THE GREEK PERFECT THROUGH HISTORY:
A FRESH ANALYSIS OF THE DEVELOPMENT AND DISAPPEARANCE OF THE
GREEK SYNTHETIC PERFECT

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1. Introduction

The Greek perfect tense during the era of the New Testament has been highly disputed both in its basic nature and its relationship to the history of the language. Since 1989, a number of descriptions of verbal aspect in New Testament Greek have put forward different suggestions for the nature of the Greek perfect, with little agreement. Some suggest that it is basically stative in nature (Porter 1989; Fanning 1990; Evans 2001), but others argue that by this time the form had already begun to merge with the past perfective (Caragounis 2004). At least one has suggested an entirely novel proposal that the perfect denotes a sort of intensive present tense (Campbell 2007). In order to evaluate these proposals, one might focus on the data from the 1st and 2nd centuries CE, but there is an alternative. None of these scholars attempt to deal with language variation. They consistently separate New Testament Greek from its history and development and make language variation a problem to be overcome rather than a necessary reality of language that must be accepted. For this reason, their research may very well stand or fall on how their proposals can be contextualized within the history and development of the language.

As an illustration, consider Campbell's criticism (2007) of Haug (2004), who analyzed the perfect from Homeric (9-8th c. BCE) through the Classical era (6-4th c. BCE).[1] Haug saw a shift, where the Homeric perfect refers to an intransitive "target state," derived from a causative telic present, but the Classical period introduces transitive perfects that refer to a "resultant state" from an atelic present (409). In these, the latter *is* the end point in and of itself and the former denotes that the state denoted by the perfect continues to hold until an indefinite point in time.[2]

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[1] Since Haug's analysis is highly relevant to our understanding of the Homeric perfect, it is worthwhile to introduce it here, as a contrastive foil for those analyzing New Testament Greek.

[2] Haug writes, "It is important not to identify the Resultant-state of an event with its 'target state.' If I throw a ball onto the roof, the target state of this event is the ball's being on the roof, a state that many or may not last for a long time. What I am calling the Resultant-state is different; it is a state of my having thrown the ball onto the roof, and it is a state that cannot cease holding at some later time" (2004: 399).

The possibility of polysemy (or perhaps here, quasi-polysemy) is problematic for Campbell, who states categorically, "[Haug's] analysis fails to provide a unified description of the perfect. He acknowledges that from his analysis 'it may seem that the perfect has no unitary semantics' (409), and while he attempts to resolve this problem, the results are unconvincing" (2007:164). We see explicitly here that any explanation that allows for variation is rejected. Only generalized semantic meaning is adequate for linguistic explanation. Language variation is a problem; never a solution.[3] But there is a larger issue. Assuming, momentarily, Campbell's analysis of the perfect in the New Testament era is correct and his approach to semantics and variation is correct, we are still left with a problem. Campbell is criticizing an analysis of Homeric and Classical Greek on the basis of New Testament Greek—a gap of at least five hundred years. It is almost as if Campbell does not believe the language has actually changed.[4]

This is only one of two problems with contemporary views of the Ancient Greek perfect. The second is the idea that this verbal form eventually merged with the aorist (past perfective) form (Caragounis 2004).[5] This has been the standard view of the Greek perfect for at least 200 years. However, there are distinct problems with this perspective. For one, even to this day, there are no grammars of the historical period in question during which the perfect supposedly merged with the aorist. Neither Byzantine nor Medieval Greek has received a substantial grammatical treatment. There is, in fact, only one substantial treatment of the perfect for this era (Mandilaras

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[3] This attitude toward polysemy and variation is seen time and time again in New Testament Greek grammar, for example, Porter (1999) on cases and prepositions and Wallace (1997) on voice. See Aubrey (2012) for a discussion of polysemy and middle voice in Ancient Greek.

[4] New Testament Greek linguistics seems trapped in the Structuralist tradition as described by Saussure in the very way Sweetser (1990) describes:

> "The structuralist tradition spent considerable effort on eliminating *confusion* between synchronic regularities and diachronic changes: speakers do not necessarily have rules or representations which reflect the language's past history. … [The] whole chess metaphor is a perfect example of Saussure's deep awareness of this fact. Saussure, of course, uses chess because for future play the past history of the board is totally irrelevant…. But he could hardly have picked … an example of a domain where past events more inevitably, regularly, and evidently (if not uniquely) *determine* the present resulting state" (10).

[5] Caragounis goes as far as to claim that the perfect was merging with the aorist as early as the 4th century BCE, roughly 500 years before the New Testament was written (2004, 154-5).

1973) and that study argues that the perfect did not merge with the aorist, but rather "retreated gradually before the aorist" (205).

The analysis that follows rejects all these views, at least in part. First, to be theoretically robust, any explanation must stand in accord with variation and change, not against them. Anything less cannot be viewed as truly unified. To that end, the analysis below seeks to show that the Greek perfect, as represented primarily by the verbs *istemi* ('I cause to stand, set') and *grapʰo* ('I write'), grew quasi-polysemous between the time of the Homeric epics (9-8th c. BCE) and the Classical period (6-4th c. BCE).[6] I propose that after the koineization of the language following Alexander the Great's conquest, the quasi-polysemy of the perfect created a certain level of instability through the Hellenistic (3-1st c. BCE) and late Roman period (1-3rd c. CE). It is precisely this instability eventually led speakers to prefer not merely the aorist forms, but more precisely the aorist *active* forms or *middle* forms of various tenses rather than the perfect in order to maintain maximal semantic differentiation that was not available with the perfect tense.

1.1 Language history, dialectology & typology

Greek is a member of the Indo-European language family (Horrocks 2010; Christidis 2007). Unlike some IE languages, however, Greek has neither died out, like Hittite, nor morphed into a variety of daughter languages, like Latin (Caragounis 2004). Greek is, then, in the incredibly unique position of providing a thoroughly documented language history for well over three thousand years in a variety of dialects that maintain a surprising level of mutual intelligibility.

All of this has been made possible by the stability the language has seen over the past two thousand years. Greek was the dominant language of politics during the Persian Empire, through the Latin Roman Empire and then during the Byzantine Empire (Janse 2003). With the fall of the

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[6] All instances of these two verbs in the indicative mood have been examined for this study, However, I make occasional reference to other verb where it is necessary or illuminating for the point at hand.

Byzantine Empire to the Ottoman Empire, the source of stability for the language shifted from the political sphere to the religious sphere. Through the medieval period up to the establishment of Greece as an independent nation in 1830 the Greek language and identity was closely tied with the Orthodox Church.[7] This long history has made Greek useful for research on paths of gramamticalization and language change.[8]

Despite the continuity, language variety is visible throughout the language's history. Classical Greek exhibits dramatic variety compressed into the small Balkan Peninsula (Bubenik 1983). Diachronically the Greek perfect shows variation from its origin in PIE, through its death in the Late Roman period, only to be reborn in Modern Greek as a periphrastic construction: ˈexo+participle, 'have+participle'—an important areal feature for Modern European languages (Horrocks 2010; Markopoulos 2009), a dramatic change from the earliest usages and forms.

1.1.1 Dialectology in the pre-classical and classical periods

From the earliest known eras of the Greek language, variation is well documented. The most ancient dialect is Mycenaean Greek, deciphered in the 1950s from Linear B, a script that mixes ideograms and syllabary. Mycenaean Greek can be dated to between the 15th century and the 12th century.[9] As if the dialect was designed to demonstrate the extensiveness of language variation, there is no definite daughter dialect in later Greek. It has been fifty years that there is still no definite conclusion as to how Mycenaean Greek relates to the later Classical dialects.

But turning to the Classical dialects, we are on a more sure footing. During the classical period, there are significant quantities of data for linguistic reconstruction and also many statements from native speakers in the texts that provide geographical and socio-linguistic

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[7] It is likely that throughout this period, the Greek language's extremely strong literary tradition also contributed to the ongoing viability of the language.

[8] See, for example, Bortone (2010) on prepositions.

[9] There is some debate as to when the final destruction of the city of Knossos, where the script was discovered, took place. Some believe the 14th century and others the 12th (Horrocks 2010:10).

context for understanding the dialectal layout of the Greek peninsula and the western coast of Asia Minor (Modern Turkey). Ancient Greek dialectology has approached the study in two different directions. One of these places the emphasis on the compilation of thoroughgoing descriptions of the evidence from surviving documents with a focus on chronological, social, and geographical diversity, as in Threatte (1980, 1996).
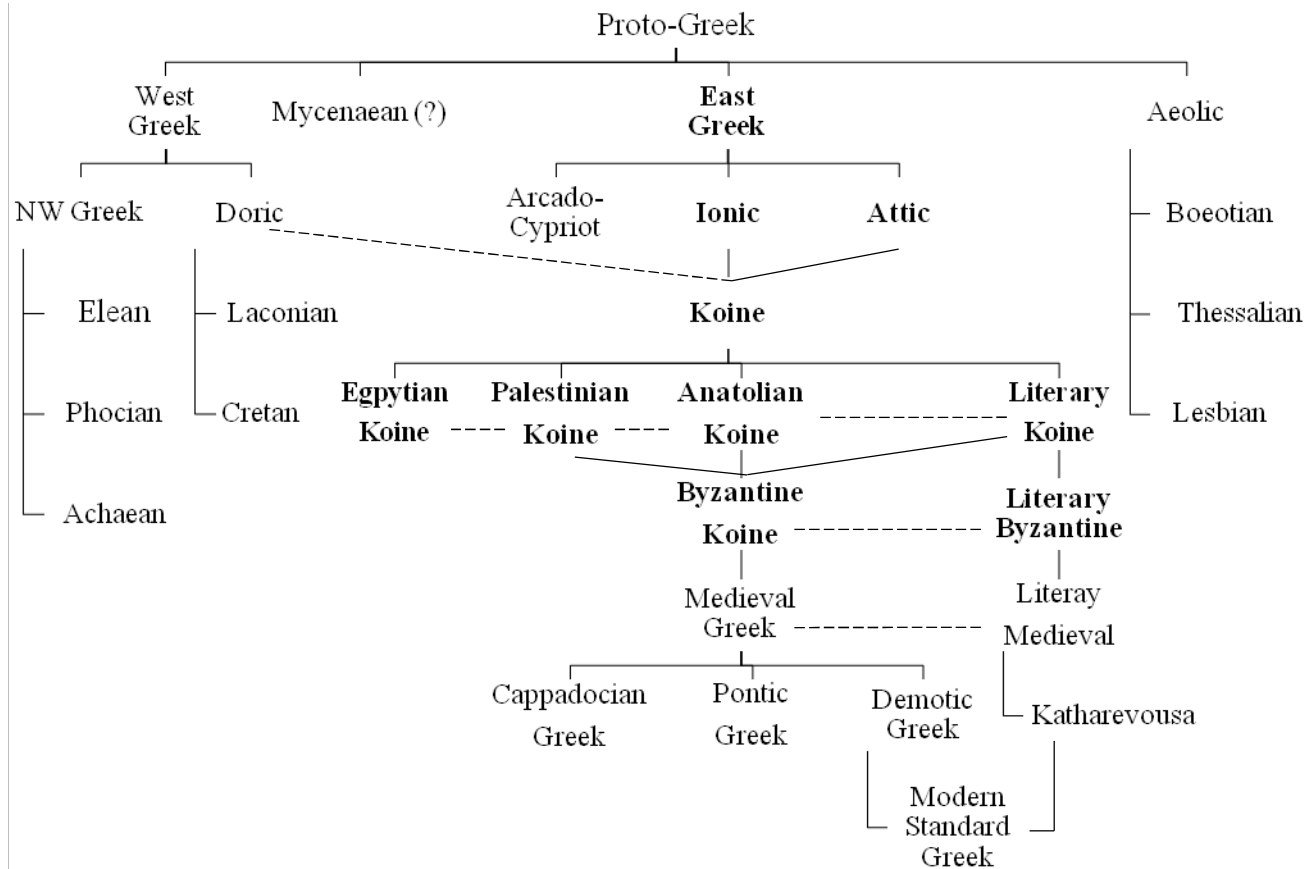

Figure 1: Dialectal tree of the Greek Language (~1400 BCE – 2000 CE)[10]

It is not clear whether Mycenaean is related to Doric Greek or Arcado-Cypriot Greek. It shares features of both.[11] Little is said in the literature about semantic differences across dialects. The

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[10] This tree is a composite from Horrocks (2010) with reference to Colvin (2010), and Woodard (2004). Dialects for which we have data for in the corpus is presented in figure 1 in bold text. The relatively narrow set is the unfortunate result of the fact that virtually all major texts from the Classical Period are either Ionic or Attic. Dashed lines denote secondary relationships when they are diagonal and denote cross-pollination when they are horizontal. The very latest of our texts from the 3-5th c. CE are representative of only the beginning of the Byzantine period. However, we must emphasize that none of these labels can be viewed as distinct categories, but rather points on a continuum that represent a certain level of prototypicality of language use for a given region.

fact of the matter is that the majority of the language data available is either Attic or Ionic with Athens being the leading city in Greece for much of history and the great Greek epics being written in Ionic. This led to the majority of Greek literature being written in one of these two dialects. As a result, morphophonology is the primary locus of Classical Greek dialectology. These observations are primarily made on the basis of inscriptions in stone since other texts are not available. Unfortunately, semantic variation rarely plays a part in this research.[12]

The dialect situation of the era is made even more complex by the geographic distribution across the Mediterranean. The Arcado-Cypriot dialect existed in two primary regions: the central region of the Peloponnese peninsula, north of Sparta, and the island of Cyprus, east of Crete.[13] Woodard notes that the great distance is a result of Arcadia and Cyprus being rather remote areas. "Their similarity is chiefly the result of the preservation of archaic features of a common ancestor dialect in two linguistically isolated areas" (2004:650). Other dialects are spread out as a result of colonization, which went both east and west. There were numerous Achaean, Ionic, and Doric colonies along the coast of Italy, Anatolia, and the many islands of the Mediterranean.

One other important note about Greek dialects in the Classical era involves the status of the Aeolic dialect. While it is somewhat arbitrarily placed in the tree above, the linguistic and geographical status of the dialect suggests that it functions as a bridge between East Greek and West Greek with a number of areal features. Under this view Aeolic primarily consists of a collection of isoglosses where Attica meets (North-) West Greek, as seen below in figure 2.

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[11] Determining which it is depends on the historical reconstruction after the fall of the Mycenaean kingdom on Crete. The question is: Did the Doric speakers invade the area or were they the people ruled by the Mycenaeans? If the latter, it is likely related to Doric, but if the former, the dialect is most likely Aracdian (Thompson 2010).

[12] For example, Horrock notes, "[An] important Aeolic feature … is the perfect participle in -οντ- [-ont-], as in the [Attic-Ionic] imperfective participle, rather than the usual [Attic-Ionic] -οτ- [-ot-], so κατεληλύθ-οντι [katelɛːlútʰ-onti] 'having returned (dative)' rather than Attic κατεληλύθ-οτι [katelɛːlýtʰ-onti]" (2010:35).There is a chance we will find such dialectal differences here, though Woodard goes as far as to say that syntactic variation "to the extent that such variation can be or has been discerned … is quite minor and lexically specific" (2004:669).

[13] Because of space limitations, Cyprus is not shown on the map below.

Figure 2: The Greek dialects of the first millennium BC (Woodard 2004, 649)

1.1.2 Dialectology in the post-classical period

With the rise of Alexander the Great came a wave of language standardization. Because Attic was the prestige dialect due to its educational and philosophical background, Alexander and his father Philip of Macedon chose it as the language of administration for their rule. This solidified the influence of Attic for the following centuries. Combine that with a dramatic level of dialect interaction as a result of all Greeks participating in Alexander's world-conquering army and you have the perfect conditions for the leveling of dialectal differences. Ionic Greek did not entirely disappear, however, for two reasons. The first is the large percentage of Alexander's army being Ionic speakers and the second is the fact that an extremely large amount of time was spent in Anatolia (Modern Turkey) before Alexander the Great broke out into the Middle East.

With his conquering, Alexander also spread Greek culture and language. The Greek of this era underwent dramatic leveling. This form of the language became the common Greek (Koine, κοινή) for the entire eastern half the Mediterranean. Moreover, language variation was obscured. It continued to exist, especially in written speech, but the vast majority of written documents are produced in the Koine dialect. Both in the Classical era and in the Hellenistic era, the vast majority of writing was done by professional scribes (Comfort 2005). The difference is that previously, those scribes were limited to their own dialect, but with the "globalization" of the Mediterranean world, the scribes of the Hellenistic period lost the previous level of (written) variation. The situation is similar to that of news anchors in the United States where, though there are many regional dialects, the news is always presented in American Standard English.

Our access to language variation in this period comes from a couple sources. First of all, there is the question of register. Hellenistic (400-50 BCE) and Roman era (50 BCE – 235 CE) writers all write at difference levels. The Greek of authors like Strabo or Polybius represent the literary register of the language, while those such as Luke or the author of Hebrew write at mid-

level register, while John, Mark, and much of the documentary papyri represent the most common working-class register. This last group is generally considered to be the closest we can get to the spoken language of the times (Deissmann 1901).[14]

The Egyptian papyri fragments are one of our best sources for the state of the Greek language in Egypt during the Hellenistic and Roman periods. Unlike most other texts, we can say with some confidence that the majority come from Egypt, though there are also letters written in other locations that were sent to Egypt. Beyond that, it is not always clear what can be extrapolated from that without more data from other locations. With that said, interference from Demotic Egyptian, the ancestor language of modern Coptic, has been documented.[15]

The region of Anatolia that encompasses Modern Turkey also functioned as a major linguistic area with substantial variation (Brixhe 2010). With its extremely rugged terrain, Anatolia was an excellent area for language variation to develop. The broader Koine dialect for trade and commerce dominated the large cities along the coasts and major trade routes, but further inland, variation and dialectology thrived. Unfortunately, none of this is available in our corpus. These texts consist of stone inscriptions, which are not readily accessible.[16]

1.2 Data background

The primary source of data for the analysis comes from the Perseus Digital Library Project (2011), a corpus of texts in a number of European languages. The Greek corpus for Perseus

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[14] There is also variation among bilingual speakers of Greek. The spread of Greek across the Mediterranean did not remove what was already there. What is called the Koine dialect represents Greek being spoken as trade language across a large heterogeneous linguistic area. For our purposes, the area of the eastern Mediterranean is important, where Indo-European meets Semitic. Here with the interaction of the Jewish people who continued to speak Semitic languages (Hebrew and Aramaic) alongside of Greek for generations, we have an important source of language contact and change. At this point in history, it is not merely a question of Greek as a second language. When we come to Greek texts written by ethnic Jews, bilingualism is the norm from childhood.

[15] Gignac (1981). Once again, these observations are all morphological and phonological. Gignac never produced a study of the syntax of the Egyptian papyri as he had originally planned. It should also be emphasized that Demotic Egyptian and Demotic Greek from figure 1, are not the same language. Demotic is simply derived from the Greek word *dēmotikós* 'popular.'

[16] For a map of linguistic variation in the Anatolian peninsula, see the appendix.

contains 16,701,167 words.[17] In addition, the Greek translation of the Old Testament, the Septuagint (Rahlfs and Hanhard 2006), the Old Testament Pseudepigrapha (Heiser and Penner 2008), Philo (Borgen, Fuglseth, and Skarsten 2005), the Apostolic Fathers (Holmes 2007), the works of Josephus (Niese 1885-1895) are also used. This is roughly 1,750,000 words. Both these texts and those from the Perseus Project are annotated with morpho-syntactic tags and searchable via Logos Bible Software and exported to Microsoft Excel 2010 for sorting and comparison. All translations and glossing are my own unless explicitly stated otherwise.[18] While not all texts or authors in this corpus appear in the examples below, all instances of the perfect indicative of the verbs, ἵστημι 'I cause to stand') and γράφω 'I write' from these texts have been examined.

1.3 Methodology and structure

The analysis of Haug (2004) mentioned above functions as a starting point for our understanding of Homer and the Classical period. Since what he claims about Homeric Greek is perfectly in line with the broader consensus regarding the nature of the Proto-Indo-European (PIE) perfect (e.g. Clackson 2007; Lehmann 1993) as well as various discussions of Classical Greek (e.g. Rijksbaron 2007; Sicking and Stork 1996), it seems reasonable to take his claims as a starting point unless the evidence dramatically suggests otherwise.[19]

The analysis proper is chronological, beginning with a brief survey of the status of the PIE perfect and its reconstruction, which is accessible without the necessity of the Ancient Greek

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[17] http://www.perseus.tufts.edu.

[18] The morphological parsing for Perseus texts is not always reliable. Those editions available in Logos separately from Perseus (e.g. the New Testament, Josephus, etc.) reflect a higher quality of morphological analysis, but regardless of source all examples examined have been checked and corrected where necessary.

[19] There are some terminological issues in how the PIE and Greek perfects are described. The term stative and resultative are used interchangeable to refer to Haug's "target state" rather than his "resultative state."

Also, while the analysis in this section takes Haug (2004) as a starting point, it does not necessarily assume that Haug is correct. Haug's claims are tested on the basis of how ἵστημι 'I cause to stand' and γράφω 'I write' function during these two large eras. If the analysis of Haug (2004) is correct, then there should be no instances of γράφω 'I write' in the prefect tense until the Classical period since this verb is neither causative nor telic in the present tense, since this is what he claims to be determinative for the perfect tense in the Homeric period.

data.[20] The analysis of data from Homeric and Classical Greek follows this, presenting the time period where the Greek perfect was the least polysemous in its semantics. More time and detail is spent on the following periods, since they represent the data more central to the broader claims regarding why the perfect disappeared from the language. While the discussion of Homeric and Classical Greek primarily focuses on textual examples, the discussion of later periods also brings in a number of statistical observations in the corpus that contribute toward validating the main argument. All of this comes to a head in section 3 where the data is synthesized and a narrative history of the perfect is suggested on the basis of the analysis.

2. Analysis

The central challenge of taking the consensus on the nature of the PIE perfect is that at face value, it comes uncomfortably close to placing the cart before the horse. That is to say, the reconstruction of the PIE perfect is, at least partially, upon how past scholarship has interpreted the data for the Greek perfect. Thankfully, for our purposes, the situation is far more complex than that, and thus the reconstruction of the PIE perfect cannot be viewed as so wholly dependent on Greek that we cannot use it as a starting point. The reconstruction of the PIE perfect relies on a large variety of factors beyond Greek data. For example, the verbal system of Sanskrit is not limited to the perfects of other Indo-European languages, but also the middle of Greek and Sanskrit, and especially the -*hi* conjugation of Hittite.

Beyond that, it is primarily Homeric Greek, being the oldest major texts, that is relevant to the reconstruction of earlier periods. What we see in and after Homer involves independent innovation that cannot be attributed to either proto-Greek or Proto-Indo-European from which it came. The data from Homer is generally clear and is demonstrably connectable to PIE, as it has

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[20] This is not to say that the Greek data is not important for the reconstruction, but that virtually everything that can be determined from Greek may also be discovered from Sanskrit, Latin, and other languages. Importantly, the most relevant Greek data, that from the Homeric era, is also the most easily interpreted, as we will see below.

been reconstructed, especially with reference to Sanskrit and Hittite (Clackson 2007; Janasoff 2003). Clackson's summary of the PIE perfect is a helpful summary of the state of research: "The perfect principally denotes a state: for example, the perfect *téthnēke* means 'he is dead', distinct from present *thnḗiskei* 'he is dying', imperfect *éthnēiske* 'he was dying' and aorist *éthane* 'he died'. As can be seen in this example, the state described in the perfect follows as a result of the action described in the other tenses" (Clackson 2007, 121).[21]

2.1 Homeric Greek & Classical Greek

Homeric Greek allows only for the perfect with verbs that have certain semantic characteristics. Specifically, perfects in Homeric Greek consistently involve a stative verb. These perfects participate in a causative / anti-causative alternation with the present verb-form. The perfect is centrally derived from transitive verbs that have telic causative semantics in the present tense. In each case, it denotes an intransitive target state that functions as the realized endpoint of that telic present form. This is demonstrated in examples (1-4). The first two examples provide a present verb with the transitive lexical meaning 'I destroy [something],' which then derives a perfect expressing the state that comes from that destruction, in the case of an animate entity, death.

(1) hektor   **ōlese**   laon.
     Hector.nom.sg   **destroy.AOR.3.SG**   people.ACC.PL
     Hector **destroyed** the people (Homer, *Iliad* 22.107).

(2) anēr   ōristos   **olōle**
     man.NOM.SG noble.SUPERLATIVE.NOM.SG   **destroy.PERF.3SG**
     A most noble man **is dead** (Homer, *Iliad* 16.521).

(3) aellai   koniēs   megalēn   **histasin**
     wind.NOM.PL cloud.of.dust.GEN.SG   large.ACC.SG   **make.stand.PRES.3PL**
     The winds **are raising up** a great cloud of dust (Homer, *Iliad* 13.336).

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[21] He continues: "[I]n most languages such survivals of inherited perfects with present meaning are not numerous (although they did spawn a whole class of 'perfecto-presents' in Germanic), and the perfect has mainly been reinterpreted as a tense with past reference. We should note that this shift to past reference offers support for the notion that the perfect originally referred to the state following an action in the past, and was not just a stative. In this new past-reference function the perfect consequently overlapped with old aorist and imperfect formations, leading to the collapse of the three-stem system in languages outside Greek and Indo-Iranian."

(4)   Axilleus   **hesēkei**[22]   epi   nēi.
       Achilles.NOM.SG   **make.stand.PERF.3SG**   by   ship.DAT.SG
       Achilles **was standing** by the stern of his large-hulled ship (Homer, *Iliad* 11.600).

Similarly, the alternation in examples (3-4) illustrate this with the causative, 'make stand,' which

is essentially equivalent to the English set, but in the perfect realizes the stative result of causing

something to stand. This basic distinction continues through the Classical period. We can

summarize the semantics requirements of the Homeric perfect as follows. [23]

(5)   a.   The basic, non-perfect sense of the verb must be telic.
       b.   The basic, non-perfect sense *tends* to be causative.
       c.   The perfect denotes the endpoint denoted by that basic form.

One logical extension of (5b) is that these perfects tend to be transitive in the present and aorist

tenses. The relationship between the telic present form and the state denoted by the perfect may

be formalized as in (6).[24]

(6)   a.   *istemi* (present), 'I cause to stand' → *esteka* (perfect), 'I am standing.'
       b.   [**do'** (x, ∅)] CAUSE [**be'** (y, [**stand'**])] → [**be'** (x, [**stand'**])]

This situation maintains itself quite well throughout the Classical period. The following

examples (7-8) helpfully demonstrate the same pattern with a telic verb in (7) followed by the

target state perfect in (8). These two clauses also helpfully showing how the Greek perfect differs

from the English perfect.[25]

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[22] The /h/ appearing at the beginning of the verb was word initial aspiration that was lost after the Classical period. Throughout this discussion we refer to the verb by its Post-Classical pronunciation without the/h/, though it will continue to be represented in Homeric and Classical example texts.

[23] It might be worthwhile to say that diachronically, there is no real basis for talking about the perfect as being derived from the present. The synchronic relationship appears to be one of derivation, but it is likely that originally, there was simply a single root which then received one of two morphological adaptions. Further whether the distinction between the perfect and present *synchronically* can be adequately described as a derivation is also unclear. For this reason, the term *alternation* is preferred throughout this discussion.

[24] In using this particular formalism for semantic representation, I do not make any theoretical claims about semantics in any way. As a whole the approach is overly simplistic and does not take into account the advances in semantics in Cognitive Linguistics, see Geeraerts (2010). With that said, the logical structure representation of Role and Reference Grammar does represents a useful shorthand for presenting the relationships between semantic classes and nothing more.

[25] These particular sentences in (7-8) are from Haug (2004, 396-7) and do not appear in any texts, but the distinction is based on real examples. The syntactic arguments have been changed to order to help make the

(7)   Aristotelēs   Athēnas   ōikei
        Aristotle.NOM.SG   in.Athens   dwell.PRES.3SG
        Aristotle is settling in Athens.

(8)   Aristotelēs   Athēnas   ōikēke
        Aristotle.NOM.SG   in.Athens   dwell.PERF.3SG
        Aristotle is living in Athens.

Compare this with two English perfects in example (9-10).

(9)   Rachel is living in Chicago.

(10)   Rachel has lived in Chicago.

In the case of the English, the truth value of example (10) is only dependent upon whether

Rachel has lived in Chicago *at some point in the past*. It makes no reference to whether or not

Rachel *still* lives in Chicago, which may or may not be the case. But the Greek clause in example

(8) makes just such a distinction. The truth condition of the English still holds for the Greek, but

it adds an additional truth condition, requiring that Aristotle continues to live in Athens at least

up until the time of speaking.

Now one might quickly protest that the examples are not entirely equivalent, that the

Greek verb *ōikō*, in fact means 'I settle,' whereas the English present of *I have lived* would be *I

am living*. This is correct and on that basis one might argue that the better English equivalent

would be *I have settled in Chicago*, a clause that does is indeed have the same two truth

conditions as the Greek: *having settled in Chicago* necessitates that I am still in Chicago.

However, this approach misses the larger point that Greek has no other equivalent for the English

verb *live*. The lexical and grammatical structures of the two languages are differ dramatically in

this regard. The preferred way of expressing the English meaning of *live* in Ancient Greek would

be to use the perfect of *settle*. And that is the central difference between the two perfects: Greek

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difference more clear. For example, the verb in (7) is parallel to Thucydides, *Peloponnesian War* 1.8.1: "For *they
settled* most of the islands" and the perfect verb in example (8) is parallel to Sophocles, *Electra* 1107: "I have been
long searching for where *Aegisthus is living*."

assumes that the target state continues to hold, while English assumes that the perfect's state-of-affairs is merely relevant at the current moment. Likewise, English's lexical inventory would make Greek grammatical distinction unnecessary for these meanings from the start.

This fact is precisely what causes the possibility of multiple translations in certain clauses from the *Iliad* (15.90).

(11) Hērē,   tipte   bebēkas;
      Hera.voc   why   walk.PERF.2.SG
      a.   Hera, why have you come?
      b.   Hera, why are you here?

The clause in example (11) may be adequately translated with either translation A or translation B. In English each of them express a different semantic property within the perfect. The first marks that a certain event took place that caused a particular state-of-affairs and the second denotes that the state-of-affairs continues to hold up until the time of speaking. In a very real sense, both possible translations are equally sufficient and insufficient for expressing the sense of the Greek perfect.

So it is clear Classical Greek has maintained the *target state* usage of the perfect from Homeric Greek for those verbs that *had* perfects in Homeric Greek. The innovation between the two historical periods in the perfect involves the extension of the Perfect to the language's entire lexical stock of verbs, by means of analogy and generalization.[26]

For those verbs that *gained* a perfect in this era, the perfect no longer denoted the target state of the basic present verb because the extension of the perfect to all semantic classes of verbs also included those verbs that were not telic. The endpoint of telic verbs was the state

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[26] This is one of those rare occasions where we can honestly say "between." This is not to say the change was not progressive, but that there is at least two hundred year gap in the material culture between the early epics and the literature written during the Classical period. Moreover, the epics represent an even earlier oral tradition going back to an era before the time of written text. Semantic bleaching is not sufficient as an explanation because the two usages stay distinct throughout the period. Extension and analogy are more likely, but the analogical mechanism behind the change is not clear. Haug (2004) makes no suggestion of what the change might be.

denoted by the perfect, as in example (2) above, *A most noble man is dead* is the telic endpoint of *I am destroying/killing someone*. When the possibility of an endpoint is removed by the use of an *atelic* verb or predicate, the state denoted by the perfect is fundamentally changed. With these atelic and transitive predicates—usually transitive activity predicates, [**do'** (x, y)]—what had been the endpoint simply becomes a resulting state that may or may not hold up until the time of speaking. The resulting state of these atelic perfects simply continues to hold for an infinite period. This is more in line with the English perfect. These verbs with a default atelic sense are represented by *grapʰo* 'I am writing' in this study. Atelic predicates also create a certain degree of ambiguity for interpretation, as demonstrated in example (12; Haug's [2004] example [7]).

(12) **gegrapʰe**=de   kai   tauta   ho=autos   Thukydidēs   Atʰēnaios
      write.PERF.3SG=CONJ also   this.ACC.PL.N   the=same   Thucydides   Athenian.NOM.SG
      a. The same Thucydides of Athens also **has written** these.
      b. The same Thucydides of Athens **is** also **the author of** these
      (Thucydides, *Peloponnesian War* 5.21.1).

There is no clear way to determine if the resultant state refers to the subject (like the Homeric perfect) or the object (as it is in English). Specifically, does the perfect state refer to fact that a written text now exists or to the state of Thucydides being the author?[27] For English, it would be the latter, but there is no definitive way of determining this for the Greek. In some contexts it might be possible on the basis of the information structure of the broader discourse, but even then, it is not always clear. The answer to the question relies primarily on the context of the individual example and even then many, like example (10) above, are still ambiguous.[28]

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[27] This is a highly debated question that goes back to at least Wackernagel (1904) and continues to this day (Haug 2004). Some, such as McKay (1994) have wanted to claim that these perfects always refer to the state of the subject, but that is a difficult position to argue, as Campbell (2007) has demonstrated so clearly. On the basis of the ambiguity, Campbell rejects the stative nature of the perfect entirely, which is an extreme and unnecessary move on his part. It seems to be better to simply recognize that atelic perfects are simply ambiguous and can be interpreted either way, depending on the larger context of the text.

[28] This may not be the case for native speakers, but this far removed from the original context, there is no way of determining this for sure.

2.2 The Hellenistic & Roman periods

There are continuities between the Classical period, the Koine, and Hellenistic periods in the semantics of the perfect. The same basic distinctions delineated above continue to hold extremely consistently. However, this is not to say that the language has not changed. Rather, the language changes that have taken place with reference to the Greek perfect are of a different kind. They do not involve variation in usage, but instead variation in how that usage is represented, where speakers (subconsciously) made a choice to use alternative grammatical forms to express the same meanings. But before we look at these changes, it is worthwhile to first examine Koine examples of these two main perfect usages (target state and resultative) that have continued from the Classical period.

2.2.1 *Target state* perfects

Target states continue from the Classical period essentially unchanged, as the example pairs demonstrate below. Once again, the perfect denotes as a state the endpoint of a telic base form, as seen in examples (13-16).

(13)   skotien=d   epi=tysin   **egere**
       dark.ACC.SG = CONJ   over=the.DAT.PL   **cause.to.rise.PRES.3SG**
       He raises up the darkness over them (Sibylline Oracles 14.6).

(14)   joannes   o=baptizon   **egegerte**   ek=nekro
       John.NOM.SG the=baptize.PRES.PART.NOM.SG **cause.to.rise.PERF.MID.3SG**   from=dead.DAT.SG
       John the baptizer **is risen** from the dead (Mark 6:14)

(15)   apʰiemi   pantas   tus=iudeus   apo=ton=pʰoro
       cause.be.released.PRES.1SG all.ACC.PL   the=Jews.ACC.PL   from=the=taxes.GEN.PL
       I exempt all the Jews from [paying] taxes (1 Maccabees 10:29).

(16)   **apʰeonte=sy**   e=amartje=su
       cause.be.released.PERF.MID.3G=DAT.2SG   the=sin.NOM.PL=POSS.2SG
       Your sins are forgiven (Luke 5:20)

Each of these clauses involves a verb that expresses a telic causative in the present (marked in the interlinear glossing), which expresses a target state in the perfect. The first pair in (13-14)

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provide the alteration between the present *egere*, 'he raises up [something],' with the perfect

egegerte, 'he is risen.' Likewise, the 1ˢᵗ person present form, *apʰiemi* 'I exempt, pardon,' in (15)

shows the alternation with the 3ʳᵈ person, *afeonte* 'is forgiven,' in example (16).

(17) tʰysian   megalen   **pyo**
      sacrifice.ACC.SG   big.ACC.SG   **make.PRES.1SG**
      I am [about to] make a great sacrificial offering
      (Greek Old Testament, 4 Kingdoms 10:21).[29]

(18) nuktʰemeron   en=to=bytʰo   **pepyeka**
      day.and.night.ACC.SG   in=the=sea   **make.PERF.1SG**
      a.   **I experienced** a day and night at sea.
      b.   For a day and night, **I was** at sea (2 Cor 11:25).

More striking are the examples in (17-18), where we find what could be termed a prototypical

causative: *pyo* 'to make.'[30] The present of this verb, *pyo* 'to make' (*pepyeka* in the perfect) in

example (14) is important since the sense of the present form of this verb is explicitly causative,

being roughly equivalent to the English, *make*. Representing the semantics in logical structure is

again useful to quickly grasping the semantics. The structure of the present would be [**do'** (x, Ø)]

CAUSE [**be'** (y, [**exist'**])], since *to make* involves bring something into existence. Since the perfect

involves expressing only the endpoint of the causative, we can simply chop off the first half of

that logical structure, so that the perfect *pepyeka* is simply [**be'** (y, [**exist'**])]. The end result is

that the perfect of *make* merely expresses *existence*: I was at sea.[31]

When we examine our representative target state verb, *istemi* / *esteka*, 'I cause to stand / I

am standing,' the situation remains the same for this era of the language as it has all the way

through. We see this below with the first person plural present form of the verb: *istanomen*, 'we

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[29] This text does not appear in most Old Testament translations because it is not in the Hebrew text.

[30] This particular verb has two basic senses: *I make* and *I do/perform*, which creates the interesting situation where both types of perfects are possible. The sense *I make* allows for either the target state or resultative reading, while the *I do/perform* reading allows for only the resultative reading. See section 2.2.2 below.

[31] Greek has a basic existential copula. One might readily wonder why an author might choose a highly morphologically complex form such as the perfect of *pyo* 'to make' in order to express a concept that already has its own lexical item. Unfortunately, this question would likely require access to native speakers for resolution.

cause to stand,' in example (19) and then also with the third person singular perfect *esteken*,

'someone is standing,' in (20).

(19)   alla nomon   **istanomen**
          but law.ACC.SG   **cause.to.stand.**PRES.1PL
          Instead, **we uphold** the law (Rom 3:31).

(20)   mesos   ymon   esteken   on   ymeis   uk=ydate
          among   you.gen.pl   stand.perf.3sg rel.pro you.nom.pl   NEG=see.perf.2pl
          Among you, is standing someone whom you do not know (John 1:26).

The lack of semantic change is magnified when the same verb is charted through the period. We

also see this in other verbs that denote sort of prototypical telicity, such as the Greek verb from

which the English *telic* is derived: *telo*, 'I make complete, finish,' in examples (21-22).

(21)   etelesen   anaginoskusa
          make.complete.AOR.3SG   read.AOR.PART.FEM.ACC.SG
          She finished reading (*Shepherd of Hermas*, Vision I, iv, 1).

(22)   en=tuto   e=agape   tu=t^{h}eu   **teteliote**
          in=this.dat.sg   the=love.NOM.SG   the=god.GEN.SG **make.complete.PERF.MID.3SG**
          In this [person] the love of God is complete (1 John 2:5).

Some translations, such as the NIV, wrongly translate this perfect with an English passive form

of the causative present form: "[L]ove for God is made perfect in them." This might be

motivated by the fact that the verb is also inflected for middle voice, but if that is the case, the

translators would be wrong in thinking that the perfect active still has a causative meaning.

Rather, clauses such as this one express a certain level of semantic redundancy that I would

suggest is central for understanding the eventual disappearance of the perfect later on in

history.[32]

2.2.2 *Resultative* perfects

The resultative state perfects arose during the Classical period on the basis of the generalization

and extension of the perfect from one narrow semantic class (essentially intransitive in the

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[32] This claim is fleshed out in detail below in section 2.3.

perfect) to virtually all Greek verbs. As we saw above, this was a dramatic shift in semantics from the original *target state* perfect and introduced a new level of complexity and quasi-polysemy to the perfect.[33]

Koine Greek verbs that by default express an activity state-of-affairs in the present function as resultative states, as with example (12) above using the verb *grapʰo*, 'I am writing.' Clauses using that same verb are provided below in examples (23) through (25). As we noted above, there is an inherent ambiguity present with such clauses as to whether the state referred to by the perfect involves the subject of the clause or the object. The following examples, demonstrate how the context motivates choosing between the options.

(23) apekrithe   o=Pilatos   o   gegrapʰa   gegrapʰa.
      reply.AOR.3SG   the=Pilate.NOM.SG   REL.PRO write.PERF.1SG write.PERF.1SG
      Pilate replied, "What I have written, I have written" (John 9:22).

The repeated perfects in this example appear in the context of Pilate responding to the Jewish leader's complaint that he had ordered "King of the Jews" to be written as the designation of Jesus' crime for his execution. The fact that *what is written*, that is, the object of the clause, is topical in both the clause and the discourse necessitates that the reader understand the resultative state-of-affairs as referring to the object of *gegrapʰa* 'I have written.' Likewise, we seen the opposite interpretation of the resultative state in the next two examples below, where the subject is topical becomes the reference point for the resultative.[34]

(24) prostʰesomen   paradosin,   en   peri Marku   tu
      add.FUT.1PL tradition.ACC.SG   REL.PRO about Mark.GEN.SG   the.GEN.SG
      to=evangeljon   **gegraφotos**
      the.ACC.SG=gospel.ACC.SG   **write.PERF.PART.GEN.SG**
      We must add a tradition concerning Mark, who is the author of the Gospel
      (Fragments of Papias 3.14).

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[33] The quasi-polysemy of the perfect is the central source of contention for New Testament Greek scholars, who consistently prefer unified descriptions and eschew language variation wherever possible—and those place where it is not possible are viewed as controversial and problematic.

[34] The verbs in both these examples are participles, roughly analogous to English relative clauses.

(25) djegeseos bulome pros juston ke afton ten=peri
description.GEN.SG want.PRES.1SG toward Justin CONJ PRO.ACC.3SG the=about
tuton pargmatean **gegrapʰota**
this.GEN.PL activity.ACC.SG write.PERF.PART.ACC.SG
I want to describe Justin also, who himself is an author regarding these affairs
(Josephus, *Life* 336).

Both these clauses involve situations where the author is topical for the perfect tense clause. The first is a Christian text from the early 2nd century discussing the authorship of the Gospel of Mark. The second is from the Jewish historian, Josephus, who refers to another historian Justin as being the author of a similar treatise. In both cases, the perfect appears in a participial clause functioning adjectivally, with the head of the noun phrase being the assumed subject of the participial clause. This is roughly analogous to a relative clause in English, which establishes the topic of the clause by the referent of the relative pronoun.

One final instance where the resultative state alternates with an intransitive activity predicate in the present is provided example (26).

(26) o=me=genealogumenos eks afton **dedekatoken** Abraam
the=not=trace.descent.PRES.PART.NOM.SG from PRO.3PL collect.tithes.PERF.3SG Abraham
The [man] without their [i.e. Jewish] ancestry has received tithes from Abraham (Heb 7:6).

This particular one involves the incorporation of the object within the verb *dekato* 'I collect tithes.' This verb used in the perfect tense here refers to the state where the collection of tithes is completed. Because the Greek text has no object, the perfect here can only relate the resultative state to the subject, even though the English rendering does not naturally accept such a reading.

Now then, an important point must be made about this class of verbs. There are indeed many verbs that denote an activity in the present and a resultant state and such a usage in both normal and natural. However, low frequency seen in Hellenistic and Early Byzantine Greek texts suggest that Greek speakers recognized (at least subconsciously) that this was not the ideal use of

the perfect and that the other usage, the target state perfect, was the more ideal one.[35] We see this especially when we compare the preference for using the active voice with activity verbs versus the use of the middle voice with those same verbs. The use of the middle voice effectively intransitivizes the verb, making it, at least in a pragmatic sense, *telic*. Thus with *grap^ho* 'I write [something],' becomes in the perfect middle *gegrapte* 'it is written,' as in example (22).

(27) kathos   **gegrapte**   oti   uk=estin   dikeos   ude   es
      just.as   **write.PERF.MID.3SG**   COMP   not=be.PRES.3SG   justice.NOM.SG   CONJ.NEG
      one
      Just as it is written, "There is none righteous, no, not one" (Rom 3:10).

The above example is in the middle voice. Perfects derived from Activity Presents do occur in the active voice but there is a distinct preference for the middle voice. For example, the verb, *grap^ho* 'I write,' occurs 64 times in the active perfect indicative attested in the texts from 200 BCE through 200 CE. In contrast, there are 462 attested occurrences of the middle perfect in the same texts for the same period. The contrast is quite staggering.

Now there are two possible explanations and they are not mutually exclusive. First of all, it is possible that this preference for the middle exists in order to avoid the ambiguity of transitive perfects. In the examples above, there are some that clearly refer to the resulting state of the object, as in John 9:22 (example 19) with the state referring to the words written on the sign to be hung above Jesus on the cross. Likewise, there are others that clearly refer to the state of the subject, as in Fragments of Papias 3:14 (example 19), where the state refers to Mark as the author of the Gospel. This preference for the middle voice over against the active is useful evidence that the middle voice is overtaking the stative meaning expressed by the Greek perfect.

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[35] A search and collation of individual lexemes reveals that there are only 43 separate verbs in the perfect active used by Roman period authors (1-2nd c. CE). This contrasts dramatically with 236 verbs that are used in the perfect middle during the same era, with only 11 verbs that use both a perfect active and perfect middle form.

The second explanation arises from the typologically common avoidance of progressive aspect with stative predicates (Smith 1997; Van Valin 2005). Again, looking at the verb *grap^ho* 'I write,' we might expect that the present middle form *grap^hete* would be the form used to express the meaning, 'it is written' either with an implicit or explicit agent. But this is not the case. The middle present form of this verb is surprisingly rare in our available texts from 200 BCE through 200 CE, appearing only fifteen times, thirteen of which are in a single author: Philo of Alexandria. In contrast, there are over two hundred instances of the perfect middle of the verb in the same set of texts, all of which express the meaning, 'it is written.' All of this suggests that Greek has a similar avoidance of the progressive or imperfective aspect with stative predicates.[36]

3. Synthesis

3.1 The *target state* perfect and middle voice

On the basis of the evidence from *grap^ho*, 'I am writing,' being used with the middle voice, it may be worthwhile to examine the relationship between the perfect and the middle of this verb in more detail as well as with our other verb, *istemi* 'I cause to stand.' Also, there may be value in making a few observations of a more general nature about the relationship between the perfect and the middle. Each of our verbs, *grap^ho*, 'I am writing,' and *istemi*, 'I cause to stand,' was chosen for this representative role in a semi-random manner.[37] The fact that these two verbs, entirely by chance, also suggested a new way of looking at the development and eventual disappearance of the Greek perfect was quite unexpected.

We saw above that there is a distinct preference for the perfect middle *gegrapte*, 'it is written,' over against the present middle *grap^hete* which should be an equally adequate way of passivizing this verb. But the relationship between the middle and the perfect is more complicated than that. Our other verb, *istemi* 'I cause to stand,' presents a different situation. The

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[36] Granted, this observation is currently limited to a single verb. Examining the relationship between perfect middles and present middles with a larger set of lexemes would be a worthwhile endeavor for the future.

[37] Specifically, they were chosen because their frequency assured a sufficiently large set of data for analysis following a search for perfect verb-forms across the entire corpus.

voice system of Greek also goes back to Proto-Indo-European and involved a basic alternation between active and middle (Klaiman 1991). Most verbs had both an active and a middle form, but there were many verbs that only had an active form (*activa tantum*) or only had a middle form (*media tantum*). This was the state of affairs in PIE (Clackson 2007) and it continued through the Classical period (Allan 2003) all the way to Modern Greek (Manney 2000). The older, *istemi* 'I cause to stand,' had always been an active only verb. And we would expect, given these circumstances, that there are no perfect middle forms of this verb at any point in our corpus from the 8th century BCE through the 5th century CE. This is because *istemi* 'I cause to stand,' participated in a perfect/non-perfect alternation that essentially amounted to the same semantics.

A strange thing happened toward the end of the Classical period: the Ionic dialect introduced a new lexeme with the same meaning from the same root: *istao*, 'I cause to stand,' representing a drive toward regularization.[38] In PIE, the basic inflectional system for the verb involved person, number, subject agreement that ended in *-mi*, '1SG' with a secondary system the ended in *-om* '1SG,' which was later reduced to *-o*, as a result of word-final de-nasalization.[39] At some point in the pre-history of Greek, the secondary system became the primary inflectional system for the vast majority of the verbs (Sihler 1995). The more archaic *-mi* inflection system continued only in a handful of high frequency verbs with basic and more concrete meanings, such as: *istemi*, 'I set,' *didomi*, 'I give,' *tithemi*, 'I put,' and *eimi*, 'I am.' These verbs fought against the systematization of their forms, but in the long term they were defeated and fully succumbed to the *-o* pattern by the Byzantine period via analogical leveling (Robertson 1923).

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[38] Liddell, *et al.* (1996).
[39] This was a common phonological process for word-final nasals in Greek. The /m/ is still visible after the addition of the plural inflection suffix to the first person form (the unmarked singular): *-o* '1SG' → *-omen*, '1PL.'

For *istemi*, this pattern began in the Classical era, with *istao* being only one twentieth as common as the standard *istemi*.[40] By the third century and the beginning of the Hellenistic era following the empire of Alexander the Great, that gap between the two forms continued to shrink with *istao* being one tenth as common as the older *-mi* form. This situation maintained itself through the Roman Period.[41] It is not until the end of the Roman era and the beginning of the Byzantine era that we see substantial change. During the 3-5th centuries CE, *istao* is one fourth as frequent as *istemi*.[42]

But how do these historical facts relate to the development of the Greek perfect? This is a complex issue, but the data is relatively clear. No instance of the lexeme, *istao* 'I cause to stand,' in our corpus appears in the perfect tense. They are all either present or past, but never perfect. Once again, the reason for this lies in analogical leveling and regularization of the language. Recall from the beginning of section 2 that the Greek perfect originated from the Proto-Indo-European *stative* verb class that stood in opposition to the *eventive* verb class. Janasoff (2003) argues that the stative class involved verbs whose subjects were *undergoers* and the eventive class whose subjects were *agents*.[43] The Greek middle voice and the Greek perfect tense *both* come from this Proto-Indo-European source.[44] And just as target state perfects have a regular

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[40] In the Classical texts available from the Perseus Digital Library, *istemi* occurs 1762 times compared to 90 instances of *istao*. While I am not trained in statistics, there is no debate about the trend for this verb. By Modern Greek, the archaic *-mi* inflection is entirely gone from the language, replaced by the *-o* inflection. The change is the numbers bear this out rather clearly.

[41] The numbers we have for the Hellenistic period are: 960 (*istemi*) to 94 (*istao*) and for the Roman period 2652 to 361. The corpus available for the 1-2 centuries CE is substantially larger than that of the Hellenistic period from 3-1st centuries BCE, though both consist of several million words.

[42] Theses centuries are our smallest set of texts, being roughly 1.5 million words. Nevertheless, the growth is clear with *istao* appearing 161 times compared to *istemi*'s 697 occurrences.

[43] Janasoff (2003) describes the PIE verbal system in terms of *active* versus *middle*, but in order to keep terminology distinct from the Greek inflectional forms, I am using *eventive* and *stative*, instead.

[44] Janasoff's view was anticipated as early as Claflin (1939). The alternative theory is slightly more complex but still emphasizes the semantic relationship between the perfect and the middle. Clackson (2007, 149) provides a helpful summary:

'The alternative theory … see the fundamental opposition between an active and a stative paradigm at the earliest reconstructable period of PIE. … The stative endings were used in one particular paradigm to

tendency to express a kind of causative relationship with the non-perfect (such as *istemi*, 'I cause to stand' versus *esteka*, 'I am standing'), the Greek middle voice maintained a similar alteration in its semantics.[45] Thus, for example, the active form *ypotasso* means, 'to subordinate, to bring under control, to rule,' but the middle form *ypotassome* has the meaning, 'to yield, to defer.'[46]

The parallel semantic relationship between the perfect and the middle made it possible for the (relatively) newly developed form, *istao* 'I cause to stand,' to function without a perfect form. Instead, it used the far more regular middle inflectional pattern to express the target state sense, *I am standing* that the perfect of *istemi* had expressed. The middle *istame* 'I am standing' slowly transitioned from a colloquial, non-standard form to the dominant form sometime between the 5th century CE and Modern Greek. It is unfortunate that the corpus used here ends at the 5th century, which prevents us from seeing this process explicitly. However, we do know the end result in Modern Greek, where *istame* survives as a middle verb with no active form.[47] In a

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denote the state resultant from a verbal action, and this formation was grammaticalized as the PIE perfect. … The grammaticalisation of active forms followed by a reflexive pronoun led to a new category, the middle. At the last stage of the PIE we therefore have to reconstruct four separate paradigms: active, stative, middle, and 'proto-perfect.' In the subsequent prehistory of the IE languages, the perfect paradigm became detached from other stative formations, which were merged to a lesser or greater extent, with the new middle. The merger of the old stative and middle reflects an overlap of function: the middle originally denoted reflexivity, from which arose secondary meaning of personal involvement and passivity; the stative is naturally the voice used to denote passive states.

[45] The fact that the Greek middle expresses a similar anti-causative semantics suggests against the alternative theory described in the footnote above.

[46] As in the 1 Clement 38.1-4: "So in our case let the whole body be saved in Christ Jesus, and let each man yield (*ypotassest^he*) to his neighbor, to the degree determined by his spiritual gift. (2) The strong must not neglect the weak, and the weak must respect the strong. Let the rich support the poor; and let the poor give thanks to God, because He has given him someone through whom his needs may be met. Let the wise display his wisdom not in words but in good works. The humble person should not testify to his own humility, but leave it to someone else to testify about him. Let the one who is physically pure remain so and not boast, recognizing that it is someone else who grants this self-control. (3) Let us acknowledge, brothers, from what matter we were made; who and what we were, when we came into the world; from what grave and what darkness he who made and created us brought us into his world, having prepared his benefits for us before we were born. (4) Seeing, therefore, that we have all these things from him, we ought in every respect to give thanks to him, to him be the glory for ever and ever. Amen.

[47] The active *istao* 'I cause to stand' simply did not have the same resiliency and was replaced by a variety of other lexical items, depending on the sense. Both the relatively new active *istao* and the older active *istemi* were eventually replaced at some point in either Medieval or Modern Greek by lexicalizations derived from concrete bodily experience: *kathorizo*, 'I set,' which comes from the same source as the English *cathedral*: the Greek word for chair or seat: *kathedra*. The process is a direct parallel to the grammaticalization of Greek prepositions described

sense, the Greek perfect and the middle together have come full circle, separating in PIE only to clash again in the early centuries after Christ. In the proto language and over a period of over one thousand years the perfect held control of this event/process with no available middle form at all, only to lose out due to a combination of regularization and analogical leveling of the paradigm.

3.2   The *resultative* perfect and the aorist tense

The fate of the *resultative* perfect differs dramatically from that of the *target state* perfect discussed above. When linguists and grammarians normally describe the death of the perfect, they are invariably referring to these resultative perfects. The target state perfects are never mentioned in this regard. Once again the limits of our data prevent us from actually seeing the disappearance of the perfect from the language. But that is less of an issue here where we are examining the standard explanation for the perfect's disappearance. Also, there is plenty of data available in the later eras to make some worthwhile observations about the linguistic forces driving the language changes involved.

The semantic innovation of the resultative perfect caused its own demise. Recall that this usage of the perfect allowed for the resultative state-of-affairs to refer either to the subject or the object, as in example (12), repeated here as (28).

(28)   **gegrapʰe**=de   kai   tauta   ho=autos   Thukydidēs   Atʰēnaios
        write.PERF.3SG=CONJ also   this.ACC.PL.N   the=same   Thucydides   Athenian.NOM.SG
        a. The same Thucydides of Athens also **has written** these.
        b. The same Thucydides of Athens **is** also **the author of** these
        (Thucydides, *Peloponnesian War* 5.21.1).

These were both viable interpretations at this period, but at least for this verb, the subject resultative usage is far less common by the time of the New Testament and later literature. There are, comparatively speaking, only a relatively small number of subject resultatives with *grapho*,

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by Bortone (2010) and clearly reflects the argument of Brinton and Traugott (2005) that grammaticalization and lexicalization processes are, in a sense, two sides of the same coin.

'I am writing,' from the 1st century CE through the 5th century. The object resultatives dominate this verb.[48]

This suggests a possible path of change that leads to the death of the perfect. The availability of the object resultative reading of atelic verbs like *grapho*, 'I am writing,' allowed for the possibility of conceptualizing these perfects not as a form of *verbal aspect*, but as *tense*. The resultative sense was reinterpreted as involving an event that takes in the past with ongoing relevance for the speaker for the situation at hand. As the usual story goes, this past time event was eventually viewed by analogy as being *only* a past tense with no reference to either a resulting state or ongoing relevance.[49] As Moulton (1908, 141) wrote, "[T]he line between the aorist and the perfect is not always easy to draw." But is this an issue with the nature of the perfect in this time in history or the nature of the aorist? Tradition takes the latter view, but it is possible that the old grammatical tradition has been distracted by the history of Latin, where the aorist and the perfect did indeed merge.[50]

However, there is an alternative. While most suggest that the perfect became more like the aorist and disappeared. There is one Classical grammarian from the early 19th century who very nearly suggests the opposite. Philipp Buttmann (1833, 350-1) writes,

> It will always be found that the pure [perfect] such as it has particularly maintained itself in Greek, is used only when the consequence of the performed action, or even of its ceasing are still connected with the *present time*. He who says, *I have known it*, says at the same time, *I do not know it any longer*. He who says, οἶκον ᾠκοδόμηκα [perfect tense], conveys the idea of *the house being still standing*; but if he says, ᾠκοδόμησα [aorist tense], he leaves it *at least undecided*, and he uses the same expression, when he *positively knows* that the house is no longer standing.[51]

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[48] And while I have not done explicit analysis of other verbs, this is, indeed, the general sense I have gathered from the regular reading of New Testament texts and other literature from the period.

[49] Robertson (1923, 898ff.) is perhaps the most extensive discussion of this view of the language's history.

[50] Goodspeed (1903) suggests that Latin influence on Greek drove the merger, though I have no reason to believe this was the case.

[51] The italics are original.

Buttmann's observation accords well with what we have seen with resultative perfects throughout, though his terminology differs.[52] It is his observation of the nature of the aorist tense that should hold our attention here. His Greek examples are repeated below in (29-30).

(29) ykon   okodomeka
      house.ACC.SG   build.PERF.1SG
      I have built a house (and it is still standing).

(30) ykon   okodomesa
      house.ACC.SG   build.AORIST.1SG
      I build/have built a house (and it may or may not still be stand).

We find that the relationship between these resultative perfects and the aorist tense involves an *asymmetrical* relationship, where the aorist is unmarked for present continuity and the perfect is marked for present continuity, much like the situation with the English perfect *Rachel has lived in Chicago*, may or may not mean that Rachel *still* lives in Chicago. The unmarked nature of the aorist tense is precisely the reason why it allows for a translation with either an English simple past tense or an English perfect tense depending on the larger context of the discourse, as in example (31) below.

(31) panta   pistevete   oti   **elabete**   ke   este   ymin
      all.ACC.PL believe.PRES.IMP.2.PL COMP **receive.AOR.2PL** and be.FUT.3SG you.DAT.PL
      Everything, whatever you pray and ask for, believe that **you have received[** it] and it
      will be given to you (Mark 11:24).

This relationship of asymmetrical markedness suggests a better explanation of why the perfect eventually disappeared. It was not that the perfect merged semantically with the aorist, but that the aorist already overlapped with the resultative usage of the perfect from the start. If a given author wanted to talk about a past situation as continuing into the present, the far more frequent aorist tense was sufficient for that. This situation likely led speakers eventually to see less need

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[52] The fact is that there was little for terminology at all at this point in the history of Greek grammar.

for the resultative perfects over the course of the following centuries, though our data ends before the final death actually takes place.

4. Conclusion

The developments and language history we have seen here partially substantiates Dixon (2007, 20-54) and his punctuated equilibrium model. The Greek perfect experienced a major level of change between 8th century and the 6th century BCE with its extension from a limited set of telic verbs to becoming an inflection class available to virtually all verbs and on par distributionally with the imperfective and perfective classes. But this extended distribution created a state of quasi-polysemy with some verbs like *istemi* 'I cause to stand' using one sense of the perfect: the *target state perfect*, as in (32).

(32) mesos   ymon   **esthken**   on   ymeis   uk   ydate
      among   you.GEN.PL   **stand.PERF.3SG** REL.PRO   you.NOM.PL   NEG   see.PERF.2PL
      Among you, **is standing** someone whom you do not know.

And other verbs like *grapʰo*, 'I am writing' use the other sense: the *resultative perfect*, as in (33).

(33) apekrithe   o =Pilatos   o   **gegrapʰa**   **gegrapʰa**.
      reply.AOR.3SG   the=Pilate.NOM.SG   REL.PRO   **write.PERF.1SG** **write.PERF.1SG**
      Pilate replied, "What **I have written**, **I have written**" (John 9:22).

This punctuation was then followed by a rather long period of equilibrium that lasted until shortly after time of Alexander the Great (323 BCE). The koineization of the language and the spread of Greek language and culture throughout the ancient world is likely the external event that eventually led to the death of the perfect several hundred years later at the beginning of the Medieval period. But whether this time period of 700 to 900 years can be viewed as what Dixon calls a "punctuation" is debatable. The overtaking of the perfect by other forms, the middle voice replacing the *target state* perfect and the aorist replacing the *resultative* perfect, was a slow process that took place over many centuries without any clear external forces driving it.

The conclusions presented here create a challenge for New Testament grammarians who seek a single broad semantic meaning for the perfect (e.g. Porter 1989; Campbell 2007), where it is clear that quasi-polysemy dominated not only the time of the New Testament, but also the Classical period. And though this study has focused primarily on two verbs with only passing reference to other lexemes, it is hoped that it has presented a compelling alternative to the standard view of the death of the perfect, while also providing a useful foundation for further study of the perfect, as well as establish a historical standard by which synchronic discussions of the Greek verbal system might be compared.

5. Appendix: Dialectology in Anatolia (Brixhe 2010, 229)

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