative perfect*

As stressed by Aerts (1965) among others, many of the periphrastic forms found in fifth-century Classical Greek are resultatives. These are predominantly of the object-oriented type, in which the syntactic subject corresponds to the semantic object of the underlying event (on the affinity of the resultative function with the passive voice, cf. Berrettoni 1972:153; Sicking & Stork 1996:169). The examples are manifold and space does not allow full enumeration. In illustration, consider the following examples from Herodotus and Thucydides, all of which indicate a property of the subject in a one-space configuration: οἱ προμαχεῶνες ἠνθισμένοι εἰσὶ φαρμάκοισι “the battlements are painted with colors” (Hdt. 1.98.6); τότε δὲ ἦσαν μεμουνωμένοι “then they were left alone” (Hdt. 1.102.2); οὕτω μὲν τεταγμένοι ἦσαν “they were thus disposed” (Thuc. 4.31.2); κεκλημέναι τε ἦσαν πᾶσαι “they were all closed” (Thuc. 5.7.5). All of these examples are passive, object-oriented, resultatives, built on telic content verbs. In the dramatists, we observe essentially the same, though especially in Sophocles and Euripides one can find relatively more subject-oriented resultatives than in the historians<sup>29</sup> (cf. Slings 1994:243 on the dramatists’ use of the synthetic perfect). Some examples: ὁ χρησμὸς οὐκέτ’ ἐκ καλυμμάτων ἔσται δεδορκῶς “my prophecy will no longer be watching from behind a veil” (Aesch., *Ag.* 1178-9); χούτος τεθνηκῶς ἦν “he too was dead” (Soph., *Phil.* 435); ὡς τότε ἦσθ’ ὠργισμένος “you were then so enraged” (Eur., *Hipp.* 1413); τοῦτο δ’ εἰς ἓν ἔστι συγκεκυφός “it is drawn together to one” (Ar., *Eq.* 854).

We have seen that in Archaic Greek εἰμί can often be considered the *primary information-bearing unit*: it retains much of its lexical value. The same can be noted for Classical Greek: the construction represents what Slobin (1994:126) calls an ‘adjectival structure’. Semantically, this means that the participle is similar to a regular adjective, in that it expresses a property of the subject. Note again the frequent co-ordination of resultative perfect participles with true adjectives, as in example (13).

(13) ... ἕως ἔτι ἀπαράσκευοὶ τε εἰσὶ καὶ μάλιστα ἐκπεπληγμένοι (Thuc. 6.49.1)

“... while the inhabitants are still unprepared and very much panic-struck”.

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<sup>29</sup> This difference is partly reflected in the number of active versus medio-passive (resultative) perfect forms. In poetry 10/37 forms (27%) are active and 27 out of 37 (73%) medio-passive. In proze only 8/54 forms (15%) are active while 46/54 (85%) are medio-passive.

As a reflection of the relative independence of finite and non-finite verb (cf. Bybee 2010:136 for meaning as the main determinant of syntactic co-occurrence), we can note a low degree of bondedness between the component parts (Lehmann 1995). One characteristic of so-called ‘stative syntax’ is the placement of temporal/locational adverbials inside the verbal group. Let us have a look at two examples. In (14) the chorus uses the subject-oriented ἔστιν βεβακῶς “he has gone (and still is)” to indicate that Alcmena’s son has taken his place in heaven. In (15) Xerxes utters a curse by which he denies his origins when not taking vengeance on the Athenians: Μὴ εἶην γεγονώς “May I not be descendant”. Twice a form of εἶμί is fronted, with the locative adverbial and the perfect participle following (note that the preposition used in (15) is ἐν “in” and not εἰς “into”, but the difference is difficult to render in (good) English).

(14) ἔστιν ἐν οὐρανῶι βεβακῶς ὁ σὸς γόνος, ὦ γεραιά (Eur., *Heracl.* 910-12).

“Your son has gone into heaven, old lady”.

(15) Μὴ γὰρ εἶην ἐκ Δαρείου τοῦ Ὑστάσπεος τοῦ Ἀρσάμεος τοῦ Ἀριαράμνεω τοῦ Τεῖσπεος τοῦ Κύρου τοῦ Καμβύσεω τοῦ Τεῖσπεος τοῦ Ἀχαιμένεος γεγονώς (Hdt. 7.11.2)

“May I not be descendant of Darius son of Hystaspes son of Arsames son of Ariaramnes son of Teispes son of Cyrus son of Cambyses son of Teispes son of Achaemenes”.

What is also clear in these and other examples (even without adverbials) is that the participle functions as a kind of ‘afterthought’, which is to be expected given the stative character of the construction. Harry (1905:350) notes with regard to (16) that “the participle is an afterthought, the predicating idea reasserting itself”.

(16) οὐδ’ ἔστιν ἄθλου τέρμα σοι προκείμενον; (Aesch., *PV* 257)

“And is there no end assigned to your ordeal?”.

In what is still the reference work on periphrasis in Ancient Greek, Aerts (1965) denies the periphrastic character of many examples on the basis of the fact that the participle is ‘appositive’. Moreover, he seems to a priori exclude expressions with locative adverbials when he notes that “with adjuncts of place, therefore, it is mainly a question of an independently used εἶναι with a participium conjunctum” (Aerts 1965:9). In my own opinion, this position is methodologically opportunistic and in need of revision. In noting the complexity of the perfect, Ruijgh (2004:29) makes the important observation that locative and temporal adverbials can appertain either to the resulting state or the prior event, the

former of which he illustrates with (17). No doubt, if this example had read οὔσαις ... καταπεφευγυίαις, its periphrasticity would have been questioned.

(17) ταῖς δὲ λοιπαῖς ἐν τῇ γῆ καταπεφευγυίαις ἐνέβαλλον (Thuc. 4.14.1)

“They charged the rest that had taken refuge on shore”.

*From resultative to anterior: from a one-space to a two-space configuration*

It is well-known that in Classical Greek the synthetic perfect underwent a diachronic shift, which the earlier studies of Wackernagel (1953[1904]) and Chantraine (1927) interpret in terms of the rise of a ‘resultative perfect’ (not to be confused with our resultative perfect), emphasizing the state of the object rather than that of the subject. Following the more recent, cross-linguistically oriented study of Haspelmath (1992), we may speak of a shift from resultative to anterior, which in MST-terminology comes down to a shift from a one-space to a two-space configuration, whereby an additional non-FOCUS EVENT-space is constructed.

I argue that the periphrastic perfect underwent the same semantic shift, though this has largely escaped the notice of previous scholarship, which has stressed the ‘stativity’ of the construction. Rijksbaron (2006:129), for example, notes that “the periphrastic perfect is mainly formed with the passive perfect participle, and, in the active, with participles of intransitive verbs”. There would only be very few instances with an active participle of a fully transitive verb, among others (18): ἦν κεκομικῶς “he had carried”.

(18) καὶ δὴ καὶ ἐκ Καρδίας πόλιος Οἰόβαζος ἀνὴρ Πέρσης, ὃς τὰ ἐκ τῶν γεφυρέων ὅπλα ἐνθαῦτα ἦν κεκομικῶς (Hdt. 9.115.1)

“Among them there was a Persian named Oeobazus from Cardia, who had carried the equipment of the bridges there”.

Closer examination shows that the active transitive perfect (with an anterior meaning) is indeed rather uncommon in fifth-century writers (the latter is an important addition, which Rijksbaron does not make), but that nonetheless example (18) does not stand on its own: various examples of active transitive<sup>30</sup> perfects can be found in writers such as Sophocles, Herodotus, Thucydides, Aristophanes and Lysias. In Herodotus, for example, we find several examples (mostly in the subjunctive or optative mood) with highly agentive (transitive, in Rijksbaron’s terminology) verbs such as, ποιέω “I do”, αἰρέω “I seize” and

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<sup>30</sup> I use ‘transitive’ here in the traditional sense of the word, i.e. as determined by the presence of an accusative object or complement clause. As Chantraine (1927:73) and McKay (1965:3) correctly observe, it is somewhat arbitrary to exclude genitive and dative objects, and those verbs where an object is possible but not expressed.

ἀπόλλυμι “I destroy”, as in (19). In Thucydides, Aeschylus, Lysias and Aristophanes, one can also find examples of medial verbs taking an object.

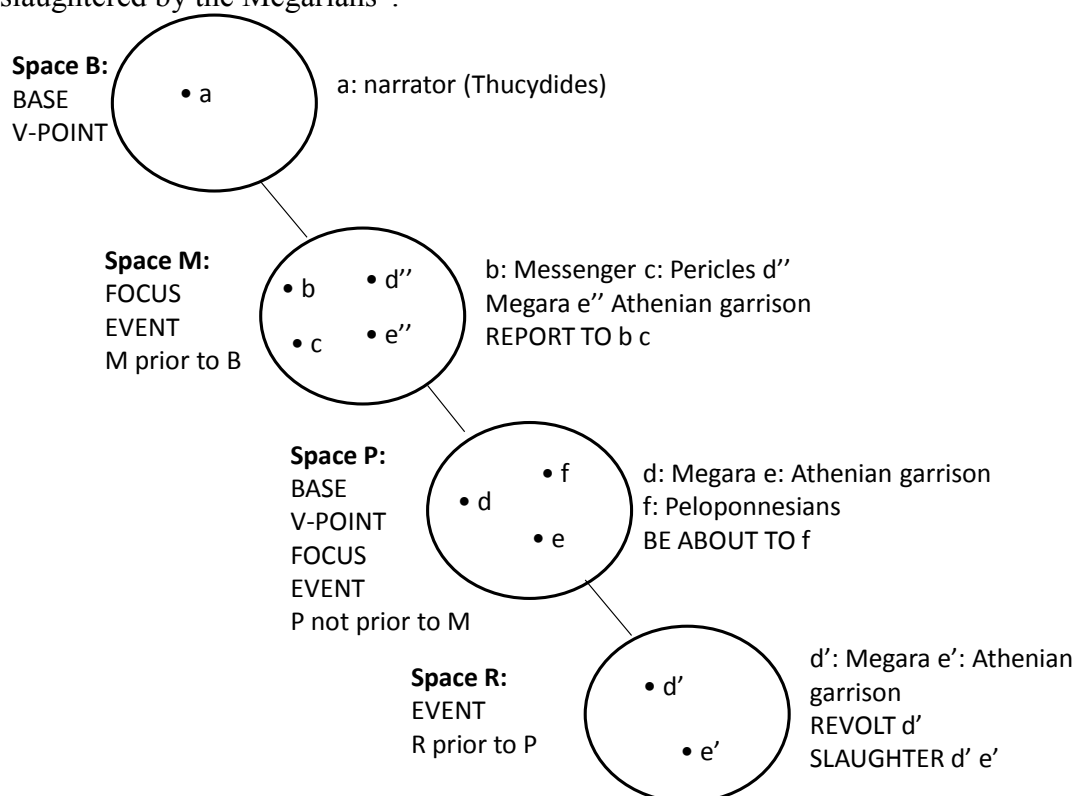
(19) ... λέγων τὴν τε προτέραν ἑωυτοῦ συμφορὴν, καὶ ὡς ἐπ’ ἐκείνη τὸν καθήραντα ἀπολωλεκὸς εἶη (Hdt. 1.45.1)

“... mentioning his former misfortune, and that on top of that he had destroyed the one who purified him”.

What is arguably even less well-known is the fact that in many cases the old resultative forms (that is, transitive verbs with passive endings, and intransitive verbs with active ones) have also undergone this semantic shift. Consider (20), where we find the periphrastic διεφθαρμένοι εἰσίν.

(20) ἠγγέλθη αὐτῷ ὅτι Μέγαρα ἀφέστηκε καὶ Πελοποννήσιοι μέλλουσιν ἐσβαλεῖν ἐς τὴν Ἀττικὴν καὶ οἱ φρουροὶ Ἀθηναίων διεφθαρμένοι εἰσὶν ὑπὸ Μεγαρέων (Thuc. 1.114.1)

“It was reported to him that Megara had likewise revolted, that the Peloponnesians were on the point of invading Attica, and that the Athenian garrison had been slaughtered by the Megarians”.



While this periphrastic form would be a prime candidate for a resultative interpretation (“they are destroyed”), clearly this is not the case: in fact we are dealing with a passive anterior perfect. Consider the rather elaborate MST-representation. In FOCUS-space M, a messenger brings Pericles news. In what follows, the use of the present tense in the complement clause (which would have been used in direct speech, cf. Rijksbaron 2006:51),



brings about a temporary shift in BASE and V-POINT (that of the messenger). The message is threefold, but for the duration of the complement-clause FOCUS remains in space P, which is the main space of meaning construction. Two elements are reported in the perfect tense: ἀφέστηκε “it has revolted” and διεφθαρμένοι εἰσὶν “they have been slaughtered”. In both cases, a separate EVENT-space is constructed, which in the case of the periphrastic perfect is reinforced by the agent-marker. In both cases, the here-and-now of the discourse context is the locus of relevance, that is, the time of past spaces M and P.

In general, the anterior perfect of fifth-century Classical Greek occurs with lexically telic predicates, though it can also be found with atelic ones, both in the active and the passive voice. In this case, however, the periphrastic perfect commonly takes the experiential or the perfect of persistence function, rather than that of perfect of current relevance. Some examples are κτίζω ἄστεα/τείχεα “I establish cities/forts” in (21) and συνναυστολέω: “I sail with” in (22).

(21) Τοῖσι γὰρ μήτε ἄστεα μήτε τείχεα ἦ ἐκτισμένα ... (Hdt. 4.46.3)

“For they, by whom there have not been established cities or forts ...”.

(22) ὡς <δ’> ἤκουσα τοὺς ναύτας ὅτι σοὶ πάντες εἶεν συνναυστοληκότες (Soph., *Phil.* 549-50)

“For when I heard that the sailors had all sailed with you ...”.

### *Agentivity*

Many studies, with regard to both Ancient Greek and other languages, describe the semantic shift from resultative to anterior in terms of temporality. Schmidt (1964:17), for example, writes the following: “Fassen wir unsere Ergebnisse zusammen, so läßt sich sagen: Das Zustandperfekt wandelte sich in den idg. Sprachen zum Tempus Präteritum”. While there is indeed a tendency for aspectual forms to be reinterpreted as expressing tense distinctions (cf. Dik 1987:61), I believe Slobin (1994:124) is quite right in cautioning (with regard to English) that the perfect, having developed from resultative to anterior, did not simply come to express a past event: “the hallmark of the [anterior, KB] perfect is its Janus-like attention to both past process and present circumstance”. Such a statement is easily explicable when turning to MST: as I have shown above, the anterior perfect cues the construction of an additional EVENT-space, but FOCUS, the center of attention, does not shift.

I believe it is more correct, and in fact crucial to our understanding of the diachrony of the (periphrastic) perfect, to discuss its development in terms of ‘transitivity’ (Hopper &

Thompson 1980), or, as I prefer ‘agentivity’<sup>31</sup> (cf. Haspelmath 1994; Schlesinger 1995; Ziegeler 1999). In a way, this is in accordance with the observations of Wackernagel (1953[1904]) and Chantraine (1927), who called attention to the object-orientation of what they called the ‘resultative’ perfect. Agentivity as I understand it, however, is a much more complex notion. I take agentivity to be a cluster-concept (Ziegeler 1999:57) which can be broken down into a number of component parameters (cf. Hopper & Thompson 1980:252; A = Agent; O = Object; > = more agentive than):

- a. Participants: 2 or more participants (A and O) > 1 participant
- b. Kinesis: kinetic (actions) > non-kinetic
- c. Aspect: telic > atelic; punctual > non-punctual; perfective > imperfective<sup>32</sup>
- d. Volitionality: volitional > non-volitional
- e. Affirmation: affirmative > negative
- f. Mode: realis > irrealis; indicative > other moods
- g. Agency: high in potency > low in potency
- h. Affectedness of O: O totally affected > O not affected
- i. Individuation of O: O highly individuated > O non-individuated
- j. Time: past > present; temporal > atemporal<sup>33</sup>
- k. Voice: active > medial > passive

Three elements, pointed out by the landmark study of Hopper & Thompson (1980), are furthermore crucial: (a) agentivity is a gradient notion (Hopper & Thompson 1980:254); (b) entire clauses (and not just one constituent or a pair of constituents) can be characterized as more or less agentive (Hopper & Thompson 1980:253, 266); (c) there is a correlation between agentivity and discourse function (Hopper & Thompson 1980:280 ff.). The third point will be discussed in greater detail at the end of this paper.

Let us apply the concept of agentivity to four example-clauses: (a) ἐπεὶ οὗ τι μεμιγμένον ἐστὶν ὁμίλῳ (ex. 10); (b) οἱ φρουροὶ Ἀθηναίων διεφθαρμένοι εἰσὶν ὑπὸ Μεγαρέων (ex. 20); (c) ὃς τὰ ἐκ τῶν γεφυρέων ὄπλα ἐνθαῦτα ἦν κεκομικῶς (ex. 18); (d) μοῖραν δ’ οὗ τινά φημι πεφυγμένον ἔμμεναι ἀνδρῶν (ex. 11). Example (a) is the least agentive: it occurs in the realis, but has low agentivity with regard to a large number of other parameters, such as participants (the subject is a patient), kinesis (non-action), aspect (atelic), volitionality (non-volitional), affirmation (negative), agency (A low in potency), affectedness and

<sup>31</sup> I prefer the latter because it does not imply the traditional sense of transitivity, e.g. the presence of an object of the verb; Hopper & Thompson (1980:297-80) themselves indicate the need “to find a superordinate semantic notion”.

<sup>32</sup> Hopper & Thompson (1980:252) list ‘aspect’ and ‘punctuality’ as two different parameters, but I believe these can be subsumed under one and the same parameter (cf. Croft 2010b for a unidimensional approach towards ‘lexical’ and ‘grammatical’ aspect).

<sup>33</sup> This is not explicitly stated by Hopper & Thompson (1980), but see Bybee (2010:179): “the present and past are not parallel ... the default meaning of the present would more likely be habitual and the default interpretation of the past would be perfective”.

individuation of O (inanimate), time (present) and voice (passive). Contrast with (b) and (c), both of which are highly transitive with regard to participants (two participants), kinesis (actions), volitionality (volitional), affirmation (affirmative), mode (realis), agency (high in potency), affectedness and individuation of O (animate). (b) is less agentive than (c), however, with regard to time (present vs. past) and voice (passive vs. active). (d), finally, is in between (a) on the one hand, and (b) and (c) on the other. Here we do have two participants and an action (kinesis), but the clause has low agentivity on parameters such as affirmation (non-affirmative), affectedness and individuation of O (non-affected and non-individuated).

These four examples quite clearly show that the overall development of the periphrastic perfect, from a one-space to a two-space configuration, can be framed in terms of agentivity rather than temporality: while the construction was essentially non-agentive in Archaic Greek, it became increasingly more agentive, to the extent that it came to express two-participant events in the active voice.

### *In search of motivation*

In an 1963 article on the Herodotean synthetic perfect, Keil mentions the fact that both Wackernagel (1953[1904]) and Chantraine (1927) had hypothesized about what motivated the diachronic development of the perfect. While the latter noted “l’effort du grec pour se créer une conjugaison” (Chantraine 1927:145), Wackernagel (1953[1904]:1012) specifically referred to the existence of a passive perfect, and the wish and need (“Wunsch und Bedürfnis”) to build its active counterpart. Keil (1963:31) is critical of both proposals: he refutes Chantraine’s proposal on the basis of the fact that Greek has defective verbs, and he does not find Wackernagel’s suggestion adequate, as it begs the question why this need only surfaced in the Classical era, and secondly why not all newly formed perfects are resultative perfects. Keil (1963:31-2) himself believes that the origins of the resultative perfect (in the sense of Wackernagel and Chantraine) must be sought in “der Wunsch nach bestimmterem, bewußterem und gezielterem Ausdruck”, in the sense that it could explicitly express a ‘resultant state’ (i.e. current relevance), which was only implicitly expressed by the aorist. Keil’s proposal was not widely accepted, however. In fact, two recent proposals by Drinka (2003) and Haug (2008) continue along the lines of the early proposals of Wackernagel and

Chantraine: while Drinka (2003)<sup>34</sup> takes the need for ‘diathetic precision’ as a point of departure, Haug’s (2008) article focuses on paradigm symmetrization.

While I do not want to question the validity of these proposals, I would like to make two general critical remarks, which lie at the heart of my own contribution. Firstly, it is quite remarkable that all of these proposals are paradigmatically oriented, to the exclusion of any syntagmatic aspects.<sup>35</sup> Admittedly, Haug (2008) does discuss whether the *Invited Inference Theory of Semantic Change* (IITSC), as developed by Traugott & Dasher, could be of use in explaining the diachrony of the Ancient Greek perfect, but he dismisses this possibility all too quickly. Secondly, none of these proposals touch upon the following question: to what extent can we attribute linguistic change to the language user let alone ‘the language’ as an entity with an independent will (cf. Chantraine’s “l’effort du grec pour se créer une conjugaison” (1927:145))? To put it differently: did the Ancient Greeks really care about filling gaps? In this context, Hopper & Traugott (2003:74) note that “speakers for the most part do not intend to change the language. On the contrary, many would like to prevent change if possible”. In a well-known and important article, Lüdtke (1986:4) suggests that speakers, by simply *using* their language, may unconsciously effect change. If we take Lüdtke’s view seriously, it might be that paradigm symmetrization is only epiphenomenal.

I adopt here a usage-based perspective (cf. recently Bybee 2010; Croft 2010a), in which language change is considered to emerge via language use (Croft 2010a:3). My point of departure is the observation that, from a synchronic point of view, the fifth-century resultative perfect shows signs of variation. To be more specific, one can find resultatives in both ‘non-agentive’ and (more) ‘agentive’ contexts respectively. Such variation can be interpreted in terms of semantic extension (Schwenter 1994a:101-2), which may have enabled the reanalysis of the resultative perfect (on the much-debated subject of reanalysis, cf. e.g. Harris & Campbell 1995:50-1; Haspelmath 1998; Hopper & Traugott 2003:ch.3; Bybee 2010). Such reanalysis in turn facilitated a process of analogical extension, as witnessed in fifth and especially fourth-century Classical Greek (cf. *infra*).

My treatment here is limited to two contexts of use,<sup>36</sup> more specifically co-occurrence with the *dativus auctoris* and temporal adverbials. As we will see, such utterances allow two different space configurations: either the ‘old’ resultative one-space configuration, with

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<sup>34</sup> Note that Drinka (2003) does take into account both the HAVE and BE-periphrasis in Ancient Greek.

<sup>35</sup> To put it somewhat differently, they rely on (paradigmatic) ‘analogy’ rather than (syntagmatic) ‘reanalysis’. But see Hopper & Traugott (2003:69) for reanalysis as the dominant mechanism in language change.

<sup>36</sup> Another context of use which would be worth researching is that of manner adverbs, especially in fifth-century drama (e.g. εὖ “well” in Eur., *Hec.* 732, *Cyc.* 214 and Ar., *Lys.* 175; μετρίως “moderately” in Ar., *Eccl.* 970; ὀρθῶς καὶ κακῶς “well and rightly” in Ar., *Lys.* 1038).

FOCUS and EVENT located in the same mental space, or alternatively a two-space configuration with an additional non-FOCUS EVENT-space. As I have already noted, from an MST-point of view this type of ambiguity is far from unexpected. To quote Cutrer (1994:21): “Linguistic elements do not completely determine meaning, but rather, they constrain the possible set of meanings. The language input may underspecify the space construction process, and hence, a given utterance may result in more than one possible space configuration”. Heine (2002) discusses this phenomenon in terms of what he calls a ‘bridging context’, i.e. a context which gives rise to an inference in favour of a new (anterior) interpretation, next to the initial (resultative) source meaning.<sup>37</sup> I mainly concentrate on Herodotus (though other authors are also referred to) because (a) he is one of the earliest writers of Classical Greek, (b) he writes in prose, and (c) his work contains many examples of (resultative) periphrastic perfects. One last remark with regard to the *status* of the linguistic evidence: I consider it both the *source* and *result* of language change (cf. Croft 2010a:3). I take it that it reflects a diachronic process which started earlier (cf. *supra* for some examples from Archaic Greek), but which cannot be dated exactly due to the lack of written sources,<sup>38</sup> and which was still ongoing in fifth-century Classical Greek. As Heine (2002:86) notes, we need not assume that the stages of diachronic evolution are discrete, so that the fact that in fifth-century Classical Greek the perfect of current relevance is already attested need not necessarily be problematic.

Let us first have a look at some examples where the resultative perfect is found in combination with a dative, as in (23) and (24). Though this type of dative is commonly called *dativus auctoris*, many grammarians write that we are in fact dealing with a dative of interest or advantage, rather than a dative of agent. Humbert (1972:287), for example, quite categorically denies any notion of agency: “c’est le datif d’intérêt et, plus encore, le datif de point de vue, qui explique la construction ordinaire des adjectifs verbaux en -τός et -τέος; c’est le même datif qui exprime, au moins apparemment, l’agent de l’action dépendant d’un thème de parfait. On dit ordinairement que le datif équivaut à ὑπό suivi du génitif dans les autres thèmes: mais en réalité, le parfait exprimant un état acquis, τὰ πεπραγμένα ἡμῶν ne peut pas signifier: ‘les choses qui ont été faites *par* nous’, mais: ‘le travail fait *en ce qui nous concerne, pour notre part*’” (cf. similarly Smyth 1984[1920]:343 and Ruijgh 2004:29-30; contrast Kühner & Gerth 1976 [1898]:422). Such treatments refer to the ‘stative’ function of

<sup>37</sup> Compare Ruijgh (2004:28-9), who notes that adjuncts can either go with the resultant state or the preceding event.

<sup>38</sup> Compare again with Ruijgh’s (2004:32) observations on the synthetic perfect.

the perfect, which was incompatible with an agent marker, and therefore took a dative of interest. Indeed in both (23) and (24), the dative must be taken as a dative of interest. In (23) it is quite clear from the context that the citizens did not built the bridge themselves, and in (24) it would not make much sense to say that the lands were set apart *by all*.

(23) ... τοῖσι πολίτησι γέφυρα ἦν κατεσκευασμένη (Hdt. 1.186.4)

“... and her citizens had a bridge made for them”.

(24) Ταῦτα μὲν δὴ τοῖσι ἅπασιν ἦν ἐξαραιρημένα (Hdt. 2.168.2)

“These lands were set apart for all”.

In many other cases an interpretation of the dative as a dative of interest is not excluded, though there is a strong inference of agency (cf. Smyth 1984[1920]:343). To be more specific, in many examples it is plausible that the person(s) denoted by the dative is/are in fact also the agent(s) of the event denoted by the participle, entailing a two-space configuration with a separate EVENT-space. Consider examples (25) and (26), which are strongly reminiscent of Heine’s bridging context. While an interpretation as a dative of interest with a stative perfect is still possible (“there is a passage *for Hesiod* on the Hyperboreans” (cf. Ruijgh 2004:30) and “they were convinced *in his advantage*”), there is a strong inference that the dative actually represents the *author* of the *event* (“Hesiod has spoken about the Hyperboreans” and “they had been convinced by him”) (cf. George 2005:79).

(25) Ἄλλ’ Ἡσιόδῳ μὲν ἔστι περὶ Ὑπερβορέων εἰρημένα (Hdt. 4.32.1)

“But Hesiod has spoken about the Hyperboreans”.

(26) Ὡς δὲ οὐτοὶ οἱ ἀνεγνωσμένοι ἦσαν, αὐτίκα μετὰ ταῦτα ὁ Θεμιστοκλῆς ἄνδρας ἀπέπεμπε ἔχοντας πλοῖον (Hdt. 8.110.2)

When they had been convinced by him, Themistocles straightway sent men in a boat”.

Noteworthy in this context is that we find the periphrastic perfect in Herodotus combined with the ‘true’ agent marker, ὑπό “by” + genitive, which only allows for a two-space configuration. Heine (2002) calls this a *switch context*, i.e. a new context in which the source meaning is no longer possible. Its use can be looked upon as an analogical extension based on the reanalysis of the dative in combination with the (periphrastic) perfect. An example from Herodotus is (27).

(27) ... ὥς μεμετιμένοι τε ἦσαν ἐκ τοῦ στρατοπέδου ὑπὸ Λεωνίδεω (Hdt. 7.229.1)

“... since they had been dismissed from the camp by Leonidas”.

Here it is quite clear what motivated the choice for ὑπό + genitive, rather than a simple dative. Had ὑπὸ Λεωνίδεω “by Leonidas” been expressed by a dative, it might have been interpreted as a dative of possession with ἐκ τοῦ στρατοπέδου “from the camp” (compare George 2005:85). In two other fifth-century prose authors, Thucydides and Lysias, we find similar examples (cf. George 2005:91 for a general increase in frequency). Thucydides: 1.114.1, 2.49.3, 3.3.1; Lysias: 1.45, 20.15, (with διά: 7.5).

A second interesting context is that in which the resultative perfect is found co-occurring with an adverbial of time. As one would expect considering the semantics of the resultative, we mostly find it in combination with durative indefinite time adverbials, such as τὸ παράπαν “for good” in (28) and τὸν ἄσκοπον χρόνον “such an unexpectedly long period of time” in (29). In both cases, the adverbials refer to the time of a final state, rather than a preceding event (which, in the case of the resultative, is implicit; cf. Carey 1995:86).

(28) ὁ δὲ οὐκ ὑπέδεκετο, ἀρρωδέων μὴ ἑωυτὸν ἐκφήνας τὸ παράπαν τῆς Ἑλλάδος ἢ ἀπεστερημένος (Hdt. 3.130.1)

“He refused to admit it, for he was afraid that if he revealed himself he would be cut off from Hellas for good”.

(29) ἦ καὶ τούτῃ τῇ πόλει τὸν ἄσκοπον / χρόνον βεβῶς ἦν ἡμερῶν ἀνήριθμον; (Soph., *Trach.* 246-7)

“Was it in fact the war against that city which kept him away such an unexpectedly long period of time, past all count of days?”.

In other examples, however, we find the resultative combined with locating indefinite time adverbials, such as πρότερον “at an earlier time”, πάλαι “long ago” and νεωστί “recently”. Obviously, this type of adverbial is much less common with resultative perfects, as it specifies the time period of the (anterior) event expressed by the participle (Nedjalkov & Jaxontov 1988:16; Carey 1995:86; cf. also Haug 2004:409 for event-modifying adverbs and the Greek perfect). Analyzing some specific examples, we will see that, as with the *dativus auctoris*, such adverbials are not entirely incompatible with a resultative interpretation, but to varying degrees suggest an alternative mental space-configuration.

Though in (30) πρότερον could be taken with the participle ἰδρυμένος, a resultative interpretation is still possible, and in my own opinion most likely: the adverbial seems to modify the resultant state indicated by ἦν, as made clear by the translation of Sommerstein (2001:131): “In the place where he used to reside before”. In example (31), on the other hand, πρότερον cannot be taken with the finite verb (note the difference in word order between (30) and (31)). According to Aerts (1965:45), εἰμί is used as a stative verb of

existence with a conjunct participle ("there was, namely, a resolution of Pericles which had already been accepted..."), but Rusten (1989:114) indicates that ἦν ... νενικηκυῖα is to be interpreted as an anterior perfect: "had prevailed".

(30) Ἴδρυσόμεθ' οὖν αὐτίκα μάλ' — ἀλλὰ περίμενε — τὸν Πλοῦτον, οὐπερ πρότερον ἦν ἰδρυμένος (Ar., *Plut.* 1191-3)

"wait a little; we are going to install Plutus presently in the place he formerly occupied".

(31) ἦν γὰρ Περικλέους γνώμη πρότερον νενικηκυῖα (Thuc. 2.12.2)

"for a motion of Pericles had beforehand prevailed".

Example (32) is quite similar in this regard. One could interpret the example by rendering πάλαι statively "for a long time (now)", as Chantraine (1927:249) does ("depuis longtemps je suis de cet avis"), or render the periphrastic construction with an anterior "I have long ago come to this conclusion" (Kovacs 1994:xx).<sup>39</sup>

(32) Πάλαι ποτ' ἐστὶ τοῦτ' ἐμοὶ δεδογμένον (Eur., *Heracl.* 1)

"Long ago, I came to this conclusion".

The Herodotean (33) is a very interesting example (cf. similarly Hdt. 2.49.2). Here, we are confronted with an almost hybrid construction: on the one hand we have the co-ordination of the perfect participle with the adjective κατάρρυτον (suggestive of a resultative interpretation), and on the other hand its co-occurrence with the adverb νεωστί, which is indicative of a higher degree of agentivity (cf. the temporal parameter mentioned above). It is interesting to see how different translators handle this example. By translating with "the Delta is alluvial land and but lately (so to speak) came into being", Godley (1920:293) seems to interpret ἐστὶ ... ἀναπεφηνός as an anterior perfect. The Italian translation of Lloyd & Frascetti (1989:23), on the other hand, maintains a resultative interpretation: "il Delta è terra alluvionale e, per così dire, comparsa di recente".

(33) ἐστὶ κατάρρυτον τε καὶ νεωστί ὡς λόγῳ εἶπειν ἀναπεφηνός (Hdt. 2.15.2)

"[the Delta] is alluvial land and but lately (so to speak) came into being".

I close this section by noting that Heine's switch context, in which the original source meaning (i.e. a one-space configuration) is not possible, is well-attested. In (34), for example, I do not see how to interpret πρότερον in combination with ἐκκεκομισμένοι ἦσαν

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<sup>39</sup> Wolfgang de Melo informs me that Kovacs' translation is in fact ungrammatical (it should run: "Long ago, I came to this conclusion").



“they had conveyed” as compatible with a resultative perfect: this temporal adverb specifies the time period of an anterior event represented by the participle ἐκκεκομισμένοι.

(34) Πλαταιῆς δὲ παῖδας μὲν καὶ γυναῖκας καὶ τοὺς πρεσβυτάτους τε καὶ πλῆθος τὸ ἀχρεῖον τῶν ἀνθρώπων πρότερον ἐκκεκομισμένοι ἦσαν ἐς τὰς Ἀθήνας (Thuc. 2.78.3)

“The Plataeans had beforehand conveyed to Athens their wives, children, and old men, with the rest of their unserviceable population”.

### *Persistence and generalization*

As a consequence of the reanalysis discussed above, the periphrastic perfect came to evoke two possible space configurations (which is a well-known phenomenon: as Cutrer 1994: 95, 138 notes, there is not necessarily a one-to-one relationship between a given language specific marker and a tense-aspect discourse-link), a phenomenon which in grammaticalization-studies is known as ‘persistence’. Hopper (1991:28) for example acknowledges that when a given construction grammaticalizes it will often retain its earlier meanings, which entails polysemy (cf. Hopper & Traugott 2003:52; Schwenter & Cacoullos 2008:11; Bybee 2010:174).

In illustration, consider the distribution of perfect functions in table 3. While in Homer, Herodotus and the dramatists the resultative is predominant, in Thucydides and Lysias we see that the perfect of current relevance gains in frequency, to the extent that it is more often attested than the resultative. The other perfect functions, experiential and perfect of persistence, seem to be of minor importance. The experiential perfect is, however, more frequently attested in two authors: Herodotus and Lysias. Note that there are no instances of the perfect of recent past, a fact which will be discussed in greater detail below.

*Table 3: distribution of the periphrastic perfect (function)<sup>40</sup>*

Author	Dates	Total	RESULT	CURR	EXPER	PERS
Aeschylus	c. 525/4 – 456/5 BC	16	7	5	2	2
Sophocles	c. 496/5 – 406 BC	14	9	4	1	0
Herodotus	c. 485 – 424 BC	71	32	25	11	3
Euripides	c. 485/0 – 406 BC	17	11	5	1	0
Thucydides	c. 460/55 – c. 400 BC	31	14	14	3	0
Aristophanes	c. 460 – 386 BC	20	10	7	2	1
Lysias	?459/8 – c. 380 BC	33	8	14	11	0

Another way to look at these data is to say that the construction of εἰμί with perfect participle has ‘generalized’ (cf. Bybee, Perkins & Pagliuca 1994:69; Schwenter 1994a:101-

<sup>40</sup> I use the following abbreviations: ‘RESULT’ = resultative perfect; ‘CURR’ = perfect of current relevance; ‘EXPER’ = experiential perfect; and ‘PERS’ = perfect of persistence’.

2) or that it has become more ‘schematic’ (Bybee 2010:67). With regard to lexical aspect, we can observe that the construction has extended from telic verbs used with a resultative function, to telic verbs used with an anterior function and atelic verbs thus used. All in all, however, Vendler’s ‘activities’ and especially ‘states’ are only marginally represented. They are most often found in Herodotus (8 instances) and Lysias (6 instances). Not surprisingly, these two authors have the most attestations of experiential perfects and perfects of persistence. Indeed, when we have a closer look at the ‘activity-verbs’, we observe that in many cases predicates are used that are atelic due to their plural object (suggestive of an experiential perfect, cf. *supra*), e.g. κτίζω ἄστεα “I found cities” (ἧ ἐκτισμένα; Hdt. 4.46.3), αἰρέω ἄνδρας “I kill men” (ἀραιρημένοι ἕωσι; Hdt. 4.66.1), ἐργάζομαι πολλὰ κακὰ “I do many evils” (εἰργασμένοι εἰσίν; Lys. 25.6), ἐργάζομαι ἄξια θανάτου “I commit acts deserving of death” (εἰσιν εἰργασμένοι; Lys. 22.2). As we will see below, the periphrastic perfect further generalizes/extends on several levels in fourth-century Greek.

### 3.3. Fourth-century Classical Greek

#### *Extension of contexts of use: semantics and morphology*

The fourth century is a very interesting period when it comes to the diachronic development of the perfect construction. Comparing table 4 to table 3, we observe a tendency towards an increased usage of the periphrastic perfect,<sup>41</sup> especially in authors such as Demosthenes, Plato and especially Xenophon, with 120, 131 and 138 attested examples respectively.<sup>42</sup> It is interesting to note that a similar development is attested for the synthetic perfect: “si l’on compare l’usage d’Hérodote et de Thucydide avec celui de Xénophon et de Platon, on voit que le parfait est beaucoup plus souvent attesté chez les deux derniers écrivains” (Chantraine 1927:145; cf. also Slings 1994:243). More research is needed, however, in order to be able to compare these respective developments.

*Table 4: distribution of the periphrastic perfect (function)*

Author	Dates	Total	RESULT	CURR	EXPER	PERS
Isocrates	436 – 338 BC	39	13	14	8	0
Xenophon	c. 430 – 354 BC	138	70	53	10	5
Plato	c. 429 – 347 BC	131	64	41	20	6
Isaeus	c. 420 – 340s BC	27	6	16	3	2

<sup>41</sup> As one of the referees notes, this observation does not seem to be valid for Herodotus, who has an elevated number of (especially resultative) periphrastic perfects (especially when taken into account that his work only fills 2 OCT volumes, while those of Demosthenes, Xenophon and Plato fill 4 to 5 each).

<sup>42</sup> Especially in Plato, the frequency of the construction is partially due to the existence of prefabricated expressions (Bybee 2010). Plato seems to have been particularly fond of constructions with the verbs γίγνομαι “I become” (30 examples) and φέρω “I bring forth” (7 examples), mostly with a resultative meaning.

Aeschines	c. 397 – c. 322 BC	9	1	5	3	0
Demosthenes	384 – 322 BC	120	30	69	19	0
Aristotle	384 – 322 BC	56	35	5	14	2

Connected with this increased frequency (cf. Bybee 2007:965) is a general increase in contexts of use (a typical characteristic of grammaticalization, cf. Marchello-Nizia 2006:199; compare Chantraine 1927:145 on the synthetic perfect). While the next section deals with the use of the periphrastic perfect in discourse, here I would like to discuss the fact that the construction has extended both semantically and morphologically.

From a semantic point of view, table 4 clearly shows that, while the resultative function remains in use, in various authors (most clearly Isaeus, Isocrates and Demosthenes), it is outdone by the anterior perfect (most importantly the perfect of current relevance). Clearly, the ‘new’ anterior meaning is becoming conventionalized, an observation which has also been made with regard to the synthetic perfect, e.g. by Slings (1994:243), who notes a steady increase of anterior perfects starting from around 450 BC (regrettably, Slings does not give any specific numbers). In comparison with the previous period, the anterior perfect is now used frequently with transitive verbs (contrast Rijksbaron 2006:129): my database contains 101 examples with an active transitive perfect, and 38 with a medial transitive perfect. Most frequently attested with the active transitive perfect are the verbs *πάσχω* “I suffer” (11 ex.), *ποιέω* “I do” (9 ex.), *(κατα)λείπω* “I leave behind” (8 ex.), *δίδωμι* “I give” (6 ex.) and *λαμβάνω* “I take” (5 ex.). Most frequent with the medial transitive perfect are *ψηφίζομαι* “I vote” (9 ex.), *διαπράσσομαι* “I bring about” (5 ex.) and *(ἐξ)εργάζομαι* “I do” (3 ex.). Most of these verbs have a fairly general meaning, with a varying degree of agentivity.

In terms of generalization or schematicity, we can note that the periphrastic perfect is used both with telic and atelic verbs. In the latter case, use of so-called ‘activity-verbs’ no longer depends on plurality of object (as was mostly the case in fifth-century Classical Greek). Especially in Demosthenes, we find ‘true’ activity verbs forming a perfect of current relevance in combination with *εἰμί*, such as *χράω* “I treat” (44.31), *ποιέω* “I do” (23.143), *βοηθέω* “I help” (19.16), *λέγω* “I speak” (23.86) and *πάσχω* “I suffer” (57.44).

We also witness some interesting morphological developments in the fourth century. For one thing, the periphrastic construction is more regularly used in the subjunctive and especially optative mood, contrary to what seems to be the case with the synthetic perfect (in Plato, Aerts 1965:49 counts only 9 subjunctives and 5 optatives; in Demosthenes 2 subjunctives and 0 optatives; cf. also Harry 1905). Table 5 shows that the optative mood is

more often used than the subjunctive mood, and that both are used with relative frequency in only three fourth-century authors: Plato, Xenophon and Demosthenes.<sup>43</sup> In fifth-century Classical Greek, the only author who makes some use of the periphrastic subjunctive and optative is Herodotus (cf. Aerts 1965:39; compare note 41).

*Table 5: Distribution of the periphrastic perfect (mood)*<sup>44</sup>

Author	Dates	Total	IMP	IND	INF	OPT	PART	SUBJ
Homer	8th cent. BC?	38	2	26	6	4	0	0
Aeschylus	c. 525/4 – 456/5 BC	16	0	16	0	0	0	0
Sophocles	c. 496/5 – 406 BC	14	0	11	0	2	0	1
Herodotus	c. 485 – 424 BC	71	0	56	0	7	0	8
Euripides	c. 485/0 – 406 BC	17	0	17	0	0	0	0
Thucydides	c. 460/55 – c. 400 BC	31	0	27	0	4	0	0
Aristophanes	c. 460 – 386 BC	20	0	18	0	0	0	2
Lysias	?459/8 – c. 380 BC	33	0	30	1	2	0	0
Isocrates	436 – 338 BC	39	0	32	0	4	0	3
Xenophon	c. 430 – 354 BC	138	0	85	2	29	0	22
Plato	c. 429 – 347 BC	131	4	60	2	47	0	18
Isaeus	c. 420 – 340s BC	27	0	21	0	5	0	1
Aeschines	c. 397 – c. 322 BC	9	0	7	0	2	0	0
Demosthenes	384 – 322 BC	120	0	73	1	27	0	19
Aristotle	384 – 322 BC	56	4	37	0	8	0	7

A second morphological element is that in fourth-century Classical Greek we have examples where εἰμί as a finite verb is used in the future tense (both with active and passive participles, almost equally divided). Here again, we have a parallel with the diachronic development of the synthetic perfect (Chantraine 1927:144; for an overview of examples cf. Magnien 1912:1.331-3), though in the active voice the synthetic perfect was limited to the forms ἐστήξω “I will stand” and τεθνήξω “I will be dead” (Jannaris 1897:444).<sup>45</sup> Table 6 shows the distribution of the periphrastic perfect with regard to the tense of the finite verb. We observe that next to Homer and to a lesser degree Lysias, the same three fourth-century authors employ the future perfect: Plato, Xenophon and Demosthenes. Obviously, with only 7 examples in Plato, 8 in Xenophon and 9 in Demosthenes, the future perfect represents only a minor (sub)construction. Also note that this future perfect could either function as a

<sup>43</sup> In Demosthenes and Xenophon there seems to be a correlation between the use of the optative mood and the perfect of current relevance; the optative mood is much less frequent with the resultative perfect.

<sup>44</sup> I use the following abbreviations: ‘IMP’ = imperative; ‘IND’ = indicative; ‘INF’ = infinitive; ‘OPT’ = optative; ‘PART’ = participle; ‘SUBJ’ = subjunctive.

<sup>45</sup> As the examples given by Magnien show, and as has also been noted by Aerts (1965:50-1), the synthetic future perfects seem to have come into use earlier than the periphrastic ones.

resultative perfect or a perfect of current relevance (the latter is more common in Demosthenes (6/9) and Xenophon (6/8), though not in Plato (3/7)).

*Table 6: Distribution of the periphrastic perfect (tense)<sup>46</sup>*

Author	Dates	Total	FUT	IMP	PRES
Homer	8th cent. BC?	38	15	3	20
Aeschylus	c. 525/4 – 456/5 BC	16	1	7	8
Sophocles	c. 496/5 – 406 BC	14	2	8	4
Herodotus	c. 485 – 424 BC	71	1	38	32
Euripides	c. 485/0 – 406 BC	17	0	8	9
Thucydides	c. 460/55 – c. 400 BC	31	0	20	11
Aristophanes	c. 460 – 386 BC	20	0	4	16
Lysias	?459/8 – c. 380 BC	33	5	11	17
Isocrates	436 – 338 BC	39	0	26	13
Xenophon	c. 430 – 354 BC	138	8	51	79
Plato	c. 429 – 347 BC	131	7	25	99
Isaeus	c. 420 – 340s BC	27	0	13	14
Aeschines	c. 397 – c. 322 BC	9	0	5	4
Demosthenes	384 – 322 BC	120	9	34	77
Aristotle	384 – 322 BC	56	1	11	44

One last morphological element I would like to mention here is that the perfect has also extended to numbers and persons other than the third singular/plural (a development which characterizes the Post-classical period).<sup>47</sup> Table 7 demonstrates that, while in most authors the periphrastic perfect is almost limited to the third person, in Isocrates, Lysias, Plato, Xenophon and Demosthenes there is a (relatively small) extension to other persons and numbers (most remarkable is the use of the 2<sup>nd</sup> person plural in Demosthenes). Obviously, however, this represents only a minor development, and the third person remains dominant at all times. It seems only partially connected to the more frequent use of the periphrastic subjunctive and optative (with regard to the entire period under consideration in this paper, 102 examples are found where εἰμί does not occur in the third person plural/singular; only 19 of these are subjunctive/optative).

<sup>46</sup> I use the following abbreviations: ‘FUT’ = future; ‘IMPERF’ = imperfect; PRES = ‘present’.

<sup>47</sup> One of the referees notes that there might be a correlation between text type and use of the second person plural: the orators, addressing a plural audience will presumably make more use of 2PL-forms of all sorts than Herodotus or Thucydides. While text type may indeed have exerted some influence, it should be noted that the morphological extension discussed here is not just limited to 2PL: contrary to what we find in Archaic and fifth-century writers, there are several examples attested for 1S, 1PL and 2S as well.

*Table 7: Distribution of the periphrastic perfect (person/number)*<sup>48</sup>

Author	Dates	Total	1S	1PL	2S	2PL	3S	3PL
Isocrates	436 – 338 BC	39	6	0	0	1	19	13
Xenophon	c. 430 – 354 BC	138	0	0	5	2	46	83
Plato	c. 429 – 347 BC	131	2	6	1	0	82	38
Isaeus	c. 420 – 340s BC	27	2	1	1	0	13	10
Aeschines	c. 397 – c. 322 BC	9	0	0	0	2	4	3
Demosthenes	384 – 322 BC	120	8	4	3	16	56	32
Aristotle	384 – 322 BC	56	0	1	0	0	30	25

***Further extension: The ‘relational’ function of the (anterior) perfect***

In fourth-century Classical Greek we also find a major development concerning discourse context which – to the best of my knowledge – has not been noticed so far. In table 8, I have represented the use of the perfect construction in main and subordinate clauses respectively. As can be seen, the fourth-century periphrastic perfect is much more often used in subordinate clauses. Compare, for example, the use of the periphrastic perfect in Thucydides and especially Herodotus<sup>49</sup> with that in writers such as Isaeus, Isocrates, Xenophon and Demosthenes: while in Herodotus the perfect occurs much more often in main clauses, the opposite can be said of the latter. This change, which I consider an important indicator of the diachronic development of the perfect, can be quite easily explained: it is related to the rise of the anterior perfect and its so-called ‘relational’ (Schwenter 1994a:74, 1994b:998; Schwenter & Cacoulios 2008:3) or ‘explanatory’ (Dahl & Hedin 2000:39) function.

*Table 8: Distribution of the periphrastic perfect (main vs. subordinate clause)*

Author	Dates	Total	MAIN	SUBORD
Homer	8th cent. BC?	38	23	15
Aeschylus	c. 525/4 – 456/5 BC	16	11	5
Sophocles	c. 496/5 – 406 BC	14	7	7
Herodotus	c. 485 – 424 BC	71	48	23
Euripides	c. 485/0 – 406 BC	17	11	6
Thucydides	c. 460/55 – c. 400 BC	31	15	16
Aristophanes	c. 460 – 386 BC	20	13	7
Lysias	?459/8 – c. 380 BC	33	16	17
Isocrates	436 – 338 BC	39	15	24
Xenophon	c. 430 – 354 BC	138	54	84
Plato	c. 429 – 347 BC	131	71	60
Isaeus	c. 420 – 340s BC	27	6	21

<sup>48</sup> See table 1 for fifth-century Classical Greek.

<sup>49</sup> One of the referees mentions as a possible counter-argument the fact that Herodotus’ style – insofar as it is λέξις εἰρομένη – has less subordination in general, so that it is only natural that there is a smaller percentage of periphrastic perfects in subordinate clauses.

Aeschines	c. 397 – c. 322 BC	9	3	6
Demosthenes	384 – 322 BC	120	46	74
Aristotle	384 – 322 BC	56	35	21

In a number of important articles (e.g. Hopper 1979; Reinhart 1984; Fox & Thompson 1990) the insight was developed that (one of) the cardinal organization principles of discourse is its division in ‘foreground’ and ‘background’ (according to Reinhart 1984:785 several layers of foreground and background can be distinguished in more complex literary narratives), parallel to what has been called ‘figure’ and ‘ground’ in Gestalt theory (cf. Reinhart 1984). The distinction between ‘foreground’ and ‘background’ was quite naturally connected to tense and aspect: aspectually ‘perfective’ verbs are typically used in foregrounded clauses, while aspectually ‘imperfective’ ones are normally used in backgrounded clauses. But what about the perfect? Cross-linguistically, the perfect is not employed to report discrete, narrative,<sup>50</sup> events (Dahl 1984:118; Schwenter 1994a:75), but rather to specify the background. There is, however, an important distinction to be made between the resultative and the anterior function of the perfect: contrary to the resultative perfect, the anterior (i.e. the perfect of current relevance) does not simply denote a state: it locates one event as being prior, and thus relevant, to another (discussed in terms of *generalization* by Bybee, Perkins & Pagliuca 1994:69; Carey 1995 calls this development an instance of *subjectification*, as current relevance is dependent on the judgement of the speaker). As Cutrer (1994:207) notes from an MST-perspective, “the distinction between the PERFECT/non-PERFECT allows the speaker to refer to past events without shifting the FOCUS from a PRESENT to a PAST space”. As such, the subordinate clause is a quite ‘natural’ environment for the anterior perfect (Schwenter & Cacoullos 2008:17): according to Reinhart (1984:796 ff.) ‘syntactic embedding’ is a natural means of backgrounding, allowing more information to be given with regard to the main assertion (it should be noted, however, that there are several exceptions to this observation; see e.g. Fox & Thompson 1990 for relative clauses expressing foregrounded events).

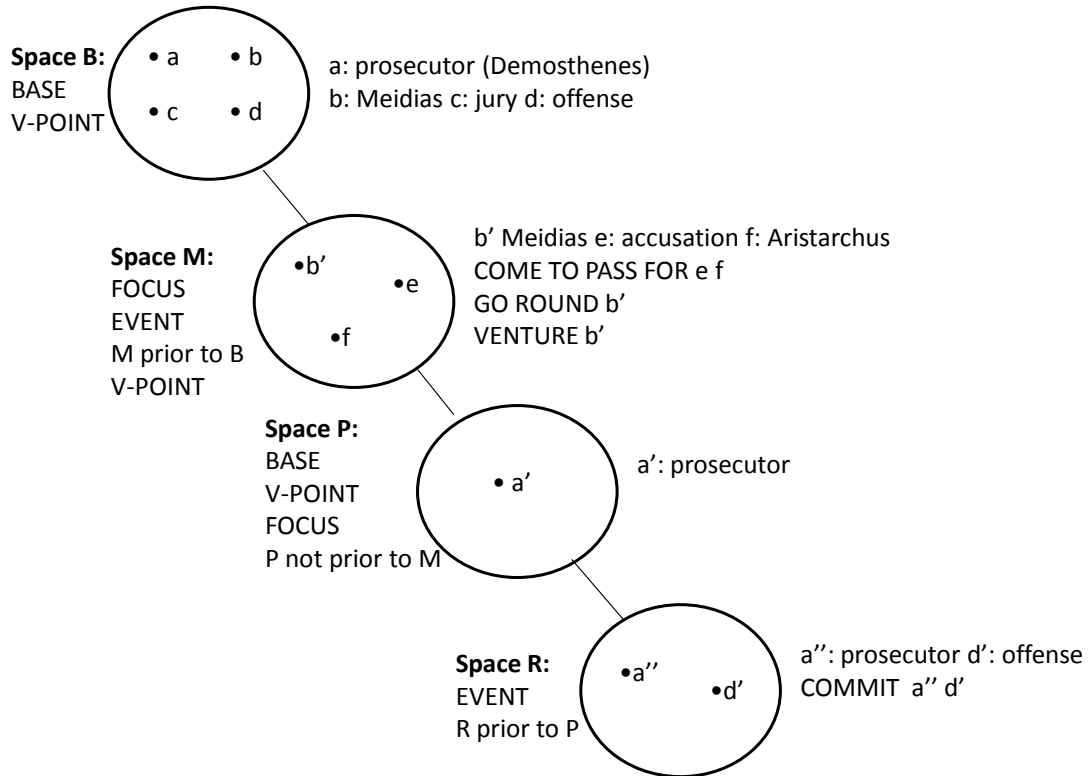
Let us have a look at an example. In the four authors mentioned before, that is, Isaeus, Isocrates, Xenophon and Demosthenes, the perfect of current relevance occurs in all three traditionally distinguished types of subordinate clause: the completive, adverbial and relative clause. In (35), we find an example of the periphrastic perfect in a completive clause.

(35) τῷ γὰρ ἀθλίῳ καὶ τάλαιπῶρῳ κακῆς καὶ χαλεπῆς συμβάσης αἰτίας Ἀριστάρχῳ τῷ Μόσχου, τὸ μὲν πρῶτον, ὃ ἄνδρες Ἀθηναῖοι, κατὰ τὴν ἀγορὰν

<sup>50</sup> Cf. Dahl (1984:116-8) for the concept of ‘narrative context’.

περιῶν ἄσεβεῖς καὶ δεινοὺς λόγους ἐτόλμα περὶ ἐμοῦ λέγειν, ὥς ἐγὼ τὸ πρᾶγμ' εἶμι τοῦτο δεδρακῶς (Dem. 21.104)

“For when a grave criminal charge was hanging over that unlucky wretch, Aristarchus, the son of Moschus, at first, Athenians, Meidias went round the market-place and ventured to spread impious and atrocious statements about me to the effect that I had done the deed”.



In BASE-space B, we have Demosthenes as a prosecutor. He speaks about a past space M, which is cued by the genitive absolute *κακῆς καὶ χαλεπῆς συμβάσεως αἰτίας*: an accusation came to pass for Aristarchus. Then Demosthenes starts describing how the accused behaved in the period represented by this past space (note the shift in V-POINT): Meidias went round the market-place and ventured to say terrible things about Demosthenes. The specifics of what was said by Meidias are told in a completive ὥς-clause (with the present tense of εἶμι indicating a temporary shift in BASE and V-POINT). According to Meidias Demosthenes has done the deed of which the former is accused. As we have seen earlier, a perfect of current relevance such as εἶμι ... δεδρακῶς “I have done” requires a two-space configuration, with EVENT-space R specifying an event prior to space P. Clearly, the periphrastic construction is not used to report a narrative event: rather, it specifies a prior event which is relevant at the time of space P/M.



### *Stage-II perfects*

One issue which has not been dealt with in detail so far is the status of the experiential perfect and the perfect of persistence, more particularly their importance for the development of the periphrastic perfect construction. In a well-known paper, Harris (1982) suggests that periphrastic perfects in fact go through four ‘stages’, corresponding to what we have been calling (i) resultative perfect, (ii) experiential perfect/perfect of persistence, (iii) perfect of current relevance, and (iv) perfect of recent past. Various other authors have similarly pointed attention to this grammaticalization path, among others Fleischman (1983:196); Schwenter (1994a:77) and Carey (1996:37-40). According to other authors, however, the experiential perfect and the perfect of persistence should rather be considered a later development (Slobin 1994). In a recent contribution, Squartini & Bertinetto (2000:419-20) have also argued that this diachronic interpretation of Harris’ so called ‘stage-II perfects’ is problematic for several reasons. Instead of considering stage-II an intermediate step, they alternatively suggest that it constitutes “a totally independent development in which actional values, or rather a peculiar interaction of actional and aspectual values, are foregrounded” (2000:419) and suggest that “stage II might not belong to the same line of development as stages III-IV” (2000:420).

As for Ancient Greek, in table 9 we observe the following: (a) up until 6-5 BC the experiential perfect/perfect of persistence on the one hand and the perfect of current relevance on the other are both marginal. None of them is common enough for one to look better established than the other. (b) Starting from 5BC both groups become more frequently used, though the perfect of current relevance now becomes much better established than the experiential perfect/perfect of persistence (especially the perfect of persistence being uncommon). I believe these observations can hardly be taken as evidence that the experiential perfect/perfect of persistence formed an intermediate step towards the development of a perfect of current relevance in Ancient Greek. Rather, I would argue that they are consonant with Squartini & Bertinetto’s view, according to which the development of an experiential perfect/perfect of persistence constitutes an independent development.

*Table 9: distribution of the periphrastic perfect (functions)*

Era	Total	RESULT	CURR	EXPER	PERSIST
8BC	38	34	0	1	3
8-7BC	8	4	1	1	2
7BC	1	1	0	0	0
6BC	1	1	0	0	0
6-5BC	17	8	5	2	2

5BC	134	66	49	16	3
5-4BC	393	171	148	55	14
4BC	194	68	82	37	3

In this context, I would like to point attention to an Aristotelian use, which I did not come across in any other author. Next to the more regular use of the experiential perfect, we have several instances of a quite specific construction, consisting of ἤδη “already” + plural subject + εἰσί “they are” + passive perfect participle (either of the verb ὁράω “I see” or λαμβάνω “I take”).<sup>51</sup> Two examples are given under (36) and (37).

(36) ἤδη δὲ καὶ τρεῖς νεοττοὶ ὠμμένοι εἰσίν. (Arist., *Hist. an.* 563a)

“But there have already been seen three chicks (=eagles with three chicks)”.

(37) Ἦδη δ’ εἰλημμένοι εἰσὶν ἔνιοι τῶν καράβων τὰ μὲν περὶ τὸν θώρακα μαλακὰ ἔχοντες (Arist., *Hist. an.* 601a)

“There have already been captured some crayfish having the parts around the thorax (still) soft”.

In these examples the adverbial ἤδη plays an important role for the semantics of the construction. Michaelis (1996:485) describes the semantics of English “already” as follows: “*already* not only encodes the existence of a given state of affairs at the reference time, but also presupposes that the inception of this state is anterior to an interval of a specific type”. In example (38) (after Michaelis 1996:486), we may distinguish between two ‘already-states’, one of which is prior to a so-called reference interval: we have a state of stability, a reference interval represented by the hurricane and afterwards a state of instability.

(38) “The already unstable bridge was rendered dangerously weak by the hurricane”.

Michaelis (1996:487-96) furthermore distinguishes between four functions: (1) priority to process, (2) comparative priority, (3) priority to expected eventuation point, and (4) priority to further accretion on a scale. Without discussing the other three functions, I argue that ἤδη in the Aristotelian examples can be classified under the fourth type. In both examples, Aristotle reports about observations which he has made. By adding ἤδη he indicates that the property attributed to the subject may, after further investigation (this would be our reference interval), advance even further on a scale. In case of the chicks, for example, there may come a time when Aristotle finds an eagle with four chicks.

<sup>51</sup> Cf. also Arist., *Hist. an.* 491b, 563b, 570a, 578b, 613a.

### *Perfect of recent past?*

As is well-known, the (periphrastic) perfect of various European languages (e.g. Romance languages such as French, Italian and Romanian; cf. Comrie 1976:61) did not undergo one, but two semantic shifts: from resultative to anterior and from anterior to perfective/simple past (cf. Bybee, Perkins & Pagliuca 1994). As an intermediary step in this grammaticalization process, which Squartini & Bertinetto (2000) call ‘aoristic drift’, the so-called perfect of recent past comes in to the picture: according to Schwenter (1994b:997) “the hot news function of perfects is an important stage in the further grammaticalization of these forms to perfective or past”. With this type of perfect, the speaker/author denotes a past event that is significant and immediate (Carey 1995:97) (as Schwenter 1994b:997 writes, the event is salient, it has a ‘surprise value’). Comrie (1976:61) gives the example of Spanish “la he visto esta mañana” “I saw her this morning”, which one would say in the afternoon. He adds that “gradual relaxation of the degree of recentness required for use of the Perfect seems to have been a key part of the development of the Perfect in many Romance languages to oust the Simple Past completely” (Comrie 1976:61).

What about Ancient Greek? With regard to the synthetic perfect, Ruijgh (2004:35) (referring to Comrie 1976) notes that recent past is a frequent ‘connotation’, citing evidence from Homer (λέων κατὰ ταῦρον ἐδηδώς (*Il.* 17.542) “een leeuw die *net* een stier heeft opgegeten” [a lion who has *just* eaten a bull]). He furthermore mentions the fact that the synthetic perfect can be found in combination with the adverb νεωστί “recently” (cf. Slings 1994:245). In case of the periphrastic perfect, one could easily parallel Ruijgh’s observations. An example such as (39) could readily be translated with “And when Dercylidas heard that they had *just* crossed the Maeander again”.

(39) ὡς δ’ ἤκουσεν ὁ Δερκυλίδας ὅτι πάλιν πεπερακότες εἰσὶ τὸν Μαίανδρον ...  
(Xen., *Hell.* 3.2.14)

“And when Dercylidas heard that they had crossed the Maeander again ...”.

All in all, however, I am quite skeptical of Ruijgh’s position, and in general the relevance of the Ancient Greek ‘perfect of recent past’. The following three critical remarks come to mind: (a) I find Ruijgh’s ‘evidence’ concerning the fact that recent past was a frequent connotation far from evident, as it largely based on intuition, (b) I have already noted that there may be instances of νεωστί with the resultative perfect, and that in general the Ancient Greek perfect collocates quite freely with temporal adverbials. I thus find it hard to see what makes Ruijgh’s ‘perfect of recent past’ more aoristic than the perfect of current relevance.

(c) Ruijgh’s suggestion that the perfect of recent past is already present in Homeric Greek does not readily comply with the cross-linguistically attested grammaticalization path.

In my own view an alternative (arguably more promising) approach to localizing (periphrastic) ‘aoristic’ perfects, followed by Schwenter (1994b) and Carey (1995) among others, is to look beyond the sentence level (i.e. collocation with certain adverbs) at how the perfect functions in discourse, more specifically (a) whether it is used in a narrative (foregrounded) or a non-narrative (backgrounded) context (as Dahl 1984:118 notes, perfects are “by and large a non-narrative category”, cf. Dahl 1985:113 and Lindstedt 2000:371), and (b) what relevance the event denoted by the perfect has for the discourse context (is the focus on the event itself or rather on its effects?). I believe that these two criteria, which are stricter than those of Ruijgh, can yield more interesting results. Consider example (40).

(40) μισθοῦται δ’ οὗτος παρ’ ἡμῶν τοῦ γιγνομένου τόκου τῷ ἀργυρίῳ, πέντε καὶ ἑκατὸν δραχμῶν τοῦ μηνὸς ἑκάστου. καὶ τιθέμεθα συνθήκας, ἐν αἷς ἢ τε μίσθωσις ἦν γεγραμμένη (Dem. 37.5)

“And the plaintiff took a lease on them from us at a rent equal to the interest accruing on the money, a hundred and five drachmae a month. We drew up an agreement in which the terms of the lease were stated”.

To contextualize this example, Demosthenes recounts a business deal between himself as creditor (together with a certain Evergus) and Pantaenetus as borrower. In §4, it is said that they lent Pantaenetus one hundred and five *minae* on the security of a mining property in Maroneia and of thirty slaves. Demosthenes then specifies the details of their agreement in the historic present: Pantaenetus took a lease on the property (μισθοῦται) and the slaves at a rent equal to the interest accruing on the money; they drew up a contract (τιθέμεθα), in which the terms of the lease were stated (the latter expressed by the periphrastic perfect). When we apply our two criteria, it becomes clear that ἦν γεγραμμένη “it was stated” does not constitute a prototypical perfect (i.e. a perfect of current relevance): it does not so much constitute an event which is prior to and relevant at the time of another, τιθέμεθα, but rather a specification of it, a next logical step in the narration<sup>52</sup> (cf. the genitive absolute *πραχθέντων δὲ τούτων* “when these things were done” in §6, referring to a series of past events).<sup>53</sup>

A second example, which is less complicated though certainly as interesting, can be found in Isocrates’ *Panathenaicus*, printed here as (41). Isocrates is doubting whether a

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<sup>52</sup> One referee mentions the possibility of interpreting ἦν γεγραμμένη as a resultative perfect (e.g. co-ordinated with an adjective “the terms of the lease were *fair* and *in writing*”). Perhaps such an interpretation must not entirely be excluded, though I myself do not find it evident.

<sup>53</sup> For a similar example, cf. Dem., *Contra Tim.* 59.

speech of his should be entirely destroyed or distributed among those who want to have it. He therefore decides to summon some of his former students, and ask their advice. In the main clause, we get a series of six pluperfects, two of which are synthetic. Here, even more clearly than in (40), the periphrastic perfects are used to narrate a series of past events, which can hardly be considered old or backgrounded information. Note, however, that the periphrastic pluperfect *συνεληλυθότες ἦσαν* “they had come together” does have its regular discourse function.

(41) *Τούτων γνωσθέντων οὐδεμίαν διατριβὴν ἐποιησάμην, ἀλλ’ εὐθὺς παρεκέκληντο μὲν, οὐς εἶπον, προειρηκῶς δ’ ἦν αὐτοῖς ἐφ’ ἃ συνεληλυθότες ἦσαν, ἀνέγνωστο δ’ ὁ λόγος, ἐπηνημένος δ’ ἦν καὶ τεθορυβημένος καὶ τετυχηκῶς ὥνπερ οἱ κατορθοῦντες ἐν ταῖς ἐπιδείξεσιν (Isoc. 12.233)*

“Having so resolved, I lost no time; they whom I have mentioned were summoned at once; I announced to them beforehand why they had come together; the speech was read aloud, was praised and applauded and accorded even such a reception as is given to successful declamations”.

Examples (40) and (41) illustrate that the periphrastic perfect could get a more ‘aoristic’ character. As already hinted at earlier, ‘discourse’ may be considered another parameter of agentivity (Hopper & Thompson 1980; *cf. supra*), foregrounded events being highly agentive and backgrounded ones having low agentivity. We can thus specify this development of the periphrastic perfect as another increase in agentivity.

Some critical remarks need to be made, however. Firstly, it seems that the examples discussed in this section are – as far as I can see – quite rare in fourth-century Classical Greek. Secondly, it is rather dubious whether the perfect forms in these examples could be fittingly called ‘perfects of recent past’: they do not seem to present any overt signs of recency. Perhaps the label ‘perfect of hot news’ (putting more emphasis on the immediacy (rather than recency) of the event and its perceived significance), as used by Schwenter (1994a, 1994b) would be more adequate. Further research, however, is needed to decide upon this matter (preferably including the synthetic perfect). Thirdly and finally, one could question the traditional interpretation of the Ancient Greek perfect of recent past as presented under §2.2. I would be inclined to represent perfects such as *προειρηκῶς ... ἦν* in (41) with a one space-configuration containing both FOCUS and EVENT (which would be consistent with the observed increase in agentivity), rather than a two-space configuration with a separate FOCUS and EVENT-space, as in the oft-cited example from Plato in (9).

#### 4. CONCLUSION & SUGGESTIONS FOR FURTHER RESEARCH

The diachronic analysis given in this paper has concentrated on three periods of the Greek language: Archaic Greek, fifth-century Classical Greek and fourth-century Classical Greek. I have shown that the periphrastic perfect underwent the cross-linguistically attested shift from resultative to anterior. Using *Mental Spaces Theory*, I have argued that this shift can be understood in terms of a movement from a one-space configuration to a two-space configuration: while the discourse primitives FOCUS and EVENT were initially located in the same mental space, starting from the fifth-century a cognitive restructuring took place, whereby an additional non-FOCUS EVENT-space was constructed. Such a development should not be understood in terms of temporality, as FOCUS does not shift to the EVENT-space, but rather in terms of agentivity. I have furthermore suggested that this semantic shift can be explained in terms of reanalysis: ‘agentive’ (‘bridging’) contexts, ambiguous between a one-space and a two-space configuration, stimulated the reanalysis of the resultative perfect. In fourth century Classical Greek, we witness an extension of the contexts of use of the periphrastic construction, on the level of semantics, morphology and discourse-use.

Central to the discussion has been the insight that the anterior perfect can be further subdivided in a number of different functions (on semantic/syntactic/pragmatic grounds), more specifically the ‘perfect of current relevance’, the ‘experiential perfect’, the ‘perfect of persistence’ and the ‘perfect of recent past’ (functions which are also recognized in studies on the synthetic perfect). We have seen that especially the perfect of current relevance came to be widespread in fourth-century Classical Greek, while the experiential perfect and the perfect of persistence were much more marginal. I closed the paper with a discussion of some possible examples of the perfect of recent past, which appear to be very infrequent (though they urge us to reconsider the traditional view of the perfect of recent past). Arguably, such examples constitute a further semantic development (a so-called ‘aoristicization’), with a movement of FOCUS to the additional EVENT-space set up by the periphrastic perfect.

Much of course remains to be done, both in terms of corpus (exhaustive research of all examples) and of diachrony (Post-classical Greek). Let me outline three related issues which I consider to be particularly relevant.

a. *The synthetic perfect*. The relevance of this first issue is quite evident. It would be very interesting to see whether the synthetic perfect underwent a semantic shift in contexts similar to those of the periphrastic perfect, and whether the synthetic perfect went through the stages of experiential perfect/perfect of persistence and perfect of recent past (Harris’

stages II and IV, *cf. supra*). One particularly difficult question, which will probably not be answered in the immediate future, is to what extent the periphrastic and synthetic perfect diverge from a semantic/pragmatic and syntactic point of view. Obviously, the paradigmatic integration of the periphrastic perfect is a strong argument in favour of those who consider them to be equivalent, but to leave it at that would be an oversimplification/generalization. From a diachronic point of view, this was hardly a stable situation: in the fifth-century Greek of Herodotus the synthetic and periphrastic perfect are still used next to each other, while in Post-classical Greek the periphrastic perfect starts to supplant the synthetic perfect.

b. *Constructions*. To continue the constructional perspective, it would be interesting to look into the semantic/pragmatic and syntactic differences between the periphrastic perfect, pluperfect and future perfect, and see to what extent they constitute separate constructions, that is, show idiosyncratic properties (Lindstedt 2000:366 notes that “past perfects (or pluperfects) and future perfects (*futura exacta*) share several properties with present perfects, but they also have some special uses and characteristics of their own”). While I have included the past and future perfect in my analysis of the periphrastic perfect, Sicking & Stork (1996:122) explicitly exclude them from their study on the synthetic perfect.

c. *Discourse*. Thirdly and finally, I would like to stress the importance of including discourse into the analysis of the perfect (for a promising point of view, *cf. Orriens 2009*). In this paper, I have made use of the well-known distinction between foreground and background, and a tendency for the anterior perfect to occur in subordinate clauses with a backgrounded function. Obviously, however, this view represents a crude generalization: it may be more correct to distinguish between different layers of foreground and background (Reinhart 1984), subordinate clauses can in fact express foregrounded information (Fox & Thompson 1990:306; note that perfective verbs freely occur in subordinate clauses in Ancient Greek) and the perfect of current relevance does occur in main clauses.

## REFERENCES

- Aerts, W.J. 1965. *Periphrastica*. Amsterdam: Hakkert (diss. Amsterdam).
- Ameis, K.F. & C. Hentze. 1920<sup>13</sup>. *Homers Odyssee. Erster Band / Erstes Heft, Gesang I – VI*. Leipzig & Berlin: B.G. Teubner.
- Ameis, K.F. & C. Hentze. 1922<sup>7</sup>. *Homers Ilias. Erster Band / Zweites Heft, Gesang IV – VI*. Leipzig & Berlin: B.G. Teubner.
- Bentein, K. 2011. Towards the identification of verbal periphrasis in Ancient Greek: A prototype analysis. *Acta Classica*. In press.
- Bentein, K. 2011b. Eimi and the adjectival participle in Ancient Greek. In: C. Cummins e.a. (eds.), *Proceedings of the Sixth Cambridge Postgraduate Conference in Language Research*, 19-28. Cambridge: Cambridge Institute of Language Research.
- Berrettoni, P. 1972. L'uso del perfetto nel greco omerico. *Studi e Saggi Linguistici* 12, 25-170.
- Bybee, J.L. & Ö. Dahl. 1989. The creation of tense and aspect systems in the languages of the world. *Studies in Language* 13, 51-103.
- Bybee, J.L., Perkins, R. & W. Pagliuca. 1994. *The evolution of grammar: Tense, aspect, and modality in the languages of the world*. Chicago (Ill.): University of Chicago press.
- Bybee, J.L. 2010. *Language, usage and cognition*. Cambridge: CUP.
- Carey, K. 1995. Subjectification and the development of the English Perfect. In: D. Stein & S. Wright (eds.), *Subjectivity and subjectivisation*, 83-102. Cambridge: CUP.
- Carey, K. 1996. From resultativity to current relevance. In: A.E. Goldberg (ed.), *Conceptual structure, discourse and language*, 31-48. Stanford: CSLI Publications.
- Chantraine, P. 1927. *L'histoire du parfait grec*. Paris: Champion.
- Chantraine, P. 1991<sup>3</sup> [1945]. *Morphologie historique du grec*. Paris: Klincksieck.
- Comrie, B. 1976. *Aspect*. Cambridge: CUP.
- Cook, J.A. 2001. The Hebrew verb: A grammaticalization approach. *Zeitschrift für Althebraistik* 14, 117-44.
- Croft, W. 2001. *Radical construction grammar*. Oxford: OUP.
- Croft, W. 2010a. The origins of grammaticalization in the verbalization of experience. *Linguistics* 48, 1-48.
- Croft, W. 2010b. *Verbs: Aspect and argument structure*. Draft of June 8, 2010, downloaded at <http://www.unm.edu/~wcroft/WACpubs.html> (last accessed October 5, 2010).
- Croft, W. & D.A. Cruse. 2004. *Cognitive linguistics*. Cambridge: CUP.
- Crudden, M. 2001. *The Homeric hymns*. Oxford: OUP.
- Cruse, D.A. 2011<sup>3</sup>. *Meaning in language*. Oxford: OUP.
- Cutrer, M. 1994. *Time and tense in narratives and everyday language*. Doctoral dissertation, University of California at San Diego.



- Dahl, Ö. 1984. Temporal distance: Remoteness distinctions in tense-aspect systems. In: B. Butterworth & B. Comrie (eds.), *Explanations of language universals*, 105-22. Berlin: Mouton.
- Dahl, Ö. 1985. *Tense and aspect systems*. Oxford: Blackwell.
- Dahl, Ö. and E. Hedin. 2000. Current relevance and event reference. In: Ö. Dahl (ed.), *Tense and aspect in the languages of Europe*, 385-402. Berlin: de Gruyter.
- Dietrich, W. 1973. *Der periphrastische Verbalaspekt in den romanischen Sprachen*. Tübingen: Niemeyer.
- Dik, S.C. 1987. Copula auxiliarization: How and why?. In: M. Harris & P. Ramat (eds.), *Historical development of auxiliaries*, 53-84. Berlin & New York: de Gruyter.
- Drinka, B. 1998. The evolution of grammar. Evidence from Indo-European perfects. In: M.S. Schmid (ed.), *Historical linguistics 1997*, 117-33. Amsterdam: Benjamins.
- Drinka, B. 2003. The formation of periphrastic perfects and passives in Europe. In: B. Blake & K. Burridge (eds.), *Historical Linguistics 2001*, 105-128. Amsterdam & Philadelphia: Benjamins.
- Duhoux, Y. 2000. *Le verbe grec ancien*. Louvain-La-Neuve: Peeters.
- Evans, V. & M. Green. 2006. *Cognitive Linguistics*. Edinburgh: Edinburgh university press.
- Evelyn-White, H.G. 1914. *Hesiod, the Homeric Hymns and Homerica with an English translation*. Cambridge, MA: Harvard University Press; London: William Heinemann Ltd.
- Fauconnier, G. 1985. *Mental spaces*. Cambridge (Mass.): MIT press.
- Fauconnier, G. 1997. *Mappings in thought and language*. Cambridge: CUP.
- Faulkner, A. 2008. *The Homeric hymn to Aphrodite*. Oxford & New York: OUP.
- Fleischman, S. 1983. From pragmatics to grammar. *Lingua* 60, 183-214.
- Fox, B. & S. Thompson. 1990. A discourse explanation of the grammar of relative clauses in English conversation. *Language* 66, 51-64.
- George, C.H. 2005. *Expressions of agency in Ancient Greek*. Cambridge: CUP.
- Gerö, E-C. & A. von Stechow. 2003. Tense in time: The greek perfect. In: R. Eckardt, K. von Heusinger & C. Schwarze (eds.), *Words in time*, 251-94. Berlin: de Gruyter.
- Godley, A.D. 1920. *Herodotus, with an English translation*. Cambridge: Harvard University Press.
- Goodwin, W.W. 1966[1889]. *Syntax of the moods and tenses of the Greek verb*. London: MacMillan.
- Harris, M.B. 1982. The 'past simple' and the 'present perfect' in Romance. In: N. Vincent & M. B. Harris (eds.), *Studies in the Romance verb*, 42-70. London: Croom Helm.
- Harris, A.C. & L. Campbell. 1995. *Historical syntax in cross-linguistic perspective*. Cambridge: CUP.
- Harry, J.E. 1905. The perfect subjunctive, optative and imperative in Greek. *The Classical Review* 19, 347-354.
- Harry, J.E. 1906. The perfect forms in later Greek from Aristotle to Justinian. *Transactions and Proceedings of the American Philological Association* 37, 53-72.

- Haspelmath, M. 1992. From resultative to perfect in Ancient Greek. In: J.L. Iturrioz Leza (ed.), *Nuevos estudios sobre construcciones resultativas* (= Función 11-12), 187-224. Universidad de Guadalajara: Centro de Investigación de Lenguas Indígenas.
- Haspelmath, M. 1994. Passive participles across languages. In: B. Fox & P.J. Hopper (eds.), *Voice: Form and function*, 151-177. Amsterdam: Benjamins.
- Haspelmath, M. 1998. Does grammaticalization need reanalysis? *Studies in Language* 22, 315-351.
- Haspelmath, M. 2000. Periphrasis. In: G. Booij, C. Lehmann, & J. Mugdan (eds.), *Morphology. An international handbook on inflection and word formation*. Vol. 1, 654-64. Berlin: de Gruyter.
- Haspelmath, M. 2003. The geometry of grammatical meaning. In: M. Tomasello (ed.), *The New Psychology of Language*, vol. 2, 211-43. New York: Lawrence Erlbaum Associates Publishers.
- Haug, D. 2004. Aristotle's kinesis/energeia-test and the semantics of the Greek perfect. *Linguistics* 42, 387-418.
- Haug, D. 2008. From resultatives to anteriors in Ancient Greek. In: E. Thorhallur (ed.), *Grammatical change and linguistic theory: The Rosendal papers*, 285-305. Amsterdam: John Benjamins.
- Heine, B. 2002. On the role of context in grammaticalization. In: I. Wischer & G. Diewald (eds.), *New reflections on grammaticalisation*, 83-101. Amsterdam & Philadelphia PA: John Benjamins.
- Hopper, P.J. 1979a. Aspect and foregrounding in discourse. In: T. Givón (ed.), *Syntax and Semantics: Vol. 12: Discourse and Syntax*, 213-41. New York: Academic Press.
- Hopper, P.J. 1991. On some principles of grammaticization. In E.C. Traugott & B. Heine (eds.), *Approaches to grammaticalization*. Vol. 1, 17-35. Amsterdam/Philadelphia: John Benjamins.
- Hopper, P.J. & S.A. Thompson. 1980. Transitivity in grammar and discourse. *Language* 56, 251-99.
- Hopper, P. & E.C. Traugott. 2003<sup>2</sup>. *Grammaticalization*. Cambridge: CUP.
- Humbert, J. 1972<sup>3</sup>. *Syntaxe grecque*. Paris: Éditions Klincksieck.
- Jannaris, A. 1897. *An historical Greek grammar chiefly of the Attic dialect*. Hildesheim: Olms.
- Keil, F. 1963. Untersuchungen zum Perfektgebrauch Herodots. *Glotta* 41, 10-51.
- Kontos, K.S. 1898. Φιλολογικαὶ παρατηρήσεις. Ἀθηνᾶ 10, 269-306; 307-324.
- Kovacs, D. 1994. *Euripides: Cyclops, Alcestis, Medea*. Cambridge: Harvard University Press.
- Kühner, R. & B. Gerth. 19763 [1898]. *Ausführliche Grammatik der griechischen Sprache. Zweiter Teil: Satzlehre. Erster Band*. Hannover: Verlag Hahnsche Buchhandlung.
- Langacker, R.W. 1996. A constraint on progressive generics. A.E. Goldberg (ed.), *Conceptual structure, discourse and language*, 289-302. Stanford: CSLI Publications.
- La Roche, J. 1893. *Beiträge zur griechischen Grammatik*. Leipzig: B.G. Teubner.
- Lehmann, C. 1995. *Thoughts on grammaticalization*. München: LINCOM Europa.
- Lindstedt, J. 2000. The perfect – aspectual, temporal and evidential. In Ö. Dahl (ed), *Tense and aspect in the languages of Europe*, 365-383. Berlin & New York: de Gruyter.
- Lindstedt, J. 2001. Tense and Aspect. In : M. Haspelmath, E. König, W. Österreicher & W. Raible (eds.), *Language typology and language universals*, vol.1, 768-83. Berlin: de Gruyter.

- Lloyd, A.B. & A. Fraschetti 1989. *Erodoto. Le storie volume II*. Milano: A. Mondadori.
- Lüdtke, H. 1986. Esquisse d'une théorie du changement langagier. *La Linguistique* 22, 3-46.
- Magnien, V. 1912. *Le futur grec*. Paris: H. Champion.
- Marchello-Nizia, C. 2006<sup>2</sup>. *Grammaticalisation et changement linguistique*. Bruxelles: De Boeck.
- Maslov, J.S. 1988. Resultative, perfect, and aspect. In: V.P. Nedjalkov (ed.), *Typology of resultative constructions*, 63-85. Amsterdam: Benjamins.
- McKay, K.L. 1965. The use of the Ancient Greek perfect down to the end of the second century AD. *Bulletin of the Institute of Classical Studies* 12, 1-21.
- Michaelis, L.A. 1996. On the use and meaning of already. *Linguistics and Philosophy* 19, 477-502.
- Michaelis, L. 1998. *Aspectual grammar and past-time reference*. London: Routledge.
- Mittwoch, A. 2008. The English resultative perfect and its relationship to the experiential perfect and the simple past tense. *Linguistics and Philosophy* 31, 323-351.
- Nedjalkov, V. & S.J. Jaxontov. 1988. The typology of resultative constructions. In: V.P. Nedjalkov (ed.), *Typology of resultative constructions*, 3-62. Amsterdam: John Benjamins.
- Nedjalkov, V. 2001. Resultative constructions. In: M. Haspelmath (ed.), *Language typology and universals. An International Handbook*, Vol. 2, 928-940. Berlin & New York: de Gruyter.
- Oriens, S., 2009. Involving the past in the present. In: S.J. Bakker & G.C. Wakker (eds.), *Discourse cohesion in Ancient Greek*, 221-239. Leiden & Boston: Brill.
- Porter, S. E. 1989. *Verbal aspect in the Greek of the New Testament*. New York: Peter Lang.
- Reinhart, T. 1984. Principles of gestalt perception in the temporal organization of narrative texts. *Linguistics* 22, 779-809.
- Rijksbaron, A. 2006<sup>3</sup>. *The syntax and semantics of the verb in Classical Greek*. Chicago & London: The University of Chicago Press.
- Romagno, D. 2005. *Il perfetto omerico: Diatesi azionalità e ruoli tematici*. Milano: FrancoAngeli.
- Ruijgh, C.J., 1991. Les valeurs temporelles des formes verbales en grec ancien. In: J. Gvozdanovic & T. Janssen (eds.), *The Function of tense in texts*, 197-217. Amsterdam: North-Holland.
- Ruijgh, C.J. 2004. Over de gebruikswijzen van het Griekse perfectum. Met speciale aandacht voor Plato's Politeia. *Lampas* 37, 24-45.
- Rusten, J. 1989. *Thucydides: The Peloponnesian war*. Cambridge: CUP.
- Schmidt, K.-H. 1964. Das Perfektum in indogermanischen Sprachen. Wandel einer Verbalkategorie. *Glotta* 42, 1-18.
- Schlesinger, I.M. 1995. *Cognitive space and linguistic case*. Cambridge: CUP.
- Schwenter, S.A. 1994a. The grammaticalization of an anterior in progress: Evidence from a Peninsular Spanish dialect. *Studies in Language* 18, 71-111.
- Schwenter, S.A. 1994b. 'Hot news' and the grammaticalization of perfects. *Linguistics* 32, 995-1028.

- Schwenter, S.A. & R.T. Cacoullos 2008. Defaults and indeterminacy in temporal grammaticalization: The 'perfect' road to perfective. *Language Variation and Change* 20, 1–39.
- Sicking, C.M.J. & P. Stork. 1996. The synthetic perfect in Classical Greek. In: C.M.J. Sicking & P. Stork (eds.), *Two studies in the semantics of the verb in Classical Greek*, 119-298. Leiden: Brill.
- Slings, S.R. 1994. Geschiedenis van het perfectum in het oud-Grieks. In: R. Boogaart. & J. Noordegraaf (eds.), *Nauwe betrekkingen*, 239-247. Amsterdam: Stichting Neerlandistiek VU.
- Slobin, D.I. 1994. Talking perfectly: Discourse origins of the present perfect. In W. Pagliuca (ed.), *Perspectives on grammaticalization*, 119-33. Amsterdam & Philadelphia: John Benjamins.
- Smyth, H.W. 1984 [1920]. *Greek grammar*. Harvard: Harvard University Press.
- Sommerstein, A.H. 2001. *Aristophanes: Wealth*. Warminster: Aris and Phillips.
- Squartini, M. & P.M. Bertinetto. 2000. The simple and compound past in Romance languages. In: Ö. Dahl (ed.), *Tense and aspect in the languages of Europe*, 385-402. Berlin: de Gruyter.
- Wackernagel, J. 1953 [1904]. Studien zum griechischen Perfectum. Programm zur akademischen Preisverteilung, 3-32. Repr. in *Kleine Schriften*, 1000-21. Göttingen: Vandenhoeck and Ruprecht.
- Ziegeler, D. 1999. Agentivity and the history of the English progressive. *Transactions of the Philological Society* 97, 53-101.