
EVA-CARIN GERÖ AND ARNIM VON STECHOW
TENSE IN TIME: THE GREEK PERFECT

1.	Survey	1
2.	On the Tense/Aspect/Aktionsart-architecture	4
3.	Chronology of Tense/Aspect Systems	10
3.1.	Archaic Greek (700-500 BC)	11
3.2.	Classical (500 – 300 BC).....	18
3.3.	Postclassical and Greek-Roman (300 BC – 450 AD)	29
3.4.	Transitional and Byzantine/Mediaeval Period (300 – 1450 AD)	31
3.5.	Modern Greek (From 1450 AD).....	33
4.	Conclusion.....	35

1. SURVEY*

The paper will deal with the diachronic development of the meaning and form of the Greek Perfect. The reason for focusing on this language is twofold: first, it has often been neglected in the modern linguistic literature about tense; secondly, in Greek, it is possible to observe (even without taking into account the meaning and form of the Perfect in Modern Greek) a very interesting diachronic behaviour of the Perfect which may have a great deal to tell about this "tense" more generally¹.

* We wish to thank two anonymous referees for critical comments.

¹ For the reader not so familiar with the chronology of the Greek language we here, in very broad outline, describe the various periods of its history.

Archaic Greek: 700-500 BC, e.g. Homer, Sappho and Alcaeus. This stage of the language is highly synthetic and in many respects not as grammaticalized as Classical Greek; the Perfect has a different meaning than that of later stages (especially salient in the so-called intensive use).

Classical Greek: 480-300 BC, eg. Plato, Xenophon and Sophocles. The language of this period is still very synthetic but more grammaticalized than AG; the Perfect, *ex hypothesi*, acquires a new meaning.

Postclassical and Roman-Imperial Greek: 300 BC-450 AD, e.g. Lucian, New Testament and Plotinus.

Shows distinct analytic tendencies and begins to confuse grammatical distinctions of CG, e.g., the moods or the two negatives; the core meaning of the Perfect is basically the same as in CG.

Transitional and Byzantine Greek: 300-1450 AD, e.g. Johannes Chrysostomos and Photius. The literary language is a mixture of "Volkssprache" and a classicistically influenced idiom; the synthetic Perfect is replaced by analytic constructions.

Modern Greek: from 1450 AD. Much more analytic than Ancient Greek; the Perfect, as well, is always analytic.

In early literary texts (e.g. Homer) the Perfect, morphologically characterised by reduplication and (often but not always) by a special Perfect-suffix *-k-*, has two different semantic values: an "intensive" (iterative or simply intensified) meaning and a resultative one. The Perfect form *dédorke* (from *dérkomai* "see") thus means "gaze" (= see in a prolonged or intense way), the Perfect Participle *dedorkós* "flashing (fire from ones eyes)". The resultative meaning we find e.g. in the Perfect form *téthnêka* (from *thnêskô* "die"), "has died" (= "is dead"). In Classical Greek the Perfect often yields a resultative meaning (although it can also, as we will see, convey other typical Perfect-shades-of-meaning). During this period we also find Perfect forms with what seems to be a Simple Past /Aorist meaning (e.g. in Pl.*Cri.*44 a *tekmaíromai dè ék tinos enupníou, ho heôraka olígon próteron taútês tês nuktós* "I conclude this from a dream which I had (lit. have seen) somewhat earlier tonight"). In Postclassical Greek the "Simple Past"-use of the Perfect gets to be quite widespread (e.g. Pol. 3.1.2 ...*en têi trítêi búblôi dedêlôkamen; homoíôs dè kai tàs aitías en autêi ekeinêi diesafêsamen* "In my third book I explained (lit. have explained)...; I likewise set forth in the same place the reasons..."). Eventually, then (in Byzantine Greek), the synthetic Perfect disappears and is replaced by analytic forms.

Like in the analysis of many other languages, the correct understanding of the Greek Perfect is a controversial matter². As far as Classical Greek is concerned (the language period most focused on in traditional Greek grammar), two important types of interpretation can be distinguished, viz. (i) the theories which focus on resultativity, and (ii) the Reichenbachian³ theories. Representatives of the resultative "school" are (Chantraine 1927), (Humbert 1960) and (McKay 1980, McKay 1981). The Reichenbachian approach we find in modern linguistic literature commenting on the Greek Perfect (e.g. (Mourelatos 1978)), as well as in newer school

² Already in antiquity, there was disagreement among the grammarians concerning the true meaning of the Greek Perfect. Dionysius Thrax (ca 170-90 B.C.) looked upon the Greek Perfect as a Past tense. His later colleague Apollonius Dyscolus (2nd c. A.D.), on the other hand, saw it as a kind of Present, attributing to the Perfect the meaning of "present achievement" (*suntéleia enestôsa*). Also Apollonius, however, regarded the Perfect as somehow past-oriented.

³ In Reichenbachian framework (following (Reichenbach 1947)) the meaning of the various tenses (e.g. in English) is described by means of the parameters E, R and S. E is the event time (the point or interval at which an event takes place); S is the utterance time and R the reference time. The possible relations between these various "temporal entities" are the following: S<R ("speech time before reference time"): Future; R<S ("reference time before speech time"): Past; S,R ("speech time and reference time identical"): Present; E<R ("event time before reference time"): Perfect; R<E ("reference time before event time"): Prospective;. The various tenses, then, are the result of a combination of specific relations. E.g. the representation of the Present is the result of the combination S,R with E,R to yield S,R,E, and the representation of the Present Perfect is the result of the combination S,R with E<R, to yield E<R,S.

and university grammars of the Greek language, e.g. in (Blomqvist and Jastrup 1996).

Depending on what views the theoreticians on Greek grammar have concerning the core meaning of the (Classical) Perfect, their theories about the diachronic development of this "tense" vary a great deal. Focusing on resultativity, quite a number of proponents of traditional Greek grammar (e.g. (Chantraine 1927)) have reconstructed the following history of the Perfect: in Homeric Greek the Perfect, which had an "intensive" or (usually) resultative meaning, was almost always intransitive⁴; in Classical Greek the resultative Perfect was distinctly extended to transitivity and therefore got to be more past-oriented (an object as a result of an event leads the thought to the event in the past which caused the result ("I have born a child") in a different way than the old result-on-the-subject ("I have born = I am a mother"); the synthetic Perfect then, in Postclassical Greek, more and more acquires a Past meaning (but probably not quite the same meaning as the Simple Past/Aorist), gets confused with the Aorist (also morphologically) and gets to be extinct. The Reichenbachian approach to the (middle and later stages of) the history of the Greek Perfect is the following: since the Perfect of Classical Greek can be seen as involving two reference-points, Present and Past (like S,R & E<R in (Reichenbach 1947)), the Perfect is present-oriented and past-oriented. Because of the past-orientation the Perfect can also be used as a retrospective tense without present-orientation, which more and more gets to be the case in later Greek, where it is used with a Simple Past-meaning. (Note that the first type of theory seems to suggest that there was no real change of meaning (from Perfect into Simple Past) between the Classical and the Postclassical period, whereas the Reichenbachian type implies that there was such a change!)

After having looked at a great deal of Greek data, as well as having considered the applicability on Greek of traditional as well as various modern linguistic approaches to the Perfect in other languages, we tend to think that an Extended Now-analysis, suggested e.g. for the English Perfect by (McCoard 1978) and (Stechow 2001a) is to be preferred to a resultative mode of explanation (whether traditional, like in Chantraine or McKay, or modern semantic like (Kamp and Reyle 1993))⁵. The Reichenbachian account of the Perfect sometimes adopted in modern

⁴ Exceptions to this rule are *Hom. Il. 2. 272 é dē mūri' Odusseūs esthlà éorgen* ("For sure, Ulysses has accomplished innumerable good deeds") and *Od. 17. 284 kakà pollà pépontha* ("I have suffered many evils").

⁵ According to the Extended-Now-account the Present Perfect denotes an interval which includes the event time and extends up to the speech time. The Extended-Now is then (e.g. by (Dowty 1979)) treated as a predicate XN, with the following truth conditions: XN(t) is true at a time t' if and only if t' is a final subinterval denoted by t. For a similar

treatments of the Greek tenses is, at most, adequate as a means of analysis of the usage at certain stages of development in this language, and it fails, in any real sense, to give insight into the mechanisms behind the development *per se*. The Extended-Now-approach, as we shall see, covers much more ground. To our knowledge, no other thorough attempt has been made to interpret the Ancient Greek Perfect in this way, either synchronically or diachronically⁶. The „intensive“ use of the Perfect we will almost entirely exclude from our investigation.

In the account of the diachrony of the Greek Perfect something will also be said about the early emergence of analytic Perfect constructions in this language, and of the fate of the synthetic vs. analytic Perfect in MG.

2. ON THE TENSE/ASPECT/AKTIONSART-ARCHITECTURE

The aim of our investigation is an analysis of the system in syntactic and semantic terms. We will use an approach in the style of recent syntax/semantics (cf. (Chomsky 1995), (Stechow 1993), (Stechow 1996), (Giorgi and Pianesi 1998), (Stechow 1999a)). The main characteristic of such systems is the assumption of functional projections for Agreement, Tense and Aspect. One of the great advantages of this approach is its ability to provide a transparent and simple analysis of the meaning of Tense and Aspect and to combine this with the semantics of adverbs and negation. We will see that this framework enables us to describe linguistic variation through time and languages within a stable underlying „universal grammar“.

The syntactic analysis proposed in the following is rather abstract. In particular, we do not commit ourselves to details of Greek surface syntax. Our syntactic structures abstract from linear

approach, cf. (Anagnostopoulou et al. 1997): „...the Perfect sets up a time span. The right boundary of that time span is oriented towards a contextually relevant point in time (not necessarily by identity, but also by approximation, as with *lately*)...The left boundary of the Perfect time span depends on the lexical meaning of the adverbial. When the Perfect adverbial is *since*, the left boundary is the overt argument of *since* (e.g. since 1991)“. For a more explicit analysis, cf. (Stechow 1999b).

⁶ It deserves, however, to be mentioned that the famous American pioneer of Greek and Latin grammar, Basil Gildersleeve, who always had very sound intuitions about the languages he interpreted, to all appearances looked upon the Perfect in some such way, cf. (Gildersleeve 1900-1911): „The perfect looks at both ends of an action. The time between these ends is considered as a present. When one end is considered, the present is used; when the other, the aorist“. In his treatment of verbal aspect in New Testament Greek, (Fanning 1990) briefly discusses the Extended-Now-theory, viz. as found in (McCoard 1978). He rejects it for NT Greek, however (with implied claims of nonvalidity also for Ancient Greek generally) in favour of a combined Tense/Aspect/Aktionsart-approach (cf. below). As for the synchronic interpretation of the MG Perfect, an Extended-Now-approach has been proposed recently by (Iatridou et al. 2001).

order and scrambling. To give an idea of the difficulties and the required abstractness of the analysis, we ask the reader to consider the following example:

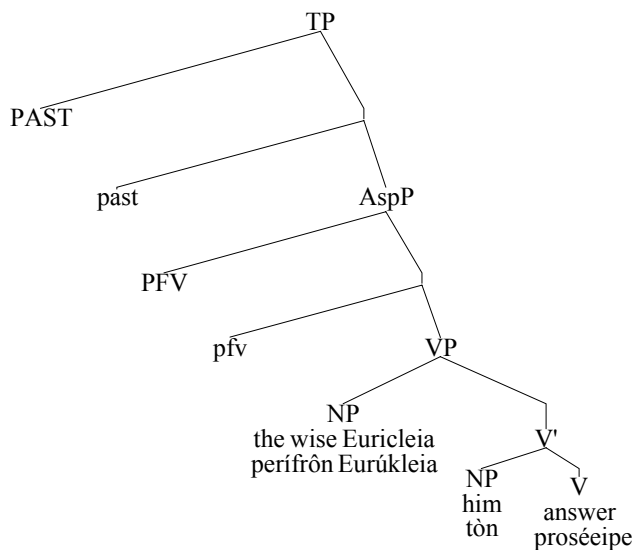
- (1) *tòn d' aúte proséeipe perifrôn Eurúkleia*
 Him then answer_{TAOR}. wise Eurycleia (Hom. *Od.* 22.134)

To our mind, this sentence expresses the statement that the PAST spoken about contains an event which is an answering done by Eurycleia and directed towards Ulysses. In somewhat more formal terms, this reading can be expressed as:

- (2) $\exists e[e \subseteq \text{PAST} \ \& \ e \text{ is the giving of an answer to him by Eurycleia}]$

PAST is the semantic past, i.e. a time before the speech time specified by the context of use. The information $e \subseteq t$ is the meaning of the perfective aspect (“PERFECTIVE”). The AG Aorist morphology contains the information PAST + PERFECTIVE, which is spread to different functional nodes in the syntax. A syntactic tree for the sentence could be this:

- (3)



The semantic tense PAST and the semantic aspect PERFECTIVE are located in the specifier of the tense phrase (TP) and in that of the aspect phrase (AspP) respectively. This information is abstract, i.e., phonetically invisible. Semantically, the finite Aorist is a combination of PAST + PERFECTIVE. Morphologically, the PERFECTIVE is associated with the stem, for we have an infinitive Aorist in AG, which has no PAST-meaning. The information PAST comes with the

augment, which is traditionally regarded as its carrier. The situation is complicated somewhat by the fact that the finite Aorist form has special personal endings different from that of other tenses. In any case, it is safe to say that the finite Aorist form has the morphological features [past] and [perfective], which are located in the heads of TP and AspP, respectively. The finite verb may check these by successive movement. It ascends gradually to the past-position. The pronoun *tón*, “him”, is scrambled to the “Wackernagel position”, i.e. to the position in front of TP. This gives us the observed surface word order.

We will see that the meaning (2) can be calculated from this tree by functional application of PFV to the VP-meaning and by functional application of PAST to PFV VP. We will now explain our system in more detail.

The essential idea of the analysis is that we carefully distinguish between morphological feature and semantics. A verb has certain morphological features, which check the presence of the functional projections containing the respective features as heads. The specifier of a functional projection contains semantic information, which matches the morphology in the unmarked case, but by no means always does so. For instance, the German perfect morphology is ambiguous in many ways: it may express a semantic Past tense, an Extended Now-Perfect, a Future Perfect and a Perfect of result⁷:

- (4) a. *Gestern sind wir in Rom gewesen.* (PAST)
 yesterday are we in Rome been
- b. *Ich habe seit zwei Stunden auf dich gewartet.* (XN)
 I have since two hours for you waited
- c. *Morgen habe ich den Aufsatz abgeben.* (FUTURE PERFECT)
 tomorrow have I the paper delivered
- d. *Eva hat Tübingen seit einem Jahr verlassen.* (Perfect of result)
 Eva has Tübingen left since one year

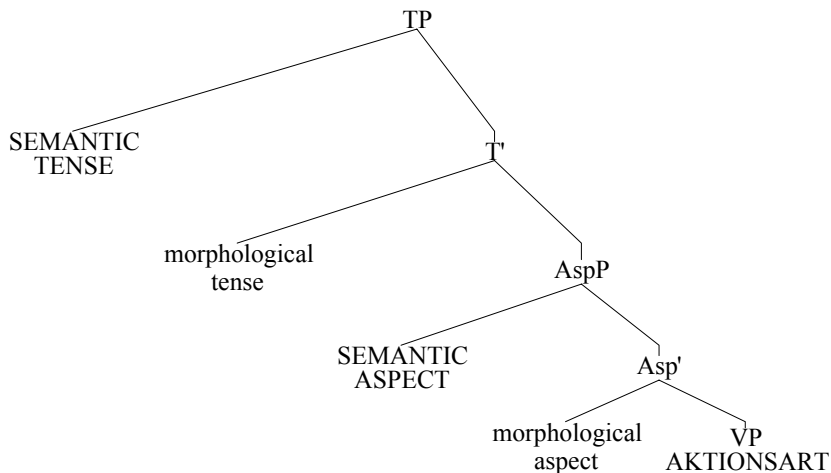
The Italian *passato prossimo*, which is morphologically equivalent to the German Perfect, has a much more restricted meaning, namely that of the AG aorist. For instance, (5a) is unacceptable. We have to use the *imperfetto* instead of the *passato remoto*, if we want to get an idiomatic text. The examples are taken from (Giorgi and Pianesi 2001).

- (5) a. **(Alle tre) Mario ha mangiato una mela e la sta mangiando tutt'ora.* [22]
 (At three) Mario has eaten an apple and he is still eating it
- b. *(Alle tre) Mario mangiava una mela e la sta mangiando tutt'ora.*
 (At three) Mario ate (ipfv) an apple and he is still eating it

Obviously, we could produce exactly the same contrast for the Aorist vs. Imperfect for Ancient Greek.

Below we give an exposition of the tense/aspect/aktionsart-architecture which we have in mind. As has been said above, we will strictly distinguish between morphological and semantic tense and aspect. The semantic notions will be represented by capital letters, the morphological ones by small letters. This the architecture of the finite clause:

(6) **The tense/aspect/aktionsart-architecture**



The standard semantic tenses are PRESENT, PAST and FUTURE, but there may be some additional ones as well. The morphological realisation of the tenses can vary from language to language. A complication may arise from the fact that TENSE and ASPECT are not always realised by separate morphemes. A stable factor in Greek morphology, on the other hand, is that the Aorist morphology of finite forms (the Aorist marking proper together with the so-called augment) expresses PAST + PERFECTIVE, whereas the imperfect morphology expresses PAST + IMPERFECTIVE.

The notion of aspect has a Janus face, which easily leads to confusion. The semantic side

⁷ Cf. (Stechow 2001b)

of the aspect morphology is complicated by the fact that we have to distinguish between two different notional categories, viz. *aspectual class* and *aspectual relation*. In the semantic literature *aspectual class* usually is a synonym for *aktionsart* in the sense of (Vendler 1957). In other words, an *aktionsart* is an accomplishment/achievement, activity or a state.⁸ The Vendler *aktionsart* is expressed by the tense- and aspectless VP. We will assume that an accomplishment/achievement is a class of events, whereas Vendlerian states are sets of times or states. Following (Herweg 1990) and (Katz 1995), we will not distinguish between times and states.

An event or state is located in time by means of a relation that connects the reference time with the event time or the event state. With (Klein 1994), we will call these relations ASPECTS, more accurately, SEMANTIC ASPECTS. The following ASPECTS are used in many languages: (i) the reference time may INCLUDE the event time or the state time, (ii) the reference time may be INCLUDED in the event time, or (iii) the reference time may follow the event time or state time, being POST. One and the same morphological aspect may license different ASPECTS. For instance, Russian perfective morphology selects Vendlerian accomplishments/achievements and licenses either INCLUDES or POST.

Let us make this more precise. Recently, a version of Partee's (1973) deictic theory of TENSE has become increasingly popular. We follow the proposal given in (Heim 1994), according to which tenses restrict the interpretation of temporal variables:

(7) **Semantic Tenses**

⁸ In the slavistic philology, the term *aktionsart* is used a bit differently. In this tradition, *aktionsarten* are properties of actions such as inchoativity, terminativity, frequentativity and what other characteristics can be expressed by verbal prefixes. The Vendlerian *aktionsarten* are classes of events defined by their temporal properties. The term does not touch upon the problem of how the VP expressing such an *aktionsart* is built up by means of internal *aktionsarten* in the sense of the slavistic philologists.

are symbols of type i which bear time variables as indices. Let c be the context of the utterance with t_c as the speech time.

- a. $\| \text{NOW} \|^{g,c}$ is the speech time conceived as a point.
- b. $\| \text{PAST}_j \|^{g,c}$ is defined only if $g(j)$ precedes the speech time t_c . If defined, $\| \text{PAST}_j \|^{g,c} = g(j)$.
- c. $\| \text{FUTR}_j \|^{g,c}$ is defined only if $g(j)$ follows the speech time t_c . If defined, $\| \text{FUTR}_j \|^{g,c} = g(j)$.

We will use the terminology introduced by (Reichenbach 1947) and call the time denoted by a semantic tense the *reference time*.⁹ Below is a list of the SEMANTIC ASPECTS mentioned.

(8) **Semantic aspects**

- a. INCLUDES = $\lambda P \lambda t \exists e. \tau(e) \subseteq t \ \& \ P(e)$, P of type $\langle v, t \rangle$ ¹⁰ (“PERFECTIVE”)
- b. POST = $\lambda P \lambda t \exists e. \tau(e) < t \ \& \ P(e)$ (“PERFECT”)
- c. INCLUDED = $\lambda P \lambda t \exists e. t \subseteq \tau(e) \ \& \ P(e)$ (“IMPERFECTIVE”)

e can be an event or a time. $\tau(e)$ is the time of e . If e is a time, then $\tau(e) = e$. In order to keep SEMANTIC ASPECT apart from morphological aspect, it would be safe to use the technical terms INCLUDES, POST and INCLUDED throughout the paper. But after (Klein 1994) there is a widespread practice of using the names PERFECTIVE, PERFECT and IMPERFECTIVE for these relations (cf. e.g. (Kratzer 1998)). We will adhere to this usage, but, at the same time, we want to formulate a serious warning: One has to understand these terms in their technical sense, which is given by the definition. One should avoid confusing SEMANTIC ASPECT with morphological aspect. Henceforth, we will use the abbreviations IPFV for IMPERFECTIVE, PFV for PERFECTIVE, while PERF will stand for PERFECT.

This said, let us evaluate in detail the LF conveyed by tree (3). We will not VP in detail, but we will assume the following meaning:

- (9) $\| [_{VP} \text{perífrôn Eurúkleia tòn; proséipe}] \|^{g,c} = \lambda e. e$ is the giving of an answer to $g(j)$ by wise Eurycleia

⁹ It is what (Bäuerle 1979) and (Fabricius-Hansen 1986) call *Betrachtzeit*, what (Klein 1994) calls *topic time* or *time of the claim*, and what (Musan 2000) calls *tense time*. I see little point in contributing to the general confusion by introducing a new terminology; we accept any term, provided it has a clear interpretation.

¹⁰ i is the type of times, v that of events.

The only important thing to keep in mind is that the VP is semantically tense- and aspectless, i.e., it is interpreted exactly as if it were a non-finite construction. The semantic tense + aspect, i.e. PAST + PERFECTIVE, is located in distant functional nodes. The Vendlerian aktionsart is not altogether clear. The VP is presumably best interpreted as an accomplishment; it could be an activity as well but not a state.

The tree is evaluated by ignoring the morphological nodes and by performing type driven functional application (FA), the way the standard textbooks teach us to do, e.g. (Heim and Kratzer 1998).

$$\begin{aligned}
& \parallel \text{PAST}_i \text{ PFV } \mathbf{perífrôn Eurúkleia tòn}_j \mathbf{ proséeipe} \parallel^g \\
& = \parallel \text{PFV } \mathbf{perífrôn Eurúkleia tòn}_j \mathbf{ proséeipe} \parallel^g (\parallel \text{PAST}_i \parallel^g) \quad \text{FA} \\
& = \parallel \text{PFV } \mathbf{perífrôn Eurúkleia tòn}_j \mathbf{ proséeipe} \parallel^g (g(i)) \quad \text{meaning of PAST}_i \\
& = \parallel \text{PFV} \parallel^g (\parallel \mathbf{perífrôn Eurúkleia tòn}_j \mathbf{ proséeipe} \parallel^g)(g(i)) \text{FA} \\
& = \lambda P \lambda t \exists e. \tau(e) \subseteq t \ \& \ P(e) (\parallel \mathbf{perífrôn Eurúkleia tòn}_j \mathbf{ proséeipe} \parallel^g)(g(i)) \\
& \hspace{20em} \text{meaning of PFV} \\
& = \lambda t \exists e [\tau(e) \subseteq t \ \& \ \parallel \mathbf{perífrôn Eurúkleia tòn}_j \mathbf{ proséeipe} \parallel^g(e)](g(i)) \\
& \hspace{20em} \text{FA + } \lambda\text{-conversion} \\
& = \exists e [\tau(e) \subseteq g(i) \ \& \ \parallel \mathbf{perífrôn Eurúkleia tòn}_j \mathbf{ proséeipe} \parallel^g(e)] \quad \lambda\text{-conversion} \\
& = \exists e [\tau(e) \subseteq g(i) \ \& \ \lambda e [e \text{ is the giving of an answer to } g(j) \text{ by wise Eurycleia}](e)] \\
& \hspace{20em} \text{meaning of the VP} \\
& = \exists e [\tau(e) \subseteq g(i) \ \& \ e \text{ is the giving of an answer to } g(j) \text{ by wise Eurycleia}] \\
& \hspace{20em} \lambda\text{-conversion}
\end{aligned}$$

3. CHRONOLOGY OF TENSE/ASPECT SYSTEMS

In what follows we give a survey of some important historical stages of the Greek tense/aspect systems. The representations will associate with different verbal forms the functional nodes checked by the form. The functional nodes are associated with their morphological features and their semantic interpretation. As before, the morphological features are written in small letters, whereas capital letters are used for the semantics. It should be obvious that the survey is highly idealised and incomplete, as any attempt to introduce order into the actual historical development has to be.

3.1. *Archaic Greek (700-500 BC)*

The following charts will not distinguish between heads and specifiers of the functional categories. Furthermore, no account will be given of the person features.

Form	Tense	Aspect	root-meaning
márptô	Present PRES	neutral	marp- “seize”
márpsô	Future FUTR	neutral	“
émarpton	Past PAST	ipfv IPFV	“
émarpsa	Past PAST	pfv PFV	“
mémarpa	Perfect PRES	ipfv IPFV	INTENS or RESULT + “seize”
(e)memárpea	Pluperfect PAST	ipfv IPFV	INTENS or RESULT + “seize”

A look at this chart reveals an asymmetry of the system. While we find perfective/imperfective opposition for the past tenses, we do not find it for the future. Modern Greek has introduced an “Ausgleich” here. The present form not being aspectually marked (i.e. its being “neutral”) does not come as a surprise. The semantic PERFECTIVE cannot be combined with PRES, which is conceived as a point in time and must therefore be combined with IMPERFECTIVE.

To all appearances, the Imperfect and the Aorist Indicative are genuine Past tenses that are distinguished by aspect¹¹. The Aorist selects the PERFECTIVE, while the Imperfect selects the

¹¹ This is indeed the *communis opinio* found in the traditional descriptions of the Greek tense and aspect system. (E.g. (Bizos 1981, Humbert 1960, Kühner and Gerth 1898)). It should also be mentioned, however that some recent

IMPERFECTIVE. PERFECTIVE seems to be the same notional category as in the Slavic languages, i.e. it expresses completion/telicity of the event type denoted by the VP. This follows from the semantics of PERFECTIVE, which requires that the VP-event is included in the reference time. This is only possible for completed events.

The Perfect and the Pluperfect are the most complex forms. The Perfect (unlike the Pluperfect) does not contain a semantic PAST. It is a presentic form expressing either intensity/iteration or resultativity. The traditional cover term for this usage is "Pure Perfect". If we have kept this terminology, this is no more than a convenient adaptation to the conventions of traditional Greek grammar. Semantically, the term covers two completely different operations, namely INTENSivity and RESULTativity. There have been attempts in traditional Greek grammar to reduce Intensity to Resultativity (as reflected e.g. in Smyth 1956:435), but we do not believe in the possibility of such a reduction. We will not speculate in the question why the two meanings are encoded in the same form. As we have said already, we will neglect the intensive meaning.

Before we consider the Perfect, let us make some remarks about the interpretation of imperfective forms. Imperfective morphology requires IPFV. As a consequence, the embedded Vendlerian aktionsart must have the subinterval property. If the VP expresses a state or an activity, this raises no problems. But if it is an accomplishment or achievement, we must stativise it by means of semantic operations such as the Progressive, Habituality, Iterativity or Modality (e.g., Possibility). These operations may be morphologically visible or not. Below is a first approximation to the meaning of a habituality and an iterativity operator:

(10) **Two temporal stativisers**

a. Habituality. HAB := $\lambda P\lambda t\exists t'[t \subseteq t' \ \& \ \text{there are many } e: e \subseteq t' \ \& \ P(e)]$

b. Iterativity. ITER := $\lambda P\lambda t[\text{There are many } e: e \subseteq t \ \& \ P(e)]$

Here are some examples illustrating the application of these stativisers.

(11) *autàr dòure dúô kekoruthména chalkôi pállôn Argeíôn prokalízeto*

theoreticians favour another view, viz. that of the Aorist (also the Indicative) not being a Past tense, but basically a tenseless form, which only expresses perfectivity (cf. (McKay 1985; Rijksbaron 1986)).

and spears two tipped bronze_{Dat.} brandishing of-Argives challenge_{-ipfv}

pántas arístous antíβion máchesthai en ainêi dêiotêti

all the best face-to-face to fight in dread combat

”and brandishing two spears tipped with bronze **he challenged** (‘went about and challenged’) **all the best of Argives to fight with him face to face in dread combat**”

(Hom. *Il.* 3. 18)

“He challenged the best” is an accomplishment. We have to convert this aktionsart into a state in order to combine it with IPFV. The operation stativising the VP is presumably iterativity. This leads to the following analysis.

(12) PAST past IMPFV ipfv [_{VP} ITER [_{VP} pro prokalizeto arístous]]

We are using “pro” as a representation for the missing subject pronoun. The reader may check for herself that this analysis provides a reasonable interpretation: PAST is contained in an interval which itself contains an iteration of challenges.

The accomplishment in the following example is presumably best stativised by means of the HAB-operator.

(13) *pàr dè zôstêr keíto panaiólos, hôi r` ho geraiòs zônnuth`*,

beside and girdle lie_{IMPF} flashing which_{.Dat.} the old man gird_{ipfv.med/pass.}

hóte es pólemon fthisênora thôrêssuito

whenever to war baneful array_{.pres.Opt.med./pass.}

”and by his side lay the flashing girdle, **wherewith the old man used to gird himself**, whenever he arrayed himself for battle, the bane of men”

(ibid. 10.78)

The logical form of the sentence is therefore something like this:

(14) [_{TP} PAST [_{Asp} IPFV HAB [_{VP} ho geraiòs zônnuto]]]

The sentence means that the reference time is a subinterval of period in which the old man had the habit to gird himself with the flashing girdle.

The introduction of the modal stativisers Progressivity (PROG) and Possibility (CAN) requires a modal framework, which we cannot seriously develop in this paper. The semantics for

the Progressive will follow (Dowty 1979) and (Landman 1992), which means that PROG is treated as a modal operator conveying the meaning that the event in question is completed in the normal course of events, in the "inertia worlds".¹² CAN means that the proposition modified is compatible with a modal background, which is a proposition specified by the context (Kratzer 1977).

(15) **Two modal stativisers**

- a. $\text{PROG} := \lambda P \lambda t \lambda w \forall w' [\text{Inert}_t(w)(w') \rightarrow \text{There is a superinterval } t' \text{ of } t \text{ such that } t \text{ is not a final part of } t' \ \& \ \exists e[e \subseteq t' \ \& \ P(e)(w')]]$
- b. $\text{CAN} := \lambda P \lambda t \lambda w [H_{wt} \text{ is compatible with } P]$, where H is a modal background

$\text{Inert}_t(w)(w')$ means that the world history w' is the same as w until the end of t , and that (w', t') makes every proposition true which should be true in w at t' in the normal course of events, where t' is the said superinterval of t . A modal background, used in the definition of modalities like CAN, is a function which assigns a proposition to a world and a time.¹³

The following data present a case where the embedded accomplishment may be stativised by means of the PROG-operator.

(16) *kaí sfin áchos katà thumòn egígneto derkoménois Trôas*

and them_{Dat.} sorrow in heart become_{ipfv} beholding_{Dat.} Trojans_{Acc}

"and sorrow grew ('was growing') in their hearts, as they beheld the Trojans"

(Hom. *Il.* 13.86)

Consequently, the LF of the sentence may be something like the following:

(17) *egígneto áchos sfin katà thumón*

$[\text{TP PAST } [\text{AspP IPFV } [\text{VP PROG } [\text{VP BECOME sorrow them in the heart}]]]]$

Note that we do not classify PROG as a semantic aspect. It is a stativiser, which belongs to the VP, not to the AspP. As to the semantics of the BECOME-operator, the reader should consult (Dowty 1979: chapter 3). This predicate is an "eventiser" which converts a state into an accomplishment or achievement. The predicate tells us that the state does not obtain at the

¹² For this term, see (Dowty 1979: 148 ff.)

¹³ This semantics is simplified because it neglects inconsistent backgrounds. We assume that they are treated along the lines indicated in (Kratzer 1978) or (Kratzer 1981).

beginning of the event, but only at the end of the interval (and is not defined in between).

Finally, the reader is asked to consider modalisation by the CAN-operator, which requires the presence of a negation in the syntax (Cf (Chantraine 1986)).¹⁴ In the following example it is the negated modality/possibility which converts the embedded accomplishment into a state:

(18) *áll' oud' hōs toū thumòn enì stêthessin épeithon, prín g` hôte dê*

but also not so his heart_{.Acc.} in breast persuade_{.ipfv.3plur.} before

thálamos púk ebálleto

chamber much batter_{.ipfv.3.Sing.Pass}

”yet not even so **could they persuade the heart in his breast**, until at last his chamber was being hotly battered”

(*Il.* 9.587)

The position of the negation is not entirely clear to us. Let us assume that it is located under the semantic aspect. In this case, the LF of the example could be as follows:

(19) [TP PAST [_{Asp} IPFV oud' [_{VP} CAN pro épeithon toū thumón]]]

PAST [IPFV NEG [_{VP} CAN they persuade his heart]]

This means that the PAST is contained in a stretch of time during which they (i.e. the people around Meleager) were not able to persuade him (i.e. Meleager himself).

Finally, let us consider the Perfect. During this period, the Present Perfect always expresses a presentic statement. It follows that the semantic aspect IPFV is unmarked in the morphology. There are two meanings connected with this form, viz. the "Intensive" and Resultativity. No PAST meaning is witnessed to our best knowledge¹⁵.

As has already been mentioned above, the Greek Perfect may express Intensity. The following example illustrates this kind of Perfect.

(20) *máchê pólemós te dédêe*

¹⁴ Interestingly, exactly this configuration is exhibited by Russian and other Slavic languages (Schoorlemmer 1995: chapter 4).

¹⁵ Examples like *Il.* 2.272 and *Od.* 17.284 (cf. above, page 2, note 4) are sometimes believed to represent an intermediary state between the Present Resultative and the more Past-oriented Experiential use. Cf. for instance Hedin (1999).

“Fight and war are raging (intensively)”

Here the active Perfect form *dédêe* (from *daiô* "light up", "kindle") has the intransitive meaning of "burn", "rage", otherwise connected with the passive forms of this verb.

In Homeric Greek this use of the Perfect is very frequent with verbs whose meaning involve a) sounds, e.g. *bébruche* "he bellows", *bebruchôs* bellowing (Pres. *brucháomai*), *kékraga* "I scream" (Pres. *krázô*), b) activities of the senses (or feelings), e.g. *ópôpa* "I see" (Pres. *horáô*), *ódôde* "smells" (Pres. *ózô*), *gégêthe* "is delighted" (Pres. *gêthéô*), d) gestures/facial expressions, etc., e.g. *pefrikôs* "staring" (Pres. *fríssô*)¹⁶.

Intensifiers are something like adverbs of degree or manner adverbs. They measure distance from normality. The INTENS-operator means approximately "very much". When the activity denoted by the verb has a component that can be escalated, the meaning of the Intensive will be "to a high extent"; when there is no such component (or sometimes even when there is one), the meaning of the Intensive will, so to speak, enter another dimension, yielding readings as "rapidly" or "repeatedly". As is to be expected, these meanings are stativisers.

We will make no attempt to analyse this use any further. Let us only remark that there is no plausible connection between the intensive use of the perfect and the simultaneously existent resultative use to which we turn next.

The prevailing use of the Perfect is that of an RESULT-operator. This use has to be assumed in the following example:

- (21) *êôs dé moi estin êdê duodekátê hót' es Ilion eilêloutha*
 morning and I.Dat. be.PRES. now twelfth when to Troy come.PERF.1.Sing.
 "it is now the twelfth morning of my being in (lit. **having come to**) Troy"
 (Hom. *Il* 21.81)

RESULT is a stativiser which gives us the resultant state of an accomplishment or achievement, exactly in the same way as in the case of the English adjectival passive or the German "Zustandspassiv". In German, we can translate the example into a presentic statement:

- (22) *Es ist der zwölfte Morgen, seit ich nach Troja gekommen bin.*

¹⁶ The meaning of the Present forms is usually that of the Perfect form *minus* the intensive "grade". A good example is also *bébêka* "be in the act or attitude of going" (Pres. *bainô* "walk"), as in *Od.* 1. 360 *hê mèn thambêsasa pálin oikónde bebêkei* ("but she (sc. Penelope) was astounded and took her way back to her rooms").

it is the twelfth morning since I to Troy come are

In Archaic Greek the resultative use is usually connected to intransitivity. A closer inspection would reveal that these verbs are typically those who have been called “unaccusatives” in the generative literature. There are quite a number of theories about the Perfect of result. We will simply adopt the proposal made in (Kratzer 2000). Kratzer assumes that the perfect of result can be formed by verbs which have an accessible resultant state in the lexical semantics. For instance, the verb “x comes to Troy” may be analysed as:

(23) **A transformative verbal**

come to Troy := $\lambda x \lambda e \lambda s [\text{cause}(s)(e) \ \& \ \text{in-Troy}(y)(s)]$

Applied to a subject x, this verb x is true of an event and a resultant state s, if e causes s and s is the state that x is in Troy. The RESULT-operator takes such a verb; furthermore, it existentially quantifies the generating event and gives us the resultant state. Consequently, its semantics is this:

(24) **The RESULT-operator** (Kratzer 2000)

RESULT = $\lambda R \lambda s \exists e [R(e)(s)]$

The RESULT-operator is not a stativiser in the sense that it converts an accomplishment/achievement into a state. It rather chooses the state as an option. This makes it an “aktionsart chooser”. In consequence, the logical representation of the tenseless perfect form “I have come to Troy” is:

(25) [_{VP} RESULT I come to Troy]

= $\lambda s. \text{cause}(s)(e) \ \& \ \text{in-Troy}(I)(s)$

This form may duly be combined with PRES + IPFV. So the LF for our example is this:

(26) [_{TP} PRES [_{AspP} IPFV [RESULT [pro *es Ilion eilêloutha*]]]]

This structure means that the PRESENT is contained in a state s such that I am in Troy at s and s is caused by a previous event. The “pluperfect” has exactly the same interpretation with PAST instead of PRES.

We have to add that the logical type of this sort of unaccusatives requires an extra logical

operation for ordinary active statement. We need an “eventiser”, which is the mirror image of the RESULT-operator. For instance, the sentence “I came to Troy” must have the following LF:

(27) PAST PFV EVENT I come to Troy

The semantics of the “eventiser” is given by the following rule:

(28) An eventiser

$$\text{EVENT} = \lambda R \lambda e \exists s [R(e)(s)]$$

The evaluation of the precise relation of this theory on the resultative Perfect to traditional analyses (e.g. (Chantraine 1927)) we leave to future research.

One wonders by which historical coincidence two very different meanings, Intensity and Resultativity, were associated with the same morphology. We will see that the double meaning of the form will not survive in history. Traditionally, it has been assumed that intensity had to give way to resultativity. As we will see, however, not all Posthomeric uses of the Perfect are resultative: in Classical and Postclassical Greek we find all the readings of the Perfect commonly associated with e.g. the English Perfect (U-reading, the various E-readings, see explications in note 5).

3.2. Classical (500 – 300 BC)

In traditional descriptions the TA-system of Classical Greek is said to be just like that of Homeric/Archaic Greek, except for the Perfect, which in Classical Greek is supposed to have resultative meaning, occasionally a Past meaning, while the intensive use is disappearing¹⁷. The grammarians also list several periphrastic constructions, which they describe as having a particularly strong resultative meaning (*eimi* "be" with Perfect Participle, *échô* "have with Aorist or Perfect Participle¹⁸). The semantics of these constructions in Classical and

¹⁷ The Intensive Perfect during the Classical period is indeed scarce and has turned into a kind of “formula”. We do not agree with some commentators of Greek tragedies who seem to think that the use of the Intensivum was then still really productive (cf. e.g. Kannicht’s commentary to Euripides *Helen* (p. 155)).

¹⁸ An example of the periphrasis with *eimi* is Ar. *Pl.* 867 *ho dè polù mallon eniôus estin exolôlekôs* ("Some of us truly he has brought to ruin rather than to wealth"; the construction *échô* with Aorist Participle we find e.g. in Hdt. 6. 12 *...andri Fôkaei alazóni...epitrépsantes hêméas autoûs échomen* ("...we have committed ourselves into the hands of this Phocaeen braggart..."); an example of *échô* with the Perfect Participle is Pl. *Theaet.* 200 *a epistêmên ára oiêsetai tethêreukôs échein, all' ouk anepistêmosúnên* ("Thus he will think that he has caught (and has) knowledge, not

Postclassical Greek will not be analysed in this paper.

As for the diachronics of the synthetic Perfect, the following functional explanation has suggested itself to the traditional grammarians: the Resultative has a “posteriority” component, which the Intensive has not. The Intensive is a sort of Present Progressive and rather points toward the near future, the end of the action. Classical Greek would then specialise towards the “posteriority” perspective.

In the new analysis which we are going to suggest, we will start our completion of the traditional picture by the observation that other uses of the Perfect appear already in the classical period, where the Perfect shows all the readings that are typical for the English Perfect.

In archaic Greek, the resultative use is almost exclusively combined with intransitivity, in the classical period the meaning is generalised to transitivity¹⁹. In the examples below (29) illustrates the frequent resultative meaning (of one transitive Perfect forms (*apoleloípasin* “have left (us)”) and two intransitive ones (*apodedrákasin* “have gotten away” and *apopefeúgasin* “have escaped”), and (30) the almost extinct “intensive” use, and (31) the new “Past” meaning (cf. above, p. 2).

(29) ***apoleloípasin hêmâs Xenías kai Pasiôn***. *all` eû ge méntoi episthátôsan*,

leave_{perfect 3.Pl} us Xenias and Pasion but well however know_{ipfv.3.Plur}.

hóti oûte apodedrákasin - *oída gár, hópêi oíchontai* - ***oûte***

that neither get away_{perfect.3.pl.}, know_{1.sing.}; for where be_{3.pl.}, neither

apopefeúgasin - *échô gàr triêreis hôste heleîn tò ekeinôn ploïon*

escape_{perfect3.pl.}; have_{pres.1.Sing} for triremes so that take_{inf.} the their ship

“X. and P. have deserted us. But they ought to know that neither have they gotten away because I know in what direction they have gone - nor have they escaped - because I have triremes²⁰ so that I can overtake their ship”

(Xen. *An.* 1. 4. 8)

(30) ***oúd` éti pûr epibômion en Troíai theoîsin lélampen***

ignorance”. Note, however, that the perphrasis with *eimi* is often used also without special emphasis on resultativity, so regularly in the third person plural, as well as in the optative and subjunctive moods of the Perfect.

¹⁹ Some theoreticians writing on the Greek Perfect have focused very much on the distinction intransitive/transitive as being of crucial importance for the (temporal/aspectual) semantic development of this “tense”.

²⁰ I.e. a bigger and faster ship than of Xenias and Pasion.

and no longer fire on-the-altars in Troy to the gods shine_{perfect.3.Sing.}

kapnôî thuôdei

smoke_{Dat.Sing} fragrant

”No more on the altars of the Immortals **is the old fire ablaze**, fragrant with incense”

(Eur. *Andr.* 1025)

(31) ***húbrismai mèn egô kai popêlákistai tò sôma***

offend_{PERF.Pass.1.Sing} for-sure I and drag-in-the-dirt_{PERF.Pass.3.Sing.} the body_{Nom.}

toumòn tôte...

my then

”It was for sure I who **was then offended** and whose person **was dragged in the dirt**”

(Dem. 9. 60)

The innovation is illustrated by the last example. The employment of the adverbial *tôte* (”then”) suggests that this is a PAST-meaning of the Perfect. In Archaic Greek, when the Perfect usually had a presentic value (intensive or resultative) the combination with past-oriented adverbs was not possible (more precisely: is not attested).

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 (cf. e.g. (Rijksbaron 1984, Smyth and Messing 1956)²¹). To be sure, the Greek Perfect during the classical period often yields a resultative reading. Upon a closer reading of the classical texts, however, we find practically all the different readings that are commonly associated with e.g. the English Perfect.

In the linguistic literature four major uses of the Present perfect have been identified (cf. for instance (Dowty 1979, McCoard 1978)) The U(niversal) Perfect conveys the meaning that the predicate holds throughout some interval stretching from a certain point in the past up to the present (“John has been sick since 1990” (on one reading of the sentence); the Experiential Perfect asserts that the subject of the sentence has a certain experience (“I have been to Athens five times”); the Resultative Perfect expresses that the effect of an underlying event still holds (“I

²¹ ”The perfect denotes a completed action the effects of which still continues in the present” (Smyth and Messing 1956); ”the primary perfect indicative (commonly: perfect) signifies that the state resulting from the completion of the verbal action exists at the moment of utterance (the ‘present’) (Rijksbaron 1984). In most grammars there is also

have lost my glasses”); the Perfect of Recent Past is employed, when one wants to report an event which just happened (“John has just graduated from college”). The (E)xistential Perfect is sometimes used as a cover term for the last three uses, but the Experiential Perfect is usually looked upon as the prototypical Existential Perfect.

Also in Greek we find cases of the Perfect, which allow existential readings which are not resultative, as well as cases of the Universal Perfect. We start with an experiential reading.

(32) *toûto humôn déomai: èàn dià tôn autôn lógôn akouété mou*

this of-you beg_{pres.1.Sing}: if through the same words hear_{pres.Subj.2.Plur IGen.Sing}

apologouménou, di' hōnper eíōtha

defend-myself_{pres.Part.Gen.Sing}, through which be-accustomed-to_{1.Sing}

légein kai en agorâ epì tôn trapezôn, hína humôn polloì

speak_{Inf} both in market at of-the-bankers'-tables, where of-you many

akêkóasi, kai állothi mête thaumázein mête thorubeîn

hear_{perfect.3.Pl}, and elsewhere neither be-surprised_{Inf} nor make-disturbance_{Inf}.

toútou héneka

of-this because

”And, men of Athens, I urgently beg you if you hear me making my defence

with the same words with which I have been accustomed to speak both in the market

place at the bankers' tables, **where many of you have heard me**, and elsewhere, not to be

surprised or to make a disturbance on this account”

(Pl. *Apol.* 17 c f.)

Also in the following example the use the Perfect has a purely existential, but not resultative meaning (on any natural reading of the sentence):

(33) *sképsasthe...eí tis emoi kai Eratosthénei échthra pôpote*

mention of the ”generic” Perfect (cf. below, p. 16, n. 21), which is sometimes recognized as a kind of Experiential Perfect (Smyth uses the term ”empiric Perfect”).

consider_{Imper.2.pl.} if I_{Dat.} and Eratosthenes_{Dat.} enmity ever

gegénētai plên taútēs

arise_{perfect.3.Sing.} beside this

”ask yourselves, if any enmity **ever arose** between me and Eratosthenes beside this one”

(Lys. 1.43)

For examples of the U-Perfect, cf. below (apropos participles). With adverbs like *dúo/tría/...étē* (”for two/three/...years”) the Greek Perfect is ambiguous between the U- and the E-reading. With adverbs like *duoîn/... etôn* or *pollôn etôn* (”in two/.../many years”) the Perfect can only have the E-reading (which in case of negation equals a U-reading). The following sentence illustrates the latter claim.

(34) *ouk oisth' hóti pollôn etôn Agathôn entháde **ouk epidedêmēken**..;*

not know_{2.Sing.} that many-years_{Gen.} Agathon_{Nom.} here not be-home_{perfect.3.Sing.?}

”Don’t you know that Agathon **has not been home in many years?**”

(Pl. *Symp.* 172 c)

It should be obvious from these examples that the Perfect of Classical Greek looks a lot more like the Perfect of various modern languages than the traditional grammarians have thought²².

For certain languages, e.g. English, it is appropriate to analyse the Perfect in terms of an Extended Now (cf. (McCoard 1978), (Pickbourn 1798), (Stechow 1999a). Since for Greek a focus on resultativity, if carried out in a traditional way, fails to account for uses of the Experiential Perfect, like in the three examples just quoted, or within a modern linguistic framework (like (Kamp and Reyle 1993)), leads to an overcomplicated analysis (cf. (Stechow 2001b)), it seems attractive to try the Extended-Now-approach also here. In order to check whether this leads to a feasible account of the data, we first need to look at some further examples.

When the Present Perfect is used in Greek, it frequently seems to be the case that the event denoted by the VP either continues after the speech time or that it, at least, continues *up to*

²² Naturally, also the ”generic” Perfect, much discussed in Greek grammar, e.g. Xen. *Anab.* 3.1.389 *hē ataxia pollois édē apolôleken* (”lack of discipline has already been the ruin of many”), should can be analysed as an Experiential use of the Perfect (not unknown also in other languages).

the speech time (in an inclusive way). In terms of an XN-analysis, the speech time can be seen as a final subinterval of an interval which reaches into a contextually or lexically determined past (cf.(Stechow 1999; Stechow 2000)).

The following example is a Greek "garden-variety" use of the Perfect, which yields an XN-reading:

- (35) *olígon gàr chrónon allélois dieilégmetha*
 short_{Acc.} for time_{Acc.} each-other_{Dat.} converse_{perfect.1.Pl.}
 "for we have conversed with each other only a little while"
 (Pl .Apol. 37 a)

The larger context shows that the speaker, Socrates, is here referring to the court situation in which he participates²³. This is depicted as "conversation", which has some duration in the past and includes the speech time. Let us use the abbreviation XN(t,n) for "t is a time interval that extends up to n (and possibly includes n)". The meaning of the last example can then be paraphrased as "there is a time t: XN(t,n) & we converse with each other at t and the beginning of t is only a little while before n."

In participle constructions, which are very frequent in Greek, the distinction between "conclusion before the speech time" and "continuation at the speech time" can be quite accurately observed²⁴. A case where it is clear that the activity denoted by the VP does no longer continue at the speech time is the following:

- (36) *humîn dè memárturêkasin hoi próteron ergazómenoi kaí pollà*

²³Cf. the continuation 37 b "I believe that if you had a law, as some people have, that capital cases should not be decided in one day, but only after several days, you would be convinced; but now it is not easy to rid you of great prejudices in a short time" and 39 e "But with those who voted for my acquittal I should like to converse (*hêdêôs àn dialechtheiên*) about this which has happened...Wait with me so long, my friends; for nothing prevents our chatting with each other while there is time".

²⁴ When looking for good examples in the Greek texts (e.g. through the TLG (*Thesaurus Linguae Graecae*)), one is soon reminded of the tendency in the Greek language to put temporal information into participle constructions. This should consequently be seen as another "excuse" for focusing so much on this type of material in this context.

you_{Dat.} and attest_{PERF.3.Pl.} the earlier cultivate_{PRES.Part.Pl.Nom.} and many
étê par' emoû memisthôménoi mê ênai sékòn en tôi chôriôï
 years from me tenant_{perfect.Part.Pl.Nom.} not be_{Inf.} olive-stump on the piece-of-land
 ”and the previous cultivators, **who rented it from me for many years**, have testified to
 you that there was no stump on the plot”

(Lys. 7.11)

The speaker has just made a list of the earlier tenants, who no longer hold the piece of land (7.10 ”In the fourth year I let it to Alcias, who is dead. After that Proteas, too, hired it in the same state during three years”). Also in this case the Perfect expresses the relation XN, since an existential reading is available here: $\exists t: XN(t,n) \ \& \ \exists t' \subseteq t(t' \text{ is many years} \ \& \ \exists t'' \subseteq t': x \text{ rents the land from me at } t'')$, where x are the people in question.

On the other hand, when we have a conclusion before the speech time (or before some other reference time) the Aorist Participle seems to be preferred. This can be observed in almost any Greek text. (37) provides an example, where the Aorist participle yields an anteriority reading with respect to a time of reference in the past.

(37) *hoútô mèn tà tôn Hellênôn prágmata efthárê hêx étê*
 thus the of-the-Hellenes affairs_{Nom.Pl.(Neutr.)} ruin_{aor.Pass.3.Sing} six years_{Acc.}
polemêsanta
 make-war_{aor.Part.Nom.Pl.(Neutr.)}

”Thus this undertaking of the Hellenes came to naught **after a war of six years**”

(Thuc. 1. 110. 1)

With durational temporal adverbs like *polùn chrónon (êdê)* (”(already) for a long time”) we find the Perfect or the Present Participle. In (38) we find the Perfect, in (39) the Present Participle.

(38) *épeitá eisin hoútoi hoi katêgoroi polloî kai polùn chrónon êdê katêgorêkótes.*

further be_{3,Pl} these the accusers many and long time already accuse_{perf.Part.},
éti dè kai en tautèi tēi hēlikiai légontes pròs humàs en hēi àn málιστα episteúsate,
 moreover and in that the age speak-pres-Part to you in which most would-believe
paídes óntes énioi humôn kai meirákia
 children be_{pres-Part} some of you and youths

"These accusers are many and **have been making their accusations already for a long time**, and, moreover, they spoke to you at an age at which you would believe them most readily (some of you in youth, most of you in childhood)"

(Pl. *Apol.* 18 c)

(39) *emoú gàr polloì katēgoroi gegónasi pròs humàs kai pálai pollà étē kai*

of-me for many accusers arise_{perfect.3.Pl} befor you and already many years and
oudèn alēthès légontes, hoùs egô mállon foboúmai è toùs amfi Ánuton
 nothing true say_{perfect.Part.}, whom I more fear_{1.Sing.} then the_{Acc.} around Anytos

"For many accusers have risen up against me before you, **who have been speaking for a long time, many years already**, and **saying nothing true**; and I fear them more than Anytos and the rest"²⁵

(Pl. *Apol.* 18 b)

With adverbs semantically equivalent to the English *since* (or German *seit*) the Present is preferred, but also here the Perfect occurs. Here is an example with a *since*-adverbial and the Present Participle.

(40) *légein keleúôn tôn Tissaférnē pròs autoùs hōs Athēnaíoi ek*

²⁵ The complication with participles present is that they express simultaneity with respect to the matrix tense. In (26), the main verb introduces an Extended Now and says that many accusers have arisen in that period; the participles specify what they did in that period and what they presumably still are doing. (The example is still interesting, however, especially as a pendant to (38), belonging to the same context and *referring to the same category of people*.)

say_{Inf.} urge_{PRES.Part.Nom.Masc.Sing} the Tissaphernes_{Acc.} to them that Athenians_{Nom.} since

pléonos chrónou epistêmones óntes toû nautikoû triôbolon

longer time experienced_{Masc.Nom.Pl.} be_{pres.part.3.pl} of-the-naval three-obols

toîs heautôn didóasin

the_{Dat.} of-themselves give_{pres.3.Pl.}

”He urged Tissaphernes to tell them that **the Athenians, who have had experience in naval matters for a longer time, give only three obols to their men”**

(Thuc. 8.45.1)

In the following example we have a “since” adverbial combined with a Perfect participle.

(41) *nûn tí dei makrêgoreîn, hôn toûs mèn*

now what be-need-for_{3.Sing} speak-at-great-length_{Inf.} of-which some_{Masc.Pl.Acc.}

dedoulóménous horâte, toîs d’ epibouleúontas

enslave_{perfect.Part.Masc.Pl.Acc} see_{pres.2.Pl.}, some_{Masc.Pl.Dat.} plot_{pres..Part.Masc.Pl.Acc.}

autoús...kai ek polloû propareskeuasménous, ei; pote

they_{Acc.} and since long time make-preparations_{perfect.Part.Masc.Pl.Acc.}, if sometime

polemêsontai;

make-war_{future.3.Pl.}

”What need is there of a long harangue, when you see that they have enslaved some of us and are plotting against others...and **that they have long (lit. since long time) been making their preparations with a view to the contingency of war?**”

(Thuc. 1.68.3 f.)²⁶

The examples show that measure adverbials such as *ek pleonos chronou* “*since much time” or *ek pollou* “*since long” have a wider range of application than their English counterpart and are more similar to German or Swedish. To begin with, English *since* does not combine with a measure term whereas German *seit* and Swedish *sedan* do: *seit langer Zeit*, *sedan langem/sedan länge*. But English *since*-adverbials are Perfect level adverbials, i.e., they only combine with

²⁶ In Greek, also the Perfect and Present Infinitive behave in a similar way in their way of combining with adverbs. Sometimes, with durational adverbs, we even find them side by side, like in Pl. *Apol.* 31 *b ou gàr anthrôpinôi éoike tò emè tôn mèn emautoû hapántôn êmelékênai kai anéchesthai tôn oikeiôn amelouménôn tosaûta êdê ètê* (“it does not seem human that I have neglected my own affairs (neglect.PERF.Inf.) and have been enduring (endure.PRES.Inf.) the neglect of my concerns all these years”).

the Present Perfect, Past Perfect or Future Perfect. In these combinations, the adverbs characterise an XN-interval introduced by the tense form (cf. (McCoard 1978), (Dowty 1979)). No such restriction holds for German *seit*, which combines with simple tenses as well and introduce an XN-reading in such contexts (Stechow 2001b) (In Swedish the Present with *sedan...tillbaka* yields an XN-reading, cf. below).

The other, more important point is the following: in spite of the quite frequent use of the Present Participle (and generally the Present) with adverbs like *pollà étê/polùn chrónon* and *ek polloù chrónou*, it could now be argued that the classical Greek Perfect introduces an Extended Now. In Greek, like in certain other languages, e.g. Swedish, an adverb may sometimes introduce an Extended Now. In such cases the Present is chosen. Cf. Swedish:

- (42) *Han bor här sedan fem år tillbaka.*
 he lives here since five years back

In other cases, usually with other adverbs, it is the Perfect which introduces the Extended-Now. Cf. Swedish:

- (43) *Han har bott här i fem år.*
 "He has lived here for five years (and still lives here)"

Adopting such an analysis in (40), we claim that the adverb *ek pléonos chrónou* ("since a longer time") introduces an Extended Now, whereas in (41) the Perfect is the introductory "item", the adverb only qualifying the Extended-Now-interval²⁷. Another important fact in this

²⁷German behaves differently in this respect. *Seit* combines with the Perfect, but only in its Preterite use; with the Present, on the other hand, *seit* introduces an Extended-Now:

Er wohnt hier seit 5 Jahren

He lives here since 5 years

Sometimes the Perfect introduces the Extended Now, usually with other adverbs. (Schiporeit 1971) and (Rathert 1999) give arguments that XN readings are triggered by the presence of the adverb *schon*:

Schiller hat immer gute Freunde gehabt
 Schiller has always good friends had
 "Schiller had always good friends"

No XN

**Schiller hat schon immer gute Freunde gehabt*
 Schiller has already always good friends had
 "**Schiller always has had good friends"

XN

context is the observation that the combination of the Greek Perfect with *since*-adverbials indeed *necessitates*, not only *allows* an XN-reading²⁸.

The introduction of the XN-perfect conveys an important change of the system: while the Homeric Perfect was an “aktionsart chooser”, the XN-perfect has a temporal meaning, but it still does not quite fit into the conventional picture drawn by (Reichenbach 1947), (Klein 1994) and others who look upon tense as a relation between the utterance time and the reference time. An XN rather stretches the reference time into an indefinite past. In consequence, it is a tense *sui generis*, say an “auxiliary tense”, because it requires the presence of another tense. (44) proposes a formal analysis which is sufficient for the purposes of the present discussion:

(44) **The XN-Perfect**

$$\text{XN-PERF} = \lambda P \lambda t \exists t' [\text{XN}(t', t) \ \& \ P(t')]$$

Recall that $\text{XN}(t', t)$ means that t is final subinterval or point of t' . Here is an analysis of the perfect statement (35):

(45) *oligon gâr chrónon allêlois dieilêgmetha*

“For a short time we have been conversing with each other”

$$\begin{aligned} & [_{\text{TP}_1} \text{PRES} [_{\text{TP}_2} \text{XN-Perfect } \mathbf{\text{for-short-time}} [_{\text{ASP}} \text{PFFV} [_{\text{VP}} \mathbf{\text{we talk to each other}}]]]] \\ & \exists t' [\text{XN}(t', \text{PRES}) \ \& \ t' \text{ is short} \ \& \ \exists e \subseteq t' [e: \text{we converse with each other}]] \end{aligned}$$

Returning to example (34), we now get the following analysis: with an Extended Now analysis the Perfect denotes a time interval extending from the reference time to an indefinite past. The temporal adverb “for n years” is predicated of that interval and tells us that it is of a specific length. The temporal adverb “in n years” picks out a subinterval of that interval. The aspect phrase is located in the restricted interval. Below is a picture of the scenario:

pollôn etôn Agathôn ouk epidedêmêken.

{-----[//////////]-----PRES}

{-----} Perfect interval

[-----] “in many years”-interval, “frame interval”

////////// Negation of the (perfective) VP “There is no being home”

²⁸ Other such data are instances of the Perfect with adverbials like *êdé en tõi pémpthi étei* (“already in the fifth year”).

The frame interval may extend up to the speech time PRES, but it needs not. Note that the impression that the embedded VP is stative comes from the fact that the occurrence of the event is negated.

Here, finally, is the picture for a *for*-interval in a construction expressing a Universal Perfect.

polla ètê Agathôn ouk epidedêmêken.

{//////////PRES}

{-----} Perfect interval = frame interval, many years long

////////// Negation of the (perfective) VP “There is no being home”

3.3. *Postclassical and Greek-Roman (300 BC – 450 AD)*

In the Greek of this period the intensive meaning of the Perfect is completely lost. The core meaning of the Perfect is *ex hypothesi* still an Extended Now meaning. All the various E-Perfects found in classical Greek still occur, e.g. in the New Testament. The non-active intransitive Perfect is gaining importance, especially the Perfect Participle. The PAST meaning, i.e. a variety of the XN-Perfect, is getting more and more frequent.

The examples below illustrate (i) the resultative use (46), (ii) the experiential use (47), and iii) the Past use (37).

(46) *tethnêkasin gàr hoi zêthoûntes tên psuchên tou paidíou*

die_{perfect.3.pl} for the search_{pres.Part.Nom.Pl.} the life_{.Acc.} the child_{.Gen.}

"those who sought the child's life have died (= are dead)"

(Matth. 2:20)

The present participle *zêthoûntes* could not correctly be integrated into our account if it contained a semantic PRESENT. This is a separate issue, which cannot be treated here. The intuitively most attractive interpretation of example (46) seems to be in terms of the resultative aspect, though one

may hold the view that the sentence is a PAST statement, i.e., an E-Perfect.²⁹

- (47) *theòn oudeìs heòraken pòpote*
 god_{.Acc.} nobody_{.Nom.} see_{perfect.3.sg} ever
 "Nobody has ever seen God"
 (Joh. 1:18)

- (48) *toùton ho theòs [kai] árchonta kai lutrotên apéstalken sìn*
 he_{.Acc.} the god_{.Nom.} (both) leader_{.Acc} and deliverer_{.Acc.} send_{perfect.3.Sing.} with
cheirì aggélou tou ofthéntos autôi en têi bátôi
 hand_{.Dat.} angel_{.Gen.} the_{.Gen.} see_{aor.Pass.Part.Masc.Sing.Gen.} in the bush_{.Dat.}
 "God sent him as [both] leader and deliverer by the hand of the angel that appeared
 to him in the bush"

(Acts 7:35)

To our mind, these examples should be interpreted in terms of an Extended Now. They can all be seen as instances of the E-Perfect. As for cases like (48), the interpretations of the traditional grammarians are at variance. Some look upon this type of Perfect as semantically equivalent to a Simple Past (Aorist) (e.g. (Mandilaras 1973); (Wackernagel 1920-24)), some as, in some sense, a Perfect of Result (e.g. (Chantraine 1927) and, with some reservation, (Fanning 1990)). Within an XN-analysis such cases yield an E-Perfect-interpretation: there is an event and there is a time such that XN, etc. A special problem is posed by examples where the (morphological) Perfect and the (dito) Aorist are used side by side with apparently very little difference in meaning³⁰. It is, however, quite possible, that an *Aorist-like* (i.e. Past-oriented) E-Perfect could be used

²⁹ The issue is hard to decide, and the context does not help us any further. The passage reports the words of an angel who reports the death of Herodes. Surely, he is dead at moment of the speech, but he died shortly before. If the sentence contained the adverb *nûn* "now", it clearly would express a perfect of result.

³⁰Such an example is the following:

heurôn de hena polítimon margarítên apelhôn pépraken
 find.aor.Part.Masc.Sing.Nom. and one precious pearl.Acc. go-away.aor.Part.Masc.Sing.Nom.
sell.perfect.3.Sing.
pánta hósá eíchen kai égórasen autón
 all.Acc. that.Acc. have.impf.3.Sing. and buy.aor.3.Sing. it.Acc.
 "...who on finding a pearl of great value went and sold (lit. has sold) all that he
 had and bought it"

(Matt. 13:46)

together with a real Aorist with almost, but not quite the same meaning³¹. The present account clarifies this often invoked difference: the Aorist reports an event which is over; it can never have a reading which expresses continuation of a state up to the speech time. The Perfect, by contrast, can also be used in such cases, as we know from examples expressing the U-Perfect. Furthermore, the Aorist and the XN-Perfect are, of course, from a conceptual point of view radically different, even if they figure in sentences that are truth-conditionally equivalent.

3.4. *Transitional and Byzantine/Mediaeval Period (300 – 1450 AD)*

During this era the morphology of the Perfect and the Aorist get more and more similar: reduplication is used instead of augmentation in Aorist forms and the suffix *-k-*, typical of the Perfect (but also earlier found in some Aorists, the so-called kappa-Aorists) spreads more generally within the Aorist paradigm; also the Perfect and Aorist personal endings get to be more alike (cf. e.g. (Hedin 1999, Ruge 1991)).

Typical for this period is the replacement of the synthetic Perfect by analytic constructions, formulae which were used in earlier Greek to express a special resultative meaning³². The periphrases in use were (i) *eimi* ("be") with Aorist or Perfect Participle, and (ii) *échô* ("have") with Present or Aorist Participle, e.g. (i) (replacing the Pluperfect) Theoph. 260. 1 *ên keleúsas* ("had ordered"), Cedr. II 331, 21 *toùs met' autoû eskedasménous óntas* ("those of his men who had been scattered"), (ii) Leo Neap. 39. 8 *egô écho hexêkonta étê hubrízôn dià tôn érgôn mou tôn Christón* ("Through my deeds I have affronted Christ for sixty years") and Duk. 210. 21 (again for a Pluperfect) *eíche perásas tôn Istron* ("he had crossed the Istrus") (cf. (Psaltis 1974)).

Towards the end of the Byzantine era we also find a periphrasis involving the auxiliary *echein* and the supine of the verb, the *aparemfato*. It is not our concern to give a precise account of the history of that form. Let us just remind the reader of the fact that the appearance of the analytical perfect is not a geographically isolated phenomenon; analogous constructions develop in the great majority of European languages during the medieval era.

In traditional treatments of the Perfect of Postclassical Greek such instances of the Perfect are often highlighted as proofs of an Aorist meaning of this tense (e.g. in (Mandilaras 1973)).

³¹ Already in (Chantraine 1927) we find the suggestion that the Postclassical "aoristic" Perfect has its own (Perfect) meaning, not identical to that of the genuine Aorist.

The emerging system is quite mixed, but already very close what we find in Modern Greek. Here is a survey.

Form	T	Aux	Aspect	root-meaning
gráfo	PRES		IPFV	graf- “write”
grápso	FUTR		neutral	“
thélo gráfin/na gráfo	FUTR	thélo	IPFV	“
thélo grápse/na grápso	FUTR	thélo	PFV	“
égrafon/égrafa	PAST		IPFV	“
égrapsa	PAST		PFV	“
gégrafa	PRES?		IPFV?	RESULT+”write”?
écho gráfon	PRES	echo XN-Perfect?	IPFV	“
écho grápsas	PRES	echo XN-Perfect?	PFV	“
eimí grápsas/écho grápsi	PRES	echo XN-Perfect?	PFV	“
ícha gráfon	PAST	ícha XN-Perfect?	IPFV	“
ícha grápsas	PAST	ícha XN-Perfect?	PFV	“
ên graspsas/ícha grápsi	PAST	ên/ícha XN-Perfect?	PFV	“

Synthetic Perfect forms are now getting rare, and they are not mentioned in the chart. They are still found occasionally towards the middle of the mediaeval period. The meaning is that of a PAST or possibly an PRES + Extended Now. Here is an example:

(49) *kontaréas dedókamen*

³² Cf. above, p. 13.

wounds-with-lance give.Perf(3.plur.)

“we wounded (lit. have wounded) them with our lances”

(Digenis Akritas 6.727)

Given the scarcity of examples, we are not attempting to analyse these forms. It is not clear to us whether the resultative interpretation of transitive forms persists in this period. Note further that we haven't given at all a semantic analysis of transitive Perfects of result in this paper. See (Stechow 2001b) for an analysis of transitives resultatives.

The following example exhibits the combination of *échō* (“have”) with an *aparémfato*. The meaning is, however, perhaps that of an Existential Perfect. It is very well possible that the periphrastic perfect is analysed as a combination of PAST + ASPECT. The Byzantine system shows a tendency towards symmetry: we find aspectual oppositions in all the tenses including the analytical Perfect. In comparison, the modern Greek system seems somewhat impoverished since the supine only exhibits perfective morphology. The following example illustrates the *aparémfato* construction.

(50) *o kápoios Frágkos eugenês, ánthrôpos paideménos,*

the some Frankish nobleman, person educated,

apó tèn pólin éxei élthei *apó ton basiléan*

from the city_{.Acc.} have_{pres.3.sing.} come_{Supin.} from the emperor_{.Acc.}

”Some noble Frank, an educated man, **has come from the city**, from the emperor”

(Morea-Chronic 4900-1)

3.5. *Modern Greek (From 1450 AD)*

In MG, the synthetic Perfect and the synthetic Future are completely lost. On the other hand, the morphological opposition Perfective/Imperfective is rather systematically implemented. Past (Aorist) and Future exhibit an aspectual opposition, but the perfect participle does not. There is no semantic reason for this gap (e.g. in Bulgarian, the Perfect Participle realises the said opposition (Anagnostopoulou et al. 1997)). As in English (or in earlier stages of the Greek

language), we do not find a perfective Present form.³³

As is well known, the Balkan languages have lost the infinitive. As a consequence the future auxiliary *thélo* embeds a finite form or a supine.

Form	T	Aux (+C)	Aspect	root-meaning
gráfo	PRES			graf- “write”
thélo gráfi(n) thélo na/théna gráfo tha gráfo	FUTR	thélo thélo na	IPFV	“
thélo grápsi(n) thélo na/théna grápso tha grápso	FUTR	thélo thélo na	PFV	“
égrafa	PAST		IPFV	“
égrapsa	PAST		PFV	“
ého grápsi	PRES	echo XN-Perfect?	PFV	“
ícha grápsi	PAST	ícha XN-Perfect?	PFV	“
tha écho grápsi	FUTR	tha écho XN-Perfect?	PFV	“

Like the Perfect of Classical and Postclassical Greek the MG equivalent of this tense may yield the resultative or the experiential reading:

(51) *Écho grápsi to grámma.* "Result"

have.I.Sing. write.Supine. the letter

“I have written the letter”

(52) *Échis pái sti Germanía?* "Experience"

³³ The most obvious and perhaps correct explanation is that the speech time is conceived as point of time and is therefore too short to embrace an entire event. We assume that this explanation is originally due to (Dowty 1979).

have_{2.Sing.} go_{Supine} to-the Germany

“Have you been to Germany?”

A difference from older Greek is that the MG Perfect never yields a Universal reading. E.g. the combination of the Perfect with the adverbial *pánta* (“always”) is ungrammatical.

(53) *Écho pánta zísi stin Athína

have_{1.Sing.} always live_{Supin.} in-the Athens

“I have always lived in Athens”

(Anagnostopoulou et al. 1997) and (Iatridou et al. 2001) explain the ungrammaticality of the example as follows. According to them, the analytic Perfect in MG denotes an Extended Now³⁴. Given that the aspect of the supine is perfective (both morphologically and semantically), we cannot have a U-Perfect, which requires the IPFV by definition.

We accept this theory for the time being, but we think that some scepticism is in place. Typologically, it is highly unlikely to have an XN-Perfect without a U-reading, for it is precisely the existence of this interpretation which motivates the theory that there is such a fancy tense. We also ask why the PFV/IPFV opposition should be missing exactly in this construction. Recall that we still had it in Byzantine period. Consequently, there is some evidence that the XN-Perfect still survived at this stage of history, but more data are required to establish the point.

As for MG, one rather gets the impression that the analytic Perfect is a competing form for the Aorist. If this turns out to be true, the analysis given must be revised in an obvious way: the Present Perfect (*écho grápsi*) must be analysed as PAST + PFV, the Past Perfect (*ícha grápsi*) must be analysed as PAST + PERFECT (= POST) and the Future Perfect, i.e. the form *tha écho grápsi*, must rather be FUTR + PERFECT (= POST). We think that this alternative is rather promising, but leave it to future research to work out the details.

4. CONCLUSION

On basis of a re-examination of the diachronic development of the Greek Perfect in the light of older as well as more recent theories of the Perfect "tense" we have found that the Archaic

³⁴ A similar analysis of the MG Perfect we find earlier in (Hedin 1987), only in a different framework (Hedin in her dissertation draws upon Bull's concept of an "extended present").

(Homeric) Perfect displays properties most typical of an intensifier or an aspect (result). The two meanings connected with the Perfect of this time are, however, too different to allow serious assumptions as to their (historical) common denominator.

In Classical Greek the Perfect seems to have developed into something between a stativiser and a tense. Its core meaning is now an Extended Now, but the resultative reading is still there. As the data discussion above has shown, the XN-approach accounts for a lot of material which causes problems e.g. for a theory focusing on resultativity, be it in a traditional or a modern linguistic framework.

In Postclassical Greek the Perfect still denotes an Extended Now. There is no reason to assume that during this time the Perfect assumes a meaning of a Simple Past (Aorist). The criteria formulated by grammarians like Mandilaras (taken over partly also by e.g. (Fanning 1990)) concerning when a Perfect form should be considered having a Past meaning may seem attractive at first glance, but do not really provide much help in narrowing down the semantic value of Perfect form in concrete cases. (One argument used by Mandilaras is the side-by-side use of Perfect and Aorist forms found in Postclassical texts; another one is the combination of the Perfect with past-oriented, punctual adverbs (cf. Mandilaras 1973:221)).

As for the classical "Present Perfect-puzzle"³⁵, it is true that the Greek Perfect during this period quite frequently combines with past-oriented adverbs. This, however, does not really constitute evidence against a preserved RESULT-meaning of the Perfect morphology in Postclassical Greek, since the use of the Perfect may still be more now-oriented in such cases³⁶. Definite, punctual adverbials, then, when combined with the Perfect, do not refer to the Extended-Now-interval, but to the event time (already in Classical Greek, cf. examples above, e.g. (21)).

The reason, then, for the synthetic Perfect becoming extinct is to be found on the semantic and the morphological level. On the one hand, the synthetic Perfect had not acquired *the same* meaning as the Aorist, as is often assumed, but nevertheless - mainly through its Experiential use - a *similar* meaning. On the other hand, the morphological confusion led to a loss of

³⁵ The semantic problem constituted by the extremely limited occurrence of the Present Perfect with punctual adverbs such as *yesterday* in languages like English and Swedish (cf. e.g. (Klein 1992)).

³⁶ Cf. for instance (Hedin 1999) apropos this kind of data in Classical Greek: "The fact that the perfect is combined with a definite time adverbial does not necessarily implicate, for instance, that it is used narratively...but (it could

understanding of the distinction between the two tenses. Finally, competing analytical constructions in later Greek were there to take over the old XN-meaning of a form no longer completely understood.

The "career" of analytical constructions has only briefly been touched upon in this paper, since our focus has been more on the semantic development of the synthetic Perfect. However, it is important to note that the early periphrastic constructions (Perfect or Aorist Participle with *eînai* ("be") or *échein* ("have") in Classical Greek) often have a very pronounced resultative meaning and therefore require a different semantic analysis than the synthetic Perfect. (Even in its resultative use the synthetic Perfect seems to have a different meaning from the analytic resultative constructions. For discussion of such constructions in other languages, e.g. Swedish, cf. (Dahl 1985):133 f.). One of these analytic constructions has survived in MG, still with a resultative meaning (the *écho gramméno*-perphrasis) Note, however, that the regular analytic Perfect in MG has developed from a completely different construction, *ícha* ("had") with the Aorist infinitive (as a kind of *futurum preteriti*, cf (Browning 1969); (Hedin 1987); (Ruge 1991).

The major claim made in this paper is that the Greek Perfect, with the exception of Archaic Greek, should be understood in terms of an Extended-Now up to the Byzantine period. According to (Anagnostopoulou et al. 1997), this claim holds even for MG. Thus the Greek Perfect, as we have pointed out, shows much similarity with the Perfect e.g. in English and Swedish. In other languages, however, the Extended-Now-approach to the Perfect is under debate.

LITERATURE

- Anagnostopoulou, E., Iatridou, S., and Izvorski, R. 1997. On the Morpho-Syntax of the Perfect and How it Relates to its Meaning: MIT.
- Bäuerle, Rainer. 1979. *Temporale Deixis – Temporale Frage*. Tübingen: Narr.
- Bizos. 1981. *Syntaxe grecque*. Paris.
- Blomqvist, J., and Jastrup. 1996. *Greisk Grammatik*. Lund.
- Browning, Robert. 1969. *Mediaeval and Modern Greek*.

mean) that the event is connected to the present in another way. Perhaps as a kind of background to what is happening now" (our translation).

-
- Chantraine, P. 1927. *Histoire du parfait grec*. Paris: H. Champion.
- Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, MA: MIT Press.
- Dahl, Östen. 1985. *Tense and Aspect Systems*. Oxford: Blackwell.
- Dowty, David. 1979. *Word Meaning and Montague Grammar*. Synthese Language Library. Dordrecht: Reidel.
- Fabricius-Hansen, Cathrine. 1986. *Tempus fugit*. Düsseldorf: Schwann.
- Fanning, B.M. 1990. *Verbal Aspect in New Testament Greek*. Oxford: Clarendon Press.
- Giorgi, Alessandra, and Pianesi, Fabio. 1998. *Tense and Aspect*. Oxford Studies in Comparative Syntax. New York/Oxford: Oxford University Press.
- Giorgi, Alessandra, and Pianesi, Fabio. 2001. Ways of Terminating. In *Semantic Interfaces [Reference, Anaphora and Aspect]*, eds. Carlo Cecchetto, Gennaro Chierchia and Maria Teresa Guasti, 211-277. Stanford, California: CSLI.
- Hedin, E. 1987. On the Use of the Perfect and the Pluperfect in Modern Greek, University of Stockholm.
- Hedin, E. 1999. Heureka! Hot news! Ett tempus' väg från den antika grekiskan till våra dagar: Stockholms universitet.
- Heim, Irene. 1994. Comments on Abusch's theory of tense, MIT: Ms.
- Heim, Irene, and Kratzer, Angelika. 1998. *Semantics in Generative Grammar*. Oxford: Blackwell.
- Herweg, Michael. 1990. *Zeitaspekte. Die Bedeutung von Tempus, Aspekt und temporalen Konjunktionen*. Wiesbaden: Deutscher Universitätsverlag.
- Humbert, J. 1960. *Syntaxe grecque*. Paris: Klincksieck.
- Iatridou, Sabine, Anagnostopoulou, Elena, and Izvorski, Roumyana. 2001. Some Observations about the Form and Meaning of the Perfect. In *Ken Hale: A Life in Language*, 189-238. Cambridge, Mass.: MIT Press.
- Kamp, Hans, and Reyle, Uwe. 1993. *From Discourse to Logic*. Dordrecht/London/Boston: Kluwer Academic Publisher.
- Katz, Graham. 1995. Stativity, Genericity, and Temporal Reference, University of Rochester: PhD Dissertation.
- Klein, Wolfgang. 1992. The Present Perfect Puzzle. *Language* 68.3:525 - 551.
- Klein, Wolfgang. 1994. *Time in Language*. London, New York: Routledge.

-
- Kratzer, A. 1978. *Semantik der Rede. Kontexttheorie - Modalwörter - Konditionalsätze*. Kronberg/Ts.: Scriptor.
- Kratzer, Angelika. 1977. What 'must' and 'can' can and must mean. *Linguistics & Philosophy* 1:337-355.
- Kratzer, Angelika. 1981. The notional category of modality. In *Words, Worlds, and Contexts*, eds. H. J. Eikmeyer and H. Rieser, 38-74. Berlin: de Gruyter.
- Kratzer, Angelika. 1998. More Structural Analogies Between Pronouns and Tenses. Paper presented at *SALT 8*, Cambridge, Mass.
- Kratzer, Angelika. 2000. *Building Statives*. University of Massachusetts at Amherst: Berkeley Linguistic Society.
- Kühner, R., and Gerth, B. 1898. *Ausführliche Grammatik der griechischen Sprache*. vol. 2: Satzlehre. Hannover.
- Landman, Fred. 1992. The Progressive. *Natural Language Semantics* 1:1-32.
- Mandilaras, B.G. 1973. *The Verb in the Non-Literary Papyri*. Athens: Hellenic Ministry of Culture and Sciences.
- McCoard, R.W. 1978. *The English Perfect: Tense Choice and Pragmatic Inferences*. Amsterdam: North-Holland.
- McKay, K.L. 1980. On the Perfect and Other Aspects in the Greek Non-literary Papyri. *Bulletin of the Institute of Classical Studies* 27:23-49.
- McKay, K.L. 1981. On the Perfect and Other Aspects in New Testament Greek. *Novum Testamentum* 23:289-329.
- Mourelatos, A.P.D. 1978. Events, Processes and States. *Linguistics and Philosophy* 2:415-434.
- Musan, Renate. 2000. *The Semantics of Perfect Constructions and Temporal Adverbials in German*, Humboldt Universität: Habilitationsschrift.
- Partee, Barbara. 1973. Some Structural Analogies between Tenses and Pronouns in English. *Journal of Philosophy* 70:601-609.
- Pickbourn, J. 1798. *A Dissertation of the English Verb: Principally intended to Ascertain the meaning of its Tenses*.
- Psaltis, Stamatios B. 1974. *Grammatik der Byzantinischen Chroniken*. Göttingen: Vandenhoeck & Rupprecht.
- Rathert, Monika. 1999. Einfache Temporalitätsphänomene. Die Kompositionalität von Tempus

-
- (Perfekt) und Temporalitätsadverbien (*bis* und *seit*) in geraden Kontexten, Seminar für Sprachwissenschaft, Universität Tübingen: Magisterarbeit.
- Reichenbach, H. 1947. *Elements of Symbolic Logic*. New York: Macmillan.
- Rijksbaron, A. 1984. *The Syntax and Semantics of the Verb in Classical Greek*. Amsterdam: J.C. Gieben.
- Ruge, H. 1991. Aufstieg, Fall und Auferstehung.
- Schiporeit, Luise. 1971. *Tenses and Time Phrases in Modern German*. München: Max Hueber Verlag.
- Schoorlemmer, Maaïke. 1995. Participial Passive and Aspect in Russian, Onderzoeksinstituut voor Taal en Spraak, Utrecht University: PhD Dissertation.
- Smyth, H.W., and Messing, G.M. 1956. *Greek Grammar*. Cambridge, Mass.
- Stechow, Arnim von. 1993. Die Aufgaben der Syntax. In *Syntax - Ein internationales Handbuch zeitgenössischer Forschung*, eds. J. Jacobs, W. Sternefeld, Arnim von Stechow and Th. Venneman, 1-88. Berlin/ New York: de Gruyter.
- Stechow, Arnim von. 1996. The Different Readings of *Wieder* "Again": A Structural Account. *Journal of Semantics* 13:87-138.
- Stechow, Arnim von. 1999a. Eine erweiterte Extended Now-Theorie für Perfekt und Futur. *Zeitschrift für Literaturwissenschaft und Linguistik* 113:86-118.
- Stechow, Arnim von. 1999b. Temporally Opaque Arguments in Verbs of Creation. In *Festschrift per Andrea Bonomi*, ed. Bruno Cecchetto. Stanford, CA: CSLI Publications.
- Stechow, Arnim von. 2001a. Perfect Tense and Perfect Aspect: *Seit* and *Since*. Paper presented at *Workshop on Participles*, Tübingen.
- Stechow, Arnim von. 2001b. Seit 1970. On the meaning of German "since" and the German Perfect. Ms. Tübingen.
- Vendler, Zeno. 1957. Verbs and Times. *The Philosophical Review* 66:143-160.
- Wackernagel, J. 1920-24. *Vorlesungen über Syntax mit besonderer Berücksichtigung von Griechisch, Lateinisch und Deutsch*. vol. 1-2. Basel.