PERFECTIVITY, TELICITY AND NEW TESTAMENT INTERPRETATION:
TOWARDS A CORPUS APPROACH TO KOINE GREEK EVENT TYPOLOGY

by

Francis G.H. Pang, Hon.B.Sc., M.Div.

A thesis submitted to
the Faculty of McMaster Divinity College
in partial fulfilment of the requirements
for the degree of Doctor of Philosophy (Christian Theology)

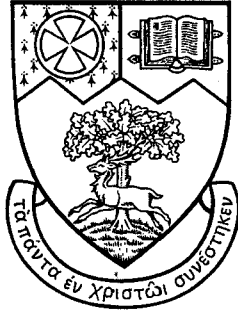McMaster Divinity College
Hamilton, Ontario
2014

Doctor of Philosophy (Christian Theology)
McMASTER DIVINITY COLLEGE
Hamilton, Ontario

TITLE: Perfectivity, Telicity and New Testament Interpretation: To-
                    wards a Corpus Approach to Koine Greek Event Typology

AUTHOR: Francis G.H. Pang, Hon.B.Sc., M.Div.

SUPERVISOR: Stanley E. Porter, Cynthia Long Westfall

NUMBER OF PAGES: xi + 456

McMASTER DIVINITY COLLEGE

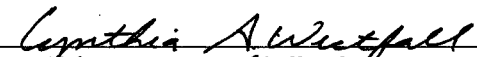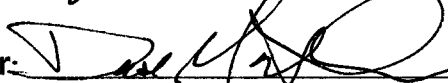Upon the recommendation of an oral examining committee,

this dissertation by

Francis G.H. Pang

is hereby accepted in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY (CHRISTIAN THEOLOGY)

Primary Supervisor: _____
Stanley E. Porter, Ph.D.

Secondary Supervisor: _____
Cynthia Long Westfall, Ph.D.

External Examiner: _____
David L. Mathewson, Ph.D.

Academic Dean: _____
Phil C. Zylla, D.Th.

Date: April 4, 2014

ABSTRACT

"Perfectivity, Telicity and New Testament Interpretation: Towards a Corpus Approach to Koine Greek Event Typology"

Francis G. H. Pang
McMaster Divinity College
Hamilton, Ontario
Doctor of Philosophy (Christian Theology), 2014

In the discussion of the relationship between aspect and *Aktionsart*, it is generally

agreed that aspect is a feature of the tense-form and *Aktionsart* depends on tense-form

together with other clausal and contextual features such as lexical meaning and adjuncts used

with the verb. Recent works have tried to find predictable patterns of meaning that emerge

when a certain set of clausal factors and lexical features combine with one of the aspects.

Most of these works are theoretical in nature and heavily rely on Zeno Vendler's

quadripartition of lexical classes as part of their theory. These works are confined to the

Greek of the New Testament, and often produce different and even incompatible results. This

study presents an empirical approach to verify these results. Following previous works on

corpus linguistics to analyze Hellenistic Greek, this study attempts to look for empirical evidence regarding what role lexical semantics and other contextual factors contribute to the choice of aspect. Using a body of text that forms a representative sample of Hellenistic text, the goal is to investigate distribution of tense-forms and lexis in the literature. Lexis are tested in groups according to Vendler's classes and also individually, and other contextual factors will also be considered.

To narrow down this study to a manageable scope, the semantic feature of telicity is chosen for examination. This feature is foundational in the formulation of Vendler's taxonomy and is often mentioned with or even conflated with the perfective aspect. It has not been adequately demonstrated whether or not aspectual choices in Koine Greek are dependent on Vendler's telicity distinction. It is argued that, based on empirical evidence, telicity and perfectivity are not related in a systematic manner in Koine Greek. As a corollary, *Aktionsart* should be considered as an interpretive category, meaning that the value cannot be systematized in a linguistic analysis but can only be determined in the process of interpretation.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

INTRODUCTION

A recent article on the use of aspectual viewpoint in three European languages

concludes with a rather despairing view on the present state of scholarship in cross-

linguistic aspectology:

> Aspect is an important, but also a very difficult temporal [sic] category,
> and studies on how it should be defined and on how it is realized in
> different languages are legion. But we are far from reaching agreement on
> what is involved, except on a very global level, and our knowledge about
> the form and function of aspects in particular linguistic systems is far from
> satisfactory. Statements such as "language x is an aspect language" or
> "language y has an imperfective aspect", may not be false, but they hide
> more problems than they answer.[1]

Indeed, it is an open secret that scholars have not yet come to a consensus regarding the

form and function of aspect after decades of cross-linguist research.[2] One can find

---

[1] Von Stutterheim et al., "New Perspectives," 214.

disagreement in fundamental issues such as terminologies and definitions,[3] the nature of

the aspectual oppositions (privative vs. equipollent), the number of aspects in a particular

language system, and the interaction between aspect and *Aktionsart* (lit. kind of action),

etc.[4]

This does not mean, however, that no progress has been made in the field.

Consider the following two examples. First, recent cross-linguistic studies suggest that

multiple co-textual features must be considered in the compositional process of

Aktionsart.[5] This moves the discussion from one that shows an over-reliance on lexical

semantic and ontological distinction to emphasizing the syntactic or interpretive nature of

this category.[6] Second, recent studies display an increased awareness of the uniqueness of

---

[2] However, this is not to suggest that aspectology is a young discipline within general linguistics. Studies in aspect (in the modern sense) of a particular language or language group exist as early as early 18th century (on the Slavic language group). What is referred to here instead is the recent surge in cross-linguistic and typological study on aspect. See 1.3 for a discussion of the historical development of both the studies of aspect and *Aktionsart*.

[3] See, for example, the introductory comment in Bertinetto and Delfitto, "Aspect vs. Actionality," 189–94.

[4] Numerous labels have been used by linguists to describe this distinction. It is usually described as the distinction between aspect and *Aktionsart* or between grammatical and lexical aspects in New Testament studies. See 1.2 for more detail.

[5] See, for example, the seven aspectual tiers proposed by Sasse. Sasse, "Recent Activity in the Theory of Aspect," 262–63.

[6] See section 1.3.3.4 for more detail.

each language/language group in aspect studies. Language-specific studies have

demonstrated that the three aspectual categories proposed by Bernard Comrie (perfective/

imperfective/perfect) are not necessarily recognized morphologically in all languages,[7]

and these categories do not necessarily convey the exact same semantic value in all

languages.[8] In fact, some recent cross-linguistic studies are more optimistic about the

state of scholarship and point out that a promising direction to aspectology is to better

appreciate the cross-linguistic variations of the categories. For example, after reviewing

five recent works on cross-linguistic aspect studies, Sasse writes:

> Many important and valuable contributions to our understanding of
> aspectuality have been made, both in the theories and individual books
> treated in this paper and elsewhere. We must now look more deeply into
> individual languages of different types to see in what way they confirm or
> modify our picture. Given the complexity of the subject, this is not an easy
> task. But it will be facilitated by an open-minded research strategy that
> leaves room for the expectation of a higher amount of variation than
> suggested by the comparison of Russian, Romance, and English.[9]

---

[7] For a definition of the three categories, see Comrie, *Aspect*, 16–40, 52–65.

[8] See, for example, a brief survey of the aspectual representations of several languages (Russian, French, English, and Chinese) in de Swart, "Verbal Aspect," 756–65.

[9] Sasse, "Recent Activity in the Theory of Aspect," 266. See Tatevosov for a similar sentiment and understanding on the study of cross-linguistic actionality (*Aktionsart*). Tatevosov, "The Parameter of Actionality".

This last point is best illustrated by looking into the current 'hot topics' in scholarship. In a recent international conference that focuses on typological research of the Tense-Aspect-Modality-Evidentiality spectrum (Chronos 10, 2011), several major research questions on aspectology are identified for panel discussion.[10] One can find two recurring themes in these questions. The first is related to the patterns of cross-linguistic variation. There are questions such as: how many aspectual distinctions (imperfective, perfective, perfect) are needed to capture all the aspectual properties found in human languages? How are we to account for cross-linguistic variations in the meaning of the aspectual forms? Why do some languages allow a neutral aspectual viewpoint but not in others? Is *Aktionsart* a language-dependent or independent category?

The other recurring theme is concerning the content or 'ingredients' of the study of aspect. There are questions such as: what ways do languages systems use to make aspectual distinctions apart from morphological affixation and stem alteration? What is the relationship between grammatical aspect and lexical aspect (*Aktionsart*)? Is this

---

[10] Thematic Panel 6 of the 10th International Conference on Tense, Aspect, Modality, and Evidentiality (Chronos 10) at Aston University, Birmingham, UK (2011). Conference website: http://www1.aston.ac.uk/lss/news/conferences-seminars/2010–11-archive/chronos-10/english/thematic-panels/panel-6-the-semantics-and-morphology-of-aspect-across-languages/.

relationship a universal phenomenon or is it language dependent? Is aspectual reference, particularly perfectivity, dependent on a telicity distinction?

In fact, these two themes are very much at the center of aspectology in western scholarship. Robert Binnick, a veteran aspectologist who maintains a very helpful bibliographic resource page on the web, also identifies similar research questions as the core of the discussion in the introduction of his recent edited volume. According to Binnick, there are four central issues in the study of aspect:[11] (1) The definition of aspect and *Aktionsart*;[12] (2) The relationship between individual aspects and *Aktionsarten*; (3) The distinction and interaction between aspect and *Aktionsart*; and (4) Universality and language dependency of aspect. Binnick rightly ties the first question to the historical development of the discipline, characterizing it as "purely contingent and derives from the rather confused (and confusing) history of the study of 'aspect.'"[13] Both the second and third points are theoretical in nature and are related to the question of content, i.e.

---

[11] See Binnick, "Introduction," 32.

[12] He prefers the labels grammatical aspect and lexical aspect but acknowledges the lack of consensus on the meaning and uses of the various labels for the latter (*Aktionsart*, actionality, lexical aspect, etc.) See Binnick, "Introduction," 32.

[13] See Binnick, "Introduction," 32.

what constitutes aspect, while the last point is related to the question of cross-linguistic variation.

We are confronted with similar research questions when we turn our attention to studies of New Testament (NT) Greek. Although the past three decades could be considered a flowering period of NT Greek aspectology, similar to general linguistics scholarship, the works on NT Greek also witness a diversity in approaches and disagreement in key areas outlined above. As I will demonstrate in detail in chapter 1, one of the main contentions in NT Greek studies concerns the distinction between aspect and *Aktionsart* in Koine Greek. The debate among biblical scholars is as fierce as that among their general linguistics counterparts. To some extent, the distinction between the two categories in Greek is easier to delineate since most would agree that aspect is explicitly expressed in the morphological system in Koine Greek and *Aktionsart* is a matter of word meaning. However, agreement ceases at this point. On the one hand, there are those who contend that the two categories belong to different disciplines (one linguistic and another extra-linguistic) and thus should not be amalgamated into one category and should not be considered at the same level of linguistic analysis. On the other hand, there are those who take a compositional approach to aspect and argue that the interaction between the inherent meaning of verbs with its clausal co-textual factors is

the key to the composition and interpretation of *Aktionsart*. Under this approach, grammatical aspect is taken as one of the markers or operators that serves to coerce one *Aktionsart* into another with different class of verbs. The corollary is that a predictable pattern of meaning can be found when the two categories are considered together at the same level of analysis.[14]

Most of the works that consider aspect and *Aktionsart* together use Zeno Vendler's quadripartition of verbal classes as a point of departure.[15] These models assume that the inherent meaning of verbs, i.e. meaning regarding action, is key to unlocking the relationship between aspect and *Aktionsart* in Greek, and the inherent meanings are best captured and characterized by Vendler's classes. These proposals thus start with inherent lexical meaning and then focus on how these core meanings, characterized in terms of Vendler's scheme, interact with grammatical aspects and other co-textual factors to produce different *Aktionsarten*.

In response to such efforts, some scholars have pointed out the danger of borrowing directly from Vendler without taking into account the non-linguistic and

---

[14] See section 1.4.2 for a brief summary.

[15] Vendler, "Verbs and Times," 143–60. See section 1.3.3.

language-specific nature of his work.[16] This brings us back to the appeal earlier from

Sasse to aspectologists to heighten the awareness and appreciation of cross-linguistic

diversity in both aspect and *Aktionsart*. Although Vendler's taxonomy is considered an

essential element in the event typology by many semanticists today, its usefulness is yet

to be proven in Koine Greek aspect studies. Recent works that rely heavily on Vendler

often adapt his English verb classes without getting into detail on class assignment, which

makes the validity of these endeavors open to question.

Another problem that plagues the study of *Aktionsart* is the general lack of

empirical evidence to support assertions regarding the alleged predictable patterns of

aspectual meaning from various combinations of aspectual markers, lexical characters

and other clausal constituents. For those proposals which use Vendler's quadripartition of

verb classes as the foundation of a compositional approach, the discussion of these

predictable patterns is always theoretical and non-quantitative in nature, often asserted

with only scattered textual examples. These textual examples are mostly confined to the

text of the NT, which is only a small part of the Koine Greek texts available. To verify

---

[16] See, for example, Evans, *Verbal Syntax*, 19–21 and section 2.2 of this work.

these claims quantitatively, a representative corpus of Koine Greek text is needed to

provide the number of instances required to formulate a statistically significant inference.

The present study is an attempt to fill a gap in the current state of Koine Greek

aspectology. The ultimate goal is to examine the validity of the aforementioned

predictable patterns using quantitative analysis.[17] In terms of the corpus approach to

Greek linguistics, this study can be considered as an extension of several recent works on

numerical analysis on Koine Greek. It is part of an ongoing project of a corpus approach

to Koine aspect studies.[18] A modified version of O'Donnell's proposed representative

corpus is used in this study in order to examine the use of Greek, particularly the verbal

system, in the Hellenistic period. However, before we can look into the validity of any

predictable patterns between morphological forms and other co-textual features, we need

to look at whether these features are related to each other. In another words, how the

choice of one feature affects or in a sense limits the choice of the other features. Since

most compositional approaches to aspect and *Aktionsart* in Koine adhere to Vendler's

---

[17] Given its theoretical or hermeneutical nature of this study, it will not provide detailed exegetical discussion of a particular passage. I will refer to particular instances (of text) from my corpus to illustrate my arguments. See chapter 4 for more detail.

[18] See O'Donnell, *Corpus Linguistics*, 232–37, 247–51; O'Donnell, "Register-Balanced Corpus," 255–97; and Porter and O'Donnell, "Probabilistic Standpoint".

verb classes, one way of looking at this is to ask whether the aspectuality system and the lexical system are dependent, i.e. whether Greek aspectual forms correlate or contribute to the overall *Aktionsart* of a predicate and vice versa.

To narrow down the study to a manageable scope, I will focus on the semantic feature of telicity. Telicity is a property of a verb phrase (or above) which denotes that an action is tending towards a definite goal/end. The evaluation of this semantic feature involves quite a few number of co-textual elements as well as the lexical meaning of the verb. This feature is foundational in the formulation of Vendler's taxonomy and is often mentioned with or even conflated with the perfective aspect. Yet it has not been adequately demonstrated whether or not aspectual choices in Koine Greek are dependent on Vendler's telicity distinction. In this study I will look at whether there is empirical evidence to support the idea that the semantic feature of telicity is related to the grammatical perfective/imperfective opposition, i.e. whether telicity and perfectivity are dependent or independent. The answer to this question will expand our understanding of the compositional process of *Aktionsart* in Koine Greek. It will also provide an answer to questions such as how useful are Vendler's classes in Greek aspect studies, whether predictable patterns of meaning can be found by combining aspectual markers and different class of verbs, and if so, whether Vendler's scheme is the best way to determine

this pattern. In other words, this study will clarify whether or not *Aktionsart* can be systematically formulated or predicted, which will enhance our understanding of the nature of *Aktionsart*. It is argued in this study that, based on empirical evidence, telicity and perfectivity are independent systems in Koine Greek. As a corollary, *Aktionsart* should be considered as an interpretive category, meaning that the value cannot be systematized in a linguistic analysis but can only be determined in the process of interpretation.

This study has two parts. Part I consists of two chapters, both pertaining to theoretical matters. Chapter 1 provides a general overview of aspect studies in current scholarship, both in general linguistics and in studies of Koine Greek. It opens with a discussion of the nomenclatural confusions of relevant terms and then provides a brief history of research on aspect and *Aktionsart*, particularly on how Vendler's classification of verbs merges with the traditional study of *Aktionsart*. It then surveys how the aspect/ *Aktionsart* distinction is described by various models in Koine Greek studies, identifying their theoretical presuppositions and linguistic framework. It concludes with a discussion of the presuppositions assumed in this study.

Chapter 2 surveys various approaches to event typology, both in general linguistics and in Greek studies. It starts with a survey of the post-Vendlerian

development in event typology. It is followed by a critical evaluation of the use of

Vendler's taxonomy in Koine Greek studies and discusses some alternative frameworks

for defining process types in Greek.

The second part of the study consists of three chapters. Chapter 3 is divided into

two parts. It starts with a brief discussion of corpus linguistics and Koine Greek studies

and followed by a description of the compilation of the representative corpus used in this

study, including a discussion of the classification criteria and the composition of the

corpus and a detailed breakdown of the data. The second part of the chapter is on the

definition and the nature of the semantic feature telicity. It is started with a discussion of

the concept of telicity, particularly how it is represented by the Greek lexicon. The goal

here is to try to define telicity in linguistic terms, as a way of answering the following

questions: (1) what constitutes valid empirical evidence for telicity? and (2) where is

telicity located among all of the facts relevant to a linguistic description? It starts with a

discussion of telicity as an ontological concept and then surveys various attempts to

formulate a linguistic realization or description of telicity. The chapter closes with a

discussion of the relationship between telicity and perfectivity, surveying both sides of

the debate.

Chapter 4 provides an overview of the scope of the data in terms of descriptive statistics and a detailed discussion of the results of various statistic tests under the null hypothesis: telicity is not correlated with perfectivity. The chapter starts with a discussion of a particular group of the so-called telic verbs in Greek, the prepositional prefixed verbs and their non-prefixed counterparts. Instances of these verbs, particularly in the NT, are used to illustrate their usefulness for this analysis. Instances of NT texts are used to illustrate how this analysis does or does not affect our reading of actual texts.

The fifth chapter of this study discusses various implications of the test results. It includes a discussion of the nature of telicity and its place in the study of Koine Greek. I will utilize the results from the corpus analysis and contend that telicity should be evaluated separately from grammatical aspectual opposition in Greek. Finally, I will utilize the discussion from both parts of this study to argue that the evaluation of telicity does not stop at the VP level but also relies on information from the wider literary context (clause and sentence level and above). It is argued that *Aktionsart* is interpretive and non-systematic in nature.

CHAPTER 1 ASPECT, *AKTIONSART*, AND NEW TESTAMENT GREEK STUDIES

1.1 INTRODUCTION

When one surveys the literature on aspectology in either general linguistics or in studies of Biblical Greek, it quickly becomes apparent that the distinction between aspect and *Aktionsart* occupies a central position in the discussion. In this section, I will survey the discussion of the aspect/*Aktionsart* distinction in both general linguistics and Koine Greek studies. I will start this chapter by looking at how various terms are defined, highlighting the nomenclatural confusions in the discussion of aspectology in cross-linguistic studies. To untangle this web of related labels, I will provide a brief outline of the history of development on related terms in section 1.3.1–1.3.3, particularly on how the classification of various kinds of action, by itself a philosophical endeavor, was introduced into the discussion of aspect. Central to the discussion of the aspect-*Aktionsart*

distinction in recent years is the idea of compositionality. I will briefly identify several

approaches to compositionality proposed in recent works in section 1.3.4. After this

necessary groundwork has been done, I will go over various proposals of Koine Greek

published in the past twenty-five years in section 1.4, focusing on their definitions of

aspect and *Aktionsart* and how they distinguish themselves from one another. This

chapter is concluded with the theoretical assumptions underlying this study.

1.2 DEFINITIONS AND NOMENCLATURAL ISSUES

Discussions regarding the definition of aspect are notoriously confusing.[1] The

sheer number of terms used to describe verbal aspect and *Aktionsart* in studies of various

languages and language groups is appallingly numerous.[2] It is almost impossible for

curious readers who are new to the subject to navigate the various definitions without

---

[1] See Macauley's analogy of a 'dark forest' and 'poorly mapped territory' in Macauley, "Review of Comrie and Friedrich".

[2] A quick survey of terms for *Aktionsart* will suffice here. We found in the literature terms used to label this category such as lexical aspect, situation aspect/type, predicational aspect, action, actionality, eventualities, verbal character, aspectual character, procedural characteristic, aspectual potential, verb classes, taxonomic category, inherent/intrinsic meaning of the verb, state-of-the-affair type, etc. For a survey of the terminological confusion, see Sasse, "Recent Activity in the Theory of Aspect", Binnick, *Time and the Verb*; Verkuyl, *Compositional Nature*; Filip, "Aspectual Class and *Aktionsart*"; and Tatevosov, "The Parameter of Actionality".

getting lost in the nomenclatural maze. These labels are not merely different ways of

referring to a single linguistic phenomenon; they also highlight different nuances that are

made by linguists when it comes to distinguishing between the two (or more) categories.

To understand this intricate web of terminology, and at the same time to avoid

overgeneralizing and oversimplifying the discussion, I will adapt the broad theoretical

categories of Hans-Jürgen Sasse as my point of departure and then add a few remarks on

possible explanation of the terminological confusion.[3]

In a recent critical review of several works on aspectology, Sasse puts forward a

dimensional view of aspect and identifies two semantic dimensions or categories.[4] At one

level, there is what he refers to as 'aspect proper,' which pertains to viewpoint distinctions

of the perfective and imperfective type. This semantic category is similar to what Comrie

refers to as "different ways of viewing the internal temporal constituency of a situation,"[5]

---

[3] The following outline of the history of development and various definitions discuss in this section is based on the following articles and other works as cited. Due to the scope of this discussion, it is not the intention to go into detail on the history of the development of various disciplines within the field of the semantics of the verb. See Sasse's work cited below for a critical review of the development of various sub-topics within aspectology. Binnick, "Temporality and Aspectuality," 557–67; Binnick, "Aspect and Aspectuality," 244–68; Filip, "Aspectual Class and *Aktionsart*," 1186–217; Sasse, "Recent Activity in the Theory of Aspect," 199–231; and Verkuyl, *A Theory of Aspectuality*, 33–67.

[4] Sasse, "Recent Activity in the Theory of Aspect," 203.

[5] Based on the definition given by Holt. See Comrie, *Aspect*, 3 and Holt, *Études d'aspect*, 6.

which is sometimes referred to as viewpoint aspect to highlight the viewpoint distinction

that is expressed in the language.[6] This distinction is not limited to a strict binary

dichotomy and different theories are used to describe the opposition of semantic

features.[7] Since this aspectual distinction is represented by verb morphology in Koine

Greek, it is generally labeled verbal aspect or grammatical aspect in biblical studies. The

second semantic dimension comprises "any type of intrinsic temporal characteristic of

situation, such as dynamicity, stativity, durativity, punctuality, telicity, etc."[8] This is

sometimes referred to as lexical aspect since the forming of temporal characters is closely

related to the intrinsic or inherent lexical meaning of a verb and its interactions with other

co-textual factors. As I am going to show in the next section, the terminology used in the

discussion of this category is close to those for *Aktionsart* in traditional Greek grammars,

which in essence is also an inquiry into the temporal characteristics of a verbal situation.

One can find a wide range of labels for this category in the literature throughout the

years. These include those labels that emphasize the opposition of the semantic features

---

[6] This is similar to Borik's "perspective aspect." See Borik, *Aspect and Reference Time*, 73, n.1.

[7] For example, a trichotomous opposition (perfective, imperfective, and neutral aspects) is proposed by Carlota Smith. See next section for a brief summary and Smith, *The Parameter of Aspect*, 65–81.

[8] Sasse, "Recent Activity in the Theory of Aspect," 203.

(telicity, punctuality, etc.) as aspectual, such as lexical aspect or situation aspect,[9] or those that highlight the temporal characteristic of the verbal situation that are manifested in word formation in the lexicon, such as procedural/aspectual character, situation type or aspectual classes.[10] Some aspectologists would further distinguish two levels of this second aspectual dimension in terms of the basic unit of analysis.[11]

It is not difficult to see that the nomenclature of various categories is a pressing problem in the study of aspect. New theoretical works on aspect have come like a flood in recent years and each in turn has introduced more new labels.[12] Sasse attributes this terminological war to the diametrically opposed development between continental and English scholarship of aspectology preceding the work of the English language

---

[9] For situation aspect, see Smith, *The Parameter of Aspect*, 17–37; for lexical aspect, see Olsen, *A Semantic and Pragmatic Model*, 8–11. Verkuyl uses the label predicational aspect to emphasize the proper unit of analysis. See Verkuyl, "How (in-)sensitive," 145.

[10] See the following discussion of Vendler's taxonomy and also the general survey from Tatevosov, who prefers the term actionality. See Tatevosov, "The Parameter of Actionality," 314–24.

[11] See Olga Borik's distinction between lexical aspect (verb-level) and telicity aspect (verb-phrase level). The latter is similar to Verkuyl's predicational aspect. See chapter 3 for a detail discussion on telicity. See Borik, *Aspect and Reference Time*, 12–13 and Verkuyl, "How (in-)sensitive," 145.

[12] In his review article published 10 years ago, Sasse counts more than 20 majors books on aspect of a general nature (and countless articles) published within a 5 years span. It shows no sign of slowing down in the last decade. See Sasse, "Recent Activity in the Theory of Aspect," 199–201. See also Binnick, ed., *The Oxford Handbook of Tense and Aspect* and Croft, *Verbs*, 317–24, both published recently.

philosopher Zeno Vendler.[13] Sasse observes that the pre-Vendler linguists from the

English-speaking tradition seem to use the terms aspect and *Aktionsart* differently

compared to linguists from the continental tradition (e.g. German or French linguists).

For the English-speaking linguistic world, the term aspect was used in a broader and

more comprehensive sense than the Slavic notion of вид (*vid*, the binary opposition of

perfectivity and imperfectivty) and was made to include (sometimes even exclusively)

the inherent temporal characteristics of predicates with respect to duration, boundedness,

etc. (i.e. *Aktionsart*).[14] The continental linguists at the time used the term aspect narrowly

to primarily refer to the Slavic binary opposition as expressed grammatically. As a result

of this difference in their understanding of the terms, the English tradition made a great

effort in consolidating the two categories while the continental tradition spent its energy

on clarifying the distinction. The current state of scholarship to a degree also reflects such

diametrically opposed development. On the one hand there are works claiming that the

two categories must be carefully distinguished,[15] and on the other hand there are works

---

[13] Vendler, *Linguistics in Philosophy*, 97–121. See next section.

[14] Sasse gives three reasons for the English tradition: the view of previous scholars, their primary interest in syntax, and the lack of formal marking in the English language. See Sasse, "Recent Activity in the Theory of Aspect," 211–3.

[15] For example, the works of Bache and Bertinetto and Delfitto. See Bache, "Aspect and *Aktionsart*," 57–72 and Bertinetto and Delfitto, "Aspect vs. Actionality," 403–39.

claiming that the term aspect may be used for any features related to temporal profiles or perspectives.[16] I will come back to this in the next section.

1.3 HISTORY OF DEVELOPMENT AND GENERAL THEORIES

In addition to the diametrically opposed development of aspectology in the early twentieth century, another reason for the rise of this plethora of terms is that the current discussion of *Aktionsart* arguably takes root in two historically related fields of studies, both related to ancient Greek philosophical works. To give an account of this, we need to briefly go through the history of development of both fields and their relationship with each other. First I will trace the notion of *Aktionsart*—and to a lesser extent, the notion of aspectual oppositions—back to the ancient Greek philosophers (1.3.1). I will then briefly survey the history of development, mainly to recount how the discussion of aspect was dropped by later Greek grammarians and how it was later picked up in studies of Slavic language group and in cross-linguistic studies from the 17th century forward. I will

---

[16] See, for example, Dowty's treatment of aspectual forms and aspectual classes. Dowty, *Word Meaning and Montague Grammar*, 52. See the discussion in the next section and also the theoretical treatment of Comrie who prefers the broader usage of the term aspect to encompass both categories. See Comrie, *Aspect*, 6–7, n.4, and later, Comrie, "Some Thoughts," 43–49. See also Lyons, *Semantics*, II.705–10 and Mourelatos, "Events, Processes, and States," 415–34.

introduce grammatical aspect using the two approaches to Slavic aspect as a point of departure (1.3.2), emphasizing definitional issues and the nature of the Russian perfective/imperfective aspectual opposition. In section 1.3.3, I will give an account of the history of *Aktionsart* studies, particularly focusing on how Vendler's taxonomy was introduced into the discussion. The goal of these sections is to provide the necessary historical background for a discussion of some recent attempts to model aspect and *Aktionsart* in cross-linguistics studies (1.3.4) and subsequently of the adaptation of these models in Koine Greek aspect studies (1.4).

1.3.1 Ancient Greek Philosophers

Despite the relatively late development of modern aspect terminology, one can find traces of the modern conceptions of both aspect and *Aktionsart* in the works of the ancient Greeks.[17] The earliest Greek philosophers (Plato and Aristotle) laid the foundation to grammatical discussion by developing a technical metalanguage for the

---

[17] See Frede, *Essays in Ancient Philosophy*, 305; Binnick, *Time and the Verb*, 135; and Robins, *A Short History of Linguistics*, 33–34.

description and analysis of Greek.[18] Aristotle's distinction between two different

ontological descriptions of states of affairs was later adopted by western philosophers as

the foundation for a taxonomy of events.[19] The early Alexandrian grammarians and the

Stoics recognized, albeit partially, the aspectual dimension of the Greek tense system

which anticipates the modern notion of perfective and imperfective grammatical

aspectual opposition.[20]

Unfortunately, the Greek philosophers also hindered later grammarians from

developing a better understanding of the aspectual character of the Greek verbal system.

Aristotle was instrumental in the discussion of the nature of time and its expression in the

---

[18] One of the contributions of Plato and Aristotle's grammatical discussion is the development of a technical metalanguage for the description and analysis of Greek. Plato describes a fundamental division between a verbal (ῥῆμα) and a nominal (ὄνομα) component of the Greek sentence, the subject-predicate distinction in logic. Aristotle further develops Plato's segments of speech into a more comprehensive and exhaustive list which envisages different semantic roles to be played in order that a sentence may be generated. For primary sources, see Plato, *Sophist*, 261e-262a and Aristotle, *Poetics*, 1456b20ff. See also Robins, *A Short History of Linguistics*, 29–47; Pinborg, "Classical Antiquity: Greece," 71–72; de Jonge and Ophuijsen, "Greek Philosophers on Language," 490–93; Schmidhauser, "The Birth of Grammar in Greece," 501–2; and Blank, "The Organization of Grammar in Ancient Greece," 401.

[19] There are different kinds of taxonomy proposed afterwards, e.g. trichotomous classification (Taylor) or quadripartition (Vendler). See below and Taylor, "Tense and Continuity," 205–19 and Vendler, *Linguistics in Philosophy*, 97–121. See also Verkuyl, "Aspectual Classes and Aspectual Composition," 39–41.

[20] See Frede, "The Stoic Doctrine of the Tenses of the Verb," 146 and Friedrich, "On Aspect Theory and Homeric Aspect," S9.

Greek language. He contends that all Greek verbs must have temporal reference.[21] As a

result, tense was considered the distinctive and primary grammatical category of the

Greek verbal system by the grammarians for several generations.[22] After Plato and

Aristotle, the development of descriptive analysis of Greek and refinement of

grammatical concepts were closely associated with the works of successive generations

of Stoic philosophers, and from a pedagogical and literary concern, the Alexandrian

grammarians.[23]

The Greeks recognized six tenses before the second century B.C. For example,

the Τέχνη γραμματική (*Téchnē grammatikḗ*, or TG) attributed to Dionysius Thrax (*c.* 100

---

[21] Aristotle, *De Interpretione*, 3. See also Robins, *The Byzantine Grammarians*, 71.

[22] Discussion of the aspectual character of the Greek verbal system could rarely be found in grammatical works until well into the Middle Ages in the work of Maximus Planudes (AD 1260–1305). For the development, see Robins, *The Byzantine Grammarians*, 227–33. Lyons calls it a matter of "historical accident" that the notion of aspect does not figure as prominently in traditional grammar as does the notion of tense. Lyons, *Semantics*, II.704–5.

[23] The development of hellenistic Greek grammars can be found in quite a few recent works. The following is a brief summary mainly based on Frede, "The Stoic Doctrine of the Tenses of the Verb," 141–54; Friedrich, "On Aspect Theory and Homeric Aspect," S1-S44; Pinborg, "Classical Antiquity: Greece," 69–94; Porter, *Verbal Aspect*, 18–22; and Robins, *The Byzantine Grammarians*, 41–86, 227–33.

B.C.),[24] the first surviving grammar in the West,[25] has a rather brief section on the six

Greek tenses.[26] Following Aristotle, Dionysius organizes the tenses (χρόνοι) according to

time reference. This temporal distinction is first divided into past, present and future, and

then the past is further divided into four sub-categories (Imperfect, Perfect, Pluperfect

and Aorist).[27] However, he does not clarify how the four past tenses are distinguished. All

one can get from the description is that these four tenses are used in past-time references.

---

[24] There is doubts among modern historians regarding the authorship of the text as a whole. However, most scholars would at least consider the first section of the work as authentic. Scholars generally agree that the work has undergone centuries of redactions and was treated as a standard work for more than a millennium. See Law, *History of Linguistics in Europe*, 55–58 for reference to the relevant publications. For a discussion on the authenticity of the work based on stylometric criteria, refer to Wouters and Law's works in Law and Sluiter, *Dionysius Thrax,* for contrasting positions.

[25] The *Téchnē* starts off by spelling out the context of studies in language, setting the practical and literary orientation of the discipline as opposed to a pure philosophical one. But this is not to say that the work has no trace of elements from the philosophical tradition. Dionysius Thrax, like other scholars in his time, is influenced by Stoic thought. Some scholars argue that he did combine both philosophical and philological traditions and includes where possible both formal and semantic elements, but this is a matter of dispute. Thus it is reasonable to say that, in writing a new kind of work like TG, the primary concern of the work is not logic but language. See Schenkeweld, "The Linguistic Contents of Dionysius's Παραγγέλματα," 41–53; Law, *History of Linguistics in Europe*, 57–58; and Robins, *A Short History of Linguistics*, 36. See Harris and Taylor, *The Western Tradition from Socrates to Saussure*, I.50–54 for a possible reconstruction of the historical setting of TG.

[26] However, scholars generally agree that the six tenses distinction did not originate from Thrax. Some consider the six-tense description is of Stoic origin. For a detail description of the Stoic origin of grammar, see chapters 16 and 17 of Frede, *Essays in Ancient Philosophy*, 301–59. Some scholars would go as far as saying that the modern notion of grammar owes its origin to the Stoics. See Robins, *A Short History of Linguistics*, 32–34 and Pinborg, "Classical Antiquity: Greece," 77–79.

[27] This study follows the convention of Porter of capitalizing the formal terms, e.g. Future, Present Indicative, Subjunctive, and using lower case for functional categories, e.g. perfective, future and past time, attitude, etc. See Porter, *Verbal Aspect*, 12.

In addition to the brief description of the tenses, Dionysius also lists three links/

relationships (συγγένεια) between the tense names but once again makes no effort to

elaborate on the nature of these links. Based on later scholia, the links may have been

made on morphological ground.[28] One needs to turn elsewhere, such as the works of the

Stoics, to find further discussion of these linkages.[29] The Stoic philosophers recognize

that the six tenses cannot be fully determined by temporal distinction alone.[30] We find the

following terminology in Stoic works for the tenses:

> Present (ἐνεστώς παρατατικός)
>
> Imperfect (παρῳχημένος παρατατικός)
>
> Perfect (ἐνεστώς συντελικός)
>
> Pluperfect (τέλειος παρῳχημένος)/(παρῳχημένος συντελικός)
>
> Aorist (ἀόριστος)
>
> Future (μέλλων)

---

[28] The Imperfect and Present (the Present stem), the Perfect and Pluperfect (the Perfect stem) and the Aorist and Future (the sigmatic stem). However, as pointed out by many, Aorist and Future are not considered etymologically related. See the discussion in Porter, *Verbal Aspect*, 19–20. For an excerpt of later scholia, see Robins, *The Byzantine Grammarians*, 71–75.

[29] We found in the later scholiast of TG an understanding of the linkages in terms of temporal distance, i.e. Present represents recent past and Imperfect distant past. The Perfect/Pluperfect pair is the past time representation of the Present/Imperfect pair. See the text and the translation in Robins, *The Byzantine Grammarians*, 73–74.

[30] There are no authentic Stoic grammatical treatises extent today. To reconstruct a Stoic grammar, classicists mainly rely on scholia on later grammatical and philosophical works and scattered direct quotations. This includes works such as those by Diogenes Laertius (4th century AD) and Apollonios Dyskolos (2nd century AD). For a list of Stoic sources, see Pinborg, "Classical Antiquity: Greece," 77–79. The following discussion is based on the scholia by Stephanos on the TG. See Robins, *The Byzantine Grammarians*, 229–30.

The Stoics recognize the temporal reference of the tenses but also recognize the importance of the concept of completion in the verbal system. They consider that the Present and Imperfect are connected because both are durative (παρατατικός) or incomplete (ἀτελές) and likewise the Perfect and Pluperfect are considered as complete (συντελικός/τέλειος).[31] Although among the classicists there is a lack of consensus regarding the detailed paradigmatization of the verbal system,[32] the distinction between παρατατικός (Present and Imperfect) and συντελικός/τέλειος (Perfect and Pluperfect) is to be interpreted as a distinction of kind of action by the Stoics.[33]

One can find the influence of Aristotle once again in the discussion of the linkages. In *Metaphysics*, Aristotle classifies Greek actions into two groups: movements (κίνησις) and actualizations/activities (ἐνεργείᾳ).[34] Movement is incomplete (ἀτελεῖς) in the

---

[31] The grouping of the Aorist and the Future has puzzled later grammarians since it lacks a temporal connection and is thus dissimilar to the other. The Stoics consider them as being both indeterminate or indefinite (ἀόριστος) tenses. However, the Stoics did not elaborate on this indefiniteness. Later grammarians and classicists have come up with different hypotheses, either in terms of time or completion. See, for example, Pinborg, "Classical Antiquity: Greece," 92–94 and Robins, *The Byzantine Grammarians*, 228. However, this is a topic that is far from having a consensus. See, for example, the discussion of Stoic tradition and binarism in Collinge, "Greek Preferences," 17–18.

[32] See Barwick, *Probleme der stoischen Sprachlehre und Rhetorik*, 52–53; Pinborg, "Classical Antiquity: Greece," 92–94; Robins, *The Byzantine Grammarians*, 227–28; and Collinge, "Greek Preferences," 17–19.

[33] See also the discussion in Porter, *Verbal Aspect*, 20–22.

[34] See Aristotle, *Metaphysics,* 1048b:18–36.

sense that the process does not include an end. Actualization, on the other hand, includes

an end (complete). As we are going to see in the following discussion, this ontological

dichotomy of actions anticipates the modern distinction of verb classes and the discussion

of verb class and *Aktionsart*.[35] In his discussion of the two kinds of action, Aristotle

illustrates the difference between them using an example. Specifically, he distinguishes

movements from activities by means of a statement that involves both the Present and the

Perfect tense-forms of a single verb. Now, according to Aristotle, an action of the

movement type cannot be described by both the Present and the Perfect tense-forms in a

single utterance without contradiction;[36] however, the description of an activity in the

Present necessarily entails a description with the Perfect.[37] Of course, I do not mean to

suggest that Aristotle and the Stoics saw eye to eye as regards their descriptions of the

tenses, both of which I myself regard as philosophical or ontological descriptions. It is,

however, significant that both Aristotle and the Stoics discuss types of action with

---

[35] See Taylor, "Tense and Continuity," 205–19.

[36] Aristotle considers the act of curing, learning, walking, thinning (fat removal), and building as examples of the movement type. So οὐ μανθάνει καὶ μεμάθηκεν or οὐδ' ὑγιάζεται καὶ ὑγίασται (Aristotle, *Metaphysics,* 1048b:24–25).

[37] Take the act of seeing, understanding, thinking, living, being happy for example, Aristotle considers these actualizations (ἐνεργείᾳ). So φρονεῖ καὶ πεφρόνηκε, καὶ νοεῖ καὶ νενόηκεν (Aristotle, *Metaphysics,* 1048b:23–24).

reference to the Present and Perfect tenses as well as the concept of completion (τέλειος), since these commonalities suggest a shared familiarity with certain ontological categories and terms.[38]

Due to the pedagogical nature of the TG, the temporal understanding of the tenses became the main line tradition for several generations. Not only did the Stoic understanding of the tense distinctions disappear from later scholarly discussion, the temporal view also dogged later generations of Byzantine scholarship throughout.[39] However, the Ancient Greek philosophers and grammarians were also the first to recognize, albeit partly, the aspectual character of Greek.[40] It is also from the discussion of the semantic feature of completion and different kinds of action that planted the seed to the later development of verb classification.

---

[38] Frede suggests that the alleged binarism in the Stoic's understanding of the verbal system originated from Aristotle's distinction of two kinds of activities. See Frede, *Essays in Ancient Philosophy*, 305. Haug's recent work also seems to see the same connection, taking the two kinds of action (complete and incomplete) of Aristotle as somewhat distinguishable by the diagnostics that are based on the Greek Present and Perfect tense-forms. See Haug, "Aristotle's *kinesis/energeia*-test," 388–89, 412–15.

[39] It is not until the work of Maximus Planudes (AD 1260–1305) that the discussion of the completion and incompletion of action in Greek surfaced. However, Planudes' work still operated under the Aristotelian understanding of the Greek tense system but he was nonetheless the first one to break out of a pure temporal understanding of the meaning of Greek verbs. See Robins, *The Byzantine Grammarians*, 74, 227–33.

[40] For the shortcomings in TG and the works of the Stoics, a good summary is Porter, *Verbal Aspect*, 20–22. See also the conclusion in Friedrich, "On Aspect Theory and Homeric Aspect," S9.

1.3.2 Grammatical Aspect

The modern conception of aspect as a binary opposition of perfectivity and imperfectivity is largely a development generated from the Slavic language group.[41] The term "aspect" was imported into the Western European grammatical tradition in the early nineteenth century from the Russian term вид (*vid*, roughly translates to 'view').[42] At first it was used to encompass both modern conceptions of aspect and *Aktionsart*, but later it became specific to the Slavic notion of an aspectual opposition (perfective vs. imperfective) as something opposed to *Aktionsart*.[43] It is only since the 1930s that the

---

[41] See Binnick, *Time and the Verb*, 135–40. For a comparison of the way aspectual distinction is represented in English and a slavic language (Bulgarian), see Kabakchiev, *Aspect in English*, 1–29.

[42] Regarding the technical (linguistic) use of "aspect," Maslov names Reiff as the first to borrow the French term in 1828. Maslov, "An Outline of Contrastive Aspectology," 1. Szemerényi traces the development of the category in the Slavic language group back to the 17th century. See Szemerényi, "The Origin of Aspect," 1.

[43] This is pointed out by Binnick and Russian aspectologists such as Maslov and Forsyth. See Forsyth, *A Grammar of Aspect*, 356, n.3; Maslov, "Contrastive Aspectology," 1, n.1; and Binnick, *Time and the Verb*, 139–40. The same can be said in the English speaking scholarship, see Sapir's use of the term aspect and Jespersen's even broader definition, Sapir, *Language: An Introduction to the Study of Speech*, 114, n.22 and Jespersen, *The Philosophy of Grammar*, 2868–69.

term aspectology has been used to refer to the study of verbal aspect and other cross-linguistic phenomena related to aspect.[44]

This is not to say that all discussion of verbal aspect today is the result of research on the Slavic language group. In fact, one can also find the discussion of something similar to the Slavic aspect in the Germanic linguistic tradition early on under a different label (*Aktionsart*).[45] The emphasis on the Slavic language group is rather that the aspectual opposition of perfective and imperfective is most commonly found in Slavic languages and Romance languages as evidenced by typological research.[46] There are suggestions from comparative linguistics that the distribution of the Present/Imperfect and Aorist forms in ancient Greek corresponds to that of the Russian aspectual

---

[44] The work of Jakobson provided an important benchmark for subsequent investigations. See Jakobson, "Zur Struktur des Russischen Verbums," 3–15. For an outline of how aspectuality is expressed in Russian, see Forsyth, *A Grammar of Aspect*, 1–58; Binnick, *Time and the Verb*, 19–29; and Smith, *The Parameter of Aspect*, 297–341.

[45] This use of *Aktionsart* is prevalent in the German linguistic tradition before the discussion of the different kinds of temporal meaning (iteration, inception, etc.) was considered as a separate subject matter. Russian grammarians, such as Isačenko, start to distinguish the use of the two terms (aspect and *Aktionsart*) from the mid-20th century. Since then, aspect is used solely to represent the perfective and imperfective opposition, and *Aktionsart* to represent the different kinds of temporal meanings convey by derivational prefixes. See Borik, *Aspect and Reference Time*, 12.

[46] For a list of languages that have the same aspectual opposition, see Östen Dahl and V. Valupillai, "Perfective/Imperfective Aspect," *The World Atlas of Language Structures Online*, http:/ /wals.info/feature/65.. Accessed on Sept 2011.

oppositions of the imperfective and perfective forms.[47] It is thus worth spending time here

to explore the discussion of Slavic aspectology, particularly how aspect is represented in

the Russian language.

The role of aspect is pervasive in the Slavic language groups and most often

completely grammaticalized in the verbal system.[48] Since this contrast of aspect is

explicit in grammar, the perfective/imperfective aspectual opposition is often labeled

grammatical aspect.[49] Aspect is overtly marked in every verb through affixation or stem

alternations in Russian.[50] A Russian speaker must choose to use either the imperfective or

perfective form of a verb to describe an action. Although irregularities can be found in

the morphological representation of the aspectual opposition in Russian, the essential

---

[47] See, for example, Mouton, *Aspects grecs*.

[48] See de Swart, "Verbal Aspect," 756–58; Maslov, "Contrastive Aspectology," 1–44 and Miller, "Tense and Aspect in Russian," 1–28. However, some would argue that aspect in Russian is mainly a matter of derivational morphology and should be considered as a lexical (or lexicaliztation) category instead of grammatical. See Dahl, *Tense and Aspect Systems*, 27.

[49] Maslov labels it "overt aspect." See Maslov, "Contrastive Aspectology," 21. However, some typologists, such as Dahl, would argue that derivationally expressed category should not be considered grammatical but lexical since the prefixed and non-prefixed verb pair is considered as separate lexemes in a lexicon. See Dahl, *Tense and Aspect Systems*, 26–27.

[50] Most Russian verbs come in morphological pairs, whereas prefixation creates perfective verbs out of imperfective roots, derivation forms a prefixed perfective verb to an imperfective one. There are exceptions to the rule and a good deal of morphological and lexical idiosyncrasy. There are also rare instances where there is no morphological connection between the forms. For a brief overview of Russian verbal aspect, see Bailyn, *The Syntax of Russian*, 30–31; de Swart, "Verbal Aspect," 756–58; and Smith, *The Parameter of Aspect*, 227–41.

semantic notion is fairly consistent.[51] According to Gvozdanović, there are two major

approaches to Slavic aspect.[52]

1.3.2.1 The Totality Approach

The first approach is more recognizable in recent discussion of western

aspectology. The central idea of this approach hinges on the totality of an event.

Following the tradition of Razmusen and the Leningrad school of aspectology (such as

Yurly Maslov and Alexander Bondarko), Forsyth sees that the totality of an action is the

intrinsic semantics of the Russian verb forms. The perfective express "the action as a total

event summed up with reference to a single specific juncture,"[53] while on the other hand,

the imperfective expresses an action without reference to the totality of an action. From

this definition of the perfective, it is clear that the relationship between Russian aspect is

---

[51] See Bailyn, *The Syntax of Russian*, 31, n.38.

[52] See Gvozdanović, "Perfective and Imperfective Aspect," 784–91. There are also other attempts
to characterize Russian aspect. See, for example, Barentsen's sequence of events approach. For a brief
summary, see Stunová, "Meaning vs. Context," 295–319 and Gvozdanović, "Perfective and Imperfective
Aspect," 784–5.

[53] Forsyth, *A Grammar of Aspect*, 8

that of privative opposition,[54] i.e. defining the imperfective aspect negatively as a

semantically unmarked form in contrast to the meaning of the perfective.[55] Forsyth

demonstrates from textual examples that neither the feature of continuity nor repetition,

both traditionally considered as the characteristic of the Russian imperfective, is the

invariant meaning of the form.[56] He thus contends that it is necessary to define the

imperfective negatively, i.e. the lack of the quintessential perfective feature (totality),

thus the notation [-perfective].[57] Likewise, according to his investigations of Slavic

languages such as Polish and Bulgarian, Gotteri considers aspect as a kind of privative

opposition. He defines perfective aspect as "summing up the process concerned in terms

---

[54] This theory of the semantic opposition in the Russian grammatical system was first set forth in the work of Roman Jakobson in the early twentieth century. Simply put, a privative opposition consists of a pair of marked members. The unmarked member lacks the semantic feature that is present in the marked member. The unmarked member can be marked with the same feature as the marked member. See Jakobson, "Zur Struktur des Russischen Verbums" and Bondarko, *Functional Grammar*, 80–83.

[55] This view has since then recognized as a trademark of Russian aspectology and is further developed in subsequent works. For example Carlota Smith takes the Russian perfective to be the marked member in the opposition since it includes both the initial and final endpoints of a dynamic situation and is not compatible with a stative situation. The Russian imperfective, on the other hand, is the dominant viewpoint since it covers all situation types, thus semantically less specific and unmarked. See Smith, *The Parameter of Aspect*, 227. For the differentiation between viewpoint and situation in Smith's two-component approach to aspect, see chapter 2.2.1. See also Forsyth, *A Grammar of Aspect*, 16–18.

[56] Forsyth also points to the instances of the imperfective used to denote a completed action is too vast to regard as exception or anomaly. See Forsyth, *A Grammar of Aspect*, 5–6.

[57] He goes as far as saying that the use of the imperfective is to avoid the view of the action in its totality. See Forsyth, *A Grammar of Aspect*, 11.

of such things as completeness, beginning, end or result and seeing it as a single

homogeneous whole," while imperfective aspect does not have such meaning.[58] Another

contribution that Gotteri made to the discussion of Slavic aspect is the use of a system

network to represent the semantic choices of a language system, which makes clear the

relationship between the interrelated ranges of choices.[59]

Another way of looking at the perfective/imperfective opposition is in terms of

the idea of limitedness, i.e. the attainment of the boundary of an event. Alexander

Bondarko, also from the Leningrad school, sees the concept of limitedness as a

complementary perspective to totality in the discussion of Russian grammatical aspect.[60]

The limit of an action is "its time boundary, its delimitation in time."[61] To him, the

---

[58] Gotteri, "Aspects of Tense and Aspect in Polish," 76. See also Gotteri, "The Concept of Aspect as a Privative Opposition," 1–7 and Gotteri, "A Note on Bulgarian Verb Systems," 49–60.

[59] Gotteri is one of the early practitioners of Systemic Functional Linguistics (SFL) to model non-English languages. He is later followed by Porter in his work on Koine Greek. For Gotteri's works on SFL and Slavic languages, see Gotteri, "Systemic Linguistics and Tagmemics," 31–42; Gotteri, "A Note on Bulgarian Verb Systems," 49–60; Gotteri, "Aspects of Tense and Aspect in Polish," 72–78; Gotteri and Porter, "Ambiguity, Vagueness, and the Working Systemic Linguist," 105–18; Gotteri, "When is a System Network not a System Network?", 5–14; Gotteri, "Some Slavonic Questions for Systemic Linguistics," 119–28; and Gotteri, "Toward a Systemic Approach to Tense and Aspect in Polish," 499–507. For a discussion of the works of Porter, see section 1.4.2.

[60] Bondarko devoted an entire chapter in his functional grammar to the variety of the functional-semantic field of limitativity and how they are expressed in the grammatical system of Russian. See Bondarko, *Functional Grammar*, 64–94.

[61] Bondarko, *Functional Grammar*, 65.

primary semantic distinction between the two aspectual forms is one of the varieties of limit. The two varieties of limit that associate with the aspectual forms are real explicit limit and potential implicit limit.[62] He also regards the aspectual opposition of Russian verbs as privative. So although the basic or specific meaning of the imperfective form is opposite to the meaning of the perfective, "in many instances of functioning of imperfective forms, the meanings expressed in the particular context are not characterized by *Unlimitedness.*"[63] The categorical meaning of the imperfective aspect in Russian is then defined as the *absence* of the feature of limitedness instead.[64]

Similarly, Dahl also recognizes boundedness as a crucial factor for aspect choice in Russian.[65] Coming from a typological perspective, he also contends that perfectivity is a matter of attaining the limit of a situation. For these scholars, the connection and mutual complementarity between the idea of totality and limitedness/boundedness of an action is

---

[62] The perfective aspect is associated with a real explicit limit. It refers to a clear expression of the fullness (exhaustiveness) of a given action, i.e. a real attainment of a limit. The imperfective aspect, on the other hand, is associated with the varieties of limit which are contrasted to the explicit expression of real limit, i.e. what the perfective aspect represents. The kinds of limit that imperfective aspect associates with is either a potential limit (an orientation towards limit) or an implicit expression of a real limit. It is also associated with aterminative action. See Bondarko, *Functional Grammar*, 68–69.

[63] Bondarko, *Functional Grammar*, 76, emphasis original.

[64] See Bondarko, *Functional Grammar*, 77.

[65] See Dahl, *Tense and Aspect Systems*, 74–76.

often emphasized in the discussion. In fact, the connection between these two features is well documented in Russian aspectology dating back to the 19th century.[66] The reasoning usually goes like this: if an action is given a clear expression of its fullness (exhaustiveness) by a given verb, it also implies that it is characterized as an indivisible whole (totality). However, not all Russian aspectologists are on board with this idea. Forsyth for example, contends that the expression of an action in its totality implies "completeness in a certain sense, but not necessarily its actual *completion*."[67] He explains that in Russian, the use of a perfective verb simply means the speaker chooses to represent an action as a total event, without necessarily implying that the action is completed in reality. An imperfective verb, on the other hand, can express a completed action when used in certain contexts.[68] Some Russian linguists, such as Bondarko, would also argue that boundedness is closely connected to the semantic feature of telicity and would tie the discussion of grammatical aspect to the "lexico-grammatical classes of terminative/aterminative verbs."[69] However, the addition of 'classes of terminative verb'

---

[66] In the works of L.P. Razmusen (1891) and E. Černyj (1876), for example. See Forsyth, *A Grammar of Aspect*, 1–16 and Bondarko, *Functional Grammar*, 74.

[67] Forsyth, *A Grammar of Aspect*, 11, emphasis original.

[68] See Forsyth, *A Grammar of Aspect*, 11–12.

[69] Bondarko, *Functional Grammar*, 72.

to the discussion comes with a hefty cost. It moves the discussion to the realm of

Aktionsart (in the Vendlerian tradition, see 1.3.3.2) and as a result, conflating the two

categories (aspect and *Aktionsart*). In fact, it can be argued that the addition of the

concept of limitedness to the totality description renders it less helpful and even

problematic.[70]

Finally, representing the totality of an action is often compared to the idea of

viewing the action from outside.[71] This description is often used as the point of departure

in contemporary cross-linguistic aspectology. But before moving on to cross-linguistic

aspectology, I will briefly go through another approach to Slavic aspect, which can be

considered as a reaction to the totality approach, an effort to come to a more precise

definition of aspect.

1.3.2.2 The Internal Semantics Approach

The second approach to Slavic aspect defines aspect in terms of internal semantics

(temporal constituency). Gvozdanović considers this mainly a western tradition following

---

[70] We will come back to this problem in the discussion of the aspect/*Aktionsart* interaction. For a critique of using the same analytical tools to describe and thus conflate the two categories, see section 1.3.4 and Borik, *Aspect and Reference Time*, 73–94.

[71] See Comrie, *Aspect*, 4. See also the discussion of grammatical aspect as a viewpoint feature in Smith, *The Parameter of Aspect*, 61–97 and Bybee et al., *The Evolution of Grammar*, 83.

the work of Reichenbach on the logical studies of time.[72] One of the major proponents of this approach is Wolfgang Klein with his time relational analysis of aspect.[73] As the label suggests, this approach tries to define aspect with regard to temporal relations (time of utterance, time of situation, etc.). Klein's work can be characterized as a reaction to or criticism of the totality approach mentioned above (Maslov, Bondarko and Forsyth). Klein voices his dissatisfaction with the lack of agreement in the discussion of aspect in Russian. He attributes this to the metaphorical nature of the viewpoint or spatial characterization of aspect which he considers as inferior since it lacks the descriptive power of a precise definition.[74] However, his intention is not to completely disregard the totality/limitedness characterization, but rather to look for a way to define aspect in a more rigorous manner.[75] He suggests instead that we should define aspect in terms of three time spans: T-SIT (also event time or the time of situation), the time at which the

---

[72] See Gvozdanović, "Perfective and Imperfective Aspect," 785.

[73] See Klein, *Time in Language* and Klein, "Time-Relational Analysis," 669–95. For a cross-linguistic approach to temporal relation analysis, see Klein, "How Time is Encoded," 39–82. See also the work of Reinhart and Olga Borik, which defines grammatical aspect based on Reichenbach's notion of Reference Time (RT). See Borik, *Aspect and Reference Time*.

[74] See Klein, "Time-Relational Analysis," 673–75.

[75] He also take issue with other characterizations of aspect such as complete/incomplete and event sequence (A. Barensten). See Klein, "Time-Relational Analysis," 672–78.

situation obtains; TT (topic time), the time for which the assertion is made (or is

confined); and TU (the utterance time). He contends that whereas tense is a temporal

relation between TU and TT, aspect is a temporal relation between TT and T-SIT.[76] T-

SIT is further divided into sub-intervals to better represent a 2-state event, i.e. an event

that includes two distinguished states (DS): a source state (SS) and a target state (TS).[77]

According to his formulation, the Russian perfective aspect represents the time span

when TT overlaps with both SS and TS while the imperfective represents when TT

overlaps with a distinguished state but not the target state.[78]

In a recent article, Gvozdanović comments that Klein's formulation of the Russian

aspectual opposition has general validity among the language groups that distinguish

perfective and imperfective aspects. However, she also points out that there is evidence

from translation theory that the semantics of perfectivity might be language-specific or

---

[76] See Klein, "Time-Relational Analysis," 684–85.

[77] This description of event with multiple stages is intended to capture semantic features that are not represented by the aspectual forms but the surrounding co-text and the lexical meaning of the verb. See Klein, "Time-Relational Analysis," 684–86. We will come back to this point in chapter 2.

[78] According to Klein, the assertion extends over the source state and the target state in the perfective aspect; while in the imperfective aspect, the assertion only affects the distinguished state, that is, the only state in 1-state expressions, and the source state in 2-state expressions. See Klein, "Time-Relational Analysis," 688.

language-type-specific. More work is needed on this front.[79] It is rather obvious from the above discussion, however, that a delicate balance should be maintained to formulate a definition of aspect that is at once precise and useful for cross-linguistic description.

1.3.2.3 Cross-Linguistic Discussion and Variations

It is under the influence of these two Russian approaches that we find the current scene of western aspectology. The idea that perfectivity can be defined as viewing an action in its totality has been especially popularized by Bernard Comrie in contemporary aspect studies.[80] Following a line similar to the Russian totality approach mentioned above, Comrie defines grammatical aspect as "different ways of viewing the internal temporal constituency of a situation."[81] He distinguishes between perfective aspect, which expresses an action as a whole without explicit reference to the internal temporal constituency, and imperfective aspect, which in contrast pays attention to the internal constituency of a situation. He utilizes the metaphorical characterization of viewpoint to

---

[79] Gvozdanović points to the heterogeneity of Slavic languages and opts for a simplified formulation for Russian: Perfective = T-SIT $\subseteq$ TT (T-SIT is a subset of TT) and Imperfective = TT $\subset$ T-SIT (TT is a proper subset of T-SIT). See Gvozdanović, "Perfective and Imperfective Aspect," 785–95.

[80] See Comrie, *Aspect*, 16–21.

[81] Comrie, *Aspect*, 3. For similar definitions, see Bybee et al., *The Evolution of Grammar*, 125–6 and Smith, *The Parameter of Aspect*, 66, 73.

describe aspect, using language such as viewing an action from an outside vantage point

or from within.[82]

Recent cross-linguistic studies and typological studies demonstrate the language

specific nature of aspect. Some choose to go with a more inclusive approach and try to

identify other kinds of oppositions manifested in a language system and label them under

the umbrella term verbal/grammatical aspect.[83] Working from a typological perspective,

Östen Dahl is more willing to expand the notion of aspect and include oppositions that

otherwise would not be considered aspectual by the Slavic linguists. Dahl's investigation

of the cross-linguistic TMA (Tense-Mood-Aspect) category types involves a survey of

aspectual oppositions in 64 languages. After going through all of the possible aspectual

oppositions in all 64 languages, he considers the Russian aspectual system as

idiosyncratic in the way it deviates from what he considers the 'normal' aspectual

oppositions, i.e. the majority of the languages he surveyed.[84] Similarly, his conclusion

---

[82] See Comrie, *Aspect*, 21–26.

[83] These include the progressive/non-progressive opposition in English, the simple past and imperfect in French and multiple oppositions (perfect/non-perfect; perfective/imperfective) in Mandarin Chinese. For a brief overview, see de Swart, "Verbal Aspect," 756–65. For a discussion of Chinese aspect, see Foley, *Biblical Translation*.

[84] For an overview of the project and the list of languages, see Dahl, *Tense and Aspect Systems*, 36–68.

regarding the nature of the aspectual opposition also deviates from the consensus of Russian aspectology. Instead of viewing the perfective/imperfective opposition as privative, he contends that it is rather difficult, if not impossible, to determine typologically which member of the opposition is unmarked. Some languages, such as Ancient Greek, have mutually exclusive grammatical categories to represent different aspects. In such cases, a change in form implies a change in meaning altogether, not merely a change of category from unmarked to marked.[85] As a result, he chooses to treat the perfective/imperfective opposition as equipollent instead of privative.[86] Similar to Klein's comment, Dahl also criticizes Comrie's definition of aspect as "a cryptic formulation which can be understood in various ways."[87] However, as mentioned above, this definitional imprecision is partly for the sake of cross-linguistic usefulness.

Another issue in aspectology is the place of the perfect tense, for those languages that have a perfect form, in the verbal system. The four main approaches to the (English) perfect tense are well documented in the literature and thus it is not necessary to recount

---

[85] See Comrie, *Aspect*, 113–14.

[86] See Dahl, *Tense and Aspect Systems*, 72.

[87] Dahl, *Tense and Aspect Systems*, 76.

the details here.[88] Basically, the common goal of these different theories is to focus on some particular feature of the perfect tense that "accounts for it from a syntactic, a semantic, or a pragmatic perspective."[89] One of the major contentions among the semanticists is whether the perfect tense should be considered an aspect. There are some who argue that completion or result are not the core semantic feature of the perfect tense.[90] Others insist that the characteristic meaning of the tense is a state resulting from the completion of an earlier event.[91] To make matters more complicated, for languages that formally distinguish between perfect and non-perfect aspects, many of them also allow, to varying degrees, the perfect/non-perfect distinction to combine with other aspectual distinctions.[92] Some would go as far as suggesting a polysemous understanding of the perfect tense, claiming that different interpretations of the perfect are a result of the

---

[88] The four theories are the "indefinite past" (ID), the "extended now" (XN), the "embedded past" (EP), and the "current relevance" (CR). See Binnick, *Time and the Verb*, 264.

[89] Ritz, "Perfect Tense and Aspect," 886. For example, the extended now theory (XN) tends to account for the kind of perfect use that emphasizes the interval that extends from the past to the time of speech. The current relevance theory (CR) on the other hand emphasizes the continuing relevance of the situation that took place prior to the time of speech.

[90] See, for example, McCoard, *The English Perfect*, 11.

[91] See Huddleston, *English Grammar*, 77.

[92] Comrie points out that some languages, such as modern Greek and Georgian, are more restrictive in the combinations of aspectual distinctions while others, such as English, have a higher level of combinability. See Comrie, *Aspect*, 61–62.

eventuality/situation type of the verb phrase (VP).[93] In essence, the decision of whether the perfect tense should be categorized as an aspect or whether it denotes a state or not depends on one's understanding of what constitutes aspect. The cross-linguistics variations of perfect expression (e.g. periphrastic constructions, resultatives, Perfect form, etc.) make the already complicated task of finding the core semantic meaning of the perfect tense an even more daunting task.[94]

1.3.3 *Aktionsart* and the Classification of Verbs

Another reason for the nomenclatural confusions is that the current discussion of *Aktionsart* (verb classes) takes root in two historically related fields of study, both of which are related to the ancient Greek philosophical works mentioned above (1.3.1).[95]

---

[93] Ritz considers this as the aspectually ambiguous view. She groups the works of Sandstrøm, Declerck, Michaelis and Kiparsky under this view. See Ritz, "Perfect Tense and Aspect," 887. For a discussion of ambiguity and vagueness, see Gotteri and Porter, "Ambiguity, Vagueness, and the Working Systemic Linguist," 105–18.

[94] It is not our goal here to be comprehensive in the discussion of the perfect tense but rather to point out the key issues in the discussion to provide a background for the discussion of the Koine Greek studies (1.4.2). For more detail, see Binnick, *Time and the Verb*, 264–81.

[95] The following outline of the history of development and various definitions discuss in this section is based on the following articles and other works as cited. Due to the scope of this discussion, it is not my intention to go into detail on the history of the development of various disciplines within the field of the semantics of verb. See Sasse's work cited below for a critical review of the development of various subtopics within aspectology. See Binnick, "Temporality and Aspectuality," 557–67; Binnick, "Aspect and Aspectuality," 244–68; Filip, "Aspectual Class and *Aktionsart*," 1187–217; Sasse, "Recent Activity in the Theory of Aspect," 199–231; and Verkuyl, *A Theory of Aspectuality*, 33–67.

The nature of the Aristotelian distinction between movement (χίνησις) and activity

(ἐνέργεια) and its encoding in language is at the core of two fields: verb class and

Aktionsart.[96] To give an account of this, I will briefly survey the history of both fields.

1.3.3.1 Aktionsart and Comparative Philology

Developing within the field of comparative philology in the 19th century, the

study of *Aktionsart* has its roots in (Proto)Indo-European (Sanskrit, Greek, Slavic,

Romance etc.) and Semitic studies. Similar to Aristotle's classifications, the study of

Aktionsart mainly concerns how various kinds of action (terminative, resultative,

iterative, semelfactive, etc.) are classified and lexicalized by means of overt derivational

word-formation devices.[97] So, in a sense, the study of *Aktionsart* concerns both semantic

and linguistic questions.

The German term *Aktionsart* was introduced to the Slavic linguistic tradition by

the work of Argell as involving the inherent temporal characteristics of verbal meaning.[98]

Then, the relevant discussion began to differentiate the morphological forms (word-

---

[96] See Filip, "Aspectual Class and *Aktionsart*," 1187.

[97] See Filip, "Aspectual Class and *Aktionsart*," 1187.

[98] See Agrell, *Aspektänderung und Aktionsartbildung*.

formation/prefixes) that are responsible for encoding *Aktionsart* as opposed to

grammatical aspect.[99] This in turn encouraged scholars to pay attention to the morphology

which marks grammatical aspect and hence to search for the invariant meaning of the

perfective and imperfective morphology (see 1.3.2).[100] Comrie's notion that perfectivity

involves viewing an action externally in its totality led scholars to make a distinction

between aspect as a viewpoint category (i.e. viewpoint aspect) and *Aktionsart* as a

category mainly concerned with the temporal properties of situations (i.e. Carlota Smith's

situation aspect).[101]

However, since the early 1970s, the study of *Aktionsart* has been slowly

integrating with the study of verb classifications, which finds its roots in English

philosophical scholarship. According to Hana Filip, the study of *Aktionsart* made

entrance into American linguistics in the 1980s. Whereas American scholars of the

---

[99] For example the work of Forsyth, where he classifies various *Aktionsarten* (he uses the term procedurals) (e.g. inceptive, terminative, totalizing, resultative, comitative, semelfactive) in Russian (through the use of prefixes), identifying various aspectual pairs. See Forsyth, *A Grammar of Aspect*, 19–20.

[100] See Filip, "Aspectual Class and *Aktionsart*," 1189–90 and Binnick, "Temporality and Aspectuality," 561–62. Markedness theory is also introduced in the study of aspectual theory in this period.

[101] See Smith, *The Parameter of Aspect*, 17–38, 61–96. Effort has also been make to argue for a distinction between aspect as a subjective category and *Aktionsart* as an objective category. See Bache for an outline and the unattainability of the notion of pure subjectivity or pure objectivity. Bache, "Aspect and *Aktionsart*," 67–72. See also the discussion in 1.3.4.2.

previous two decades had spent much of their energy on the Aristotelean classification of

verbs (through the work of Vendler, see next section), they gradually became aware of

the distinction between aspect/*Aktionsart* made by the continental tradition.[102] *Aktionsart*

study has thus moved into the realm of lexical semantics and has separated itself from

discussions of grammatical aspect by "loosening its dependence on overt derivational

morphology" and by "merging with aspectual classes in the Aristotelian sense."[103] A new

combined field now bears many labels such as lexical aspect, situation aspect or alike.[104]

These developments have created a notorious problem in aspectual study, namely, the

question of how these two brands of aspect (grammatical aspect and *Aktionsart*) are

---

[102] See Filip, "Aspectual Class and *Aktionsart*," 1188.

[103] Filip, "Aspectual Class and *Aktionsart*," 1188. This can be seen in works of the European generative grammar frameworks such as Platzack and Verkuyl. See, for example, Platzack, *Semantic Interpretation* and Verkuyl, *Compositional Nature*. Another possible reason for this shift of focus might due to the makeup of the language(s) under investigation, shifting from a language where prepositional prefixes are prominent in the construction of the lexical stock (such as Russian or German) to those where prepositions are not usually attached to the verb (such as English).

[104] The label lexical aspect is rather misleading in the sense that aspectual character is not expressed by one lexical item (verb alone) but also at the levels of verb phrases and sentences (multiple lexical items). See below for more detail. See also Verkuyl, *A Theory of Aspectuality*, 33–67 and Rothstein, *Theoretical and Crosslinguistic Approaches*, 2–3.

related to and distinguished from one another.[105] Or to pull one step back, the question is

whether both of these categories should be given the label *aspect*. But before we can

move on to answer these questions, first we need to take a look at research into different

verb classifications.

1.3.3.2 Vendler's Taxonomy and Event Typology

The discussion of the classification of verbs found its genesis within philosophical

literature.[106] The discussion is generally ontological in nature without paying much

attention to linguistic considerations or implications. The formulation of verb classes is

generally attributed to the works of a trio of British philosophers, Gilbert Ryle, Anthony

Kenny and Zeno Vendler.[107] Ryle was the first to draw a contrast between different kinds

of action in the Aristotelian sense. In his discussion of the distinction between

---

[105] The distinction between grammatical aspect and lexical aspect is one of the major issues of a thematic panel in the CHRONOS conference, an annual international conference devoted to research on the semantics and pragmatics of markers of tense, aspect, modality and evidentiality (TAME). For detail on the latest CHRONOS conference (2011), CHRONOS 10's website: http://www1.aston.ac.uk/lss/news-events/ conferences-seminars/chronos-10/ (access Oct 2011)

[106] Details can be found in Dowty, *Word Meaning and Montague Grammar*, 52–55. This is not to suggest that this is the only effort of classifying English verbs according to their semantic characteristics. Slavic linguists such as Voroncova (1948) and Ivanova (1961) were among the first to try to identify verb classes according to their procedural characters. See Kabakchiev, *Aspect in English*, 19–22.

[107] Ryle, *The Concept of Mind*; Kenny, *Action, Emotion and Will*; and Vendler, *Linguistics in Philosophy*.

dispositions and episodic occurrences, he distinguishes two kinds of episodic words:

those which are end-oriented (Achievements) and those which lack any end or goal

(Activities/Performances).[108] In what could be considered today as a diagnostic test for

Achievement verbs,[109] Ryle suggests that end-oriented verbs, unlike task (Activity) verbs,

cannot be qualified by adverbs that evaluate the result of the task.[110] Ryle attributes this

logical behavior between verbs of achievement and task verbs to Aristotle.[111] Similarly,

Kenny introduces a tripartition of actions with two levels of distinctions. Following more

strictly the Aristotelian classification, he distinguishes between States and Events, and

then within Events between Activities and Performances.[112] Kenny also develops

---

[108] Ryle further distinguishes intentional Achievements from those which happen by chance by introducing the criterion of agentivity. He also points out that the difference between Achievements and Activities could be easily overlooked due to the fact that achievement verbs are often borrowed to signify the performance of the corresponding Activities. To illustrate this point, Ryle contends that one could describe a runner having a big lead over the others as "winning the race" despite the fact that it might not be the case at the end. However, this kind of descriptions only makes sense when it is uttered at a certain time, In the case of the example of the runner "winning" the race, it only makes sense if it is uttered during the race if it turns out that he/she loses at the end. Ryle's other examples are also questionable at best. See Ryle, *The Concept of Mind*, 149–51.

[109] All verb class labels are capitalized in this study.

[110] For example, one can say a doctor treated a patient assiduously or un-assiduously but it makes no sense to talk about a doctor curing a patient assiduously or un-assiduously. See Ryle, *The Concept of Mind*, 151.

[111] See Ryle, *The Concept of Mind*, 149.

[112] See Kenny, *Action, Emotion, and Will*, 120–30. The pagination of the edition used here (2nd edition) is different from the first edition (1963).

diagnostic tests for class assignment. For example, State and Event verbs are differentiated by the progressive test, i.e. Events can freely take the progressive form, but not States.[113] In addition, State verbs do not have a habitual interpretation in the present tense while Event verbs do.[114] Finally, the entailment test is used to distinguish between Activity verbs and Performance verbs.[115]

Notwithstanding the earlier work of Ryle and Kenny, Vendler's quadripartition classification of verbs has served as the foundation for subsequent works.[116] Unlike Kenny, however, Vendler was unaware of the continuity between his work and Aristotle's distinction of action. He later admits that his highly influential categories were not intended as a comprehensive linguistic analysis but rather as a response to Ryle's

---

[113] For example, Kenny compares the verb phrases "learning to swim" with "knowing how to swim," and contends that only the former makes sense in English. See Kenny, *Action, Emotion, and Will*, 120.

[114] According to Kenny, VPs such "Mark smokes cigarettes" (Activity) can be interpreted as habitual but not "William loves orange juice" (State).

[115] For example, "I am drawing a circle" (Performance verb) does not entail "I have drawn a circle" but rather "I *have not* drawn a circle." But for an activity verb such as walk, I am walking now implies I *have* walked. This idea is later developed into what is referred as imperfective paradox. See chapter 2 for more detail. See Kenny, *Action, Emotion, and Will*, 123.

[116] For example, the works of Dowty (1979), Mourelatos (1978) and Verkuyl (1972/1993) are related to (or a response to) Vendler's class. See Mourelatos, "Events, Processes, and States," 415–34; Verkuyl, *Compositional Nature*; and Verkuyl, *A Theory of Aspectuality*. For Biblical Greek, see 1.4.3 on the works of Fanning and Olsen.

assignment of 'seeing' to the Achievement class.[117] Moreover, he has stated at the outset

that his work did not intend to "give rules about how to use certain terms but to suggest a

way of describing *the use* of those terms."[118] His description of the time schemata is not

intended to be a hard and fast rule for class assignment. He shows in his work the

awareness of how class assignment is not only a matter of the meaning of the verb, but

the use of the verb in particular contexts, i.e. the interaction of the verb with other co-

textual and contextual factors.[119] Thus it will be necessary later on to discuss the optimal

unit of analysis for class assignment in modern aspectology.[120]

Vendler classifies English verbs into four classes: Activities, Accomplishments,

Achievements and States, according to the inherent meaning of the verbs. He provides

several unambiguous examples for each time schemata that, in their prototypical or

---

[117] In a private correspondence with Hank Verkuyl, Vendler expresses his surprise on how this research paper, written during the third year of his graduate studies, would take on a life of its own. It was not Vendler's intention to model his classes after Aristotle. See Verkuyl, *A Theory of Aspectuality*, 34, n.25. For his response to Ryle's analysis of 'seeing,' his conclusion is that there is a sense of 'seeing' (the ability of seeing) that should be classified as State instead of Achievement. See Vendler, *Linguistics in Philosophy*, 113–21.

[118] Vendler, *Linguistics in Philosophy*, 98. Emphasis mine.

[119] He states from the outset that classifying verbs into processes, states, dispositions, etc. cannot be made in terms of time alone. Other factors such as the presence or absence of an object, conditions, intended states of affair also enter the picture. See Vendler, *Linguistics in Philosophy*, 97.

[120] Refer to 2.2.2.3 for more detail.

dominant use, demonstrate the classes in pure form. The following are some of the

generic examples in his work:[121]

Table 1.1: Vendler's Quadripartition of Lexical Classes

LABEL	EXAMPLE	TIME FRAME
Activities	*A was running at time t* means that time instance t is on *a* time stretch throughout which A was running	Stretch
Accomplishments	*A was drawing a circle at t* means that t is on *the* time stretch in which A drew that circle	Stretch
Achievements	*A won a race between t1 and t2* means that *the* time instant at which A won that race is between t1 and t2	Instant
States	*A loved somebody from t1 to t2* means that at *any* instant between t1 and t2 A loved that person	Stretch

Since the 1980s there have been a number of works that have proposed different

characterizations for either Vendler's four classes or some other modified versions of his

time schemata. These proposals have either re-labeled features or introduced new ones.[122]

---

[121] See Vendler, *Linguistics in Philosophy*, 106. The original paper was published at 1957 (before Kenny's work), and reprinted in a volume of collected works in 1967. Emphases (italic) in the examples are from original.

[122] See, for example, the works of Mourelatos, Hoeksema, Carlson, Dowty, and Van Valin. For a summary, see Verkuyl, *A Theory of Aspectuality*, 50–67; Van Valin, *Syntax-Semantics Interface*, 32–42; and Tatevosov, "The Parameter of Actionality," 319–24. I will come back to this in 2.2.1.2.

However, the basic principle of class assignment still comes down to whether the verb (or in later developments, the predicate) entails a clear-cut goal/termination (boundedness/ telicity) and if not, whether there is a change of state.[123] The emphasis on the semantic feature of telicity in the discussion becomes gradually more prominent and is regarded as commonplace in later works. Under this development, recent discussion of the aspect/ *Aktionsart* distinction is formulated as an investigation of how the feature of telicity factors into the discussion of grammatical aspect, particularly its relationship with the perfective aspect. This development has fueled a new round of debate in the aspect/ *Aktionsart* distinction. Scholars have come up with polarized ideas as to whether the perfective aspect is dependent on telicity, or whether the two are independent systems.[124] Three related questions regarding verb classes should be clarified before we can move on to look closer into the relationship between perfectivity and telicity:[125] (1) How do we determine what constitutes a relevant semantic component, how are the components in question related to each other, and how do they determine class assignment? (2) How do cross-linguistic variations factor into the discussion of cross-linguistic aspect studies? Is

---

[123] See the list of figures in Tatevosov, "The Parameter of Actionality," 320–21.

[124] See section 3.3.3 for a detail discussion.

[125] For a similar approach, see Filip, "Aspectual Class and *Aktionsart*," 1192.

Vendler's taxonomy easily transferable to the study of other languages such as Koine

Greek? (3) How are these features lexicalized in verbs and how do they interact with

other features on different ranks of analysis (e.g. morphological, syntactic, semantic

structure of a clause/sentence)? I will tackle the first two questions in the next chapter

(2.2–2.3). Here I will focus on the third question regarding the compositional process of

the overall aspectual interpretation of a sentence.

1.3.4 Aspect, *Aktionsart*, and Compositionality

Although the discussion of verb classes in the mid-20th century began as a matter

of philosophy, it took on a life of its own in the 1980s and has been an important area of

linguistics research ever since. The flowering of verb-class research was mainly

motivated by two goals. Semanticists were trying to formulate explanatory hypotheses for

the verb classes on the one hand, while at the same time trying to explicate the nature of

the compositional process needed in the derivation of these classes at the wider level of

linguistic analysis.[126] Now, then, we will turn our attention to the formulation of the

interaction between aspect and *Aktionsart*.

---

[126] Citing the works of Krifka and Verkuyl as examples. See Filip, "Aspectual Class and
Aktionsart," 1187.

1.3.4.1 Unidimensional Approach

Given the intertwining of aspect and *Aktionsart* described in the previous sections,

it is not difficult to see why the two categories are sometimes confused or conflated. The

oft-cited remarks of Comrie and Lyons provide a good starting point of the discussion.

Speaking of the distinction between aspect and *Aktionsart*, Comrie differentiates two

ways to distinguish the categories: (1) grammatical (aspect) vs. lexical (*Aktionsart*), and

(2) inflectional morphology (aspect) vs. derivational morphology (*Aktionsart*).[127] I will

only briefly touch on the second distinction here before moving on to the first. The

distinction between grammatical and derivational morphology is considered by Comrie as

a Slavic approach to the distinction between grammatical aspect and derivational

Aktionsart. Recall from 1.3.2, *Aktionsart* is partly conveyed in Russian (or similar Slavic

languages) by derivational morphology.[128] It is commonplace in the writings of the

Leningrad School of aspectology to see the term *aspectuality* used as a cover term for

both grammatical aspect and *Aktionsart*. This is what Sasse coined as a unidimensional

---

[127] See Comrie, *Aspect*, 6–7, n.4.

[128] See, for example, Maslov, "Contrastive Aspectology," 21 and Bondarko, *Functional Grammar*, 64.

approach.[129] However, Comrie's stricter definition of Slavic *Aktionsart* is no longer

prevalent among Slavic linguists. For example, Maslov distinguishes between two kinds

of aspectual expressions in the Russian lexico-grammatical system: overt (grammatical)

and covert/latent (lexical and co-textual) expressions. However, when he talks about the

covert expression of aspect in terms of the opposition of "aspectual classes of verbs" and

"finer sub-divisions within these classes," he explicitly states that these classes and the

sub-classes are "not necessarily marked by any kind of morphemic indicators" even

though such marking do occurs normally in a fair number of cases.[130] This understanding

of the distinction is very close to Comrie's first distinction: aspect being a grammatical

category and *Aktionsart* a lexical category. However, some semanticists from the

typological perspective do not want to sustain this distinction. Comrie chooses rather to

use aspect as a cover term to speak of a broader understanding of the aspectual

distinctions and subsumes *Aktionsart* (inherent meanings of verb) and grammatical aspect

under one category.[131] Similarly, John Lyons follows the Aristotelian distinction of

---

[129] See Sasse, "Recent Activity in the Theory of Aspect," 202–03.

[130] See Maslov, "Contrastive Aspectology," 19–21.

[131] He drops the term *Aktionsart* altogether to avoid possible confusions of the two different understanding of *Aktionsart* (Slavic derivational and lexical). See Comrie, *Aspect*, 6–7, 41–51. He later reiterates his stance on the inseparability of aspect and *Aktionsart* in Comrie, "Some Thoughts," 43–49.

situations and opts to focus on the aspectual characters of verbs that denotes "one kind of situation rather than another."[132]

There are other typologists who reject the grammatical and lexical distinction of aspect on other grounds. For example, arguing from a cross-linguistic point of view, Dahl contends that restricting the category of aspect to morphological (inflectionally marked) categories and excluding other syntactic means of marking would mean "an unwanted delimitation of the field of inquiry, given the frequent cases of functional equivalence of syntactically and morphologically expressed categories across languages and even in one language."[133] He goes on to talk about how the aspect-*Aktionsart* distinction is sound in theory but difficult to apply in practice, contending that the interaction of the so-called inherent aspectual meaning of the verb is rather flexible when combining with other relevant co-textual factors.[134]

In addition, the nature of the aspectual opposition (equipollent or privative) also affects the understanding of the relationship between aspect and *Aktionsart*. Recall from

---

[132] Lyons, *Semantics*, II.706.

[133] Dahl, *Tense and Aspect Systems*, 22.

[134] Dahl also points out that the notion of distinguishing lexical and grammatical aspect is slippery and considers it as a failure, for those who insist on this distinction, to recognize the potential complication when derivational morphology (e.g. Russian verbs) enters the discussion. See Dahl, *Tense and Aspect Systems*, 26–27.

section 1.3.2 that the Russian tradition of aspectology characterizes the aspectual

opposition as privative. This understanding of the aspectual opposition not only factors

into the quest of determining the invariant meaning of the aspectual forms, but also

affects the understanding of the interaction between the aspectual forms and the

"elements of the environment," i.e. all possible lexical, co-textual and contextual

elements.[135] In a privative analysis of Russian aspect, the marked character of the

perfective aspect is manifested in the strong impact of the meaning of limitedness on the

interpretation of individual instances. For example, Bondarko speaks of how different

nuances emerge when a perfective verb is used in specific context (environment) and

calls these readings the particular meanings of the perfective aspect. Thus, in a sense, the

perfective aspect is the element in the system which unites all these meanings expressed

by different combinations of elements of the environment. On the other hand, the

aspectual unmarkedness of the imperfective aspect creates a rather complicated

interpretive issue. Not only can the imperfective form appear in situations typical to the

perfective (marked) form, it also leads to "a situation in which the particular meanings

---

[135] "Element of environment" is found in the work of Bondarko to designate all other lexical and contextual features that factor into the overall interpretation of the portrayal of an action. Simply put, it consists of (a) the lexical meaning of verbs, i.e. the presence or absence of aspectually relevant elements/ conceptual components, telicity or indication of other modes of action and (b) the context and situation, i.e. relevant information represented by other co-textual constituents. See Bondarko, *Functional Grammar*, 80.

determined by the influence of environmental elements turn out to be more

heterogeneous and the unifying factor in them is not so distinctly expressed as in the

functioning of perfective form."[136]

1.3.4.2 Bidimensional Approach

In contrast to the unidimensional approach, Sasse describes the approaches that

distinguish grammatical aspect from *Aktionsart* as bidimensional. He characterizes the

two approaches as follows:

> There are unidimensional approaches proceeding from the assumption that
> there is only one set of aspect-relevant semantic primitives, a single
> conceptual dimension in terms of which aspectual phenomena on all
> representational levels can be analyzed and described. In their strongest
> form, they employ the same set of categories with the same labels on all
> levels or, in a different version, assume only one level (the sentence)
> where aspectual distinctions manifest themselves. By contrast,
> bidimensional approaches insist on the distinction of two such dimensions,
> but differ widely in their assumptions about the conceptual independence
> of these two dimensions.[137]

Two related points should be highlighted from Sasse's brief characterization of the

bidimensional approach. The first point sounds rather tautological at first but it is an

---

[136] Bondarko, *Functional Grammar*, 84. For a detail discussions of primary and particular (secondary) meanings of the Russian aspectual forms, see Bondarko, *Functional Grammar*, 80–87.

[137] Sasse, "Recent Activity in the Theory of Aspect," 202.

important point nonetheless. The effectiveness of a bidimensional approach to aspect and *Aktionsart* depends on a clearly articulated distinction between the two categories. As I have shown in the above discussion, one of the major issues in modern aspectology is the confusion caused by the numerous labels and by different understandings of the same label in studies of different language groups. Definitional imprecision not only leads to a nomenclatural nightmare but also affects how the aspect/*Aktionsart* interface is articulated.[138] In fact, one of the goals of the current section (1.3) is to delineate a better articulation of the distinction by way of a thorough examination of the origin and the historical development of the two disciplines.

This echoes the second part of Sasse's statement that even within the camp of the bidimensional approach, the proponents have difficulty agreeing on the conceptual (in)dependency of the two categories. Once again, this difficulty is partly due to terminological confusion but also partly due to cross-linguistic variations of aspect and

---

[138] See Bertinetto and Delfitto for a similar argument, Bertinetto and Delfitto, "Aspect vs. Actionality," 189.

Aktionsart.[139] For now I will focus on articulating the aspect/*Aktionsart* distinction and

come back to Sasse's second point in the next section.

A great deal has been said regarding the aspect/*Aktionsart* distinction. One oft-

mentioned characterization is that aspect is a subjective category, in the sense that the

speaker's viewpoint of the action is independent of the objective temporal constituency or

procedural characteristics of the situation (*Aktionsart*).[140] Bache points out that neither of

the two categories can be described as entirely subjective or objective.[141] However, this

does not necessarily mean that the subjective/objective distinction should be disregaded

entirely. The point that Bache tries to bring across in his work is that sometimes the

speaker/writer does not have total freedom in aspectual choice. A better way of

describing this is that a speaker/writer is more probable to represent certain kinds of

---

[139] See, for example, Carlota Smith's work on multiple languages. See also Tatevosov's comprehensive study on cross-linguistic variation of *Aktionsart* (which he prefers to use the term 'actionality'). See de Swart, "Verbal Aspect," 756–65; Smith, *The Parameter of Aspect*; and Tatevosov, "The Parameter of Actionality".

[140] See, for example, Forsyth, *A Grammar of Aspect*, 29–31, 356. Bache traces this all the way back to Agrell's work on *Aktionsart* and Jakobson's review of Wackernagel's work in Greek. See Bache, "Aspect and *Aktionsart*," 64.

[141] See Bache, "Aspect and *Aktionsart*," 65–67.

situation in one way and not the other.[142] Some scholars have adopted this as the basic

premise of the distinction and have chosen to highlight two keywords in the above

definition: viewpoint and situation. Carlota Smith's two-component theory is a

representative example.[143] Smith's approach is clear and syntax-centered. She builds on

the basic premise that sentences "present information about aspectual situation type and

viewpoint,"[144] i.e. the basic unit of analysis/interpretation is the sentence. She

distinguishes between situation types (*Aktionsart* or actionality) and viewpoint types

(grammatical aspect).[145] Her situation types are in fact a modified version of the Vendler's

classes and are expressed by what she calls the verb constellation, i.e. a composite of the

main verb, the aspectual form and its argument (adverbials, complements, etc.).[146] Smith's

---

[142] See Bache, "Aspect and *Aktionsart*," 69–70. Bache's argument is actually stronger than what I describe here. He argues that there are certain situations where a speaker *must* choose one or the other way of representation. For instance, he argues that strictly punctual situations must be referred to by perfective construction. In terms of probability, it is to argue that a speaker/writer has no likelihood to use an imperfective construction to represent a strictly punctual situations. However, if that is the case, the use of the imperfective form for certain verbs should be so rare that eventually it will disappear from the grammatical system. In addition, no matter how punctual a situation is objectively, there are still times that a speaker would describe the internal constituency of the action. For example, a sentence like "while he was coughing (one cough), he got shot by the police" would still make sense.

[143] See Smith, *The Parameter of Aspect*. For other bidimensional approaches, see, for example, Bertinetto and Delfitto, "Aspect vs. Actionality," 403–39.

[144] Smith, *The Parameter of Aspect*, 2.

[145] See Smith, *The Parameter of Aspect*, 2–3.

[146] See Smith, *The Parameter of Aspect*, 17–8, 54–9. See 2.2.1 for more detail.

viewpoint types, on the other hand, are mostly conveyed by grammatical morphemes

with adverbial elements supplying relevant aspectual information. For those languages

that do not have a specific aspectual/viewpoint morpheme, i.e. aspectually vague, for a

certain tense in the language system (such as French Past or Future), a neutral aspect is

used as the default value or point of departure for the interpretation of viewpoint types.[147]

Smith's two-component theory also assumes that the viewpoints and situation types are

independent.[148] In her framework, the aspectual components (viewpoint and situation

types) are independent because the analysis of these types take place on different

grammatical ranks. Viewpoints are conveyed by grammatical morphemes, whereas

situation types are conveyed by entire verb constellations (verb + arguments).[149] This

characterization of the distinction is in fact quite similar to Maslov's distinction between

overt grammar (aspectual forms) and covert grammar (kinds of action) in his

characterization of Russian aspectual system.[150] Moreover, it explains Smith's choice of

---

[147] But this assumes that imperfective/perfective aspect can be derived or inferred exclusively from other constituents of a sentence or by interpretation. See Smith, *The Parameter of Aspect*, 62–66. For a more rigorous definition of aspectual vagueness, see Porter, *Verbal Aspect*, 442–47.

[148] See Smith, *The Parameter of Aspect*, 81–96. I will come back to this point next chapter.

[149] See Smith, *The Parameter of Aspect*, 83.

[150] See Maslov, "Contrastive Aspectology," 21. Smith also uses the overt/covert language, see Smith, *The Parameter of Aspect*, 5.

labels for the categories. Since the optimal unit of analysis for *Aktionsart* involves quite a

few clausal constituents in addition to the main verb in her analysis, it makes better sense

to label it something other than the oft-used 'lexical aspect,' which would give the

impression that *Aktionsart* or Vendlerian class assignment is determined by a single

lexical item (i.e. the main verb).[151] However, as is pointed out by Borik, despite Smith's

insistence on the independence of the two categories in the execution of her framework,

her use of the same analytical tools or entities (e.g. eventuality description, lexical

properties such as telicity) to describe viewpoint and situation aspect makes it impossible

to maintain the argument of independence.[152]

1.3.4.3 Compositionality

Carlota Smith's syntax-centered, bidimensional approach to aspect can also be

characterized as compositional in nature. The basic premise of a compositional approach

to semantics is that "the meaning of a complex expression is computable on the basis of

its constituent parts."[153] Applied to aspect, this approach stresses the development of

---

[151] See, for example, Olsen, *A Semantic and Pragmatic Model.*

[152] See Borik, *Aspect and Reference Time,* 76–79.

[153] Verkuyl, "Surveying the Ingredients," 202.

"formal theories in which NPs [Noun Phrases] as well as verbs are taken into account, and actionality [*Aktionsart*] is determined compositionally for the clause (or VP) as a whole."[154] Hank Verkuyl is one of the earliest aspectologists to propagate a compositional understanding of aspect from the early 1970s.[155] After four decades, compositionality has now become a standard keyword in western aspectology.[156] It is typical to find in the literature today a compositional description for aspectual languages (languages with overt grammatical markers to express the perfective/imperfective opposition). For example, in his work on the Slavic language group, Bondarko contends that grammatical aspect is the principal and regular means of expressing aspectual relations, "integrating and consolidating other elements in the sphere of aspectuality—modes of action, classes of

---

[154] See Tatevosov, "The Parameter of Actionality," 322.

[155] There were earlier studies on argument structure, such as the work of Robert Allen. Verkuyl himself traces the development back to the works of Poutsma and Jacobsohn. See Verkuyl, "Surveying the Ingredients," 202. However, Verkuyl's works was the first to systematize the relationship between argument structures and event predicates. His first work, which is his doctoral dissertation, was published in 1972 and the basic premise of his work has not undergone any drastic change since then. See Allen, *The Verb System of Present-Day American English* and Verkuyl, *Compositional Nature*; Verkuyl, "Aspectual Classes and Aspectual Composition"; Verkuyl, *A Theory of Aspectuality*; Verkuyl, *Aspectual Issues*; Verkuyl, "How (in-)sensitive"; Verkuyl, "Surveying the Ingredients".

[156] See section 3.3.2 for a list of works on the relationship between argument structure and event predicates.

terminative and aterminative verbs, syntactical constructions that have aspectual

functions, lexical features of aspectuality, and all aspectual elements of the context."[157]

However, although most scholars today recognize the effect that various internal

and external arguments have on temporal interpretation at the higher ranks of grammar

(clause or sentence), not all can agree on the step/order and the list of 'ingredients' for the

compositional process. For example, Verkuyl's compositional approach to aspect is

radically unidimensional and operates on a strict semantic dichotomy of boundedness

(bounded vs. unbounded). He collapses the categories of aspect and *Aktionsart* into two

aspects (terminative vs durative) at the sentential level and rejects all lexical-semantic

considerations, which is the point of departure for the discussion of *Aktionsart* of the

Vendlerian tradition.[158] The main thrust of his work is to look at how various co-textual

elements (temporal and non-temporal) in a clause (VP) affect the basic temporal meaning

of a verb. Therefore, instead of the inherent meaning of the verb, the point of departure of

the discussion of this sentential aspect is the grammatical opposition of perfective/

imperfective:

---

[157] Bondarko, *Functional Grammar*, 64.

[158] See Verkuyl, *A Theory of Aspectuality*, 33–70.

Taking up the idea that the nature of the objects can influence the basic aspect of a verb, I argued that the opposition between imperfective and perfective aspect is not a matter settled at the verbal level. I proposed that aspect be 'taken away' from the verb and be assigned to higher levels of sentential structure[.][159]

On the other hand, there are other bidimensional frameworks which, as in Smith's work, maintain the independence of aspect and *Aktionsart* while also focusing on the contributions of other sentential constituents to the composition of *Aktionsart*.[160] As a result, works that follow this approach often focus on semantic features (telicity/terminative, durativity/process and dynamic/change) that allegedly distinguish different classes of verb or verb phrase. The end product of some interpretive process is sometimes referred to as a sentential *Aktionsart* or sentential situation/eventuality type.[161]

In addition to the differences or confusions in deciding what components are applicable to the compositional process and where it should take place, the theoretical makeup of the compositional hierarchy, i.e. the order of the compositional steps or the order of interpretation, is another topic on which scholars are far from reaching a

---

[159] Verkuyl, "Aspectual Classes and Aspectual Composition," 40.

[160] See, for example, Mourelatos' work on the effect of temporal adverbs and nouns (mass and count) on the interpretation of lexical aspect. See Mourelatos, "Events, Processes, and States," 415–34. See section 1.4.3.2 for Mari Olsen's work on English and Greek.

[161] See Sasse, "Recent Activity in the Theory of Aspect," 217.

consensus.[162] For example, an aspectual coercion approach might start the process of composition at the level of eventuality analysis. Under this approach, aspectual operators (grammatical markers) are treated as modifiers of eventuality description, i.e. the machinery responsible for shifts in eventuality description. For example, in de Swart's syntactic structure of the sentence, she uses the following formulaic expression to describe aspectual coercion:

[Tense [Aspect* [eventuality description]]][163]

Under this formula, grammatical aspect is interpreted as aspectual operators that map or shift an eventuality description from one domain to another. This approach gives interpretive primacy to *Aktionsart* and treats grammatical aspect markers as a secondary or additional factor. This differs greatly from a unidimensional approach such as

---

[162] What I refer to here are questions such as whether the object or the adverbial should be considered first in a verb + object + adverbial construction. Also, for languages with morphological aspect markers, at which point does the marker operate? See Sasse, "Recent Activity in the Theory of Aspect," 219.

[163] Eventuality description signifies different types of situation. She adapts Mouretalos's tripartite classification of States, Processes and Events as the ontological distinction. de Swart borrows the notion of the Kleene star/Kleene operator (*) from mathematical logic to express multiple operations with a finite set of operators. In this case, the aspectual operators include grammatical aspect and duration adverbials. She points out that the duration adverbials are sensitive to the so-called "aspectual character" of the eventuality description, implying that the so-called aspectual coercion is actually a shift in eventuality description from one type to another. It is in essence an eventuality mapping mechanism. See de Swart, "Aspect Shift and Coercion," 348–49.

Verkuyl's, where aspectual forms and other sentential semantic features are handled

together at a single level of linguistic analysis.[164] In addition, since grammatical aspect is

treated as an operator, the only analytical description used in this framework involves

eventuality. As mentioned above, this approach to aspect presupposes that grammatical

aspectual descriptions are inseparable from *Aktionsart* (eventuality) descriptions, and as a

result, it muddles the two categories.[165] To further complicate the story, scholars have

also noticed cross-linguistic variation in the domain of *Aktionsart* and have stressed that

characterizations of eventuality must be carried out separately for each individual

language.[166]

At the risk of overgeneralization, Bondarko's observation of cross-linguistic

variation of aspect seems to be a good summary. Bondarko suggests that in languages

where limitedness/totality of the action (perfectivity/imperfectivity) is not expressed

grammatically, "the significance of the opposition of terminativity/aterminativity [lexical

---

[164] See, for example, Verkuyl, "Aspectual Classes and Aspectual Composition".

[165] Especially in the case between perfectivity and telicity. See next chapter for more detail. See also Borik, *Aspect and Reference Time*, 85–88 for a critique of de Swart's framework, particularly on its failure to distinguish between basic and derived (VP+delimiting adverbials) event types.

[166] See, for example, de Swart's treatments of Germanic and Slavic languages and Smith's work on the Navajo language. See de Swart, "Verbal Aspect," 756–63 and Smith, *The Parameter of Aspect*, 297–327.

characteristics] in the overall system of relations of action to limit, increase[s]."[167] In fact,

this insight provides a possible explanation to the dialectical development of scholarship

between continental and English linguists in the early 20th century mentioned above

(1.2). It is not difficult to see that linguists working primarily with English, where an

explicit marker of the perfective/imperfective opposition is lacking, would emphasize the

analysis of the inherent meaning of the verb and the overall interpretation of the clausal

eventuality/*Aktionsart* description, whereas those working with languages that have

explicit aspect markers (such as Russian, or Ancient Greek) would focus on the

grammatical opposition and the relationship between the two categories. Equipped with

this arsenal of terminologies and approaches, we can now move on to a discussion of how

the aspect/*Aktionsart* distinction is handled in NT Greek studies.

---

[167] He cites research of various languages to support his claim. For example, in the Uzbek language, which does not have a universal category of aspect in the grammatical system, and in which the formal markers of aspect are optional, a greater role is played by the characteristics inherent in the lexical meaning of verbs. See Bondarko, *Functional Grammar*, 73.

1.4 ASPECT AND AKTIONSART IN NEW TESTAMENT GREEK

Turning to aspectual studies in NT Greek, several major proposals and numerous

articles have been published in the past three decades.[168] Works that chronicle the debate

of Koine Greek verbal aspect are ample. The major arguments have been summarized

nicely by others and it is not necessary for me to rehash them in detail here. It is

unnecessary, for example, for me to recount a detailed history of the Porter/Fanning

debate or to rehearse the arguments from all parties.[169] Instead, what is needed is a

comparative summary of the development of various models, singling out the things that

are relevant to the discussion of the aspect/*Aktionsart* distinction. I will start with the

---

[168] For example, in the order of publication date, McKay, "On the Perfect and Other Aspects in New Testament Greek," 289–329; McKay, "Aspect in Imperative Constructions in New Testament Greek," 201–26; Gotteri and Porter, "Ambiguity, Vagueness, and the Working Systemic Linguist," 105–18; Porter, "Vague Verbs," 155–73; Porter, *Verbal Aspect*; Fanning, *Verbal Aspect*; McKay, "Time and Aspect in New Testament Greek," 209–28; McKay, *New Syntax*; Olsen, *A Semantic and Pragmatic Model*; Evans, *Verbal Syntax*; Campbell, *Verbal Aspect, the Indicative Mood*. For the application of a particular framework (Porter's), see Decker, *Temporal Deixis*; Foley, *Biblical Translation*; Mathewson, *Verbal Aspect in the Book of Revelation*. There are also quite a few unpublished theses on the topic, for example, Huovila, "Aspectual Nesting" and Shain, "The Preverb," 1–129.

[169] See, for example, Porter and Pitts, "Recent Research," 215–22; Naselli, "Brief Introduction," 15–28; and Pang, "Aspect, *Aktionsart*, and Abduction," 129–40. For the Porter/Fanning debate, see Carson, "Porter/Fanning Debate". For non-English works, see, for example, Mateos, *El Aspecto Verbal*; Fernandez, *L'aspect verbal en Grec ancien*; and Duhoux, *Le verbe Grec ancien*.

history of the discussion of the Greek verbal system in traditional grammars and

specialized studies and then focus on the handling of the aspect/*Aktionsart* distinction in

these works.

1.4.1 Traditional Greek Grammars

Traditional NT Greek grammarians usually begin their discussions of Greek tense

by pointing to two functions of the tense stems: one function related to time and another

related to *Aktionsart*.[170] Much has already been said regarding the treatments of

Aktionsart that are found in the traditional Greek grammars,[171] and since the main focus

of the present work is the interaction between aspect and the Vendlerian notion of

Aktionsart in Greek aspect studies, only a brief summary is needed here. Following the

investigation of the German comparative philologists, NT Greek grammarians in the

nineteenth century began to recognize semantic distinctions involving the portrayal of

different kinds of action in Koine Greek.[172] For these grammarians, time became only a

---

[170] See, for example, BDF ∮318 and for earlier works, see Wackernagel's works. See, for example, the latest edition of his lecture on syntax, Wackernagel, *Lectures on Syntax*, 187–273.

[171] For the history of research of *Aktionsart* in Greek, see the detailed discussion in Porter, *Verbal Aspect*, 26–50 and Fanning, *Verbal Aspect*, 30–46.

[172] Most scholars credit the work of Curtius as the first to introduce the discussion of how different kinds of action is expressed in Greek. See, for example, Porter, *Verbal Aspect*, 26–27 and Fanning, *Verbal Aspect*, 12.

minor consideration, with past time being something expressed only by the augment.[173]

Yet these grammarians lacked the terminological arsenal or the theoretical advancements

of modern aspectology, using as their point of departure the works of German

comparative philologists.[174] The fact that some Greek verbs (the defective/irregular verbs)

have different verbal roots (such as ἐσθίω/ἔφαγον or ὁράω/εἶδον) is often used to

substantiate the development of *Aktionsart* of the verb-stems.[175] It is argued that the

development of the meaning of the verbal roots into two major verb-types (punctiliar and

durative/non-punctiliar roots) preceded and thus guided the development of the Greek

tense forms into similar kinds of action (*Aktionsart*).

In general, most traditional grammarians recognize that the basic tripartition of

Greek tense forms does not represent the notion of time (past, present, future) but rather

three primary kinds of action.[176] The main distinction of *Aktionsart* is between punctiliar,

---

[173] See, for example, Robertson, *Grammar of the Greek New Testament*, 824–25, Chamberlain, *An Exegetical Grammar of the Greek New Testament*, 67–69.

[174] See, for example, Brugmann, *Griechische Grammatik*, 471–84.

[175] See Moulton, *Prolegomena*, 109–10 and Robertson, *Grammar of the Greek New Testament*, 823.

[176] Robertson describes these three kinds of action as a two level hierarchy: punctiliar and non-punctiliar at the first level and indefinite and non-indefinite linear within the non-punctiliar. Robertson, *Grammar of the Greek New Testament*, 823.

durative and perfect/completed actions.[177] The punctiliar action is regarded as either the

entry/end point of an action or viewing an action without giving information regarding its

progress. The durative action, on the other hand, is the action in progress. The perfect

action denotes what begins in the past and continues to the present in a state of

completion.[178] The contrast between durative and punctiliar action is often illustrated

graphically as a contrast of action regarded as a line (linear) versus a dot (pointed).

Following the same graphic illustration, the perfect is then a combination of both, i.e. a

dot plus a line.[179]

These *Aktionsart* distinctions are manifested in the three main stems of the Greek

verb: the Aorist stem (punctiliar), the Present stem (durative) and the Perfect stem

(perfect). There are also a host of secondary or resultant *Aktionsarten* that could be

derived from the complex interplay of verb-roots (which express different types of

---

[177] BDF uses the term perfective to label the kind of action that is expressed by the perfect tense. I disregard the term here and use perfect instead to avoid confusion. See BDF §318.

[178] See, for example, Moulton, *Prolegomena,* 109 and Robertson, *Grammar of the Greek New Testament,* 823–24.

[179] See, for example, Robertson, *Grammar of the Greek New Testament,* 823; Moulton, *Prolegomena,* 108–09; and Dana and Mantey, *A Manual Grammar of the Greek New Testament,* 179.

temporal meaning) and tense-stems.[180] This idea of an overall *Aktionsart* interpretation, at

the verb-level, anticipates the compositional approach to lexical aspect in later Greek

aspect studies.[181]

Not all Greek grammarians draw a clear distinction between aspect and

Aktionsart.[182] For example, when introducing the Greek tenses, Blass and Debrunner treat

aspect (viewpoint) and *Aktionsart* (kinds of action) as interchangeable.[183] Although one

finds language that is used in modern aspectology in their description, the overall tenor of

the discussion is very similar to discussions of *Aktionsart*.[184] In the light of recent

research, therefore, the traditional grammarians unintentionally conflate what would now

be considered two semantic categories (aspect and *Aktionsart*).[185]

---

[180] For example, punctiliar action can be further classified as constative (unmodified point-action), ingressive (point-action with the accent on the beginning) or effective (point-action with the account on the conclusion). See Robertson, *Grammar of the Greek New Testament*, 829.

[181] See, for example, the work of Mari Olsen below (1.4.3.2).

[182] Moulton seems to express this kind of sentiment towards the subject of *Aktionsart*. Both Moulton and Robertson complain about inconsistent terminology in the discussion. See Moulton, *Prolegomena*, I.108.

[183] BDF ∮318.

[184] For example, one of the expression of a punctiliar action (aorist stem) is described as an action that is conceived as a whole irrespective of its duration, which sounds a lot like a totality approach to the perfective aspect. See BDF ∮318.

[185] See, for example, Fanning, *Verbal Aspect*, 41.

1.4.2 Aspect and New Testament Greek

It is not exaggerating to say that scholarship in NT Greek linguistics over the past

25 years has been dominated by the discussion of aspect.[186] Since the end of 1980, several

English monograph-length works have been dedicated solely to discussing the Koine

Greek verbal system. Other works have developed particular models or have tested the

validity of individual frameworks. The main research questions in these works are

interrelated, including topics such as the organization of the Greek verbal system, the

relationship between temporality and aspectuality in Koine Greek, the core semantic

values of the tense-forms, definitional and terminological issues and the distinction

between grammatical aspect and the traditional notion of *Aktionsart*.

It is generally agreed that aspect can be loosely defined as a viewpoint feature,

expressing a speaker's subjective portrayal of an action. Most would agree that in Koine

Greek aspect is encoded in and expressed by tense-form alone. To borrow Porter's

wordings, aspect is defined as:

---

[186] Juan Mateos and Kenneth L. McKay are considered to be the forerunners in Greek aspect. See Mateos, *El Aspecto Verbal* and McKay, *Greek Grammar for Students*. Although his monograph on aspect was published after Porter and Fanning, much of Kenneth McKay's work on the topic can be found in scattered articles from mid-1960s. See, for example, McKay, "The Use of the Ancient Greek Perfect down to the End of the Second Century A.D," 1–21 and McKay, "Syntax in Exegesis," 39–57.

> [A] synthetic semantic category (realized in the forms of verbs) used of meaningful oppositions in a network of tense systems to grammaticalize the author's reasoned subjective choice of conception of a process.[187]

Independently, Fanning defines aspect in a more ontological manner:

> [A] category in the grammar of the verb which reflects the focus or viewpoint of the speaker in regard to the action or condition which the verb describes. It shows the perspective from which the occurrence is regarded or the portrayal of the occurrence apart from the actual or perceived nature of the situation itself... [Aspect is] a rather subjective category, since a speaker may choose to portray certain occurrences by one aspect or another without regard to the nature of the occurrence itself.[188]

It is not difficult to notice traces of the influence of the Russian totality approach to aspect in these definitions. Both describe aspect as a semantic category that is related to the perspective of the speaker/writer and is grammaticalized in the morphology of the verb. However, based on the framework of Systemic Functional Linguistics (SFL), Porter's definition is less reliant on the totality approach to aspect. His use of system networks to describe the verbal system is similar to Gotteri's works on Bulgarian and Polish and is unique in the study of Koine Greek.[189] Following Comrie's definition,

---

[187] Porter, *Verbal Aspect*, 87, 107.

[188] Fanning, *Verbal Aspect*, 84–85.

[189] See, for example, Gotteri, "A Note on Bulgarian Verb Systems," 49–60 and Gotteri, "Toward a Systemic Approach to Tense and Aspect in Polish," 499–507.

Fanning utilizes the metaphorical notion of a viewpoint in order to describe aspect and then proceed to speak about viewing an action from the outside or from within.[190] Similarly, McKay emphasizes the speaker's choice to portray an action in relation to its context.[191] Campbell likewise focuses on the opposition between the internal and external portrayal of an action.[192]

Mari Olsen also follows the definition of Comrie and defines the various grammatical aspects as different ways of viewing the internal temporal constituency of a situation.[193] Olsen chooses to describe Greek aspect in terms of how an action related to the Event Time (ET), the time spanned by the situation, and the Reference Time (RT). Olsen's approach is thus similar to the work of Wolfgang Klein mentioned above. Following Reichenbach's tense analysis, grammatical aspect is described according to

---

[190] Fanning argues that the feature of viewpoint is invariant in aspect. See Fanning, *Verbal Aspect*, 83–85. See also Porter's parade illustration (from Isachenko), Porter, *Verbal Aspect*, 91.

[191] For McKay's definition of aspect, see McKay, *New Syntax*, 27. For a response to Porter and Fanning, see McKay, "Time and Aspect in New Testament Greek," 209–28.

[192] Formally, he defines verbal aspect as the manner in which verbs are used to view an action. A portrayal of an event either from the inside (unfolding) or from the outside (as a whole) by the speaker/ author. See Campbell, *Verbal Aspect, the Indicative Mood*, 8–9.

[193] See Olsen, *A Semantic and Pragmatic Model*, 60–61.

how ET is related to RT.[194] Olsen's contribution to the discussion is her inclusion of

lexical features to organize the ET into a nucleus (dynamicity and/or durativity) followed

by a coda (telicity).

Judging from the above, there seems to be a certain level of agreement between

these works, at least at the definitional level. However, the agreement vanishes once we

move past the definition of grammatical aspect. There are different opinions regarding

foundational questions such as how many aspects are in Koine Greek; the nature of the

formal aspectual oppositions; and the handling of *Aktionsart* and its relationship with

grammatical aspect. I will briefly address the first two questions here and tackle the third

question, which is most related to the present study, in the next section.

Regarding the question of how many aspects in Greek, Porter contends that there

are three distinct aspects corresponding to a threefold formal distinction:[195] perfective

(Aorist), imperfective (Present/Imperfect) and stative (Perfect/Pluperfect). Similarly,

McKay identifies three full aspects in Greek, although he employs different labels

---

[194] Similar to Klein's Topic Time (TT) and Time of Situation (T-Sit), see 1.3.2 above for detail. See Olsen, *A Semantic and Pragmatic Model*, 61 and Klein, "Time-Relational Analysis," 684–85.

[195] Actually it is represented by a system network with two binary choices. See below for a graphical representation.

(imperfective, aorist, and perfect).[196] Both Porter and McKay recognize the Future as an anomaly and treat it as partially aspectual (or aspectually vague) due to its odd formal paradigm and limited distribution. Although both of them recognize the modal character of the Future, they differ on the issue of the core semantic value of the tense-form, particularly as regards its temporal representation. McKay contends that the Future is used to express the speaker's intention and, consequently, simple futurity.[197] Porter, on the other hand, considers the Future as aspectually vague and argues that it grammaticalizes a speaker's expectation toward a process.[198]

Compared to McKay's work, Porter's approach to Greek aspectuality is more linguistic in nature in the sense that most of his theoretical arguments are grounded in a flexible yet explicit linguistic framework. Notice that, in Porter's definition of aspect, the Greek verbal structure is described as systemic. Following Hallidayan systemic linguistics, Porter understands language as system-based and thus takes a systemic

---

[196] See McKay, *New Syntax*, 7 and 27 and Porter, *Verbal Aspect*, 88–90.

[197] See McKay, *New Syntax*, 34.

[198] See Porter, *Verbal Aspect*, 93–7 and 409–16. See also Pang, "Aspect, *Aktionsart*, and Abduction," 142–59.

approach to aspect.[199] All meaningful components within a language are part of a system

of various choices, which can be represented using a system network.[200] Since

aspectuality is one of the systems in the Greek verbal network, it is essential to describe

the relationship between the aspectual oppositions. Within the aspectual system,[201] at the

least delicate level, the system requires choice of [+expectation] or [+aspectual] to

distinguish the partial aspectual choice (Future) with the full aspectual choices. Further to

the right with choices of greater delicacy are the two sub-systems ASPECT 1 and

ASPECT 2, both full aspectual choices which cover the Aorist, Present and Perfect. The

Pluperfect and Imperfect are realized by combining the ASPECT 2 with the

---

[199] See Porter, "Aspect Theory and Lexicography," 216. Carson considers Porter's work as the work of a working linguist. See Carson, "Porter/Fanning Debate," 23. This should not come as a surprise given that Porter's doctorate is awarded by both the department of linguistics and the department of biblical studies of the University of Sheffield.

[200] Porter treats aspectuality and finiteness as the two major systems in the Greek verbal network. In the SFL framework, the network of systems is said to express a hierarchy of delicacy. In these systems of choices, the user of the language moves from the least delicate choices and then led to further semantic choices of greater delicacy. Once the network of systems has been traversed, the accumulation of semantic choices is realized by the substance of the language. For more detail of the systemic functional model, see Fawcett, "What makes a 'good' system network good?" and Porter, *Verbal Aspect*, 7–16.

[201] For a more developed version of the Greek verbal network, see Porter and O'Donnell, "Probabilistic Standpoint," 40.

REMOTENESS [±remoteness] system under [+assertion].[202] The following is the

relevant part of Porter's Greek verbal network:[203]
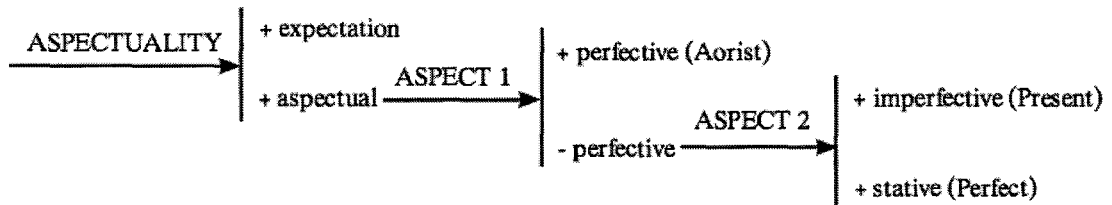
Figure 1.1: A System Network for the ASPECTUALITY System

On the other side of the debate are various scholars who recognize only two

grammatical aspects in Greek, including Fanning, Olsen and Campbell. Fanning sticks

with the viewpoint metaphor and labels these verbal aspects internal (imperfective) and

external (perfective).[204] Likewise, both Olsen and Campbell recognize only an aspectual

opposition between imperfectivity and perfectivity. The crux of the contention here is the

Perfect form, with various scholars disagreeing about the core semantic value of the

Perfect. Following Comrie, Fanning considers the oppositions between the Perfect and

the "pure aspects" (Present and Aorist) as something peripheral to the task of defining the

---

[202] For detail, see Porter, *Verbal Aspect*, 89–109, esp. 93–6.

[203] Part of chart 4 in Porter, *Verbal Aspect*, 109.

[204] See Fanning, *Verbal Aspect*, 84–85.

aspects.[205] Against Porter, he considers stativity as an *Aktionsart*, not an aspect, arguing

that the Perfect expresses three distinct semantic features: a stative *Aktionsart*, the

temporal feature of anteriority, and the aspect of the summary viewpoint (perfective).[206]

Similarly, Olsen also considers the Perfect as perfective, but she disagrees with the others

concerning stativity, which she considers an ill-defined feature that should not be

assigned to the Perfect form.[207] According to Olsen, stativity is a result of the interaction

between lexical and grammatical aspect (the dynamicity feature and perfective aspect).

She claims that the differences between the Perfect and the Aorist should be attributed to

tense but not aspect, i.e. the Aorist refers to past time while the Perfect refers to present

time.

To complete this already complicated picture, Campbell disagrees with all of the

aforementioned scholars and argues that the Perfect is imperfective. He does not describe

his aspectual system at the outset, claiming that it is rather difficult to decide whether

---

[205] See Fanning, "Approaches to Verbal Aspect," 50, n.1.

[206] He contends that different interpretations of the form in individual texts are the result of various contextual factors highlighting one or the other features. However, it is not clear in his work whether he considers all three features as the invariant meaning of the Perfect. His handling of the so-called Perfect with purely present meaning (with verbs such as οἶδα and ἕστηκα) seems to indicate that anteriority is not expressed in those instances. See Fanning, *Verbal Aspect*, 119–20, 299.

[207] See Olsen, *A Semantic and Pragmatic Model*, 250–60.

there are two aspects or three and that the key is to figure out the aspect of the Perfect and

Pluperfect forms. Campbell points out that those who reject a temporal understanding of

the verb may prefer the concept of remoteness to distinguish the two imperfective tense-

forms (Present and Imperfect).[208] Remoteness is a spatial category used to express

distance or lack of proximity temporally, logically or contextually. He argues that the

Perfect is a "discourse tense-form," i.e. it is mostly found in the discourse section in a

narrative.[209] Since the Present is also the dominant tense-form within discourse, Campbell

argues that the Perfect shares the imperfective aspect with the Present.[210]

As regards the nature of aspectual oppositions in Greek, most scholars regard the

Greek aspect system as consisting of equipollent oppositions. Porter, for example, argues

against privative oppositions by means of four criteria derived from discussions of

---

[208] He cites Decker as an example. See Campbell, *Verbal Aspect, the Indicative Mood*, 15

[209] Campbell uses the term "discourse" to refer to three types of discourses: direct, indirect and what he called "authorial" discourse. See Campbell, *Verbal Aspect, the Indicative Mood*, 3–4, 12. For the discussion of the aspect of the Perfect, see Campbell, *Verbal Aspect, the Indicative Mood*, 184–87.

[210] In a recent article, Campbell claims that both the stative and imperfective understanding of the Perfect are both beneficial to the translation of the Greek text, even though he would prefer the latter instead of the former. See Campbell, "Breaking Perfect Rules: The Traditional Understanding of the Greek Perfect," 139–55. For a response to Campbell's approach to the Perfect, see Porter, "Greek Linguistics and Lexicography," 46–54.

markedness:[211] (1) Greek has no formally unmarked tense form; (2) distributional

marking between Present and Aorist is not significant; (3) implicational markedness

points to the Present/Imperfect as the marked form and; (4) there is no apparent evidence

in Greek that any of the tense forms is semantically unmarked in aspect. He concludes

that aspectual oppositions in Greek are equipollent in nature, so that even though "each

aspect is not identically weighted, at the least each contributes semantically in an

identifiable way."[212] Fanning also prefers to speak in terms of equipollent oppositions in

his work, claiming that the evidence of clear contrasts of usage (e.g. non-indicative uses

or uses in past time contexts) suggests that both aspects are marked with positive

features.[213]

Olsen, on the other hand, endorses a privative analysis of both lexical (*Aktionsart*)

and grammatical aspect. She argues for a compositional and monotonic understanding of

aspect, arguing that full aspectual meaning derives from both "the various constituents

that encode lexical aspect (verbs, their arguments, temporal adverbials, etc.)," and the

---

[211] The four criteria are material, implicational, distributional, and semantic markedness. See Porter, *Verbal Aspect*, 178–81 for more detail.

[212] Porter, *Verbal Aspect*, 89–90. See also Friedrich, "On Aspect Theory and Homeric Aspect," S14.

[213] See Fanning, *Verbal Aspect*, 71–72. Campbell also comes to the same conclusion. See Campbell, *Verbal Aspect, the Indicative Mood*, 19–21.

"grammatical aspect morphemes."[214] According to her analysis, lexical aspectual features

(in the Vendlerian sense) and grammatical aspectual features are both privative in nature,

meaning that only the positive member (those marked with the features) has a consistent,

uncancelable semantic meaning, whereas verbs not marked will be interpreted as having

or not having the relevant feature on account of other lexical constituents and/or their

pragmatic context. Thus meaning that comes from marked categories cannot be canceled

by contextual factors, but features unspecified by the verb can be marked or unmarked by

contextual elements (implicature). A privative analysis of both grammatical and lexical

features might offer a better explanation of variations in class assignment at different

grammatical ranks (i.e. how various contextual factors affect verb class assignment).[215]

According to Olsen's privative understanding, the Future is the only aspectually

unmarked form and all other Greek tense forms are either marked with [+imperfective] or

---

[214] Olsen, *A Semantic and Pragmatic Model*, 14.

[215] Olsen argues that her treatment of the Greek grammatical oppositions as two independent privative oppositions, along with their interaction with tense and lexical aspect features "account for the range of meanings associated with the indicative verb forms in the NT text, as represented in the literature and the English translation." However, this seems to suggest that her analysis relies on English translation to provide the range of meaning associated with the Greek verb and works backward in some sort of re-engineering process in order to "discover" or "recover" the possible combination of lexical, grammatical and co-textual features that gives such range of meaning (in translation). If this is the case, her approach seems extremely deductive in nature. See Olsen, *A Semantic and Pragmatic Model*, 240–63. See below for further comment on her approach.

[+perfective], which is essentially no different from an equipollent analysis. As far as the

handling of the Future form, Porter and Fanning would also agree that the Future does not

participate in the perfective/imperfective opposition and that any overall "aspectual"

(*Aktionsart*) meaning involving a future predicate is not due to the core semantic value of

the Future form.

To summarize the discussion so far, the following table lists the major views and

their different groupings:

Table 1.2: A Summary of Recent Studies of Koine Greek Aspect

Author	Number of Aspects	The Perfect Form	Other Factors
McKay	4	Perfect Aspect	Verb Classes
Porter	3	Stative	None
Fanning	2	Perfective + Stative *Aktionsart* + Present Tense	Procedural Characters + Co-textual Factors
Olsen	2	Perfective + Present Tense	Lexical Aspect
Campbell	2	Imperfective	*Aktionsart*

1.4.3 Aspect and *Aktionsart* in New Testament Greek: Two Approaches

As I have shown in section 1.4.1, the prevailing view in Koine Greek studies

during the past century was that the tense-forms primarily convey *Aktionsart* with time

being a secondary matter related primarily to the augment. This traditional understanding,

however, became an obstacle and a point of contention amidst discussions of Greek

aspect, particularly in the final decade of the nineteenth century. Most scholars in the

field now recognize, albeit to different degrees, that aspect and *Aktionsart* should be

distinguished as two separate categories at the theoretical level. Most would agree, at

least at definitional level, that verbal aspect is a grammatical category and that *Aktionsart*

is a function of the meaning of a lexical item together with other clausal constituents. The

main disagreement in the field is the role that *Aktionsart,* which itself is not a

grammatical category, should occupy in the discussion of the formulation of aspectual

meaning. Some scholars contend that *Aktionsart,* by itself a matter of lexical semantics,

should not be treated together with the analysis of a grammatical category (e.g. aspect).

Others see *Aktionsart* as an integral part of Greek aspect and introduce the Vendlerian

classification into the discussion. These approaches usually take *Aktionsart* as a lexically

expressed feature and use a different label to avoid confusion with the traditional

understanding of *Aktionsart*. Olsen chooses to use the label "lexical aspect" while

Fanning follows the Russian tradition and uses Forsyth's "procedural characteristics" to

refer to the ways in which verbs behave in different co-textual settings.[216]

---

[216] See Fanning, *Verbal Aspect*, 49–50 and Olsen, *A Semantic and Pragmatic Model*, 8–9.

1.4.3.1 Non-Vendlerian Approaches

Working with a functional understanding of language, Porter considers *Aktionsart*

irrelevant to the discussion of grammatical aspect. In his view, *Aktionsart* is a matter of

lexical semantics and the discussion of lexical meaning should not interfere with

grammar.[217] Elsewhere he also questions the legitimacy of using Vendler's classification

in Greek aspect study, calling into question the way that lexis is given more importance

than grammatical aspect.[218] He has thus "focused most of his considerable energies on

developing a consistent semantic theory of Greek verbal morphology,"[219] and has put

aside in the discussion the interaction between tense-form, lexis and other co-textual

factors. As a result, Decker, who applies Porter's model in his study of the Gospel of

Mark, has been forced to consult other works in order to come up with a working

definition of *Aktionsart*.[220]

---

[217] See Porter, "In Defence of Verbal Aspect," 37.

[218] See Porter, "Aspect Theory and Lexicography," 212–14.

[219] Carson, "Porter/Fanning Debate," 24–25. This does not imply, in my opinion, that Porter has not treated *Aktionsart* in his work at all. He did have an extended discussion on the category, trying to put it in historical perspective and ultimately concluded that it is irrelevant to the discussion of aspect. See Porter, *Verbal Aspect*, 26–39.

[220] Decker draws on the works by Bache, Fanning, Fleischman, and Binnick to construct his definition of *Aktionsart*. See Decker, *Temporal Deixis*, 26, 176 n.118, n.120.

Kenneth McKay also distinguishes grammatical aspect from *Aktionsart* and

relates the latter to a lexical distinction between different verb types, which he argues is

analogous to aspect.[221] He stresses the importance of context in determining the

translation of each aspectual form. However, he does not follow Vendler's classification

of verb classes but opts instead for a simpler distinction between action and stative verbs,

claiming that Vendler's subclassifications rely too heavily on English.[222] Trevor Evans

also points out the dangers of relying on Vendler's English-based classifications in his

work on Greek verbal syntax. In a chapter where he briefly describes the Greek verbal

system, Evans maintains that the distinction between aspect and *Aktionsart* is that aspect

is a grammatical category and *Aktionsart* a lexical category. To him the main distinction

between the two categories is that aspect is realized through grammatical marking

whereas *Aktionsart* is not.[223] He contends that *Aktionsart* is a metalinguistic category

which mainly concerns lexical semantics. Although he sees the value of applying

Vendlerian classes to the study of *Aktionsart,* he also expresses the reservation that there

---

[221] See McKay, *New Syntax*, 27–29.

[222] See McKay, *New Syntax*, 29.

[223] He later adds that those affixal elements that contribute *Aktionsart* value may become grammaticalized through time. He argues that stativity, an *Aktionsart* value, became grammatically systematized to the Perfect. See Evans, *Verbal Syntax*, 20–21, 26–32.

are "methodological weaknesses" in the classification, citing verbs that switch classes (re-

categorization) under different verbal situations.[224]

Campbell's approach is in the middle of the spectrum. Although he seems to

assume Vendler's classification in his discussions of *Aktionsart,* he does not explicitly

define *Aktionsart* in his work and makes only rare references to Vendler's four classes.[225]

However, from the brief discussion in his work, he seems to assume a Vendlerian

understanding of *Aktionsart* instead of focusing on the issues that are common to the

Proto-Indo-European study of *Aktionsart*, issues such as how prefixes change the

procedurals of the verb. He acknowledges the lexical nature of the category but does not

touch on class assignment. In addition, he attempts to follow the patterns of aspect-

Aktionsart interaction and tries to work backwards in order to uncover the aspectual value

of the Future form.[226] Following Bache, he makes several distinctions between the two

categories. Whereas aspect is regarded as primarily subjective (not entirely so),

Aktionsart is regarded as primarily objective (again, not entirely so). In other words,

---

[224] See Evans, *Verbal Syntax*, 20. See also 2.2.1 for a critical review of Vendler's taxonomy in Koine Greek studies.

[225] See Campbell, *Verbal Aspect, the Indicative Mood*, 10–12 and 46–7.

[226] See Campbell, *Verbal Aspect, the Indicative Mood*, 141–51. I have commented elsewhere at length that this re-engineering approach to aspect cannot determine the core aspectual value of the Future form. See Pang, "Aspect, *Aktionsart*, and Abduction," 142–48.

whereas aspect concerns the perspective of the speaker, *Aktionsart* concerns the nature of

an action as objectively determined.[227] Campbell also insists on maintaining a semantics/

pragmatics distinction between aspect and *Aktionsart*. To him, aspect is a semantic

category while *Aktionsart* is a matter of pragmatics.[228] However, judging from the

discussion of individual passages, what he means by pragmatics seems to be nothing

more than the interaction of a main verb and various co-textual factors.[229] Unfortunately,

due to the lack of a clear definition of *Aktionsart*, Campbell's overall treatment of

Aktionsart interpretation is rather unsystematic.[230] In a later work that is intended to be

pedagogical (and rudimentary), Campbell gives a somewhat clearer picture of his

understanding of the interaction between aspect/*Aktionsart*.[231] However, due to the

pedagogical nature of the work in question, references to academic discussion are

extremely rare, such that Campbell does not articulate the theoretical backing of his

---

[227] See Bybee et al., *The Evolution of Grammar*, 10–11.

[228] See Campbell, *Verbal Aspect, the Indicative Mood*, 24–26.

[229] I will argue later in chapter 5 that the use of a semantics/pragmatics distinction to describe the relationship of aspect and *Aktionsart* is imprecise and unhelpful.

[230] The lack of a clear description of verb class assignment definitely contributes to this problem. Some scholars, however, would go as far as saying that unsystematicity is a trademark of the discussion of inherent lexical meaning. See Evans, *Verbal Syntax*, 16.

[231] See Campbell, *Basics of Verbal Aspect in Biblical Greek*.

mathematical and formulaic representations of *Aktionsart* or of his classifications of

verbs.[232]

1.4.3.2 Vendlerian Approaches

Among the works that rely on Vendler's taxonomy, Fanning's work is the first

major work to thoroughly describe *Aktionsart* in the Koine Greek verbal system. As he

states at the outset of his work, his main focus is on the interpretation of aspect-usage at

the sentence level (using terms traditionally assigned for *Aktionsart* as labels) and on how

verb classes (procedural characters) and aspectual forms (grammatical aspects) contribute

to the overall meaning of a sentence.[233] Aiming to distinguish between aspect and the

traditional notion of *Aktionsart*, while at the same time acknowledging the vexed problem

of nomenclature in aspectology, Fanning adapts Bache's subjective/objective distinction

between aspect and *Aktionsart* but applies to the latter the label procedural character in

order to distance his ideas from those of the traditional NT grammarians.[234] Fanning

employs a bottom-up, bi-dimensional approach to grammatical semantics and seeks to

---

[232] For example, he does not explain the reason behind his choice of transitivity, a clausal feature, as a classification criterion for verbal lexemes. See Campbell, *Basics of Verbal Aspect in Biblical Greek*, 55–59.

[233] See Fanning, *Verbal Aspect*, 8, 49–50.

[234] See Fanning, *Verbal Aspect*, 38–42.

delineate the overall "aspectual" meaning of a sentence or a phrase. As is apparent from

the organization of his work, his overall strategy is to move in at the lower ranks of

grammar, starting with classes rather than with functions. He spends a considerable

amount of time and energy on listing all of the possible procedural characters from the

outset.[235] This attempt to analyze the varieties of possible *Aktionsart* distinctions is rooted

in the analysis of the lexical character of various groups of verbs. He considers such an

endeavor to be an important contribution to the study of Greek aspect since "variations in

the lexical character of verbs produce significant and predictable patterns of meaning

when combined with the grammatical aspects."[236]

Looking for a formulation that involves fewer and more comprehensive classes of

lexical characteristics, Fanning turns to the quadripartition of lexical classes by

Vendler.[237] He acknowledges the philosophical nature of Vendler's treatment and also

observes that Vendler's classes are distinct from grammatical aspect. However, he insists

---

[235] See Fanning, *Verbal Aspect*, 42–50 and the idea is further expanded in 126–96.

[236] Fanning, *Verbal Aspect*, 43.

[237] See Fanning, *Verbal Aspect*, 43–50.

that the interaction of grammatical aspect with these verbal classes deserves careful attention, since it can enhance our understanding of Greek aspect.[238]

Fanning also acknowledges the English language-specific nature of Vendler's taxonomy in his work, recognizing that classifying Greek verbs into discrete classes is difficult and may not be feasible for certain groups of verbs. He admits that there are certain groups of verbs, such as verbs of saying, that fall in between features or that display a different actional character depending on their contexts. However, he insists that even though the inherent meaning of the verb by itself may not be fully determinative, one can still examine which of the competing features are predominant in a given context.[239] This shows that while he recognizes the compositional nature of the procedural character, he does not clarify at what level of linguistic analysis the compositional process should take place. In practice, Fanning does not provide a systematic framework or formal feature-changing mechanism that describes the interaction of these different elements (verbs, other clausal constituents, and grammatical aspect morphemes).[240] Instead he starts his construction of the hierarchy of procedural

---

[238] See Fanning, *Verbal Aspect*, 44–46.

[239] See Fanning, *Verbal Aspect*, 163, 129–30.

[240] Refer to Olsen's critique on this point. See Olsen, *A Semantic and Pragmatic Model*, 204–06.

characters by grouping verbs into the four classes without grounding his decisions in

explicit criteria or in an underlying lexicographical method. Neither does Fanning clearly

state whether Vendler's taxonomy applies to bare verbs or to verbal situations (i.e. verbs

together with their arguments).[241] Thus although Fanning's work opens up an important

discussion concerning the interaction of Greek grammatical aspect and other lexical and

co-textual features, the linguistic and methodological imprecision of his work has limited

its usefulness.[242]

Mari Olsen, on the other hand, begins her work by delineating various properties

of lexical items and then proceeds to construe the overall aspectual meaning of a clause

by looking at the interaction of different properties of lexical and grammatical aspect.[243]

She also relies on Vendler's classification and adopts Fanning's categorizing of Greek

verbs into various aspectual classes without providing an overall method for mapping

Greek verbs onto Vendler's classes.[244]

---

[241] Fanning refers to Stork, who admits that a systematic investigation of the criteria of classification in Ancient Greek is needed. But Fanning explicitly states that he has no intention to make a systematic attempt to validate his classification. See Fanning, *Verbal Aspect*, 129, n.4, 163 and Stork, *Aspectual Usage*, 36–37.

[242] See Carson's comment in Carson, "Porter/Fanning Debate," 25.

[243] For an outline of her approach, see Olsen, *A Semantic and Pragmatic Model*, 25–7, 60–5.

The basic premise of Olsen's analysis is similar to that of Fanning. She assumes in her model that aspect and *Aktionsart* each represent a set of universal semantic features and that the full "aspectual" interpretation of a given sentence or proposition results from interactions between aspect and *Aktionsart*. This process of interpretation is outlined rather meticulously in her work, beginning with a description of the inherent semantic features of verbs and moving on to a classification of *Aktionsarten* (lexical aspect) at the sentential level before finally evaluating how the interpretation of *Aktionsart* is combined with grammatical aspect in order to arrive at a so-called full aspectual interpretation.[245] Although in practice her approach could be characterized broadly as bi-dimensional, her choices of labels (grammatical aspect, lexical aspect, and overall aspectual meaning of a phrase) could be easily misunderstood as being unidimensional.

Olsen emphasizes both compositionality and monotonicity in the interpretation of the overall meaning of aspects.[246] Her work focuses on the compositional nature of aspectual interpretation at the sentential level, claiming that unlike grammatical aspect,

---

[244] She rejects the new subcategories added by Fanning (Climax and Punctual). See Olsen, *A Semantic and Pragmatic Model*, 215–16.

[245] See Olsen, *A Semantic and Pragmatic Model*, 8–10, 25–116.

[246] See Olsen, *A Semantic and Pragmatic Model*, 17–22.

where aspects are marked in a language-specific manner, "the selection of lexical aspect

[from a set of universal features] is at the proposition level: although all languages have

lexical aspect, not every feature is represented in every proposition."[247] Following the

works of linguists such as Mourelatos and Verkuyl, she assumes that lexical constituents

contribute to overall aspectual meaning in principled ways and that explicit rules can be

defined for deriving the aspect class of a given clause from the inherent meaning of the

verb in combination with clausal constituents.[248] Her approach to the description of

Aktionsart is thus quite similar to Fanning's.[249] However, unlike Fanning, she describes

Aktionsart as a class at the sentential level that derives from "the lexical aspect properties

of the verb in combination with other sentential constituents."[250] Terminologically

---

[247] Olsen, *A Semantic and Pragmatic Model*, 14.

[248] See Olsen, *A Semantic and Pragmatic Model*, 16.

[249] She agrees with Fanning that Vendler's classes should be used to describe the inherent actional character (aspect) of a verb. Unfortunately, also similar to Fanning, she does not give a systematic lexicographical method that specifies how to assign Greek verbs to these classes, nor does she give a list of possible verbs in each class. She does include the list of verbs by Fanning as an appendix. However, this does not mean that the call to apply Vendler's classes to Greek based on advanced lexicographical method has been totally ignored. Efforts have been made in recent years, albeit rather sporadically and non-comprehensively, to bridge the gap between Vendler's classes and the study of Koine Greek. See, for example, the master's thesis of Shain, who applies Dowty's aspect calculus to the analysis of the preverb εἰσ- and the verb ἔρχομαι. See Shain, "The Preverb," 77–103 and also in published form, Shain, "Exploring *Aktionsart* in Corpora," 221–48. I will come back to talk about Shain's work in chapter 4..

[250] Olsen, *A Semantic and Pragmatic Model*, 16.

speaking, therefore, Olsen prefers to speak about lexical aspects rather than *Aktionsarten*

or procedural characters in order to emphasize the primacy of lexical constituents in the

composition of the overall *Aktionsart* or overall aspectual meaning that operates at the

sentential level.

Olsen also argues for a monotonic understanding of the Greek aspect.[251] Indeed,

the primary formal mechanism of her model of lexical aspect is built on a monotonic

composition of privative features. She argues that marked aspectual features (lexical *and*

grammatical) should be represented semantically as privative oppositions even though the

corresponding negative features are unmarked equipollent oppositions.[252] A monotonic

understanding of aspectual meaning construction entails that a negative aspectual feature

implicates only the absence of a feature, not the marking of a (non-)feature.[253] Since the

semantic features are privative instead of equipollent, her interpretative mechanism

allows other clausal constituents (such as verb complements and adverbials) to contribute

---

[251] See Olsen, *A Semantic and Pragmatic Model*, 4, 14. See also Rappaport and Levin, "Building Verb Meanings," 103–06.

[252] See Olsen, *A Semantic and Pragmatic Model*, 20–22. She emphasizes in her work the distinction between semantic feature and pragmatic implicature. I have commented on this rather illusive distinction in my previous work, arguing that scholars seem not to have a consensus regarding the definition and nature of semantics and pragmatics. See the discussion in 5.2.1.

[253] So, for example, atelicity is not marked as a semantic feature in active verbs like 'walk,' but it implicates absence of telicity. See Olsen, *A Semantic and Pragmatic Model*, 21–22.

to the aspectual interpretation of a clause, i.e. to mark a feature that is unmarked on the

verb. Using data from English, she extends Vendler's classes by looking at different

combinations of marked features, adding two classes as a result (Semelfactives and

Stage-level States).[254]

In essence, the goal of Olsen's work, like that of Fanning's, is to construct an

overall aspectual interpretation starting from the lower ranks of grammar. But here it is

necessary to add that when these two scholars speak about an "overall aspectual

interpretation" at the sentential/clausal level, they are using the term "aspectual" in a very

broad sense. Similar to what Sasse describes as the English tradition of aspect, they

consolidate the Slavic notion of aspect and the philosophical tradition of event

classifications in order to develop an interpretation at the sentential level.[255] Thus it might

not be coincidental that both works adapt Vendler's analysis of English verbs as the

starting point of their studies.[256] There is also, but particularly in Olsen's case, an over-

---

[254] Olsen relies on Smith's Semelfactives class. Her Stage-level States is an extension of States that adds telicity as a marked feature. Her Semelfactives are similar to Fanning's Punctuals. See Olsen, *A Semantic and Pragmatic Model*, 46; Fanning, *Verbal Aspect*, 154–63; and Smith, *The Parameter of Aspect*, 55–58. For detail see chapter 2.

[255] Refer to last section (1.2) for more detail. See also Sasse, "Recent Activity in the Theory of Aspect," 211–13.

[256] Olsen's work is particularly relied on English. Her privative analysis is based on data from English. See Olsen, *A Semantic and Pragmatic Model*, 26.

reliance on English translations. Olsen's handling of secondary languages has not gone unchallenged in subsequent discussions.[257]

As one of the respondents during the Porter/Fanning debate, Schmidt's comment rings true even today. After reviewing Fanning's handling of *Aktionsart*, he concludes that "[t]he relationship between the two categories of aspect and lexical *Aktionsart* will need much more study."[258] Unfortunately, not much has been done in the past decade in order to advance the discussion of the aspect-*Aktionsart* distinction in Koine Greek studies. Rather, the three questions that I raised above (1.3.3.2) concerning the use of Vendler's classes in contemporary aspect studies (i.e. the method of class assignment, the question of transferability between languages, and the identification of the appropriate unit of analysis) are still very relevant. It will thus be necessary to return to these questions later (2.2.2) in the course of a critical evaluation of the use of Vendler's taxonomy in Greek aspect studies.

---

[257] See Foley, *Biblical Translation*, 134–35.

[258] Schmidt, "Verbal Aspect in Greek: Two Approaches," 66.

1.4.4 Assumptions in the Present Study

As mentioned in the survey above, recent advances in typological studies on aspect have demonstrated that cross-linguistic variations are not only a possibility but also a prevalent phenomenon. It is thus imperative that we acknowledge the diversity of aspect representations in different languages, as well as the language-specificity of the theories and analytical tools that we use to discern and describe the Greek verbal system. It is the goal of this study to examine the applicability of one of these tools to Koine Greek, namely, the English-based Vendler taxonomy. Since the major objective of this study is to look at the connection between aspect and *Aktionsart*, particularly at how the telic verb group interacts with the perfective and the imperfective aspects, a few theoretical assumptions and presuppositions should be established here before moving on to the analysis.

Based on my survey above, I propose that a useful comparison can be made between the grammatical aspectual opposition of Greek (Present/Imperfect vs. Aorist) and Russian (imperfective vs. perfective). Both of these languages display a basic opposition between perfective and imperfective aspects, and this opposition is related to how an action is viewed in terms of its internal temporal constituency. In this study,

therefore, I will adapt Comrie's definition of grammatical aspect as a point of departure. Grammatical aspect is concerned with how different ways of viewing the internal temporal constituency of a process can be expressed by speakers using the resources of a verbal system. As regards Koine Greek, I follow the totality approach to the perfective/ imperfective opposition, assuming that a Greek perfective verb presents a process in its entirety without specifying any details concerning its internal makeup. The imperfective, on the other hand, opens up a process and thus permits a speaker to talk about things that are in some sense internal to that process. Lastly, the perfect form opens up a complex state of affairs that somehow derives from a process (which may or may not be completed), permitting a speaker to talk about things that are in some sense internal to that state.

Given the above understanding of the Greek grammatical aspectual opposition, it is clear that the perfective aspect is not considered to be the marked member of the pair in my analysis. Contrary to the Slavic totality view, where formally the perfective aspect is showed as the marked member of the privative opposition, I assume that the tripartite division of the Greek verbal forms suggests that the opposition is equipollent in nature. All three forms should be treated as carrying semantic weight. In the Slavic understanding of the aspectual opposition, imperfectivity is often define negatively, i.e.

the lack of a perfective [-perfective] feature, whether it is limitivity or totality. However, in Koine Greek, the perfective aspect is treated as the default aspectual form in the Koine Greek verbal system marked with [+perfective]. The imperfective and the stative (or Perfect) aspect are both marked with the [-perfective] feature with the stative feature marked for the stative aspect [+stative] and the imperfective aspect [+imperfective].

From the above description, it is not difficult to note that my understanding of the Greek verbal system is generally compatible to Porter's framework. I found the Hallidayan systemic framework a very powerful and flexible analytical tool. However, this does not mean that the analysis presented in the following chapters is deductive in nature, i.e. linking a preset premise to the conclusion. In fact, an abductive logical method is assumed in this study to allow the premise to be challenged during the process of data analysis. Abductive reasoning describes a process of refinement between the data and the hypothesis. The notion of abduction or abductive reasoning originated with American philosopher Charles S. Peirce.[259] He defined abduction in terms of "explanation and hypothesis," "the process of forming an explanatory hypothesis."[260] It differs from

---

[259] See Peirce, "Pragmatism and Pragmaticism," 99–107. Walton suggests that an article by Harman is also possibly responsible for introducing the notion of abduction to philosophy. See Walton, *Abductive reasoning*, 3.

[260] Walton, *Abductive reasoning*, 8.

deductive and inductive reasoning as it is looking for a hypothesis as a best explanation,

an intelligent or reasonable guess, given what is known and what is not known in the

case.[261] An abductive analysis draws conclusions by working from the given data and

then tries to explain these facts or evidences by suggesting an explanation.[262] Formally, a

plausible hypothesis is formed with the available data. It is then "tested by further

investigations, providing more data that could support or refute the hypothesis."[263] It is a

process of refinement of the hypothesis. The data and the hypothesis are in a reciprocal

relationship shaping the other. It is thus fair to conclude that apart from some extreme

cases where true deductive method is assumed, aspect theorists try to make the most

intelligent guess (i.e. hypothesize) from the available data in constructing and proving

their theory.

For example, regarding the handling of the Perfect in the Greek verbal system, I

will not commit to lump the Perfect with either the perfective or the imperfective tense-

forms in my corpus analysis.[264] I will instead only make comment if and when the Perfect

---

[261] See Walton, *Abductive reasoning*, 11.

[262] See Walton, *Abductive reasoning*, 17.

[263] Walton, *Abductive reasoning*, 5.

[264] Unlike similar analysis such as Shain, "Exploring *Aktionsart* in Corpora," 221–48. See chapter 4 for more detail.

might shed light on the discussion, i.e. when the addition of the Perfect to either side of

the aspectual opposition yields a significantly different result. However, this does not

mean that there are any theoretical presuppositions for including the Perfect with either

the imperfective tense-form (Present and Imperfect) or the perfective (Aorist). As I

mentioned above, formally speaking, it makes more sense to treat the Perfect as a third

aspect in Koine Greek due to the tripartite formal distinction. Unlike languages where the

Perfect can combine with other aspectual distinctions (such as English and Portuguese),

the Koine Greek Perfect precludes combination with the other aspectual distinction

(imperfective/perfective) due to the use of different stems.[265]

In terms of the labels, I will use *Aktionsart* throughout this work, unless quoting

or referring to other scholars' work in which other terms play an important role. For

aspect, I will use verbal aspect and grammatical aspect interchangeably. The decision to

use these terms in this work is partly due to the familiarity of the terms to biblical

scholars, and partly following the convention of the discussion in the field of Greek

grammar and linguistics. I also reject the term lexical aspect for the unwanted

connotation that *Aktionsart* is determined by the inherent meaning of the verb where in

---

[265] See Comrie, *Aspect*, 61–62.

fact it involves a web of other co-textual factors. I have found the terms situation type or

event/eventuality type more helpful and accurately describe the philosophical root of

what has been called *Aktionsart* or lexical aspect in Biblical studies.[266]

I consider that the aspect/*Aktionsart* distinction should be articulated in a two

dimensional framework. However, I refrain from using aspect or aspectuality as the

umbrella term to describe both categories together, nor do I want to label the non-

morphological category *Aktionsart* as aspect (whether it is lexical or situation aspect). I

also choose to keep a distance from most of the characterizations of the aspect/*Aktionsart*

distinction (subjective vs. objective, semantic vs. pragmatic, grammatical vs. lexical) but

maintain a simple morphological (grammatical aspect) vs. co-textual/contextual

(*Aktionsart*) distinction.[267] In fact, one of the objectives of this study is to demonstrate the

complexity of the composition process of *Aktionsart,* a process that involves multiple

semantic, syntactic, and pragmatic factors which takes place at multiple levels of

analysis. This differs greatly from the discussion of grammatical aspect, which is

primarily a matter of verbal morphology.

---

[266] For situation type, see Smith, *The Parameter of Aspect*, 17–38. For event type, see Halliday and Matthiessen, *Construing Experience*, 466–506.

[267] I will come back to discuss some of these characterizations in chapter 5.

1.5 CONCLUSION

This chapter has done two things in the course of surveying both general linguistic works as well as studies of Koine Greek. First, it has outlined some of the critical issues in aspectology today, both in cross-linguistic studies and in Koine Greek studies. Second, it has provided some groundwork that will be essential for my analysis of the relationship between the Greek perfective aspect and the semantic feature of telicity (chs. 2–5). Specifically, I have pointed out that one of the major issues in aspectology is nomenclatural confusions, and I have provided a brief historical survey of the two categories that are most relevant to this study: grammatical aspect and *Aktionsart*. I have also given an overview of some hypotheses concerning the relationship that exists between aspect and *Aktionsart*. Finally, this chapter supplies the definitions, assumptions, and logical reasonings that are presupposed in this study.

CHAPTER 2 APPROACHES TO EVENT TYPOLOGY

2.1 INTRODUCTION

As mentioned in the previous chapter (1.3), Vendler's ontological analysis of

event typology occupies a crucial place in discussions of *Aktionsart*. In this chapter, we

will look at linguistic developments in the post-Vendler era. Olga Borik observes the

influence of Vendler's work on the development of aspectology, saying that "[t]here is

hardly any work on or related to aspect that does not refer to Vendler's well-known

classification. What varies is the attitude of the authors, ranging from full acceptance to

sharp criticism."[1] This chapter will provide an overview of post-Vendler developments in

event typology that focuses on the acceptance end of this spectrum, surveying and

evaluating works in both general linguistics and Koine Greek studies.

---

[1] Borik, *Aspect and Reference Time*, 31–32.

To begin with (2.2), I will focus on the three general trends in the development of event typologies: the addition of new (sub-)classes, the identification of lexical semantic features, and the formulation of diagnostic criteria. I will then look into how these developments have been employed the study of Koine Greek (2.3). Finally, I will critically evaluate models of Greek *Aktionsart* that rely on Vendler's framework (2.3.3) and then explain what an empirical approach to Greek event typology should look like (2.4).

2.2 POST-VENDLERIAN DEVELOPMENTS IN EVENT TYPOLOGY

As mentioned repeatedly last chapter (1.3.3.2), Vendler's classification of action types is philosophical in nature and does not adopt a linguistic approach to class assignment. However, since Vendler's work was first introduced into linguistic discussion in the 1970s, many have tried to formulate class assignment in a systematic and analytical manner. These works attempt to answer several questions that arise from the effort to provide linguistic realizations for the distinctions Vendler made: Are the original four classes inclusive enough to capture all event types or situation types? Which linguistic

components should be considered in the formulation of classes? What are the rules that

govern the assignment of individual constituents to classes?

A common thread here concerns the rules or criteria that govern how verbs or

verb phrases should be classified and what to do when exceptions arise. Linguists have

revised and extended Vendler's taxonomy. Semanticists have come up with a myriad of

rules to govern class assignment. Regarding exception handling, some have modified

Vendler's framework by adding more classes and/or sub-dividing the original four.

Others have tried to identify the underlying semantic features that define the classes. In

the following sections, I will discuss each of these trends in turn.

2.2.1 Alternative Construals and Class-Expansions

Vendler does not provide formal linguistic definitions for his four classes.[2] From

what we can gather from his work, the distinction between a state verb (know, love, etc.)

and an activity verb is that a state verb is not a process going on in time, i.e. a process

"going on at present consisting of phases succeeding one another in time."[3] Both activity

---

[2] In my opinion, it is unfair to criticize Vendler for the lack of linguistic descriptions in his work since it was not his intention to engage in linguistic discussion (See note 117 on page 51). It is thus understandable if one comes up empty from his work looking for argument to support the usefulness of the taxonomy in linguistic discussion. The burden of proof is rather on subsequent semanticists who adapt Vendler's work in linguistic descriptions.

verbs and accomplishment verbs are used to describe processes.[4] An Activity is a process

without a terminus (e.g. running) while an Accomplishment is realized only when the

endpoint is reached (e.g. draw a picture).[5] To put it another way, an Activity goes on in

time homogeneously, i.e. being realized in every phase of the time it takes place, whereas

an Accomplishment does not.[6] Achievements (e.g. to reach the mountain top), on the

other hand, are neither states nor processes, but a terminus preceded by a process.

Vendler also groups state verbs and achievement verbs together since both classes do not

indicate processes going on in time. While Achievements occur only in a single moment,

States last for a period of time.[7] On the other hand, States can be paired with Activities

since both call for a non-unique and indefinite time period/instance while

---

[3] Vendler, "Verbs and Times," 144–45.

[4] A word on the use of caps. In this work I capitalize the first letter of five classes: States, Activities, Accomplishments, Achievements, and Semelfactives when they are used to indicate the classes and small letters when they are used as an adjective, i.e. an activity verb, accomplishment verbs, etc.

[5] See Vendler, "Verbs and Times," 145–46.

[6] Vendler compares "running" (activity) with "running a mile" (accomplishment). When it makes sense to say that a runner runs in every phase of the time, it is wrong to say that a runner runs a mile in every period of the process. See Vendler, "Verbs and Times," 146.

[7] See Vendler, "Verbs and Times," 146.

Accomplishments and Achievements both involve unique and definite time period/ instance.[8]

Although the Vendlerian classes remain the most widespread point of departure in linguistic literature, other similar taxonomies have been proposed over the years. Several years after the publication of Vendler's work, Anthony Kenny (1963) proposed a taxonomy similar to Vendler's.[9] There are three classes of verbs in Kenny's taxonomy: static, activity and performance. The distinction between static verbs (States) and activity verbs is very similar to Vendler's. Kenny's performance verbs represent actions that are specified by their ends, which can be seen as merging Vendler's Accomplishments and Achievements into one class. A decade later, Mourelatos proposed a scheme of verb-types that merges the two into one trichotomy of eventualities: States, Processes and Events.[10] He contends that both Vendler's and Kenny's frameworks are too narrow both linguistically and ontologically. In Mourelatos's model, Vendler's Accomplishments (developments) and Achievements (punctual occurrences) are clearly identified as a

---

[8] See Vendler, "Verbs and Times," 149.

[9] See Kenny, *Action, Emotion, and Will*, 125.

[10] See Mourelatos, "Events, Processes, and States," 415–34 The three labels are originally from Comrie. See Comrie, *Aspect*, 13, 48–51. Emmon Bach was the one who coined the cover term eventualities for the tripartition. See Bach, "On Time, Tense, and Aspect," 63–81.

secondary division. They are classified as a subclass under Kenny's performances class,

which goes under the label of events. Mourelatos also makes a distinction between States

and non-States in order to resolve "the agentivity bias" in Vendler's framework.[11]

Mourelatos's trichotomy framework is compared with the taxonomies of Vendler and

Kenny in the following figure:

Table 2.1: Three Classification Frameworks: Vendler, Kenny, and Mourelatos

Vendler	States	Activities	Accomplishments	Achievements
Kenny	States	Activities	Performances	
Mourelatos	*STATES*	Non-States		
		PROCESSES	*EVENTS*	
			Developments	Punctual Occurrences

Mourelatos's framework can be represented graphically as follows:[12]

---

[11] Verkuyl considers this revised model as Mourelatos's main contributions to the discussion. See Verkuyl, *A Theory of Aspectuality*, 50–51. More on this in the next section.

[12] This is borrowed from Verkuyl, *A Theory of Aspectuality*, 51.
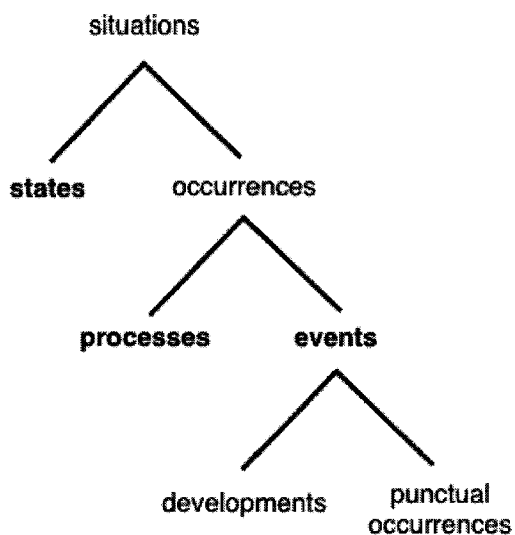
Figure 2.1: A Tree Diagram of Mourelatos's Framework

Similar to Mourelatos, Verkuyl also uses a tripartition in his work, but he applies

it to eventualities instead of verb classes.[13] In doing so, he also includes other clausal

constituents in his discussion instead of focusing solely on the verb.[14] However, the effort

of consolidating or combining various frameworks to favor a unifying model ends here.

Since the late 1970s, semanticists have spent a considerable amount of time and energy

adapting Vendler's classes, but a major obstacle has been the handling of exceptions. In

---

[13] See Verkuyl, *A Theory of Aspectuality*, 19, 67.

[14] In Verkuyl's framework, the tripartition of states, processes and events are construed by combining semantic information expressed by the verb AND its argument Noun Phrase(s). See Verkuyl, *A Theory of Aspectuality*, 19.

fact, Vendler himself already noticed quite a few verbs that, when used in certain contexts, do not fit into his classification scheme. He thus clarifies that a verb "exhibiting a use fairly covered by one schema [class]" can be "described in terms of the other schemata [classes]."[15] As semanticists were confronted with more and more peculiar cases, it became clear that the alleged anomalies could not be disregarded so easily. Although various approaches were used to handle irregularities, class expansion is definitely the most popular approach.[16]

I will start with the achievement class, which is a class of verbs that represent situations consisting solely of a terminus. Comrie notes that for an achievement verb to be distinguished from an accomplishment verb, the achievement verb cannot have a preceding process that itself is part of the same event.[17] This implies that an Achievement is either a climax to some other process or the inception of some other process or state.[18]

---

[15] Vendler, "Verbs and Times," 143–44.

[16] I will come back to this and discuss some other approaches (semantic features, aspectual potential, etc.) in the next section and later offer my own approach in chapter 5.

[17] See Comrie, *Aspect*, 47–48.

[18] See Mourelatos, "Events, Processes, and States," 416. Similarly, Kenny's performance verbs are also defined by their relationship with other processes: they are brought to the end by States/static verbs or another performance verb that would ultimately bring an action to its end. For example, washing a car is to bring about the car to the 'clean state.' See Kenny, *Action, Emotion, and Will*, 124–25.

Following Comrie, however, semanticists posited a more delicate level of description for single instance actions and further divided Achievements into two sub-categories: independent single-instance happenings and event culminations.[19] Moreover, it is common in today's literature to find a fifth class, the Semelfactive, in contrast to the achievement class. The semelfactive class is a class of verbs that refers to instantaneous events that are not related to other processes (e.g. coughing, knocking, etc.).[20] A Semelfactive can be compared to an Achievement that is not preceded by another process and that does not bring about another process or state.[21] While the Semelfactives are

---

[19] Lauri Carlson was the first to divide Achievements into two sub-classes: "momentaneous" and "achievement proper" in her analysis of the English verbal system. See Carlson, "English Bare Plural," 36–39. Many soon followed suit and adapted Carlson's model in their works. Emmon Bach was the first to construct theoretical semantics to the domain of eventualities using Carlson's framework. See Bach, "The Algebra of Events," 5–16. Fanning also adapts a similar taxonomy of Koine Greek verb classes comparable to Carlson's. He labels the two sub-classes of Achievements: Punctual (without a preceding process) and Climax (with a preceding process). See Fanning, *Verbal Aspect*, 154–55. See below (2.2.2.1) for more detail.

[20] The label possibly originated from Slavic linguistics. In Russian, for example, there is a class of verb (with suffix -nu) which refers to situation that normally would not be viewed as having any duration in non-iterative instance. Comrie is probably the first to introduce this term to the discussion of aspect. See Comrie, *Aspect*, 42–43. Carlota Smith is the one who popularized the semelfactive label in her discussion of situation types. Moens and Steedman call it point expression. See Smith, *The Parameter of Aspect*, 28–30 and Moens and Steedman, "Temporal Ontology," 15–28. See also Olsen, *A Semantic and Pragmatic Model*, 46.

[21] Lauri Carlson uses the label 'momentaneous' for this kind of action. William Croft, on the other hand, recognizes actions such as coughing, which is usually classified as semelfactive, can have the potential to be construed as either cyclic/iterative or momentaneous. He chooses to call it 'cyclic action' to highlight the cyclic nature/potential of the action. See Carlson, "English Bare Plural," 39 and Croft, *Verbs*, 40.

almost always associated with cyclic or repeated actions, semanticists also want to

distinguish between repeatable (e.g. to break a repairable machine) or reversible (e.g. to

open a door) Achievements and non-repeatable Achievements (e.g. to break a window).[22]

In sum, Vendler's Achievements now constitute as many as four distinct classes:

culminations, semelfactives, reversible achievements, and non-repeatable achievements.

The achievement class is one of the more problematic classes in Vendler's

scheme, but it is not the only class in the original four that has undergone sub-divisions.

The state class is also considered by some to be dividable into multiple subclasses.[23] One

way to divide the Vendlerian States is to distinguish between transitory/contingent States

and permanent States.[24] Greg Carlson distinguishes between object-level state verbs,

which denote states that remain true all the time (such as properties that are predicated of

an individual, e.g. being clever, being brave, etc.) and stage-level state verbs, which

denote States that are only true for a certain stage(s) of an individual, i.e. can be

---

[22] See Croft, *Verbs*, 43, 60 and Talmy, "Lexicalization Patterns," 77–78.

[23] See, for example, Carlson, "English Bare Plural," 444–55; Carlson, "Aspect and Quantification," 31–64; Bach, "The Algebra of Events," 6; Klein, "Time-Relational Analysis," 684–86; Croft, *Verbs*, 41–42. Emmon Bach considers the ontological status of States more obscure than other classes of verbs and their relation to temporal notions seems unclear. See Bach, "On Time, Tense, and Aspect," 71.

[24] For the discussion of the contingent state, see Comrie, *Aspect*, 103–05.

interpreted as having an inherent end (e.g. sick, drunk).[25] However, this further division

seems to be more about properties that are predicated of individuals than about a

distinction between different States. There have also been attempts to distinguish between

being States and non-being States, and Croft points out another distinction that is made

among permanent States: inherent (e.g. one's ethnicity) and acquired (e.g. a cracked

glass).[26] Acquired States assume a preceding process, probably an Achievement, which

has brought the State into existence.[27]

Semanticists also struggle to deal with various processes that seem to allow

alternative construals as Activities and Accomplishments. Dowty recognizes a class of

activity verbs that involve a scalar and measurable (incremental or decremental) change

---

[25] See Carlson, "English Bare Plural," 446–49. However, some semanticists have found the notion of a telic state difficult to maintain since a state by definition does not involve change. See, for example, the discussion in Olsen, *A Semantic and Pragmatic Model*, 49.

[26] See Croft, *Verbs*, 42. The acquired state is similar to Klein's 1-state content (see 1.3.2.2), where the current State only comes to existence after a certain point in time (e.g. the extinction of a particular species). See Klein, *Time in Language*, 83–85.

[27] Croft also mentions a third type of state (apart from permanent and transitory), the point state. It denotes a state that lasts for only a point in time (e.g. it is ten o'clock, or the train is on time). It is first pointed out by Mittwoch but has not been taken up by subsequence works. See Croft, *Verbs*, 43, 59.

that may or may not lead to an end.[28] He concludes that these verbs can be construed as Activities or Accomplishments according to context and thus makes the classification ambivalent. Other scholars disagree and distinguish instead between direct unbounded Activities, which consist of a measurable change over time but without an inherent end, and non-directed unbounded Activities, which is Activity proper.[29] However, there are also verbs (or verbs phrases) that have an inherent end but without a measurable or incremental process leading to the end (e.g. proving a mathematical theorem). This creates another problem for the Vendlerian classification scheme since these verbs cannot fit nicely into any of the Vendlerian non-State classes.[30] As a result, some opt for adding yet another class of Achievements for these non-state verbs.[31] To further complicate the

---

[28] Verbs such as cool, age, sink, when used in different contexts, can denote either an Activity or an Accomplishment. For example, cooling down a bowl of soup can be argued to have an inherent end, i.e. when it reaches a certain temperature, but aging a bottle of wine can theoretically lasts forever. Dowty labels these verb degree Achievement. See Dowty, *Word Meaning and Montague Grammar*, 88–90.

[29] Croft cites Lauri Carlson's dynamic class, Talmy's gradient verbs, Bertinetto and Squartini's gradient completion verbs and his own directed Activity as examples. However, I am not sure if these classes (or sub-classes) are all referred to the same class of verbs. For example, the label "gradient completion verbs" seems to refer to the uses of these verbs in telic contexts, which is different from "directed activity," which captures only the instances of these verbs in non-telic contexts. See Croft, *Verbs*, 43–44.

[30] It is not an Activity since it has an inherent end. It is not a normal Achievement since it is not punctual. It cannot be classified as an Accomplishment since the end is not reached in an incremental/ measurable fashion. See Croft, *Verbs*, 41.

[31] Croft calls this runup Achievement while Rothstein calls it progressive Achievement. See Croft, *Verbs*, 41.

issue, there is also the case of the "accomplishment use of activity verbs,"[32] meaning that

some activity verbs, particularly verbs of motion, consumption and creation, can also

have an accomplishment construal when the direct object is a specified entity or

quantity.[33] It should not come as a surprise that some linguists have extended Vendler's

classes to capture these uses of activity verbs.[34]

Unquestionably, class expansion/sub-division is a major trend in recent literature.

If one considers all of the new classes proposed in the past three decades, there are as

many as ten sub-classes extended from Vendler's original four. There will likely be

further divisions and expansions.[35] Unfortunately, it is not at all clear in many cases

whether these sub-divisions are ontologically or linguistically driven. Most of the more

delicate sub-divisions seem to have little to do with the temporal characteristics of verbs

or verb phrases, being preoccupied instead with how particular verbs are used in

---

[32] Van Valin, *Syntax-Semantics Interface*, 32–33.

[33] For example, William ate (activity) vs. William ate two apples (accomplishment).

[34] See, for example, Van Valin's active accomplishment class. Croft, on the other hand, disagrees with Van Valin and considers his expansion purely motivated by the decompositional analysis in Role and Reference Grammar. See Van Valin, *Syntax-Semantics Interface*, 32–34 and Croft, *Verbs*, 38–39.

[35] If one counts the causative counterpart in Van Valin's modified Vendlerian scheme (Vendler's four plus semelfactives and active accomplishments) as new types, then there are twelve types in total in his framework. See Van Valin, *Syntax-Semantics Interface*, 34. Croft, on the other hand, lists eleven classes in total. See Croft, *Verbs*, 44.

association with various co-textual factors.[36] Instead of describing a language system, semanticists seem to be describing all of the different ways that people can talk about different kinds of actions—which by itself is an ontological exercise rather than a linguistic one.[37]

As mentioned above, one reason for the multiplication of verb classes is class shifting, i.e. verbs that are classified into one type but that shift to another type when used in certain contexts. An oft-cited comment from Dahl articulates this problem succinctly and is worth quoting here again:

> [W]e encounter the problem of separating out the 'inherent aspectual meaning' from contextual influences—after all, every occurrence of a verb is in a definite context, and there is no obvious way of determining what a 'neutral aspectual context' would be like. Also it turns out that there is an astonishing flexibility in how individual verbs may be used.[38]

---

[36] Except maybe the semelfactive class, which ties to temporal characterizations such as iterative, cyclical, or momentaneous.

[37] For example, the example of how the verb 'break' could be used in different contexts to denote a repeatable (to break a repairable machine) and non-repeatable achievements (to break a window) has almost nothing to do with the temporal characteristic of the verb 'break.' It can rather be considered a classification of objects, i.e. what is repairable and what is not. See Croft, *Verbs*. A similar conclusion could be said of Carlota Smith's approach to classify basic and derived situation types. Although she emphasizes in her work that her situation types function as linguistic categories, she admits that general world knowledge or pragmatic knowledge is essential to readings or interpretations of particular derived situation types. See Smith, *The Parameter of Aspect*, 5, 50–51, 59. More on Smith's work on section 2.2.3 below.

[38] Dahl, *Tense and Aspect Systems*, 26–27.

Dahl's remark explains why some works in the Vendlerian tradition have tried to stay away from verb classifications and have extended the basic unit of analysis to the verb phrase or even some larger unit.[39] Instead of classifying verbs into an event types, these linguists attempt to describe the semantic features of verb classes or predicate types.

2.2.2 Lexical Semantic Features

In an earlier discussion (1.3.3.2), I observed that the ontological nature of Vendler's classification makes it important for linguists who adopt his four classes to treat class assignment in a systematic and analytical manner. One popular way of doing this is to describe which semantic components or features are lexicalized in which verbs and how these features affect class assignment.[40] The results of this approach, however, are

---

[39] See, for example, Dowty, *Word Meaning and Montague Grammar*, 62; Mourelatos, "Events, Processes, and States," 421; and Croft, *Verbs*, 37. Smith extends the basic unit of analysis for situation type to what she calls the verb constellation, which basically consists of the main verb, its internal and external arguments and adverbs of a sentence. See Smith, *The Parameter of Aspect*, 4.

[40] See Filip, "Aspectual Class and *Aktionsart*," 1192. See also Verkuyl's lament on the lack of attention to these features in his survey of works in the 1970s-80s in Verkuyl, *A Theory of Aspectuality*, 66. The tide has changed apparently in the 90s. See, for example, the work of Olsen, whose compositional approach to aspect is entirely grounded on the interaction of semantic features at different levels of linguistic analysis. See Olsen, *A Semantic and Pragmatic Model*, 25–116.

varied.[41] The classifications are initially similar to Vendler's, but they gradually divert

from his scheme and become more complex and subjective.

As mentioned above, the basic distinction between the four time schemata can be

derived from two semantic features [±Process] and [±Definite].[42] For example, States and

Achievement are grouped together because neither class involves a process that takes

place over time [-Process], but States and Activities are grouped together because neither

class involves a unique, definite, bounded temporal unit [-Definite]. Note that these

descriptions are ontological, i.e. not a description of the linguistic realization of said

feature.

Treating the four classes on equal footing, Verkuyl contends that the four classes

can be identified by these two features on the ontological level.[43] He labels these two

---

[41] See, for example, the summary in Verkuyl, *A Theory of Aspectuality*, 65. See also Platzack, *Semantic Interpretation*, 67–121; Van Valin, *Syntax-Semantics Interface*, 22–49; Smith, *The Parameter of Aspect*, 20.

[42] These labels are borrowed from Verkuyl. Vendler does not provide a formal definition for his classes or features. For his exact wording, see See Table 1.1 on page 52. See Verkuyl, *A Theory of Aspectuality*, 34–35.

[43] However, it is the brief description of the tests and criteria that Vendler uses to distinguish these classes linguistically that Verkuyl has taken issue with. See next section for more detail. See Verkuyl, *A Theory of Aspectuality*, 34–46.

criteria Continuous Tense Criteria (CTC) and Definiteness Criteria (DC) respectively.

Under his partition, the classes are organized in a 2x2 matrix:[44]

Table 2.2: Verkuyl's Criteria for Vendler's Classes

	-Process	+Process
-Definite	STATE	ACTIVITY
+Definite	ACHIEVEMENT	ACCOMPLISHMENT

However, even though in theory these two criteria should be sufficient to

determine class assignment, Vendler adds another criterion on top of the DC to further

distinguish between States and Achievements, pointing out that Achievements "can be

predicated only for single moments of time" while States can be predicated "for shorter or

longer period of time."[45] As a result, another parameter is introduced into the model. The

following table summaries the partition of the four classes according to Vendler's four

parameters:[46]

---

[44] See Verkuyl, *A Theory of Aspectuality*, 34–35. Rothstein has a similar partition of Vendler's classes with different parameters ([stages], [telic]). She argues, rightly in my opinion, that an efficient feature-based system of verb classes should be able to predict four classes by only two parameters. See Rothstein, *Structuring Events*, 183–84.

[45] Vendler, "Verbs and Times," 146.

[46] The [±Momentary] label is borrowed from Verkuy and Mourelatos. See Verkuyl, *A Theory of Aspectuality*, 65.

Table 2.3: Semantic Features and Vendler's Four Classes

	Process	Definite	Momentary
States	−	−	−
Activities	+	−	−
Accomplishments	+	+	−
Achievements	−	+	+

Verkuyl is not the only one who formalizes Vendler's taxonomy using the

presence or absence of particular semantic features. However, the identification and

definition of these features often involves a high degree of subjectivity that affects how

actual instances are assigned to different classes. For instance, Comrie lays out his

linguistic framework using three semantic features.[47] Instead of starting with Vendler's

four classes, he describes the internal structure of a situation in terms of three pairs of

semantic oppositions: punctual vs. durative; telic vs. atelic and state vs. dynamic. First,

Comrie points to languages that have a special class of verbs which can only refer to

punctual or semelfactive situations to substantiate punctuality as a valid linguistic

category.[48] As the labels imply, the distinction between a punctual situation and a

---

[47] See Comrie, *Aspect*, 41–51.

[48] He cites Slavic languages such as Russian and Hungarian as examples with a marked category of semelfactive class of verbs. See Comrie, *Aspect*, 43–44.

durative situation depends on whether the situation endures over time. Second, Comrie

defines a telic situation that is very similar to Vendler's Accomplishment, in that a telic

event consists of both a process leading up to a terminus as well as the terminal point.[49]

Third, he points out that the key to distinguishing states and dynamic situations is to

determine whether or not the situation involves change, i.e. requries an influx of energy.[50]

Another way of organizing Vendler's four classes is proposed by Platzack, who

uses three dimensions that are similar to those of Comrie: change, boundedness (in time)

and durativity.[51] The classes can be tabulated in the following manner so as to provide a

comparison with Vendler's scheme:[52]

---

[49] See Comrie, *Aspect*, 47.

[50] According to Comrie, a state will retain its status quo unless something happens (e.g. energy input) to change that state. On the other hand, a dynamic situation needs a continual influx of energy in order to maintain the status quo. See Comrie, *Aspect*, 48–51. Unfortunately, it is not clear in Comrie's work how this feature of change is defined, and as a result it is difficult to understand how physical activities such as standing or sitting—which are considered state situations by Comrie—can be said to require *no* energy in order to be sustained. From a physiological point of view, standing is not something that can be done "without effort." It certainly involves some kind of energy to hold a physical body in an upright position.

[51] There are certain dependencies in Platzack's dimensions. For example, no change in time implies unbounded and durative. See Platzack, *Semantic Interpretation*, 67–118.

[52] The makeup of the two tables is very similar. The only difference is between the [Process] and [Change] features. As suggested by Verkuyl, whereas it takes only two features: [Process] and [Definite] to distinguish between the four classes in Vendler's model, it takes all three features in Platzack to uniquely identify the classes. For a similar proposal, see Mourelatos, "Events, Processes, and States," 422–24.

Table 2.4: Comrie's Semantic Features and Vendler's Classes

	Change	Bounded	Duration
State	−	−	+
Activity	+	−	+
Accomplishment	+	+	+
Achievement	+	+	−

These descriptions from Comrie and Platzack illustrate three trends that are

common in works on event typology that adapt the Vendlerian tradition: (1) departure

from the original; (2) definitional subjectivity; and (3) uniqueness of labels. First,

although most of these proposals identify Vendler's fourfold division as the starting point

of their discussion, they often depart from Vendler's features. In fact, most of the

subsequent proposals employ features similar to Comrie's threefold division of verbal

situation: dynamicity, telicity, and durativitiy, instead of the features proposed by

Vendler [±Process, ±Definite, ±Momentary]. Although the new features proposed by

Comrie seem very similar to, or at least compatible with, Vendler's features, when actual

instances are assigned to the resulting classes, it becomes clear that the classes defined by

Comrie are quite distinct from Vendler's original classes.

Take punctuality, for example. Comrie posits that punctuality and imperfectivity

are incompatible since, by definition, a punctual situation has no internal structure, i.e. is

not conceived of as lasting in time. But a corollary of this is that the use of an

imperfective verb to describe a punctual situation demands an iterative meaning, which

leads to an understanding of the Achievements/Accomplishments distinction that differs

significantly from Vendler's original proposal.[53] What is considered an Accomplishment

in Vendler's model is considered an iterative Achievement in Comrie's.[54]

Moreover, not all scholars are convinced that the punctuality/durativity feature is

necessary for class assignment.[55] Vendler's original intention for the [Momentary] feature

was to distinguish between States and Achievements, yet many who follow him employ

this feature instead to isolate a semelfactive class or to distinguish between

Accomplishments and Achievements.[56] Susan Rothstein questions whether Semelfactives

should stand on an equal footing with Vendler's four, giving two reasons for her rejection

---

[53] See Comrie, *Aspect*, 43.

[54] For example, Comrie considers that the VP "reach the summit" describes a punctual situation, since it only pertains to the terminus of an action. It is also considered as an Achievement in Vendler's terms [-Process, +Definite, +Momentary]. However, according to Comrie's interpretation of punctuality, the phrase "the soldiers are already reaching the summit" would only have iterative meaning, i.e. an iteration of individual acts of reaching the summit. Comrie would describe this as iterative Achievement whereas Vendler would identify this as an Accomplishment [+Process, + Definite, -Momentary]. See Comrie, *Aspect*, 41–43.

[55] See note 44 on page 125 and Verkuyl, *A Theory of Aspectuality*, 41.

[56] See, for example, Smith's [Durative] feature or Van Valin's [Punctual] feature. See Smith, *The Parameter of Aspect*, 20 and Van Valin, *Syntax-Semantics Interface*, 33.

of the Semelfactives.[57] First, subscribing to a 2x2 partition similar to that of Verkuyl, she

argues that adding a fifth class to the mix disrupts the rather elegant and sufficient 2x2

partition and creates "a conceptual problem."[58] Second, she disagrees with those who

grant the Semelfactives the status of a separate lexical category by pointing out that

Semelfactives do not necessarily have an internal structure that differs from the internal

structure of Achievements.[59] Rather, semelfactive events can be classified as Activities

that allow for both a simple activity reading and a semelfactive reading.[60] As a result of

these factors, Rothstein argues that Semelfactives should not be treated as a fifth class.

---

[57] See Rothstein, *Structuring Events*, 183–87.

[58] She also argues that it is rather inefficient to add another feature just for the sake of identifying one more class, since three features should be able to uniquely identify eight classes (2 to the power of 3). See Rothstein, *Structuring Events*, 184.

[59] Contrasting Carlota Smith, who argues that the Semelfactives are atelic Achievement, Rothstein points to the difference in the internal structure between Achievements and Semelfactives. She contends that any semelfactive event such as a wink, or a knock on the door, consists of a series of movements which are part of the event. This implies that these events involve a starting point and an end point which does not overlap or nearly overlap in time. This suggests that the Semelfactives should not be considered as instantaneous or near-instantaneous events and thus differ from Achievements. See Rothstein, *Structuring Events*, 185 and cf. Smith, *The Parameter of Aspect*, 46–48.

[60] Rothstein uses the temporal adverbial "once/twice" to differentiate the semelfactive activities from activity proper. That a phrase like "he skipped twice" can mean either he jumped over the rope twice (Semelfactive/iterative) or had two turns of jumping (Activity) suggests that it is different from a phrase like "he ran," which only allows the latter reading. See Rothstein, *Structuring Events*, 186–87. Smith, on the other hand, would classify such a phrase as a multiple-level activity under her principle for interpreted situation type shifts (principle of external override), which lets the adverbial feature (durative for this example) override the value of the verb constellation (semelfactive). See Smith, *The Parameter of Aspect*, 53.

It is not difficult to see from the above discussion that there is a high degree of

subjectivity among different proposals and that this complicates matters even when

similar labels are being used. Still, another semantic feature will be discussed. Recall that

Comrie defines a telic event to be a terminus plus a process leading up to the terminus.

His understanding of telicity then leads him to reject the achievement class as denoting a

telic event, since an Achievement consists only of a terminus but not the process leading

up to it. This differs from Vendler's understanding of Achievements, which are clearly

described as a bounded and definite event.[61] As a result, when it comes to the

classification of individual instances, we once again see the same verb (or verbal

situation) being assigned to different classes due to differences in the definitions of

underlying features.[62]

Finally, there is the issue of labeling features. Since Vendler never clearly

identifies his features or formally defines them, scholars have had to come up with

---

[61] See Vendler, "Verbs and Times," 149.

[62] For example, Vendler considers the English verb *die* as an achievement verb without reservation. Comrie, on the other hand, considers the verb a telic verb and thus it cannot be an achievement verb since it includes both the terminus (dead) and the process leading to the terminus ("he is dying"). See Vendler, "Verbs and Times," 150 and Comrie, *Aspect*, 47. Following prototype theory, Smith suggests that this may due to cross-linguistic variations. However, in this case we have two scholars disagreeing on class assignment in the same language (English). See Smith, *The Parameter of Aspect*, 13–14.

linguistic descriptions of them. Initially, most scholars worked with Vendler's four classes (under the original labels) and used no more than three features for identification, but their labeling of the features lacked consistency.[63] It was not until the late 1980s or early 1990s that a level of consistency was attained in naming semantic features.[64] The relevant labels can be summarized as follows:[65]

(1) Dynamicity/Stativity: The transition from one point to another, usually, but not always, focusing on whether an action is going on in time or not and/or whether the content involves a change of state (States vs. Non-States); and

(2) Durativity/Punctuality: For bounded content, the length of the interval, i.e. instantaneous or extended (Achievements vs. others); and

(3) Telicity/Atelicity: Whether the content has an initial and a final boundary, i.e. whether the interval is definite (Activities vs. Accomplishments), sometimes the label boundedness is used.

---

[63] For example, see Verkuyl's summary in Verkuyl, *A Theory of Aspectuality*, 65.

[64] Compare for example, the works cited in Verkuyl, *A Theory of Aspectuality*, 33–67 (Hoeksema, Mourelatos, Dowty and L. Carlson, all published before early 1980s) and more recent ones such as Olsen (1994), Smith (1991/1997), Van Valin (2005), and the works cited in Walková, "Dowty's Aspectual Tests," 498–99.

[65] See Verkuyl, *A Theory of Aspectuality*, 65–66. See also Verkuyl's summary of other characterizations of the features in his work. See Klein, "How Time is Encoded," 59 for another such generalization, which has five core features instead of three. See also Dahlgren, *Naive Semantics for Natural Language Understanding*, 85; Smith, *The Parameter of Aspect*, 19–20; Olsen, *A Semantic and Pragmatic Model*, 31–45; Bertinetto and Delfitto, "Aspect vs. Actionality," 190; Van Valin, *Syntax-Semantics Interface*, 33 and below (3.3.1) for a longer discussion on telicity.

Notice that these labels imply a choice in naming due to the complementary nature of the semantic concepts. For instance, [+dynamic] can also be described as the lack of stativity, i.e. [-stative], so that one often finds variations in the labeling of features in recent works.[66] Arguably, however, the naming of these features has little to do with tangible linguistic facts, being rather an exercise in naming abstract semantic categories (classes) with other abstract semantic categories (features). Technically, we could come up with yet another level of abstraction that uses even less abstract semantic components to describe the features.[67] The point here is that unless we can finally point to some tangible linguistic evidence in order to ground these labels, what we have at the end is just subjective ontology, i.e. a definition of a feature that is nuanced differently by different authors, each according to their perception of certain ontological features. This brings us to the last trend that characterizes post-Vendlerian typologies, namely, the

---

[66] For example, Smith seems to use [Dynamic] and [Static] interchangeably in her work while Olsen uses [Dynamic] exclusively. See Smith, *The Parameter of Aspect*, 18, 20 and Olsen, *A Semantic and Pragmatic Model*, 25–51. A more extreme case can be found in Van Valin, where he uses both features ([±dynamic] and [±static]) for class distinctions in his framework. See Van Valin, *Syntax-Semantics Interface*, 33.

[67] For example, instead of defining dynamicity as [±dynamic] or [±static], we can define it as [±change] and likewise define telicity as [±bound] and durativity [±time]. However, unless we can link this definition to linguistic evidence, the whole exercise is only a matter of glossing.

development of class diagnostics and the description of linguistic realizations for semantic features.

2.2.3 Diagnostics and Linguistic Realizations

Class diagnostics can be traced back to the work of Vendler.[68] Recall from above the two classifying criteria (CTC and DC) suggested by Verkuyl, by means of which Vendler's four classes can be uniquely identified in connection with their temporal profiles. The tests that Vendler provides to facilitate class assignment can be analyzed according to the class grouping. These classification schemes rely heavily on English grammatical rules and native speaker's intuition. For example, the CTC involve whether a verb, in typical cases, can take continuous tense or not. One of the important testing criteria is whether the verb can have a progressive form.[69] In English, the [+Process]

---

[68] Such as the continuous tense test. See Vendler, "Verbs and Times," 144. See also section 1.3.3.2

[69] See Vendler, "Verbs and Times," 144–48. In addition to the progressive form test, Vendler also suggests other criteria that involve restrictions on co-occurrence of verbs with certain adverbials or verbs to determine class grouping similar to the [Process] feature. First, there is the so-called *do*-criterion (i.e. the answer to a *do*-question expresses an intention for activity verbs but not state verbs) as well as the test with the verbs *start* and *stop* (i.e. only the [+Process] verbs pair with the start/stop verbs). In my opinion, however, some of the cases that Vendler rejects can be argued both ways. For example, according to Vendler, it makes sense to talk about starting and stopping an Activity (such as running, swimming) and an Accomplishment (e.g. drawing a circle) but not a State (knowing) nor an Achievement (recognizing). However, a statement like "he is starting to recognize the house" to describe someone recovering from memory loss seems fine to me.

classes (Activities and Accomplishments) can take on the progressive form and produce

acceptable sentences, but the same cannot be said for the [-Process] classes (States and

Achievements), which sound awkward in typical usages.[70] Vendler also introduces tests

for the [±Definite] feature. The idea is to test whether the durations expressed by

different forms of time adverbials are compatible with the definite event [±Definite]

described by verbs or verb phrases of different classes.[71] In theory, these semantic

features should enable one to distinguish between different classes of actions, but the

linguistic realizations of these features are so complex that, in practice, it is very difficult

to define simple linguistic tests to clearly distinguish between classes of verbs (or VPs).

In fact, many of Vendler's tests for the CTC and DC are later shown to be "associated

---

[70] For example, achievement verbs in progressive form such as recognizing, reaching, winning are less common and sometimes not acceptable in a sentence (e.g. she is recognizing him), compared to activity verbs such as running and swimming, which is acceptable most of the time.

[71] See Vendler, "Verbs and Times," 145–46. Verkuyl calls these the FIT-criteria, which stands for the for-adverbial, in-adverbial and the verb "take." See Verkuyl, *A Theory of Aspectuality*, 40–43. Activity verbs [-Definite] take for-adverbials (e.g. a durative prepositional phrase such as *for any hour*) but not in-adverbials (e.g. a completive prepositional phrase such as *in an hour*). For example, comparing the two sentences: 'William ran for an hour.' versus 'William ran in an hour,' the latter is considered as peculiar. On the other hand, Accomplishments [+Definite] allow completive adverbials but marginally take durative adverbials. The acceptability of a phrase such as 'William ran a mile for an hour' is questionable.

with an unclear amalgamation of different factors such as agentivity and more purely

temporal aspects."[72]

Anthony Kenny first came up with comprehensive linguistic (English) diagnostics

to aid class assignment.[73] Similar to Vendler, Kenny's work can also be characterized as a

philosophical endeavor. He states from the outset that his goal is to develop rules to

distinguish types of action verbs in which their "differences are of philosophical

importance."[74] As a result, his diagnostic tests are, like those of Vendler, heavily

dependent on English grammatical rules. As mentioned above, Kenny's taxonomy has

three classes instead of four and in turn he has three sets of tests to identify his three

---

[72] Verkuyl, *A Theory of Aspectuality*, 45. For example, Vendler argues that the acceptability of agentive modification by adverbials such as "deliberately" or "carefully" can be used to distinguish the [+Process] classes (e.g. deliberately pushed the cart; carefully drew a circle) from [-Process] classes (e.g. deliberately knew the answer, carefully found a pen). However, Verkuyl has shown that this test fails with impersonal subjects (e.g. "the sun had *deliberately evaporated the water in the pond," where the VP "evaporate the water in the pond" should be classified as an Accomplishment, a [+Process] class) and is in fact a test for voluntary agency rather than with continuous tense. Similarly, Verkuyl has also shown that the progressive form test is in fact used to cover two semantic factors: agenetivty and progressivity and each factor by itself is not tied up with the use of the progressive form. See Verkuyl, *A Theory of Aspectuality*, 35–40 for a discussion of the problem of other Vendlerian tests.

[73] See Kenny, *Action, Emotion, and Will*, 123.

[74] Kenny, *Action, Emotion, and Will*, 120. Kenny's categories and tests are fairly similar to the discussion in Aristotle. See Kenny, *Action, Emotion, and Will*, 122, n.1.

classes.[75] Following the trend discussed above, more tests have been formulated during

the past three decades in order to accommodate class expansion and sub-division.[76] In

particular, Kenny's tests have been developed into David Dowty's diagnostic tests, which

are popular for classifying verb classes or situation types or to test temporal semantic

features.[77]

---

[75] For example, Kenny has three tests for Static verbs: (1) It cannot take the progressive form; (2) it cannot be frequentative; and (3) the use of the simple present form is true (in terms of a truth-conditional evaluation) only if the simple perfect is true. For a summary of the tests for all three classes, see Kenny, *Action, Emotion, and Will*, 123.

[76] Kenny's five tests were expanded to more than ten in Dowty. Van Valin has seven tests for his six classes (and their causative counterpart). In Walková's list she has 14 tests attributed to Dowty. See Dowty, *Word Meaning and Montague Grammar*, 55–71; Van Valin, *Syntax-Semantics Interface*, 34–42; and Walková, "Dowty's Aspectual Tests," 501–02. It is also interesting to note that although expansion is, according to my understanding, a general trend in classifications and diagnostics, the number of semantic features that are included in the discussion is fairly constant. Although some scholars do not go into detail regarding the feature of the sub-classes, most works surveyed in this study used at most four features to identify the classes. The reason might simply be a matter of mathematics. Even if one only has three features, the number of combinations would be enough to uniquely identify eight classes (2 to the power of 3). However, not all of these combinations are equally useful or meaningful in the discussion. See the discussion of Olsen's classes next section.

[77] This approach to event typology can be classified as a lexical semantic approach. Apart from Dowty's work, see Brinton, *The Development of English Aspectual Systems*; Olsen, *A Semantic and Pragmatic Model*; Smith, *The Parameter of Aspect*; Rappaport Hovav, "Lexicalized Meaning". Walková identifies two other approaches, the syntactic approach focuses on the semantic-syntactic interface, i.e. the role of syntactic features and structures in class/feature assignment. Carol Tenny's work is a good example of this approach. See Tenny, *Syntax-Semantics Interface*. The other approach identified by Walková is the formal approach. In which aspect/*Aktionsart* is defined by the notion of a scale with terminologies such as cumulativity, quantization or incrementality, etc. See Krifka, "Thematic Relations" and below (3.3) for more detail. See Walková, "Dowty's Aspectual Tests," 497.

The three most common types of diagnostic tests are: aspectual modification,

entailment criteria and adverbial modification.[78] The aspectual modification tests check

whether the VP in question is accessible to aspect modification, like the progressive test

for English stative verb, which tests for qualitative change (i.e. the [dynamic] feature).[79]

Entailment criteria include diagnostic tests that distinguish VPs through logical

entailments, testing whether a certain form of the VP entails a certain reading or

ambiguity. The progressive entailment test, for example, distinguishes activity VPs from

accomplishment VPs, by testing for telicity.[80] Finally adverbial modification tests check

---

[78] See Dowty, *Word Meaning and Montague Grammar*, 60. Walková's characterizations of Dowty's tests are also quite helpful. She categorizes Dowty's tests into three general types: (1) lexical co-occurrence tests; (2) grammatical co-occurrence tests; and (3) logical entailment tests. For a concise summary of all of Dowty's tests, see Walková, "Dowty's Aspectual Tests," 500–03.

[79] The progressive test is a grammatical co-occurrence test. There are other grammatical co-occurrence tests, such as the imperative test (a state VP is generally incompatible with the imperative mood), that test for the dynamic feature. However, both tests are unhelpful in identifying the Achievement class. See Dowty, *Word Meaning and Montague Grammar*, 55, 60 n.7 and Walková, "Dowty's Aspectual Tests," 501.

[80] We can trace the origin of this test back to Aristotle and later in works such as Garey and Kenny. See Garey, "Verbal Aspect in French," 108–10 and Kenny, *Action, Emotion, and Will*, 121. This test is now known as the 'imperfective paradox,' which states that an Accomplishment VP used in progressive/imperfective form entails that the same VP can be interpreted as done. In short, x is V-ing entails x is V-ed. On the other hand, an activity VP when used in progressive does not entail that it is done. See Dowty, *Word Meaning and Montague Grammar*, 57, 133–8. This does not imply that the entailment tests are only used for testing telicity. The habituality test, for example, tests for the dynamic feature by looking at whether the verb or VP in its non-progressive form can be interpreted as habitual. For a list of entailment tests, see Walková, "Dowty's Aspectual Tests," 500–03. The for-test, on the other hand, is also a criterion for the Homogeneity property. See Verkuyl, *A Theory of Aspectuality*, 43–44.

whether a VP can be combined with a specific adverbial phrase. The in-adverbial and for-adverbial tests are used to distinguish Activities from Accomplishments and the for-adverbial is also used to further distinguish between Accomplishments and Achievements. In another words, these tests are for both boundedness and durativity.[81]

Although Dowty's tests have been popular among event typologists since the 1980s, not everyone is convinced of their effectiveness. In particular, three problems have been raised. First, although Dowty's diagnostic tests are widely used to identify semantic classes, not all of them can be used to uniquely identify all classes.[82] For example, a test that tests for the dynamic feature should ideally be able to distinguish States from all other non-State classes, but in most cases, a group of tests are needed. In

---

[81] These tests are mostly lexical co-occurrence tests. Other lexical tests includes co-occurrence with specific adverbs (such as "deliberately," "carefully") or other verbs that have temporal implications (e.g. stop, begin, finish. Dowty calls these 'aspectual' complement verbs). See Dowty, *Word Meaning and Montague Grammar*, 66–71.

[82] See Walková, "Dowty's Aspectual Tests," 503–05. Verkuyl arrives at a somewhat similar conclusion in his survey of post-Vendlerian works on event typology. He points out that most scholars only pay lip service to the parameters but focus most of their effect on class assignment. See Verkuyl, *A Theory of Aspectuality*, 66.

addition, although individual semantic features can be identified by combining the results

of several tests, the tests are not applicable to all classes.[83]

This leads to the second related problem for these tests, namely, that some of

these tests do not test for any of the semantic features discussed above but rather test for

some other unrelated semantic parameters. Take the progressive test, for example.

Intuitively (at least for native English speakers), it seems like a helpful test for the feature

[±dynamic], but its ability to determine progressivity has been called into question.[84] But

as I pointed out above, the progressive test is actually based on both progressivity and

agentivity, two semantic factors that are very different from one another, and so the test is

---

[83] Achievements and Semelfactives cause the most complications for the tests. See Van Valin, *Syntax-Semantics Interface*, 35, 39 and Walková, "Dowty's Aspectual Tests," 501–02. Walková also points out that some tests do not test for an individual feature but a combination of features. See Walková, "Dowty's Aspectual Tests," 504–05.

[84] For example, Comrie, *Aspect*, 37–40 and Mourelatos, "Events, Processes, and States," 417. There are readings of specific state and achievement VPs that are acceptable when use with the progressive. E.g. 'He is loving her,' 'she is winning the race.' Some would argue that those state verbs that accept progressive form (standing, lying, sleeping) actually represents processes instead of States, while other remain unpersuaded and prefer to call them States. There are also others who take the intermediate position and come up with some almost oxymoronic labels such as "inactive actions" or "dynamic states." See Croft, *Verbs*, 39 for a survey. For a detailed discussion of the problem with the progressive test, see Verkuyl, *A Theory of Aspectuality*, 36–40.

not as useful as Vendler originally intended.[85] This explains why the test sometimes

produces inconsistent or even contrasting results.[86] Verkuyl argues that agentivity, as

important as it is in philosophy and the study of human action, has little to do with the

study of aspect (or eventuality).[87]

Finally, since the basic unit of analysis in Dowty's tests is the VP, the tests are not

able to handle class shifting very well.[88] These shifts occur when conflicting

interpretations (either in terms of incompatible semantic features or class assignments)

---

[85] I suspect the philosophical nature of the original discussion also contributes to this problem. Under the rubic of philosophy, it is understandable why Vendler uses progressivity as a diagnostic criterion for States and the non-State classes. One might argue that the distinction between a state and a process in reality is whether change takes place, i.e. in progress. So ontologically speaking, the progressive test should be able to differentiate the two. However, we need to ask whether it translates to grammatical analysis. It is shown by the work of Verkuyl that the use of the progressive form in English does not pertain to progressivity only and thus renders it not suitable for grammatical analysis. See Verkuyl, *A Theory of Aspectuality*, 36–38.

[86] A few other tests are also used to test for agentivity rather then temporal features. Some achievement VPs, like 'notice' or 'find' for example, are prone to display irregular results in various tests (e.g. imperfect test or progressive test, etc.). However, it does not mean that the seemingly unpredictable behavior of these achievement VPs under different contexts is due to stativitiy since the tests that are used are based on volition rather than stativity. See Walková, "Dowty's Aspectual Tests," 505 for a list of Dowty's tests that are based on agentivity or volition. See also Verkuyl, *A Theory of Aspectuality*, 35–40 and Filip, *Aspect, Eventuality Types, and Nominal Reference*, 19.

[87] See Verkuyl, *A Theory of Aspectuality*, 37–38 for a list of VPs that demonstrate the independence of the two factors as well as a list of non-agentive uses of achievement VPs.

[88] This is sometimes called 'aspect shift' or 'aspectual shift' in the literature. See Moens and Steedman, "Temporal Ontology," 16–21; Moens, "Temporal Reference," 130–55; de Swart, "Aspect Shift and Coercion," 347–85, Rothstein, *Structuring Events*, 123–47; and Walková, "Dowty's Aspectual Tests," 506–12. For an opposite position on handling shift (the operator approach), see Bary, "The Perfective/ Imperfective Distinction," 33–53.

arise as a result of the addition of incompatible element(s) that force a re-assignment of the clause (or sentence) from one class to another.[89] The compositionality of class (or *Aktionsart*) assignment has been a major research topic since the 1970s.[90] Yet, as pointed out numerous times above, the failure to handle exceptions and class shiftings is one of the major shortcomings of verb- or VP-based approaches to event typology. In fact, a comprehensive approach should include both temporal and atemporal information.[91]

Carlota Smith's compositional rules for situation types seem to be a good candidate to fulfill this task, and so I will briefly describe her approach and compare it

---

[89] Two kinds of type shiftings are sometimes maintained by scholars: aspectual shift and aspectual coercion. A shift can arise in two scenarios: (1) when multiple readings are possible for a predicate, that is, the class/feature assignment is ambiguous (e.g. a phrase such as 'William reads a book' can be interpreted as both telic or atelic), or (2) when a predicate that has a certain semantic feature (class) is combined with another element with different features (whether it is a clausal or sentential constituent or other pragmatic factors), that is, a strategy to resolve type mismatch. Coercion arises when an element that does not normally occur with a predicate is added to a predicate (grammatical oddity or ungrammaticality) and causes class or feature mismatch. For example, adding the prepositional phrase 'in an hour' (telic) to the predicate 'William reads a book' (atelic) causes a mismatch in the telic feature. However, not all scholars maintain this subtle difference between type shifting and type coercion in aspect studies. Smith uses the two terms interchangeably in her work. See Smith, "Tense and Aspect," 2585–86. For a detailed discussion on type coercion and aspect, see de Swart, "Aspect Shift and Coercion," 347–85, and de Swart, "Mismatches and Coercion," 574–97. Both Smith and de Swart's work on the patterns of type coercion and shift originate from the work of Marc Moens. See Moens, "Temporal Reference," 130–55 and Moens and Steedman, "Temporal Ontology," 15–28.

[90] See Verkuyl, *Compositional Nature*, 1–185 is considered as the pioneering work in this area.

[91] See Verkuyl, *A Theory of Aspectuality*, 66–67. See also the recent work by Husband, who extends Verkuyl's work to look at stative eventualities. Husband, *On the Compositional Nature of States*.

with other verb/VP approaches.[92] Instead of classifying verbs or verb phrases, Smith

starts her analysis by classifying different situation types. She distinguishes two kinds of

situation types: basic and derived. The five basic situation types consist of Vendler's

original four plus Semelfactives. The basic unit of analysis is the verb constellation,

which is the verb and its arguments.[93] A situation type is conveyed by a verb constellation

according to its temporal features. However, the relation between the two is not one-to-

one. A verb constellation may be associated with several situation types when it is

combined with other sentential constituents (e.g. adverbial phrases).[94] Yet, instead of

employing sub-categorization (see 2.2.1.1 above), Smith employs derived situation types

in order to handle both class shifting and specific readings that are applicable to the basic

types (e.g. habitual, inchoative, etc.).[95]

---

[92] See Smith, *The Parameter of Aspect*, 135–37.

[93] See Smith, *The Parameter of Aspect*, 4–5, 17–19.

[94] For detail, see Smith, *The Parameter of Aspect*, 48–59.

[95] For an overview of the basic types, see Smith, *The Parameter of Aspect*, 17–37, for the derived types, see Smith, *The Parameter of Aspect*, 48–53. Her use of derived types to handle certain sub-types of verb constellations is very similar to sub-categorization. For example, her handling of the personal property predicates is very similar to Greg Carlson's stage-level States and object level States. Compare Smith, *The Parameter of Aspect*, 57–58 with Carlson, "English Bare Plural," 446–49. She admits that multiple categorization is a possible approach but it will not work in her framework due to the assumption of the one-to-many relation between verb constellations and situation types. Multiple categorization would render this relation meaningless, i.e. there is no difference between the associations of a verb constellation with multiple situation types. See Smith, *The Parameter of Aspect*, 18.

In practice, therefore, the entire sentence is always in view in Smith's analyses. She claims repeatedly that her situation types are covert linguist categories, since each of them has a distinctive set of syntactic and semantic properties.[96] She unpacks the idea by going through a list of the constituents that contribute to the aspectual interpretation of a verb constellation.[97] Instead of assigning classes on the verb level and then handling class shifts as exceptions, Smith proposes that there are initial rules which assign specific verb constellations to basic situation types.[98] Then, interactions between verb constellations and other sentential constituents (such as adverbial phrases or phrases like *begin to, about to, gradually*, etc.) lead to derived situation types.

Although Smith does not explicitly distinguish between her derived situation types, there seem to be two fundamentally different derived types. The first type applies to sentences that shift to a sub-type, or, to borrow Smith's words, that "present situations from a narrowed point of view, rather than the full view of the basic-level verb

---

[96] See, for example, Smith, *The Parameter of Aspect*, 5, 7, 18, 39–59, 133–7.

[97] Apart from the main verb, there are NPs (subject or direct object); prepositions and certain particles and prepositional (adverbial) phrases. See Smith, *The Parameter of Aspect*, 54–5, 133–4.

[98] She calls these rules the basic-level compositional rules. For example, an atelic verb plus count nouns as both subject and direction object gives a composite value of atelic [-Telic] for the verb constellation. ("The child walk the dog"). Note that in all her rules Smith does not use the inflected form of the verb. See Smith, *The Parameter of Aspect*, 55.

constellation."[99] Whereas other scholars prefer to define sub-classes to handle specific

readings of these "narrower-viewed" situations, Smith's treatment has the advantage of

eliminating unnecessary classes.[100] She admits, however, that the rules for these derived

situation types are interpretive in nature, such that pragmatic knowledge (i.e. knowledge

of the world) is essential.[101] Arguably, this weakens her claim that her situation types are

linguistic categories.

A second kind of derived situation type applies to sentences that shift to a

different basic situation type as a result of a clash between the temporal values of a verb

---

[99] Smith, *The Parameter of Aspect*, 48. For detail, see Smith, *The Parameter of Aspect*, 48–51.

[100] Although it is not entirely clear from her work whether she treats these derived types as a variation of the basic types or sub-types. For example, whereas the verb constellation, "Olivia knocked at the door," is Semelfactive, "Olivia knocked at the door for 10 minutes," is considered to be a series of repeated events with an arbitrary endpoint, and thus a Multiple-event Activity instead of Semelfactive. However, it is not clear whether the Multiple-event Activity type is a sub-type, a new type or a variation of the Activity type. See Smith, *The Parameter of Aspect*, 50. Other named derived types in her work are Habitual statives, Inchoative Achievement.

[101] See Smith, *The Parameter of Aspect*, 51. de Swart also concludes similarly regarding the necessity of pragmatic knowledge under the topic of type (aspectual) coercion. See de Swart, "Aspect Shift and Coercion," 360.

constellation and those of forms external to it.[102] Smith develops a set of language-

dependent compositional rules for these derived situation types.[103] Each verb is assigned

intrinsic semantic features in the lexicon in accordance with how it contributes to the

interpretation of what Smith calls a "maximally simple sentence," which is either

intransitive or has a quantized NP as the direct object.[104] Other sentential constituents are

then classified according to different semantic features.[105] The resultant combination of

semantic features of a verb constellation is evaluated according to a set of compositional

---

[102] As mentioned above, type shifting can be a result of adding another constituent such as an adverbial phrase. Smith explains this shift with the principle of external override, which states that the temporal value (expressed in terms of the three semantic features) of the adverbial always override the value of the verb constellation. So whereas the clause "she coughed" is a semelfactive [+Dyn -Telic -Dur], "she coughed all night" is an activity [+Dyn -Telic +Dur]. The [+Dur] value of the adverbial "all night" override the semantic value of the verb constellation [-Dur]. She argues that this principle holds for many instances of coercion. See Smith, *The Parameter of Aspect*, 55–56 and Smith, "Tense and Aspect," 2585–86.

[103] The examples used here are taken from her discussion of the rule for English. See Smith, *The Parameter of Aspect*, 133–37.

[104] For example, since 'she walked' is atelic, the verb walk is atelic. Smith does not elaborate on the mechanism of feature assignment nor provide any references. As far as I am aware of, she is the only one who tries to provide anything that is close to a systematic procedure for feature/class assignment for verbs. It leaves the reader with many questions such as how to handle conflicted interpretations between a reading of an intransitive sentence and a reading from the same verb but with a quantized direct object. See Smith, *The Parameter of Aspect*, 54–55.

[105] For example, NP can either be count or non-count ([+Court] vs. [+Mass]) according to the presence or absence of an article or the use of the plural form. Prepositions and certain particles can either be telic or atelic [±telic]. Prepositional phrases can be locative, directional, completive, or frequentative. So for example, an atelic (and durative and dynamic) verb, with its compatible complements (atelic prepositions or particles, uncountable NP) will form an Activity verb constellation (Smith's Rule 1a). See Smith, *The Parameter of Aspect*, 133–37.

rules.[106] At the basic level, for example, an atelic verb (walk, run, etc.) or a telic verb with

an atelic particle (read in, work on, etc.) will produce an activity verb constellation. Other

compatible constituents for this basic-level Activity construction include uncountable

argument NPs and locative adverbial phrases (at home, in the park, etc.).[107] The rules for

derived-level Activities follow a somewhat similar structure. For example, when a

durative adverbial (for ten minutes, etc.) is used to modify an accomplishment verb

constellation, the resultant sentence will shift to the activity type.[108] Upon closer

inspection, Smith's "compatible constituents" are very similar to what others refer to as

class diagnostics.

The difference between the two approaches just discussed is the basic unit of

analysis and the way that exceptions (class shifts) are handled. The presentation of

Smith's work is different from most works in event typology. Typically, event typologies

start with four or five classes at the verb or VP level and then proceed to deal with

exceptions involving lexical co-occurrences (e.g. adding an adverbial with a different

---

[106] However, she does not go into detail regarding how other sentential constituents (NPs, PP, etc.) are classified. She admits that neither does the set of rules exhaust the syntactic structures of English nor the full range of situation type categorization. See Smith, *The Parameter of Aspect*, 134.

[107] See Smith, *The Parameter of Aspect*, 134–35.

[108] For example, whereas 'William draws a picture' is an Accomplishment, 'William draws a picture for ten minutes' is an Activity.

temporal feature), proposing diagnostic tests that can be used to assign the VP to more

narrowly defined sub-classes.[109] Smith, by way of contrast, starts with situation types, a

quasi-linguistic category, as well as with compositional rules for different verb

constellations (i.e. combinations of different clause constituents). By expanding the basic

unit of analysis from the verb (or VP) to the verb constellation, Smith does not have to

deal with the exceptions from the outset but can instead focus on the definitions of the

situation types. It is only later in her work that the inherent messiness shows its head

when she provides rules for her derived situation types.

The advantage of Smith's presentation is that it provides more elegant definitions

of the situation types (classes), at least in the initial phase, by delaying the treatment of

exceptions. However, one can see the same kind of messiness sneaks back to her

discussion when she presents multiple rules for the same derived situation types.[110] So

although the two approaches discussed in this section look very different at first, both of

them are confronted with the same inherent complexity that problematizes all event

---

[109] See, for example, the recent work of Van Valin, *Syntax-Semantics Interface*, 32–49.

[110] See, for example, the five rules for the derived situation type for Activity. Smith also admits earlier that the list is not exhaustive. See Smith, *The Parameter of Aspect*, 134–36.

typologies, and so they must both find some way to handle exceptions as more clausal constituents are introduced into the discussion.

To summarize post-Vendlerian developments in event typology, let me reiterate two general trends. First, although Vendler's four classes are at the centre of linguistic discussion, many later scholars, if not all, have added new classes and/or further divided the core classes into sub-classes.[111] Also, the same thing has taken place with the diagnostics tests. Not only has there been an increase in the number of tests for each class, but the level of complexity of the diagnostics has increased, particularly in the way different tests are combined in order to uniquely identify individual classes.[112] As mentioned above, the primary reason for this endless increase in classes is the task of handling exceptions resulting from class shifting or class coercion.

---

[111] See, for example, Mourelatos, "Events, Processes, and States," 415–34; Carlson, "English Bare Plural," 413–57; Carlson, "Aspect and Quantification," 31–64; Bach, "The Algebra of Events," 5–16; Moens and Steedman, "Temporal Ontology," 15–28; Smith, *The Parameter of Aspect*, 17–60; Van Valin, *Syntax-Semantics Interface*, 32–49; and Croft, *Verbs*, 31–45. See also Tatevosov, "The Parameter of Actionality," 320–21 for a summary of recent works.

[112] For example, the works of Dowty, Van Valin, and the compositional rules of Smith. See Dowty, *Word Meaning and Montague Grammar*, 60; Smith, *The Parameter of Aspect*, 133–37; and Van Valin, *Syntax-Semantics Interface*, 32–49.

Second, there is a lack of agreement among scholars concerning the unit of

analysis that should be employed for class assignment.[113] Generally speaking, more and

more clausal and sentential constituents have been deemed relevant and important to the

discussion over the past four decades. Whereas Vendler originally considered only verbs

and verb phrases, recent works introduce more elements, whether temporal and

atemporal, verbal and non-verbal, aspectual and non-aspectual. As a result, these works

sometimes read like discussions of how *reality* can be categorized instead of like

discussions of the ways in which language represents reality. Given the ontological

genesis of the discussion (Vendler), this should perhaps not come as a surprise.

Linguistically speaking, however, it is unclear whether it is even possible to account for

all the factors that are relevant to event typologies—whether semantic, syntactic, or

pragmatic—and if so, whether the relevant factors can be systematized to formulate a

manageable number of rules. Given that the list of relevant elements has grown to a point

that almost every single constituent of a sentence is included in the discussion,[114] and

given that variations in event representations are evident in different languages (and

---

[113] This has been an on-going concern among typologists, for a brief overview, see Rothstein, *Theoretical and Crosslinguistic Approaches*, 2–3. I will come back to this in section 2.3.3.

[114] See, for example, Verkuyl, "Surveying the Ingredients," 19–39.

language groups),[115] it seems to be a daunting, if not impossible, task to formulate a

universal and comprehensive linguistic description for eventualites (*Aktionsart*).

Granted, it may still be feasible to describe event typologies on a language by

language basis. So we will now turn to the matter of *Aktionsart* in Koine Greek.

2.3 EVENT TYPOLOGY AND NEW TESTAMENT GREEK

As mentioned last chapter (1.4), a few works over the past twenty years have

analyzed Biblical Greek *Aktionsart* using Vendler's taxonomy as their foundation. In this

section I am going to focus on two such works, particularly on their utilization of

Vendler's taxonomy.

I will start with Fanning's work and characterize it as a traditional Vendlerian

approach in the sense that, barring some minor modifications, his work can be described

as a direct borrowing of Vendler (2.3.1). Essentially, Fanning starts with a set of slightly

modified classes and basic diagnostic tools and then explores how Vendler's work can be

---

[115] See, for example, the discussion in Tatevosov, "The Parameter of Actionality," 317–401.

translated and applied to the study of Greek verbs.[116] He states from the outset that his use

of Vendler's taxonomy is to guide his examination, which is concerned with the

relationship that exists between Greek verbal aspect (aspectual forms) and other features

of meaning that affect aspect function at the proposition level—including the inherent

lexical meaning of Greek verbs, other sentential constituents, tense reference, etc.

Specifically, Fanning looks for significant and predictable patterns in the interactions that

exist between grammatical aspect and these other features of Greek.[117]

Another work that is based on Vendler's taxonomy is Olsen's privative approach

to Greek *Aktionsart* (2.3.2). Olsen's work develops a general theory that describes

English and Greek tense, aspect and *Aktionsart* (her lexical aspect) in terms of a set of

universal semantic privative features. A large part of her work focuses on the theoretical

basis for a compositional framework to aspect and *Aktionsart* and its application to

English and Greek.[118] Similar to Fanning, Olsen's verb classes are an expanded and

---

[116] This is consistent with the works on *Aktionsart* in general linguistics at that period of time (1980s or before). Verkuyl observes that the works in event typology before 1990s have a tendency to focus on the classes instead of the semantic features. However, he offers no reason to explain this tendency. See Verkuyl, *A Theory of Aspectuality*, 66.

[117] See Fanning, *Verbal Aspect*, 8, 42–6, 126, and later reiterated in Fanning, "Approaches to Verbal Aspect," 166–67.

[118] Only one of her seven chapters is directly on Koine Greek. See Olsen, *A Semantic and Pragmatic Model*, 199–276.

modified version of Vendler's original four. But unlike Fanning, Olsen does not populate

her classes with examples, choosing instead to start with a discussion of the core

semantic features and then to show how they are used to construct the classes in a

privative analysis.[119] Olsen has a goal that is similar to Fanning's, in that she wants to

delineate the relationship between grammatical aspect and *Aktionsart*.[120] She argues that a

privative analysis of semantic features allows "grammatical aspect to build monotonically

on the lexical aspect feature structure, in ways predictable from the privative semantic

features and the temporal structure of the ET [Event Time] they represent."[121]

In the following sub-sections I will focus on how these two works (as well as

some others) use the Vendler taxonomy in order to develop a compositional approach to

Greek *Aktionsart*. I will touch only briefly on the predictable patterns they observe

between Greek aspect and *Aktionsart*, because I will come back to these patterns—and to

the relationship between telicity and perfectivity in particular (4.2)—after I have properly

introduced the notion of telicity and discussed its use in Greek studies (3.3).

---

[119] She does provide a list of Greek verbs for the four Vendler's class in the appendix. But it is a direct borrowing from Fanning's. See Olsen, *A Semantic and Pragmatic Model*, 287–98.

[120] See Olsen, *A Semantic and Pragmatic Model*, 21–22.

[121] Olsen, *A Semantic and Pragmatic Model*, 110.

2.3.1 Fanning: A Traditional Vendlerian Approach

Fanning's classification scheme is much the same as Vendler's. After briefly

recounting how discussions of Greek aspect shifted towards a preoccupation with the

lexical nature of *Aktionsart* during the first half of the twentieth century, Fanning

introduces the works of Vendler and Kenny as an approach that involves "more

comprehensive classes of lexical characteristics which are significant for predicting

variation in the function of the aspects."[122] While acknowledging the philosophical roots

of Vendler's and Kenny's works, he also cites subsequent linguistic works that rely on

Vendler and Kenny and argues for the usefulness of their ideas in Koine Greek

aspectology.[123] As mentioned last chapter, Fanning states repeatedly in his work that

aspect should be distinguish from *Aktionsart* and the procedural characters in general.

However, he also defends his use of Vendler's framework, insisting that aspect-usage is

greatly affected by the interaction of aspectual forms with procedural characteristics.[124]

---

[122] Fanning, *Verbal Aspect*, 43.

[123] He cites Juan Mateos' work as an example. See Fanning, *Verbal Aspect*, 45–46.

[124] See, for example, Fanning, *Verbal Aspect*, 50.

Fanning dedicates a chapter of his work to the effect that the inherent meaning of verbs and other compositional elements has on Greek aspect.[125] His description and layout of the construction of Greek verb classes closely follows Vendler. Fanning first distinguishes two groups of verbs (or verb-phrases) based on whether they posses continuous tenses or not. Four classes of verbs are then classified according to their temporal characteristics: Activities (homogeneous) and Accomplishments (climax) are continuous, while Achievements (instantaneous) and States (durative) are non-continuous.[126] Similar to Platzack and Comrie, Fanning uses three semantic features to distinguish Vendler's four event types: dynamism [±change], boundedness [±bounded] and durativity [±duration].

As mentioned above, Achievements have the rather notorious reputation of being the class that produces the most exceptions in Vendler's original scheme. Thus, like the linguistic works described above, Fanning extends his framework by adding another level of actional characters to further distinguish between two types of Achievements [+change +bounded -durative]: Climaxes and Punctuals (by way of the semantic feature of

---

[125] See Fanning, *Verbal Aspect*, 126–96. The following discussion is drawn mostly from this chapter, I will keep references to a minimum.

[126] See Fanning, *Verbal Aspect*, 44–46. See also Vendler, *Linguistics in Philosophy*, 98–107.

prefacing [±prefaced]).[127] Although Fanning seems to have developed this approach

independently of Carlotta Smith, his Punctuals are very similar to Smith's

Semelfactives.[128] Using the language of semanticists (such as Comrie), Fanning's

Climaxes and Punctuals can be described as different combinations of process, state and

terminus. By his definition, a Climax involves the terminus of some closely related

process and a Punctual involves a terminus without the implication of any preceding

process or resulting state.[129] Fanning contends that the purpose of adding further event

types is to capture iterative occurrences of semelfactive events when expressed using a

---

[127] Fanning states that the idea of prefacing is taken from a study of Danish aspect that distinguishes between those Achievements which presuppose a transitional or approaching phase and those which do not, and as a result highlight the instantaneousness of the action. The idea of sub-dividing the achievement class can be traced to the work of Lauri Carlson mentioned above. See Fanning, *Verbal Aspect*, 155, n.61.

[128] As mentioned above, Fanning is not the first to further distinguish between Vendler's Achievements. He mentions Comrie and L. Carlson in his discussion but does not mention Emmon Bach's work, which is much more similar to his categories. See Bach, "The Algebra of Events," 5–16 and the discussion in 2.2.1.

[129] As mentioned above, others (such as L. Carlson) would consider Fanning's Climaxes as "Achievement proper," and his Punctuals as Semelfactives. See Carlson, "English Bare Plural," 36–39

progressive or imperfective form.[130] In essence, a large part of his classification and

defining features are very much the same as Vendler's original proposal. Fanning's verb

classes are summarized in Table 2.5.

Table 2.5: Fanning's Five Verb Classes

Class		Continuous	Temporal Profile	Verb Groups
Events	Activities	Yes	homogeneous	movement, gradable transitions, active perception/perception/ cognition

---

[130] However, those (such as Smith, Van Valin and Olsen) who recognize Semelfactive processes as a legitimate event class usually identify it as a separate class, not a sub-class of Achievement. For example, Smith uses the same three semantic features that identify Vendler's original four to describe her Semelfactive situation type [-Static -Durative -Telic] to distinguish it from Achievement [-Static -Durative +Telic]. Notice that in Smith's framework (and also Van Valin's), what separates Achievements and Semelfactives is the telicity feature. According to Smith's definition, Semelfactives are atelic instantaneous events with no result or outcome (single-stage events), whereas Achievements are telic events, meaning that they have a change of state which constitutes the goal of the event. Fanning, on the other hand, introduces another feature to identify Semelfactive events (Punctuals) as somehow related to Achievements. He uses the boundedness feature [±bounded] to define the classes instead of telicity and thereby needed another feature [±prefaced] to identify Semelfactives. This seems to imply that his boundedness feature is different from Smith's telicity. Indeed, one can see the argument that not all bounded events are telic. However, judging from Fanning's definition of the boundedness feature, it seems to me that it is fairly similar to the Smith's description of telicity. I will look at these definitions more closely later (3.3.2) when I focus on telicity and its relationship with perfectivity. Overall, Smith's framework is simpler and more efficient in the use of semantic features to uniquely identify classes. Olsen also considers that Fanning's boundedness feature, compared to the telic feature which only includes the end point, unnecessarily complicates the model. See Fanning, "Approaches to Verbal Aspect," 140–1, 154–62; Olsen, *A Semantic and Pragmatic Model*, 265 n.7; Smith, *The Parameter of Aspect*, 19–20; and Van Valin, *Syntax-Semantics Interface*, 33.

	Accomplishments		Yes	climax	prefixed movement verb, durative, perfectivizing prefix verb
	Achievements	Climaxes	No	instantaneous	instantaneous transition/ receiving/giving, object-complement constructions
		Punctuals	No	instantaneous	Example: βάλλω, ἐχψύχω, κλάω, πατάσσω, πίπτω, προσκόπτω, πταλιω, πτύω and ῥίπτω
	States		No	lasting for a period of time	being, existence, identity, passive possession/ perception/cognition, location, impersonal states

As noted in the above table, Fanning populates his five classes with various Greek verbs/VPs, emphasizing that what are included are verbs "in their normal usage."[131] These verbs/VPs are introduced in different groups (e.g. being verbs, verbs of movement, etc.). A list of verbs is given for each group with brief explanations. What is lacking here is a linguistic and systematic descriptions on how these verbs/VPs are grouped together as well as how they are assigned to the classes. The only guiding principle for group (not

---

[131] Fanning does not elaborate on what he means by normal usage. See Fanning, *Verbal Aspect*, 128, 135, 144, 150, 156. Vendler uses the same kind of language, such as clear-cut examples, dominant use, avoid borderline uses, to describe the text examples that he uses for each class without giving clear linguistic descriptions for these terms. See Vendler, "Verbs and Times," 144.

class) membership seems to be lexical semantics, i.e. the meaning of the verbs. But even

here, Fanning does not explain how these groups are populated, i.e. whether it is by

drawing from lexicons or by grouping verbs from related semantic domains, etc.[132]

In addition, Fanning does not clearly define the proper grammatical unit for the

classification of events. Both verbs and VPs are used in his illustrations,[133] and there are

other places where one might question whether the verb alone sufficiently represents the

core semantic feature of the class.[134] Nevertheless, Fanning does include from the outset a

cautious word regarding the use of the term "verb classes" to describe his scheme of

classification, admitting that the term might give the false idea that his classification is

based entirely on the inherent meaning of the verb alone. He justifies his use of the rather

---

[132] He does give a brief definition of most of the groups. But some of these definitions are good only for identifying a specific usage of a verb. For example, there is a group of activity verbs with the label "Gradable Transitions," which is defined as "verbs which lexically denote a change in the subject or object, but with a relative terminal point--there is no definite end at which the action must cease" (Fanning, *Verbal Aspect*, 144). However, for some verbs, whether it denotes an action that has no definite end also depends on the complement.

[133] In his illustrations of States for example, one can find entries with standalone verbs (ἀσθενέω, ζάω, ἰσχύω, etc.) and VPs with different kinds of complements (ἔχω with adverb, ὑπάρχω with noun predicate, εἰμί with adjective predicate, etc.). In fact, the states class has most VP illustrations since the classification of some of the verbs (such as εἰμί and γίνομαι) depend heavily on the meaning of the complement. See Fanning, *Verbal Aspect*, 134–36.

[134] Activity verbs such as ἐσθίω and πίνω are examples that, even in their "normal usage," are heavily dependent on other co-textual factors. For Fanning's list of activity verbs, see Fanning, *Verbal Aspect*, 144–45.

misleading term "verb classes" by saying that, even though procedural characteristics are

ultimately features of the entire proposition (sentence), the lexical meaning of the verb is

central to the classification.[135] Yet even though he acknowledges the effect that co-textual

factors can have on the classification of verb/VPs, such as external arguments and

adverbial phrases, Fanning does not go into detail how interactions between the inherent

meaning of verbs and other compositional elements actually affect the classification of

event types (i.e. class shifting). He chooses rather to treat the inherent meaning of the

verb and the other compositional elements separately, focusing on how they individually

affect the overall aspect function of a sentence, i.e. how they individually interact with

grammatical aspect.[136] In another words, he chooses to look at the meaning of

grammatical aspects in relation to procedural characteristics and distinguishes them from

---

[135] He further qualifies his statement by saying that the term "verb class" is only a shorthand reference for "proposition types." See Fanning, *Verbal Aspect*, 127.

[136] The effects of the inherent meaning of verbs and other co-textual elements on aspect are treated as two separate sections in his work. Regarding the compositional elements, Fanning surveys the effects of other clausal constituents such as adverbial phrases (durational vs. non-durational), noun phrases (count/ mass distinction) as subject or object, and briefly touches on other elements such as directional adverbials, effected or affected accusatives, negatives. See Fanning, *Verbal Aspect*, 126, 163–85. It seems to me that Fanning does not think these elements are as important, at least in the sense of the need of a comprehensive and systematic treatment, compared to the discussion of verb classes in Greek aspect studies. At one point he comments that the effects of these elements are considered as common-sense observations and have long been considered by exegetes under the rubric of 'context.' Nevertheless, he acknowledges the need to address the interaction between these factors and aspect. See Fanning, *Verbal Aspect*, 48.

other compositional elements.[137] This seems to go against recent developments in event

typology, since most other approaches focus on the effects that various compositional

elements have on event classes (see 2.2.1).

In my opinion, Fanning's approach to Greek verb classes seems to undermine the

goal he sets for himself, namely, to observe predictable patterns between grammatical

aspect and other relevant elements. Since his procedural characters are mainly a matter of

the inherent meaning of verbs, their effect on the aspectual function is considered

separately from other co-textual elements. As a result, it is difficult to get a full picture of

what actually contributes to the alleged patterns Fanning finds between grammatical

aspect and the overall procedural characteristic. For example, Fanning talks about how

the grammatical number of verbal arguments affects the use of grammatical aspect.[138]

However, the grammatical number of these external arguments also contributes to class

shifting.[139] It would be more useful if both features were considered together, so that it

---

[137] See Fanning, *Verbal Aspect*, 46.

[138] For example, an event (or a state) with a description of a single occurrence, i.e. singular subject and object, is more naturally associated with the 'aorist' (perfective) aspect. See Fanning, *Verbal Aspect*, 164–65.

[139] To re-use an example mentioned above, "the soldiers are already reaching the summit" can be considered as an Accomplishment [+telic +durative +process], whereas 'he reached the summit' is an Achievement [+telic +process -durative]. Changing the subject of a VP from singular to plural also changes the durative feature.

would be possible to determine whether the preference of specific grammatical aspect is a result of the overall procedural characteristic or the grammatical number of external arguments.

As I have shown above (2.2.1), one of the main focuses in post-Vendlerian event typology is the scope or the relevant ingredients for the formation of *Aktionsart*. In my opinion, in order to have a more meaningful discussion regarding interactions between Greek aspect and *Aktionsart*, we need to consider all non-verbal elements together with the lexical meaning of the verb. Of course, I must quickly add the disclaimer that this compositional process, as shown above, is rather complicated and its systematicity is yet to be proven. However, looking at *Aktionsart* as a function of both the inherent meaning of verbs and other co-textual elements allows us to facilitate a comparison between specific values of grammatical aspect and *Aktionsart*. In this study, for example, I will investigate the use of the perfective aspect using a set of related activity [-telic] and accomplishment [+telic] verbs (see 4.3).

2.3.2 Olsen: A Privative Approach

Like Fanning, Olsen identifies classes using the inherent semantic features of verbs. Unlike Fanning, however, Olsen observes an asymmetrical variation in lexical

aspectual oppositions: constituents with marked features make a semantic contribution

that cannot be canceled, whereas unmarked features can be overridden. In another words,

only positive features define homogeneous classes with consistent aspectual

interpretations.[140] As a result, the absence of a marked feature does not dictate aspectual

interpretation. So [-telic] does not mean atelic; rather, the absence of the feature [telic]

means that telicity is unspecified, which then allows other clausal constituents to

contribute to the lexical aspect semantics through monotonic composition.[141]

Specifcally, Olsen identifies three privative features that limit, rather than

determine lexical aspect: dynamism [+dynamic], durativity [+durative], and telicity

[+telic].[142] Her privative analysis of semantic features demonstrates, at least in theory, an

understanding of the complexity of *Aktionsart*, i.e. an appreciation of how other co-

textual constituents and even extra-linguistic context can contribute to the interpretation

---

[140] On the privative approach, see Olsen, *A Semantic and Pragmatic Model*, 25–45.

[141] See, for example, the often quote illustration of the distinction between 'run' (atelic) and 'run a mile' (telic). According to Olsen, 'run' is not marked by telicity and therefore open to interpretation. In the case of 'run a mile,' telicity [+telic] is added to the interpretation due to the [+count] noun phrase, atelicity is only one of the possible interpretations of telicity non-marked verb 'run.' See Olsen, *A Semantic and Pragmatic Model*, 29–30.

[142] These three features are commonly used in most of the recent works in event typology (Dowty, Smith, Van Valin, Croft). The uniqueness of Olsen's approach lies rather in her privative understanding of these features and how different combinations construct different verb classes. See Olsen, *A Semantic and Pragmatic Model*, 31–51.

of *Aktionsart* composition.[143] However, although the cancelablity of non-marked features

seems to be a helpful way of explaining class shifting, since other constituents (or

context) can mark a non-marked verb with a temporal feature, Olsen's discussion seems

to force the language into her privative framework. This point can be illustrated using the

telicity feature.

As mentioned above, one of the issues that most event typologists have to deal

with is the fact some verbs have the potential to construe readings that belongs to

different classes,[144] e.g. an activity verb can be used as an Activity or an

Accomplishment.[145] Under Olsen's privative framework, since atelicity is regarded as a

cancelable conversational implicature, any telic interpretation of a VP with an activity

verb must result from the addition of telic co-textual constituents (or other contextual

factors).[146] In my opinion, this explains rather succinctly why activity verbs permit

---

[143] See Olsen, *A Semantic and Pragmatic Model*, 27–31.

[144] See my discussion on the activity and the accomphlishment classes and its numerous sub-classes in section 2.2.1.

[145] The activity verb "eat" can be used as an Activity "I ate," or an Accomplishment "I ate two oranges." This example is borrowed from Croft, *Verbs*, 38–39.

[146] In case of an Activity verb such as "walk," whereas the phrase "I walk" is unmarked with telicity and thus an Activity, the noun phrase "three miles" in "I walked three miles" is an Accomplishment.

multiple construals. However, the same cannot be said in Olsen's handling of cases where a verb is marked with an uncancelable feature. For example, some accomplishment verbs, which by definition are marked with the uncancelable telic feature [+telic], can be used to construe Activities in certain contexts.[147] Yet Olsen's privative framework does not allow her to treat these marked telic verbs as having multiple potential construals. Instead, she considers these uses as variations within the same class instead of class shifting.[148] This seems to me to be framework driven rather than the result of a bottom-up analysis.

Olsen identifies six classes using her three privative semantic features. Similar to Fanning's, her six classes are a slightly modified version of Vendler's original scheme, including the original four together with Semelfactives and Stage-level States.[149] In fact, the layout of the semantic features of Vendler's four core classes is exactly the same in both Fanning and Olsen's work, except that negative features are left unspecified by

---

[147] For example, the accomplishment verb "destroy" can be used in a context of sports, a sentence like "he destroyed the opponents for years" is interpreted as continuous dominance in the game. See Olsen, *A Semantic and Pragmatic Model*, 33, for similar examples.

[148] For example, she considers the phrase "he created havoc for years," as iterative Accomplishment (iterative telic events) instead of Activity (an atelic whole). She admits, however, that the progressive entailment test is not useful in these cases since using the progressive form of the verb in phrases with durative adverbial is not acceptable in English. See Olsen, *A Semantic and Pragmatic Model*, 33, 54–55 n.12.

[149] For a general discussion of the features and classes, see Olsen, *A Semantic and Pragmatic Model*, 25–57, for her discussion of Koine Greek *Aktionsart*, see Olsen, *A Semantic and Pragmatic Model*, 202–16.

Olsen.[150] Olsen considers her privative model of semantic features superior to Fanning's

equipollent approach, criticizing his hierarchical model for lacking a formal feature-

changing mechanism (i.e. he allegedly fails to explain instances that appear to contradict

their feature specifications).[151] In my opinion, however, Olsen fails to show convincingly

that her privative analysis, which is demonstrated mostly by examples in modern

European languages (particularly English), is transferable to the Koine Greek verbal

system. From her brief discussions and scattered examples in her chapter on Koine

Greek, it is not clear whether the three features can be considered as privative oppositions

---

[150] See Olsen, *A Semantic and Pragmatic Model*, 204–05.

[151] Citing Carson, she also criticizes Fanning for confounding semantics and pragmatics. For example, she considers Fanning's distinction between two sub-classes of Achievements (Punctuals and Climaxes) a matter of pragmatics, arguing that the [±prefaced] feature is in fact not a semantic feature, i.e. not consistently associated with verbs, but is rather tied to the pragmatic context. In general, she contends that her privative model avoids this problem by separating the uncancelable marked features (semantics) and unmarked features (pragmatics). Thus, the distinction between Punctuals and Climaxes can be attributed to the unmarked durative feature of the achievement class, which allows context and other co-textual factors to mark durativity. I have commented on the problem of cancelability above. I will come back to the semantic/pragmatic distinction later in chapter 5. See Olsen, *A Semantic and Pragmatic Model*, 202–06. See also Carson, "Porter/Fanning Debate," 24–25.

in Greek.[152] As I am going to show in this study, more empirical evidence is needed to

prove the asymmetry that Olsen claims to observe. I will come back to this in the next

two chapters.

Turning to the two non-Vendlerian classes, Olsen goes against recent trends in

linguistics by adding more classes instead of subdividing Vendler's original classes,

treating her two new classes as the result of different combinations of her three semantic

---

[152] Take the telicity feature for example. Olsen's argument consists of three claims, with very few (or none) actual text examples: (1) Since the entailment test is drawn from Aristotle, it is thus applicable to NT Greek; (2) Verbs that are unmarked for telicity can be made telic by other clausal constituents but the same cannot be said about the telic verb; and (3) Whereas atelic verbs can be marked telic by a telic prefix, there are no instances of prefixes changing telic verbs to atelic. See Olsen, *A Semantic and Pragmatic Model*, 206–09. I will briefly respond to the first two claims here and leave the third to a later section where empirical data are used to facilitate the discussion. First, I maintain that Aristotle's philosophical discussion of logical entailment was not intended to be a linguistic discussion. Even though he used different Greek tense-forms to illustrate his point, it does not mean what he did was to demonstrate how the Greek language works. As I have mentioned above (1.3.3.2), not all event typologists see the connection between verb class studies and Aristotle's work. Even Vendler did not see the connection himself. For an opposite view, see Haug's work on the meaning of the Classical Greek Perfect for a discussion of the similarities between Aristotle's tests and Kenny's. See Haug, "Aristotle's *kinesis/energeia*-test," 412–15. However, Haug himself admits that Aristotle's discussion between two kinds of action is essentially ontological and not linguistic. He attributes Aristole's use of two tense forms (Present and Perfect) as illustration to the worldview of an ancient Greek, that the language (Greek) reflects reality in a direct way. See Haug, "Aristotle's *kinesis/energeia*-test," 392. Secondly, two things need to be pointed out regarding the assertion that Greek telic verbs cannot be made atelic. The first problem with this claim is that Olsen heavily relies on Fanning's verb assignments, which itself lacks a systematic procedure. It is yet to be shown that (1) telic prefixes is a valid grammatical category; (2) the activity verbs in Fanning's list are valid; (3) the prefixed counterpart of these alleged activity verbs are 'telicized' version of the verbs. It is the objective of this study to provide an empirical approach to test these claims. I will come back to talk about the prefixed verbs next chapter.

features.[153] Stage-level States, for instance, add telicity as a marked feature [+durative

+telic].[154] Olsen acknowledges the rareness of true Stage-level State verbs, particularly in

English, and does not include it in her discussion of Koine Greek.[155] Olsen's

Semelfactives are similar to Fanning's Punctuals,[156] but since the only feature that is

marked is [+dynamic], these verbs have the potential to permit both telic or atelic and

durative or non-durative interpretations, depending on the contribution of other co-textual

or contextual features.

---

[153] There are eight possible combinations from three features. Apart from the six classes that she included in her framework, there are two unattested classes: telic verbs without other consistent features [+telic], and empty set [∅]. Both classes appear to not occur at all. See Olsen, *A Semantic and Pragmatic Model*, 50–51.

[154] See Olsen, *A Semantic and Pragmatic Model*, 50 and also Carlson, "English Bare Plural," 413–57.

[155] She cites Spanish and Mandarin Chinese as two languages that possibly have Stage-level State verbs. See Olsen, *A Semantic and Pragmatic Model*, 46–50. She later admits that the main reason for not including this class in the study of Greek is lack of relevant data. See Olsen, *A Semantic and Pragmatic Model*, 206.

[156] She also relies on Smith. See Olsen, *A Semantic and Pragmatic Model*, 46 and Smith, *The Parameter of Aspect*, 55–58.

Unfortunately, Olsen does not provide a list of verbs for her two non-Vendlerian

classes.[157] Nor is it clear whether the inclusion of these two classes is the result of a

bottom-up analysis (i.e. an analysis of feature combinations) or the result of a top-down

analysis (i.e. an analysis of the various combinations of features that are characteristic of

verbal situations/phenomena already mentioned by others). The latter seems more likely,

at least in her analysis of English. Another problem is that the examples cited by Olsen

sometimes seem forced. In some readings, it is not only immediate clausal constituents

but also much wider contextual factors that are taken into consideration.[158] This actually

undermines the elegance of her monotonic compositional framework and demonstrates

that lexical aspectual interpretation might *not* take place at the sentential level but might

---

[157] Nor does she come up with a method to populate Greek verbs in Vendler's four classes. As mentioned above, she provides a list of verbs in an appendix which is borrowed directly from Fanning, who also does not provide any particular method as to how these Greek verbs are assigned to Vendler's classes. Her over-reliance on Fanning's verb classes crippled her from analyzing the Semelfactives and Stage-level States in Koine Greek. Since Fanning does not have them in his work, she does not have any examples from the NT. See Olsen, *A Semantic and Pragmatic Model*, 206, 287–98.

[158] See below on the discussion of Olsen's example of a durative single cough. See Olsen, *A Semantic and Pragmatic Model*, 47.

rather be a much more complicated endeavor.[159] Olsen's model can be summarized in the

following table:[160]

Table 2.6: Olsen's Six Verb Classes

Class	Telic	Dynamic	Durative
State			+
Activity		+	+
Accomplishment	+	+	+
Achievement	+	+	
Semelfactive		+	
State-Level State	+		+

2.3.3 A Critical Evaluation of Vendler's Taxonomy in NT Greek Studies

Speaking about Porter's work twenty years ago, Carson said this:

I suspect his aspect theory will find wider and more rapid acceptance if he
now devotes more attention to a systematic articulation of the ways in
which a wide range of factors impinge on the meaning of a verb in a
particular context. The Vendler-Kenny taxonomy, for instance, could

---

[159] See section 5.1 for a discussion of the notion of epiphenomenon as a description of this kind of endeavor.

[160] Note that due to her privative understanding of the semantic features, the marked features limit rather than determine *Aktionsart* and, thus, only the marked (+) features are shown in the table. The entries that are left blank represent not the opposite of the marked feature [-telic vs. +telic] but they are rather left unspecified. See Olsen, *A Semantic and Pragmatic Model*, 25–27. There is also a class with [+telic] alone but without any specification on dynamism and durativity. Since by definition a verb must be minimally dynamic or durative, this class of [+telic] alone does not appear to occur at all. See Olsen, *A Semantic and Pragmatic Model*, 50–51.

easily be adapted to dealing with the challenge of exegesis where the interpreter has adopted Porter's aspect theory.[161]

Two observations about the state of scholarship today could be made: (1) We still need a framework that can account for the complex interactions that exist between lexical semantics, clausal semantics, and even wider co-textual and contextual factors and; (2) We need to reconsider whether the Vendler-Kenny taxonomy is a good starting point for such an endeavor and whether it is really adaptable to Koine Greek aspect study. These two observations in turn correspond to the three key issues that were presented earlier in connection with the aspect/*Aktionsart* distinction: (1) the issue of cross-linguistic transferability; (2) the proper unit of analysis and its implications; and (3) the best way to approach event typology in Koine Greek. I will briefly discuss these three issues here.

(1) Transferability

The first thing we need to ask is whether the Vendler taxonomy has a good cross-linguistic foundation. It is a well-documented fact that Vendler's four classes are intended "to capture the common schemata implied by the use of *English verbs*."[162] Attempts have been made in the past to apply these classes in cross-linguistics studies and in the field of

---

[161] Carson, "Porter/Fanning Debate," 24–25.

[162] Vendler, *Linguistics in Philosophy*, 98–99. Emphasis Mine.

language acquisition.[163] However, in cross-linguistics studies the tendency is still to appropriate Vendler's classes with some minor modifications, or to assign verbs to the classes in a quasi-intuitive manner.

In fact, there are at least two ways to classify verbs into *Aktionsart* categories and both of them rely on the intuition of native speakers.[164] One way is to differentiate verbs directly using the semantic intuitions of a native speaker, but such exercises are highly subjective and fuzzy, and there are no native Koine Greek speakers around today. Even Fanning's notion of "normal usage" runs into this problem, because there are no native speakers who can verify what constitutes normal usage. Does normal mean how a verb is most frequently used in the NT? Or is normal usage based on the subjective judgment of a grammarian?

Given this problem, linguists often employ a second approach to assist with class assignment, which is the diagnostic approach discussed above. As already mentioned, the diagnostic approach looks at "the way in which verbs are affected by syntactic or

---

[163] Since the 1960s, effort have been made to integrate the Vendler taxonomy in a few European languages (Icelandic, Italian, Georgian, Croatian), Asian languages (Japanese, Korean, Tagalog) and others. For a brief list, see Van Valin, *Syntax-Semantics Interface*, 32.

[164] See Klein, "How Time is Encoded," 62.

morphological operations."[165] Although the superiority of this method seems obvious

when it is compared with pure intuition, the tests are not as objective and effective as

they seem to be.[166] To the contrary, the diagnostics depend on acceptability judgments

made by native speakers.[167] As a result, some scholars like Olsen try to justify the use of

English translations, which is a major shortcoming in any work concerned with Koine

Greek.

Despite this inherent limitation, numerous revised criteria, both syntactic and

semantic, have been proposed in the years since Vendler published his initial proposal.[168]

But of course, these tests are language specific, and "it is necessary to adapt these tests to

---

[165] Klein, "How Time is Encoded," 62.

[166] Let me briefly reiterate the three problems with diagnostic tests (at least in those works which follow Dowty) I stated above: (1) Some tests identify semantic features but not necessarily the corresponding classes; (2) some tests identify features other then those (the core three or four) that define the classes; and (3) the limited ability to handle class shifting. See 2.2.3 for a detail discussion.

[167] See Walková, "Dowty's Aspectual Tests," 503. This is not to say that these tests are unable to produce unanimous results, but some verbs may prompt different judgment from native speakers. Walková attributes this to the role played by pragmatics in interpretation. See also, Smollett, "Quantized Direct Objects Don't Delimit After All," 41–59.

[168] For example, Dowty's eleven diagnostic tests and Robert Van Valin's seven. See Dowty, *Word Meaning and Montague Grammar*, 52–60 and Van Valin, *Syntax-Semantics Interface*, 32–41.

features of the language under investigation."[169] Hana Filip voices some concern over this

when she says that,

> It is not always entirely clear what exactly the diagnostic criteria used by
> various researchers test for in linguistic expressions, and since the most
> common linguistic tests were developed based on English data, not all the
> tests are transferable across natural languages, due to language-specific
> properties, and those that seem to be require some clarification whether
> they in fact access the same aspectually relevant properties in different
> languages.[170]

Although the transferability of diagnostic tests has been widely questioned in linguistic

literature, this has not prevented linguists from transferring them to various languages.[171]

In Greek aspect study, those works that apply Vendler's classes make few modifications

apart from expanding some of the subcategories, and rarely do we see any systematic

diagnostic tests tailor-made for Greek.[172] It is obvious that tests involving the progressive

marker or progressive meaning are not applicable to languages such as Greek, which

lacks such a marker, but the usefulness of the other standard tests is still to be determined.

---

[169] See Van Valin, *Syntax-Semantics Interface*, 32, 35. For example, the progressive test is an English specific test, which only works for language that has progressive marker, like Turkish and Icelandic.

[170] Filip, "Aspectual Class and *Aktionsart*," 1192.

[171] See Klein, "How Time is Encoded," 62–64 and Filip, "Aspectual Class and *Aktionsart*," 1189–90.

[172] Evans also points out that these studies also depend heavily on the dated English glosses of LSJ. See Evans, "Future Directions," 204–05.

This is an area where we will need to invest more energy before the relationship between

inherent lexical meaning and grammatical aspect can become meaningful.[173] More

objective criteria and empirical approaches are needed to determine the role played by

various co-textual and pragmatic factors in interpreting event classes in Greek.

(2) Optimal Unit of Analysis

Concerning the proper unit of analysis, we need to ask whether Vendler's classes

should be applied to verbs or to some larger unit. More precisely, we need to consider

whether *Aktionsart* (or eventuality) should be treated as a clause level category (or

above), and, if so, whether it should still be treated as a grammatical category. As

mentioned above (2.2.3), the basic unit of the diagnostic tests is not the verb alone, since

they invoke other clausal constituents.[174]

I suggest that the general move towards larger units and the invoking of a broader

and broader range of phenomena is symptomatic of a theoretical problem.[175] As Henk

---

[173] But see, for example, the recent work of Shain, "Exploring *Aktionsart* in Corpora," 221–48. See also the discussion below (chapters 3–4).

[174] See Verkuyl, *A Theory of Aspectuality*, 43–44.

[175] To further complicate the problem, there are some, such as Olga Borik, who suggest a threefold distinction of aspect: lexical (verb class), telicity (clause/predicate) and viewpoint (morphology). However, she also qualifies this distinction by pointing out that there is no consensus on whether the three types of aspect should be considered as the same linguistic phenomena. See Borik, *Aspect and Reference Time*, 12–13.

Verkuyl points out in his review of aspectual classes, "none of the parameters is systematically related to constituents of natural language, except for the verb."[176] He rightly contends that this failure stems from a philosophical bias and that Vendler's classes are thus best viewed as ontological categories rather than linguistic categories. After all, it is well-documented in the linguistic literature that surface verbs manifest considerable variability in their assignment to Vendler's classes depending on numerous co-textual factors.[177] The basic meaning of a verb does *not* fully determine class projection.[178] This is why subsequent classifications, such as those by David Dowty and others, have extended the relevant domain of study from verbs to VPs so as to encompass other temporal entities.[179] In recent works, the relevant domain has been extended to include atemporal entities as well as temporal entities, which means that it basically

---

[176] Verkuyl, *A Theory of Aspectuality*, 66.

[177] See, for example, Sasse, "Recent Activity in the Theory of Aspect," 215–16 and Filip, "Aspectual Class and *Aktionsart*," 1189–90. Even Vendler himself uses abstract verb phrases (he calls them 'terms') in his examples instead of verb lexemes. See Vendler, *Linguistics in Philosophy*, 97–121.

[178] See Filip, "Aspectual Class and *Aktionsart*," 1191.

[179] See Dowty, *Word Meaning and Montague Grammar*, 185. and also Filip, "Aspectual Class and *Aktionsart*," 1193. Refer also to the works of Verkuyl where he talks about the effects of the internal arguments (1972) and the external arguments (1993) on the aspectual interpretation of a sentence. Verkuyl, *Compositional Nature*; Verkuyl, *A Theory of Aspectuality*; and Verkuyl, "Surveying the Ingredients". See also Sioupi's work, which includes the Determiner (DP in generative grammar) in her analysis of modern Greek. See Sioupi, "Morphological and Telicity Aspect," 131–44.

encompasses all clausal elements.[180] Scholars have not yet agreed upon a list of all the

relevant ingredients for class assignment, but it is clear that verb alone is not sufficient

for class assignment.

Recall from the discussion above (2.2.1), for example, that adding a plural subject

to a punctual VP changes the overall reading of the clause from semelfactive to durative,

i.e. from [-durative] to [+durative].[181] As a result, a problem arises with regard to the

labels used in many event typologies. If classes can only be meaningfully and uniquely

differentiated at the clausal or sentential level, the label "verb class" is misleading. It

misrepresents what is actually being described, namely, event types involving a predicate

and its arguments.[182]

---

[180] See Verkuyl, *A Theory of Aspectuality*, 23–31. See also Klein, "How Time is Encoded," 59.

[181] As I mentioned above, there is also a degree of subjectivity to the interpretation (from singular to plural subject). To reuse an example from above, Comrie chooses to interpret clause such as "the soldiers are already reaching the summit" as a punctual iterative, seemingly without considering the effect of the plural head term on the interpretation. However, later in his work, Comrie argues that the basic unit of analysis for telicity should include the verb and its argument, citing the works of Verkuyl and Dowty as support. See Comrie, *Aspect*, 43–45.

[182] This prompts scholars to move away from labels that would imply that the verb alone has a primacy in the analysis. Fanning's procedural characteristics and Smith's situation types are two recent examples. Olsen's choice of labels (verb class and lexical aspect) seems to go against her insistence of considering both co-textual elements and pragmatic implicatures (from wider context and knowledge of the world) in her analysis.

In fact, following Dowty's analysis and the advent of event semantics in the

1980s, non-temporal criteria have been very much in the spotlight.[183] Since then, many

studies have discussed the representation and composition of events using theories of

argument structure and thematic roles.[184] Yet although these theoretical advances have

been gradually accepted in subsequent linguistic frameworks, full scale integration of the

relevant semantic components has not yet been attained in an all-encompassing

framework.[185] As demonstrated above, one of the shortcomings in recent studies of the

Koine Greek verbal system is the lack of a comprehensive systematic approach to

eventualities that covers the various interactions among all of the relevant co-textual

elements. Fanning acknowledges the effects of verbal arguments, but he fails to provide a

systematic framework that describes how these arguments interact with other relevant

---

[183] See also, for example, Smollett, "Quantized Direct Objects Don't Delimit After All," 41–59 for a discussion of direct objects. See Piñón, "Adverbs of Completion in an Event Semantics," 149–66; and Rawlins, "On Adverbs of (Space and) Time," 153–93 for adverbs, and Zwarts, "Algebra of Paths," 739–79 for directional prepositional phrases.

[184] See, for example, Bach, "The Algebra of Events," 5–16; Krifka, "Thematic Relations," 29–53; Krifka, "The Origins of Telicity," 197–236; Tenny, *Syntax-Semantics Interface*; Rappaport and Levin, "Building Verb Meanings," 97–131; Filip, *Aspect, Eventuality Types, and Nominal Reference*; Rothstein, *Structuring Events*; Husband, *On the Compositional Nature of States* and the works of Verkuyl and others mentioned in note 183 on page 178. Note in particular Verkuyl's reservation on the mereological approach suggest by Krifka in Verkuyl, "Surveying the Ingredients," 214. See section 3.3 below for a summary of the works that relate to the discussion of telicity.

[185] We see bits and pieces in individual works. The closest one can get is Smith's compositional rules, which is based on Moens and Steedman. See 2.2.3.

factors.[186] Likewise, Olsen moves in the right direction by including co-textual factors, but her discussion is marred by poorly chosen labels and by its lack of a rigorous and comprehensive account of how various compositional factors interact with each other. Indeed, given the level of complexity and the vast number of entities that need to be considered, we should perhaps ask whether it is even feasible to describe an event typology as a linguistic system.

(3) Overall Approach

At this point, some very general issues need to be addressed. First, the level of subjectivity employed in the Vendlerian tradition needs to be acknowledged and accounted for. As I have shown above, different proposals employ different understandings of how eventualities (and *Aktionsarten*) are expressed in language, even when similar-sounding terms are being used. There are differences in connection with

---

[186] For example, something like a fully integrated account of how the Count/Mass distinction affects aspectual interpretation is lacking in his work.

how many semantic features should be included,[187] or how to handle exceptions in class

assignment,[188] as well as definitional and nomenclatural issues involving particular

semantic features, as well as different class hierarchies and groupings.[189] Quite often, as

demonstrated in the survey above, the same label means different things to different

scholars.[190]

Second, more attention needs to be paid to the limitations of the Vendlerian

framework, and it needs to be asked whether the benefits outweigh the problems. One

issue that has plagued event typologists in recent years is the handling of exceptions in

---

[187] See, for example, the discussion above on Van Valin's use of both static and dynamic features in his work and compare it with the other proposals. While most scholars, such as Smith, would define the pair as a semantic opposition, e.g. [+static] equals [-dynamic] and vice versa, and mainly use it to distinguish between States and non-State classes, Van Valin, on the other hand, includes both features in his framework and apparently understands the dynamic feature differently. Instead of treating the dynamic feature as a direct inverse of the static feature, Van Valin introduces a slightly different meaning (and usage) of the dynamic feature that "involves action or not" and is diagnosed with adverbs such as strongly, violently, or actively. (Van Valin, *Syntax-Semantics Interface*, 33). By defining dynamicity this way, Achievements and Accomplishments are considered as non-dynamic, which is contrary to most other proposals, and the Semelfactives as ambiguous. See Smith, *The Parameter of Aspect*, 19–20 and Van Valin, *Syntax-Semantics Interface*, 32–35.

[188] Either by way of class sub-division, adding more semantic features, or refining the diagnostic tests.

[189] See Olsen's critique of Fanning's hierarchical framework. See Olsen, *A Semantic and Pragmatic Model*, 204–06. See also Verkuyl's comment on various class groupings. See Verkuyl, *A Theory of Aspectuality*, 51–65.

[190] On the other hand, the definitions and labels of the classes, at least the core Vendler ones, are rather stable and consistent within the guild. The same could not be said for the semantic features. For example, see the discussion of dynamic and static features above (note 187 on page 180).

class assignment. Scholars have come up with different solutions to this problem,

including dividing classes into more delicate types, adjusting the basic unit of analysis,

adding more semantic features, and combining diagnostic tools. One common theme in

these various 'solutions' is expansion, whether in terms of classes or features or

diagnostics. I have already attributed this expansion to the ontological nature of Vendler's

endeavor. Here I want to add that the root of this problem is the lack of a coherent

framework for Vendler's classification scheme. His original classification and its later

expansions are not exhaustive, yet there is no way of telling when (if ever) the descriptive

expansions will adequately account for the complexity that is involved in construing

perceived events.[191] As a result, questions need to be raised regarding the effectiveness of

---

[191] For a critique of Vendler's framework, see Verkuyl, "Aspectual Classes and Aspectual Composition," 39–94.

the Vendlerian approach in general and regarding its usefulness and transferability to

Koine Greek study in particular.[192]

This brings us to the final issue, which is the viability of an all-encompassing

approach to event typology. First of all, we need to step back and ask whether the

philosophical tradition of Vendler is the best place to start. As Klein rightly points out,

we are not trying to describe "what is the case in reality but the way in which languages

grasp and encode reality in lexical contents."[193] Alternative linguistic frameworks that are

not closely connected to ontology or to the traditional Vendlerian approach should be

---

[192] See 2.2.3 for detail. I will give one more example here. The usefulness of the so-called imperfective paradox, which can be found in a recent work on Koine Greek, is questioned by Verkuyl. The paradox is used to distinguish an Accomplishment (X is V-ing does not entails X is V-ed) from an Activity (X is V-ing entails X is V-ed). Verkuyl points out that the major weakness of using the imperfective paradox as entailment diagnostics is that it works mainly on rather restrictive sets of VP, namely sentences with a singular direct object or with directional prepositional phrases. So, for example, an accomplishment VP such as "William is drawing some circles" will fail the test. See Verkuyl, *A Theory of Aspectuality*, 206–09. See Shain, "Exploring *Aktionsart* in Corpora," 221–48 for an example of how the imperfective paradox is applied to the study of Koine Greek texts. I will come back to response to Shain's work later. For another detail critique of Dowty's diagnostic tests, see Walková, "Dowty's Aspectual Tests," 495–518.

[193] Klein, "How Time is Encoded," 61.

brought into the discussion.[194] Quite a few competing frameworks are available from which we might choose.[195]

Second, we need to figure out how to approach compositionality. Existing proposals are presented as bottom-up, since they start with inherent lexical meaning and proceed to talk about how this meaning interacts with the properties of other other clausal constituents, including grammatical aspect operators. They then conclude with an overall aspectual meaning or aspectual interpretation of the sentence. In my opinion, however, we still need to determine whether grammatical aspect and temporally classified clauses inhabit a single level of abstraction. Is it self-evident that discussions about the inherent meaning of a verb and its interaction with other relevant clausal components should take place alongside discussions of grammatical aspect? Maybe the two should be treated as separate and potentially independent categories. A recent study of Modern Greek, for

---

[194] There are a few scholars, such as Verkuyl, who question the validity of Vendler's framework and Dowty's tests. The majority of event typologists are adherents of the Vendlerian tradition.

[195] There are other frameworks that are derived from a completely different linguistic theory, or adapts the core Vendler framework but models it using a more robust linguistic model. For the latter see Van Valin's RRG approach and Mourelatos's tripartite agentivity-neutral classification for example, and for the former, see Dik's functional grammar approach or the Systemic Functional Linguistics (SFL) approach. See Tatevosov, "The Parameter of Actionality," 317–24; Dik and Hengeveld, *The Theory of Functional Grammar*, 105–26; Halliday and Matthiessen, *Construing Experience*, 466–506; and Steiner, *Functional Perspective*, 225–36. For a SFL informed critical review of the bottom-up approaches to event typologies, see Pang, "*Aktionsart* as Epiphenomenon," 449–74.

example, has demonstrated that perfectivity is independent of telicity.[196] We need to

rethink our assumptions and reconsider whether we can safely treat the two systems as

dependent (see 3.3.3).[197]

2.4 MOVING FORWARD: A CORPUS BASED METHOD

Let me conclude this rather negative sounding chapter by suggesting a way

forward. Given the three critical comments above (2.3.3), I think that a top priority is to

determine whether the Vendlerian framework is suitable as a starting point for Koine

Greek studies. In another words, we need to determine whether a Vendlerian framework

that is tailored to Koine Greek is at all possible, and, if so, whether such a framework will

in any way benefit our understanding of the language and our interpretations of actual

texts.

---

[196] See Sioupi, "Morphological and Telicity Aspect," 131–44. See section 3.3.2.1 for more detail. See also Horrocks and Stavrou, "Actions and their Results," 297–327. For cross-linguistic studies see Borik and Reinhart, "Telicity and Perfectivity"," 13–34. But cf. Bohnemeyer and Swift, "Event Realization and Default Aspect," 263–96. For a language specific analysis, see Verkuyl, "How (in-)sensitive," 145–69.

[197] For example, does the presence of a singular or plural object to a semelfactive action expressed by an aorist verb change the aspectual meaning of the aorist so that it ceases to be a semelfactive action in certain contexts and becomes an accomplishment? Or is this change always independent of the aorist itself, as a matter of clause level semantics?

One of the biggest obstacles here is the lack of objective criteria. On the one hand, there is the problem of relying on native speaker intuitions both for class assignments and diagnostics, which often leads to an over-reliance on English translations. On the other hand, subjectivity is lurking in almost every corner of every event typology, affecting the number of levels, the numbers of classes, and the combinations of semantic features. This leads to confusion over issues such as definitions of semantic features and classes, exception handling, and diagnostics. These issues call for a different and more objective approach that can produce quantifiable empirical results. In this study, I will employ a quantitative and corpus approach to Koine Greek event typology, which I will briefly unpack here (but see chs. 3–5).

Many, if not most, of the works that have studied the Greek verbal system over the past three decades have focused exclusively on the Greek of the New Testament. It should not come as a surprise as the motive of these works is to help the reader to become a better interpreter.[198] However, the NT is a rather small corpus and it is not representative of the larger body of Hellenistic Greek literature. Thus predictable patterns found in the NT may not be linguistic in a general sense, but may instead be related to

---

[198] See, for example, Fanning, *Verbal Aspect*, v-vi, 421–2 and Porter, "Verbal Aspect and Discourse Function in Mark," 137.

register/genre, dialect, or other related factors. What is needed is a corpus large enough to be representative of how the Greek language was used in the Hellenistic period. This corpus must include genres and text types that are under-represented or absent from the NT, as well as dialects that are much broader than those employed in the NT. It should also be a large enough sample to perform reliable inferential numerical studies. I will provide an outline of such a corpus in chapter 3, including the relevant classification criteria and the statistical tools that are needed for inferential analysis. I will also talk about how corpus linguistics can enhance our understanding of Koine Greek by providing objective numerical measures for various grammatical features of the language.

A word of clarification is needed here, however. I want to emphasize that I am not trying to claim that numerical analysis is the only accurate way to do linguistics, nor am I claiming that there is no subjectivity in statistical analysis. What I am suggesting is that numerical analysis provides a healthy antidote to the excessive subjectivity that is prevalent in earlier studies, while at the same time providing a way to verify or falsify earlier claims that have been made about the Greek verbal system.

In order to construct a Koine Greek event typology that is quantitatively testable, a few things are needed. First, for the testing procedures, we either need to start from scratch with new classes and new patterns of interaction, or we need to begin by testing

the legitimacy of existing verb classifications and predicted patterns. As far as Greek

goes, one of the few explicit proposals that can be tested is Fanning's.[199] To develop a

manageable test, I will use a small set of verbs and isolate one semantic feature. In my

opinion, the telicity feature is a good candidate. It distinguishes between Activities

[+dynamic +durative -telic] and Accomplishments [+dynamic +durative +telic] and it has

produced much discussion and debate over the past two decades.[200] A large part of the

debate is focused on the definition and the label of the feature, but a related point

concerns its linguistic realization in different languages. I will treat these two key issues

separately in the next chapter (3.3).

First, I will focus on nomenclatural and definitional issues, developing a concrete

description of telicity as a semantic concept. I believe much of the confusion that

surrounds telicity derives from a failure to separate the ontological notion of telicity from

the ways that it is (or is not) represented in human languages. It is thus imperative that the

notion of telicity be clearly defined before the matter of its representation in a language

---

[199] I will supplement Fanning's verb list with the works of Mateos and Napoli. See Mateos, *El Aspecto Verbal* and Napoli, *Homeric Greek*.

[200] The literature on telicity in the past two decades is legion. See, for example, Krifka, "Thematic Relations," 29–53; *idem*, "The Origins of Telicity," 197–236; and Filip, *Aspect, Eventuality Types, and Nominal Reference*, 81–156. See section 3.3.1 for a detail discussion.

like Greek can be examined. I will also look into whether telicity can be fully and systematically represented in a language.

Second, I will look into various proposals that concern the ways that telicity is represented in language. I will start with existing formulations in cross-linguistic studies and then determine: (1) whether such tests are transferable to Greek studies and; (2) whether there is a way to verify the interpretation of telicity apart from reader intuition. I will start with those rules that claim to be linguistically verifiable.[201]

Regarding my choice of verbs, I will employ verbs with the so-called perfectivizing prefixes, since each pair of verbs is semantically and grammatically related. Some regard these verbs as clearly displaying the difference between telic and atelic verbs, and hence as a good way to observe interactions between telicity and other grammatical features such as grammatical aspect.[202] Others, however, contend that this line of reasoning conflates lexical and grammatical categories.[203] Scholars also cannot

---

[201] Smith's rule on identifying the core semantic feature of a verb (the maximally simple sentence rule) is a good place to start. See Smith, *The Parameter of Aspect*, 54–55.

[202] They would argue that these prefixed verbs demonstrate the differences between the Activity verbs (simplex) and Accomplishment verbs (prefixed). See, for example, Fanning, *Verbal Aspect*, 32, 151 and Shain, "Exploring *Aktionsart* in Corpora," 221–49.

[203] Porter's short treatment on the prefixes is arguably the most comprehensive in recent literature. See Porter, *Verbal Aspect*, 66–70.

agree on the classification of particular pairs of verbs.[204] This set of verbs provides the

ideal data set for the kind of testing and verification that this study is set to do. By

observing how each pair of verbs interacts with specific co-textual features, we can

determine whether the interactions differ between the simplex and the prefixed verbs.

This in turn will allow me to verify or falsify existing proposals concerning verb

classifications and the pattern that is alleged to exist in interactions between certain

classes of verbs and certain grammatical aspects.

Due to the scope of this study, I will narrow my examination to an alleged pattern

that characterizes telic verbs, which are said to favour the perfective aspect in Koine

Greek. I will use only non-peculiar verbs (verbs with a complete paradigm) in the

representative corpus as a baseline, and I will then compare the usage of perfectivizing

prefixed verbs with their simplex counterparts in order to determine: (1) whether the

usage patterns of either group deviates significantly from the baseline measurement, and

(2) whether the prefixed group differs significantly from the simplex group as regards the

use of the perfective form. Specifically, I will look at the use of perfective forms (both

simplex and prefixed) in various co-textual environments (e.g. with different kinds of

---

[204] Compare, for example, the treatment of Fanning and Mateos of ἔρχομαι and εἰσέρχομαι. See Mateos, *El Aspecto Verbal*, 87, 98 and Fanning, *Verbal Aspect*, 144, 151.

arguments and adjuncts) in order to determine the optimal grammatical unit of comparison (4.3). Various statistical tests will be used to test whether significant inferences can be made concerning how Koine Greek works.

Clearly, a corpus approach to Koine Greek requires far more than a single project. My goal for this study is thus somewhat hermeneutical in nature. I hope to call attention to the complexities that are involved in interpreting NT Greek texts (5.2). It is my belief that readers of the NT should be aware of the contributions that various grammatical, co-textual and contextual features have in the interpretive process. Interpretations of Greek texts should never rely upon over-generalized or under-formalized claims that mix together a complex set of distinct theoretical categories (grammatical, lexical, contextual).

CHAPTER 3 A CORPUS APPROACH TO KOINE GREEK EVENT TYPOLOGY

3.1 INTRODUCTION: NUMERICAL METHODS AND BIBLICAL STUDIES

As noted by Porter and O'Donnell, quantitative analyses—or more formally,

numerical linguistic analyses—are not prevalent in biblical studies.[1] Aside from

stylometric studies or studies of authorship, we rarely see quantitative evidence employed

in Koine Greek linguistics.[2] In traditional grammars, including the more comprehensive

volumes by Robertson and Blass-Debrunner, assertions regarding the prevalence of

---

[1] See Porter and O'Donnell, "Probabilistic Standpoint," 3–11.

[2] These studies usually claim to examine the issue of authorship by measuring and comparing the style of writing across different sections of a work or multiple works from allegedly the same author. See, for example, the works of David Mealand on the authorship of the Pastoral Epistles. See Mealand, "Positional Stylometry Reassessed," 266–86 and Mealand, "The Extent of the Pauline Corpus," 61–92. For a similar kind of study in the Old Testament, see the works of Radday. Radday, *The Unity of Isaiah in the Light of Statistical Linguistics* and Radday and Shore, *Genesis: An Authorship Study in Computer-Assisted Statistical Linguistics*. For a good summary of recent developments in computer-assisted studies of biblical stylistics, see Alviar, "Recent Advances," 139–59. For a discussion of how numerical analysis is used in NT studies, see the excursus in O'Donnell, *Corpus Linguistics*.

certain grammatical features are rarely quantified.[3] When numerical analyses are used in

NT studies, basic issues such as sample size and sampling bias are often not taken into

consideration.[4] One reason for this has been the lack of an easily searchable corpus that is

large enough to represent Hellenistic Greek. However, the recent popularization of

affordable and sophisticated cross-platform digital search engines has provided much of

what was previously lacking. My work on linguistic numerical analysis and corpus

linguistics in this chapter is an extension of recent works on numerical analysis on Koine

Greek.[5] It is part of an ongoing project of a corpus approach to Koine aspect studies by

Porter and O'Donnell. I will use a modified version of O'Donnell's proposed

representative corpus in order to examine uses of the Greek verbal system in the

Hellenistic period.

---

[3] For example, Blass-Debrunner use terms such as "occasionally, relatively, rarely" to describe various uses of the Future. See BDF § 178.

[4] For example, in the use of *hapax legomena* in the later Pauline works and the above mentioned example of the authorship of the Pastoral Epistles. See Robinson, "Grayston and Herdan's 'C' Quantity Formula," 282–88.

[5] In chronological order: O'Donnell, "Register-Balanced Corpus," 255–95; Porter and O'Donnell, "Probabilistic Standpoint," 3–41; Porter and O'Donnell, "Theoretical Issues," 119–37; Porter, "Aspect Theory and Lexicography," 207–22; O'Donnell, *Corpus Linguistics*; and Porter and O'Donnell, "Representative Papyri," 287–311. I have presented an early form of this corpus at a recent conference, entitled "Aspect and Lexis: Towards an Empirical Approach using a Representative Corpus Sample" (SBL 2012 Chicago).

This chapter is divided into two sections, the first (3.2) discusses the numerical tools and methods that I am going to employ in this study. I will first explain how corpus linguistics and quantitative studies can deepen our understanding of Koine Greek as a language system (3.2.1). I will then give an overview of the representative corpus used in this study and a detailed breakdown of how specific texts are assigned to the corpus (3.2.2). I will introduce the notion of classification criteria and will explain how they guide the formation of my corpus.

As mentioned in the last chapter, the bulk of my analysis involves a relationship between a semantic feature (telicity) and a grammatical feature (perfectivity). The second section of this chapter (3.3) will therefore discuss telicity. I will define telicity as a semantic component of event formation (3.3.1) and will distinguish it from its various linguistic realizations. In particular, I will look into the validity of the notion of a telic verb and how telicity is realized in higher ranks of grammar (3.3.2) and how it is related or distinguished from perfectivity (3.3.3).

3.2 A REPRESENTATIVE CORPUS OF KOINE GREEK

The focus of this section is on the technicalities involved in conducting a corpus

analysis. I will start with a brief discussion of corpus linguistics as a discipline (3.2.1).

This will then be followed by an outline of the representative corpus used in this study. I

will describe the sampling method and classification criteria that have guided the

formation of the corpus. I will also discuss the sources of the various texts used and

certain limitations that remain (3.2.2).

3.2.1 Corpus Linguistics and Koine Greek Studies

Linguistic analyses that are based on empirical observations are considered by

some linguists to be antithetical to theoretical linguistics.[6] Corpus linguistics is

---

[6] Even within the field, corpus linguists do not agree regarding the nature of their own discipline. Some consider it a theory (e.g. the so-called neo-Firthian scholars), whereas others consider it a method (e.g. Hardie and McEnery). See Gries, "Corpus Linguistics and Theoretical Linguistics," 327–43; Hardie and McEnery, "On Two Traditions," 384–94; and McEnery and Hardie, *Corpus Linguistics*, 122–66, 225–27. Borrowing from Thompson and Hunston, Barlow gives a few reasons regarding the "theory lightness" of corpus linguistics, i.e. skewing to the data side along the data-theory continuum. He contends that corpus linguists: (1) have a skepticism towards the reliability and validity of established theoretical constructs; (2) do not need to commit to a particular linguistic theory (along the cognitive-social spectrum); (3) do not have a unifying research method and tend to be more tolerant of methodological diversity; and (4) rely on actual corpus data, which is more difficult to generalize, instead of intuition/idealized data. Barlow, "Corpus Linguistics and Theoretical Linguistics," 3–7.

considered, at least in some circles of linguists, to be a fringe discipline in the study of language.[7] However, quantitative and corpus studies have been gradually gaining traction as more and more scholars recognize the benefits of quantitative work.[8] One reason for the resurgence of quantitative approaches is a growing awareness of the limitations of Chomskyan frameworks. In a recent article on the complementarity between corpus linguistics and various theoretical approaches to language, Barlow lists three areas in which corpus linguistics significantly enhances our understanding of the nature of language: (1) highlighting the importance of collocations and, as a result, meaningful

---

[7] This is not to say that corpus-based approaches to language were never mainstream. In fact, quite a few groundbreaking studies, such as the works of Zipf, Yule, and Nida, are corpus based. See Zipf, *The Psycho-Biology of Language: An Introduction to Dynamic Philology*; Yule, *The Statistical Study of Literary Vocabulary*; and Nida, *A Synopsis of English Syntax*. Some attribute the temporary demise of corpus linguistics to the rise of the Chomskyan generative approach, where the idea of finding a "deep structure" underlying sentences has little to do with quantitative observations over a large amount of data. See Porter and O'Donnell, "Probabilistic Standpoint," 3–5 and Barlow, "Corpus Linguistics and Theoretical Linguistics," 4. For a fuller historical overview of corpus linguistics and examples in both linguistics and NT studies, see O'Donnell, *Corpus Linguistics*, 68–101.

[8] Sampson quantifies this development in his two studies and observes that there is a general change of heart within the discipline, from an overall lack of interest in empirical approaches to a gradual gain of more traction in the guild. He concludes that the current scene in linguistics is as empirically-minded as it has ever been. See Sampson, *Empirical Linguistics*, 122–207; Sampson, "Quantifying the Shift Towards Empirical Methods," 15–36; and Sampson, "Ten Years On," 281–89. See also Gilquin and Gries, "Corpora and Experimental Methods," 1–8. In a later article, Sampson attributes this development to three factors: (1) availability of computing power; (2) change of emphasis to syntax within the discipline and; (3) rejection of pure intuition-based techniques. See Sampson, "Two-Way Exchange," 197–200.

units larger than the word;[9] (2) providing frequency information which can be viewed as

usage data for the study of language in context; and (3) quantifying the extent of

variability in language, which is particularly useful to the study of the character of

different registers, genres and text types.[10] Others have also come to a similar conclusion

regarding the benefits of the corpus approach to studying language, stating, for example,

that the corpus approach enhances our understanding of the notion of grammaticality.[11]

This study is an extension of an ongoing project of quantitative analysis begun by

Porter and O'Donnell. These scholars have conducted several studies that provide the

necessary groundwork for a large scale quantitative linguistic analysis of Koine Greek.[12]

The basic idea is to compile a corpus of Hellenistic Greek large enough to permit

---

[9] This also leads to the rejection of the traditional grammar/lexicon divide which leads to the notion of a lexicogrammar. For the SFL interpretation of lexicogrammar, see McEnery and Hardie, *Corpus Linguistics*, 79–81.

[10] See Barlow, "Corpus Linguistics and Theoretical Linguistics," 3–44, particularly 7–9. For a similar conclusion regarding the benefit of corpus linguistics, see Hardie and McEnery, "On Two Traditions," 385–86.

[11] See Sampson, "Two-Way Exchange," 206–09 and the exchange in the generative tradition in the 2007 issue (3.1) of *Corpus Linguistics and Linguistic Theory*, particularly Sampson's article and his response to the critics: Sampson, "Grammar without Grammaticality," 1–32 and Sampson, "Reply," 111–29. Biber also views corpus linguistics as complementary to a traditional theoretical approach. See Biber et al., *Corpus Linguistics*, 1-18.

[12] Porter and O'Donnell have (1) introduced Hallidayan statistical analysis into the study of the Greek of the NT; (2) developed a verbal network with statistical probabilities attached to various systems within it; and (3) laid out the groundwork for the compilation of a representative corpus sample for Hellenistic Greek. See note 5 on page 192 for the list of works.

inferential statistical analyses—i.e. large enough that one can infer the validity of a

particular hypothesis about Greek from an analysis of the corpus.

Like these previous studies, I will assume that (1) language is a network of

systems involving paradigmatic choices; (2) language is both a system and its instances;

and (3) grammar is inherently probabilistic, involving systems that are either

equiprobable or skewed.[13] It is under these assumptions that I am going to examine

interactions between Greek grammatical aspect and other lexical and co-textual factors. I

assume that grammatical aspect is a grammatical system in Greek (i.e. the system of

ASPECTUALITY), and my objective is then to test whether ASPECTUALITY is

independent of certain semantic factors.[14] I will expand Porter and O'Donnell's corpus

and re-examine the probabilistic distribution of the ASPECTUALITY system,

particularly the distribution between the +perfective and -perfective options. I will then

---

[13] As mentioned in the work of Porter and O'Donnell, this understanding of a language system comes from the functional school of linguistics known as Systemic Functional Linguistics (SFL), in particular the work of M.A.K. Halliday. I am not going to go over the basics of SFL here in this chapter. It has been described in the works I listed above (Note 5 on page 192). For more discussion, particularly in the notion of distributional markedness, see Porter and O'Donnell, "Probabilistic Standpoint," 3–17. For a list of Halliday's work on quantitative studies in linguistic analysis, see Halliday, *Computational and Quantitative Studies*, particularly chapters 3–5, 7.

[14] Porter and O'Donnell have demonstrated that the Greek aspect system is independent of other verbal systems (Voice and Mood) using only the NT texts. See Porter and O'Donnell, "Probabilistic Standpoint," 3–41.

use my new baseline measurement in order to determine whether certain verbs deviate

from this distribution enough that their deviation can be regarded as a statistically

significant phenomenon.

In my opinion, moving towards empirical observations of a larger body of text,

although by itself a rather painstaking undertaking, is essential in the study of Koine

Greek aspect. As I pointed out in the previous chapters, most of the works surveyed in

this study are theoretical in nature and rely heavily on the intuitions of language speakers.

One can find traces of subjective judgments and speaker intuitions in almost every facet

of the study of eventualities/*Aktionsart*. Corpus-based analyses are a welcome remedy to

this overdose of subjectivity, since they provide a way to verify claims regarding specific

features and patterns. In the words of Porter and O'Donnell:

> The importance of a structured representative corpus for the purposes of
> linguistic analysis cannot and should not be underestimated. It is only with
> a structured and representative corpus that quantification of results can
> move beyond impression to verification of significance ... for the entire
> corpus of Greek texts included.[15]

---

[15] Porter and O'Donnell, "Representative Papyri," 294.

In essence, a corpus approach to the study of Koine Greek is as close to a bottom-up approach as one can get to theorizing,[16] which I think can serve as a corrective or counterbalance to the top-down approach that is dominant in the study of Greek event typology.

However, a word of clarification is warranted at this point, so as to avoid giving the impression that I am arguing for a corpus-only approach to grammar. I am not arguing that we should abandon theoretical analyses altogether and build a grammar solely on the basis of usage data. Nor am I arguing that corpus analyses are unbiased analyses. I also acknowledge the discussion of whether corpus linguistics should be treated as a theory or a method.[17] Similar to Halliday, I maintain that the line between

---

[16] See Gries, "Corpus Linguistics and Theoretical Linguistics," 328; citing Teubert, "My Version," 4.

[17] Note that this division is, ironically, only theoretical in nature. In practice scholars from the two traditions most often work together without any hostility. In my opinion, part of the corpus-as-method vs. corpus-as-theory debate has to do with logical reasoning. Some within the neo-Firthian school, such as Teubert, argue that the purist and truest brand of corpus linguistics should be theory neutral. The practitioner should let the data in the corpus shape the interpretative framework, that is, corpus linguists should avoid as much as possible being affected by the so-called pre-corpus theoretical assumptions. On the other hand, those who subscribe to the method tradition see corpus data and computation method as tools to find evidence to support or disprove different theories, i.e. the pre-corpus theoretical framework guides one's analysis. In this sense, the corpus-as-theory adherents are advocating for an inductive approach to data analysis while the corpus-as-method school is more geared towards an abductive approach. For abduction in logical reasoning, see the brief discussion in 1.4.4 and Peirce, "Pragmatism and Pragmaticism," 99–107 and Walton, *Abductive reasoning*. For the method vs. theory debate, see Teubert, "My Version," 1–13 and Hardie and McEnery, "On Two Traditions," 387–90.

data gathering (corpus analysis) and theorizing are not as clear as some have perceived. Yet supposing that there is a method-theory continuum, I would position my approach fairly close to the method end of the spectrum. Similar to my stance on logical reasoning,[18] I contend that the corpus-as-theory approach to modeling language is rather difficult to execute, given that it requires the practitioner to be presuppositionless. What I propose in this study is an abductive understanding of corpus linguistics, i.e. corpus data are used to verify, support, or disprove existing theories. I am confident that the corpus approach can help us to verify the validity of various claims regarding the Greek verbal system, particularly regarding the behavior of telicity and its interaction with grammatical aspect. With this disclaimer out of the way, let me turn to the representative corpus used in this study.

The representative corpus of Hellenistic Greek used in this study consists of 56 documents. According to conventional groupings, it includes the entire New Testament, four works from the LXX, nine from the apostolic fathers, four from the Pseudepigrapha and 11 extra-biblical texts, including works by Hellenistic writers such as Josephus,

---

[18] See the discussion of abductive reasoning in section 1.4 on page 104.

Philo, Polybius, Epictetus, etc. and a small selection of papyri letters.[19] In terms of length,

the corpus is slightly more than half a million words (529,006), which is roughly 10%

smaller than O'Donnell's original proposal. Inaccessibility of some of the annotated

documents is the main reason for the decrease in corpus size.[20] Tagged texts and a proper

search interface are only available for a limited set of documents. Although there are

digital libraries that contain many texts, such as the TLG (*Thesaurus Linguae Graecae*),

PHI (Packard Humanities Institute) and DDbDP (Duke Databank of Documentary

Papyri),[21] morphological searching is not always available. These databases contain large

collections of Greek literary texts (TLG), inscriptions (PHI) and documentary papyri

(DDbDP) with only very basic search functions.[22]

---

[19] For genre, style and other external criteria such as date and provenance for most of these texts, see the next section and Appendix A in O'Donnell, "Register-Balanced Corpus," 294–95.

[20] Another reason is to avoid over-representation of the history category. See the discussion below.

[21] For more information on and background to these databases, refer to their websites: TLG: http://www.tlg.uci.edu; PHI: http://epigraphy.packhum.org/incriptions/ and DDBDP (Through the Papyrological Navigator project): http://papyri.info. TLG has an abridged version available to the public for free. It is, however, a very small collection of the TLG collection and is intended for college level instruction of Greek. See http://www.tlg.uci.edu/demoinfo/demo.php for more detail.

[22] There is also open-source third-party software programs such as *Diogenes*, that provide simple searching and browsing functionality of TLG and PHI texts. However, the databases are under license and not distributed with the software and morphological search is not available. For more information of the Diogenes software, refer to the developer's (Peter Heslin) website: http://www.dur.ac.uk/p.j.heslin/Software/Diogenes.

Obviously, one option would be to start a corpus annotation project with the objective of tagging the various features recognized in discourse analysis.[23] However, such an endeavor would require resources that are not available for the present study. Thus the only viable option is to use those existing digital libraries which provide a morphological search function. The Perseus digital library, host by Tufts University, is one such project.[24] Although the Perseus collection of Greek texts (Greek and Roman Materials Collection) is much smaller in size than the TLG collection, it has a fair number of canonical texts available for free access as well as a web interface to parallel original and translated versions and link to different editions, reference works,

---

[23] These different levels at which annotation can take place can be connected with different units of the text recognized in discourse analysis, beginning with smaller units like phoneme and morpheme all the way to larger text units like clause, sentence, paragraph or the whole discourse. Other levels of possible annotations such as lexical semantics, stylistics, and pragmatics should also be considered. See O'Donnell, *Corpus Linguistics*, 138–63.

[24] The Perseus project is an open-source digital library for the Classical world with text and materials in different languages (Greek, Latin, Arabic) available to the public for free download (in XML format) and the published source code of the entire website is also available for software developers for free. The project is currently (Summer 2013) in the 4.0 release, also known as the Perseus Hopper, which provides a searchable web interface for the entire collections. It is a fourth-generation digital library with transcribed text and their original page images as well as other forms of annotation (morphological, syntactic, indices of people and places). It has two mirror sites as of Summer 2013, hosted by the Max Planck Society in Berlin, Germany and by the University of Chicago. See http://www.perseus.tufts.edu/hopper/opensource and http://www.perseus.tufts.edu/hopper/research/current for more detail.

commentaries and dictionaries.[25] One of its mirror sites at the University of Chicago also

provides morphological search functionality through their PhiloLogic system.[26] Another

option is to conduct the search through a commercial software package. At the moment

of writing, Logos Bible software allows its users to download the entire Perseus

collection of Greek texts and the documentary papyri from DDbDP for free and provides

search functionality of the collections through their search engine.[27]

There is also a slight discrepancy in word count in my study compared to

O'Donnell's. It may well be the result of different search engines used in different

studies.[28] In this project, the Accordance Bible software platform is used to access the

---

[25] The size of Perseus, in terms of word count, is less than 10% of TLG. The Perseus collection of Greek texts approaches 8 million words while the latest version of TLG (web only Post-TLG E, as of 2001) has roughly 105 million words, covering from Homer to the fall of Byzantium in AD 1453. See http://perseus.uchicago.edu/ and http://www.tlg.uci.edu/about/ for more detail.

[26] For more information, visit the project website at http://perseus.uchicago.edu and the product wiki at http://sites.google.com/site/philologic3.

[27] Refer to Logos' website at http://www.logos.com/products/search?Product+Type=Perseus. The search function for the Duke databank in Logos is less than desirable (I am using the most updated version on a Mac system). However, this might not be entirely Logos's fault. If I am not mistaken, the morphological tagging of the DDbDP is not done by Logos but rather is imported from the provider (the Integrating Digital Papyrology project) and apparently Logos has not done anything to enhance its accuracy. I found numerous mis-tagged entries in the Logos incarnation of the text.

[28] Part of the discrepancy is a result of a slight difference of the biblical text. It might be a result of the use of different editions of the text or the counting mechanism used in different search engine. Refer to the figure below and the appendix at O'Donnell's study for detailed comparison. See O'Donnell, "Register-Balanced Corpus," 294–95.

biblical and related text.[29] The extra-biblical material used in this study is hosted in the

Perseus digital library. Table 3.1 illustrates the total number of words for the NT and

other texts. The proposed corpus is roughly four times the size of the NT, so that three

quarters of the texts are outside of the NT. However, this is not to say that size alone

determines the usefulness of a corpus. In fact, as noted in previous works, the texts used

in this work only make up a small corpus of Hellenistic Greek to serve as the basis for a

more representative corpus. As I mentioned above, the compilation of the corpus in the

present stage is constrained by accessibility of the morphological information of the

ancient texts. To properly access the usefulness of a sample, one needs to look further

into various classification criteria that guide the makeup of the corpus.

Table 3.1: Word Distributions: NT and Others Hellenistic Texts

	NT	Other	Total
Words	138,158	390,848	529,006
Percentage	26%	74%	100%

3.2.2 Classification Criteria and Representative Corpus

In developing a corpus of texts, it is important to use a sampling method that

achieves a desirable representativeness, because one of the key factors in a statistical

---

[29] The entire NT and the selections from the LXX, apostolic fathers, Pseudepigrapha, Josephus, and Philo. For the text used in each work, see below.

(inferential) analysis is that "the sampling methodology will provide a high degree of confidence that the results obtained for the small sample of the population will be representative of the population as a whole."[30] It is thus important to maintain balance and diversity in selecting texts for this study.[31] Following O'Donnell's proposal, the representative corpus used in this study has been compiled using two external classification criteria. These external criteria involve what Firthian linguists call a text's context of situation, which is similar to what biblical scholars call its *Sitz im Leben*.[32] Crucially, the notion of context of situation does not directly involve some of the key introductory parameters that are familiar to NT scholars, such as date, provenance and authorship. Such historically-oriented criteria are not very helpful for corpus compilation because they rely upon historical evidence that may or may not be available to the modern analyst. Moreover, given that the primary purpose of a linguistic corpus is to

---

[30] O'Donnell, "Register-Balanced Corpus," 261.

[31] Let me illustrate this by way of a figure. Imagine for a moment that the two classification criteria each has four elements. These elements can then be arranged in a 4x4 matrix and each NT document can be assigned to a slot within it. An ideal and balanced corpus, therefore, would have all 16 slots filled with NT and Hellenistic texts of similar size (to avoid over-representing any type of text). However, it is obvious that the genre and language varieties of the NT does not represent the corpus of all Hellenistic texts. Most slots need to be added and filled with sizable amounts of text in order to achieve a diverse and representative sample corpus. I will come back to this and provide a figurative representation of the corpus.

[32] See O'Donnell, *Corpus Linguistics*, 274–80. For the notion of context in SFL, see Halliday and Hasan, *Language, Context, and Text*, 3–51.

enable the study of Hellenistic Greek, the external classification criteria that are

employed should be directly related to language use.

Two criteria have proven to be particularly useful: degree of formality and

genre.[33] In terms of the former, I adapt the continuum proposed by Porter: vulgar, non-

literary, literary and Atticistic.[34] The NT itself can be categorized as non-literary although

some texts also display diversity on the spectrum. The language of Acts, James, 1 Peter

and Hebrews, for example, might be considered close to the literary spectrum whereas

the language of Revelation and the Johannine epistles might be considered vulgar.[35]

In terms of genre, the main genres demonstrated in the NT are epistle, ancient

biography (βίος), history and apocalypse. The Pauline letters and most of the so-called

---

[33] The other main criteria often used in the compilation of a sample corpus are the internal criteria, which pertain to features internal to the text, such as theme, style and register. As noted by O'Donnell, the majority of corpora have been complied solely base on external criteria. He attributes this to the lack of a satisfactory method for classification by internal criteria. Definitions of various related concepts such as topic, theme and style remain unclear and ill-formed. The levels of grammatical and semantic annotation are not yet available for Greek texts outside of the NT. For a discussion of classification criteria (internal and external), see O'Donnell, *Corpus Linguistics*, 115–21.

[34] See Porter, *Verbal Aspect*, 152–54. Note that these four groups represent points on a continuum or a cline.

[35] See O'Donnell, *Corpus Linguistics*, 133. Incidentally, Moulton considers the quality of Greek in 1 Peter, James, and Jude to be learned compared to some other NT texts (such as Mark). He attributes this to the bilingual upbringing of the authors (Peter, James and Jude), arguing that the quality of Greek in their writings seem to imply that they speak better Greek than Aramaic compared to the author of Mark, who might be more fluent in Aramaic than Greek. See Moulton and Howard, *Accidence and Word-Formation*, 25–27. For the language of Revelation see Aune, *Revelation 1–5*, clx–ccvii.

general epistles can be confidently classified as epistles.[36] The genre of the Gospels has

been a matter of debate in Gospel studies, especially in past decades, but a strong

argument can be made that the Gospels belong to the genre of ancient biography.[37]

Following previous works, Acts is classified as a work of history and Revelation as an

apocalypse.[38]

---

[36] Although there maybe a certain degree of register variation within the body of texts, all of the Pauline letters and most of the other epistles in the NT share the Hellenistic epistolary conventions (basic structure, idiomatic phrases, etc.). O'Donnell, *Corpus Linguistics*, 125–26. For a discussion of ancient Greek letter writing and their relevant for understanding NT and Patristic letters, see White, *Light from Ancient Letters*, 188–220. See also Stowers, *Letter Writing in Greco-Roman Antiquity*, 17–26. For a discussion of the recent development in the research of the five letter divisions of the Hellenistic letter form, refer to the essays in Porter and Adams, eds., *Paul and The Ancient Letter Form*. For the use of rhetorical categories to analyze Paul's letters, see Porter, *Paul in Acts*, 98–125. There are a few letters, such as Hebrews and James, that do not fit nicely in the Hellenistic letter form. I will come back to those documents below.

[37] See, for example, the works of Talbert (mythical biographies), Shuler (encomium biography) and Burridge (ancient biography). Talbert, *Literary Patterns*; Shuler, *A Genre for the Gospels*; and Burridge, *What are the Gospels*. See Aune, "The Problem of the Genre of the Gospels," 9–60 for a critique of Talbert, and Burridge, *What are the Gospels*, 252–307, for his response to his critics. For a brief discussion of the concepts of techniques that Burridge used that are similar to corpus linguistics, see O'Donnell, *Corpus Linguistics*, 44–45.

[38] I am not going to provide a thorough analysis of the genre of each NT document (or group of documents) since others from this corpus project (Porter and O'Donnell) have already spent considerable time tackling this issue. Following O'Donnell, I will define genre under the SFL notion of context and register. Genre is treated as an element of the context that affects the writer's/speaker's choice of field, tenor and mode. See O'Donnell, *Corpus Linguistics*, 124–37. For a discussion of the SFL context and register, see Halliday and Hasan, *Language, Context, and Text*, 3–49. For an in-depth discussion of NT genre, see Pearson and Porter, "The Genres of the New Testament," 131–65. For the genre of Acts, see Pearson and Porter, "The Genres of the New Testament," 144–48. For Revelation, see below.

Table 3.2: NT Documents According to Two External Classification Criteria

GENRE	LANGUAGE VARIETY			
	Vulgar	Non-Literary	Literary	Atticistic
Letter	Johannine Epistles	Pauline Epistles, 2 Peter, Jude	1 Peter, Hebrews, James	
Biography	Mark, John	Matthew, Luke		
History	Acts			
Apocalypse	Revelation			

Recent works have argued for a finer gradation of genre for certain NT texts to better account for the linguistic variations within a single work with apparent shift of literary type.[39] For example, some scholars have argued that Revelation should be treated as a work of mixed genres (epistle, apocalypse and prophetic literature),[40] and the same

---

[39] The same can also be said about language variety. There are suggestions that variation of the language formality is evident in a given NT text. The language of the parable of the prodigal son, for example, is described as displaying unsurpassed literary excellence. See Robertson, *Grammar of the Greek New Testament*, 84–85.

[40] For the mixed genres of Revelation, see Bauckham, *The Theology of the Book of Revelation*, 1–17. For an overview of the Apocalypse genre, see Collins, *The Apocalyptic Imagination*, 1–41. For Revelation as apocalypse, see Aune, *Revelation 1–5*, lxx-xc.

has been said regarding specific passages (narrative vs. speech) in the Gospels and Acts.[41]

Likewise, some would argue that the epistles of Hebrews, which lacks a proper letter

opening, reads more like a sermon than a letter.[42] However, when a corpus is compiled

using the sampling method outlined above, such variations within a given text do not

---

[41] Runge argues that reported speeches (in the gospels and Acts) behave more closely to epistles than narrative proper based on his analysis of discourse devices (forward pointing references, near/far distinction). See Runge, *Discourse Grammar of the Greek New Testament*, 315–16. By the same token, I think the same can also be said regarding the so-called apocalyptic discourses in the Synoptic Gospels (e.g. Matt 24–25; Mark 13; Luke 21) and Paul's description of his travel itinerary in Galatians 2, i.e. a passage within a work in a different text-type (speech within a narrative) has features similar to another genre type, that is different from the rest of the work. However, I think this does not necessary call for a finer gradation of genre but rather a better understanding of what constitutes a genre, i.e. at what level of specificity we talk about a genre. We need to ask, how far should this gradation go? In other words, what is the minimal unit of analysis? For example, a reported speech in a gospel narrative might include the speaker telling a story (a parable), within which might also be further breakdown to speech, narrative, dialog and instructions. If we push this to the extreme, we might get different "genres" for every other sentence or paragraph. Obviously there is nothing wrong with pushing this analysis to a lower rank, but the question here is at what level of specificity the analysis of genre could remain meaningful. In this study, I will follow the convention of NT studies and look at genre at the level of a complete work, but at the same time, in my analysis of text below, I will pay attention to the difference, if any, between the major text-types (narrative, speech, etc.) within a document.

[42] There are quite a number of suggestions in the past regarding the genre of Hebrews, ranging from treatise, sermon, homily, to epistle. The major contention among scholars is whether it should be treated as a speech/sermon or a letter. If it is the former, what rhetorical categories one should use to analyze it. However, recent works in discourse analysis have shown that it might be better to analyze Hebrews based on its internal structure instead of relying on existing rhetorical categories to avoid superimposing foreign categories to the analysis of the structure of the text. For a discourse analysis of Hebrews, see Westfall, *Discourse Analysis of the Letter to the Hebrews*. In addition, even if Hebrews is a sermon in its original form, the epistolary ending shows that it was later considered to be distributed in written form and it is rather difficult to draw a hard and fast distinction between a written and an oral document. See O'Brien, *The Letter to the Hebrews*, 21–23 and also Pearson and Porter, "The Genres of the New Testament," 152–55.

pose any problems.[43] Rather, it matters only that the corpus maintains its

representativeness in terms of balance and diversity, meaning that the corpus includes

enough material for each genre and language variety without over-representing particular

combination(s). I will discuss intra-generic variations in my analysis only when they

warrant specific discussion.

Moving outside of the NT to other Hellenistic texts, I have followed the guideline

employed earlier by O'Donnell, who writes about his own corpus that "other texts and

writers have been selected to match each combination of the New Testament where

possible."[44] Then, following this, some additional genres such as philosophy, prophetic

literature, and geography are included to move the corpus one step closer to being an

accurate representation of Hellenistic Greek. To get back to the matrix illustration, the

---

[43] What I mean here is that in general the variations in genre we see in the NT documents generally fall into one of the other genre categories. For example, one can further break down the gospels to different general text-types: narrative proper, reported speech, and apocalyptic discourse, etc., and move the non-narrative passages to other genre categories, presumably the epistle/discourse. At the same time, there are other passages in the corpus from the epistles that can be counted as narrative (E.g. Gal. 2). Another example would be the book of Isaiah (LXX), where it includes both prophetic literatures and narratives (e.g. Isa. 36–39). Note that the same can also be said about language variety. There are suggestions that variation of the language formality is evident in a given NT text, such as the language of the parable of the prodigal son. See Robertson, *Grammar of the Greek New Testament*, 84–85. What we need to do is to account for these shifts (in both categories) and estimate whether it would result in over-representation of a specific combination. I suspect that given that these shifts seem to appear in all genre categories and all language varieties, the overall effect would not severely skew the distribution.

[44] O'Donnell, *Corpus Linguistics*, 133.

goal here is to fill in as many slots as possible and at the same time avoid over-populating

any single slot. Table 3.3 illustrates the additional works that have been included in order

to cover the entire range of the two classification criteria used in this study.[45]

The compilation of texts in my sample corpus is slightly different from

O'Donnell's in several ways. First, the majority of the texts in certain genres fall in the

middle along the formality continuum. The main reason for this is accessibility. Digital

libraries with tagged Atticistic and vulgar texts are difficult to come by. Although some

searchable databases contain these texts, the functionality of the relevant databases is

either limited or not available, particularly with respect to the morphological searches

---

[45] O'Donnell modified his original proposal (2000) in a later work (2005) and added several Hellenistic works to strengthen the literary and Atticistic categories. He has also taken away several works from his original proposal. Of particular interest here is O'Donnell's abandoning of translated works. Comparing the second version of his corpus with the first, it is clear that O'Donnell has minimized the use of the Septuagint in order to avoid dealing with translated Greek. His two main concerns regarding translation are that (1) the discussion of Greek of the LXX is still surrounded with controversy and; (2) the discussion of the use of translations in corpus linguistics is still in its infancy. Compare O'Donnell, "Register-Balanced Corpus," 294–95 and O'Donnell, *Corpus Linguistics*, 134–35.

required in the present study.[46] For this same reason, I have replaced a few extra-biblical

documents on O'Donnell's list with similar alternatives.[47]

Table 3.3: Representative Corpus According to Genre and Language Formality

GENRE	LANGUAGE FORMALITY			
	Vulgar	Non-Literary	Literary	Atticistic
Letter	Johannine Epistles, Select Papyri Letters	Pauline Epistles, 2 Peter, Jude, Letter of Ignatius	1 Peter, Hebrews, James	
Biography	Mark, John	Matthew, Luke	Life (Josephus) Moses (Philo)	Selected Lives (Plutarch)

---

[46] The texts that I can neither find nor replace are Dionysius of Halicarnassus's *On Literary Composition* (Atticistic Philosophy) and Welles' *Royal Correspondence in the Hellenistic Period* (Atticistic Letter). I have also left Arrian's *Anabasis* (Literary History) and Dio Casssius's *Roman History* (Literary History) out of my corpus and have not replaced them. I have added more texts to the category by allocating more proportionately to Strabo's *Geography*. However, this should not be a major concern for my corpus since the history genre category is over-represented in O'Donnell's proposal. In addition, I have also replaced Welles' work with a rather small collection of documentary papyri (the Zenon Archive in the Michigan collection, P.Mich Volume 1: 1–120). As mentioned above, the major challenge to the compilation of the corpus is the lack of digitized texts and a good search engine. The performance of both the Papyrological Navigator (papyri.info) and Logos 5 are less than desirable for handling large amounts of papyrological texts. See note 27 on page 203 for more detail.

[47] I have replaced Plutarch's *Cato Minor* with two of his parallel *Lives* (Solon and Nicias). The size of the two works combined roughly equals to *Cato Minor* (≈17,000). Although I have omitted Dionysius of Halicarnassus's *On Literary Composition* from the philosophy category, I have added *Wisdom of Solomon* to the same category. The Greek of the work is generally considered to be eloquent and thus it should be placed in the literary category. For a discussion of the genre and language of the *Wisdom of Solomon*, see Winston, *The Wisdom of Solomon*, 14–20.

History/ Geography		3 Maccabees, Greece (Pausanias)	Acts, Library (Diodorus Siculus)	Geography (Strabo), 2 Maccabees	History (Polybius)
Apocalypse	Revelation	Shepherd of Hermas, Testament of Abraham, 3 Baruch			
Philosophy/ Sapiential Work		Discourses (Epictetus), Letter of Aristeas, 4 Maccabees	Library (Apollodorus), Wisdom of Solomon		
Manual		Didache			
Speeches			Speeches (Demosthenes)		

I have also made some modifications to O'Donnell's corpus in connection with translated works and apocalyptic literature. Regarding the translated works, I agree with O'Donnell that they should be kept to a minimum as much as possible, so I have omitted translated LXX texts (Judges, 1 Macc and Isaiah). To replace the translated texts, I have added the last three books of Maccabees (2–4 Macc), each of which was written in Greek during the Hellenistic period.[48] The second and third books of Maccabees are classified as

---

[48] Here is the general consensus regarding the date of the three works: 2 Macc, late second century BCE; 3 Macc, second century BCE to first century CE; 4 Macc, late first century BCE to early second century CE. See Schwartz, *2 Maccabees*, 11–15; Croy, *3 Maccabees*, xi-xiii; and deSilva, *4 Maccabees*, xiv-xvii.

history and the fourth is classified as a sapiential or philosophical work.[49] The language

of 2 Macc is generally considered to have the quality of a literary work, but the same

cannot be said regarding 3 Macc.[50] For this reason, I have classified 2 Macc as close to

the literary category in the language formality continuum and 3 Macc as close to non-

literary. Given its philosophical nature and its dependence upon 2 Macc, I have classified

4 Macc between the non-literary and literary categories.

In the apocalypse section of my corpus, I have replaced 2 Esdras (also known as *4*

Ezra) with two apocalyptic works (Testament of Abraham and 3 Baruch).[51] The reason is

that a large portion (chs. 3–14) of 2 Esdras was written in Hebrew and later translated

---

[49] Here I follow the classification by Berthelot. However, she also qualifies her classification, admitting that 4 Macc cannot be considered as a philosophical treatise in the strict sense, but its aims are clearly concerning religious edification. See Berthelot, "Early Jewish Literature Written in Greek," 187–88. deSilva contends that any assessment of the genre of 4 Macc must give weight to its demonstrative and encomiastic dimensions. He considers it to most resemble to protreptic literature, using Epictetus's discourse and Seneca's treatises as examples. See deSilva, *4 Maccabees*, xxi–xxiii.

[50] Schwartz compares the vocabulary of 2 Macc with the work of Polybius, which is a good witness to the standard Greek of the period. See Schwartz, *2 Maccabees*, 67–71. For the language of 3 Macc see Croy, *3 Maccabees*, xiii–xiv.

[51] The text of the Testament of Abraham is the edition by Montague James and includes both recensions (long and short). See James and Barnes, *The Testament of Abraham*. The text of 3 Baruch is also from James. See James, *Apocrypha Anecdota II*, 83–94. For the source and length of individual texts in the corpus, see Appendix A.

into Greek, likely several decades after the destruction of the temple (70 CE).[52] The

original Greek version of 4 Ezra survives only in fragmentary quotations and paraphrases

by later Christian writers, with the most important surviving versions being Latin and

Syriac.[53] Conversely, 3 Baruch and the Testament of Abraham are apocalyptic works

written in Greek during the Hellenistic period (possibly between 100–200 CE).[54] The

Greek of both works can be classified as non-literary.[55]

---

[52] The first two (5 Ezra = 2 Esdras 1–2) and last two (6 Ezra = 2 Esdras 15–16) chapters of 2 Esdras are later Christian compositions that have been attached to the Jewish apocalypse. For a concise summary of the naming convention of various works labelled Esdras or Ezra, see Evans, *Ancient Texts for New Testament Studies*, 11.

[53] For a brief summary of the textual transmission of 2 Esdras, see deSilva, *Introducing the Apocrypha*, 329–30.

[54] There are some scholars who consider the genre of the Testament, as the title suggests, a testament of the patriarch. Others have also questioned whether the *T.Ab.* should be considered an apocalypse since only half of the work can be legitimately considered to be an apocalypse. However, it is exactly this ambiguity in genre that makes it comparable to the other apocalyptic works in the corpus. As mentioned above, the genre of Revelation has also long been considered as ambiguous. Regarding the date of *T.Ab.*, Allison suggests that it can not be written later than the second century CE. For a thorough discussion of the date and the genre of *T.Ab.*, see Allison, *Testament of Abraham*, 28–60. For the genre and setting of 3 Baruch, see Kulik, *3 Baruch*, 11–15.

[55] Turner contends that the Greek of *T.Ab.* bears a strong syntactic and lexical resemblance to the Greek of the LXX and the NT. See Turner, "The 'Testament of Abraham': Problems in Biblical Greek," 220, 222. See also Sanders, "Testament of Abraham," 873–74. For the Greek of 3 Baruch, see briefly Harlow, *The Greek Apocalypse of Baruch*, 10.

Lastly, I have added Demosthenes' selected *Speeches* (Book 1–8), which was in

O'Donnell's original proposal but was later omitted.[56] My reason for putting the *Speeches*

back into the corpus is a desire to compare them with the reported speeches in the various

narrative genres (biography, history, apocalypse, etc). This will allow me to test whether

there are significant differences: (1) between the narrative proper and narrated speeches,

as well as (2) between narrated speeches and the speech genre itself.

With these modifications in place, Tables 3.4 and 3.5 summarize the proportion of

my corpus that has been allocated to each of the formality and genre categories. The

numbers in the brackets indicate the percentage of the overall total word count.[57]

Table 3.4: Text Distribution According to Language Formality

FORMALITY	NT	Others	Total
Vulgar	39,444 (29%)	8136 (2%)	47580 (9%)
Non-Literary	71,858 (52%)	179,431 (47%)	251,289 (48%)
Literary	26,856 (19%)	151,907 (40%)	178,763 (34%)
Atticistic	0 (0%)	43,594 (11%)	43,594 (8%)
Total:	138,158 (100%)	383,068 (100%)	521,226 (100%)

---

[56] Compare O'Donnell, "Register-Balanced Corpus," 294–95 and O'Donnell, *Corpus Linguistics*, 134–35.

[57] The number of words for the non-literary NT text is quite different from O'Donnell's calculation. I suspect he counted the non-literary/literary categories twice in his work. See O'Donnell, "Register-Balanced Corpus," 286.

Table 3.5: Text Distribution According to Genre

GENRE	NT	Others	Total
Letter	44,991 (33%)	15,916 (4.2%)	60,907 (11.7%)
Biography	64,841 (47%)	65209 (17%)	130,050 (25%)
History/ Geography	18,470 (13%)	117,584 (30.7%)	136,054 (26%)
Apocalyptic	9,856 (7%)	41,135 (10.7%)	50,991 (9.8%)
Philosophy	0 (0%)	121,364 (31.7%)	121,364 (23.3%)
Manual	0 (0%)	2,203 (0.6%)	2,203 (0.4%)
Speeches	0 (0%)	19,657 (5.1%)	19,657 (3.8%)
Total:	138,158 (100%)	383,068 (100%)	521,226 (100%)

As is obvious, Atticistic and vulgar texts play a fairly minor role in this study.
Also, the ratio of non-literary and literary texts in the overall corpus does not match the
ratio in the NT. More literary texts have been added so as to avoid a skewing of the
corpus towards the non-literary end of the spectrum (48% to 34% overall, as opposed to
52% to 19% in the NT). As regards the genres, history is still over-represented even
though I have eliminated some of the non-NT history works from O'Donnell's original
proposal. The addition of other genres, however, makes the corpus more inclusive and
diverse. In any case, "both the initial and experimental nature of the corpus must be
stressed at this point."[58] Despite the limitations of this corpus, representative statements

---

[58] O'Donnell, "Register-Balanced Corpus," 287.

regarding the use of Hellenistic Greek can be made. In particular, the corpus will allow

me to draw some statistical inferences regarding the semantic feature of telicity.

3.3 THE COMPOSITIONALITY OF TELICITY

The Aristotelian ontological distinction between different states-of-affairs has

been given various labels and interpretations throughout the centuries, but it is best

known as a distinction in telicity (i.e. telic vs. atelic) whereby certain actions move

towards a goal and others do not.[59] But of course, the notion of an eventuality reaching an

inherent boundary has also been associated with the grammatical perfective/imperfective

distinction. This association between telicity and perfectivity is not at all novel, but recent

developments involving the notion of temporal boundaries spark the discussion once

again.[60]

---

[59] Other labels include: terminative/durative (Verkuyl, Maslov), resultative/irresultative, punctual/ non-punctual, bounded/unbounded (Talmy), event/process (Mourelatos), accomplishment/activity (Vendler), quantized/cumulative (Krifka, Filip), delimited/non-delimited (Briton, Levin, Rapparport Hovav and Tenny). For a list of comparable terms that have been used to characterize the same ontological distinction, see Dahl, "Telic-Atelic Distinction," 79–81. Another list of comparable terms can be found in Filip, *Aspect, Eventuality Types, and Nominal Reference*, 53.

[60] See Borik, *Aspect and Reference Time*, 13–14, citing the works of Krifka as examples. For the historical development of aspect and *Aktionsart*, refer to the discussion above (1.2–1.3), particularly Sasse's observation of different tendencies between the studies in English and other European languages. See Sasse, "Recent Activity in the Theory of Aspect," 211–13.

I suggested in the previous chapter (2.3.3) that one reason for the confusion surrounding linguistic discussions of telicity is the ontological nature of the original distinction. The Aristotelian distinction itself is not intended to be linguistic in nature, but is rather a reflection of how different states of affairs can be categorized ontologically.[61] Therefore, when it comes to the description of language, there are two dimensions to the discussion: (1) how to define telicity as a concept, i.e. at the level of eventuality description; and (2) how to describe telicity as a semantic feature in a given language. In this section, I will handle these two questions separately. I will first talk about telicity as an ontological concept (3.3.1) and then survey various attempts to formulate a linguistic realization or description of telicity (3.3.2). Finally I will address the relationship between telicity and perfectivity, briefly surveying both sides of the debate (3.3.3).

3.3.1 Telicity as an Ontological Category

Before we can talk about how telicity is expressed in a language system and what is the optimum linguistic unit for its description, we need to have a clear grasp of the

---

[61] Borik identifies two approaches to the definition of telicity, one pertaining to the notion of an end-point and the other the semantic property of homogeneity. She considers the first approach to be ontological in nature. I will add that the end point approach can usually be found in the discussion of the definition of telic situation/event, less often in the linguistic realization, where the discussion usually concerns what elements should be included in the formulation. See Borik, *Aspect and Reference Time*, 25.

semantic notion of telicity. Discussions of telicity usually start by attempting to identify

whether or not there is a natural end point to some eventuality or situation. In fact, this

criterion is what Vendler uses to distinguish between his Activity and Accomplishment/

Achievement classes.[62] Definitions of telicity that involve a discussion of an end point are

ample.[63] Garey is often treated as a classic example of defining a telic action as one "that

tends towards a goal."[64] Comrie further elaborates this idea and defines a telic situation as

"one that involves a process that leads up to a *well-defined terminal point*, beyond which

the process cannot continue."[65] Similarly, Smith defines a telic event as an event that has

"a *natural final endpoint*, or intrinsic bound,"[66] adding later that "the notion of completion

---

[62] Although he does not use the term telicity explicitly, he did characterize the process as proceeding toward a terminus which is logically necessary to their being what they are. See Vendler, "Verbs and Times," 146.

[63] See Depraetere, "(A)telicity and Intentionality," 243–44 for a survey of various definitions.

[64] Garey, "Verbal Aspect in French," 105–06. Garey defines atelicity as an action that is realized as soon as it begins. Note that Garey's definition is for the classes of French verbs that describe telic and atelic action, not just the situations.

[65] Comrie, *Aspect*, 45. Emphasis mine. Contrary to Garey, Comrie clearly demonstrates in his work that what is defined here is a telic situation instead of a telic verb, an ontology instead of linguistic realization of the reality. He shows that a telic situation cannot be represented by the verb alone, but involves the wider co-textual and contextual elements. He goes as far as saying that given enough context, many sentences that would normally describe atelic situations can be given a telic interpretation. See Comrie, *Aspect*, 45–46.

[66] Smith, *The Parameter of Aspect*, 19. Emphasis mine.

is intrinsic to a telic event, irrelevant to an atelic event."[67] Note that these definitions

concern telic situations rather than the linguistic construal of such situations. In other

words, this is an ontological description of telicity rather than a linguistic description of

how language does or does not encode telicity.[68]

Although it seems intuitive to categorize events according to their attainment of

an endpoint, scholars have taken several issues with this definition. The first concerns

how the endpoint is related to the process that precedes it. There are some events where

the terminus is preceded by a process but there are also others where the terminus occurs

on its own.[69] Some contend that these two should not be lumped together under the same

category.[70] Others suggest that only those events that presuppose some cumulative

---

[67] Smith, *The Parameter of Aspect*, 43. At both instances she also emphasizes that a telic event involves a change of state which constitutes the goal of the event. I will come back to this later.

[68] For a similar discussion, see Dahl, "Telic-Atelic Distinction," 83.

[69] This leads to the discussion of all kinds of sub-divisions of the Achievement class. See 2.2.1 for detail.

[70] Fanning's two classes of Achievements, both considered bounded, is one such distinction. He compares two events, "kick a ball" (Punctuals) and "find my jacket" (Climaxes) and contends that whereas the terminus of the former is independent from a preceding process, the later cannot be defined without one (Fanning considers the preceding process not an integral part of the event). See Fanning, *Verbal Aspect*, 154–62. Dahl's example, on the other hand, seems forced. He suggests that the terminus-process relationship between "make a chair" and "my car has run 20,000 miles" is different. He contends that whereas the former can be understood without referring to the preceding process, the same cannot be said of the latter. See Dahl, "Telic-Atelic Distinction," 83–84. In my opinion, however, I would argue that most English speakers would understand the meaning of sentences such as "my car has accumulated 20,000 miles," or "my car has 20,000 miles" without mentioning or referencing the process of running.

process should be considered telic.[71] This difference in the terminus-process relationship

can also be described in terms of state changes. For example, Smith defines a telic event

as one involving "a change of state which constitutes the outcome, or goal, of the

event."[72] Given this definition, it is possible to understand the distinction she makes

between Achievements [+telic] and Semelfactives [-telic] as a distinction related to

telicity. For Smith, when a semelfactive event is completed (i.e. the end point is reached),

it does not produce a changed state. Therefore, unlike Fanning's Punctuals, Smith's

Semelfactives are classified as atelic even though semelfactive events have a clear end

point.[73]

Another issue that has been raised by scholars concerns the exact nature of the

endpoint of an event. First, there is the problem of defining naturalness and definiteness

when describing the terminus. Regarding naturalness, scholars suggest that a distinction

---

[71] See, for example, Binnick, *Time and the Verb*, 192.

[72] See, for example, Smith, *The Parameter of Aspect*, 19. The endpoint involves a beginning of a new state, upon which being reached, the situation is completed and cannot continue. See also Dowty's discussion of the same notion, which he attributes this idea to the work of von Wright and Kenny. Dowty, *Word Meaning and Montague Grammar*, 74–78.

[73] Fanning's Punctuals should cover Smith's Semelfactives. However, it should be noted once again that Fanning uses boundedness instead of telicity to distinguish between Activities and Accomplishments/Achievements. For the differences between the two, see below and also section 2.3.1, particularly note 130 on page 157.

between arbitrary endpoints and natural endpoints should be maintained. A telic event is

one with a necessary conclusion instead of an arbitrary terminal point. In another words,

the goal of a telic event is an inherent part of the situation.[74] Regarding definiteness,

scholars argue that the point at which the goal of a telic process is reached must be

specified. Thus telic situations should be distinguished from situations with an indefinite

endpoint, such as those involving direction ("move toward the North Pole") or degree

("cool down the engine").[75] In addition to these distinctions, others have also pointed out

that events which assume the involvement of an agent should be treated separately from

non-agentive ones (i.e. acts should be distinguished from happenings).[76]

---

[74] See Brinton, *The Development of English Aspectual Systems*, 26. Similarly, Dahl states that a telic event is one that has a terminal point built into it. It can be interpreted as a conditional statement: "There is a terminal point *t* such that if *t* is reached, the process cannot continue." (Dahl, "Telic-Atelic Distinction," 84–85)

[75] Dahl points out that although the situation that has a directional endpoint may exhaust itself, examples often fail the adverbial modification tests (for-/in- adverbials) and the entailment tests. See Dahl, "Telic-Atelic Distinction," 86–88. Brinton, on the other hand, contends that it is possible to attribute goal meanings to the endpoint expressions that specify a degree rather than a goal. Using the notion of salient changes, she argues that the changes that constitutes the final state (as oppose to the initial state) on a degree scale are "perceptible, relatively permanent, and maximally different from the initial state." (Brinton, *The Development of English Aspectual Systems*, 169–70) This is similar to Smith's notion of the change-of-state property mentioned above (See note 72 on page 222).

[76] Compare the two phrases for example, "a leaf dropped from its branch to the ground" and "William built a lego house." The first is non-agentive and the later has an agent (William). See also Dahl, "Telic-Atelic Distinction," 83–84 and Brinton, *The Development of English Aspectual Systems*, 251, n.26. However, this does not imply that agentivity is a factor of telicity. Verkuyl has shown that agentivity is a criterion that applies to all predicates. See Verkuyl, *A Theory of Aspectuality*, 35–40.

This discussion in turns opens up a related debate as to whether a goal is intentional/purposeful or natural. Some scholars, such as Olsen, emphasize the existence and naturalness of the endpoint in telic situations. According to her, the existence of an endpoint does not necessary imply "the attainment of such as end."[77] A natural endpoint is also distinguished from an inherent or intended endpoint in some works. Depraetere, for example, defines a telic situation as one having an intended endpoint.[78] However, the identification of the intended endpoint, at least in certain situations, is dependent on contextual information, such as "an intention to achieve a certain aim by one of the discourse participants."[79] This leads the discussion to the question of how much influence

---

[77] Olsen, *A Semantic and Pragmatic Model*, 32. Olsen's discussion of telicity mostly focuses on the verbs with the privative [+telic] feature and does not get into detail on the semantic concept itself. She does talk about a telic situation as having reached its end but the discussion is limited to situations as described by linguistic expression. She contends that the attainment of the endpoint is interpreted on a higher level of linguistic analysis (as oppose to verb and VP). She calls this the interpretation of the full aspectual structure, which is basically the entire clause (including factors such as grammatical aspect, tense and other relevant co-textual features). This understanding of the mechanics of aspectual interpretation anticipates Declerck's understanding of a multi-level framework of aspectual/temporal interpretation. See Olsen, *A Semantic and Pragmatic Model*, 31–35; Declerck, "Distinguishing between the Aspectual Categories," 49–64 and below for more detail.

[78] See Depraetere, "(A)telicity and Intentionality," 244–45.

[79] Depraetere, "(A)telicity and Intentionality," 245. This is, however, by no means a novel development. The discussion of the incompatibility of volition and verb classes can be found as early as Ryle's work. See Ryle, *The Concept of Mind*, 149–53.

extra-linguistic or pragmatic factors have on the classification of telic situations—and in particular, on the identification of inherent endpoints.[80]

Another issue related to the definition of telicity concerns the assumption of the existence of a terminus. Not all scholars are certain that a situation/eventuality can be identified as either telic or atelic even at the conceptual level. Borik goes as far as questioning whether it is possible to come up with a clear definition of an ontological endpoint given the present state of scholarship. She is not optimistic that the many kinds of endpoints (natural, inherent, intended, arbitrary, definite, etc.) can be precisely and accurately distinguished.[81] Further complicating the discussion is the notion of potential endpoints, which is used in cases where the materialization of an endpoint is not guaranteed at the time of an utterance (e.g. finding a book in a bookstore). Borik points

---

[80] Depraetere considers intentionality (as provided by context) as the decisive factor to determine telicity for predicates with numerical NPs. For example, "smoking a cigarette" is telic and bounded in most context, but "smoking five cigarettes" is telic only if the context indicates that five cigarettes are in the scope of an intention, i.e. made aware from the beginning that it is a target to be reached. A similar conclusion can be drawn for events that involve creating, consuming or affecting an item. In another words, an event is telic only if the attainment of the end is suggested (implicitly or explicitly) in the text (or context). See Depraetere, "(A)telicity and Intentionality," 243–69, example from 251–3.

[81] In fact, in my survey of works that discuss telicity, I found quite often that the definition of the endpoint of an event would stop at a certain level of specificity and quite often telicity is not clearly distinguish from other related, but not equivalent, features (such as boundedness). See, for example, Brinton, *The Development of English Aspectual Systems*, 25 and Dahl, "Telic-Atelic Distinction," 79–81. Borik contends that this is due to the lack of a clear definition of endpoint. She considers that the current state of scholarship relies too heavily on an intuitive and vague notion of a natural endpoint. See Borik, *Aspect and Reference Time*, 31.

out that an event described as progressing or developing does not exclude the possibility

of having an endpoint, even though the ability to express it is lacking in some language

systems.[82]

This last problem leads Borik to look into different levels of specificity employed

in definitions of telicity in recent literature. Telicity is sometimes compared to or even

conflated with other similar semantic features. Depraetere, for example, contends that

telicity should be distinguished from boundedness. Specifically, she suggests that

whereas an inherent or intended endpoint is integral to the notion of telicity, boundedness

has to do with whether or not a situation is described "as having reached a temporal

boundary, irrespective of whether the situation has an intended or inherent endpoint or

---

[82] She uses two Russian verbs *čitát'* ("to read") and *iskát'* ("to look for") to illustrate this point. She points out that whereas the process of reading a book is considered to have a natural endpoint, the same cannot be said of the process of looking for a book. To further complicate matters, in Russian only *čitát'* has the perfective form. However, whether the perfective form of *čitát'* can only have the telic interpretation, "to finish reading a book," is not entirely clear. See Borik, *Aspect and Reference Time*, 26–27.

not."[83] In another words, according to Depraetere, telicity should be treated as a subset or

a special case of boundedness.[84]

Not all are convinced that this distinction between telicity and boundedness can

be easily made at the conceptual level. Some scholars argue that the distinction can hold

only when telicity is defined using the notion of a changed state.[85] Others, such as

Declerck, treat the distinction as one between semantics and pragmatics, i.e. linguistic

---

[83] Depraetere, "On the Necessity," 3. This definition anticipates her later work on intentionality and telicity. Simply put, the decisive factor in distinguishing a telic situation and a bounded situation is whether the endpoint/right boundary is intended.

[84] Depraetere provides the following distinction: A telic situation [+telic], i.e. a process has reached the intended endpoint, implies that its temporal boundary has also reached [+bounded] and likewise for the relationship between [-telic] and [-bounded]. However, a situation without an inherent/ intended endpoint can also be described as having reached the temporal boundary [+bounded]. See Depraetere, "On the Necessity," 2–3.

[85] See, for example, Moens, "Temporal Reference," 57–58 and Smith, *The Parameter of Aspect*, 19. On the other side of the debate, Borik maintains that the distinction simply cannot be made conceptually. She questions whether a duration adverbial that indicate a possible temporal boundary (e.g. "for two hours") represents a situation that cannot continue beyond the period (i.e. telic). See the discussion in Borik, *Aspect and Reference Time*, 28–29.

realizations on different grammatical ranks.[86] Moreover, it is not clear whether this

distinction is maintained in works that use boundedness instead of telicity in the

classification of eventualities, even though some consider that the distinction has clear

grammatical implications for the formation of *Aktionsart*.[87] Fanning, for example, uses

boundedness instead of telicity to distinguish between Activities and Accomplishments.

Although he does not explicitly define boundedness as a semantic feature, his

understanding of what kind of *Aktionsart* a bounded expression realizes is similar to

those of Vendler and Declerck.[88] He distinguishes bounded expressions from their

unbounded counterparts by assessing "whether the expression includes a *limit* or terminus

---

[86] Declerck considers telicity a semantic distinction and boundedness a pragmatic distinction in his recent work, overturning his conclusion in an earlier work which does not clearly distinguish the two. See Declerck, "Bounded/Unbounded Distinction," 761–94 and Declerck, review of *Event Structure*, 275–304. In his recent work, Declerck argues that telicity is a matter of lexical aspect, for which he also coins the term "ontology aspect" (VP level), and boundedness a matter of what he calls actualization aspect, realized at the clause level. These are distinguished from the first level of aspect, which is grammatical aspect (verb morphology). See Declerck, "Distinguishing between the Aspectual Categories," 49–64. However, this still does not explain how an endpoint is defined at the second (VP/lexical aspect) level of realization. How to distinguish between a VP such as "find a book" (potential endpoint) and "read a book" (natural endpoint) and "try to find a book" (intention). I will come back to Declerck's model in section 3.3.2 and 5.2.2.

[87] In English, for example, whereas telicity (a description of a telic situation) is unaffected by whether the situation is described as progressive or not, the same could not be said regarding boundedness. Compare for example, "he is building a house" [+telic -bounded] with "he built a house" [+telic +bounded]. See Depraetere, "On the Necessity," 5.

[88] Fanning borrows from Declerck's early work (1979), in which telicity and boundedness are not clearly distinguished. See Fanning, *Verbal Aspect*, 140–45.

for the action or not,"[89] and he later characterizes the endpoint as "a terminal point at which the action is 'finished,' not just 'ended'."[90] This description seems to be very similar to the definition of a situation with non-arbitrary and inherent endpoint. However, although Fanning is aware of the many nuances surrounding the notion of an endpoint, he seems to choose not to explore them in his work,[91] nor does he clearly distinguish in his discussion between the bounded/unbounded event and the bounded/unbounded expression.[92]

To summarize, recent discussions of telicity as a semantic concept depend on various notions related to the idea of an endpoint. However, the description of an endpoint is not as intuitive as it sounds. Moreover, many definitions of telicity rely heavily on the notion of a natural endpoint, which is an intuitive notion whose meaning is quite contentious. In this study, I will take a rather narrow approach and define the terminus of an event as the point at which a change-of-state takes place. This state-

---

[89] Fanning, *Verbal Aspect*, 141.

[90] Fanning, *Verbal Aspect*, 141, 143. See also Fanning, *Verbal Aspect*, 151, n. 60.

[91] He mentions the works of Smith (natural and arbitrary endpoint) in a footnote without further elaborating on its implication. See Fanning, *Verbal Aspect*, 141, n. 36.

[92] There are other places in his work where the classification of kinds of action and the classification of the linguistic expressions for the actions seem to be treated together. See, for example, Fanning, *Verbal Aspect*, 148 where he talks about an unbounded *action* (Activity) instead of an unbounded expression in the conclusion of a discussion which is mostly referred to the linguistic expressions of the activity class (such as grammatical diagnostics, classification of Greek verbs/verb phrases). See Fanning, *Verbal Aspect*, 140–47.

changing point constitutes the natural (not arbitrary) and inherent (as opposed to unintended) conclusion (or goal) of the event, irrespective of the potential involvement of an agent.[93] Like Depraetere, I conclude that the potential for an endpoint is interpretive in nature (i.e. involving contextual information that is both linguistic and extra-linguistic) and should be treated—linguistically speaking—as a matter of pragmatics.[94]

3.3.2 Telicity and Linguistic Realizations

How exactly telicity is (or is not) expressed in various grammatical systems is a hot topic in event typology.[95] One of the core questions is whether telicity should be considered a valid and relevant feature in a language system. Borik articulates it succinctly when she asks "how do we know that telicity is a linguistically relevant notion which really finds its way into the grammatical system of language?"[96] Some say that various diagnostics demonstrate that linguistic representations of telic and atelic

---

[93] The notion of the change-of-state property is borrowed from Smith. See Smith, *The Parameter of Aspect*, 19.

[94] See note 80 on page 225.

[95] For example, in a recent work, Rothstein considers the question "what is telicity" to be one of the central theoretical issues in research in lexical aspect. This includes the question of what linguistic ingredients are involved in a telic expression. See Rothstein, *Theoretical and Crosslinguistic Approaches*, 3–4. See below for a brief description of the role of quantization in determining telicity. See also Krifka, "Thematic Relations," 29–53; Krifka, "The Origins of Telicity," 197–236; and Zucchi and White, "Temporal Constitution of Predicates," 223–70.

[96] Borik, *Aspect and Reference Time*, 13.

eventualities are indeed distinct and that a telicity distinction should therefore be

employed in the study of aspect.[97] But as I have shown above (2.2.3), these diagnostic

tests fail to account for numerous exceptions, such that various strategies are required in

order to address type shiftings/coercions at various levels of grammatical analysis.

In response to this difficulty, many have suggested moving the basic unit of

analysis upward from the verb alone to higher ranks of grammar. Thus it is normal to find

in recent literature that various co-textual elements and syntactic constructions are

incorporated in the discussion of telicity. Some contend that the telicity of a VP is not

fully determined by the semantic properties of the verbal head, thereby rendering

irrelevant any discussion of telicity at the verb level.[98] Even for those who insist that it is

---

[97] See, for example, Hinrichs, "A Compositional Semantics" and Dowty, *Word Meaning and Montague Grammar*.

[98] In contrast to the early Vendlerian tradition (1970s-80s), Verkuyl argues for a structural and compositional approach to telicity. He adapts a tripartite distinction of eventualities (States, Processes and Terminative Events) and introduces two semantic properties ([±ADD TO], [±SQA]) to distinguish them. The [±SQA] feature is associated with non-verbal (nominal) element of a VP. It describes whether a VP contends a "Specified Quantity of A" where A is the interpretation of a nominal argument (NP). A [+SQA] feature of a VP is formed compositionally by the Determiner and the Noun. The [±ADD TO], on the other hand, pertains to the predicate-argument relation. It is similar to Vendler's [±Process], expressing change or a going through time property based on the so-called Principle of Mathematical Induction (If $n \in N$, then $n+1 \in N$. For $0 \in N$). So, for example, to analyze a VP such as "eat two apples" in Verkuyl's framework, the verb "eat" is considered to be [+ADD TO] and allows the [+SQA] object "two apples" to percolate the object to the VP. See Verkuyl, *Compositional Nature*; Verkuyl, "Aspectual Classes and Aspectual Composition," 79–90; and Verkuyl, *A Theory of Aspectuality*. See also Dowty, *Word Meaning and Montague Grammar*.

still meaningful to talk about the classification of verbal heads, the question has now

shifted from how to assign verbs to different classes (according to semantic features) to

"how different heads can be classified according to the contribution they make towards

determining telicity."[99] In another words, recent developments in the discussion of telicity

have two foci: one that emphasizes the formation of telicity at the VP level, and another

that focuses on the classification of verbs according to their contributions to telic

interpretation. The linguistic investigation of telicity, which started out as a discussion of

ontology, has evolved from the study of the core meaning of verbs—by itself a matter of

lexical semantics—so as to encompass more and more syntactic elements. It is moving

slowly but surely into the realm of syntax and even pragmatics.

Since the core question of the present study is whether telicity is related

systematically to perfectivity in Koine Greek, it needs to be asked at which grammatical

rank we should describe the linguistic representation of telicity. In another words, should

perfectivity be examined in connection with something at the verb level or in connection

---

[99] Rothstein, *Theoretical and Crosslinguistic Approaches*, 2. Rothstein considers Krifka's work on thematic relations as foundational to her theory of telicity, in which she shows how verbs of each (Vendler) class interact with the non-verbal elements that result in telic or atelic VPs. For Krifka's theory of thematic role and telicity, see Krifka, "Thematic Relations," 29–53 and Krifka, "The Origins of Telicity," 197–236. For another generative approach to verb meaning, see, for example, Rappaport and Levin, "Building Verb Meanings," 97–131 and Rappaport Hovav, "Lexicalized Meaning," 13–42.

with something at a higher rank of grammar (e.g. VP or clause)? If the latter turns out to

be the case, then the appropriate grammatical rank has to be determined, so I am going to

spend the rest of this section looking at the various options. First, I will survey proposals

in recent works discussing the linguistic representation of telicity, pointing out a major

trend: namely, the importance of other co-textual factors in the formation of telicity.

Then, I will outline my own approach to telicity and explain how it enables the

quantitative analysis conducted later in this study.

In recent years, some linguists have suggested that we can categorize approaches

to telicity with reference to a distinction between syntax-oriented (or syntax-semantics

interface) approaches and semantics-oriented approaches.[100] However, contrary to these

labels, the semantic approach does not imply that syntax plays no role in the analysis, nor

is lexical meaning overlooked by the syntactic approach.[101] In fact, most recent proposals,

---

[100] For example, Walková distinguishes three approaches to telicity: syntax oriented, lexical semantic oriented and formal semantic oriented approaches. See Walková, "Dowty's Aspectual Tests," 496–97 for the list of works that he categorizes under these approaches. The syntax-oriented approach is also called the syntax-semantic interface approach, in which telicity is determined by syntactic features or structures (e.g. Tenny 1994). Telicity in the semantic approaches is grounded in meaning, whether it is the element of meaning denoted in the lexicon (such as the works of Dowty, Rappaport-Hovav, Smith, Olsen for example) or semantic properties such as homogeneity or cumulativity (such as the works of E. Bach, Krifka, Filip, Rothstein). See the discussion below for detailed references.

[101] This is similar to the discussion of the two approaches to the V/VP discussion above. See Filip, *Aspect, Eventuality Types, and Nominal Reference*, 81–83 and Rothstein, *Theoretical and Crosslinguistic Approaches*, 2–3.

regardless of the theoretical framework they employ, acknowledge the role that various

clausal constituents play in telicity. Filip, for example, suggests that most scholars agree

on the influence of noun phrase semantics on the telicity of verbal predicates. The

evaluation of telicity involves three "ingredients": (1) the lexical semantics of the verbal

head; (2) the relation between the verbal head and its nominal arguments that determines

telicity at the clausal level; and (3) the quantization status of the nominal argument.[102] Let

me briefly explain what is referred to as the quantization status of the nominal argument

before moving on to talk about how other co-textual elements are introduced into the

discussion of telicity.

In order to understand the development of the compositional approach to telicity,

a few temporal (semantic) properties must be introduced here.[103] First, a distinction is

made between homogeneity and heterogeneity. Vendler first introduces the notion of

---

[102] She adds that the verbs under discussion are episodic. See Filip, *Aspect, Eventuality Types, and Nominal Reference*, 81–83. Similar to Walková, Filip also talks about a distinction between semantic and syntactic approaches. While both of these approaches share the same assumption listed above, they differ in what types of rules, either syntactic, semantic or some combination of both, can account for the interactions between the properties of the argument (quantization or culmulativity) and telicity. See her comparison between the works of Tenny (syntactic or structural approach) and Dowty's semantic compositional approach, in Filip, *Aspect, Eventuality Types, and Nominal Reference*, 81–99.

[103] The following discussion is intended to serve as an introduction to the mereological approach to event typology, and is thus not intended to be comprehensive or detailed. For a good summary article, see Filip, "Lexical Aspect," 721–51. For a neo-Davidsonian approach to verb meanings and their interaction with (lexical) aspect, see Rothstein, *Structuring Events*.

"successive phases within a process" to distinguish between Activities and

Accomplishment. Vendler contends that Activities are homogeneous since "they consist

of successive phases following one another in time,"[104] in which "any part of the process

is of the same nature as the whole."[105] Accomplishments, on the other hand, are

heterogeneous, since they proceed toward a terminus in such a way that the successive

phases preceding the terminus cannot be alike and none of these phases is of the same

nature as the whole.[106] In another words, the part-whole structure of temporal intervals is

different between telic and atelic situations: there is entailment from part to whole in

atelic situations but not in telic situations.[107] The homogeneity property also assumes the

subinterval property, which is one of the defining properties of dynamic atelic

predicates.[108] If a VP is "the main verb phrase of a sentence which is true at some interval

of time I, then the sentence is true at every subinterval of I including every moment of

---

[104] Vendler, "Verbs and Times," 144.

[105] Vendler, "Verbs and Times," 146. To borrow Vendler's example, if someone is "running for half an hour," then it must be true that he/she has been running every period within that half hour.

[106] For example, any part of the process "swimming four laps in 5 minutes" cannot represent the whole process (completed four laps). See Vendler, "Verbs and Times," 146.

[107] For more detail of the part-whole structure and how it figures into linguistic discussion, see below and Krifka, "The Origins of Telicity," 197–236. For a concise summary, see Filip, *Aspect, Eventuality Types, and Nominal Reference*, 91–94.

[108] See Bennett and Partee, "Toward the Logic of Tense and Aspect in English," 59–109.

time in I"—and hence the VP has the subinterval property.[109] Under this definition,

accomplishment (dynamic and telic) VPs are distinguished from activity (dynamic and

atelic) VPs, i.e. Accomplishments entail a definite change of state and do not have the

subinterval property.[110]

The development of the homogeneity property and subinterval property, which

maintain that the part-whole structure of eventualities is crucial to class assignment,

anticipates the mereological approach to telicity.[111] A mereological understanding of

telicity starts with the idea of incrementality, i.e. a transformational relationship between

an event's progress (eventualities) and its effects on any objects (affected or effected),

---

[109] Bennett and Partee, "Toward the Logic of Tense and Aspect in English," 72. The article being referenced here is the second reprint (2004). The original article was published at 1972 and reprinted with a new postscript in 1978.

[110] See Dowty, *Word Meaning and Montague Grammar*, 168–73. Dowty distinguishes between the subinterval property of States and Activities by pointing out that whereas the subinterval within a State can be reduced to a single moment of time, the part or subinterval of an Activity has to come down to a certain limit in size. A subinterval of the act of walking, for example, must be more than a single moment in time. See Dowty, "The Effects of Aspectual Class," 42. For a summary of other limitations and revisions of the subinterval property, see Borik, *Aspect and Reference Time*, 33–36.

[111] See Filip, "Lexical Aspect," 732.

also known as the incremental theme.[112] Using Krifka's term for example, it is the

homomorphism from the extent of the theme argument (affected or effected direct object)

to the extent of the event "which allows the properties of the direct object to determine

whether the VP is telic or atelic."[113] At the core of the mereological approach to telicity is

the notion of quantization, which can be found in both nominal and verbal predicates.[114]

Semanticists posit that eventualities and objects are comparable ontological entities that

can be described by similar part-whole structures. They argue that the count/mass and

telic/atelic distinction have certain similarities and thus warrant a unified distinction to

---

[112] The act of eating a sandwich is a good example to illustrate the homomorphic relationship between the object (theme argument) and the event itself. The act of eating the sandwich is reversely related to the existence of the sandwich. As the eating progresses, there is less and less of the sandwich. The act is realized until the sandwich is no more. See Mittwoch, "Eating and Eating Something," 113–22; Dowty, "Thematic Proto-Roles and Argument Selection," 547–619; and Krifka, "The Origins of Telicity," 197–236.

[113] Rothstein, *Structuring Events*, 148. Many semanticists have come up with similar structure-preserving mappings to describe the compositional dimension of telicity, including Verkuyl's [±ADD ON] property mentioned above (See note 98 on page 231); Krifka's homomorphism (in his earlier works) or incremental relations; Tenny's "measuring out" relation. For a list of other labels, see Krifka, "The Origins of Telicity," 199 and Filip, *Aspect, Eventuality Types, and Nominal Reference*, 81–82.

[114] This is influenced by the so-called Davidsonian or neo-Davidsonian approach to Event Semantics proposed by American philosopher Donald Davidson, whose work posits that events should be treated with the same ontological status as objects. See Davidson, "The Logical Form of Action Sentences," 81–95. Dowty, who coins the term neo-Davidsonian approach, further stipulates that both the modifiers and the arguments of verbs are predicates of events. See Dowty, "Thematic Role," 69–130 for a discussion of the formal foundation of a theory of thematic roles (relations between individual and events). For an overview of the development of event semantics, see Casati and Varzi, "Introduction," xi–xvi.

describe both: quantization/cumulativity.[115] According to Krifka, a predicate (VP or NP)

is quantized if and only if there are no proper parts that are instances of the predicate. A

cumulative predicate, on the other hand, can be equated by the mereological sum of

different proper parts of the predicate.[116] However, quantization is a stricter notion than

telicity, i.e. all quantized predicates are telic but not all telic predicates are quantized.[117]

Later studies have shown that incremental relations alone do not determine telicity at the

verb level and, as a result, only a subset of Accomplishments/telic predicates fit this

---

[115] Krifka coins the terms quantization and cumulativity, which is similar to E. Bach's antisubdivisibility and additivity. See Krifka, "Thematic Relations," 29–52 and Bach, "On Time, Tense, and Aspect," 63–81.

[116] Krifka uses an algebraic structure that consists of the sums "$\oplus$" and proper part relation "<" operators to describe the incremental relations. For a quantized predicate X, $QUA(X) \leftrightarrow \forall x,y [X(x) \wedge X(y) \rightarrow \neg y < x]]$ and for a cumulative predicate X, $CUM(X) \exists x,y[X(x) \wedge X(y) \neg x = y] \wedge \forall x,y [X(x) \wedge X(y) \rightarrow X(x \oplus y)]]$. So for example, both water and apples are cumulative. Quantized predicates, on the other hand, are expressed by extensive measure functions such as explicit measuring units, two liters of water, three apples. Similarly, verbs such as arrive, reach are described as quantized and run and walk are described as cumulative. For the algebraic expressions, see Krifka, "The Origins of Telicity," 199–200. For other examples, see Krifka, "Thematic Relations," 29–52.

[117] See Krifka, "The Origins of Telicity," 207–08. Filip argues that incrementality is independent of telicity in the lexical structure of verbs and at the level of sentential semantics. Incrementality is not a requirement of telicity, nor does it guarantee telicity. As a result, she adds incremental verbs as a third class in addition to telic and atelic ones and assumes that they are unmarked with telicity. See Filip, *Aspect, Eventuality Types, and Nominal Reference*, 104–11 and Filip, "Lexical Aspect," 738.

framework.[118] However, this does not mean the discussion of incremental relations

contributes nothing to our understanding of telicity. It provides additional support for the

argument that the classification of eventualities concerns not just verbs alone but also a

host of co-textual elements.

The rise of the mereological approach also explains the trend we see in several

recent works to further break down the analysis into different levels with respect to

grammatical ranks. For example, in his recent work, Declerck distinguishes three levels

in linguistic representations of a situation: grammatical aspect (verb morphology),

lexical/ontological aspect (situation as represented by a VP), and actualization aspect

(clause level). He also distinguishes telicity from boundedness and then assigns them to

different grammatical ranks: telicity is realized by VPs (lexical aspect) whereas

---

[118] Zucchi and White show that Accomplishments that are not quantized but with theme arguments modified by at least/at most/most/many/few systematically are telic. Rothstein also points out there are telic VPs for which the extent of the theme does not determine the extent of the event. I have already mentioned a few examples such as "proving a mathematical theorem" or "fixing a computer" (See page 111, section 2.2.1). See Zucchi and White, "Temporal Constitution of Predicates," 223–70 and Rothstein, *Structuring Events*, 91–116, particularly 98.

boundedness is realized by clauses (actualization aspect).[119] At the highest level of

realization, actualization aspect describes how a VP (an abstract representation of a

situation) is realized in a clause, i.e. how lexical/ontological aspect interacts with other

clausal/sentential constituents (e.g. durative adverbials) and grammatical aspectual

markers to form a description of a situation. Obviously, this is the level where most of the

type coercions occur (telic and atelic, or in his term, bounded and unbounded).

Declerck considers telicity as one of the semantic properties that constitutes what

he calls "ontological aspect."[120] Under his framework, telicity is evaluated at the VP level

as a conceptual (or abstract) description of a situation type/template that denotes an

action tending towards a natural point of completion.[121] At the VP level, the situation is

represented as an abstract or generic type or template that "lack[s] some information

(such as a subject and a tense) necessary to denote a situation proper, and consequently

---

[119] See Declerck, "Distinguishing between the Aspectual Categories," 48–64. Borik also distinguishes three level of analysis. Unlike Declerck, her first level focuses on the lexical type of verbs determined by the inherent temporal properties. The second level, which she calls telicity or predicational aspect, is similar to Declerck's ontological aspect, which focuses on the telicity of a predicate. Her third level of aspectual analysis is the viewpoint aspect, which is close to the Slavic notion of aspect. See Borik, *Aspect and Reference Time*, 11–13.

[120] Declerck distinguishes telicity from boundedness. He uses telicity to label the feature expressed at the VP level and boundedness at the clause level. Other ontological features include stativity, agentivity, homogeneity, durativity, etc. See Declerck, "Distinguishing between the Aspectual Categories," 54–5, 60–1.

neither can be used to refer to any particular instance of actualization[.]"[122] Limiting the

analysis to the VP, a situation template can be classified as telic or atelic depending on

whether it "involves reference to a point of completion beyond which the situation (as

described by the VP) cannot continue."[123] As a result, a situation template (VP) is

distinguished from an actualizing situation, i.e. a clause that represents an instance of a

situation type (a VP used in an utterance).[124] The clause level description (actualization

aspect) expresses a realization of boundedness in an actualized situation that reaches a

terminal point. In short, boundedness can be treated as a representation of an actualized

telic event.

---

[121] Declerck considers a clause as consisting of a subject NP and a predicate constituent. A predicate constituent consists of a VP and the optional adverbials. The VP consists of the verbal group (Verb + optional auxiliaries), the complements, and any necessary adverbials. To cite his example, the clause "John put the book on the table this morning," consists of the NP ("John"), the VP ("put the book on the table') and the optional adverbial ("this morning"). See Declerck, "Distinguishing between the Aspectual Categories," 50.

[122] Declerck, "Distinguishing between the Aspectual Categories," 51. For example, "walk" and "walk to the church" each denote a situation template. The former can be classified as an Activity and the latter an Accomplishment. Both of these descriptions lack some vital information, such as the subject, the location in time, necessary to describe a situation proper (linguistic expression in an utterance). See Declerck, "Distinguishing between the Aspectual Categories," 50–2, 54.

[123] Declerck, "Distinguishing between the Aspectual Categories," 55. For example, the VPs "drink" and "drink gin" are atelic, but VP such as "drink a glass of gin" or "drink a bottle of wine" are telic.

[124] Using the previous examples (note 124), the two clauses "John drank gin yesterday" and "John drank a bottle of wine yesterday" both represent the actualization of a bounded situation even though the former contains an atelic situation template while the latter has a telic type VP. See Declerck, "Distinguishing between the Aspectual Categories," 54–55.

Similarly, Smith's basic and derived situation types can also be taken as a two-level analysis for telicity. In her framework, basic situation types (following the Vendlerian labels) are quasi-ontological descriptions of a situation at the VP level. The derived situation types, on the other hand, are clause level description of a situation. Guided by various compositional rules, the derived types cover various kinds of shifting and coercion due to the addition of other clausal constituents to the basic type VP in the analysis.[125]

In light of these developments, I propose to describe telicity not at the verb level but at a higher rank of grammar. However, it is clear from the above discussion that the list of relevant co-textual factors comprises various clausal and sentential elements. For the sake of practicality, the basic unit of analysis in this study is the VP.[126] I will differentiate between telic and atelic VPs, always comparing my analysis with alternative classifications at the verb level in order to illustrate the role of the co-textual factors in

---

[125] See page 142 for an overview of Smith's compositional rules and also Smith, *The Parameter of Aspect*, 54–5, 133–4. For another multi-level interpretive approach to telicity, see the discussion of the framework of Horrocks and Stavrou in section 3.3.3.

[126] However, this does not mean I will pay no attention to the verb and its contribution to the composition of telicity. Since most of the existing classifications are done at the verb level, my analysis will also include an examination of aspect choice and telicity at the verb level. See section 4.2 for more detail.

the evaluation of telicity. The relevant co-textual elements that are considered in this study are collectively labeled as the Telic Linguistic Environment (TLE). The TLE consists of linguistic elements such as various kinds of adverbial phrase, internal and external arguments, and other relevant co-textual factors that cause a telic shift in typical atelic situations, i.e. away from the atelic activity class to the telic accomplishment and achievement classes. These linguistic factors are summarized in Table 3.6, in which the particular grammatical unit that forces a telic reading of the atelic situation is emphasized.[127] There is also a similar set of co-textual elements that force an atelic or complex iterative reading of a typical telic situation. These are labelled Atelic Linguistic

---

[127] The following lists of elements and examples are gathered from several works. See Filip, *Aspect, Eventuality Types, and Nominal Reference*, 61–73; Smith, *The Parameter of Aspect*, 39–59, 123–6, 131–7; Moens, "Temporal Reference," 67–74, 150–4; and Moens and Steedman, "Temporal Ontology," 20–22. What I list here are only the typical usages of the elements. Within each category there are exceptions that warrant further discussion. I will come back to the exceptions when specific passages are discussed next chapter. In addition, it should also be pointed out that one usually has to deal with multiple elements (and their interplay) in the analysis of actual text. Ideally, a comprehensive framework should be able to deal with extreme cases that involve multiple elements such as Moens and Steedman's example: "It took me two days to play the 'Minute Waltz' in less than sixty seconds for more than an hour" and be able to determine accurately the telicity of the whole clause. See Moens and Steedman, "Temporal Ontology," 21. (A side note: the composer of the Minute Waltz, Frédéric Chopin did not intend for this waltz to be played in one minute, the word "minute" in the title likely means small or little. See Hinson, *The Pianist's Dictionary,* 114.)

Environment (ATLE). The list of ATLE elements and their typical uses are summarized

in Table 3.7.[128]

Table 3.6: Elements of Telic Linguistic Environment (TLE)

Element	Example
Iterative and Frequency Adverbials[129]	He pushed/started pushing the cart *three times* She lived in Toronto *twice*
Point Adverbials	*At that moment* I knew it was him
Time-Span and Completive Adverbials	She combed her hair *in five minutes*[130]
Directional and Locative Adverbials	He walked *a mile/to the college/out of the theater*[131]
Resultatives	She washed it *clean*
Phasal verbs	He just *finished/stopped* reading the book

---

[128] Note that this list only includes those element that trigger an atelic shift, not all the elements that are compatible with atelic VPs. See Smith, *The Parameter of Aspect*, 134–35 for a list of relevant elements.

[129] The kinds of iterative adverbials that can trigger a telic reading of an atelic verb are those that signify a specific number of iterations (x number of times).

[130] See Filip, *Aspect, Eventuality Types, and Nominal Reference*, 64. Dowty has pointed out that in order for this telic reading to work, the time span has to be specific (i.e. five minutes) and it must be in a specific context. For example, given enough contextual information, that John is in the habit of swimming a specific distance every day, the telic reading of "today John swam in an hour" is legitimate. Unspecific time-span, however, resists this kind of interpretation even in the same context. See Dowty, *Word Meaning and Montague Grammar*, 61 and Moens and Steedman, "Temporal Ontology," 21.

[131] Although the addition of locative extent and directional adverbial phrases forces a telic reading to most motion verbs, not all directional adverbials imply delimitation (e.g. *toward the mountain, for miles and miles, over water*). See Filip, *Aspect, Eventuality Types, and Nominal Reference*, 67.

Imperative Mood	*Please understand what I am trying to do here is to help you*
Specified and Countable Argument[132]	*He* ate *two sandwiches*

Table 3.7: Elements of Atelic Linguistic Environment (ATLE)

Element	Example
Durative and Time-Span Adverbials	He practiced/sang the lied *for two hours*[133] I knocked at the door *for an hour*[134]
Temporal Deictics	I understand more about the synoptic problem *as each day goes by*
Bare Plural/Uncountable (Mass) Argument[135]	She built *houses* He ate *some apples*

---

[132] Refer to the discussion of Verkuyl's [±SQA] on page 231 above. See also Verkuyl et al., *Perspectives on aspect*, 20–21.

[133] The atelic (iterative) reading of this example, however, depends on pragmatic or contextual knowledge (i.e. knowledge of the world). One needs to have knowledge about the length of play to sing a typical German *lied* to determine whether the practice or singing covers the entire song or not (Some *lieder* can last for an hour). Compare this to a sentence like "she played the sonata for ten hours." Although this latter example is more likely to have an atelic (iterative) interpretation, knowledge of the world is still a prerequisite for such reading. See Smith, *The Parameter of Aspect*, 135 and Moens and Steedman, "Temporal Ontology," 21.

[134] See Moens, "Temporal Reference," 68. Notice that not all durative adverbials (for-adverbials) with a telic event express iteration. The for-adverbial in "John left the room for a few minutes" seems to express duration and not iteration. Moens and Steedman point out that this is a particular problem in the English language, where the same device (for-adverbial) is used to convey different meanings. These two constructions are clearly distinct in other languages such as French and German. See Moens and Steedman, "Temporal Ontology," 20.

[135] Refer to the discussion of divisibility/quantized and cumulative features above.

To illustrate how the elements of TLE/ATLE operate in Greek, we can look at a

few examples of the verb ἔρχομαι. As mentioned above, ἔρχομαι is considered an atelic

verb by most scholars. However, it can be used with different TLE elements to denote a

telic situation. For example, in Mark 3:20 it is used with a locative adverbial phrase (εἰς

οἶκον) to describe a telic situation, namely "going into a house." In Luke 2:44, it is used

with a time-span adverbial (ἡμέρας ὁδόν), which limits the action to a certain duration and

thereby telicizes the process. Finally in John 4:27, a point adverbial (ἐπὶ τούτῳ) is used to

pinpoint the exact moment at which Jesus' disciples came to him. Here the effect of

individual elements has been described, but in an actual analysis, multiple elements often

factor into (a)telic interpretations of a given VP. There are instances where both TLE and

ATLE elements are present in a single VP. For example, in Luke 2:41, the Imperfect

ἐπορεύοντο is followed by both a TLE element (εἰς Ἰερουσαλήμ) and an ATLE element (κατ'

ἔτος). Although the locative adverbial gives the VP a telic reading, the iterative adverbial

atelicizes the entire phrase and creates an atelic (iterative) reading.[136]

3.3.3 Telicity and Perfectivity: Dependent or Independent Systems?

As mentioned above (1.3.4), there are two general approaches to the distinction

between aspect and *Aktionsart*. A unidimensional approach treats both grammatical

aspect and *Aktionsart* at the same level of analysis. This approach is rather commonplace

for languages in which *Aktionsart* is conveyed by derivational morphology, such as those

in the Slavic language group.[137] On the other hand, a bi-dimensional approach insists on a

---

[136] One might notice that the above TLE/ATLE elements are all illustrated by simple (non-nested) clauses/sentences. I have left the nested VPs out of this stage of discussion. What I mean by this is that elements such as an infinitival clause that functions as a complement or circumstantial or adverbial uses of a participle clause are not classified as TLE in this stage of the analysis. There are two reasons for this decision. First, the evaluation of a non-finite clause functioning as an element in another VP (e.g. καὶ ἐπορεύοντο πάντες ἀπογράφεσθαι in Luke 2:3) is rarely mentioned in the discussion of telicity in the linguistic literature. The idea that the completion of an event is dependent on or is at least related to another event further complicates the telicity evaluation of a VP. The other reason for not including these cases in this analysis is that the number of occurrences of these construction in our data set is relatively small. For example, in the movement verb group (5 simplex verbs, more than one thousand Indicative instances combined), the nested VPs construction appears in less than 10% of the total. In this study, these kinds of construction are evaluated based on the function of the non-finite clause. In an instance such as Luke 2:3, I will argue that the function of the complement ("to register for the census") is not to provide a temporal boundary to the main action ("going") but rather to provide the purpose of the action, which is often the function of the infinitival clause. See, for example, BDAG's entries of the use of πορεύομαι/ἔρχομαι with infinitive.

[137] See, for example, the writings of the so-called Leningrad School of aspectology such as Maslov, "Contrastive Aspectology," 21 and Bondarko, *Functional Grammar*, 64.

distinction between grammatical aspect and lexical *Aktionsart*.[138] Being part of the larger

discussion of the aspect/*Aktionsart* distinction, this dichotomous trend can also be found

in discussions of the telicity/perfectivity distinction. Some argue that the two categories

are dependent systems while others contend that they are independent. Some also argue

that the relationship between the two categories should be investigated language by

language. Verkuyl, for example, contends that telicity and perfectivity are the same thing

for Germanic languages, whereas Slavic linguists are not too certain about this claim for

a language such as Russian.[139] In what follows I will first survey some recent works that

insist on a strict separation of perfectivity and telicity, before turning to the other side of

---

[138] See, for example, Smith, *The Parameter of Aspect* and Bertinetto and Delfitto, "Aspect vs. Actionality," 403–39.

[139] See Verkuyl, "How (in-)sensitive," 145–69. For the discussion of Russian, see Borik, *Aspect and Reference Time*, 73–94. However, even though Verkuyl could be considered as arguing from for a unidimensional approach, and Borik, bi-dimensional, this does not imply that those who take the unidimensional view of aspect and *Aktionsart* are always adherent to the dependent view and vice versa. What I want to emphasize here is more on the dichotomous nature of the discussion of the relationship between telicity and perfectivity. For a unidimensional approach with a clear distinction between the two categories, see Frawley, *Linguistic Semantics*, 295–306. In what he considers to be the six "major" aspects, Frawley includes both perfective/imperfective and telic/atelic contrasts under the same umbrella term (aspect) but clearly distinguishes between the two categories. However, his analysis is too brief to be useful for our analysis. In addition, his definition of the perfective/imperfective contrast as one between complete and incomplete viewpoints could also be easily conflated with the telic/atelic distinction. The fact that he spends no time talking about the relationship between the two contrasts certainly makes his framework less helpful. For a bi-dimensional approach which holds an independent view, see Smith's two-components theory. See Smith, *The Parameter of Aspect*, 81–86.

the debate in order to explore the notion that there are predictable patterns involving

telicity and perfectivity.

In a recent study on modern Greek resultative predication, Horrocks and Stavrou

argue that grammatical aspectual choice is independent of the terminative/non-

terminative contrast in Greek. In what could be considered a three-tier interpretive

framework, Horrocks and Stavrou suggest that the overall aspectual reading of a VP can

be broken down into three layers of semantic contrast: delimited/non-delimited;

terminative/non-terminative; telic/atelic, each at different levels of linguistic analysis.[140]

At the morphological level, particularly in languages which encode the perfective/

imperfective aspectual contrast morphologically, there are in principle two ways to view

the action denoted by a verb:

> On the one hand, it may be conceived as a single complete whole with
> external 'bounds' (beginnings and ends), but without specification of any
> internal temporal 'contour' (in Comrie's 1976 terminology) characterized
> in terms of properties like continuousness or progressiveness: such
> delimited readings are carried by the choice of perfective aspect.
> Alternatively, it may be conceived exclusively in terms of some internal
> contour of this sort, i.e. without specification of external bounds: such
> non-delimited readings are carried by the choice of imperfect aspect.[141]

---

[140] See Horrocks and Stavrou, "Actions and their Results," 309–13.

[141] Horrocks and Stavrou, "Actions and their Results," 309–10. Emphasis original.

The terminative/non-terminative contrast concerns the lexical meaning of a verb

in its normal usage, i.e. whether or not, in normal usage, the verb entails a natural

inherent endpoint.[142] Horrocks and Stavrou consider the terminative/non-terminative

contrast independent of grammatical aspectual choice, since it is a matter of lexical

semantics and it affects all forms of a given verb.[143] In this multi-layered framework,

terminativity contributes to telicity, which involves the character of a situation/

eventuality at the VP level[144]—but whether a VP denotes a telic or atelic situation has

"nothing directly to do with grammatical aspect."[145] Building on the distinction by

Horrocks and Stavrou, Sioupi provides more support for the argument that telicity and

perfectivity (delimitedness) are independent in modern Greek. Examining two groups of

---

[142] They consider a Greek verb such as melt (λιώνω) as intrinsically terminative. See Horrocks and Stavrou, "Actions and their Results," 310.

[143] See Horrocks and Stavrou, "Actions and their Results," 309, n.15.

[144] Note that telicity and terminativity is also independent to some degree. Telicity at the VP level does not require terminativity at the verb level. A telic clause may contain a non-terminative verb ("I ran five miles this morning") due to the compositional nature of telicity (telic shift). The same can be said regarding the atelic clause with terminative verb ("she built houses").

[145] Horrocks and Stavrou, "Actions and their Results," 312. However, they also point out that the "overall impact" of grammatical aspectual choice (delimitedness) on the final aspectual reading of the VP depends *in part* on the lexical meaning. For example, the choice of perfective aspect in a telic clause means that the speaker chooses to view the event as reaching the lexically encoded result state, i.e. action completed, while the same choice in an atelic clause forces an arbitrary bound to the description of the action since there is not lexically intrinsic culmination to the action encoded in the verb. See Horrocks and Stavrou, "Actions and their Results," 310.

verbs, verbs of consumption and verbs of creation, she argues that the determiner in the

complement of these verbs can affect the interpretation of telicity in various ways,

regardless of grammatical aspectual choice.[146]

Similarly, in her analysis of the Russian language, Borik contends that the main

problem of the unidimensional approach is its analytics. She argues that, for those

proposals which use the same analytical tools (or terms) to model both viewpoint aspect

and *Aktionsart*, perfectivity must be tied with telicity—and the descriptions thus fail to

provide a satisfactory account of all the relevant data.[147] Specifically, Borik has

demonstrated that for Russian, both the imperfective and perfective aspect can be used in

both telic and atelic predicates according to the standard diagnostic tests for telicity.[148] In

another words, she argues that telicity is neither a necessary nor a sufficient condition for

perfectivity in Russian.[149] Likewise, in their cross-linguistic study, Bertinetto and Delfitto

---

[146] Sioupi demonstrates that in modern Greek the VPs formed out of verbs of creation and verbs of consumption with bare objects are atelic, whereas the same verb classes which appear with a determiner phrase that contains an indefinite determiner are telic, regardless of grammatical aspectual choice. See Sioupi, "Morphological and Telicity Aspect," 131–44.

[147] See Borik, *Aspect and Reference Time*, 74–76.

[148] For tests such as the adverbial modification tests and the the conjunction tests, see Walková, "Dowty's Aspectual Tests," 495–518 for detail.

[149] The argument is made in an earlier article of Borik, co-written with Tanya Reinhart. See Borik and Reinhart, "Telicity and Perfectivity," 8–12.

argue that in a considerable number of cases, actional contrast [±telic] and aspectual

contrast [±perfective] are two completely independent variables.[150] They come up with

this conclusion after examining the behavior of a set of temporal adverbials with respect

to a set of actional and aspectual values, concluding that the various temporal adverbials,

which are usually used as actional (*Aktionsart*) discriminators, behave quite differently

with respect to telicity and perfectivity.[151]

On the other side of the debate, some scholars argue that there is a connection

between perfectivity and telicity. In their cross-linguistic analysis, Bohnemeyer and Swift

argue that in languages such as German, Inuktitut and Russian, the aspectual evaluation

at the clause level is depended on telicity.[152] Contrary to Borik's findings, they argue that

there is a preferred correlation between telicity and perfectivity in these languages. In

their words,

---

[150] The languages under investigation are English, Romance languages (Italian and Spanish) and Slavic languages (Russian and Bulgarian). It is also worth noting that, earlier in the article, they contend that the notions of perfectivity and telicity should not be conflated since (i) events may be viewed from a perfective or an imperfective viewpoint, regardless of telicity and; (ii) telic predicates only fulfill the inherent character in the perfective. See Bertinetto and Delfitto, "Aspect vs. Actionality," 192–94.

[151] They use the labeled "terminative/non-terminative" for the the perfective/imperfective contrast. See Bertinetto and Delfitto, "Aspect vs. Actionality," 194–217.

[152] Their argument is the direct opposite of Borik. Coincidentally, both works are published in the same year (2004). See Borik and Reinhart, "Telicity and Perfectivity," 13–34 and Bohnemeyer and Swift, "Event Realization and Default Aspect," 263–96.

[t]elic predicates only entail realization under perfective aspect, and clauses encoding them are thus interpreted perfectively in the default case. Atelic predicates are compatible with realization under both imperfective and perfective aspect, but since imperfective and perfective form an entailment scale with respect to realization, clauses that encode atelic predicates and are not marked for perfective aspect are interpreted imperfectively.[153]

Building on Bohnemeyer and Swift's conclusion, Shain argues that the Greek perfective (in the NT) also demonstrates a preferred correlation with telic verbs/ predicates.[154] Using a pair of movement verbs (ἔρχομαι and εἰσέρχομαι) as a test case, she attempts to show by way of statistical evidence that the simplex is atelic while the compound is telic. She first argues, by way of a few examples, that ἔρχομαι is used in various grammatical constructs in a manner similar to Activity verbs, and that εἰσέρχομαι is a telic verb.[155] Then, limiting her analysis to the NT alone, she observes that the telic

---

[153] Bohnemeyer and Swift, "Event Realization and Default Aspect," 264–65.

[154] See Shain, "Exploring *Aktionsart* in Corpora," 244. I will examine Shain's argument later in section 4.3.1.

[155] However, her analysis of the (a)telic interpretation of several of these instances is questionable. For example, her treatment of Luke 2:44, where ἔρχομαι is used with a time-span adverbial to form a telic VP as the same as an Activity verb, is puzzling. See my discussion of the time-span adverbial in the last section (3.3.2) and Shain, "Exploring *Aktionsart* in Corpora," 233.

compound verb has a preference for the perfective while the simplex prefers the imperfective.[156]

Alongside these scholars there are others who, without explicitly arguing for a strong correlation between perfectivity and telicity, assume that there is some kind of a relationship between certain verb classes and a certain grammatical aspect. For example, some authors have suggested that the combination of a certain lexical property (such as telicity) and a certain grammatical aspect will produce a predictable pattern of meaning. The best example is perhaps Comrie, who argues that the telic/atelic distinction plays a very important role in the study of aspect. He writes:

> [w]hen combined with the perfective/imperfective opposition, the semantic range of telic verbs is restricted considerably, so that certain logical deductions can be made from the aspect of a sentence referring to a telic situation cannot be made from the aspect of a sentence referring to an atelic situation.[157]

Similarly, in his analysis of Russian, Klein suggests that States and Activities are regularly paired with the imperfective aspect.[158] Fanning suggests in his analysis of NT Greek that the imperfective aspect "is the most compatible aspect for use with

---

[156] See Shain, "Exploring *Aktionsart* in Corpora," 243–46. I will come back to Shain's numerical analysis in 4.3.1.

[157] Comrie, *Aspect*, 46.

[158] See Klein, "Time-Relational Analysis," 689–90.

STATES,"[159] and that the activity verb "combines easily with [imperfective aspect] ...

and the result is a sense of cutting into a process at some point as it is unfolding[.]"[160]

Likewise, in her analysis of Homeric Greek, Napoli argues that "telicity is a relevant

parameter for the selection of the present or aorist of durative non-stative verbs."[161] She

applies syntactic diagnostic tests proposed by Bertinetto and Delfitto to the Homeric

corpus in order to classify verbs according to Vendler's taxonomy.[162] Then, by examining

the number of occurrences of activity and accomplishment verbs in the Homeric corpus,

Napoli concludes that verbs used with telic linguistic elements (e.g. singular direct

objects) tend to be in the Aorist. Conversely, verbs used with atelic elements or used

without any direct object tend to be in the Present.[163]

---

[159] Fanning, *Verbal Aspect*, 137.

[160] Fanning, *Verbal Aspect*, 145. Fanning also looks at the frequency between different verb types and grammatical aspect in negative sentences. He suggests that different verb types seem to favor a certain aspect in negative sentences and the same could be assumed in positive sentences. See Fanning, *Verbal Aspect*, 175–76.

[161] Napoli, "Telicity as a Parameter of Aspect," 163.

[162] The three syntactic tests that are used by Napoli are based on three types of durative adverbial: (1) "for X time" (ii) "until" and (iii) "still." These tests are part of a more comprehensive treatment put forward by Bertinetto and Delfitto. See Napoli, "Telicity as a Parameter of Aspect," 131–38 and Bertinetto and Delfitto, "Aspect vs. Actionality," 195–205. For more detail of Napoli's framework, see the published form of her dissertation, Napoli, *Homeric Greek*, 24–84. I will come back to her verb classification next chapter (4.2.2).

[163] See Napoli, "Telicity as a Parameter of Aspect," 163–64.

To conclude this section, let me outline the quantitative analysis that I am going to conduct in the next chapter. My analysis investigates two things. First, I want to verify whether predictable or systematic patterns of meaning emerge from the choice of a particular grammatical aspect in combination with the selection of a verb from a particular lexical class.[164] Specifically, I will determine whether the distribution of the perfective form is skewed between telic and atelic verbs (i.e. whether the choice of perfective aspect correlates in a significant way with the choice of a telic verb). In the process, I will compare different classifications of telic/atelic verbs in order to explore the differences between them.[165] More importantly, I will assess whether it makes sense to talk about an interaction between the lexical property of telicity and the grammatical choice of perfectivity, i.e. whether telicity and perfectivity are related at the verb level.

Second, I will test whether there is a significant relationship between telicity and perfectivity at any higher ranks in the grammar. Using the notion of TLE discussed

---

[164] As mentioned above, I will refer to the classifications of Fanning and Mateos, which as far as I am aware of, are the only works that attempt to classify Greek verbs in the NT comprehensively. See Fanning, *Verbal Aspect* and Mateos, *El Aspecto Verbal*.

[165] As I am going to show below, there are several verbs that fall into the exact opposite classes (telic vs. atelic) in different classification schemes. See the discussion on ἔρχομαι and εἰσέρχομαι in section 4.2.1. One way to explain this is the fact that these classifications of Koine Greek verbs are not based on empirical evidence or any linguistic framework but rather the intuition of the language user. See the discussion in 2.3.3, particularly on the topic of transferability.

above, I will determine whether there is empirical evidence to support the hypothesis that

telicity and perfectivity are related linguistic systems in Koine Greek, extending my unit

of analysis to the VP-level while also examining extra-linguistic elements that can trigger

telic/atelic shifts.[166] To borrow Declerck's framework, I want to distinguish between the

formation of an ontological aspect and an actualized aspect, in order to determine

whether these two distinct categories are related in any systematic manner in Koine

Greek.[167]

3.4 CONCLUSION

This chapter, being a prelude to the empirical study that is presented below, has

laid the necessary groundwork for a corpus-based analysis. First, it has explained how a

corpus-based approach to Koine Greek is useful, citing the advantages of using numerical

---

[166] What I mean by extra-linguistic elements here are those factors which is generally considered as contextual, i.e. information from outside the clause itself. I want to avoid using the term 'context' in this work. I will come back to the notion of context in chapter 5.

[167] However, as shown above, my definition of the TLE (clause level) is different from Declerck's VP level ontological aspect and I consider the actualized aspect as the interpretation of the TLE and the grammatical aspect. But I adapt an understanding of telic interpretation similar to his ontological aspectual interpretation, i.e. a VP is telic or atelic is interpeted semantically/ontologically, i.e. telicity is determine independent of whether the goal/end/τέλος is actualized in the description (text) or not. See Declerck, "Distinguishing between the Aspectual Categories," 60–62.

analyses in biblical studies. I have briefly outlined recent developments involving Koine Greek databases and I have pointed out the need for an open source and easily searchable database containing a large body of Koine Greek texts. I have also spelt out the detailed corpus used in this study, describing its classification criteria, makeup, and limitations.

The second half of this chapter has provided a two-level description of telicity, distinguishing between a semantic or ontological understanding of telicity and its linguistic realization. I have shown that the notion of an action having an end or a goal cannot be easily defined. Rather, the nature of a telic event is inherently ambivalent at the ontological level. I have also demonstrated that the basic unit of linguistic analysis employed in discussions of telicity has moved upward from the verbal head alone in order to include a large number of co-textual elements. By introducing the notion of Telic Linguistic Environment (TLE) and Atelic Linguistic Environment (ATLE), I have attempted to provide some viable categories for an assessment of telicity and perfectivity in Koine Greek.

Finally, I have surveyed recent remarks suggesting that there is a relationship of some kind between telicity and perfectivity, such that the two features either correlate strongly or else produce a predictable result when used together. I have emphasized the

diametrically opposed nature of the discussion, and thereby set the stage for the empirical

analysis that I am going to present in the next chapter.

CHAPTER 4 TELICITY AND PERFECTIVITY IN KOINE GREEK

4.1 INTRODUCTION

This chapter deals with the alleged correlation between grammatical aspects and eventualities/*Aktionsarten* mentioned above (3.3.3). I will particularly focus on the relationship between telicity, as realized in a verb and its co-textual constituents, and the perfective aspect, as realized in the Aorist tense form. This section begins with a discussion of a group of Greek prefixed verbs that has long been considered to demonstrate the process of perfectivization (4.2.1). I will argue that in fact this so-called perfectivization process is mislabeled by the earlier Greek grammarians and should be named a telicization process, describing a type shifting of a verb or VP from atelic to telic instead of changing the verbal aspect from imperfective to perfective. I will briefly survey the few works on these prefixed verbs in the past and argue that the validity of this process of telicization should be put under scrutiny by means of empirical analysis. It is

followed by a short survey of previous verb classifications in Koine and Homeric Greek

(4.2.2), highlighting the subjective nature of the discussion. I will then provide a list of

verbs at the end of the section that are going to be put to the test in the empirical analysis,

which is the topic of the next main section. Section 4.3 begins with some general remarks

regarding the use of statistical measures in Greek aspect study and a description of the

baseline measurement (4.3.1), a vital part of the statistical analysis. For this study, I am

going to examine roughly 40 verbs from three conventional groupings: movement verbs,

the so-called perfectivizing prefixed verbs, and a group of verbs that are used for control

measurement (4.3.2). I am going to approach the analysis at both the verb and the VP

levels. The goal is to investigate whether telicity and perfectivity interact in any

systematic ways at the verb or VP levels (4.3.3).

4.2 DEFINING THE DATA: ACTIVITY AND ACCOMPLISHMENT

4.2.1 Prefixed Verbs and Telicization

The so-called perfectivizing prefixed verbs have not received much attention in

recent scholarship. Apart from the scattered remarks in traditional grammars, little work

has been done on the topic since the 1950s.[1] BDF comments only briefly on the

"perfectivizing" effect of some prepositional prefixes (such as ἐξ, ἀπό, κατά, διά) on the

verb as conceiving of the action "as having reached its consummation" or "as continuing

to its completion or as repeatedly achieved,"[2] without getting into detail regarding the

categorizing of these various effects. Due to the brevity of this account, it is rather

unclear whether this perfectivizing effect refers to (i) adding a different meaning

(intensification, completion, termination, etc.) to the verb or (ii) changing the aspectual

meaning of the verb from imperfective to perfective. In addition, the wordings in BDF

(e.g. consummation, completion, achieved, etc.) have a rather similar sound as those in

the modern discussion of telicity (3.3). In fact, quite a few grammarians have lamented

the use of "perfectivizing" to describe the function of these prefixes due to the lack of a

---

[1] Apart from an appendix in Porter's work, one can hardly find any scholarly discussion of the effect of the prefixes to the meaning of the verb in Biblical Greek. Brunel's work on Attic Greek is the last monograph-length work on the topic and it was published more than 70 years ago (1939). See Brunel, *L'aspect verbal*, 1–269. Brunel modifies his conclusion in a later work. See Brunel, "L'aspect et 'l'ordre du procès' en grec," 67–75. There are also a few unpublished dissertations on the topic in the 1940s. See, for example, Allen, "The Force of Prepositions," 1–114 and Southern, "The Preposition KATA," 1–169. For a general description of the function of the prefixes in Classical and Koine Greek, see the unpublished dissertation of Green. See Green, "Reciprocity and Motion Verbs," 37–67. For a brief but comprehensive summary of the state of research, see Porter, *Verbal Aspect*, 66–70.

[2] See BDF §318(5). BDF does not provide any detail to this definition. In fact, the entire discussion of the prefixes only occupies a few lines in a column.

better term, pointing out possible confusion with the tense-name (Perfect).[3] The later

popularization of the Slavic sense of perfective aspect in Koine Greek studies has only

made this use of the term ("perfectivizing" prefixation) even more confusing.

Looking more closely at various definitions and discussions in traditional

grammars, it becomes obvious that the term "perfectivizing" has little to do with tense

(Perfect) nor aspect (perfective) but is rather a description of the effect that prepositional

prefixes have on the lexical meaning of a verb. Moulton characterizes it as "the

combination [compounded verb] denoting action which has accomplished a result, while

the simplex denoted action in progress, or else momentary action to which no special

result was assigned."[4] He adds that the combination of a preposition and a verb to

produce the "perfectivizing" effect is related to both the local sense (obscured or not) of

the preposition and the lexical meaning of the verbal root.[5] Two kinds of prefixed verbs

can be distinguished in Moulton's discussion: (i) compounds with prepositions (ἀπό, διά,

κατά, σύν) that maintain the local sense and have no perfective force (e.g. movement verbs

---

[3] See Moulton, *Prolegomena*, 111, n. 2 and Robertson, *Grammar of the Greek New Testament*, 564 for example.

[4] Moulton, *Prolegomena*, 112.

[5] Moulton points out that there are compounds such as συναρπάζω that depend on context; the prefix can maintain its adverbial force or take over the perfectivizing force. See Moulton, *Prolegomena*, 113.

such as διαπορεύεσθαι, συνέρχεσθαι, etc.) and (ii) compounds with prepositions in which the

local sense has been sufficiently obscured and replaced with the perfective force

(ἀποθανεῖν "be dead" vs. θνῇσκειν "be dying").[6] These descriptions might give the

impression that the "perfectivizing" force is dependent on whether the local sense of the

preposition is maintained in the compound. It seems to imply that the obscurity of the

local sense of the preposition contributes to the perfectivizing effect. However, Moulton

also talks about a third kind of prefixed verbs, most probably a variation of the first

category, with prepositions maintaining the local sense but also having a certain

"perfectivizing" force, i.e. the action is described as tending to a goal or as accomplished/

completed.[7] So although much of the discussion in Moulton (see also Robertson below) is

on the relationship between the local sense of the prefixes and the perfectivizing effect,

the effect itself is not necessarily directly related to the obscurity of the local sense of the

---

[6] He also suggests that the majority of the compounds with ἀπό, διά, κατά, and σύν preserve the local sense of the preposition and have no perfectivizing effect on the compound. See Moulton, *Prolegomena*, 113.

[7] Moulton only gives English examples for this kind of compound. For example, the actions describe by VPs such as "drive in," "drive out," "drive off" are said to be perfective since they are all tending to a goal/completion. The various goals of the same action (driving) are attained according to the distinct sense of the adverb. See Moulton, *Prolegomena*, 112.

preposition but rather determined by the meaning and the use of the simplex verb in relation to the prefix.[8]

Following Moulton, Robertson also acknowledges the "perfectivizing effect" on certain verbs (such as θνῇσκω and ἀποθανεῖν mentioned above) in Koine Greek.[9] Robertson defines this use of the preposition as "that of the mere adverb and intensifies or completes the idea of the verb."[10] Judging from the examples he cites, Robertson's understanding of the "perfectivizing" effect is similar to Moulton's second and third categories. Once again, the basic idea is not perfectivizing in the sense of changing the aspectual meaning of the verb from imperfective (simplex) to perfective (compound), i.e. the Slavic notion of aspect, but rather adding the sense of completion to the meaning of the simplex, i.e.

---

[8] See Moulton, *Prolegomena*, 111–12. Brunel also emphasizes that each use of the prefix in forming compound verbs must be determined in relation to the meaning and the use of the simplex verb. His determined/undetermined oppositions are based upon the meaning of the verbs (and the prepositions). See particularly his second work, Brunel, "L'aspect et 'l'ordre du procès' en grec," 43–75 and Porter, *Verbal Aspect*, 69.

[9] According to Robertson, there are four broad categories of effects that the prepositional prefixes have on the meaning of the verb: (i) no effect at all (the preposition maintain its local meaning), (ii) the prefix perfectivizes or intensifies the meaning of the verb, (iii) the meaning of the preposition is weakened, (iv) the prefix changes the meaning of the verb and blends with it. See Robertson, *Grammar of the Greek New Testament*, 562–65. Note that the categories here are slightly different from Porter, *Verbal Aspect*, 69–70. Brunel also recognizes a similar categorization; see Porter's summary, Porter, *Verbal Aspect*, 66–68.

[10] Robertson, *Grammar of the Greek New Testament*, 563.

changing from an atelic event to a telic one.[11] If this understanding of the effect is right, a

better label should be telicizing instead of perfectivizing since what we are looking at

here is adding meaning to the simplex, whether it is the idea of completion,

intensification, or the attainment of a goal.[12] This effect, in the modern discussion of

lexical aspect/Vendlerian *Aktionsart*, is considered as a telic shift (see 3.3.2). Therefore,

the discussion of this effect should not be a matter of grammar, but lexical semantics, i.e.

the interpretation of how different prepositions alter the meaning of the simplex in

various co-textual scenarios.[13]

The telicizing understanding of the prefixation effect on the meaning of the verb

becomes obvious in the recent studies of the Vendlerian tradition of *Aktionsart*. In the

discussion of class membership of his Accomplishment ([+telic], his [+bounded]),

Fanning suggests that there are several types of VPs, in normal usage, which should be

---

[11] For example, while ἐσθίω describes the process of eating as a whole, κατεσθίω emphasizes the completion of the process. Similarly, compare the use of ἔφαγον in Matt 6:25 and κατέφαγον in Matt 13:4. The later emphasizes the extent of the act of eating ("ate it up"). See Robertson, *Grammar of the Greek New Testament*, 564.

[12] This is close to Brunel's understanding of the *indéterminé/déterminé* opposition in his later work, i.e. the distinction is lexical/actional in nature, not grammatical nor aspectual. See Brunel, "L'aspect et 'l'ordre du procès' en grec," 69.

[13] This is the same as Porter's conclusion on his critique of Brunel and the NT grammarians. See Porter, *Verbal Aspect*, 69–70.

included in this class. These include (i) verbs of movement used with a prepositional

phrase or prefix denoting source, destination, or extent, (ii) bounded durative VPs either

as a result of an effected/abolished object or of the lexical meaning of the verb, and (iii)

other verbs with a "perfectivizing" prefix."[14] Among the three groups of accomplishment

VPs, the first and third categories have corresponding groups of verbs that are classified

as Activity ([-telic], his [-bounded]), i.e. the simplex movement verbs and the simplex of

the "perfectivizing" compounds. This demonstrates that in Fanning's classification the

criteria of the distinction between "perfectivizing" prefixed verbs and the simplex verbs is

the semantic feature of telicity (or in his wording, boundedness).[15] Judging from the few

examples that he gives under the "perfectivizing" prefix verbs, most of the verbs listed

under this category can be characterized as telicizing compounds.[16] However, there are a

---

[14] See Fanning, *Verbal Aspect*, 150–51. He does not, however, go into detail about what he refers to as "perfectivizing" prefixed verbs, nor does he give any reference to the discussion. He only lists eight verbs under the category with the prefixes ἐκ and κατά, obviously far from an exhaustive list.

[15] The same can also be said between the prefixed movement verbs and the simplex verbs, that is the first category listed above.

[16] Among the eight verbs, κατεργάζομαι and κατεσθίω appear in the discussion of "perfectivizing" verbs in Moulton and Robertson. Unlike these grammarians, who use καταδιώκω as the counterpart of the simplex διώκω, Fanning chooses the very rare ἐκδιώκω (only one occurrence in the entire NT) instead. Apart from these three verbs, one of the remaining five (καταπίνω) has the simplex listed under Activity (under the category: other transitive or intransitive verbs with unbounded meaning). Two of the many compounds of the verb κόπτω are listed as telic (ἐκκόπτω as Accomplishment and προσκόπτω as Punctual) but the simplex is not listed under Activity. The simplex of ἐκχεω does not appear in the NT. See Fanning, *Verbal Aspect*, 144–5, 150–1.

few curious cases such as ἐκβάλλω and ἀποστέλλω. In ἐκβάλλω for example, while the

compound is classified as an Accomplishment ([+bounded +durative +prefaced]), the

simplex (βάλλω) is considered a Punctual verb ([+bounded -durative -prefaced]). Instead

of demonstrating a contrast in telicity, this "perfectivizing" prefixed verb actually

contrasts with another bounded (telic) verb. It is also puzzling why βάλλω is classified as

a non-durative non-prefaced event while ἐκβάλλω is considered marked in both features.[17]

As mentioned above, Fanning also provides a list of movement verbs in his

discussion of activity verbs and defines them as "verbs which lexically denote a change

in the location of the subject or object."[18] In the discussion of the corresponding

Accomplishment motion verbs, Fanning defines the effect of the preposition as denoting

source (e.g. ἀπό, ἐκ), destination (e.g. πρός, εἰς, ἐπί, etc.), or extent (διά with a specific

object), regardless of whether it is a prepositional phrase that is associated with the verb

---

[17] See Fanning, *Verbal Aspect*, 150–1, 156–7. What is more puzzling is the case of ἀποστέλλω/ ἐξαποστέλλω in Fanning's classification. While ἐξαποστέλλω is listed under Accomplishment movement verbs, which includes most of the prefixed activity movement verbs (e.g. ἄγω, ἔρχομαι, φέρω, τρέχω, πορεύομαι), ἀποστέλλω is considered a Climax verb [-durative +bounded +prefaced]. It is rather difficult to see why the simplex is non-durative but the compound is durative. It is even more puzzling as to why the action denoted by the simplex is considered to have a separate approach-phase (the definition of Climaxes) but the action denoted by the compound, which is in the same semantic domain as the simplex (15.66–68), is considered to have an integrated preceding process.

[18] Fanning, *Verbal Aspect*, 144.

or a prefix to the verb.[19] However, sometimes the telicizing process is not as clear cut as

this description seems to imply. In some cases, adding a prefix with the sense of attaining

a goal does not guarantee a telic shift; other co-textual factors also seem to play a role in

Fanning's class assignment.[20] Nonetheless, Fanning's characterization of the effect, i.e.

utilizing the general concept of goal attainment, is very similar to the discussion of

telicity mentioned above (see 3.3.1), which further demonstrates the fact that the

distinction between Fanning's Activity and Accomplishment is telicity.[21]

Apart from the issue of labeling, Fanning's classification also suffers from

methodological imprecision. First, he does not elaborate on the selection mechanism nor

provide an exhaustive list of verbs. As a result, it is less clear how the list of simplex

---

[19] Not all compounds are marked with a goal. For example, although the simplex ἔρχομαι is classified as Activity, the compound περιέρχομαι is not considered as an Accomplishment since περί does not denote source, destination, nor extent. Fanning does not mention compound prefixes (e.g. συνεισέρχομαι, ἐπεισέρχομαι), so I will assume that they are classified as telic according to the same reasoning, i.e. whether the prefixe(s) denotes source, destination, or extent (the same is assumed here when a compound movement verb is used with a PP with a different preposition). See Fanning, *Verbal Aspect*, 144, 150–1.

[20] For example, Fanning lists διέρχομαι as *both* an Activity and an Accomplishment with different glosses ("go about" in Activity and "go through" in Accomplishment), apparently depending on how the compound verb is used. See Fanning, *Verbal Aspect*, 144, 151.

[21] Refer to the discussion in 3.3.1 and see Brinton, *The Development of English Aspectual Systems*, 169–70.

verbs and their telic counterpart are assembled.[22] The same can also be said regarding the

telicizing prefixed verbs (Accomplishments) and the corresponding activity verbs. To

make matters more complicated, the lack of an exhaustive list of prefixes and a detailed

discussion of their functions makes it rather difficult to justify certain selections on the

list (or not on the list).[23] From what I can gather from the rather brief description, the

following table summarizes all the possible telicizing prefixed verbs (Activity and

Accomplishment) included in Fanning's discussion (found in the NT corpus):[24]

---

[22] Take ἔρχομαι for example again. The usages of the simplex without a prepositional phrase (PP) indicated is listed under the activity class. The usage of the simplex with a telicized PP and various prefixed verbs such as ἀπέρχομαι, διέρχομαι, εἰσέρχομαι, ἐξέρχομαι, ἐπέρχομαι, παρέρχομαι, προέρχομαι, προσέρχομαι and the like should be classified in one of the telic classes (Accomplishments, Punctuals and Climaxes) according to Fanning's definition but it is not the case in Fanning, only εἰσέρχομαι, ἐξέρχομαι, and προσέρχομαι are listed under her Accomplishment class. In addition, it is rather interesting that Robertson considers that the prefix ἐκ- in ἐξέρχομαι has no "perfectivizing," or any, effect on the simplex. He considers the effect as "merely local" (Robertson, *Grammar of the Greek New Testament*, 562) in the sense that it only adds the local sense to the meaning of the simplex, not altering (intensifying or perfectivizing) it.

[23] For example, while ἀναβαίνω ("to move/come/go up, to ascend" L&N) is listed as a movement verb in the activity class, another prepositional prefixed verb formed with the same verb stem (βαίνω), καταβαίνω ("to move/come/go down, to descend" L&N) is nowhere to be found in the activity class list, nor is it included in the accomplishment class. However, both ἀνά and κατά can be used to denote destination, which provides a boundary for the action. Unfortunately Fanning does not go into detail regarding this pair of prepositions. As a result, I will leave all movement verbs with ἀνά- and κατά- out of this study. See Fanning, *Verbal Aspect*, 144, 150–1.

[24] This list is solely based on Fanning's listing. I made no attempt to come up with new verbs, but occasionally added more compounds (limited to NT occurrences) to the list. See Fanning, *Verbal Aspect*, 144–5, 150–1.

Table 4.1: List of Possible Telicizing Prefixed Verbs from Fanning[25]

Activity	Accomplishment
Movement Verbs	
ἄγω	ἀπάγω, διάγω, εἰσάγω, ἐξάγω, προσάγω, συνάγω, ὑπάγω[26]
ἀποστέλλω[27]	ἐξαποστέλλω
ἔρχομαι[28]	ἀπέρχομαι, διέρχομαι,[29] εἰσέρχομαι, ἐξέρχομαι, ἐπέρχομαι, παρέρχομαι, προέρχομαι, προσέρχομαι
πορεύομαι	εἰσπορεύομαι, ἐκπορεύομαι
φέρω	εἰσφέρω, ἐκφέρω, προσφέρω
τρέχω	εἰστρέχω, προστρέχω
Other Telicizing Prefixed Verbs	
βάλλω[30]	ἐκβάλλω
διώκω	ἐκδιώκω, καταδιώκω
ἐργάζομαι	κατεργάζομαι
ἐσθίω	κατεσθίω
κόπτω	ἀποκόπτω, ἐκκόπτω, κατακόπτω

---

[25] The first six verbs on the list are movement verbs, the rest are what were labelled as "perfectivizing" verbs.

[26] Συνάγω and ὑπάγω are not included in Fanning's list of possible prefixes with ἄγω. However, these prefixes seem to add the sense of source (ὑπό) and destination (σύν) to the simplex.

[27] Ἀποστέλλω is classified under Climaxes instead of Activity but formally it should be grouped together with other simplex movement verbs. It is included in this analysis here for the sake of comparison.

[28] Fanning lists two prefixed compounds of ἔρχομαι, διέρχομαι and περιέρχομαι, under Activity. See Fanning, *Verbal Aspect*, 144.

[29] Διέρχομαι can be Activity or Accomplishment. See note 20 on page 269 for more detail.

[30] Βάλλω is listed as a Punctual verb instead of an Activity.

| κρίνω | κατακρίνω |
| χέω[31] | ἐκχέω |

4.2.2 Classifications of Greek Verbs

Although Fanning's work is referred to by others as the only framework that deals

with lexical aspect in Greek, his work is actually not the only work to identify Greek

verbs into Vendlerian classes.[32] In this section I will go over two other such works. The

first effort to classify Koine Greek verbs according to types of action is the work of Juan

Mateos, published more than a decade before Fanning's.[33] Mateos's approach to Greek

aspect is unidimensional. He argues that the aspectual value of a verb used in context

depends on three factors: lexical aspect, morphological aspect and syntactic aspect.[34] As

the labels imply, Mateos treats all three categories—lexical meaning, grammatical

aspectual marker, and co-textual factors—on an equal footing for the evaluation or

---

[31] Χέω does not occur in the NT.

[32] See Olsen, *A Semantic and Pragmatic Model*, 203. Stork's work on the dynamic infinitives also talks about verb classification but does not follow Vendler's scheme. See Stork, *Aspectual Usage*, 36–37.

[33] See Mateos, *El Aspecto Verbal*, 22–23. He talks about verb classes with examples in Mateos, *El Aspecto Verbal*, 41–134.

[34] In his words, "el aspecto de un lexema verbal en contexto to es la resultante de tres factores, del aspecto lexical o lexemático y de los aspectos gramaticales, morfemático y sintagmático"(Mateos, *El Aspecto Verbal*, 22).

interpretation of aspect at the clause level, inevitably viewing aspect and *Aktionsart* as part of one larger semantic category. Mateos distinguishes four classes of verb. Similar to Vendler's taxonomy, he first makes the distinction between static and dynamic verbs and then further breaks down the latter into three types of lexemes denoting continuous action, instantaneous action, and resultative action.[35] Unfortunately, he does not go into detail regarding the semantic distinctions that separate continuous verbs from resultative verbs, nor does he provide a systematic scheme to explicate how verbs are classified, which seems questionable.[36]

For verbs denoting dynamic continuous processes (atelic verbs), Mateos further distinguishes three groups of verbs that indicate continuous action: (i) habitual or occasional activities (emphasis on the grammatical subject), (ii) habitual and occasional activities (emphasis on the terminus), and (iii) movement verbs without a specific

---

[35] These three types of dynamic verbs match fairly well with Vendler's Activity (continuous), Accomplishment (resultative), and Achievement (instantaneous). Moreover, Mateos considers *Aktionsart* (his semantic/lexical aspect) to be based on a series of hierarchical oppositions that is very much similar to Vendler's distinctions. According to his framework, the primary lexical aspectual distinction is between stativity and dynamicity, and the dynamism is further divided into effective and non-effective (continuous). Among the effective are instantaneous and non-instantaneous (resultative) "aspects." Compare Mateos, *El Aspecto Verbal*, 19–23 and the discussion of Vendler mentioned above (1.3.3.2). See also Mateos, *Methodo de Analisis Semantico*, 55–56.

[36] There is also a discussion of a group of complex static-dynamic verbs, which describe a list of verbs that have both the characteristics of static and dynamic verbs, denoting a state that requires action for its existence.

terminus.[37] The inclusion of the second sub-category under the dynamic category seems

to be contrary to the definition of non-effective dynamism, which describes indivisible

continuous action *without* an intended terminus.[38] Most verbs in this sub-category

describe telic action; however, whether the terminus of the action is natural or arbitrary is

debatable.[39] In sum, the common character among these verbs is the iterative nature of a

repeatable durative action.[40] However, this iterative reading of most of these verbs cannot

be established by the meaning of the lexical item alone; it also depends on a variety of

co-textual factors.

Given the similarity in the definitions of Mateos's continuous dynamic verbs and

Fanning's understanding of the Activity verbs,[41] one should expect fairly similar lists of

verbs in these two works. Although one can find most of Fanning's Activity verbs in

---

[37] See Mateos, *El Aspecto Verbal*, 65.

[38] See Mateos, *El Aspecto Verbal*, 23, which reads "un continuo indiviso sin finalidad o término previsto."

[39] For example, verbs of creation such as οἰκοδομέω and ἐποικοδομέω seem to have an inherent and natural terminus when they are used with an effected object, at least in the Vendlerian understanding of the action of building. See, for example, Fanning, *Verbal Aspect*, 169. Fanning also classifies these verbs as Activity, but only in their figurative sense. See Fanning, *Verbal Aspect*, 144.

[40] It includes, in general, actions such as serving or teaching such as διακονέω, διδάσκω, δουλεύω, τρέφω, πρεσβεύω, στρατεύομαι; serving in religious duties such as ἱερατεύω, λατρεύω, λειτουργέω; constructing or building οἰκοδομέω, ἐποικοδομέω; and other repeated action such as πατέω, καταπατέω. Most of these verbs can be found in Fanning's activity class. See Fanning, *Verbal Aspect*, 144–45.

[41] Compare Mateos, *El Aspecto Verbal*, 23, 65 and Fanning, *Verbal Aspect*, 140–45.

Mateos, there are a few rather glaring differences that should be singled out here. For

instance, ἔρχομαι, an activity (atelic) verb in Fanning's scheme is not considered to be a

dynamic continuous verb but a resultative (telic) verb in Mateos.[42] This difference

becomes more puzzling when two of the compounds of ἔρχομαι, περιέρχομαι and διέρχομαι,

are listed in both works as atelic.[43] Similarly, although both scholars list πορεύομαι as

atelic, Mateos also considers εἰσπορεύομαι and ἐκπορεύομαι, both telic verb in Fanning, as

atelic (continuous dynamic verbs).[44] However, most of the arguments Mateos puts

forward for the atelicity of these verbs are heavily reliant on the interpretation of

---

[42] See Shain, "Exploring *Aktionsart* in Corpora," 221–22. Other similar cases include the extremely rare παλαιόω (only eight occurrences in the entire Perseus database, four are in the NT) and φυσιόω (15 occurrences in Perseus, seven in the NT), both are classified as atelic (Activity) in Fanning but telic (resultative verb) in Mateos. See Fanning, *Verbal Aspect*, 144 and Mateos, *El Aspecto Verbal*, 98.

[43] Fanning also has both verbs under Activity but qualifies his classification of διέρχομαι by limiting it to the sense of "go about." See Fanning, *Verbal Aspect*, 144.

[44] See Fanning, *Verbal Aspect*, 151. Mateos considers these verbs (and the classification) as ambivalent. One of Mateos's reasons for classifying both compounds as atelic has to do with the choice of grammatical aspect in the corpus, NT in his case. I will come back to this next section (4.3.2.1). See Mateos, *El Aspecto Verbal*, 73.

instances of the verb used *with* other co-textual elements.[45] Although this does not

necessarily nullify Mateos's (or Fanning's for that matter) classification scheme, this does

confirm the observation made earlier (3.3.2) that co-textual factors play an important role

in the composition (and interpretation) of telicity.[46] I will come back to talk about the

(a)telicity of these verbs later in my analysis (4.3.1).

Mateos's verbs of resultative continuous action (telic verbs), which describe

actions that come into existence as a result of a process, are most comparable to Vendler's

Accomplishment.[47] He further divides this class into six sub-classes, which can be

generalized by four main criteria: realization of an action, change of state,

---

[45] Take ἐκπορεύομαι for example. The three arguments that he gives for continuous usages have to do with co-textual factors. First, he argues that the verb can be used to denote a continuous, uninterrupted, and dynamic departure. However, in most of the examples that he gives, the subject is either plural (e.g. Mark 1:5, Matt 3:5, Luke 3:7, 4:22, John 5:29, Rev 9:17) or a mass noun (e.g. Luke 4:37), a condition for a durative exit/departure. The argument from the uses of ἐκπορεύομαι in the Present Participle as denoting concurrency depends on the main verb. Likewise, the iterative understanding of the verb (in this case both ἐκπορεύομαι and εἰσπορεύομαι) is also depended on other co-textual factors. See Mateos, *El Aspecto Verbal*, 73–74.

[46] Mateos also treats the βάλλω/ἐκβάλλω pair differently when compared to Fanning. Mateos considers βάλλω as a continuous verb while ἐκβάλλω a resultative verb (both sub-classes of the dynamic class). Fanning, as mentioned above, considers the simplex as a Punctual verb and the compound an Accomplishment verb. See page 267 above.

[47] Mateos considers the resultative verbs and the static verbs constitute a group; both describe durative actions that are related to a terminus. See Mateos, *El Aspecto Verbal*, 97.

communication, and movement verbs.[48] The change of state and movement categories are

comparable to Fanning's non Activity dynamic classes. Apart from the peculiar cases

mentioned above (ἔρχομαι, εἰσπορεύομαι and ἐκπορεύομαι), a few other telic verbs are also

classified differently in Mateos. For example, although one can find quite a few of

Fanning's accomplishment movement verbs in Mateos's resultative class, Mateos

considers three of the compounds of ἔρχομαι (ἀπέρχομαι, εἰσέρχομαι, ἐξέρχομαι) as

instantaneous verbs [-durative +telic] instead of accomplishment verbs [+durative

+telic].[49] In addition, quite a few verbs in Mateos's resultative class [+durative +telic] are

classified in Fanning as Climaxes [-durative +telic +prefaced].[50] In both cases the

differences in the classifications lie in the understanding of the durative properties of

---

[48] Realization of an action is further divided into those that emphasize the action of an agent (e.g. πωλέω, κτίζω) and those that focus on the effect of the action (e.g. λύω, δέω). Two types of change-of-state verbs are identified by Mateos, those that denote action that causes a state or quality (e.g. δικαιόω, νεκρόω) and those that change of state or situation (e.g. μεταβαίνω, μετατρέπω). See Mateos, *El Aspecto Verbal*, 97–98.

[49] In addition, Mateos includes quite a few prefixed movement verbs with the preposition prefixes (ἀνά-, κατά-) in his resultative verb class (ἀναβαίνω, ἀναφέρω, καταβαίνω, etc.). Fanning, on the other hand, does not explain the function of these two prepositions in his discussion of Accomplishment. See note 23 on page 270.

[50] This includes: ἁγιάζω, ἁγνίζω, καθαρίζω, κοινόω, δικαιόω, ἐλευθερόω, and νεκρόω. A few verbs (βεβαιόω, κραταιόομαι, μισθόομαι) are left out of in Fanning's work entirely. All of these verbs are listed in Mateos under the heading "Causation of a quality, state or situation," which emphasizes the change of state property of a telic verb. Compare Mateos, *El Aspecto Verbal*, 98 and Fanning, *Verbal Aspect*, 144, 156–7. Two verbs (παλαιόω and φυσιόω) are listed as Activity (atelic). See note 42 on page 275.

these actions, that is, the relationship between the terminus and the preceding process.

While Fanning insists that a distinction between an integrated relationship

[Accomplishments] and separated relationship [Climaxes] can be maintained between the

terminus and the preceding process, Mateos does not maintain this finer, even over-

complicated,[51] distinction. Having said that, it is also interesting to note that Mateos is in

agreement with Fanning in the aforementioned curious cases of βάλλω and ἀποστέλλω.

Mateos also classifies them as instantaneous dynamic verbs [-durative +telic].[52] Both

consider the simplex to be non-durative (Instantaneous/Prefaced) and the compound to be

durative (Resultative/Accomplishment).[53] However, unlike Fanning, in both instances

Mateos's classification is dependent on the distribution of the grammatical aspect of these

verbs in his corpus (NT).[54] I will come back to talk about this later (4.3.2.1–4.3.2.2).

---

[51] See Evans, *Verbal Syntax*, 25.

[52] Fanning considers ἀποστέλλω a Climax verb and its compound ἐξαποστέλλω an Accomplishment verb. Mateos leaves off the compound for his work. See note 17 on page 268 for a discussion of Fanning's classification of ἀποστέλλω/ἐξαποστέλλω.

[53] However, Mateos also admits that it is sometimes difficult to distinguish whether the action denoted by a verb is conceived as instantaneous (non-durative) or resultative (durative) in Greek. See Mateos, *El Aspecto Verbal*, 85.

[54] See Mateos, *El Aspecto Verbal*, 86–87.

Apart from the works of Mateos and Fanning, Maria Napoli's recent works on the

actional character of verbs should also be included in this discussion. In a study of

Homeric Greek, Napoli investigates the relationship between the grammatical aspectual

dichotomy (between the Present and Aorist) and lexical *Aktionsart* according to the

Vendlerian taxonomy.[55] Limiting herself to a rather small corpus (the *Iliad* and the

Odyssey), her objective is to examine how the actional parameters "affect the distribution

and the function of aspectual markers [sic]."[56] Napoli's classification is the first attempt in

Ancient Greek study to populate verb classes in a systematical manner using semantic

and syntactic criteria. Napoli admits at the onset that her semantic analysis is based on

Vendler's classification and the three most common semantic features. Acknowledging

the challenge of applying syntactic diagnostics to a dead language,[57] she borrows the

---

[55] For the overall framework and theoretical background, see Napoli, *Homeric Greek*, 13–84. For a summary of her work on the interaction between telicity and perfectivity in Homeric Greek, see Napoli, "Telicity as a Parameter of Aspect," 124–69.

[56] Napoli, *Homeric Greek*, 14.

[57] See Napoli, *Homeric Greek*, 20 and Napoli, "Telicity as a Parameter of Aspect," 130–31. For a discussion of the three common semantic features, [±durative], [±dynamic], and [±telic], to identify Vendler's four classes and their limitations, see sections 2.2.2 and 2.3.3. It seems to me that Napoli does not quite address the legitimacy of applying syntactic diagnostics to a dead language in her work. She asserts that verbs that are not attested with certain temporal adverbials should not be hastily considered as not compatible. However, she does not offer any other strategy to further investigate the actional character of such verbs, apart from looking at the semantic range of these verbs as attested in the rather limited corpus and also consulting etymological dictionaries. This strategy, as I mentioned above, involves a high degree of subjectivity and thus an unreliable method. For her brief discussion, see Napoli, *Homeric Greek*, 20–21.

diagnostics put forward by Bertinetto and Delfitto to guide her classification.[58] She argues

that certain types of durative adverbials are atelic in nature and thus *normally* employed

with activity verbs in Homeric Greek.[59] However, since the use of the time-span adverbial

("in X time") is very rare in her corpus, she is only able to test for atelic predicates or

atelic shifts using durative adverbials ("for X time" and similar phrases).[60] While

acknowledging that the lack of diagnostics limits the usefulness of her analysis, she does

not offer other syntactic diagnostics, or other strategies to compensate for this weakness.

Napoli instead points to the relationship of the temporal expressions with the aspectual

markers as attested in studies of other languages (non-Greek) to support her case.[61] In the

second part of her work, she looks at the distribution of grammatical aspect among

---

[58] See note 162 on page 255.

[59] See Napoli, "Telicity as a Parameter of Aspect," 132.

[60] Following Bertinetto and Delfitto, she defines three types of durative adverbial. She claims that the "for X time" type and "until" type are atelic and should be able to identify atelic verbs. The "for X time" durative adverbials includes prepositional phrases such as those with ἀνά, διά, εἰς, ἐν, ἐπί; temporal nouns or deixis such as ἐνιαυτός, ἔτος, ἦμαρ, ἠώς, μείς, νύξ, χρόνος, ὥρη and temporal adverbs such as δηθά, δηρόν, διαμπερές, μίνυνθα, πανῆμαρ. She considers the preposition εἰς/ἐς plus a noun as the prototypical "until" type in Homeric Greek. However, in the subsequent discussion she only proves that these types of durative adverbials are able to distinguish durative from non-durative predicates. See Napoli, *Homeric Greek*, 71–74. For a brief outline of the theory of Bertineeto and Delfitto, see See note 162 on page 255.

[61] This is, once again, referred to the study of Bertinetto and Delfitto. See Napoli, *Homeric Greek*, 70–1, 77–82.

various groups of predicates that she claims share the same actional character.[62] Since she

does not have the means, i.e. the syntactic diagnostics, to determine whether a verb is

telic or atelic, she selects verbs from her corpus that can behave as Activity or

Accomplishment depending on the co-textual elements, particularly the direct object.[63]

She claims that these verbs tend to have an atelic meaning when used with a non-specific,

indefinite mass NP and telic meaning with a specific quantified NP. Given the role of the

direct object in the interpretation of telicity, most of her analysis on the Activity/

Accomplishment distinction are done on transitive verbs.[64] She distinguishes three groups

of transitive verbs (verbs of destruction, movement verbs, and others) in her analysis but

does not get into detail about how these groups are formed.[65] Using simple descriptive

statistics, she argues that telic predicates "preferentially select the perfective aspect,"[66]

---

[62] In what follows, I will only focus on her discussion of telicity (Activity and Accomplishment) in Napoli, *Homeric Greek*, 85–128 and Napoli, "Telicity as a Parameter of Aspect," 124–69.

[63] She describes these verbs as having the dynamic and durative properties and also tending to take durative (atelic) temporal expressions and lacking adverbials used with a punctual or a momentary reading. See Napoli, *Homeric Greek*, 85–87.

[64] See Napoli, *Homeric Greek*, 86–123. She only mentions intransitive verbs on a few pages. See Napoli, *Homeric Greek*, 123–27.

[65] It seems to me that the only guiding principle is the proximity of the semantic fields. However, she never explains why movement verbs and verbs of consumption/destruction are singled out in her analysis.

[66] Napoli, *Homeric Greek*, 87.

while atelic predicates take the imperfective more often. However, in some cases, it is less than clear whether the choice of aspect is the cause or the result of a telic or atelic interpretation.[67] In the end, her main contribution to the discussion is to include co-textual elements in the evaluation of telicity and her use of statistics, albeit limited, in the analysis of the relationship between aspect and *Aktionsart* in Ancient Greek.[68]

At this point in the discussion, it is quite obvious that classification of Greek verbs according to actional character involves a rather high degree of subjectivity. It is thus imperative for this study to establish some ground rules for data collection before moving on to an empirical analysis. Some selection criteria should be established from the outset to eliminate verbs that are unsuitable for the test. First, there is the issue of availability; a verb that only shows up a handful of times in the corpus is obviously less useful, in terms of statistical significance, to the analysis. For those verbs that have prefixed counterpart(s), if the simplex is very rare or has even ceased to be used in the

---

[67] There are three interconnected variables (grammatical aspectual markers, the properties of the direct object, and the telic/atelic meaning of the verb) that contribute to the interpretation in her analysis. Sometimes in her discussion it is not clear whether a particular grammatical aspectual marker (Present or Aorist tense-form) is the cause or the result of telicity. See the discussion, for example, in Napoli, *Homeric Greek*, 89, 106.

[68] One should note that the size of her corpus is far from being representative for an empirical linguistic analysis. In addition, since the works that were chosen to be included in her corpus are of the same literary genre, one should take her results with a large grain of salt.

Hellenistic period, we need to ask whether such a group of verbs should be included in the study solely on the ground that it has prefixed counterpart(s).

The second selection criterion is diversity. Since one of the goals of this study is to examine whether the verbs/VPs assigned as Activity and Accomplishment in existing works are valid, the verbs/VPs selected for analysis here should not be limited to one particular group of verb/VP, whether they are grouped together by way of meaning (e.g. movement verbs, verbs of creation/consumption) or grammatical means (e.g. prefixed verbs). Although the telicized prefixed group, given its size, is an ideal collection for the analysis, the fact that some of these prepositions, particularly those with locative forces (ἀπο, ἐξ, εἰς, ἐν, ἐπί), are repeated after the prefixed verb might suggest that some of these prepositions in composition may be "a bit worn down."[69] Therefore, in addition to the list of telicized prefixed verbs mentioned above, four accomplishment verbs have been chosen to add to the list.

---

[69] See, for example, the use of ἐκ- phrases after ἐκ- verbs in Matt 2:6, Acts 26:17 and likewise for εἰς, see Mark 1:21. See Robertson, *Grammar of the Greek New Testament*, 559. On the other hand, Robertson also observes that there was an increase in use of prepositions in composition within the history of the Greek language. The growing tendency is particularly obvious with διά, κατά, and σύν taking over what the simplex could indicate in older Greek. See Robertson, *Grammar of the Greek New Testament*, 558. Therefore, hypothetically, even if the result of the analysis of telicizing prefixed verbs demonstrates the same kind of tendency towards a particular tense form compared to the baseline, it is rather difficult to determine whether the result proves that telicity and perfectivity are independent or whether it is simply the prefix losing its function and rendering the compound verb synonymous with the simplex.

The main goal of incorporating additional accomplishment verbs to our analysis is similar to the idea of scientific control, i.e. to provide some kind of comparable measurement in a controlled environment. The aspect distribution of these Accomplishment verbs can serve as a "scientific control" measurement, i.e. a measurement with minimal effect from the variables other than the one that is under examination (telicity). In our case, an ideal scientific control measurement is a verb that is prototypically telic. Most of these additional verbs are taken from the accomplishment class of existing classifications. Two of these verbs (κωλύω and μανθάνω) are taken from Fanning's accomplishment class in the subgroup "other durative verbs with bounded lexical meaning."[70] These verbs are chosen from the class partly due to the size of the data set and partly due to their narrow semantic range.[71] Κωλύω is listed under one semantic domain (13 Be, Become, Exist, Happen) and μανθάνω under two (27 Learn and

---

[70] Fanning, *Verbal Aspect*, 151.

[71] The majority of the verbs found in Fanning's Accomplishment class have a rather small data set for the kind of statistical analysis that we want to use in this study.

34 Understand) according to the lexicon by Louw and Nida (L&N).[72] Two other verbs are

chosen from existing classifications that are verbs of creation or verbs of consumption/

destruction. These two verb groups are considered to be inherently telic and are often

considered part of the accomplishment class.[73] Οἰκοδομέω, in the sense of making any

kind of construction ("to build," L&N 45.1), is often introduced in the study of the

actional class as a prime example of how the direct object determines whether the VP

headed by the verb is telic or atelic.[74] It is considered as an activity verb in most

---

[72] For a discussion of semantic domains and the theoretical framework behind Louw and Nida's lexicon, see Nida, *Componential Analysis of Meaning*; Louw, *Semantics of New Testament Greek*; Louw, *Lexicography and Translation*; Nida and Louw, *Lexical Semantics of the Greek New Testament*. The fact that Fanning did not make any effort to elucidatine the mechanism of how verbs are assigned to different classes makes it difficult for us to find suitable verbs for control measurement. His assignment of several verbs in the Activity class seems puzzling. Φθείρω, for example, seems more likely to be an Accomplishment than an Activity in the sense of "causing something to be corrupt and thus to cease to exist" (L&N 20.39). However, if it is taken to mean "causing harm, to ruin," or to corrupt in general (L&N 20.23), then it might be more fitting to classify it as a gradable transitions verb (Fanning's Activity). In addition, a verb such as ποιέω, which has multiple senses (it is listed under nine semantic domains in L&N) could make the classification even more complicated and confusing. A verb with a semantic range this wide would have certain usage(s) which fit the description of one class and other usages of another, which makes it very difficult to assign into one particular class. As a result, some verbs (such as ποιέω) are found in both Activity and Accomplishment under Fanning's classification. See Fanning, *Verbal Aspect*, 144, 151.

[73] For a discussion of verbs of destruction and Homeric Greek, see Napoli, *Homeric Greek*, 87–102, 216. See also the discussion of Sioupi's work on modern Greek and verbs of creation/consumption above (3.3.3).

[74] For a discussion of the effect of the argument, see the discussion above (3.3.2). The English verb "build" is considered as an accomplishment verb and has a preference for the perfective in Dahl's analysis. See Croft, *Verbs*, 143–45 for a discussion of Dahl's model.

classifications at the verb level but an Accomplishment at the VP level.[75] Examining the

aspect distribution at different levels (verb vs. VP) will demonstrate whether the choice

of grammatical aspect is affected by telicity. Ἀπόλλυμι, on the other hand, is generally

considered as a telic verb (a verb of destruction).[76] In addition to these verbs, κατεσθίω and

καταπίνω from the telicizing prefixed verb group can also be considered as verbs of

consumption. Here is the list of verbs that will be tested in this study:

Table 4.2: List of Activity and Accomplishment Verbs for Corpus Analysis

Activity	Accomplishment
Movement Verbs with Telicizing Prefixed Compound(s)	

---

[75] Fanning considers only the figurative meaning of the verb, "to build up" or "to edify" (L&N 74.15), as Activity. This raises two questions regarding the classification mechanism of this verb. The first question that one needs to ask here is regarding the unit of classification, i.e. what is being classified? A verb or particular sense(s) of a verb? Since he specifically highlights this particular sense of the verb, it seems to the reader that the more literal meaning ("to build") is not considered as Activity, at least not in the "gradable transitions" sub-category. However, later in the chapter when he talks about how the effected or affected object affects the "aspectual function" of a VP, the example with οἰκοδομέω seems to suggest that when the verb is used without a specific object (in the literal sense) it should be treated as an Activity verb. If this is the case, why is the figurative sense mentioned specifically in the classification but not the more literal sense? See Fanning, *Verbal Aspect*, 144, 169.

[76] See Mateos, *El Aspecto Verbal*, 97. See also Napoli's discussion of the preferred relationship between verbs of destruction and the perfective aspect. Note that the obsolete simplex (at the Koine period) ὄλλυμι is considered a verb of destruction. See Napoli, *Homeric Greek*, 216. Fanning, on the other hand, consider it as a Climax verb [+telic -durative], presumably trying to separate the preceding process (e.g. beating up) with the terminus (e.g. killing/destroying). This introduces another variable (durativity) to the analysis and thus renderes ἀπόλλυμι a less desirable control measurement. However, as will become obvious in the following analysis, the durativity property of a few verbs (βάλλω and ἀποστέλλω) in the telicizing prefixed group are also contested among scholars, which makes ἀπόλλυμι a good control measurement for these special cases. See Fanning, *Verbal Aspect*, 157.

ἄγω	ἀπάγω, εἰσάγω, ἐξάγω, ἐπάγω,[77] προσάγω, συνάγω, ὑπάγω
ἀποστέλλω[78]	ἐξαποστέλλω
ἔρχομαι	εἰσέρχομαι, ἐξέρχομαι, ἐπέρχομαι, προσέρχομαι
πορεύομαι	εἰσπορεύομαι, ἐκπορεύομαι
φέρω	εἰσφέρω, ἐκφέρω, προσφέρω
Other Telicizing Prefixed Verbs[79]	
διώκω	καταδιώκω
ἐργάζομαι	κατεργάζομαι
κόπτω	ἀποκόπτω, ἐκκόπτω, κατακόπτω
κρίνω	κατακρίνω
χέω	ἐκχέω
ἐσθίω	κατεσθίω
πίνω	καταπίνω
βάλλω[80]	ἐκβάλλω
Other Accomplishment Verbs[81]	
μανθάνω, κωλύω, οἰκοδομέω, ἀπόλλυμι	

---

[77] It does not appear in the NT and thus is not mentioned in Fanning.

[78] Ἀποστέλλω is considered a non-durative verb in both Fanning and Mateos.

[79] Most of the verbs under this heading are listed under "perfectivizing" verbs in Fanning's classification. However, some of them are also considered to have a bounded/unbounded contrast. For example, διώκω, ἐσθίω, πίνω, and ἐργάζομαι are classified by Fanning as Activity verbs (verbs with unbounded meaning) and the prefixed counterpart are listed under "perfectivizing" verbs. See Fanning, *Verbal Aspect*, 144, 151

[80] A Punctual verb in Fanning.

[81] These verbs do not have the kind of grammatical connection (prefixation) between the Activity and Accomplishment.

4.3 CORPUS ANALYSIS

4.3.1 General Remarks and Baseline Measurement

Before we move on to apply our analysis to the above data set, two general

remarks on the use of numerical analysis in in this study should be mentioned here. First

of all, although a true inductive method of analysis is very difficult, if not impossible, to

achieve, we should try to be as theory neutral as possible. Data should be thoroughly

examined before a linguistic theory is drawn up to explain it. It should guide the forming

of an explanatory hypothesis, instead of constituting a means to support an already

formed conclusion.[82] Secondly, although there are a whole host of statistical tests that we

can apply to the data, we have to be selective and understand the usefulness and

limitation of each test to avoid a biased interpretation. At the same time, instead of

applying statistical analysis to a limited set of data, a larger and more representative

corpus allows us to more thoroughly analyze the data. Having a larger corpus, with works

evenly spanning different genres and language varieties, lowers the risk of sampling bias,

and also allows us to look into specific genre/language variety issues.

---

[82] This is the premise of abductive reasoning mentioned above. See page 104 for more detail.

A recent work looking at the relationship between ἔρχομαι and εἰσέρχομαι is a good case in point to illustrate the importance of the above remarks. In a recent article, Shain argues that adding the prefix ἐισ- to ἔρχομαι telicizes the verb.[83] After examining all occurrences of ἔρχομαι and εἰσέρχομαι in the NT, she concludes that ἔρχομαι is inherently atelic whereas εἰσέρχοαμι is telic.[84] Shain's approach to the problem is twofold, involving both theoretical argument and statistical analysis. It is her use of statistical analysis to support her argument that is of interest here. After she concludes her theoretical analysis with the assertion that ἔρχομαι is atelic and the compound is telic, she turns to statistcal analysis to find additional confirmation of the lexical aspect of the verbs.[85] Based on the study of Bohnemeyer and Swift, she argues that there is good cross-linguistic evidence that a preferred correlation exists between telicity and the perfective viewpoint.[86] In other words, what she is trying to prove is that telic verbs are used more often in perfective

---

[83] See Shain, "Exploring *Aktionsart* in Corpora," 221–48.

[84] She points to the disagreement between Fanning and Juan Mateos regarding the inherent meaning of the two verbs as the motivation of her project. Fanning classifies ἔρχομαι as an Activity and εἰσέρχομαι as an Accomplishment verb. Mateos, on the other hand, considers the former an Accomplishment and the latter an Achievement. See Shain, "Exploring *Aktionsart* in Corpora," 230; Fanning, *Verbal Aspect*, 144, 150–1; and Mateos, *El Aspecto Verbal*, 85, 98.

[85] See Shain, "Exploring *Aktionsart* in Corpora," 240–47.

[86] See Shain, "Exploring *Aktionsart* in Corpora," 243–45. Refer to section 3.3.3 above for a discussion of different theoretical treatments of the relationship between telicity and perfectivity, including the work of Bohnemeyer and Swift.

aspect while atelic verbs are more compatible with the Imperfect. She then lists the tense-form usage of the two verbs in both the indicative and participle forms in a contingency table and applies a chi-square test to both sets of data. She concludes that since the results of the chi-square tests are statistically significant, it further confirms her claim that the core distinction between the meaning ἔρχομαι and εἰσέρχομαι is telicity.

There are two problems with Shain's work. First, her presentation of the argument seems to suggest a deductive approach, i.e. having a conclusion before examining the data. As I mentioned above (3.3.3), the discussion of the relationship between lexical and grammatical aspect, particularly the telicity/perfectivity debate, is far from settled. Mentioning only one side of the debate discounts the objectivity of the study. Secondly, although the results of the chi-square tests are acceptable, its usefulness *per se* is actually rather limited. Basically, a chi-square test can be used in linguistic studies to test whether two characteristics are independent or are associated in such a way that high frequencies of one tend to be connected with high frequencies of the other.[87] What it tells us is only that the variation of tense-form usage between the two verbs is significantly different.

---

[87] For example, a chi-square test can be used to investigate the relationship between tense and progressivity in a language with a progressive form such as English. For a brief description of the chi-square test and how it can be used in linguistic analysis, see Butler, *Statistics in Linguistics*, 112–26 and also the examples in O'Donnell, *Corpus Linguistics*, 229–32.

There are a few questions that we need to ask to avoid having come to a premature or even biased conclusion. These questions form the backbone of the analysis that is going to be presented in the next section.[88]

Looking at the data more closely we find that the tense-form variation for both verbs actually follows the same pattern (perfective is chosen more often than imperfective) with εἰσέρχομαι having a larger ratio favoring the perfective. What we therefore need to ask is, how likely is this kind of distribution to happen by chance? A baseline measurement is needed in order to answer this question. What we need is to measure the frequency of all tense-form/mood combinations for the two verbs in question and compare the results against the typical frequency (the baseline) for any such combination in a corpus for any word. It is not until we have a good idea of how the distribution of aspects is different from the expected frequency that a comparison between the verbs (chi-square) becomes meaningful.

For this study, the baseline measurement consists of the distributions of all aspect/ mood combinations for all verbs occurring in the corpus combined, except those verbs

---

[88] The statistical methods used in this study, such as hypothesis testings, sample estimation, parametric tests of significance, are fairly standard in the field of general statistics and corpus linguistics. The calculation of these statistical measurements (z-score and chi-square score) is covered in most introductory statistics textbooks. See for example, Butler, *Statistics in Linguistics*, 44–97, 112–26. For a discussion of statistical methodology and corpus linguistics, see Biber et al., *Corpus Linguistics*, 243–80.

that have an incomplete paradigm (such as εἰμί and φημί).[89] The baseline is then used to

facilitate the calculation of a test statistic to determine whether the frequency of a

particular aspect/mood combination is significantly different from the expected

frequency. Therefore, the first step of the analysis after the aspect/mood frequency is

amassed for the activity/accomplishment verbs is to calculate a statistical measure called

the significant score, or z-score. The z-score is used to measure a particular aspect/mood

frequency of a verb in comparison with what is 'normal' for the corpus. It compares the

actual frequency of a particular aspect/mood combination to the expected frequency

based on the general distribution of that particular aspect/mood combination from the

entire corpus. A baseline measurement of the aspect/mood distribution of all verbs from

our corpus is included in table 4.3:[90]

Table 4.3: Corpus Baseline Measurement[91]

---

[89] For a comparison of the tense-form/mood distribution for all words in the NT, see O'Donnell, *Corpus Linguistics*, 235.

[90] Note that the distribution for the papyri collection (the Zenon archive, the Michigan collection vol. 1) is compiled using the information provided by both the papyri.info website and Logos Bible Software. The grammatical tags and the result returned by the search engines are not always in sync. I suspect these differences could be explained by either a matter of tagging or versions (papyri.info may have the more updated version). For more on the Zenon archive, see Edgar, *Zenon Papyri*, 1–57 and Clarysse, "The Zenon Papyri Thirty Years on," 31–43.

[91] The total at the end of the each row (the column on the far right) includes the Future and Future Perfect.

Mood/Aspect	Imperfective	Perfective	Stative	Total
Indicative	20,178	15,012	2,989	41,845
Subjunctive	1,390	3,459	26	4,876
Imperative	1,878	1,721	75	3,674
Optative	282	526	3	812
Infinitive	6,936	5,858	572	13,822
Participle	14,792	10,737	3,414	29,343
Total	45,456	37,313	7,079	94,372

The baseline measurement provides an idea of what is considered a normal or expected frequency of aspect for the analyzed corpus. For example, in our corpus, the Indicative has more than 41 thousand total occurrences and the distribution of aspect has roughly the ratio of 20 to 15 to 3 (imperfective to perfective to stative). Since the primary focus of this present study is on the imperfective/perfective contrast and its interaction with the telic/atelic opposition, this ratio is of particular interest to us. In our corpus, there is roughly a 4 to 3 ratio if we narrow it down to just the imperfective and the perfective Indicative.[92] In terms of percentage, roughly 60% of the verbs in the corpus are in the imperfective and 33% perfective Indicative.[93] To determine whether the aspect distribution of a particular verb is significantly different from what is considered to be

---

[92] All ratios are listed in the form of imperfective vs. perfective in this study.

[93] The baseline measurement can be broken down into a genre/text-type specific measurement when a comparison is warranted for a particular verb/VP.

normal, a standard-score (z-score) should be computed for all aspect/mood combinations of such verb. A z-score greater than 3 (either positive or negative) indicates that the difference between the aspect choice of a particular verb and the baseline is significantly different and this deviation of the actual frequency from the expected frequency is not likely to happen by chance.[94]

While the z-score is good for comparing between actual and expected frequencies, we also need a statistical measure that is capable of comparing the aspect distribution between two verbs. The chi-square score is used in this study to complement the z-score. The chi-square test looks at whether the variation of aspect choice between two (or more) verbs could happen by chance, i.e. whether a certain verb's tendency to pick a certain aspect occurs independently of the tendency of another verb. For a comparison of two variables (verbs), a chi-square score of 3.84 or greater indicates the aspect distributions

---

[94] In statistical terms, a z-score greater than 3 indicates that the score value is outside of three standard deviations from the mean score (in the 1 percentile), which means it has a one in a hundred likelihood of happening by chance. For the calculation of a z-score, see O'Donnell, *Corpus Linguistics*, 235–37. For more on the normal distribution, see Butler, *Statistics in Linguistics*, 44–52.

are independent, i.e. the tense-form usage for the two verbs are highly unlikely to have occurred by chance.[95]

To conclude this section, let me go back to the comment made earlier regarding Shain's use of empirical evidence. To avoid misinterpreting the data or overstating the differences between the two verbs (ἔρχομαι and εἰσέρχομαι), the significant score (z-score) should be consulted before a head to head comparison is made between the aspect distribution of two verbs (chi-square test). When compared to the baseline, the aspect distribution of both verbs is actually significantly skewed towards the perfective.[96] This does not totally nullify Shain's argument that εἰσέρχομαι has a preferred correlation with the perfective. The fact that ἔρχομαι also shows a preference for the perfective indicates, however, that there is more to the story than Shain presents in her work. Since both the simplex and the compound share the same tendency, albeit to a different degree, it is questionable whether one can come to a definite conclusion based on just the result of the chi-square test. The fact that both verbs choose the perfective more than the imperfective

---

[95] That is, under a 95% confidence interval and one degree of freedom. Statistically speaking, a chi-square test can be used in linguistic studies to test whether two characteristics are independent, or are associated in such a way that high frequencies of one tend to come with the high frequency of the other. For a brief description of the chi-square test and how it can be used in linguistic analysis, see Butler, *Statistics in Linguistics,* 112–26 and also the example in O'Donnell, *Corpus Linguistics,* 229–32.

[96] I will analyze the aspect distribution of these verbs more thoroughly later (4.3.2.1).

warrants a more detailed examination of the data, which is what I am going to present in

the next section.

4.3.2 Telic Verb, Telic Environment, and Perfective Form

Turning our attention to the empirical analysis, two hypotheses are put to test in

this section. First, I want to look at whether the aspect distribution of a telic verb is

skewed towards a particular aspect when compared to the baseline measurement. The

common hypothesis (to be accepted or rejected based on the data) is that aspect

distribution of a telic verb is significantly different from the baseline. The second test is

to see whether telicity is in any way related to perfectivity in Greek. The common

hypothesis here is that telic verbs or verbs used in the Telic Linguistic Environment

(TLE, see 3.3.2) have a preference for the perfective, and likewise, that atelic verbs

demonstrate a preference for the imperfective. By framing the analysis this way,

empirical evidence can be gathered to either support or challenge existing classifications

of particular telic/atelic verbs, and more importantly, whether it makes sense to talk about

an interaction between the semantic property of a verb or a VP and the choice of

grammatical aspect, and whether it makes sense to describe a dependent relationship

between telicity and perfectivity in Greek.

As mentioned above, I have arranged the verbs into three groups according to the use of the telicizing markers (prefixation) and also their semantic range. I will first go through a group of telicizing prefixed verbs that are in the semantic domains related to movement (4.3.2.1). This will be followed by a discussion of other telicizing prefixed verbs (4.3.2.2). The question once again is to see if a similar pattern of aspect usage can be found among these verbs. This section is rounded off by a discussion of a few accomplishment verbs in various semantic domains (4.3.2.3) that are chosen for control measurement. Unless it is necessary for illustration purposes, all descriptive statistics are presented in Appendix B instead of the main text.

In the following sub-sections, I will present my findings in the following order. For each verb group (simplex/compounds), I will first go over the sense(s) of each verb as found in the lexicons to provide a rough semantic range of each word.[97] This will be followed by the basic descriptive statistics for each verb, highlighting the tendency that is apparent from the raw data. If the data displays a preference for a particular aspect, the first thing I will do is to examine all the occurrences of this aspect and determine whether

---

[97] The main lexicons used in this study are LSJ, Louw and Nida, and BDAG. The latter two are accessed through Accordance Bible Software, the first is accessed from the online version (http://www.tlg.uci.edu/lsj/). See Louw and Nida, *Greek-English Lexicon of the New Testament: Based on Semantic Domains*; Danker et al., *A Greek-English Lexicon of the New Testament and Other Early Christian Literature*; and Liddell et al., *A Greek-English Lexicon*.

they are evenly distributed in the corpus or clustered in a specific genre, text type, and/or collection of works (e.g. NT vs. non-NT). If the distribution is not evenly distributed across the works, a genre/collection-specific baseline should be considered for the analysis of this particular verb.

The second step of the analysis is to identify relevant TLE elements for the particular verb or group of verbs. For verbs that are associated with telicizing prefixed verb(s) with the same root, the TLE elements that trigger the telic shift or telicizing process are different for verbs in different semantic domains. Similarly, ATLE (Atelic Linguistic Environment) elements also need to be identified for the compound verbs. After identifying the relevant TLE and ATLE elements for the verbs, the data are examined using the two statistical measures mentioned above (z-score and chi-square score). I will go over each pair of activity/accomplishment verbs with the same verbal root. I will first look at the aspect distributions of the simplex and compare them to the corresponding prefixed verb(s). The same set of statistical procedures will be run twice for each pair of verbs. First I will cover the basic comparison at the verb level, i.e. the aspect frequencies between all instances of the simplex verb and all instances of the compound verb. Then I will apply the same procedures at the VP level on a variety of sets of data. For example, we can make comparisons such as between the TLE instances

of the simplex and all instances of the compound verb; the non-TLE instances of the

simplex and the TLE instances; and also the ATLE instances of the compound with the

non-TLE instances of the simplex, etc.[98] A preliminary conclusion will be made at the

end of each section.

4.3.2.1 Movement Verbs

There are five verbs in this group (ἄγω, ἔρχομαι, πορεύομαι, φέρω, ἀποστέλλω). Due

to the closeness of their semantic range, one would expect similar results in terms of the

imperfective/perfective distribution.[99] In what follows I will first discuss each one of the

verbs separately (sub-sections 1–5) and then talk about the overall tendency of these verb

as a group (sub-section 6).

---

[98] Obviously all of these comparisons are not possible without a large enough sample size. If we have enough instances of a particular pair of verbs we can even compare the aspect distribution between the prefixed verb and the simplex used with the same preposition (V + PP construction) to see if they display a similar pattern. Take ἔρχομαι and εἰσέρχομαι for example. We can make a comparison among these different groups: (i) all the TLE instances of ἔρχομαι, (ii) the TLE instances of ἔρχομαι with εἰσ- prepositional phrase, (iii) all instances of εἰσέρχομαι, (iv) all non-ATLE instances of εἰσέρχομαι, (v) category (ii) + (iii) or (ii) + (iv), depending on the number of instances.

[99] The senses that relate to movement or motion (from L&N) is the linear movement domain (domain 15). All five verbs in this group have more than one entry in that domain: ἄγω (15.34; 15.165; 15.210); ἀποστέλλω (15.66; 15.67); ἔρχομαι (15.7; 15.81); πορεύομαι (15.10; 15.18; 15.34); and φέρω (15.11; 15.160; 15.166; 15.187). However, most of these verbs (apart from ἀποστέλλω) have more senses listed in L&N that are not directly related to physical movement. I will come back to these other senses later.

1. ἄγω and compounds

The verb ἄγω has seven different senses under LSJ and five under BDAG.[100] It is

classified as a movement verb (Activity) in Fanning's scheme, presumably because in a

large number of instances in his corpus (NT) ἄγω is used to denote movement of objects

or living things. In our corpus, more than two thirds of the occurrences (counting only

Indicative) are related to movement. There are, however, a few senses found in the

lexicons that have little to do with physical movement. For example, one usage of ἄγω is

to denote the act of marrying ("carry away for oneself" for middle ἄγομαι), possibly an

extension from the meaning "bringing a spouse to oneself/others."[101] Likewise, LSJ and

BDAG also have an entry of "celebrating, observing a festival" or describing "passing of

time,"[102] uses which are not quite related to the other senses. For the sake of comparison,

it should be noted that all of the prefixed verbs with ἄγω considered in this study (ἀπάγω,

εἰσάγω, ἐξάγω, προσάγω, συνάγω and ὑπάγω) rarely have non-movement uses according to

---

[100] LSJ on Perseus. http://www.perseus.tufts.edu/hopper/
morph?l=a%29%2Fgw&la=greek#lexicon. It has six entries in L&N spanning four semantic domains
(Domain 15 Linear Movement; 36 Guide, Discipline, Follow, 42 Perform, Do; and 67 Time).

[101] The B.2 entry under ἄγω in LSJ. For example, see Josephus, *Life*, 414; 415; 427.

[102] See the fourth definition in BDAG "to make use of time for a specific purpose," which is
similar to the definition for domain 67.79 under L&N. See also the fourth entry in LSJ. For instances of the
sense of celebration, see, for example, Philo, *Moses*, 2:41; 2:224, Strabo, *Geogr.*, 7.7.6, Pausanias, *Descr.*,
1.31.5. For the sense of passing of time, see 2 Macc 2:12; 10:6.

the lexicons.[103] However, although these non-movement uses of ἄγω are few in our data

set, their effect on the analysis will be monitored.

Based on the descriptive statistics, a few trends stand out within the data of the

ἄγω verb group and should be mentioned here first. The choice of aspect for ἄγω is fairly

balanced for the Indicative between the imperfective and perfective but is skewed to the

imperfective for almost all non-indicative moods (except the Optative where the data are

too limited to draw conclusions). The stative use of the verb is almost non-existent in the

corpus sample (2 out of 367 instances).[104] Turning to the prefixed verbs, if the theory that

the prefixed verbs are the telic counterpart of the simplex is right, one would expect

heavy skewing to the perfective across the board. However, judging from our data set, the

distributions of the imperfective/perfective choice are far from consistent, and range from

a fairly balanced spread (ἀπάγω, ἐξάγω and προσάγω), to a mild to heavy skewing towards

the perfective (εἰσάγω, συνάγω), to even a rather heavy skewing towards the imperfective

(ὑπάγω). Moreover, these trends are also manifested consistently between the Indicative

---

[103] See, for example, John Lee's discussion of συνάγω. Lee, *A History of New Testament Lexicography*, 317–20.

[104] However, only the Indicative (zero instances) has produced a statistically significant result (a z-score of -3.60).

and the non-Indicative.[105] Apart from συνάγω and ὑπάγω, which each appear in more than

a hundred instances in the corpus, the number of instances of the other prefixed ἄγω verbs

is rather low compared to the simplex.[106] Also, similar to the simplex, the stative uses of

the compound verbs are very few. In fact, only one compound has more than five

instances of stative aspect (συνάγω, with eight). In terms of genre, roughly three quarters

of the occurrences are in narrative (128 out of 169 instances) and the rest (roughly 25%)

are in epistles or philosophical works (such as Epictetus's *Diatr.*). It is interesting to note

that the aspect distribution in the non-narrative genre displays a preference for the

imperfective (26 to 11) while the narrative genre has a fairly balanced split (60 to 66).

This is similar to the baseline measurements of the respective genres.[107]

Comparing the Aspect/Mood distribution of the ἄγω verb group with the baseline

distribution confirms the observations mentioned above. For the simplex, the distribution

---

[105] The only exception is εἰσάγω, where the Indicative is skewed heavily to the perfective (4:17) but the Infinitive is equal between imperfective and perfective and the Participle has slightly more imperfective (6:4). However, given that the occurrences are so few, it takes a rather drastic difference to produce a statistically significant difference.

[106] The actual number of occurrences: ἄγω (367), ἀπάγω (69), εἰσάγω (43), ἐξάγω (43), προσάγω (68), συνάγω (135), and ὑπάγω (135).

[107] If the corpus is divided into narrative and speech/epistles, the aspect ratio of imperfective to perfective is roughly 1 to 1 (10,207 to 10,200) for the works that are generally considered as narrative and 2 to 1 for speech and epistles (9971 to 4812).

of imperfective/perfective aspect in the Indicative is very close (86 to 77). The rate of the

perfective is slightly more than the baseline (roughly 5% more) but the difference is not

statistically significant (close to but not over three standard deviations). The skewing to

the imperfective in three of five of the non-Indicative forms (Subjunctive, Infinitive, and

Participle but not Imperative and Optative) are statistically significant. The stative

Indicative (0 occurrence) also has a z-score lower than -3.0. The Aspect/Mood

distribution and the z-scores (in parentheses) are summarized in the following table:

Table 4.4: Aspect/Mood Distribution and z-scores for ἄγω

ἄγω	Imperfective	Perfective	Stative
Indicative	85 (0.54)	78 (2.79)	0 (-3.60)
Subjunctive	19 (5.75)	4 (-5.65)	0 (-0.35)
Imperative	12 (1.60)	5 (-1.43)	0 (-0.59)
Optative	1 (0.45)	1 (-0.44)	0 (-0.09)
Infinitive	54 (3.09)	23 (-2.46)	1 (-1.30)
Participle	57 (4.29)	16 (-2.81)	1 (-2.81)

For the compound verbs, the z-scores once again confirms our observations on the

raw data. Here is a list of the frequency and the significant z-scores:[108]

---

[108] Note that a positive z-score indicates the deviation of the actual frequency from that which is expected according to the normal distribution is higher. A negative z-score indicates a lower frequency from what is expected according to the normal distribution. See O'Donnell, *Corpus Linguistics*, 236–37. For the complete distributions and z-scores, see Appendix B.

Table 4.5: Frequency and significant z-score for compound ἄγω verbs

εἰσάγω[109]	
Perfective Indicative	17 (4.05)
συνάγω	
Indicative (Impf/Perf)	15/35 (-3.21/4.16)
Participle (Impf/Perf)	3/11 (-4.17/4.16)
ὑπάγω	
Indicative (Impf/Perf)	39/3 (5.79/-4.08)
Imperative (Impf/Perf)	55/0 (7.24/-6.95)
Infinitive (Impf/Perf)	13/0 (3.59/-3.09)

Applying the data to the chi-square test (between the simplex and each compound) confirms the finding of the above significant z-scores. The choice of grammatical aspect of these compounds (εἰσάγω, συνάγω and ὑπάγω) is significantly different from the simplex.[110]

However, the above result does not necessarily confirm previous classification of the three compounds (Accomplishment) and the simplex (Activity). In fact, if we look at all the ἄγω prefixed verbs as a whole, the data seems not to support the claim made in

---

[109] The z-score of the imperfective Indicative of εἰσάγω is close to -3.0 at -2.82 with 4 instances out of 21.

[110] The χ2-score are 8.46 (εἰσάγω Indicative), 7.95 (συνάγω Indicative), 31.86 (συνάγω Participle), 22.56 (ὑπάγω Indicative), 17.38 (ὑπάγω Imperative), and 5.22 (ὑπάγω Infinitive). All are above 3.84, the five percent level, and one degree of freedom.

previous works in that not all prepositions denote source (ἀπό, ἐκ) and destination (πρός)

telicize the verb. However, at this point what the result implies is that at the verb level,

ignoring any co-textual factors, the choice of grammatical aspect of some of these

compounds is different from the simplex. Therefore, to give a more complete picture,

these instances need to be compared to the instances where the simplex is used (1) in a

telic linguistic environment (TLE) and (2) with the same preposition in a VP, in terms of

the choice of aspect. Since the use of the non-Indicative is rare for the compound verbs,

in what follows I will focus particularly on the Indicative.

Out of the 169 instances of ἄγω in the Indicative, 100 of them are used in TLE,

i.e. with explicit co-textual factors that denote a telic situation, and 69 instances are used

without any explicit TLE element. The main TLE elements that are applicable to ἄγω are

directional and locative adverbials, and specific and countable arguments.[111] Although

close to two-thirds of the instances are in a telic situation by way of TLE, this does not

mean that those instances with no explicit linguistic telic marker are all atelic. In quite a

few of these instances ἄγω is used in those senses that are not related to physical

---

[111] For directional and locative adverbials, see the instances of ἄγω with εἰς or ἐπί prepositional phrase (PP). For ἐπί PP see, for example, Luke 23:1; Acts 18:12; 23:31, 1Macc 10:8; T.Ab. B 10:2; Strabo, *Geogr.* 7.2.3; Apollodorus, *Library* 1.9.23. For εἰς PP see Luke 4:9; 10:34; John 18:28; Acts 6:12; 11:26; 2 Macc 1:19; 2 Bar 3:1; Apollodorus, *Library* 1.8.6; 2.4.6; 2.5.1. For countable and non-countable arguments, compare "bringing joy" (3 Macc 7:15) and "they brought it [the colt] to Jesus" (Luke 19:35).

movement, i.e. making use of time, observing a festival, or other idiomatic uses.[112] For

other non-TLE instances that are used to describe movement, the goal or terminus of the

action can often be found in the wider literary context.[113]

Of the 100 TLE instances, 33 instances are used with εἰς, 26 with ἐπί plus an

accusative or a genitive object, 15 with πρός, six with ἐν,[114] two each with ἐκ and σύν, and

the rest are used with either a location, a particular person, or time.[115] When these telic

VPs are lumped together with the corresponding prefixed verb, not many new insights

can be found. For example, adding the 33 instances of ἄγω + εἰς PP to the calculation of

εἰσάγω brings the z-score of the imperfective Indicative of εἰσάγω closer to the normal

distribution (from -2.82 to 1.45) but also intensifies the skewing of the perfective

Indicative, resulting in an even higher chi-square score.[116] For the case of ἐπάγω,

---

[112] Such as the act of silencing, "lead to silence/rest," or marrying, "bringing oneself a wife." 11 out of 69 non-TLE instances are used in the sense of celebration.

[113] For example Matt 21:7; Acts 19:37; 25:23.

[114] Most of these uses (5 out of 6) are used to refer to honoring someone, "leading into honor." All of these instances have the PP ἐν τιμῇ with ἄγω. See Pausanias, *Descr.*, 1.5.3; 1.9.5; 1.26.4; 1.26.6; 1.27.9.

[115] In terms of TLE, these VP have telic elements such as locative adverbials (e.g. locative dative, locative phrase with ὅπου), directional adverbials (e.g. ὀπίσω, ἐνταῦθα), resultative (Infinitive complement), countable argument, and time span adverbial (see Luke 24:21).

[116] Adding the 33 instances of ἄγω + εἰς PP to εἰσάγω changes the ratio from 4:17 (Impf:Perf) to 14:39.

similarly, adding the 26 instances of ἄγω + ἐπί PP construction does not change the z-score nor produce a significant chi-square score.[117] One interesting case is ἄγω with πρός PP. Adding the 15 instances of ἄγω + πρός PP to the προσάγω table does not change the chi-square score but actually changes the z-score of the imperfective Indicative from non-significant to significant (from 1.95 to 5.53). This means that the use of the imperfective form is actually more frequent when the verb is paired with the preposition πρός (prefix and prepositional phrase), which by itself usually signifies a destination for movement verbs and creates a telic environment.

In regard to the subset of the simplex TLE instances, the aspect distribution is 42 to 55, with a z-score of -1.24 (imperfective) and 3.99 (perfective), which indicates a preference for the perfective.[118] On the other hand, the z-scores for the non-TLE instances demonstrate that the choice of aspect is within reasonable range of the baseline.[119] Looking closer at the TLE instances, the skewing towards the perfective is mainly caused by the ἄγω + εἰς PP construction. Out of the 55 perfective instances, 22 are in that

---

[117] The aspect ratio of ἐπάγω is 11:5 (Impf:Perf), adding the 21 instances to the ratio makes it 21:20. The z-scores for these entries are all under 3.

[118] Three instances are used in the Future form.

[119] The aspect distribution of the non-TLE instances is 43 to 23. The z-score for imperfective Indicative is 2.34, -0.44 for the perfective Indicative. Both are under three standard deviations.

construction. Taking away all 33 instances of this construction,[120] the aspect ratio of the

rest of the TLE instances (32 to 33) is very much similar to the combined frequency (86

to 77).[121]

These observations confirm some of the general description mentioned above.

Among the seven compound ἄγω verbs, only two (εἰσάγω and συνάγω) have an aspect

distribution skewed towards the perfective. The same skewing demonstrated by the

instances of the ἄγω + εἰς PP construction is in line with a similar tendency demonstrated

by the prefixed verb (εἰσάγω). Five of the seven prefixed verbs demonstrate an aspect

ratio fairly comparable to the baseline (the normal distribution). Particularly interesting

are ὑπάγω and προσάγω, both of which demonstrate skewing towards the imperfective

instead of the perfective. This calls into question whether all these prefixed verbs should

be considered as telicizing or, in Vendler's term, accomplishment verbs. However, to

avoid concluding prematurely, we must observe whether similar patterns can be found in

other movement verbs.

---

[120] 10 imperfective instances, 22 perfective, and 1 in the Future.

[121] The z-score of the TLE instances, excluding the ἄγω + εἰς PP construction, is 0.29
(imperfective) and 2.40 (perfective). Two of these TLE instances (non-εἰς PP construction) are used in the
Future.

2. ἔρχομαι and compounds

The verb ἔρχομαι can be found in two semantic domains: the domain of linear

movement (domain 15) and the domain of be, become, exist and happen (domain 13).[122]

Quite a few idiomatic uses are related to the second domain, describing a process of

coming into a particular state or condition, i.e. becoming.[123] However, not all lexicons

treat the two senses as separate categories; some have treated the sense of becoming as an

extension of the primary sense (physical movement).[124] Another extension of the linear

movement sense is the sense of happening; ἔρχομαι is sometimes used to describe the

happening of an event or a time, in the sense of the coming of a particular time.[125] The

physical movement usages of the verb are often found in narratives, particularly the

gospel narratives, while non-physical movement senses/extensions are more often found

---

[122] L&N domains: 13.50; 13.117; 15.7; 15.18.

[123] For example, to come into knowledge, to come to the worst. See L&N domains: 23.150; 27.4; 32.17; 88.233; 89.43.

[124] See the fifth category of the entry of ἔρχομαι in BDAG. It is not listed under LSJ.

[125] See the fourth category from BDAG. This use of ἔρχομαι to describe temporal increments, e.g. "the hour is coming," is particularly prominent in the gospel of John. See, for example, John 4:21, 23; 5:25, 28; 7:30; 8:20; 9:4; 13:1; 16:2, 25. It is also used to describe the coming of an event (e.g. Luke 17:20) or a phenomenon such as a particular kind of weather, e.g. Luke 12:54; 17:27. These usages often carry a sense of future referring or a level of expectation even though it is used in the indicative and not in the Future tense.

in philosophical works.[126] This should not come as a surprise given that a particular genre

is more likely to use the verb for certain kinds of description or purposes of

communication.[127] However, it may give the wrong impression to those who only work

with the NT (such as Fanning and Mateos), where the instances of ἔρχομαι are found

mainly in the narratives (the four gospels and Acts), that certain uses/patterns in narrative

are the dominant or primary usage of the verb. A corpus approach, on the other hand,

provides a more complete and balanced picture of the various senses of the verb.[128]

Regarding the descriptive statistics at the verb level, the group of ἔρχομαι

compounds shows the most consistent trend among the five movement verbs. Three out

of four compounds of ἔρχομαι (εἰσέρχομαι, ἐξέρχομαι, and ἐπέρχομαι) show heavy skewing

towards the perfective while προσέρχομαι displays a mild skewing, again to the perfective,

---

[126] Examples of non-movement use of the verb include: Phil 1:12 "happened to me," Epictetus, *Diatr.* 1.1 "how much does it come to be worth," *Diatr.* 3:21 "come to an idea," *Diatr.* 4:5 "come into the misfortune." See also the idiomatic instances (non-Indicative) such as 1 Tim 2:4; 2 Tim 3:7.

[127] In terms of probability, it is way more likely to find a description of physical movement in a narrative than in a philosophical work.

[128] However, I also have to point out that most of the instances (Indicative and Non-Indicative) of the compounds, apart from ἐπέρχομαι, are found in the NT. These include almost half of the total occurrences of προσέρχομαι (86 out of 155), more than two-thirds of ἐξέρχομαι (209 over 290, 122 over 155 if we only count the Indicative) and more than half of εἰσέρχομαι (194 over 325, 74 over 115 for the Indicative).

in the Indicative.[129] All of these distributions have significantly high z-scores.[130]

However, two points of concern should be pointed out here. The first is regarding sample

size. Compared to the simplex (592 instances of Indicative), the sample sizes of ἐπέρχομαι

(23) and προσέρχομαι (50) seem to be quite small.[131] The second point of concern is

regarding the aspect distribution of the simplex. Unlike the ἄγω verb group where the

simplex (atelic verb/Activity) has a fairly balanced aspect distribution, the instances of

ἔρχομαι in our corpus display heavy skewing to the perfective in the first place (196 to

306).[132] This is particularly of interest to us since one would expect a consistent pattern

---

[129] From here on I refer to the Indicative only, unless the non-Indicative frequencies show a contrasting trend compared to the Indicative. I will only include the figure of the Indicative in the discussion. In this case for example, the non-Indicatives demonstrate a preference for the perfective across the board, except the Imperative of the simplex, which displays a skewing to the imperfective (29 to 15 out of 44 instances). See Appendix B for a detailed breakdown of each verb in this verb group.

[130] The z-scores for εἰσέρχομαι (15 to 78 out of 115 instances), ἐξέρχομαι (12 to 127 out of 155) and ἐπέρχομαι (2 to 18 out of 23 instances) are (-7.55, 7.15), (-10.08, 11.97), and (-3.79, 4.24) respectively. The rather extreme values demonstrate that the deviation of aspect ratios from what is considered as normal are highly unlikely to happen by chance. The aspect ratio of προσέρχοαμι is not as extreme as the other compounds (12 to 31 out of 50 instances) but is still considered as significantly deviating from the normal distribution (with z-scores of -3.42 and 3.85).

[131] Compare to εἰσέρχομαι (115) and ἐξέρχομαι (155).

[132] Similar patterns (skewing towards the perfective) are found if instances are grouped according to their genre (narrative, speech, etc.). For example, in the narrative genre, ἔρχομαι has an aspect ratio of roughly 1 to 2.5, in which the preference for the perfective is very obvious compared to the genre baseline (1 to 1 ratio). Similarly, whereas the baseline for speech/epistle has a roughly 2 to 1 ratio, the aspect distribution for ἔρχομαι has an 8 to 11 ratio. Both of these ratios demonstrate that the perfective is chosen more often than the expected frequency of the genre-specific baseline.

across the verbs that belong to the same class (Activity). We should keep this important

information in mind when it comes to the interpretation of the chi-square result.

Given the rather extreme skewing towards the perfective in the three compounds

(εἰσέρχομαι, ἐξέρχομαι and ἐπέρχομαι), it should not come as a surprise that the chi-square

scores between the simplex and these compounds confirm the finding of the significant z-

scores. The preference for the perfective of these compounds, compared to the simplex, is

unlikely to happen by chance. However, since the aspect distribution of the simplex also

displays the same tendency, the significant chi-square tests only prove that the degree of

skewing of the compounds is significantly higher than the simplex, not necessarily that

there is a dependent relationship between telicity and perfectivity. We need to look at an

analysis at a higher rank of grammar for more insight into the tendency of aspect choice

for this verb group.

The TLE elements that are often found collocating with ἔρχομαι in the corpus are

mainly directive or locative adverbials and a few time-span adverbials and iterative/

frequency adverbials, etc.[133] Out of 592 total instances of the simplex, more than half

(347) of them are found in a TLE. The aspect ratio of these TLE instances (108 to 190) is

---

[133] For point adverbials, see Mark 1:9; John 4:30; Rom 9:9. For iterative adverbials, see John 14:3, for time-span adverbials, see Luke 2:44.

comparable to the overall number (196 to 306), both with a mild skewing towards the

perfective. Not only are the z-scores of the imperfective and perfective Indicative of these

TLE instances very close to the overall number,[134] the chi-square score between the TLE

and non-TLE distribution (88 to 116) is also non-significant.[135] This means that the

preference for the perfective is consistent across the simplex.

Of the 347 TLE instances, more than one-third (127) are used with an εἰς

prepositional phrase, roughly 22% are with πρός (77), 10% with ἐπί (34), and less than 10

instances with ἐκ (9).[136] Adding these instances to the instances of the corresponding

prefixed verbs produces interesting results. On the one hand, there are cases where

lumping all the instances of the simplex with the PP together with the prefixed verb does

not shed new light on our analysis. Take the case of εἰς for example: adding the instances

of the simplex with the εἰς PP to the total of εἰσέρχομαι does not change the result of the

---

[134] For the non-TLE instances, the z-scores for the imperfective (88) and the perfective (116) are -3.85 and 3.74. For the TLE instances (108 to 190), the z-scores are -5.68 and 8.17. The overall numbers of ἔρχομαι (196 to 306) are -6.37 and 7.33. All of these groupings have the same result, a preference for the perfective over the imperfective with significant z-scores.

[135] Comparing between the TLE instances (108 to 190) and non-TLE instances (88 to 116) of the simplex, the chi-square score is 2.42, which is below the significant level.

[136] The sample size of the ἐκ PP construction is too small for a meaningful comparison.

analysis, only intensifies the skewing.[137] Similar trends can also be observed in the case

of ἐπί PP and ἐπέρχομαι; adding the instances of the PP construction to the prefixed

instances does not change the result.[138] What is interesting is the case of the preposition

πρός. Of the 77 instances of ἔρχομαι with πρός PP, there are actually more instances of

imperfective than perfective (37 to 29).[139] Combining these instances with those of the

prefixed verb result in an aspect ratio of 49 to 60 with non-significant z-scores (-1.86 and

2.98). This also brings the chi-square score to a non-significant level (0.10). In other

words, taking all the instances of the ἔρχομαι verb group (simplex and compound) that

involve the prepositional πρός together, even though the use of the perfective is still

slightly more than the imperfective (49 to 60), it is not in any way a significant deviation

from the expected distribution from the non-TLE instances. Once again, this prompts us

to question whether the telicizing prefixes, that is, those that designate source,

---

[137] The 127 instances of ἔρχομαι + εἰς PP have a 23 to 95 aspect ratio. Adding them to the calculation of εἰσέρχομαι gives a 38 to 173 ratio out of 242 instances (all instances with εἰς, simplex and compound). The significant scores for both the imperfective and perfective frequencies are way outside of three standard deviations (-10.12 and 11.55 respectively). Comparing this ratio to all non-TLE instances of the simplex (88 to 116) will produce a whopping chi-square score of 30.97.

[138] The aspect ratio of all instances with ἐπί (simplex and compound) is 11 to 41 (compared to ἐπέρχομαι alone, 2 to 18) with the z-scores of -4.37 and 5.68. The chi-square score is 9.55 (compared with all non-TLE instances of the simplex).

[139] Five instances of Future, four of Perfect, and two of Pluperfect add up to 77 instances.

destination, or extent for a movement, relate to the choice of aspect in any systematic

way or whether all the telicizing prefixes have the same telicizing function. In the case of

ἔρχομαι, what we have are three prefixes (εἰς, ἐπί, and πρός) that are used for the same

telicizing function (denoting the destination),[140] but relate differently to the choice of

aspect. Here in both ἄγω and ἔρχομαι, the telicizing function of πρός is called into question.

More attention should be paid to see whether a similar tendency could be found in other

movement verbs with this preposition.

To summarize, compared to the ἄγω verb group, the ἔρχομαι group does indeed

display a more consistent tendency in choosing the perfective in the corpus. However,

this tendency does not only present itself in the compounds, i.e. the telic verbs, but also

the allegedly atelic simplex. This raises the question of whether ἔρχομαι should be

considered an Activity verb, given that its aspect distribution is similar to those that are

generally characterized as telic verbs (Accomplishment). However, this also explains, to

a certain degree, why ἔρχομαι and its compounds are classified in totally opposite classes

in existing classifications.[141] The dilemma here is that, based on the preference of aspect,

---

[140] See Fanning, *Verbal Aspect*, 150–51.

[141] Fanning and Shain consider the simplex as atelic and the compounds as telic. Mateos, on the other hand, considers the simplex as a telic verb. See the discussion in 4.2.2 above.

ἔρχομαι is different from typical atelic verbs, which should have a preference for the

imperfective. At the same time, however, it is also different from its telic compounds in

terms of the degree of the skewing. If there is a consistent correlation between telicity and

perfectivity in Greek, the aspect distribution of ἔρχομαι (skewness to the perfective)

questions the correctness and legitimacy of classifying the simplex verb as an atelic

(Activity) verb.[142] On the flip side of the coin, even if we take ἔρχομαι as a telic verb based

on the aspect distribution, we still need to question whether there is a consistent degree of

correlation between telicity and perfectivity. Given the significant difference in aspect

ratio between the simplex and the compounds, it is rather difficult to argue that both

verbs belong to the same (telic) class. More evidence is needed to answer these questions.

3. πορεύομαι and its compounds

Compared to the previous verb groups, the analysis of the πορεύομαι groups and

the next verb group are rather straightforward. The data show the kind of consistency that

is lacking in the previous groups, but the rather small sample size makes them less useful

for statistical analysis. Nevertheless, there are still some interesting observations worth

mentioning here. In terms of the lexical meaning, unlike the previous two verbs,

---

[142] Fanning, *Verbal Aspect*, 144 and Shain, "Exploring *Aktionsart* in Corpora," 247–48.

πορεύομαι is mainly used in the sense of denoting linear movement.[143] There is also a

metaphorical use of the verb that has the meaning "to live, to behave, to go about

doing."[144] However, this use is not prominent in our corpus and will be accounted for in

the analysis.[145] There are only 76 instances of πορεύομαι in the corpus and both of its

compounds have an extremely limited sample size. There are only nine instances of

εἰσπορεύομαι and 16 of ἐκπορεύομαι in the corpus.[146] What is surprising in this sample is

that all of the occurrences of both compounds are in the imperfective. There are no

perfective instances of the compounds in the Indicative and only a handful of non-

imperfective instances in the non-Indicative.[147] In total, more than 95% of the occurrences

in the corpus are in the imperfective in this rather limited data set (60 instances). This

heavy skewing towards the imperfective goes against the conventional understanding of

the usage of a telic verb. However, the number of occurrences for both compounds are

---

[143] See L&N 15.10; 15.18; 15.34. See also the first entry of πορεύω in BDAG and the entry in LSJ.

[144] L&N 41.11, see also the second entry of πορεύω in BDAG and LSJ II.3. There is also another rarer extension of the movement sense to denote "to die." See BDAG's third entry and LSJ II.6.

[145] Only roughly 10% of the 76 instances of πορεύομαι are used in this sense, all are non-TLE instances, and most of them are in the Future (5 out of 8).

[146] Counting only the Indicative instances.

[147] Even counting the non-Indicative forms, there are only three instances of the Aorist out of 60 total occurrences (21 εἰσπορεύομαι and 39 ἐκπορεύομαι). There is also one instance of Future Indicative.

relatively small (9 out of 9 for εἰσπορεύομαι and 15 out of 16 for ἐκπορεύομαι). Given that

there are only 76 Indicative instances of the simplex in our corpus, the low frequency of

the compounds should not come as a surprise. The z-scores for the imperfective of both

compounds are significant, indicating that even with such a small sample size, the

preference for one aspect is not likely to happen by chance.[148] However, we should not

read too much into this significant result given its limited sample size. For the same

reason, it would make little sense to talk about the genre specific aspect distribution.[149]

Πορεύομαι has a fairly standard aspect ratio compared to the baseline

measurement. In the Indicative, the distribution is skewed to the imperfective in a 2 to 1

ratio (39 to 21 out of 76 instances). The TLE elements that are often found with the verb

are locative and directive adverbials.[150] Unlike the previous two verbs, there are actually

---

[148] The chi-square tests for each compound verb, when compared with the simplex, are also significant (4.53 for εἰσέρχομαι and 7.29 for ἐκπορεύομαι). However, the small sample size makes it less useful for our analysis. It is also worth noting that there is no Aorist Indicative of any of the compounds in the entire Perseus database (including the NT). However, according to LSJ, the Aorist form of ἐκπορεύω is attested in some other Greek texts.

[149] However, I also need to point out that of the 60 instances of the Indicative of the simplex, roughly 60% (45 out of 76) are from the four gospels and Acts.

[150] For example, Matt 28:16; Luke 1:39; 4:42; 7:11; 9:56; 19:12; 22:39; John 7:53; 8:1; Acts 5:41; 12:17; 18:6; 20:22; 22:5; Rom 15:25; 2 Tim 4:10; Josephus, *Life* 231; Wis 15:8.

more non-TLE instances (42) than TLE instances (33) of πορεύομαι.[151] The TLE instances

have a balanced distribution (13 to 13) while the non-TLE instances are skewed towards

the imperfective (26 to 8). As a result, the z-score for the TLE instances (-1.01 and 0.42)

and the non-TLE instances (1.77, -2.27) are not significant. The size of the data set really

limits the usefulness of statistical (inferential) tests.[152] Finally, adding the 19 instances of

the simplex used with an εἰς PP to the table of the prefixed verb (εἰσπορεύομαι) produces a

more balanced distribution (14 to 11) with non-significant test scores (both z-score and

chi-square score). Although the number of total instances (28) is still too small for the

inferential analysis to carry any weight, we should note that the allegedly telic use of

πορεύομαι shows no significant skewing to the perfective. Another observation worth

pointing out here is that the aspect distribution of πορεύομαι with εἰς PP (5 to 11) is

actually different from that of εἰσπορεύομαι (9 to 0). Even acknowledging the limitation of

small sample size, this further questions the legitimacy of treating these two groups of

usages as having the same telicizing function.

---

[151] Eight out of the 42 non-TLE instances are used in the metaphorical sense ("live in faith," "walk in God's commandments," etc.).

[152] For a sample size this is small; it takes a rather extreme distribution (such as those of the compounds) to produce a significant z-score.

In summary, although the size of the data set keeps us from drawing statistical inferences from the aspect distribution, there are some interesting observations that are useful to our analysis. The extreme skewing to the imperfective displayed by the compounds is contrary to the hypothesis by some typologists that a telic verb is more likely to pair with the perfective. The preference for the imperfective is not limited to the allegedly telic compounds. Even in the case when πορεύομαι is used in TLE, the aspect ratio is far from what is expected from a telic verb (a preferred correlation with the perfective). Finally, it is also interesting to note that the simplex TLE instances actually display a rather different aspect distribution when compared to the compound verb (of the same prefix). This brings into question whether telicizing prepositions function similarly when used as a prefix and in an adverbial phrase.

4. φέρω and its compounds

According to the lexicons, φέρω has a fairly wide semantic range.[153] The entry in BDAG has ten senses and not all of them are related to linear movement. What makes it more complicated is that some of the non-movement senses are listed under the

---

[153] Similarly, the verb appears in ten semantic domains in L&N. Apart from domain 13 (be, become, exist, happen) and 15 (linear movement), all other domains (23.199; 25.176; 31.55; 36.1; 70.5; 82.12; 85.42; 90.64) have only one entry.

movement sense.[154] Some of the figurative and non-movement senses, unlike the

movement senses, are telic.[155] This makes one wonder if verbs like φέρω, which has

multiple senses that belong to different actional classes, should have one entry in a

classification or multiple entries (according to its different senses). In addition, these non-

movement senses are not genre specific, i.e. they appear in all genres in our corpus.

Therefore, instead of doing a genre specific analysis, a more fitting approach to the

analysis of φέρω is to distinguish between the movement uses and the non-movement uses

of the verb and see if those denoting movement have a similar aspect distribution

compared to other movement verbs.

Turning to the descriptive statistics, the aspect ratio for φέρω (82 to 47) in the

Indicative (138 instances) is very close to the baseline, which has a roughly 4 to 3 ratio.[156]

---

[154] For example, the figurative uses of φέρω such as "carrying a burden" (BDAG 1.b.α), "bearing a name" (BDAG 1.b.β), or "bearing a favor" (1.b.γ), are both listed under the primary sense "to bear or carry from one place to another." Similarly, LSJ has 11 senses for φέρω and they only cover the active use of the verb. Among them, there are senses such as "endure, suffer" (LSJ III.1; L&N 25.176 or 90.64), although it can be argued that this sense denotes a State instead of an Activity (e.g. Rom 9:22; Heb 13:13), and "bear fruit, be fruitful" (LSJ V; L&N 23.199), which has little to do with physical movement (e.g. Matt 13:23; Jas 5:18).

[155] Such as the sense of "give one's vote" (LSJ IV.7), "pay something due or owing" (LSJ IV.5), both under the primary sense of "bring, fetch" (LSJ IV).

[156] Among the 138 instances, 82 are in narrative and 56 in speech/writing. The genre-specific aspect distributions are fairly similar to the overall number as well as the baseline. Both demonstrate a preference for the imperfective (46 to 33 for Narrative, 36 to 14 for Speech/Epistle).

It is a fairly standard distribution with non-significant z-scores.[157] Turning to the prefixed verbs of φέρω, two out of three compounds (εἰσφέρω and ἐκφέρω) have a fairly balanced distribution between the imperfective and the perfective with non-significant z-scores.[158] The imperfective/perfective ratio of προσφέρω, on the other hand, displays a mild skewing towards the perfective (16 to 22) but the significant scores for both aspects are under 3 (-0.9 and 2.68).

Regarding the inferential statistics, once again the analysis is plagued by the issue of sample size. The sample sizes for all three compound verbs are less than desirable for the kind of statistical analysis in this study.[159] In the case of φέρω, assuming that all three prepositional prefixes have telicizing effect,[160] what we could try instead is to add the data from all three compounds into one data set and compare it to the simplex. Although this

---

[157] The z-score of the imperfective Indicative of φέρω is 2.63, reflecting the fact that the use of the imperfective Indicative is close to a relatively high frequency (82 out of 138 of Indicative uses of the verb). It is, however, not alarmingly high and still within a reasonable range of the expected frequency. The z-score for the perfective is -0.45.

[158] The aspect distribution of εἰσφέρω is 5 to 6 (out of 12) with non-significant z-score (-0.45 and 1.02). Similarly, the distribution for ἐκφέρω is 9 to 9 (out of 21) with z-scores under 3 (-0.49 and 0.67 respectively).

[159] Among the three compounds, προσφέρω has the biggest data set with 39 instances of the Indicative (94 in total). Ἐκφέρω has 19 Indicative instances (51 total) and εἰσφέρω has 12 (44 total).

[160] It is reasonable to make this assumption since the data shows that, unlike the compounds of πορεύομαι, the compounds of φέρω display a slight skewing towards the perfective (except ἐκφέρω, which has equal instances of imperfective and perfective).

is not as desirable as a one-to-one (simplex vs. compound) analysis, by doing this we will

at least have a big enough sample to draw a general inference from this data set.

Combining the data of the compounds, the aspect distribution displays a slight preference

for the perfective (30 to 37) with non-significant z-scores.[161] The chi-square score,

however, is significant between the simplex and the combined data set.[162] This seems to

illustrate that for the case of φέρω, the allegedly atelic simplex and the telic compounds

relate to grammatical aspect differently, i.e. telic verbs seem to choose the perfective

more often. However, there is one more thing that we need to examine before coming to

this conclusion. We need to look at whether the non-movement uses of the simplex

contribute to the significant chi-square result.

To look at the effect of the non-movement senses to our analysis, first we need to

turn our attention to the TLE/non-TLE distinction of the simplex. For the data set of

φέρω, the subset of non-TLE instances (102) is almost three times the size of the TLE

subset (36). What is interesting here is that both sets of data display a preference for the

---

[161] Out of 72 total instances (Indicative), the z-scores for are -1.11 (imperfective) and 2.74 (perfective).

[162] The chi-square score is 6.36 between the ratio of the simplex (82 to 47) and the combined prefixed verbs (30 to 37).

imperfective.[163] The chi-square score of between the TLE and non-TLE instances is also

insignificant (0.69). If we add the TLE instances to the combined data set of the

compounds, the aspect distribution of this combined telic data set actually demonstrates

no skewing at all (49 to 51). Comparing these telic instances to the non-TLE instances of

the simplex results in a significant chi-square score (5.53). This seems to suggest that in a

telic environment, regardless of how telicity is formed in the linguistic environment i.e.

whether it is from a telicizing adverbial or telicizing prefix, the aspect distribution of

φέρω demonstrates a preference to the imperfective aspect in the atelic co-textual

environment and to the perfective aspect in TLE. However, if we compare the non-TLE

instances to individual compound verbs, it produces non-significant chi-square scores to

all combinations except those involving προσφέρω.[164] This implies that the preference to

the perfective in the προσφέρω set largely account for the skewness of the combined telic

set. This contradicts directly the observations I made from the analysis of ἄγω above,

---

[163] The non-TLE set has a 63 to 33 aspect ratio and the TLE 19 to 14; all frequencies have non-significant z-scores. However, the z-score for the TLE imperfective frequency is very close to the significant level (2.74).

[164] These combinations include εἰσφέρω (1.73), ἐκφέρω (1.59), εἰσφέρω and ἐκφέρω combined (2.83), TLE instances (0.69), TLE plus εἰσφέρω and ἐκφέρω (2.43). All of them have non-significant chi-square scores (under 3.84). On the other hand, all combinations that involve προσφέρω, including προσφέρω (6.22), combined compounds (7.00), TLE + προσφέρω (4.49), etc, have significant chi-square scores.

where the preposition πρός actually demonstrates an atelicizing effect (skewness towards

the imperfective).

Finally, quite a few instances of the non-TLE set are not used to describe physical

movement.[165] Almost 20% of the instances in the non-TLE set are non-movement and

most of them are in the imperfective (17 out of 28).[166] Although taking away the non-

movement instances brings down the skewing of the non-TLE set, it does not change the

result of most of the significance tests.[167]

5. ἀποστέλλω and ἐξαποστέλλω

To round out the analysis of the movement verb group, we turn our attention to

the last set of movement verbs, ἀποστέλλω and its compounds. Unlike the other movement

---

[165] For example, the sense of "bearing fruit" in Mark 4:8; John 12:24; 15:2, 4–5, 8, 16; Philo, *Moses* 1:189, 224; Herm. 51:3–4, 8; "producing," e.g. Philo, *Moses* 2:62, 258; "bringing charges," e.g. John 18:29; Acts 25:18; "bearing commandment," e.g. Heb 12:20; "bear with patience," e.g. Rom 9:22; "bearing with someone." e.g. Epictetus, *Diatr.* 3:21; "bearing pain/grievous," e.g. 2 Macc 7:20; 14:28; Epictetus, *Diatr.* 2:8; "bringing judgment," 2 Pet 2:11.

[166] Apart from the 14 imperfective, there are six perfective, one Perfect, and two Future instances in this set.

[167] Taking away the non-movement instances of the non-TLE changes the aspect ratio from (63 to 33) to (46 to 25). There are two non-movement instances in the TLE subset, taking them away gives a 17 to 14 ratio. The significance level of all the z-scores and chi-square scores have not changed except the chi-square score between the non-TLE instances and the set of all TLE instances plus προσφέρω, which change from significant (4.49) to borderline non-significant (3.48).

verbs mentioned above, ἀποστέλλω has a rather limited semantic range.[168] Although it is

not explicitly labeled as movement verb in some classifications, the lexicons are in

unison that the core meaning of this verb is linear movement, denoting the sense of

"send/send away," "depart," or "dispatch."[169] Greek scholars, on the other hand, have a

hard time agreeing on the actional character of the verb. As mentioned above, the actional

classification of the ἀποστέλλω verb group has long been a controversial issue. On the one

hand, scholars seem to agree that both ἀποστέλλω and ἐξαποστέλλω have the semantic

properties: [+telic] and [-durative].[170] On the other hand, this classification is contrary to

the convention in existing classifications, particularly in movement verbs, to identify the

simplex as an atelic (Activity) verb and the compound as a telic (Accomplishment) verb.

Semantically speaking, in the case of ἀποστέλλω, the key to the classification may not so

much be telicity but durativity, i.e. whether the action denoted should be considered as

---

[168] It only appears in one semantic domain in L&N, domain 15 (linear movement). Likewise in BDAG and LSJ, most of the descriptions under the entry are related to movement, meaning "send away/ out."

[169] Refer to the entries in LSJ, BDAG, and L&N. Fanning classifies ἐξαποστέλλω as a movement verb but labels the simplex as a verb denoting an instantaneous transition of the subject or object from one absolute state or location to another. See Fanning, *Verbal Aspect*, 151, 156–7.

[170] Fanning classifies the compound ἐξαποστέλλω as an Accomplishment movement verb but the simplex as a Climax verb (a kind of Achievement). Mateos also classifies ἀποστέλλω as an instantaneous verb (Achievement). See the discussion in 4.2.2 above. See also the analysis of the βάλλω verb group below.

instantaneous or not. As a result, this raises the question of whether the prepositional

prefix ἐκ in this case is a telicizing prefix, since the defining (semantic) factor of the

ἀποστέλλω/ἐξαποστέλλω distinction seems to be durativity, not telicity. In addition,

introducing another semantic feature to the discussion adds an undesirable level of

complexity to our analysis. Not only do we need to look at whether telicity is related to

perfectivity in this case, we also need to examine how durativity figures into the

interaction between these features. In what follows, I will first examine the data in my

corpus (ἀποστέλλω/ἐξαποστέλλω) to see if it shows a preferred correlation between telicity

and perfectivity and then move on to look at the effect of durativity on these features.

The data set of the ἀποστέλλω verb group seems to support the above claim by the

typologists since both the simplex and the compound have a rather strong preference for

the perfective. However, the simplex has an alarmingly high number of instances of

perfective Indicative compared to both the baseline and the imperfective.[171] Compared to

the simplex, the skewing towards the perfective in the aspect distribution of ἐξαποσέλλω

---

[171] It has a 20 to 123 aspect distribution out of 170 total occurrences. Obviously both aspect frequencies have a significance score way higher than 3, which demonstrates that these ratios are highly significant and very unlikely to be happening by chance.

seems less extreme.[172] The significant chi-square result (7.33) confirms this observation

and demonstrates that the variation in aspect usage between ἀποστέλλω and ἐξαποσέλλω is

significantly different. What's interesting here is that it is the simplex that is more heavily

skewed towards the perfective.[173] This implies that the prefix does not intensify the

meaning, or the telic component, of the verb, which is contrary to the common hypothesis

that telic verbs are more likely to choose the perfective aspect.[174] Once again, this raises

the question of the function that the prefix ἐκ serves in the compound, i.e. what meaning

the prefix ἐκ adds to the simplex.

We now turn to the analysis between TLE/non-TLE instances. Ninety instances

(out of 170) of ἀποστέλλω are used with TLE elements. The aspect distribution (12 to 66)

is very similar to the ratio of all instances (20 to 123). Likewise, the distribution of the

non-TLE uses also demonstrates a comparable ratio (8 to 56).[175] All of these frequencies

display significant z-scores, indicating that the high frequency of the perfective and the

---

[172] The aspect ratio of ἐξαποστέλλω is 12 to 24 (out of 37 instances); the z-score for the imperfective is insignificant (-1.92) but the perfective is significant (3.68).

[173] The Accomplishment verb (the compound) displays a ratio of 1 to 2 compared to a 1 to 6 ratio of ἀποστέλλω.

[174] In contrast to the observation made by Robertson mentioned earlier, see the discussion on page 265.

[175] There are also 12 instances of the Perfect/Pluperfect and four instances of the Future.

low frequency of the imperfective is significantly different from the baseline

measurement in both TLE and non-TLE instances. The chi-square score (0.24) between

the TLE and non-TLE instances shows that the two ratios are not significantly different.

Of the ninety TLE instances, a third are used with πρός (30 out of 90) and roughly another

third are used with εἰς (28). The aspect ratio of these instances are also, as expected,

overwhelmingly skewed to the perfective.[176] Therefore, our analysis of ἀποστέλλω shows

that with the simplex, the distribution of grammatical aspect is consistent in both a telic

and an atelic environment, i.e. heavily skewed towards the perfective, even more so than

the telic compound. Even if we combined all the telic instances (TLE and prefixed), the

chi-square score is still non-significant (2.03), meaning that both aspect distributions

display a similar tendency (skewness towards the perfective).[177] The lower aspect ratio of

the compound (12 to 24) compared with the ratio of simplex might suggest there are

ATLE elements in these instances. However, the relatively small sample size (37 in total

for ἐξαποστέλλω) makes it difficult to qualify for a meaningful statistical analysis.

---

[176] For the subset with εἰς PP, the aspect ratio is 2 to 24 (out of 28 instances). For πρός PP, the ratio is 2 to 25 (out of 30).

[177] The combined telic set has a aspect distribution of 24 to 90, which is roughly a ratio of 1 to 3.5. The ratio of the non-TLE simplex instances (8 to 56) is 1 to 7.

To recapitulate, the result of these statistical analyses demonstrates that, unlike most of the simplex movement verbs described above, the aspect distribution of ἀποστέλλω is significantly different from other simplex verbs. The extreme skewing towards the perfective cannot even be matched by most of the allegedly telic compounds. In fact, this strong preference for the perfective prompts Mateos to classify it as an instantaneous verb (similar to Vendler's Achievement, [+telic] and [-durative]). However, notice that two semantic features of an instantaneous verb may both contribute to the perfective correlation. Judging from our analysis at this point, there is little evidence to support the idea that a preferred correlation between telicity and perfectivity exists in Greek. In addition, we also need to ask what the relationship between durativity and telicity is. However, this is an area that is under ongoing research in the study of Koine Greek and is out of the scope of this study. Here I will only offer two educated guesses. The first is that, similar to telicity, the linguistic evaluation of durativity likely takes place at a higher rank of grammar (above the verb level). It is likely that multiple co-textual factors contribute to or affect the linguistic realizations of the feature. My second point is that intuitively, given our definitions of the grammatical aspects, probabilistically speaking it is less likely for a speaker/writer to describe an instantaneous (or very short) event as in progress. However, I have no empirical data to either verify or disprove this

hypothesis. What I am trying to say here is that the above analyses only demonstrate that the skewing to the perfective (of both the simplex and the compound) is very unlikely to happen by chance. How it is interpreted, however, depends on whether we can identify a one-to-one relationship between two features and limit the confounding effect of other factors (such as other semantic features at work). In this case, since we cannot eliminate or at least isolate the effect of the confounding factor (durativity), it is rather difficult, if not impossible, to draw any conclusion regarding the relationship between telicity and perfectivity in this case.

6. Summary and Combined Analysis

To conclude the analysis of the movement verbs, let me highlight a few things to recapitulate what we have learned so far from this group. First, the choice of grammatical aspect (imperfective and perfective) and the lexical semantic property of telicity (by way of the Activity/Accomplishment classification) do not demonstrate a consistent correlation. The interaction of the two factors displayed in these verbs does not show a systematic or predictable pattern. Variations in aspect distributions can be seen across almost every grouping we introduced to the analysis (different grammatical ranks, TLE vs. non-TLE, Prefixed + PP vs. non-TLE, etc.). A couple of examples will suffice here. First, the effect of the preposition πρός has been called into question in the analysis of

ἄγω, ἔρχοαμι and φέρω. I have shown that πρός has a positive effect on the perfective at the

verb level but a negative effect at the VP level.[178] Similarly, a rather high level of

inconsistency can be found when we look at the z-scores of simplex (TLE and non-TLE

distributions) of the five verbs. If there is a preferred correlation between telicity and

perfectivity in Koine Greek, one would expect the non-TLE subset to have a preference

for the imperfective and the TLE for the perfective. However, judging from our data, the

z-scores of the aspect frequencies suggest otherwise. For instance, the (significant) z-

scores of the non-TLE instances of ἔρχομαι suggest that the distribution of aspect is

skewed towards the perfective while the (non-signifcant) z-scores of the TLE subset of

both πορεύομαι and φέρω suggest that there is no preference for the perfective.[179] The

following table summarizes the z-scores and the tendency of the aspect distributions:[180]

---

[178] For ἔρχομαι, comparing the simplex with the prefixed verb (πρός) produces a significant result of a preference for the perfective. However, the result is different at the VP level; when comparing the non-TLE simplex with all the instances with πρός (prefix and phrasal construction), the aspect ratio displays a slight preference for the imperfective. Refer to the above discussion for more detail.

[179] The descriptive statistics show that φέρω (TLE instances) has a slight preference for the imperfective and a rather balanced distribution for πορεύομαι (TLE).

[180] Notice that a z-score greater than 3 indicates that the frequency is significantly different from the baseline and is unlikely to happen by chance. The significant z-scores in this table are italicized.

Table 4.6: Significant Scores and Distribution Tendencies (Simplex)

Movement Verb	TLE z-scores	Non-TLE z-scores	Tendency
ἄγω	Impf: -1.24 Perf: *3.99*	Impf: 2.34 Perf: -0.44	TLE: Perfective Non-TLE: Imperfective
ἔρχομαι	Impf: *-5.68* Perf: *8.17*	Impf: *-3.85* Perf: *3.74*	Both: Perfective
πορεύομαι	Impf: -1.01 Perf: 0.42	Impf: 1.77 Pef: -2.27	TLE: Balanced Non-TLE: Imperfective
φέρω[181]	Impf: 0.55 Perf: 0.38	Impf: 2.53 Perf: -0.29	Both: Imperfective
ἀποστέλλω	Impf: *-6.62* Perf: *7.41*	Impf: *-6.84* Perf: *6.36*	Both: Perfective

The numbers in this table show that there is little consistency in the aspect distribution of these movement verbs (simplex). The only consistent tendency among these verbs is between ἔρχομαι and ἀποστέλλω, where both verbs (simplex) display a strong tendency to choose the perfective. However, as mentioned above, these verbs should be considered as special cases given that even the non-TLE instances demonstrate a preference for the perfective.

Variations of aspect ratio can also be seen even within the same verb group. Take the aspect distributions of the ἄγω group for example. The tendencies of aspect

---

[181] The z-scores for φέρω are calculated by counting only the instances in the movement sense.

distribution are so diverse that we can find examples from both ends of the spectrum,

ranging from balanced distribution (ἀπάγω and ἐξάγω) to skewing towards one or another

aspect (εἰσάγω, συνάγω and ὑπάγω). Variations of aspect ratio can also be found even in

verbs that are supposed to be in the same verb class (Activity or Accomplishment). For

example, although three out of four Activity verbs (ἄγω, πορεύομαι and φέρω), according

to Fanning's classification, display a slight preference for the imperfective, ἔρχομαι

actually has a fairly strong preference for the perfective.[182] The same could be said

regarding verbs that are supposed to belong to the accomplishment class. While most of

the compound verbs demonstrate a preference for the perfective, there are quite a few

cases in which the allegedly accomplishment compounds display a skewing towards the

imperfective (the compounds of πορεύομαι and ὑπάγω, etc.). However, some of these

outliers have rather small sample size and should be used with caution to either prove or

disprove a hypothesis.

Secondly there is the issue of non-movement senses. Most of the movement

verbs examined above, particularly the simplex, can be used to denote action that is not

---

[182] It is interesting to note that the aspect ratio of ἄγω, when only counting the NT instances, is heavily skewed towards the perfective. This should come as a surprise to those scholars whose works are primarily based on NT data.

related to physical movement. In some instances the verb is used figuratively and not in the sense of an Activity or an Accomplishment.[183] In most cases these non-movement or figurative instances are few (10% or less) in the dataset and usually do not affect the outcome of the statistical analysis. However, there are cases (such as φέρω) where the figurative uses are rather prominent in the dataset. This calls into question whether the whole exercise of verb classification is a matter of distinguishing verbs or distinguishing particular sense(s) of a verb. In the analysis I have taken the non-movement instances into consideration in each case, i.e. checking whether they alter the outcome of the analysis. I suspect this is also why most works in verb classification emphasize the "normal usage" of a verb.[184] However, it is rather difficult to justify a "normal usage" approach when the other senses (figurative extensions or other related senses) take up one third of a sample data set. In such cases, the line between what is normal and not normal usage begins to blur. This reminds us of the philosophical root of Vendler's classification. It was meant to be a classification of action type instead of verb type. A more thorough analysis would involve going over all the senses of a word and analyzing them

---

[183] Such as the sense of "grieving" and "bearing a burden" in the case of ἄγω and the sense of celebration in some instances of ἄγω, etc.

[184] For example, it is often mentioned in Fanning. See Fanning, *Verbal Aspect*, 135, 144, 150, 156.

individually, including the task of determining the set of TLE elements that goes with

each of them, and looking into other factors such as genre and text type. However, it

takes a rather large sample to conduct such a thorough analysis and it is out of the scope

of the present study.

The third and final issue that I want to point out pertains to the size of the data set.

The analysis of quite a few compound verbs is handicapped by a small sample size. This

limitation keeps us from delving further into potentially interesting cases. This is

particularly apparent in the analyses of πορεύομαι and φέρω. In the case of πορεύομαι, both

of its compounds display overwhelming skewing towards the imperfective and the effect

of εἰς is actually different when it is used as a prefix and in a phrasal construction.[185]

However, the sample size is so small that it makes little sense to take any inferential

statistics seriously. Likewise, the analysis of the compounds of φέρω, all of which have a

fairly balanced aspect distribution, also suffers from a limited data sample. To

compensate for the limitation of small sample size, the effect of all prepositions is taken

together in the analysis of φέρω. To push this idea a step further, we can combine the data

from all five verbs to form a much bigger sample. Once again, we have to acknowledge

---

[185] The aspect distribution of εἰσπορεύομαι shows a preference for the imperfective but the phrasal
construction (πορεύομαι + εἰς PP) has a preference for the perfective.

that this is not as desirable as a one-to-one (simplex vs. compound) analysis since we can

have more control over the confounding factors for a one-to-one analysis. However, a

combined analysis allows us to draw a general inference from the data set.[186]

Looking at the data at the verb level, the combined aspect distribution of the

simplex is 422 to 575 (out of 1145) and the z-scores for both frequencies are very high

(-7.7 and 10.12). If there is a supposed correlation between telicity and perfectivity in

Greek, the number of perfective instances in this sample are much higher than one would

expect for a group of atelic Activity verbs. Obviously, the majority of these perfective

Indicative instances are from ἔρχομαι (196 to 306) and ἀποστέλλω (12 to 123). It is thus not

a coincidence that Greek scholars have a hard time identifying the actional character (and

---

[186] Given the size of her corpus (two works of Homer), Napoli also draws inferences from a rather small sample size and analyzes verbs in groups instead of one by one. However, the size of her sample in the case of movement verbs is comparable to this study. For example, one of her samples of 13 transitive movement verbs in total has roughly 400 instances of Indicative (counting only imperfective and perfective). Out of the 13 movement verbs, seven of them are simplex and six are compounds, most of the compounds are formed with ἄγω. See Napoli, *Homeric Greek*, 119, 218.

classification) of these two verbs.[187] If we take away the instances of ἀποστέλλω, which is quite obviously an outlier in terms of aspect distribution, the distribution is still slightly skewed towards the perfective and the z-scores are still above three,[188] and thus it is only when both ἔρχομαι and ἀποστέλλω are taken away from the data set that the distribution is back to the expected level (179 to 131 out of 333 instances).[189] However, the distribution is very similar to the baseline level, not favoring the imperfective as one would expect if telicity and perfectivity are correlated. Likewise, the aspect distributions of the combined compounds are overwhelmingly skewed towards the perfective (199 to 399 out of 662). However, similar to the combined simplex group, if we take away the instances of the two controversial verb groups (the compounds of ἔρχομαι and ἀποστέλλω), the combined

---

[187] See the discussion in section 4.2.2 above. Napoli's classification of ἔρχομαι (in Homeric Greek) seems the most interesting of all. Following the work of Levin and also Rappaport Havav, who argues that some movement verbs such as "to come," "to go," and "to arrive" are inherently telic (goal-directed movement) and others are inherently atelic. Napoli classifies Homeric Greek movement verbs into Activity and Accomplishment accordingly. However, she considers ἔρχομαι as a special case, where the imperfective stem is considered as atelic while the suppletive aorist ἦλθον is considered telic. Unfortunately, she does not provide any data, apart from a few examples, to support her case. See Napoli, *Homeric Greek*, 164–73. In our corpus, both ἔρχομαι and ἦλθον are used quite frequently and evenly between TLE and non-TLE. Ἔρχομαι is found in 108 TLE instances and 88 non-TLE instances. Although ἦλθον is used slightly more in both the TLE (190) and non-TLE (116), the fact that both are used in TLE presents a challenge to Napoli's classification.

[188] Both Fanning and Mateos do not consider ἀποστέλλω as an Activity verb. See 4.2.2 above.

[189] The z-scores of both aspects (2.02 and 1.32) are not significant. The non-movement uses of the verbs are excluded from this calculation.

aspect distribution is back to a level very similar to the baseline measurement (146 to 121 out of 282).[190] Given the similarity of the aspect ratios between the activity verbs (simplexes) and the accomplishment verbs (compounds), a low chi-square score (0.55) should not come as a surprise. These statistics demonstrate that, at the verb level, the movement verb group does not demonstrate a consistent pattern in the choice of aspect between the telic and atelic verbs even when we take away all the cases that do not fit the conventional actional profile.[191]

Turning to the VP level, we will once again look at the data of (i) all five verbs as a whole and (ii) the subset of ἄγω, πορεύομαι and φέρω. As expected, the aspect distribution of the combined TLE instances displays a strong preference for the perfective (194 to 338) with significant z-scores (-7.98, 10.21).[192] Taking away the instances of ἔρχομαι and ἀποστέλλω results in a significant drop of perfective instances and brings the ratio to a more balanced level (74 to 82) and the perfective frequency has a z-score

---

[190] If we include the instances of ἐξαποστέλλω in the combined data set, the z-score for the perfective will go slightly above the cutoff line (three standard deviations) but the z-score for the imperfective will still be under 3.

[191] Assuming there is a correlation relation between telicity and perfectivity, the conventional actional profile of an Activity verb is to have a higher percentage of imperfective forms than the perfective and vice versa for an Accomplishment verb.

[192] Out of 606 (TLE) and 538 (non-TLE) instances.

slightly higher than the significant level (3.43).[193] This indicates that the TLE instances of

this sub-group have a slight preference for the perfective. Adding this to the combined

compound set will yield a distribution of 218 to 204 (out of 467 instances). Even though

there are more imperfective instances than the perfective, compared to the baseline, the

frequency of the perfective is still considered to be higher than expected with a z-score

higher than three (3.52).[194] For the non-TLE instances, once again the distribution is

skewed to the perfective if we take all five verbs into consideration.[195] Taking away the

outliers, the number of perfective Indicatives drops drastically and the aspect distribution

skews towards the imperfective (132 to 64 out of 213 instances).[196] The chi-square score

(13.41) for the non-TLE instances and all telic instances (TLE and prefixed verbs) is

significant, indicating that the difference is less likely to happen by chance. This indicates

that in a rather controlled environment, i.e. eliminating the data that does not follow the

overall pattern, the non-TLE Activity group displays a preference for the imperfective

while the same group of verbs when used in a telic environment displays a slight

---

[193] The z-score of the imperfective (-1.15) is not significant.

[194] The z-score of the imperfective is once again not significant (-0.67).

[195] The ratio is 228 to 236 with the z-scores of -2.71 and 3.86 respectively.

[196] The z-score for the imperfective is significant at 4.02 while the perfective is not significant (-1.77).

preference for the perfective. Notice that even though our analysis of this grouping of movement verbs produces a result that seems to support the correlation hypothesis, the grouping (ἄγω, πορεύομαι, φέρω, and their compounds) is different from all existing classifications.[197] In fact, if we had not analyzed the verbs individually, we might get the impression that all these verbs (simplex and compound) have a consistent pattern across the board. However, as I have shown in the analysis of individual verbs above, the picture is far from consistent. If we look at each verb individually and combine the TLE instances with the instances of all compounds, only the ἄγω group produces a statistical result that is similar to the conventional actional profile.[198] In fact, I would argue that it is

---

[197] Notice that this grouping is different from the classification of Fanning and Mateos. Fanning classifies ἔρχομαι as Activity and the compounds as Accomplishment. Mateos classifies the two verbs the other way around. Looking at our data set, if we include either ἔρχομαι or εἰσέρχομαι in our analysis we would not be able to reproduce the same result. The result of our grouping (ἄγω, πορεύομαι, φέρω, and their compounds) seems to align with the result of Napoli. However, the degree of skewing displayed by our data is far from the extreme tendency as shown in Napoli (TLE: 94 to 120; non-TLE: 141 to 39). I suspect that the extreme skewing in her analysis is partly due to the fact that her data is drawn from only two works that are in the same genre. See Napoli, *Homeric Greek*, 119.

[198] Here is a breakdown of the data for the individual verbs (the telic designation represents the instances of all prefixed verbs and the TLE instances of the simplex):

Verb Group	Aspect Ratio	z-score	χ2 score
ἄγω	Non-TLE: 43 to 23 Telic: 132 to 140	Non-TLE: 2.34, -0.44 Telic:-1.52, *3.85*	*5.88*
πορεύομαι	Non-TLE: 26 to 8 Telic: 37 to 13	Non-TLE: 1.77, -2.27 Telic: 2.37, -2.14	0.07
φέρω	Non-TLE: 63 to 33 Telic: 49 to 51	Non-TLE: 2.74, -0.74 Telic: -0.59, 2.46	*7.23*

the rather extreme cases of εἰσάγω (14 to 39) and συνάγω (15 to 35) that drive up the ratio

of the ἄγω group,[199] and thus also affect the numbers of the above grouping (ἄγω,

πορεύομαι, φέρω, and their compounds). Therefore, according to existing classifications of

movement verbs, there is little evidence to support the hypothesis that telicity and

perfectivity have a preferred correlation. The next step in our analysis is to investigate the

aspect distribution of other telicizing prefixed verbs and see whether it displays the same

kind of tendency.

4.3.2.2 Telicizing Prefixed Verbs

1. βάλλω and ἐκβάλλω

As mentioned above, the classification of ἀποστέλλω and βάλλω is very similar to

existing classifications. Both verbs are listed under the same domain that denotes linear

movement (domain 15 in L&N).[200] Both verbs are considered as telic in existing

classifications and the compounds of both verbs (ἐξαποστέλλω and ἐκβάλλω) are classified

---

Note that although the chi-square score for the φέρω group is significant, the aspect ratios for both non-TLE instances and the telic instances are not considered as deviating from the norm (all z-scores are under three). For the ἄγω group, note that the only z-score that is significant is the telic perfective.

[199] The data of εἰσάγω here includes the instances of both the prefixed verb and the phrasal construction (ἄγω + εἰς PP). If we take away the instances of εἰσάγω and συνάγω, the aspect ratio of the telic instances is 106 to 65.

as accomplishment verbs.[201] Similar to ἀποστέλλω, βάλλω can be classified as a movement

verb, denoting action such as "throw, drive out, and place."[202] In our data set, apart from

the sense of physical movement, βάλλω is also used quite a few times in other figurative

senses such as building,[203] casting, and throwing in a figurative sense, as well as other

idiomatic usages.[204] One of these non-movement senses is particularly different from the

others. The senses listed under domain 13 in L&N: 13.14 "to cause a state or condition,"

and 13.45 "to cause a state to cease by force," involve a change-of-state property which

---

[200] Both verbs have the semantic range of linear movement (L&N domain 15). Βάλλω is also listed under domain 13 (be, become, exist, happen), "to cause," or "to remove;" domain 47 (activities involving liquids or masses), "to pour;" domain 57 (possess, transfer, exchange), "to deposit;" and 85 (existence in space), "to put, to place." A few idiomatic uses are listed under other domains. See note 200 below.

[201] Fanning classifies both βάλλω and ἀποστέλλω as Achievement verbs (Punctuals and Climaxes). This is different from his classifications of other movement verbs, which are normally under Activity or Accomplishment. Similarly, Mateos also classifies βάλλω as an instantaneous (Achievement) verb. See Fanning, *Verbal Aspect*, 157 and Mateos, *El Aspecto Verbal*, 85.

[202] See the first three senses listed under βάλλω in BDAG. LSJ considers the sense of "put, place" a looser sense. See LSJ βάλλω II.6. Fanning, however, does not specify βάλλω as a movement verb. Likewise, Mateos does not group it with other movement verbs and it is listed under the category "personal, possessive, or local connection/relation" instead. See Fanning, *Verbal Aspect*, 157 and Mateos, *El Aspecto Verbal*, 85.

[203] Literally, "fitting/throwing" stones in one place in the sense of building. See, for example, Herm. 81:3–4; 84:5.

[204] For example, "throw/cast someone on a bed of sickness/suffering," e.g. Rev. 2:22 (L&N 23.152 "causing someone to become very ill"); "casting physical or abstract object onto an imaginary scale," e.g. Epictetus, *Diatr.* 2.11; "fighting" or "throwing fists," e.g. Apollodorus, *Library* 2.8.4; "casting out feelings such as fear," e.g. 1 John 4:18; "to cause discord, to cause division," e.g. Luke. 12:49 (literally "to throw fire"); and "to begin to harvest a crop," e.g. Rev. 14:19 (literally, "to throw a sickle").

by definition is a telic process. This may help to explain why the existing classifications tend to identify βάλλω as a telic verb (Achievement).[205] However, ἀποστέλλω, on the other hand, does not have an intrinsic telic sense. The other common factor between ἀποστέλλω and βάλλω is that both have senses that can be interpreted as denoting an instantaneous process.[206] The sense of "wind suddenly rushing down" (βάλλω) and "sending off a messenger" (ἀποστέλλω) can be interpreted as instantaneous.[207] If this is the case, the aspect distribution of βάλλω should resemble that of ἀποστέλλω.

The descriptive statistics indicate that the aspect distribution of βάλλω is quite heavily skewed towards the perfective (27 to 59) while ἐκβάλλω has a fairly balanced ratio (29 to 32). The z-scores for the simplex (both imperfective and perfective) are significant (-4.54, 4.43) while the z-scores for the compound are not (-0.92, 1.92). This indicates that the preference for the perfective for the simplex is unlikely to happen by chance. The chi-square score (3.94) indicates that the difference between the two is borderline significant,

---

[205] However, of the five movement verbs examined above, ἔρχομαι also has a similar sense (L&N 13.50): "to come into a particular state or condition," "to become." If this is the common thread between the two verbs, then Mateos's classification is more consistent than Fanning's. Fanning considers ἔρχομαι as atelic and βάλλω as telic. Mateos considers both as telic.

[206] See, for example, the definition of βάλλω, which is "to cause a state or condition, *with focus upon the suddenness or force of the action,*" in L&N 13.14 (emphasis mine), or the sense "to drop" (15.122).

[207] See BDAG's βάλλω entry, the sixth subcategory and the first category of ἀποστέλλω.

meaning that the simplex is more likely to choose the perfective compared to the compound. This is different from ἀποστέλλω, where the simplex has an extreme skewing towards the perfective while the compound has a mild skewing.[208] It is also different from ἔρχομαι, where both the simplex and the compound have preference for the perfective but the compound has a more extreme tendency. However, a few things regarding the composition of the data set need to be addressed before moving on to the analysis of the VP level. In this sample, more than 60% of the instances are from narrative, and within this group are quite a few parallel passages from the synoptics.[209] Almost 30% of the dataset is from the book of Revelation and an overwhelmingly high number of instances within this group is used in the perfective (22 out of 27). This extreme preference for the perfective is not found in any other work in our corpus.[210] As a result, the aspect ratio of the narrative instances displays a strong preference for the perfective (16 to 38) and deviates from the narrative baseline (1 to 1). However, due to the size of the sample, the

---

[208] I have to add that both βάλλω and ἀποστέλλω (both simplex forms) have a preference to the perfective, which is different from the pattern of a common Activity (atelic) verb.

[209] For example, the speech of John the Baptist (Matt 3:10; Luke 3:9), old wine in new wine skins (Matt 9:17; Mark 2:22; Luke 5:37), settle matters quickly (Matt 5:25; Luke 12:58), the poor widow (Mark 12:41–4; Luke 21:3–4).

[210] This includes: Rev 8:5, 7–8; 12:4, 9, 10, 13, 15–16; 14:19; 18:21; 19:20; 20:3, 10, 14–15. Note that some verses have multiple instances.

z-score of the imperfective only demonstrates a borderline significant value (-2.95).[211]

Nevertheless, this should be taken into consideration at every stage of our analysis.

In the analysis at the VP level, there are a few TLE elements used with βάλλω

which denote a telic process. These include specific countable arguments and locative

and directive adverbials.[212] There are more TLE instances (61) in our sample of βάλλω

than non-TLE instances (43). The aspect distribution of both sets displays a skewing

towards the perfective with the TLE having a rather extreme ratio (11 to 40 out of 61).

The z-scores for the non-TLE set (14 to 22 out of 43) are not significant (-2.06, 2.09), but

are significant for the TLE set (-4.72, 4.84). The non-significant scores for the non-TLE

is probably due to the size of the sample. The chi-square score between the two sets is

3.09, meaning that the difference is not significant.[213] All these factors indicate that both

the TLE and non-TLE instances display a preference towards the perfective.[214] What is

---

[211] The z-score of the perfective is also very close to the significant value (2.60).

[212] A count noun in a collective sense (e.g. αὐτοὺς in Matt 13:42, 50, ὅλον τὸν βίον αὐτῆς in Mark 12:44) or a count noun with specific amount (λεπτὰ δύο in Mark 12:42). There are plenty of examples of locative or directive adverbials: εἰς φυλακὴν (Matt 18:30; Luke 12:58; Acts 16:23, 37; Epictetus, *Diatr.* 1.1, 12, 29; 3.7), εἰς ἄβυσσον (Rev 20:3).

[213] It is, however, rather close to the cut off point (3.84).

[214] Taking away the instances from the book of Revelation does lower the significant scores but not to a non-significant level.

interesting is that if we compare the aspect distribution of the TLE instances (simplex) and instances of the compound, which both presumably contain only telic instances, the chi-square score (8.16) is significant, indicating that the degree of skewing of the simplex TLE instances is higher than the compound. This confirms the earlier observation that the simplex is more likely to choose the perfective compared to the compound.[215] On the other hand, the chi-square score between the non-TLE instances and the compound is acutally non-significant (0.69), which indicates that the aspect distribution of the compound is similar to the atelic instances of the simplex.

In summary, although existing classifications seem to classify the βάλλω and ἀποστέλλω verb groups in the same classes,[216] our data shows that the aspect distributions between the two are rather different. Whereas ἀποστέλλω shows an extremely strong preference for the perfective across all possible groupings (TLE, non-TLE, genre, etc.), the aspect distribution of βάλλω shows a rather mild skewing towards the perfective in comparison.[217] Comparing the compounds, once again the aspect distribution of ἐκβάλλω

---

[215] Another point of interest is that while the compound is prefixed by the preposition ἐκ, the majority of the TLE instances are modified by the εἰς PP. The compound εἰσβάλλω is quite rare and only appears 13 times in the corpus. Similarly, there are only two instances in our sample where βάλλω is used with an ἐκ PP.

[216] The simplex in the Accomplishment class and the compound in Achievement class.

[217] It is between a 1 to 6 ratio (ἀποστέλλω) and 1 to 2 ratio (βάλλω).

shows less skewing towards the perfective than ἐξαποστέλλω. Although both the simplexes

have a preference for the perfective, the "perfective skewing" of βάλλω is in large part a

result of the instances in the book of Revelation. This indicates that even though scholars,

based on their intuition or some kind of semantic analysis, think that the two verbs should

be classified in a similar manner, the empirical evidence demonstrates that the behavior

of the verbs is actually quite independent. This further supports the argument that there is

little consistency when it comes to the choice of aspect even from verbs within the same

class.

2. Other telicizing prefixed verbs

Following Fanning, there are seven other telicizing prefixed verbs in the group

apart from the βάλλω/ἐκβάλλω cluster.[218] Unfortunately, we have very limited data for two

of these seven verbs (κατακρίνω and ἐκχέω). For ἐκχέω, there are only a few instances

outside of the 16 occurrences in the NT. The simplex χέω is not listed in any existing

classifications and cannot be found in our corpus.[219] In the case of κατακρίνω, the simplex

is either not classified (Fanning) as Activity or is considered as telic (Mateos) in existing

---

[218] See Fanning, *Verbal Aspect*, 151.

[219] It has 273 occurrences in the Perseus online database, more often found in works of the earlier period (Homer, Plato, Euripides).

classifications.[220] The data in our corpus, however, does not seem to support either a telic or an atelic classification. The aspect distribution of κρίνω is fairly similar to the baseline (74 to 38). The z-scores indicate that both frequencies do not deviate significantly from the expected frequencies.[221] The z-score for the perfective indicates that the use of perfective is relatively low compared to the baseline, which seems to favor a classification of Activity. However, since the score is not quite at the significant level, the result is not conclusive. The ideal scenario then is to compare the aspect distribution of κρίνω to a compound. However, the data set of the compound is extremely limited (2 to 8). Although the compound shows a strong preference for the perfective, the small sample size keeps us from getting any meaningful inferential statistics.[222] Finally, the analysis of κόπτω is similarly plagued by small sample size.[223] Therefore, although the

---

[220] Although Fanning comments that the simplex is *generally* a homogeneous Activity verb, the fact that he has most of the simplex forms of the prefixed verbs listed under Activity but not κρίνω leaves the reader without a definite answer. See Fanning, *Verbal Aspect*, 151. Mateos classifies it as a resultative verb (Accomplishment). See Mateos, *El Aspecto Verbal*, 97.

[221] The z-scores are 0.43 for the imperfective and -2.59 for the perfective.

[222] The data set has 30 total instances, 23 are Indicative instances.

[223] The simplex κόπτω has 35 total instances, with a 7 to 1 aspect distribution out of 12 Indicative instances. The datasets of the compounds are in a similar situation. For example, ἐκκόπτω has 26 instances with a 3 to 3 aspect distribution out of nine Indicative instances, ἀποκόπτω has 25 instances with a 2 to 10 aspect distribution (out of 14 Indicative instances), and finally, κατακόπτω has 11 total instances with a 1 to 3 aspect distribution. Combining all the instances of the compounds, there are 61 total instances with a 6 to 16 aspect distribution out of 30 Indicative instances.

aspect distributions of the simplex (7 to 1) and the combined compounds (6 to 16) seem

to confirm a preferred relationship between grammatical aspect and telicity, the

remarkably small sample size makes the statistical outcome extremely unreliable. What

makes the analysis of this verb even more complicated is the fact that the simplex and all

its compounds (ἀποκόπτω, ἐγκόπτω, ἐκκόπτω, and κατακόπτω) belong to the same semantic

domain (19 Physical Impact).[224] What makes this outcome even more unreliable is that

κόπτω in my corpus is rarely used in the sense of cutting (L&N 19.17). Half of the

Indicative instances are used in the sense of mourning, which further limits the usefulness

of our sample.[225] This leaves us with four telicizing prefixed verbs to work with (ἐσθίω,

πίνω, ἐργάζομαι and διώκω). None of these verbs, however, has a big enough sample size

for individual analysis. Therefore, acknowledging the limitation of analyzing verbs from

different semantic domains as a group, I am nevertheless going to treat these verbs as a

group.

---

[224] L&N domain 19.17 ("to cut"): κόπτω; 19.18 ("to cut down/to cut off"): ἐκκόπτω, ἀποκόπτω, and 19.21 ("to cut with sharp instrument"): κατακόπτω. Ἐκκόπτω also has a figurative extension of "to eliminate" (13.101) and the simplex can also be used to denote beating one's breast as an act of mourning (see BDAG second sense of κόπτω).

[225] Matt 11:17; 24:30; Luke 8:52; 23:37; Rev 1:7; 18:9.

The semantic ranges of the four verbs are somewhat narrower compared to some

of the verbs analyzed above. Both ἐσθίω and πίνω have a similar semantic profile

according to L&N. Both verbs have a primary sense of consumption with a figurative

extension and an idiomatic use.[226] According to the lexicons, διώκω also has a similarly

restricted semantic range, i.e. one primary sense, "to persecute" (L&N 39.45), plus a

figurative use and an idiomatic use. However, it also has a movement sense, "to run after/

to run" (15.158, 15.223).[227] Finally, for ἐργάζομαι, two related senses can be found in

BDAG, both associated with the general idea of working.[228]

The results of the descriptive statistics demonstrate that the aspect distribution of

the combined simplex is 107 to 66 (out of 211 Indicative instances). The z-scores for both

are not significant (0.72, -1.39), indicating that the ratio is comparable to the expected

distribution. The aspect distribution of the individual verb is fairly uniform compared to

---

[226] Both verbs are listed in domain 23 (Physiological Processes and States) of L&N. The primary sense of ἐσθίω is "to eat" or "to consume food" (23.1) and "to drink" for πίνω (23.34). L&N also lists a figurative extension (20.44), "to consume" or "to destroy" (e.g. Heb 10:27) for ἐσθίω and "to absorb" (14.35) for πίνω. Both verbs also have an idiomatic use: "to earn a living" (57.190) for ἐσθίω and "to suffer" (24.81) for πίνω. For the figurative extensions, see also the entries in BDAG.

[227] These senses are in the same domain (15 Linear Movement) as all of the movement verbs (primary sense) in the previous section. In Napoli's classification, διώκω is classified as a transitive movement verb. See Napoli, *Homeric Greek*, 217. For the figurative (68.66 "to strive toward") and idiomatic senses (89.56 "to strive toward a goal"), see L&N.

[228] BDAG has (1) "to engage in activity that involves effort, work" and (2) "to do or accomplish something through work." These are similar to entries in 42.41; 57.198; and 90.47 in L&N. Domain 13.9, "to cause to be, to make, to result in" can be found in BDAG 2.c and LSJ II.7.

the overall number.[229] The compound verbs that have a large enough dataset are all κατά compounds.[230] The aspect distribution of the combined compounds, on the other hand, displays a skewing towards the perfective (21 to 34). The preference for the perfective is proved significant with a z-score of 3.74, while the frequency of the imperfective is within the range of the baseline (-1.72). The aspect ratio of the individual verbs is fairly uniform except for κατεργάζομαι (13 to 7 out of 21 instances). Unlike the other three, which are all heavily skewed to the perfective, its aspect distribution is fairly similar to the baseline.[231] The number of total instances of the combined compounds (57), however,

---

[229] Here is the breakdown of each verb:

Verb	Aspect Distribution (Total Instances)	Z-scores
ἐσθίω	33 to 28 (71)	-0.29 (I), 0.63 (P)
πίνω	16 to 11 (32)	0.20 (I), -0.18 (P)
διώκω	20 to 11 (41)	0.07 (I), -1.21 (P)
ἐργάζομαι	38 to 16 (67)	1.39 (I), -2.05 (P)

Note that all individual z-scores are not significant. However, it might due to the size of the datasets.

[230] Κατεσθίω, καταπίνω, καταδιώκω, and κατεργάζομαι. Fanning also considers ἐκδιώκω an Accomplishment verb, but it only has two instances in our corpus, both non-Indicative.

[231] Here is the breakdown of the aspect distribution of each verb:

Verb	Aspect Distribution (Total Instances)	Z-scores
κατεσθίω	4 to 11 (16)	-1.86 (I), 2.74 (P)
καταπίνω	2 to 11 (13)	-2.37 (I), *3.66 (P)*
καταδιώκω	2 to 5 (7)	-1.04 (I), 1.96 (P)
κατεργάζομαι	13 to 7 (21)	1.25 (I), -0.24 (P)

There is one significant z-score in the above table. The aspect distribution of καταπίνω is so extreme that the perfective frequency is considered to be significantly deviated from the baseline.

is still rather small given that it includes the total instances of four verbs combined. This should be kept in mind when we interpret the outcome of the statistical analysis.

Turning our attention to the analysis at the VP level, we note that the TLE elements that are common to the four verbs are mainly countable and specific arguments.[232] A few observations should be made regarding the composition of this dataset. First, quite a few instances are found in more than one synoptic gospel.[233] Similar parallels can also be found in Paul's Damascus narratives in Acts (chs. 9, 22, and 26).[234] In terms of percentage, these parallel instances are relatively low. The corpus used in this study is large and diverse enough and should not be a concern; however, the studies that work with the NT alone might inflate a certain pattern that in turn might mislead the

---

[232] For ἐσθίω, see 1 Cor 11:29; Jas 5:3; Rev. 10:10; 17:16; Did. 11:9; Strabo, *Geogr.* 7.7.12; Apollodorus, *Library* 1.4.1. For πίνω, see Matt 20:23; 1 Cor 11:29; 3 Bar 4:6; 5:2. For διώκω (only in the sense of "to persecute") see John 15:20; Acts 9:4–5 (and parallels 22:7–8, 26:14–15); Gal 4:29; Rev 12:13. The sense of pursue is not treated as telic even when it has a countable and specific argument since the outcome of the action is not guaranteed. Finally for ἐργάζομαι, see Matt 26:10; Mark 14:6; 2 Cor 7:10; Jas 2:9; Herm. 29:1; 38:2; Pausanias, *Descr.* 1.33.3. This is based on Verkuyl's theory of [ADDTO] and [SQA]. See note 98 on page 231 for more detail.

[233] For example, David ate the consecrated bread in Matt 12:4//Mark 2:26//Luke 6:4; the feeding miracles in Matt 14:20//Mark 6:42//Luke 9:17 and Matt 15:37//Mark 8:8; the dialog with the Syrophoenician Woman in Matt 15:27//Mark 7:28; eating with unclean hands in Matt 15:2//Mark7:2; eating and drinking with sinners in Matt 9:11//Mark 2:16//Luke 5:30. There are eight instances of perfective and five instances of imperfective in this group.

[234] The use of διώκω in Acts 9:4–5//22:7–8//26:14–15. All of these instances are imperfective and considered as telic.

analyst. The second observation is that ἐσθίω is often found to be collocated with πίνω in a phrase which idiomatically denotes the act of dining or table fellowship in the NT.[235] Once again, this might drive up the frequency of a particular usage of the verbs if we only examined the data from the NT. Thirdly, almost half (31 out of 67) of the instances of ἐργάζομαι in our corpus are from one work (Shepherd of Hermas). When we compare the aspect distribution of this work with the rest, we discover that the use of ἐργάζομαι in the Shepherd (12 to 8) is relatively more balanced than the rest (26 to 9). Given that the sample size of both sets are rather small, all statistical measures yield insignificant results. This should be kept in mind when interpreting the statistical result of the overall numbers.

In the telicizing verb group, however, there are fewer TLE instances in the telicizing prefixed verbs in terms of percentage. Roughly 20% of out of 211 total instances are considered telic. These instances are spread uniformly among the four verbs. The aspect distribution of the TLE instances displays a pattern (22 to 13) comparable to the overall number, which is fairly similar to the baseline measurement (4 to 3 ratio). The non-significant z-scores of both frequencies confirm this observation

---

[235] See, for example, Luke 5:30, 33; 13:26; 17:8, 27–28; Acts 9:9; 1 Cor 9:13; 10:31.

(0.70 and -0.56). Likewise, the aspect distribution of the non-TLE instances also displays a fairly expected pattern (85 to 53) with non-significant z-scores (0.46 and -1.28).[236] As expected, the chi-square score (1.08) is not significant, indicating that the distributions of aspect are not significantly different in any way in these two groups. Although the sample size of the TLE is rather small, these statistics indicate that these verbs do not have a preference for the perfective when used to describe a telic situation. In fact, three out of four verbs have more imperfective instances than the perfective.[237]

Adding the TLE instances to the combined compound group yields a fairly balanced aspect distribution for the overall telic group (43 to 47 out of 98 instances).

---

[236] This set has a relatively high frequency of the Future. Out of 170 non-TLE instances, there are 30 (18%) instances of the Future. It is rare to have that many Future instances compared to the datasets we have examined so far. A third of these Future instances are from the Mandate and Parable sections of Herm. (particularly, chapters 33, 37, 46, 51, 54, 77), which concern the right behavior of the believers and consist of future referring statements and warnings. Here is the breakdown of the aspect distribution of each verb in non-TLE:

Verb	Aspect Distribution (Total Instances)	z-scores
ἐσθίω	31 to 22 (59)	0.66 (I), 0.23 (P)
πίνω	13 to 10 (26)	0.18 (I), 0.27 (P)
διώκω	11 to 8 (29)	-1.11 (I), -0.93 (P)
ἐργάζομαι	30 to 13 (56)	0.80 (I), -1.98 (P)

Even though the z-scores are not the most reliable due to small sample size, the trend is obvious here. The aspect distributions of three of the four verbs (ἐσθίω, πίνω and διώκω) are very much similar to the baseline measurement. For the case of ἐργάζομαι, even though the imperfective instances are double of the perfective, the z-score indicates that it is not significant.

[237] The following is the breakdown of the aspect distribution of each verb in TLE:

Although there are slightly more perfective instances than the imperfective, the z-scores

for both frequencies are actually not significant (-0.86 and 2.49). Recalling that the aspect

distribution of the combined compound group is skewed towards the perfective, this

means that adding the TLE instances actually changed the z-score from significant to not

significant, i.e. the degree of skewing is decreased. However, even though the aspect

distribution of the telic group is not considered to be deviated from the norm, the chi-

square score (4.22) shows that the aspect distribution between the non-TLE (simplex)

instances and the telic group is significantly different.[238] These results indicate that, at the

VP level, the telicizing prefixed verb group displays a preference for the perfective,

which is similar to our analysis at the verb level.

There are three things, however, that I need to point out to help us to put these

statistics into perspective. First, one has to remember that the degree of skewing in the

Verb	Aspect Distribution (Total Instances)
ἐσθίω	2 to 6 (12)
πίνω	3 to 1 (6)
διώκω	9 to 3 (12)
ἐργάζομαι	8 to 3 (11)

The z-scores are not calculated due to small sample size.

[238] If only one of the parallel instances mentioned above (Synoptics and Pauline) are counted. The z-scores of both groups (non-TLE: 82 to 48 and TLE + prefixed: 40 to 47) are still not significant. The chi-square score is changed from 4.22 to 6.19. Both are significant.

telic set is significantly decreased at the VP level compared to the verb level, indicating

that this preference for the perfective is not as strong in the VP level as in the verb level.

Secondly, the tendency to choose the perfective can only be found in instances of the

prefixed verbs, not the TLE simplex. This calls into question whether there are other

semantic factors at work (such as durativity) in the cases of the prefixed verbs. Finally,

we should also be reminded that this result, while comparable to the result of a particular

combination of the movement verb group (ἄγω, πορεύομαι, and φέρω), comes from a

combined study instead of one-to-one analysis. As I have reiterated repeatedly, the result

of a combined study is less reliable than a one-to-one study. In this case, the size of the

combined telic group (98 total instances) is still rather low (compared to the number of

instances of ἔρχομαι for example). To get a more complete picture, we need more data to

verify whether this result is repeatable. Therefore we turn to the third and final group of

verbs, four Accomplishment verbs chosen for control measurement.

4.3.2.3 Other Accomplishment Verbs

To round out the analysis, four telic verbs have been chosen to provide a measurement that can be used as a "scientific control."[239] As mentioned above, these verbs are selected from existing classifications that are considered as having the [+telic] property.[240] Both μανθάνω and κωλύω are classified as accomplishment verbs. Οἰκοδομέω is classified as Activity at the verb level but is often used to illustrate the effect of the argument on the evaluation of telicity at the VP level.[241] Ἀπόλλυμι is classified as Accomplishment by some and Achievement by others. As mentioned above (4.2.2), the point of contention regarding the classification of ἀπόλλυμι is whether it should be considered as durative or non-durative. The goal of this exercise is to investigate whether a consistent pattern of aspectual choices for the prototypical accomplishment verbs can be observed. Μανθάνω and κωλύω are used to show the aspect distribution of a typical accomplishment verb. Οἰκοδομέω can be used to demonstrate the effect of the argument on

---

[239] As mentioned above, all four verbs have a respectably sized dataset and a relatively narrow semantic range which allows us to perform a standalone analysis. See the discussion in 4.2.2 above.

[240] Μανθάνω and κωλύω are found in Fanning's classification. Οἰκοδομέω is found in both the classification of Mateos and Fanning and ἀπόλλυμι is found in Mateos and its old simplex in Napoli. See Fanning, *Verbal Aspect*, 151; Mateos, *El Aspecto Verbal*, 65; and Napoli, *Homeric Greek*, 216.

[241] See note 75 on page 286 above.

the composition of telicity, i.e. different patterns of aspect distributions between the verb level and the VP level. Finally, ἀπόλλυμι is a good control measurement for verbs, such as ἀποστέλλω and βάλλω, for which the durativity property is in dispute among typologists.[242]

If the hypothesis that telicity and perfectivity are related in Greek holds true, one would expect that the aspect distribution of all four verbs (οἰκοδομέω at the VP level) would all display a preference for the perfective. However, diversity can be found even between μανθάνω and κωλύω. While the aspect distribution of μανθάνω has a clear skewing towards the perfective (15 to 47), κωλύω displays a strong preference for the imperfective (42 to 17). The z-scores for μανθάνω are both significant (-4.57, 5.33), indicating that the imperfective frequency is significantly lower than the expected frequency and the perfective is significantly higher. The z-scores for κωλύω, on the other hand, are both under three standard deviations (0.88, -2.66), meaning that both frequencies are within the expected range of what is considered as normal.[243] The result of the chi-square test, as expected, is significant (26.79). This means that the difference in aspect distribution of the two verbs is significant.

---

[242] See the previous two sub-sections (4.3.2.1–4.3.2.2) for more detail.

[243] The z-score for the perfective (-2.66), however, is fairly close to 3, which indicates that it is quite low compared to the baseline but not quite to a significance level (3).

These statistics come as a surprise given that both verbs have a rather stable

semantic range and therefore the problem that we saw earlier with verbs that have

multiple senses (such as φέρω) is not an issue here.[244] Both verbs also have a similar

makeup in terms of instance distribution. The instances in the NT are actually only a

small part of the total occurrences.[245] Both are used slightly more often in the non-biblical

works (such as Epictetus's *Discourses* and Demosthenes's *Speeches*) but are found to be

quite balanced among different genres. This is quite puzzling considering that both verbs

are from the same class and share the same semantic profile [+dynamic +telic + durative].

Looking at individual instances of κωλύω, we note that not many of them are used with

ATLE elements. Quite a few instances in the NT can be considered to be used in an

ATLE mainly due to the presence of a non-countable or unspecified argument.[246]

However, this construction is not prominent in the sample. Although this is only an

examination of two accomplishment verbs, it seems to confirm some of our earlier

---

[244] Κωλύω has only one entry in L&N and three for μανθάνω (in two domains), all related to the act of learning or understanding. See L&N 27.12; 27.15; 32.14 for μανθάνω and 13.146 for κωλύω.

[245] Μανθάνω has 186 total instances (71 Indicative), with only 25 of them (9 Indicative) are from the NT. Likewise, κωλύω has 159 total instances (79 Indicative) and only 23 of them (8 Indicative) are from the NT.

[246] For example, Matt 19:14; Mark 9:38–9; 10:14; Luke 9:49–50; 11:52; 18:16. A few of them are synoptic parallels.

observations that the pattern between the telic verb class and aspect choice is not

consistent across the board (such as the case of the ἄγω verb group). In the next section I

will elaborate on the implication of this statistical results in terms of the hypotheses I set

out earlier.

Turning to the dataset of οἰκοδομέω, the overall number demonstrates balanced

distribution between the imperfective and the perfective (22 to 22 out of 58 instances).

Even though the aspect ratio is different from the baseline (a ratio of 4 to 3), the z-scores

for both frequencies are not significant (-1.57, 0.33). This indicates that at the verb level,

the aspect distribution of οἰκοδομέω is not significantly different from the baseline, even

though it has slightly more instances of the perfective than the norm. However, for an

atelic verb, one would expect a higher frequency of the imperfective compared to the

perfective if there is a preferred correlation between telicity and perfectivity. An aspect

ratio of 1 to 1 thus does not seem appropriate for οἰκοδομέω, which is considered an

activity verb by most. This seems to suggest that οἰκοδομέω does not fit the profile of an

activity verb after all. However, as I have mentioned above, this verb is included here to

demonstrate the effect of the argument on the evaluation of telicity at the VP level. When

we turn to an analysis at the VP level, we see a totally different story. There are slightly

more instances used in the TLE (32) than those that are not (26). The aspect distribution

of the TLE instances displays a fairly strong skewing towards the perfective (6 to 16) while the non-TLE group has a strong preference for the imperfective (16 to 6).[247] This seems to support the hypothesis that the telic group is more inclined to pair with the perfective and the atelic group with the Imperfect. However, this interpretation should be qualified by the following two observations. Out of the 26 non-TLE instances, quite a few of them are used in a figurative sense (L&N 74.15, "to edify, to build up"). Taking these instances out of the calculation further reduces the sample size and also brings the aspect distribution to a more balanced level (11 to 6 out of 20 instances). Given that all these instances are from a single work, it is safe to assume that this use is not prevalent in Koine Greek.[248] However, I also have to point out once again that verbs with multiple unrelated senses are a real issue in the present study. As I have shown in the above analysis, there are cases where the aspect distribution of a particular sense of a verb will change the overall number in the opposite direction (see the analysis of φέρω). The

---

[247] The statistical measures may not be the most reliable for this dataset given its small sample size. The z-scores for the TLE group are -3.34 for the imperfective and 1.67 for the perfective, indicating that the imperfective is significantly lower than expected. The z-score for the non-TLE set are not significant (1.36, -1.36). The chi-square score between the two distributions is significant at 9.09. However, chi-square test is even more sensitive to sample size.

[248] All of these instances are found in 1 Cor (8:1, 10; 10:23; 14:4, 17). Five of them are in the Present and one in the Future. In fact, even though LSJ also has a sub-entry for this use, all the references under that entry are from the NT.

second observation is that the TLE uses of some activity verbs (such as the group of telicizing verbs mentioned above) have demonstrated a different, or even opposite, trend in the aspect distribution compared to the distribution of their prefixed counterpart. Therefore, a (non-)significant difference between the TLE and non-TLE set does not necessary signify that a relationship can be established between telicity and perfectivity.

Finally, turning to the dataset of ἀπόλλυμι, the aspect distribution demonstrates a preference for the perfective (45 to 76).[249] The z-test confirms the skewing with a significant score for the imperfective (-5.56) and a borderline score for the perfective (2.53). For the sake of comparison, μανθάνω displays a stronger preference for the perfective (15 to 47, roughly a 1 to 3 ratio) then ἀπόλλυμι (a ratio of 1 to 1.7).[250] On the other hand, the distribution is significantly different from κωλύω, with a chi-square score of 18.36. However, as mentioned above, a better comparison to ἀπόλλυμι would be verbs such as ἔρχομαι, βάλλω and ἀποστέλλω, i.e. the verbs' classification in dispute among the

---

[249] Almost a third of the instances (86 out of 304, counting all Moods) of this dataset are from one work (Epictetus's *Diatr.*). However, the aspect distribution within that work is fairly balanced (24 to 25) and does not affect the overall number in any direction.

[250] The chi-square score is not significant at 3.14, but it is quite close to the cut off mark (3.84).

three +dynamic classes.[251] Similarly to these verbs, ἀπόλλυμι is classified as non-durative

(Achievement verb) in Fanning but durative in Mateos (Accomplishment verb).

Compared to the other Achievement verbs in Fanning's classification (βάλλω and

ἀποστέλλω), the aspect ratio of ἀπόλλυμι is closer to that of βάλλω (1 to 2.2) than ἀποστέλλω

(1 to 6).[252] In fact, the perfective preference of ἀποστέλλω is so extreme that only a few

verbs investigated in this study could match it (such as εἰσέρχομαι and ἐξέρχομαι). If we

push this to the extreme and limit the judging criterion to the skewing of the aspect

distribution alone, classifying ἀποστέλλω (and also εἰσέρχομαι and ἐξέρχομαι) as

achievement verbs seems to make more sense.[253] Likewise, if we simply look at aspect

ratio, both ἀπόλλυμι and βάλλω seem to better match the pattern of an accomplishment

---

[251] To summarize, βάλλω is classified as an Achievement verb ([+telic -durative]) in Fanning (Punctual class) and Mateos (Instantaneous verb) while the prefixed is considered as an Accomplishment in Fanning ([+telic +durative]). Likewise, ἀποστέλλω is also classified as an Achievement verb in Fanning (Climax class) and Mateos but the prefixed compounds are classified as Accomplishment in Fanning's classification. Finally, ἔρχομαι is considered an Activity verb [-telic +durative] in Fanning and Shain but an Accomplishment (Resultative verb) in Mateos. Napoli considers the present stem as atelic but the aorist stem as telic. The compounds (such as εἰσέρχομαι and ἐξέρχομαι) are considered as Accomplishment verbs [+telic +durative] in Fanning but Achievement [+telic -durative] in Mateos. See the discussion above for more detail.

[252] The chi-square score between ἀπόλλυμι and βάλλω is not significant (0.74). The chi-square score of the ἀπόλλυμι/ἀποστέλλω pair, on the other hand, is significant (19.01). This indicates that the distribution of ἀπόλλυμι is more similar to that of βάλλω than to ἀποστέλλω.

[253] In other words, Mateos's classification of these three verbs seems to make better sense with the aspect ratio than Fanning's.

verb than an achievement verb. In short, the case of ἀπόλλυμι highlights the fact that the aspect distribution of the accomplishment/achievement verbs considered in this study, regardless of their existing classification, is far from being consistent.

4.3.3 Null Hypotheses Revisited

In the beginning of this section, I set out two questions to be put to the test in our corpus analysis. Based on the aspect distribution of the telicizing prefixed verbs (and their corresponding atelic simplex), the first thing I wanted to determine was whether the usage pattern of either group deviated significantly from the baseline measurement. If either group showed significant deviation from the expected distribution, the follow up question was whether the telic group differed significantly from the atelic group as regards the use of the perfective form. In terms of statistical hypothesis testing, these questions could be formulated into two hypotheses.[254] The null hypothesis (H0) represents the situation that is assumed to be the case, i.e. the result happened by chance. The alternative hypothesis (H1) represents the result of the thesis under investigation. In this case, the two hypotheses can be formulated as follows:

---

[254] See O'Donnell, *Corpus Linguistics*, 229–32 for another example of hypothesis testing.

Table 4.7: The Null Hypothesis and the Alternative Hypothesis

H0:	Any differences in the aspect distribution between the telic and atelic verbs/VPs happened by chance
H1:	The difference in aspect distribution between the telic and atelic verbs/VPs is significantly different

The null hypothesis assumes that perfectivity and telicity are independent systems in

Greek and the alternative hypothesis assumes that systematic patterns can be found in

these two semantic factors.

In order to reject the null hypothesis and accept the alternative hypothesis, a few

trends in the datasets have to be proven to be statistically significant. First, the aspect

distribution of the telic verbs and the atelic verbs used in the TLE must display a

preference for the perfective. Second, the aspect distribution of the atelic verbs (used in

non-TLE) must either be comparable to the baseline measurement (4 to 3 ratio) or display

a preference for the imperfective. Finally, these patterns need to be shown from the

datasets with a high level of consistency. However, it is fairly obvious by now that the

aspect distributions of the verbs we examined in this study show trends which are far

from consistent. In fact, inconsistent tendencies can be found in almost every facet of our

analysis.

Let me recount some trends from the above analysis to illustrate this point. First,

from the above analysis we have learned that neither the simplex nor the compound verbs

show a systematic pattern between telicity, either at the verb level or the VP level, and

the perfective form. Variations in aspect distributions can be seen across almost every

grouping we introduced into the analysis. Although some prefixed verbs have clearly

demonstrated a preference for the perfective (such as μανθάνω and εἰσάγω), others have

shown a variety of patterns ranging from a fairly balanced distribution (such as ἀπάγω

and ἐξάγω) to a skewing towards the imperfective (such as κωλύω and ὑπάγω). The same

can also be said regarding the simplex verbs. There is little consistency between the

aspect distribution of the allegedly atelic simplex verbs. We found in our dataset different

aspectual preferences within the TLE and non-TLE groupings.[255]

Obviously one can turn the argument around and contend that those verbs that do

not demonstrate a preference for the perfective should not be considered as telic.

However, the result would be so inconsistent that we would find both telic AND atelic

---

[255] For example, while the non-TLE set of πορεύομαι and ἄγω shows a preference for the imperfective, the non-TLE instances of ἔρχομαι display a preference for the perfective. The TLE instances of both φέρω and πορεύομαι do not have a preference for the perfective while the aspect distribution of all other movement verbs demonstrate such a preference.

verbs from compounds of the same simplex.[256] We would also find that a particular prefix

demonstrates a telicizing effect at one level of analysis but not on another level.[257] In fact,

we would find the same verb classified in more than one class due to having multiple

senses in different semantic domains.[258] Finally, there are verbs that have an extreme

aspect distribution (such as ἀποστέλλω and ἐξέρχομαι) which cannot be assigned easily to

any preset actional profile. Therefore, based on our analysis, a more straight forward

conclusion is that telicity and perfectivity are not dependent in Koine Greek. In other

words, our analysis suggests that the alternative hypothesis should be rejected at this

stage of the analysis.

4.4 CONCLUSION

This chapter has provided a corpus analysis of Koine Greek, particularly in terms

of the choice of grammatical aspect and the semantic property of telicity. More than 40

---

[256] Compare ἀπάγω, συνάγω, and ὑπάγω (from ἄγω), as well as προσέρχομαι and εἰσέρχομαι (from ἔρχομαι) for example.

[257] Refer to the discussion of the preposition πρός in the analysis of the movement group above.

[258] For the problem of classifying verbs with multiple senses, see the discussion of φέρω and ἀπόλλυμι above. Some extreme cases, such as ποιέω and ζητέω, have multiple senses across different semantic domains (ποιέω has nine entries in L&N, while ζητέω has seven).

verbs were chosen for this analysis, the majority of them from a group that is labelled telicizing prefixed verbs. I have included a discussion of the telicizing prefixed verb (4.2.1) as well as a brief summary of the existing classifications (4.2.2). This section has been concluded with a list of criteria describing how verbs were selected for this study.

For the empirical analysis (4.3), I have first laid out a few general guidelines regarding the use of statistical analysis in language study, especially concerning two factors that affect the interpretation of statistics: sample size and logical reasoning (4.3.1). I have introduced two statistical measures for this study and demonstrated how they are to be interpreted. After a detailed analysis of each verb group (simplex and compounds), I have also included a brief discussion of four Accomplishment verbs that are used as a control measurement (4.3.2.3). I have demonstrated that at both the verb and VP levels, the choice of grammatical aspect and the telicity property of the lexical item do not show a consistent correlation. Different variations of aspect ratio are displayed in different verb groups, ranging from a fairly balanced distribution to skewing towards either one or another aspect (4.3.2.1–3). Therefore, I conclude this chapter by suggesting that the hypothesis of a preferred correlation between telicity and perfectivity in Koine Greek should be rejected according to empirical evidence presented in this study.

CHAPTER 5 TOWARDS AN INTERPRETIVE UNDERSTANDING OF *AKTIONSART*

5.1 INTRODUCTION

This chapter sums up the present study by offering a discussion of the

implications of corpus analysis for the study of Koine Greek and providing a way

forward to model Greek *Aktionsart*. In the first section, I will argue that, based on

empirical evidence presented in the last chapter, telicity should be treated as an

interpretive, not a grammatical, category. I will utilize the discussion from both parts of

this study to argue that telicity should be evaluated separately from grammatical

aspectual opposition in Greek (5.2). There are two parts to this section. I will first revisit

the discussion regarding the nature of the aspect-*Aktionsart* distinction, with a focus on

the alleged semantics-pragmatics distinction among works on Greek verbal aspect

(5.2.1). The goal of this section is to formulate precise definitions and terminologies to

describe the distinction. Building on previous studies, I will talk about a three-tier

framework for the evaluation of aspect and *Aktionsart* in Greek (5.2.2). In particular, I

will use the evaluation of telicity to illustrate how a three-tier framework is helpful in

clarifying the nature of the aspect-*Aktionsart* distinction in the study of Koine Greek. I

will also use them to illustrate the complexity in the compositional process of telicity. I

will utilize the results from the corpus analysis and contend that the evaluation of telicity

does not stop at the VP level but also relies on information from the wider literary context

(clause and sentence level and above). In doing so, I will evaluate certain claims made in

existing classifications and point out the pitfalls of a verb (lexical semantic) based

classification mechanism.

5.2 TELICITY AS AN INTERPRETIVE CATEGORY

5.2.1 The Semantic and Pragmatic Model of Telicity[1]

Within the body of works on the NT Greek verbal system, there is a prevalent

notion that a semantics-pragmatics distinction ought to be maintained when speaking of

the interaction between aspect and *Aktionsart*.[2] This distinction allegedly refers to two

---

[1] Part of this section is a revised version of a section in Pang, "Aspect and *Aktionsart* Once Again".

[2] See, for example, Decker, *Temporal Deixis*, 26–28; Campbell, *Verbal Aspect, the Indicative Mood*, 24–26; and Naselli, "Brief Introduction," 18–19.

different areas of linguistic investigation, both of which deal with the study of meaning

but which nevertheless have distinct objects of study.[3]

5.2.1.1 Semantics and Pragmatics

Speaking broadly, semantics is supposed to be responsible for compositionally

constructed sentence (literal) meaning and pragmatics is supposed to be focused on

utterance meaning.[4] This traditional understanding of the distinction is in part built on the

fact that the prevalent approach to semantics involves truth-conditionality. Semantics

concerns the meaning of lexical items in their immediate co-text; pragmatics focuses on

meanings in actual utterance contexts. It is also a distinction between conventional

meaning and use, such that "semantics studies the conventional meaning of linguistic

expressions, while pragmatics deals with how speakers use expressions in context."[5] In

---

[3] For a general overview of the two disciplines and their distinctions, see Cruse, *Meaning in Language*, 13–15 and Levinson, *Pragmatics*, 1–5. For a different view, see Lyons, *Semantics*, I.114–7, II.607–13. For the history and recent development of the distinction, see Bach, "The Semantics-Pragmatics Distinction," 66–84; Bianchi, "Semantics and Pragmatics: The Distinction Reloaded," 1–11; and Jaszczolt, "Semantics/Pragmatics Boundary Disputes," 2333–60.

[4] Cruse further distinguishes three division in the study of semantics: (1) lexical semantics, the study of the meaning of the words, (2) grammatical semantics, the study of meaning in clausal or sentential level, and (3) logical semantics, the relations between natural language and formal logical system. See Cruse, *Meaning in Language*, 13–15.

[5] Bianchi, "Semantics and Pragmatics: The Distinction Reloaded," 2. Linguists call this a traditional understanding of the distinction. See Ariel, *Pragmatics and Grammar*, 1–3.

more recent years, however, this traditional understanding of the semantics-pragmatics

distinction has been challenged by the semantic underdetermination view.[6] The boundary

between the two disciplines has become blurry and has remained a battlefield between

truth-conditional semanticists and pragmatists.[7]

One reason for the fierce debate is the question of how to define pragmatics as an

academic discipline; it is notoriously difficult to come up with a precise definition of

pragmatics.[8] In fact, until recently the domain of pragmatics has always been defined

negatively. It has been considered the "wastebasket of linguistics" by linguists and

philosophers.[9] It is a discipline that covers a wide range of topics (reference and deixis,

conversational implicature, ambiguity, presupposition, speech acts, conversational

structure, etc.),[10] and it is rather difficult to create a definition that would include all of

---

[6] Radical pragmaticists would go as far as saying that semantic analysis alone cannot fully recover utterance meaning and pragmatic enrichment is needed to complete the process. See Jaszczolt, "Semantics-Pragmatics Interface," 458–62.

[7] See, for example, Davis, "The Distinction between Pragmatics and Semantics," 685–93.

[8] Levinson's attempt to give fourteen definitions of pragmatics is a good example. See Levinson, *Pragmatics*, 5–34. Some semanticists do not think it is altogether necessary to distinguish between semantics and pragmatics. Lyons discusses what many consider to be topics of pragmatics (like deixis and speech-acts) in his second volume of *Semantics*. See Lyons, *Semantics*, II.570–786.

[9] See Mey, *Pragmatics: An Introduction*, 12–55. For a general summary of the issue of the semantics-pragmatics boundary, see Bianchi, "Semantics and Pragmatics: The Distinction Reloaded," 1–9. See also Lyons, *Introduction to Theoretical Linguistics*, 50–51.

[10] See Levinson, *Pragmatics*, 1–53 and Cruse, *Meaning in Language*, 313–94.

these topics (code/inference, truth-conditionality, sentence and utterance meaning,

context dependency, meaning and implicature, cancellability, etc.).[11] Given this level of

complexity in the matter of definition, it is not surprising that it is equally, if not more,

difficult to pinpoint the exact nature of the boundary between semantics and pragmatics.[12]

A recent trend has seen the discussion move in two extreme directions. At one end of the

spectrum is truth-conditional semantics, which insists on the traditional division of labor.

Its practitioners insist that the goal of semantics is to assign truth conditions to sentences

and they happily leave other indexicals and demonstratives to pragmatics. At the other

end of the spectrum is radical contextualism, which doubts the usefulness of truth-

conditional semantics and opts instead for a complete revamp of the discipline by means

of a truth-conditional pragmatics.[13] It is obviously out of the scope of this study to go into

detail about these developments or to attempt their resolution. Its purpose is simply to

demonstrate the complicated relationship that now exists between the two academic

---

[11] To illustrate, all linguists will agree that the phenomenon of deixis is a pragmatics category since it concerns the ways in which languages encode or grammaticalize features of the context of utterance. However, even though it passes the test of context-dependency, it fails to meet the non-truth-conditionality criteria. See Levinson, *Pragmatics*, 54 and Ariel, *Pragmatics and Grammar*, 1–3.

[12] For a code and inference distinction, see Ariel, *Pragmatics and Grammar*, 1–107.

[13] See Bianchi, "Semantics and Pragmatics: The Distinction Reloaded," 15.

disciplines, and hence to explain why the boundary between semantics and pragmatics is so badly blurred.

5.2.1.2 The Semantics-Pragmatics Distinction in Greek Studies

In the investigation of the Greek verbal system, it is Porter who first introduced the semantics-pragmatics distinction. He mentions it only in passing, when talking about how Koine Greek uses deictic indicators to grammaticalize tense.[14] The semantics-pragmatics distinction is also one of the many illustrations that he uses to describe the idea of levels of meaning in texts.[15] Yet apart from spare mentions in a few places, mainly concerning how aspectual meaning and temporal meaning are represented in Greek, Porter does not use the semantics-pragmatics distinction at all.[16] Likewise, Fanning maintains that aspect is a grammatical category, something that "distinguish[es] it from the closely related feature of 'procedural character' which is inherent in actual situations."[17] Under his analysis, aspect is semantically distinct from procedural

---

[14] See Porter, *Verbal Aspect*, 82–83.

[15] Porter utilizes Dahl's notion of primary/basic vs. secondary meaning, prototypical and secondary foci, and also meaning and implicature as described in Comrie. See Dahl, *Tense and Aspect Systems*, 3, 9–11 and Comrie, *Tense*, 18–26.

[16] See Porter, *Verbal Aspect*, 82–3, 97, 107.

[17] Fanning, *Verbal Aspect*, 49.

characteristics (or lexical aspect) and the aspectual oppositions (grammatical aspect) are "of a different semantic order from procedural oppositions."[18] In a manner similar to Carlota Smith, he argues for a two-level understanding of aspect and insists that aspect should be analyzed both at a definition level, which describes the basic aspectual oppositions, and at a function level, which describes the function of the aspects in combination with lexical and other co-textual features.[19] Although it may sound like Fanning is here articulating a distinction of meaning and use (utterance context) between aspect and *Aktionsart*, in fact he never uses the term pragmatics to describe either the inherent meaning of a verb or *Aktionsart*.[20]

Until this point in the discussion, the term pragmatics was generally used by scholars to describe either meaning expressed by deictic indicators or, in a broader sense,

---

[18] Fanning, *Verbal Aspect*, 50 and Fanning, "Greek Presents, Imperfects and Aorists," 158.

[19] See Fanning, *Verbal Aspect*, 420–21. He restates this idea in his later works, insisting that although aspect is central to the Greek verbal system, his main concern is rather how aspect interacts with other co-textual features which produce the full sense of the text. See Fanning, "Approaches to Verbal Aspect," 52–53 and Fanning, "Greek Presents, Imperfects and Aorists," 157–59.

[20] In fact, when recounting McCoard's work on the meaning of the Perfect, Fanning himself seems to agree with McCoard's distinction between linguistic context (the verb's lexical sense and adverbial features), and pragmatic inferences (the interpreter's knowledge of the real world and its affairs), but he does not tie this distinction to the discussion of aspect and *Aktionsart*. This seems to reflect a clear distinction between contextual factors (co-text/linguistic context) and pragmatic factors (context of utterance/inferences/implicature). However, given the lack of discussion regarding definitions of the relevant linguistic terms, it is rather difficult to be certain. See Fanning, *Verbal Aspect*, 107–20.

meaning in context (i.e. use). However, a trend is visible in works that have appeared

since the Porter/Fanning debate. These works have begun to extend the semantics-

pragmatics distinction so as to encompass the relationship between aspect and *Aktionsart*.

The semantics-pragmatics distinction is first tied to the discussion of verbal

aspect, although somewhat implicitly and with a broader meaning, in the volume that

documents the so-called Porter/Fanning debate.[21] In the introductory essay, when Carson

recounts Porter's argument for the function of the tense-forms, he summarizes his

observations by saying that the main focus of Porter's work is "on the semantics of the

morphology of the Greek verb, not on pragmatics."[22] Similar to Fanning's second level of

functional interpretation, here he uses pragmatics as an umbrella term to describe factors

that affect the interpretation of the verb used in particular contexts, mainly referring to

lexis, context, and deixis. However, it is not clear whether the term context here means

linguistic context (co-text) or utterance context. Probably, co-textual factors such as

adjunct and complement phrases are in view. Similar things are also said in Carson's

suggestion to Fanning that "his future work will have to demonstrate a greater grasp of

---

[21] See Porter and Carson, *Biblical Greek Language and Linguistics*, 19–82. The first part of this volume consists of a collection of works centering on the works of Porter and Fanning as presented at the Greek Language and Linguistics session in one SBL annual meetings (1990).

[22] Carson, "Porter/Fanning Debate," 24.

the fundamental distinction between semantics and pragmatics."[23] Carson's concern with

Fanning's work is that although he has devoted himself to explaining how verbs are used

in different co-textual environments (his pragmatics) and how to tie them to an

interpretation in *Aktionsart* terms, he has not spent enough time explaining the semantics

of the morphology of the tense-forms.[24]

Among the major monograph-length works in NT Greek aspect, Decker's was the

first to explicitly make a connection between the two distinctions.[25] He characterizes the

aspect-*Aktionsart* distinction as one between a grammatical category and a contextual

category. He claims that *Aktionsart* "is a pragmatic category based on the meaning of the

word (lexis) as it is used in a particular context."[26] Decker's notion of the aspectual

meaning of a verbal complex, i.e. a verb-phrase with all relevant co-textual factors, is

---

[23] Carson, "Porter/Fanning Debate," 25.

[24] Carson adopts the same broad meaning of semantics and pragmatics, claiming that in general semantics concerns meaning and pragmatics concerns the context. See Carson, *Exegetical Fallacies*, 72–73.

[25] Olsen's work is not included in this discussion since the semantics-pragmatics distinction in her model is not directly related to the aspect-*Aktionsart* distinction, but more to do with the oppositions within lexical aspect (within verb classes). She uses the semantics-pragmatics distinction to illustrate the asymmetry of semantic features in the discussion of her privative model of lexical aspect. She maintains that the distinction between grammatical aspect and *Aktionsart* (her lexical aspect) is semantically based. For an overview of Olsen's model, see the discussion in 1.4.3.2 and 2.3.2.

[26] Decker, *Temporal Deixis*, 26, 153–5.

similar to a compositional approach to a clause level aspectual meaning.[27] In fact, when

he further unpacks this notion, he explicitly ties the semantics-pragmatics distinction to a

distinction between meaning at the word level and meaning at the clause level.[28]

Therefore, when he categorizes the subcomponents within the verbal complex, he

considers both the utterance context (e.g. deixis) and *Aktionsart* as pragmatics. However,

Decker's *Aktionsart* is in fact the meaning of the verb class at the clause level, i.e. the

meaning of the lexis (by itself a matter of semantics) combined with its co-textual factors

as a construct, which is similar to what others would call lexical aspect.[29]

Following similar definitions, Campbell summarizes the state of research by

saying that "most of the major participants in recent discussion regard aspect as a

semantic category" and "*Aktionsart* is regarded as a pragmatic category."[30] Campbell

---

[27] See Decker, *Temporal Deixis*, 27–28.

[28] See Decker, *Temporal Deixis*, 176, n.120. Decker cites Binnick and Fleischman. Binnick points to Verkuyl for the compositional nature of the Vendlerian class but does not take it as a pragmatic category, and Fleischman distinguishes between lexical aspect (V) and *Aktionsart* (VP) in terms of the level of analysis (V vs. VP). See Binnick, *Time and the Verb*, 457–58 and Fleischman, *Tense and Narrativity*, 22.

[29] See, for example, the work of Olsen, who also adheres to a compositional approach to *Aktionsart*. See Olsen, *A Semantic and Pragmatic Model*, 14–17.

[30] Campbell, *Verbal Aspect, the Indicative Mood*, 24. Campbell cites Porter, Fanning, and Evans for support. The same is articulated in Carson, "Porter/Fanning Debate," 24–25 and more recently (citing Campbell) in Naselli, "Brief Introduction," 18–19.

refers to the works of Porter, Fanning, and Evans for this categorical distinction.[31]

However, although both Porter and Fanning do consider aspect a matter of semantics,

they do not categorize *Aktionsart* as pragmatics. In addition, Evans' comment on the

distinction rests on grammaticality, not on an explicit semantics-pragmatics contrast. It is

thus not unreasonable to deduce that Campbell is working with Decker's model.[32]

Basically, these two scholars understand semantics to be the study of meaning at the

word level and pragmatics to be the study of meaning at the clause level. Since verbal

aspect is universally considered to be a property of the verbal tense-form whereas

Aktionsart depends on various co-textual factors, under this understanding of the

semantics-pragmatics distinction, aspect and *Aktionsart* belong to different disciplines

within linguistics.[33] Thus, on one level, Campbell is right when he says the distinction

between semantics and pragmatics is of vital importance to the debate.[34] It is especially

---

[31] See Campbell, *Verbal Aspect, the Indicative Mood*, 24.

[32] Which is also similar to Carson's description mentioned above.

[33] In fact, Campbell expands his idea in his recent introductory work, breaking up the meaning components in a clause-level analysis. His framework for analyzing *Aktionsart* interaction is similar to Decker's concept of verbal complex. In this framework, the *Aktionsart* of a verb (probably the overall value of the verb-phrase) is the sum of the verbal aspect and the lexical aspect (verb class) and how they combine to interact with other co-textual factors. See, for example, his analysis on the present tense form *Aktionsart* in Campbell, *Basics of Verbal Aspect in Biblical Greek*, 63–68.

[34] See Campbell, *Verbal Aspect, the Indicative Mood*, 25.

important whenever deictic markers are a central topic of discussion. However, when it comes to the relationship between aspect and *Aktionsart*, the semantics-pragmatics distinction may not be the best way to characterize the interaction.

5.2.1.3 The Shortcomings of the Semantics-Pragmatics Distinction

There are several reasons not to equate the two distinctions. First, as mentioned above, the definitions and boundary of semantics and pragmatics as separate disciplines are notoriously difficult to determine. The two terms are pregnant with unwanted connotations and have a complicated and controversial history. New and less confused terminology is to be preferred. Second, not all scholars agree about the exact nature of *Aktionsart* or about how to characterize the relationship between lexical aspect (verb classes) and the traditional notion of different kinds of action (inceptive, iterative, etc.). A third reason for new and better terminology is that, for those scholars who categorize *Aktionsart* as pragmatic, the focal point of the category is not related to the traditional distinction between meaning and implicature but to a distinction between verb meaning and clause meaning. In fact, at the risk of overgeneralization, what most scholars are trying to do in their analysis of the Greek verbal system is to describe the same phenomenon. Most of them are trying to find a way to describe how the core aspectual

value, which is expressed by tense-form, should be interpreted when combined with lexical, co-textual and contextual factors (the one exception is Porter). It is without dispute that grammaticality should be put at the center of the discussion of the distinction between aspect and *Aktionsart*, so perhaps we should call it a distinction between grammatical and contextual. However, similar to pragmatics, the different meanings of the term context can also cause unnecessary confusion.[35] To further complicate matters, these factors are not all contextual (in the sense of extra-linguistic context or utterance context): the discussion of verb classes is a matter of lexical semantics and philosophy, and the interaction of particular classes of verb with co-textual/clausal elements is a matter of clausal semantics and syntax. It is thus not difficult to see that the key to the distinction between aspect and *Aktionsart* lies in how one understands the exact nature of *Aktionsart*. Specifically, at what level of linguistic description should we include *Aktionsart*? In other words, should we treat it as a philosophical or ontological category that models events and thus is an extra-linguistic discussion? Or should we treat it as a linguistic category or even a grammatical category and try to come up with a systematic

---

[35] I have avoided the term context, as much as it is possible, so far in this study. I have used the term "co-text" to refer to literary context and "context" to refer to utterance or extra-linguistic context. This use of the term context is borrowed from the Firthian school of linguistics, otherwise known as Systemic Functional Linguistics (SFL).

mechanism to classify verbs or VPs and realization rules that govern the interaction of these classes with lexical and co-textual factors? In the case of telicity, we see in the preceding chapters that the linguistic realization of telicity involves lexical semantics, clausal semantics, and syntactic analysis. The evaluation of telicity is an ontological exercise at its root since it involves the identification of pre-defined semantic properties in the inherent meaning of the verb, i.e. the action described by the verb alone. It is also a matter of lexical and clausal semantics since it involves an evaluation of the verb with its co-textual elements to determine (i) the sense of the verb used in a particular co-textual environment and, (ii) the telicity property of the VP. In my experience with the dataset in this study, quite often the evaluation of telicity requires information at the clausal/ sentential level or even the discourse level, i.e. wider literary contexts.[36] In fact, the compositional process of telicity in some cases, particularly in cases that involve class coercion or class shifting, is strongly dependent on pragmatic knowledge, i.e. knowledge of the world.[37] Therefore a holistic linguistic model is needed to model *Aktionsart*.

---

[36] My analysis above, however, is at the VP level. The reason is that it is extremely difficult, if not impossible, to analyze elements that lie outside of the VP/clausal level in a systematic manner.

[37] See, for example, Smith's interpretation of the habitual stative VP in Smith, *The Parameter of Aspect*, 51. See also de Swart, "Aspect Shift and Coercion," 360.

5.2.2 Positioning Telicity in a Multi-Tier Model

Recall from the discussion of the linguistic realizations of telicity above (3.3.2)

that I have mentioned a few recent works that break down the analysis of telicity (and

other related semantic factors) into various levels with respect to grammatical ranks. In

this section I will use these frameworks, comparing them to existing frameworks in

Greek *Aktionsart* study, to illustrate the level of complexity of the composition process of

telicity.

In a recent study of Greek and English, Horrocks and Stavrou suggest that the

overall aspectual reading of a VP can be broken down into three levels of semantic

contrast at different levels of linguistic analysis.[38] The delimitedness contrast is realized

at the morphological level by the perfective/imperfective markers. The terminative/non-

terminative contrast concerns the lexical meaning of a verb in its normal usage. Finally

on the uppermost tier, terminativity contributes to the interpretation and composition of

telicity, which denotes the character of a situation at the VP level.

---

[38] See Horrocks and Stavrou, "Actions and their Results," 302–13 and the discussion in section 3.3.3 above.

In a similar multi-tier interpretive framework, Declerck also distinguishes three

levels of linguistic representations of a situation.[39] Instead of having two levels of

contrast between the verb level and VP level, Declerck combines them into a single level

of semantic opposition (telicity) which is realized at the VP level. He also extends the

analysis to the level of clause/sentence. Similar to Horrocks and Stavrou, grammatical

aspect is at the lowest tier and is realized by verb morphology. The second tier is labeled

lexical/ontological aspect, which describes an abstract (non-actualized) type of situation

as represented by a VP.[40] At the highest level of realization, actualization aspect describes

how a telic/atelic VP (an abstract representation of a situation) is realized in a clause/

sentence, that is, how actional character interacts with other clausal/sentential

constituents and grammatical aspectual markers in a concrete actualization of the

situation, i.e. when used in an utterance.[41]

---

[39] See Declerck, "Distinguishing between the Aspectual Categories," 48–64 and the discussion in section 3.3.3 above.

[40] Declerck emphasizes in his work that the referent of a verb, VP or even predicate constituent, can be an abstract situation type, meaning that it does not refer to an actualizing situation, i.e. it is not used in an utterance. An abstract type of situation is a mental construct. See Declerck, "Distinguishing between the Aspectual Categories," 50–51.

[41] Declerck labels the semantic opposition realized at this level boundedness, which is "a distinction between two possible ways [i.e. bounded or unbounded] of representing or interpreting a particular instance of *actualization* of a situation" (Declerck, "Distinguishing between the Aspectual Categories," 57. Emphasis original).

In Greek studies, Fanning's work is the closest to what could be considered as a model for *Aktionsart*. However, it is rather difficult to delineate his overall linguistic framework due to terminological imprecision. For example, although he insists on a distinction between grammatical aspect and the (Vendlerian) procedural/actional character of the verb, his frequent uses of the phrase "aspectual function" or "overall meaning of the aspects"[42] to describe the overall interpretation of temporal meaning at a higher level of grammatical rank seems to suggest either (i) that the compositional elements (various co-textual factors and the inherent meaning of the verb) have an effect on the meaning of aspect or (ii) that these elements affect the composition of actional character such as telicity (his boundedness). In fact, in the discussion of the effect of co-textual elements on "aspectual function," he seems to suggest that a particular element has a preferred correlation with a certain aspect,[43] but in other instances he seems to suggest that the element has a certain effect on the actional character.[44] It is also unclear

---

[42] See, for example, Fanning, *Verbal Aspect*, 163, 194.

[43] For example, phrases denoting repetition and habituality seem to have a preference for the imperfective. While he goes on to talk about the interaction between this kind of element and different grammatical aspects, he does not, however, talk about whether or how they affect the actional character. See Fanning, *Verbal Aspect*, 173.

[44] For example, the effected object when used with an Activity verb produces a bounded (telic) interpretation, i.e., an Accomplishment VP. See Fanning, *Verbal Aspect*, 169. He does not talk about whether this element has any effect on the meaning of the aspect.

to me how different elements work together at different levels of linguistic analysis and at what level(s) the evaluation of the actional character takes place. On the other hand, when he talks about how these compositional elements are combined to form the aspectual function, he seems to treat the verb as the basic unit of analysis,[45] which is closer to the framework of Horrocks and Stavrou.

Looking at these multi-tier models, another question that we need to ask is how these levels are related to each other, and in particular, whether the analysis at the morphological level relates to the other levels. According to Horrocks and Stavrou, the terminative contrast is related to the telicity contrast, i.e. the analysis at the V and VP levels are related,[46] but is independent of the delimitedness contrast (morphological level). Similarly, Declerck's grammatical aspect and ontological aspect are independent categories evaluated at a different level of analysis (verb morphology and VP

---

[45] For example, according to Fanning, the ingressive Aorist is most common when a stative *verb* is used in the Aorist. The consummative Aorist is denoted by a *verb* of Accomplishment or Climax used in Aorist tense-form in a context implying difficulty. See Fanning, *Verbal Aspect*, 261–64.

[46] The terminative property (V level) requires the verbs that have this actional character to appear in Activity (atelic) VPs, and non-terminative verbs in Accomplishment (telic) VPs. He also distinguishes a kind of verb that is neutral in terminativity. However, their framework also allows non-terminative or neutral verbs to form a telic VP. See Horrocks and Stavrou, "Actions and their Results," 302–4, 310.

respectively). The interactions of these two categories and other non-VP co-textual elements are realized at the clause/sentence level (actualization aspect).

On the other hand, it is not clear in Fanning's work how and at what level actional character is realized. In fact, he admits at one point that "aspect is a category of language which intersects in usage with a bewildering variety of lexical, contextual, and discourse features."[47] What is clear is that Fanning distinguishes between meaning at a definition level and a function level. Assuming that it is realized at the sentence level, the *Aktionsart* description or the so-called overall aspectual function, is derived from the aspects in combination with the relevant compositional elements.[48] However, at what level this compositional process of actional character takes place is not apparent in his description. The above discussion can be summarized in the following table:

---

[47] Fanning, *Verbal Aspect*, 194.

[48] The distinction of meaning at a definition and function level is borrowed from Carl Bache. See Fanning, *Verbal Aspect*, 194–96. However, later in his work when he talks about the uses of each aspect, the description that he uses is similar to some kind of formulaic statement: Aspect + Verb type + context = *Aktionsart*. Fanning calls this final product the "function meaning" of the aspect, i.e., a classification of how the aspect is used in certain co-textual and contextual environments. However, these function meanings are always labelled with *Aktionsart* terminology. See, for example, his discussion of the so-called ingressive Aorist and the consummative Aorist in Fanning, *Verbal Aspect*, 261–69. The use of *Aktionsart* terminology (ingressive aorist, constative aorist, etc.) to describe the use of the aspect is rather puzzling to me since earlier in his work he himself warns against attaching "the combinatory sense to the aspect itself" (Fanning, *Verbal Aspect*, 194). Using these terms opens himself up to commit to the very problem he asked his readers to avoid.

Table 5.1: Recent Multi-Tier Frameworks

	Horrocks & Stavrou (2003)	Declerck (2007)	Fanning (1990)
Grammatical Aspect	Verb Morphology	Verb Morphology	Verb Morphology
Actional Character	Verb and VP	VP	Verb?
Combined Interpretation	N/A	Sentence (Actualization Aspect)	Sentence and above (Aspectual Function/ *Aktionsart*)

The one thing that is similar across all three frameworks is that actional character

and grammatical aspect are treated as independent categories. This is in agreement with

the result of my empirical analysis: The aspect distributions of the telic and atelic groups

do not display a consistent pattern or tendency across the data that I examined above.[49]

Looking at the frameworks that extend the analysis to the sentence level (Declerck and

Fanning), I am interested here in determining at what level the actional characters such as

telicity are evaluated and what elements are involved in the compositional process. Under

Declerck's framework, telicity is realized at the VP level. The relevant 'ingredients' at this

level include the inherent meaning of the verb and all other co-textual elements that can

---

[49] Refer to the summary in 4.3.3.

trigger a class shift/coercion.[50] What happens at the clause level is the interpretation of the interaction between the elements from the two levels (grammatical aspect and actional characters) as well as other elements from the wider literary context and extra-linguistic information, i.e. knowledge of the world, that is relevant to the temporal profile (his boundedness property) of the description. Unlike in Fanning's attempt, the actional character of the verb is not treated as a separate level of analysis from the other co-textual elements. This agrees with the result of my empirical analysis (4.3). The data have shown that the aspect distribution at the verb level is almost always different from the aspect distribution analyzed at the VP level (simplex instances in TLE).[51]

However, I am not sure if I can agree with any of the above frameworks when it comes to the list of relevant ingredients, such as telicity, that are related to the evaluation of actional character. Like Fanning, I consider that various kinds of *Aktionsarten* or descriptions that are similar to *Aktionsart* terminologies (such as iterative, consummative, ingressive, etc.) can be described at the sentence level. However, I disagree with Fanning

---

[50] Which is similar to the list of TLE and ATLE elements, for example, in section 3.3.2.

[51] That is, comparing the aspect ratio between all instances of the simplex and the TLE instances. For example, the aspect distribution of ἄγω at the verb level (all instances regardless of TLE/non-TLE uses) displays a preference for the imperfective. However, the aspect distribution of the TLE instances (ἄγε) shows a preference for the perfective aspect. See the discussion in section 4.3.2 above.

that predictable patterns of meaning can be easily described by way of systematic

formulaic statements, i.e. actional character (verb type) + co-textual elements + aspect =

Aktionsart. The problem I have with this framework is that it underestimates the

complexity of the composition of telicity at the upper tiers (VP level and up). I will give

two reasons to support this. First, as I have mentioned above in the theoretical discussion

(2.3.3 and 3.3.2), the classification of actional character involves a large number of co-

textual and contextual factors. Because of this, like some typologists, I consider a

discussion of verb types almost irrelevant in the discussion. As I have shown in the

empirical analysis (4.3.2), the effect of various co-textual factors cannot be downplayed

in the interpretation of the temporal profile of action. Not only are these elements

involved in the composition of telicity, they also play an important role in the

identification of the inherent meaning of a verb, i.e. which sense of the verb is realized in

a particular instance. This brings us back to the question of the basic unit of the

classification of actional character. Once again, the question here is: should the unit of

classification be the verb (Fanning), the VP (Declerck), or the specific sense of a verb?

This should not be a surprise since Vendler's taxonomy is not intended to be a linguistic

description of process types but an ontological description of kinds of action. This is the

question that needs to be addressed in further research of Greek *Aktionsart*.[52] Judging by

the result of the empirical analysis above, it seems to me more reasonable to assume that

the particular sense of a verb, which is determined by the verb and its surrounding co-

textual elements, should be the minimal unit of classification.[53]

The second point that I want to make regarding the predictable pattern of

Aktionsart concerns the formulaic statement put forward by Fanning.[54] We need to ask

whether it is legitimate to talk about the predictable pattern of meaning (*Aktionsart*) at the

sentence level given that the evaluation of telicity, which only forms one part of the

equation, involves so many elements from different grammatical ranks. What I am

challenging here is not that it is impossible to find a predictable pattern of meaning

between aspect, actional character, and a specific set of compositional characters. Instead,

I am questioning whether this pattern can be recognized in a systematic manner given

---

[52] For an evaluation of similar frameworks based on a SFL approach, see Pang, "*Aktionsart* as Epiphenomenon," 449–74.

[53] For those verbs with multiple senses such as ἄγω and φέρω, the sense of a verb that is realized in a particular instance can only be determined when the meaning of the verb is evaluated according to its surrounding co-textual and contextual (wider literary context and utterance context) factors. For example, in Philo, *Moses* 2:41, the sense of ἄγω in the phrase καὶ πανήγυρις ἄγεται κατὰ τὴν Φάρον νῆσον ("a festival celebrated in the island of Pharos") is determined as "spend, observe, or celebrate" (BDAG #4, L&N 67.79) due to the collocation of words such as πανήγυρις and the locative adverbial phrase.

[54] A similar mechanism can also be found in the recent works of Campbell. See Campbell, *Basics of Verbal Aspect in Biblical Greek* and Campbell, *Colossians and Philemon*.

that the number of elements involved are extremely numerous and inter-related. As I

mentioned above (3.3.2), the number of co-textual elements involved in the evaluation of

telicity are many,[55] and I have only listed those elements that are relevant at the level of

the VP. In practice, the description of an end point to the action may not be present in the

VP but in the wider literary context, i.e. at the clause level or above.[56] Using Mari Olsen's

durative, non-iterative semelfactives as an example, we can see that given a context with

enough co-textual hints, it is possible to construe a durative non-iterative semelfactive

event like a prolonged but single cough:

> John and I were eating together. I had turned to look at the dessert tray,
> when I heard a cough followed by a choking sound. I guess the waiter
> saved him with a quick-thinking Heimlich maneuver. He said John was
> coughing when he grabbed him around the middle.[57]

---

[55] Fanning himself lists a number of factors which include: inherent meaning of the verb (in terms of verb class/actional character), NP used as subject or object (whether it is singular or plural, effected or affected, specific or non-specific), adverbial phrases (durative, habitual, etc.), negatives, aspectual verbs, general or specific reference, tense relations, and other discourse features such as narrative sequence. See Fanning, *Verbal Aspect*, 126–96. Campbell tries to simplify the process but in fact involves as many factors. The formulaic statement for *Aktionsart* in Campbell involves three main categories. *Aktionsart* = Aspect + Lexeme + Context. Unfortunately, he does not provide any detail or theoretical discussion on issues such as how to determine the semantic/actional value of the lexeme, nor does he provide a clear definition of what he means by context. See Campbell, *Basics of Verbal Aspect in Biblical Greek*, 55–59.

[56] For example, in quite a few instances in my analysis of the movement verbs, the destination of the movement can only be found in the surrounding clauses instead of a locative adverbial.

[57] Olsen, *A Semantic and Pragmatic Model*, 47. Emphasis original.

It is not difficult to notice that Olsen's interpretation of this event as durative, non-iterative, and semelfactive depends upon much more than the individual verb, phrase, or even clause in question. As a result, it is doubtful that the evaluation of telicity alone can be completely systematized in a linguistic analysis. In fact, I have pointed out elsewhere that even linguists who work with a linguistic model which has more explanatory power and which is more empirically organized and comprehensive (SFL), express less confidence about obtaining clearcut results in modeling actional characters.[58] I suggest, therefore, that telicity should be treated as an interpretive category, meaning that the value cannot be systematized in a linguistic analysis but can only be determined in the process of interpretation, i.e. when all relevant factors are weighted by the interpreter.[59]

5.3 CONCLUSION

In the final chapter of this study, I have tried to bring together the theoretical discussion of telicity (ch 2–3) and the result of the empirical analysis (ch 4) to answer the

---

[58] I adopted the idea of epiphenominon from SFL to explain the complexity of the problem. See Pang, "*Aktionsart* as Epiphenomenon," 464–74.

[59] However, it does not mean that all patterns of meaning (telicity) are random and cannot be predicted. All I am saying is that these patterns involve so many factors that it is almost impossible to systematically describe them in a linguistic analysis.

question I put forward in the beginning of the study. As I stated there, the main research

question of this study is hermeneutical in nature. One of the goals of the present study is

to help the reader better understand the compositional process of *Aktionsart* in Koine

Greek. What I am trying to achieve in this study is to clarify whether or not *Aktionsart*

can be systematically formulated or predicted. I set out a few research questions in the

introduction of this work, asking whether Vendler's classes are useful in Greek aspect

studies, whether predictable patterns of meaning can be found by combining aspectual

markers and different class of verbs, and whether Vendler's scheme is the best way to

determine this pattern.

In the first two chapters, I argued that in order to examine the claim that

Aktionsart can be systematically predicted in Greek, the first question that we need to ask

is whether the elements that are claimed to be part of the formation of *Aktionsart* are

related to each other. I have chosen the semantic feature of telicity and the perfective

aspect as a test case. By examining the relationship between these two features in a

corpus analysis (chapters 3–4), I have concluded that, when evaluated at the VP level,

telicity and perfectivity are not related in any systematic manner in Koine Greek (4.3.3). I

further developed the implications of this in the present chapter; I argued that given the

number of co-textual and contextual elements involved in the compositional process of

telicity, it is doubtful that the evaluation of telicity can be systematized in a linguistic

analysis (5.2).

APPENDIX A: PROPOSED REPRESENTATIVE CORPUS OF HELLENISTIC GREEK

Text	Author	Genre	Language Formality	Length
Matthew	?Matthew	Biography	Non-literary	18363
Mark	?Mark	Biography	Vulgar/Non-literary	11312
Luke	?Luke	Biography	Non-literary/Literary	19495
John	?John	Biography	Vulgar/Non-literary	15671
Acts	?Luke	History	Non-literary/Literary	18470
Pauline Epistles	Paul/?Paul	Letter	Non-literary	32440
1 Peter	?Peter	Letter	Non-literary/literary	1685
2 Peter/Jude	?Peter/?Jude	Letter	Non-literary	1560
Johannine Epistles	John/Johannine Community	Letter	Vulgar/Non-literary	2605
Hebrews	?	Letter/Sermon	Non-literary/literary	4956
James	?James	Letter	Non-literary/literary	1745
Revelation	?John	Apocalypse	Vulgar	9856
2 Maccabees	?	History	Literary	11921
3 Maccabees	?	History	Non-literary	5174
4 Maccabees	?	Philosophy	Non-literary/Literary	8003
Wisdom of Solomon	?	Philosophy	Literary	7107
Letter of Aristeas	?	Letter/Philosophy	Non-literary	12943

Testament of Abraham	?	Apocalypse	Non-literary	10365
3 Baruch	?	Apocalypse	Non-literary	3132
Didache	?	Manual	Non-literary	2203
Shepherd of Hermas	?	Apocalypse	Non-literary	27638
Selected Letters[1]	Ignatius	Letter	Non-literary	7780
Life	Josephus	Biography	Literary	15835
Moses	Philo	Biography	Literary	31452
Geography: Books 6–7	Strabo	Geography/ History	Literary	25705
Greece: Book 1	Pausanias	History	Non-literary	25790
Discourses	Epictetus	Philosophy	Non-literary	76403
History: Book 1	Polybius	History	Atticistic	25672
Live of Solon	Plutarch	Biography	Atticistic	8745
Live of Nicias	Plutarch	Biography	Atticistic	9177
Library: Book 11	Diodorus Siculus	History	Non-literary/ Literary	23322
Library: Book 1–2	Apollodorus	Philosophy	Literary	16908
Speeches: 1–8	Demosthenes	Speeches	Literary	19657
Selected Papyri Letters	P.Mich V.1 (Zenon Archive)	Letter	Vulgar	8136
			Total:	

---

[1] Selected letters of Ignatius include: The letter to the Ephesians, the letter to the Magnesians, the letter to the Trallians, the letter to the Romans, the letter to the Philadelphians, the letter to the Smyraneans and the letter to Polycarp.

APPENDIX B: ASPECT/MOOD DISTRIBUTIONS AND STATISTICAL ANALYSES

1. Corpus Baseline Measurement (Aspect/Mood Distribution)

1.1 All Verbs (except εἰμί and φεμί)[2]

	Imperfective	Perfective	Stative	Total
Indicative	20178	15012	2,989	41,845
Subjunctive	1,390	3,459	26	4,876
Imperative	1,878	1,721	75	3,674
Optative	282	526	3	812
Infinitive	6,936	5,858	572	13,822
Participle	14,792	10,737	3,414	29,343
Total	45,456	37,313	7,079	94,372

1.2 Narrative Baseline

	Imperfective	Perfective	Stative	Total
Indicative	10,207	10200	1,404	23,584
Subjunctive	399	1,771	5	2,176
Imperative	761	1,001	21	1,783
Optative	133	233	0	367
Infinitive	3244	3,327	256	7,054
Participle	8,640	7070	2,029	17,953
Total	23,384	23,602	3,715	52,917

---

[2] Note that only the total is calculated by adding the instances of the three aspects AND the Future/ Future Perfect instances, which are not listed here.

1.3 Speech Baseline

	Imperfective	Perfective	Stative	Total
Indicative	9,971	4812	1,585	18,260
Subjunctive	991	1,688	21	2,701
Imperative	1,117	720	54	1,891
Optative	149	293	3	445
Infinitive	3692	2531	316	6,768
Participle	6,152	3667	1,385	11,390
Total	22,072	13,711	3,364	41,455

2. Movement Verbs

2.1 The ἄγω Group

2.1.1 Aspect/Mood Distribution and Significant Score for the Simplex (ἄγω)

ἄγω	Imperfective	Perfective	Stative	Total
Indicative	85	78	0	169
Subjunctive	19	4	0	23
Imperative	12	5	0	17
Optative	1	1	0	2
Infinitive	54	23	1	80
Participle	57	16	1	76
Total	228	127	2	367

ἄγω	Imperfective	perfective	stative
Indicative	0.54	2.79	-3.61
subjunctive	5.75	-5.66	-0.35
imperative	1.61	-1.44	-0.60
optative	0.45	-0.44	-0.09
infinitive	3.10	-2.47	-1.30
participle	4.29	-2.81	-2.81

2.1.2 Aspect/Mood Distribution and Significant Score for the Compounds

ἀπάγω	Imperfective	Perfective	Stative	Total
Indicative	11	15	1	28
Subjunctive	1	2	0	3
Imperative	2	1	0	3
Optative	0	1	0	1
Infinitive	3	6	0	10
Participle	15	9	0	24

402

| Total | 32 | 34 | 1 | 69 |

ἀπάγω	Imperfective	perfective	stative
Indicative	-0.95	1.95	-0.73
subjunctive	0.19	-0.16	-0.13
imperative	0.54	-0.47	-0.25
optative	-0.73	0.74	-0.06
infinitive	-1.28	1.13	-0.66
participle	1.18	0.09	-1.78

εἰσάγω	Imperfective	Perfective	Stative	Total
Indicative	4	17	0	22
Subjunctive	0	1	0	1
Imperative	0	1	0	1
Optative	0	0	0	0
Infinitive	3	3	0	6
Participle	6	4	3	13
Total	13	26	3	43

εἰσάγω	Imperfective	perfective	stative
Indicative	-2.82	4.05	-1.30
subjunctive	-0.63	0.64	-0.07
imperative	-1.02	1.07	-0.14
optative	0.00	0.00	0.00
infinitive	-0.01	0.38	-0.51
participle	-0.31	-0.44	1.29

ἐξάγω	Imperfective	Perfective	Stative	Total
Indicative	9	8	0	17
Subjunctive	1	0	0	1
Imperative	0	1	0	1

Optative	0	0	0	0
Infinitive	2	6	0	8
Participle	5	10	0	16
Total	17	25	0	43

ἐξάγω	Imperfective	perfective	stative
Indicative	0.39	0.96	-1.14
subjunctive	1.58	-1.56	-0.07
imperative	-1.02	1.07	-0.14
optative	0.00	0.00	0.00
infinitive	-1.42	1.87	-0.59
participle	-1.53	2.15	-1.45

προσάγω	Imperfective	Perfective	Stative	Total
Indicative	14	6	0	20
Subjunctive	4	4	0	8
Imperative	0	1	0	1
Optative	1	0	0	1
Infinitive	7	2	0	9
Participle	18	9	2	29
Total	44	22	2	68

προσάγω	Imperfective	perfective	stative
Indicative	1.95	-0.55	-1.24
subjunctive	1.35	-1.30	-0.21
imperative	-1.02	1.07	-0.14
optative	1.37	-1.36	-0.06
infinitive	1.66	-1.22	-0.62
participle	1.26	-0.62	-0.80

συνάγω	Imperfective	Perfective	Stative	Total

Indicative	15	35	0	56
Subjunctive	0	3	0	3
Imperative	0	5	0	5
Optative	0	0	0	0
Infinitive	3	11	0	14
Participle	13	36	8	57
Total	31	90	8	135

συνάγω	Imperfective	perfective	stative
Indicative	-3.21	4.15	-2.08
subjunctive	-1.09	1.11	-0.13
imperative	-2.29	2.38	-0.32
optative	0.00	0.00	0.00
infinitive	-2.15	2.74	-0.78
participle	-4.17	4.16	0.57

ὑπάγω	Imperfective	Perfective	Stative	Total
Indicative	39	3	0	42
Subjunctive	2	0	0	2
Imperative	50	0	0	50
Optative	0	0	0	0
Infinitive	9	0	0	9
Participle	8	5	1	14
Total	108	8	1	117

ὑπάγω	Imperfective	perfective	stative
Indicative	5.79	-3.88	-1.80
subjunctive	2.24	-2.21	-0.10
imperative	6.91	-6.64	-1.02
optative	0.00	0.00	0.00
infinitive	2.99	-2.57	-0.62

participle	0.50	-0.07	-0.52

ἐπάγω	Imperfective	Perfective	Stative	Total
Indicative	11	5	0	16
Subjunctive	0	0	0	0
Imperative	0	0	0	0
Optative	0	0	0	0
Infinitive	0	0	0	0
Participle	0	0	0	0
Total	11	5	0	0

ἐπάγω	Imperfective	perfective	stative
Indicative	1.64	-0.39	0.00
subjunctive	0.00	0.00	0.00
imperative	0.00	0.00	0.00
optative	0.00	0.00	0.00
infinitive	0.00	0.00	0.00
participle	0.00	0.00	0.00

2.1.3 Aspect Distribution (Indicative) and Significant Score for ἄγω (VP Level – TLE vs. Non-TLE)

	Imperfective	Perfective	Total
TLE	42	55	100
TLE (with εἰς)	10	22	33
TLE (not εἰς)	32	33	67
Non-TLE	43	23	69

z-score	Imperfective	perfective
TLE	-1.24	3.99
TLE (with εἰς)	-2.06	3.69

TLE (not εἰς)	-0.08	2.28
Non-TLE	2.34	-0.44

2.1.4 Chi-Square Scores for the ἄγω Group[3]

χ2–scores (Verb Level)	ἄγω (86 to 11)
ἀπάγω (11 to 15)	0.98
εἰσάγω (4 to 17)	8.46
ἐξάγω (9 to 8)	0.00
προσάγω (14 to 6)	2.14
συνάγω (13 to 36)	31.86
ὑπάγω (39 to 3)	22.56
ἐπάγω (11 to 5)	1.50
Combined Compounds (90 to 85)	0.06

χ2–scores (VP Level)	Non-TLE (43 to 23)
TLE (42 to 55)	7.52
TLE (εἰς) (10 to 22)	9.97
TLE (not εἰς) (32 to 33)	3.39
ἀπάγω (11 to 15)	4.01
εἰσάγω (4 to 17)	13.63
ἐξάγω (9 to 8)	0.86
προσάγω (14 to 6)	0.16
συνάγω (13 to 36)	16.79
ὑπάγω (39 to 3)	10.78

---

[3] The ratio in each cell follows the order of imperfective to perfective instances.

Combined Compounds (90 to 85)	3.65

2.2 The ἔρχομαι Group

2.2.1 Aspect/Mood Distribution and Significant Score for the Simplex (ἔρχομαι)

ἔρχομαι	Imperfective	Perfective	Stative	Total
Indicative	196	306	63	592
Subjunctive	5	90	0	95
Imperative	29	15	0	44
Optative	0	5	0	5
Infinitive	23	88	1	113
Participle	90	188	13	291
Total	343	692	77	1140

ἔρχομαι	Imperfective	perfective	stative
Indicative	-7.36	8.02	3.31
subjunctive	-5.02	5.11	-0.71
imperative	1.96	-1.70	-0.96
optative	-1.63	1.65	-0.14
infinitive	-6.34	7.64	-1.74
participle	-6.65	9.92	-3.81

2.1.2 Aspect/Mood Distribution and Significant Score for the Compounds

εἰσέρχομαι	Imperfective	Perfective	Stative	Total
Indicative	15	78	3	115
Subjunctive	2	34	0	36
Imperative	1	9	0	10
Optative	0	1	0	1
Infinitive	3	66	0	70
Participle	22	66	5	93
Total	43	254	8	325

εἰσέρχομαι	Imperfective	perfective	stative
Indicative	-7.55	7.14	-1.89
subjunctive	-3.05	3.11	-0.44
imperative	-2.60	2.73	-0.46
optative	-0.73	0.74	-0.06
infinitive	-7.68	8.79	-1.74
participle	-5.16	6.88	-1.88

ἐξέρχομαι	Imperfective	Perfective	Stative	Total
Indicative	12	127	7	155
Subjunctive	2	13	0	15
Imperative	0	5	0	5
Optative	0	0	0	0
Infinitive	1	22	0	23
Participle	10	76	6	92
Total	25	243	13	290

ἐξέρχομαι	Imperfective	perfective	stative
Indicative	-10.09	11.96	-1.27
subjunctive	-1.30	1.34	-0.28
imperative	-2.29	2.38	-0.32
optative	0.00	0.00	0.00
infinitive	-4.40	5.17	-1.00
participle	-7.59	9.16	-1.53

ἐπέρχομαι	Imperfective	Perfective	Stative	Total
Indicative	2	18	2	23
Subjunctive	0	8	0	8
Imperative	0	0	0	0
Optative	0	0	0	0

Infinitive	0	4	0	5
Participle	10	25	2	37
Total	12	55	4	73

ἐπέρχομαι	Imperfective	perfective	stative
Indicative	-3.79	4.24	0.29
subjunctive	-1.79	1.81	-0.21
imperative	0.00	0.00	0.00
optative	0.00	0.00	0.00
infinitive	-2.24	1.70	-0.46
participle	-2.84	3.91	-1.18

προσέρχομαι	Imperfective	Perfective	Stative	Total
Indicative	12	31	3	46
Subjunctive	4	3	0	7
Imperative	2	3	0	5
Optative	0	2	0	2
Infinitive	3	5	0	8
Participle	13	69	1	83
Total	34	113	4	151

προσέρχομαι	Imperfective	perfective	stative
Indicative	-3.43	3.85	-0.31
subjunctive	1.68	-1.64	-0.19
imperative	-0.50	0.59	-0.32
optative	-1.03	1.04	-0.09
infinitive	-0.72	1.15	-0.59
participle	-6.33	8.80	-2.96

2.2.3 Aspect Distribution (Indicative) and Significant Score for ἔρχομαι (VP Level)

	Imperfective	Perfective	Total
TLE	108	190	347
TLE (εἰς)	23	95	127
TLE (πρός)	37	29	77
TLE (ἐπί)	9	23	34
TLE (εἰς) + εἰσέρχομαι	38	173	242
TLE (πρός) + προσέρχομαι	49	60	123
TLE (ἐπί) + ἐπέρχομαι	11	41	57
Non-TLE	88	116	245

z-score	Imperfective	perfective
TLE	-5.68	8.17
TLE (εἰς)	-6.79	9.15
TLE (πρός)	-0.03	0.33
TLE (εἰς)	-2.54	3.86
TLE (εἰς) + εἰσέρχομαι	-10.12	11.55
TLE (πρός) + προσέρχομαι	-1.86	2.98
TLE (ἐπί) + ἐπέρχομαι	-4.37	5.68
Non-TLE	-3.85	3.74

2.2.4 Chi-Square Scores for the ἔρχομαι Group[4]

χ^2–scores (Verb Level)	ἔρχομαι (196 to 306)
εἰσέρχομαι (15 to 78)	18.00
ἐξέρχομαι (12 to 127)	45.93
ἐπέρχομαι (2 to 18)	6.89
προσέρχομαι (12 to 31)	2.08

---

[4] The ratio in each cell follows the order of imperfective to perfective instances.

Combined Compounds (41 to 254)	56.23

χ2–scores (VP Level)	ἔρχομαι Non-TLE (88 to 116)
TLE (108 to 190)	2.42
εἰσέρχομαι (15 to 78)	20.57
TLE (εἰς) (23 to 95)	18.50
TLE (εἰς) + εἰσέρχομαι (38 to 173)	30.97
προσέρχομαι (12 to 31)	3.42
TLE (πρός) (37 to 29)	3.35
TLE (πρός) + προσέρχομαι (49 to 60)	0.10
ἐπέρχομαι (2 to 18)	8.32
TLE (ἐπί) (9 to 23)	2.58
TLE (ἐπί) + ἐπέρχομαι (11 to 41)	8.44
ἐξέρχομαι (12 to 127)	47.65
Combined Compounds (41 to 254)	53.79
Combined Telic (Compounds + TLE) (149 to 444)	23.57

2.3 The πορεύομαι Group

2.3.1 Aspect/Mood Distribution and Significant Score for the Simplex (πορεύομαι)

	Imperfective	Perfective	Stative	Total
Indicative	39	21	0	76
Subjunctive	3	17	0	20
Imperative	33	7	0	40
Optative	0	0	0	0
Infinitive	30	6	0	37
Participle	40	41	1	82
Total	145	92	1	255

	Imperfective	Perfective	Stative
Indicative	0.54	-1.50	-2.42
subjunctive	-1.34	1.38	-0.33
imperative	3.97	-3.72	-0.91
optative	0.00	0.00	0.00
infinitive	3.76	-3.22	-1.26
participle	-0.30	2.52	-2.94

2.3.2 Aspect/Mood Distribution and Significant Score for the Compounds (πορεύομαι Group)

εἰσπορεύομαι	Imperfective	Perfective	Stative	Total
Indicative	9	0	0	9
Subjunctive	0	0	0	0
Imperative	0	0	0	0
Optative	0	0	0	0
Infinitive	0	0	0	0
Participle	12	0	0	12
Total	21	0	0	21

εἰσπορεύομαι	Imperfective	perfective	stative
Indicative	3.11	-2.24	-0.83
subjunctive	0.00	0.00	0.00
imperative	0.00	0.00	0.00
optative	0.00	0.00	0.00
infinitive	0.00	0.00	0.00
participle	3.44	-2.63	-1.26

ἐκπορεύομαι	Imperfective	Perfective	Stative	Total
Indicative	15	0	0	16
Subjunctive	0	1	0	1
Imperative	2	0	0	2
Optative	0	0	0	0
Infinitive	0	0	0	0
Participle	18	2	0	20
Total	35	3	0	39

ἐκπορεύομαι	Imperfective	perfective	stative
Indicative	3.64	-2.99	-1.11
subjunctive	-0.63	0.64	-0.07
imperative	1.38	-1.33	-0.20
optative	0.00	0.00	0.00
infinitive	0.00	0.00	0.00
participle	3.54	-2.47	-1.62

2.3.3 Aspect Distribution (Indicative) and Significant Score for πορεύομαι (VP Level)

	Imperfective	Perfective	Total
TLE	13	13	33
TLE (εἰς)	5	11	19

TLE (not εἰς)	8	2	14
TLE (εἰς) + εἰσπορεύομαι	14	11	28
TLE + Compounds	37	13	58
Non-TLE	26	8	42

z-score	Imperfective	perfective
TLE	-1.01	0.42
TLE (εἰς)	-1.91	2.00
TLE (not εἰς)	0.67	-1.68
TLE (εἰς) + εἰσπορεύομαι	0.19	0.38
TLE + Compounds	2.37	-2.14
Non-TLE	1.77	-2.27

2.3.4 Chi-Square Scores for the πορεύομαι Group

χ2–scores (Verb Level)	πορεύομαι (39 to 21)
εἰσπορεύομαι (9 to 0)	4.53
ἐκπορεύομαι (15 to 0)	7.29
Combined Compounds (24 to 0)	11.20

χ2–scores (VP Level)	ἔρχομαι Non-TLE (26 to 8)
TLE (13 to 13)	4.54
Combined Compounds (24 to 0)	6.55
Combined Telic (Compounds + TLE) (37 to 13)	0.07

2.4 The φέρω Group

2.4.1 Aspect/Mood Distribution and Significant Score for the Simplex (φέρω)

	Imperfective	Perfective	Stative	Total
Indicative	82	47	1	138
Subjunctive	11	3	0	14
Imperative	44	5	0	49
Optative	1	0	0	1
Infinitive	46	17	0	64
Participle	89	17	3	110
Total	273	89	4	376

	Imperfective	Perfective	Stative
Indicative	2.63	-0.45	-2.93
subjunctive	4.15	-4.08	-0.27
imperative	5.42	-5.14	-1.01
optative	1.37	-1.36	-0.06
infinitive	3.47	-2.56	-1.66
participle	6.40	-4.60	-2.91

2.4.2 Aspect/Mood Distribution and Significant Score for the Compounds (φέρω Group)

εἰσφέρω	Imperfective	Perfective	Stative	Total
Indicative	5	6	0	12
Subjunctive	1	4	0	5
Imperative	0	0	0	0
Optative	0	0	0	0
Infinitive	14	4	0	18
Participle	7	1	1	9
Total	27	15	1	44

εἰσφέρω	Imperfective	perfective	stative
Indicative	-0.45	1.02	-0.96
subjunctive	-0.42	0.45	-0.16
imperative	0.00	0.00	0.00
optative	0.00	0.00	0.00
infinitive	2.34	-1.73	-0.88
participle	1.64	-1.59	-0.05

ἐκφέρω	Imperfective	Perfective	Stative	Total
Indicative	9	9	1	21
Subjunctive	0	1	0	1
Imperative	0	1	0	1
Optative	0	0	0	0
Infinitive	10	9	0	19
Participle	4	6	1	11
Total	23	26	2	53

ἐκφέρω	Imperfective	perfective	stative
Indicative	-0.49	0.67	-0.42
subjunctive	-0.63	0.64	-0.07
imperative	-1.02	1.07	-0.14
optative	0.00	0.00	0.00
infinitive	0.21	0.44	-0.91
participle	-0.93	1.24	-0.26

προσφέρω	Imperfective	Perfective	Stative	Total
Indicative	16	22	1	39
Subjunctive	5	3	0	8
Imperative	1	3	0	4
Optative	0	0	0	0

Infinitive	12	7	0	20
Participle	16	6	1	23
Total	50	41	2	94

προσφέρω	Imperfective	perfective	stative
Indicative	-0.90	2.67	-1.11
subjunctive	2.13	-2.08	-0.21
imperative	-1.04	1.13	-0.29
optative	0.00	0.00	0.00
infinitive	0.88	-0.67	-0.93
participle	1.84	-1.05	-1.09

2.4.3 Aspect Distribution (Indicative) and Significant Score for φέρω (VP Level)

	Imperfective	Perfective	Total
TLE	19	14	36
TLE (Movement Only)	17	14	34
Combined Compounds	30	37	72
TLE + Compounds	47	51	106
Non-TLE	63	33	102
Non-TLE (Movement Only)	46	25	73

z-score	Imperfective	perfective
TLE	0.55	0.38
TLE (Movement Only)	0.21	0.64
Combined Compounds	-1.11	2.74
TLE + Compounds	-0.80	2.63
Non-TLE	2.74	-0.74
Non-TLE (Movement Only)	2.53	-0.29

2.4.4 Chi-Square Scores for the φέρω Group

χ2–scores (Verb Level)	φέρω (49 to 51)
εἰσφέρω (5 to 6)	0.05
ἐκφέρω (9 to 9)	0.01
προσφέρω (16 to 22)	0.53
Combined Compounds (30 to 37)	0.29

χ2–scores (VP Level)	φέρω Non-TLE (63 to 33)
TLE (19 to 14)	0.69
εἰσφέρω (5 to 6)	1.73
ἐκφέρω (9 to 9)	1.59
εἰσφέρω + ἐκφέρω (14 to 15)	2.83
εἰσφέρω + ἐκφέρω + TLE (33 to 29)	2.43
προσφέρω (16 to 22)	6.22
προσφέρω + εἰσφέρω (21 to 28)	6.90
προσφέρω + ἐκφέρω (25 to 31)	6.39
προσφέρω + TLE (35 to 36)	4.49
Combined Compounds (30 to 37)	7.00
Combined Telic (TLE + Compounds) (49 to 51)	5.53

χ2–scores (VP Level - Movement Only)	φέρω Non-TLE (Movement Only) (46 to 25)
TLE (Movement Only) (17 to 14)	0.90
εἰσφέρω (5 to 6)	1.51
ἐκφέρω (9 to 9)	1.33
εἰσφέρω + ἐκφέρω (14 to 15)	2.34
εἰσφέρω + ἐκφέρω + TLE (33 to 29)	1.83
προσφέρω (16 to 22)	5.19
προσφέρω + εἰσφέρω (21 to 28)	5.65
προσφέρω + ἐκφέρω (25 to 31)	5.15
προσφέρω + TLE (35 to 36)	3.48
Combined Compounds (28 to 37)	6.45
Combined Telic (TLE + Compounds) (47 to 51)	4.71

2.5 The ἀποστέλλω Group

2.5.1 Aspect/Mood Distribution and Significant Score for the Simplex (ἀποστέλλω)

	Imperfective	Perfective	Stative	Total
Indicative	20	123	20	170
Subjunctive	1	6	0	7
Imperative	1	7	0	8
Optative	0	0	0	0
Infinitive	5	10	1	16
Participle	3	34	21	58
Total	30	180	42	259

	Imperfective	Perfective	Stative
Indicative	-9.51	9.92	2.34
subjunctive	-0.83	0.86	-0.19
imperative	-2.18	2.30	-0.41
optative	0.00	0.00	0.00
infinitive	-1.51	1.63	0.42
participle	-6.89	3.48	5.84

2.5.2 Aspect/Mood Distribution and Significant Score for the Compounds (ἀποστέλλω Group)

ἐξαποστέλλω	Imperfective	Perfective	Stative	Total
Indicative	12	24	0	37
Subjunctive	0	0	0	0
Imperative	0	3	0	3
Optative	1	0	0	1
Infinitive	3	0	0	3
Participle	2	2	1	5
Total	18	29	1	49

ἐξαποστέλλω	Imperfective	perfective	stative
Indicative	-1.92	3.68	-1.69
subjunctive	0.00	0.00	0.00
imperative	-1.77	1.85	-0.25
optative	1.37	-1.36	-0.06
infinitive	1.73	-1.49	-0.36
participle	-0.47	0.16	0.58

2.5.3 Aspect Distribution (Indicative) and Significant Score for ἀποστέλλω (VP Level)

	Imperfective	Perfective	Total
TLE	12	66	90
TLE (εἰς)	2	24	28
TLE (πρός)	2	25	30
TLE (others)	8	17	32
Non-TLE	8	56	80

z-score	Imperfective	perfective
TLE	-6.62	7.41
TLE (εἰς)	-4.35	5.50
TLE (πρός)	-4.55	5.42
TLE (others)	-2.63	2.03
Non-TLE	-6.84	6.36

2.5.4 Chi-Square Scores for the ἀποστέλλω Group

χ2–scores (Verb Level)	ἀποστέλλω (20 to 123)
ἐξαποστέλλω (12 to 24)	7.33

χ2–scores (VP Level)	ἀποστέλλω Non-TLE (8 to 56)
TLE (12 to 66)	0.24
TLE (εἰς) (2 to 24)	0.43
TLE (πρός) (2 to 25)	0.50
TLE (others) (8 to 17)	4.64
ἐξαποστέλλω (12 to 24)	6.25
ἐξαποστέλλω + TLE (εἰς) (14 to 48)	2.22
Combined Telic (24 to 90)	2.03

3 Telicizing Prefixed Verbs

3.1 The βάλλω Group

3.1.1 Aspect/Mood Distribution and Significant Score for the Simplex (βάλλω)

	Imperfective	Perfective	Stative	Total
Indicative	27	59	6	104
Subjunctive	1	14	0	15
Imperative	0	15	0	15
Optative	0	0	0	0
Infinitive	6	17	0	23
Participle	26	27	9	62
Total	60	132	15	219

	Imperfective	Perfective	Stative
Indicative	-4.54	4.43	-0.54
subjunctive	-1.87	1.91	-0.28
imperative	-3.96	4.13	-0.56
optative	0.00	0.00	0.00
infinitive	-2.31	3.06	-1.00
participle	-1.33	1.14	0.71

3.1.2 Aspect/Mood Distribution and Significant Score for the Compounds (βάλλω Group)

ἐκβάλλω	Imperfective	Perfective	Stative	Total
Indicative	29	32	1	68
Subjunctive	0	13	0	13
Imperative	1	7	0	8
Optative	1	0	0	1
Infinitive	9	18	0	27
Participle	12	26	1	39
Total	52	96	2	156

ἐκβάλλω	Imperfective	perfective	stative
Indicative	-0.92	1.92	-1.82
subjunctive	-2.28	2.31	-0.26
imperative	-2.18	2.30	-0.41
optative	1.37	-1.36	-0.06
infinitive	-1.75	2.55	-1.08
participle	-2.45	3.90	-1.77

3.1.3 Aspect Distribution (Indicative) and Significant Score for βάλλω (VP Level)

	Imperfective	Perfective	Total
TLE	11	40	61
TLE (εἰς)	8	30	48
TLE (others)	3	9	13
Non-TLE	14	22	43

z-score	Imperfective	perfective
TLE	-4.72	4.84
TLE (εἰς)	-4.38	3.85
TLE (others)	-1.81	2.51
Non-TLE	-2.06	2.09

3.1.4 Chi-Square Scores for the βάλλω Group

χ2–scores (Verb Level)	βάλλω (27 to 59)
ἐκβάλλω (29 to 32)	3.94

χ2–scores (VP Level)	βάλλω TLE (11 to 40)

ἐκβάλλω (29 to 32)	8.16

χ2–scores (VP Level)	βάλλω Non-TLE (14 to 22)
TLE (11 to 40)	3.09
TLE (εἰς) (8 to 30)	2.82
TLE (others) (3 to 9)	0.76
ἐκβάλλω (29 to 32)	0.69
Combined Telic (40 to 72)	0.12

3.2 Other Telicizing Verbs

3.2.1 Aspect Distribution and z-scores

Simplex	Imperfective	Perfective	Total
ἐσθίω	33	28	71
πίνω	16	11	32
διώκω	20	11	41
ἐργάζομαι	38	16	67
Combined	107	66	211

z-score (Simplex)	Imperfective	perfective
ἐσθίω	-0.29	0.63
πίνω	0.20	-0.18
διώκω	0.07	-1.21
ἐργάζομαι	1.39	-2.05
Combined	0.72	-1.39

Compound	Imperfective	Perfective	Total
κατεσθίω	4	11	16
καταπίνω	2	11	13
καταδιώκω	2	5	7
κατεργάζομαι	13	7	21
Combined	21	34	57

z-score (Compound)	Imperfective	perfective
κατεσθίω	-1.86	2.74
καταπίνω	-2.37	3.66
καταδιώκω	-1.04	1.96
κατεργάζομαι	1.25	-0.24
Combined	-1.72	3.74

non-TLE	Imperfective	Perfective	Total
ἐσθίω	31	22	59
πίνω	13	10	26
διώκω	11	8	29
ἐργάζομαι	30	13	56
Combined	85	53	170

z-score (non-TLE)	Imperfective	perfective
ἐσθίω	0.66	0.23
πίνω	0.18	0.27
διώκω	-1.11	-0.93
ἐργάζομαι	0.80	-1.98
Combined	0.46	-1.28

TLE	Imperfective	Perfective	Total
ἐσθίω	2	6	12
πίνω	3	1	6
διώκω	9	3	12
ἐργάζομαι	8	3	11
Combined	22	13	41
Combined Telic (TLE + Compound)	43	47	98

z-score (TLE)	Imperfective	perfective
Combined	0.70	-0.56
Combined Telic (TLE + Compound)	-0.86	2.49

3.2.2 Chi-Square Scores for the Telicizing Verb Group (Combined)

χ2–scores (Verb Level)	Simplex (107 to 66)
Compound (21 to 34)	9.49

χ2–scores (VP Level)	TLE (22 to 13)
non-TLE (85 to 53)	1.08

χ2–scores (VP Level)	Combined Telic (TLE + Compound) (43 to 47)
non-TLE (85 to 53)	4.22

4.1 Other Accomplishment Verbs

4.1.1 Aspect Distribution and z-scores

	Imperfective	Perfective	Total
μανθάνω	15	47	71
κωλύω	42	17	79
οἰκοδομέω	22	22	58
ἀπόλλυμι	45	76	168

z-score	Imperfective	perfective
μανθάνω	-4.57	5.33
κωλύω	0.88	-2.66
οἰκοδομέω	-1.57	0.33
ἀπόλλυμι	-5.56	2.53

4.1.2 Chi-Square Scores for other Accomplishment Verbs

χ2–scores (Verb Level)	μανθάνω (15 to 47)
κωλύω (42 to 17)	26.79
οἰκοδομέω (22 to 22)	7.54
ἀπόλλυμι (45 to 76)	3.14

χ2–scores (Verb Level)	ἀπόλλυμι (45 to 76)
κωλύω (42 to 17)	18.36
οἰκοδομέω (22 to 22)	2.20
βάλλω (27 to 59)	0.74
ἀποστέλλω (20 to 123)	19.01

BIBLIOGRAPHY

Agrell, Sigurd. *Aspektänderung und Aktionsartbildung beim Polnischen Zeitworte: Ein Beitrag zum Studium der Indogermanischen Präverbia und ihrer Bedeutungsfunktionen (Lunds Universiteits Årsskrift, 4.2)*. Lund: H. Ohlsson, 1908.

Allen, J. P. "The Force of Prepositions in Compound Verbs in the Perfect Tense in John's Gospel and Epistles." Ph.D. diss., Southern Baptist Theological Seminary, 1940.

Allen, Robert L. *The Verb System of Present-Day American English*. Janua linguarum. Series practica, 24. The Hague: Mouton, 1966.

Allison, Dale C. *Testament of Abraham*. Commentaries on Early Jewish Literature. Berlin: Walter de Gruyter, 2003.

Alviar, J. José. "Recent Advances in Computational Linguistics and their Application to Biblical Studies." *New Testament Studies* 54, no. 1 (2008): 139–59.

Ariel, Mira. *Pragmatics and Grammar*. Cambridge Textbooks in Linguistics. Cambridge: Cambridge University Press, 2008.

Aune, D.E. "The Problem of the Genre of the Gospels: A Critique of C.H. Talbert's *What is a Gospel?*" In *Gospel Perspectivs II: Studies of History and Tradition in the Four Gospels*, edited by R.T. France and D. Wenham, 9–60. Sheffield: JSOT Press, 1981.

Aune, David Edward. *Revelation 1–5*. Word Biblical Commentary. Dallas, TX: Word Books, 1997.

Bach, Emmon. "On Time, Tense, and Aspect: An Essay in English Metaphysics." In *Radical Pragmatics*, edited by Peter Cole, 63–81. New York: Academic Press, 1981.

———. "The Algebra of Events." *Linguistics and Philosophy* 9 (1986): 5–16.

Bach, Kent. "The Semantics-Pragmatics Distinction: What it is and Why it Matters." In *The Semantics/Pragmatics Interface from Different Points of View*, edited by Ken Turner, 66–84. Oxford: Elsevier, 1999.

Bache, Carl. "Aspect and *Aktionsart*: Towards a Semantic Distinction." *Journal of Linguistics* 18, no. 1 (1982): 57–72.

Bailyn, John F. *The Syntax of Russian*. Cambridge: Cambridge University Press, 2012.

Barlow, Michael. "Corpus Linguistics and Theoretical Linguistics." *International Journal of Corpus Linguistics* 16, no. 1 (2011): 3–44.

Barwick, Karl. *Probleme der stoischen Sprachlehre und Rhetorik*. Abhandlungen der Sächsischen Akademie der Wissenschaften zu Leipzig. Philologisch-historische Klasse. Berlin: Akademie-Verlag, 1957.

Bary, Corien. "The Perfective/Imperfective Distinction: Coercion or Aspectual Operators?" In *Cross-Linguistic Semantics of Tense, Aspect and Modality*, edited by Lotte Hogeweg et al., 33–53. Amsterdam: John Benjamins, 2009.

Bauckham, Richard. *The Theology of the Book of Revelation*. New Testament Theology. Cambridge: Cambridge University Press, 1993.

Bennett, Michael, and Barbara H. Partee. "Toward the Logic of Tense and Aspect in English." In *Compositionality in Formal Semantics: Selected Papers by Barbara H. Partee*, edited by Barbara H. Partee, 59–109. Malden, MA: Blackwell, 2004.

Berthelot, Katell. "Early Jewish Literature Written in Greek." In *The Eerdmans Dictionary of Early Judaism*, edited by John J. Collins and Daniel C. Harlow, 181–99. Grand Rapids, MI: Eerdmans, 2010.

Bertinetto, Pier Marco, and Denis Delfitto. "Aspect vs. Actionality: Some Reasons for Keeping them Apart." In *Tense and Aspect in the Language of Europe*, edited by Östen Dahl, 403–39. Berlin: Mouton de Gruyter, 2000.

Bianchi, Claudia. "Semantics and Pragmatics: The Distinction Reloaded." In *The Semantics/Pragmatics Distinction*, edited by Claudia Bianchi, Stanford, CA: CSLI Pub, 2004.

Biber, Douglas, et al. *Corpus Linguistics: Investigating Language Structure and Use*. Cambridge Approaches to Linguistics. Cambridge: Cambridge University Press. 1998.

Binnick, Robert I. *Time and the Verb: A Guide to Tense and Aspect*. Oxford: Oxford University Press, 1991.

————. "Temporality and Aspectuality." In *Language Typology and Language Universals*, edited by Martin Haspelmath et al., 557–67. Berlin: Walter de Gruyter, 2001.

————. "Aspect and Aspectuality." In *The Handbook of English Linguistics*, edited by B. Aarts and A. McMahon, 244–68. Malden, MA: Blackwell Pub, 2006.

————. ed. *The Oxford Handbook of Tense and Aspect*. Oxford: Oxford University Press, 2012.

————. "Introduction." In *Oxford Handbook of Tense and Aspect*, 3–56. Oxford: Oxford University Press, 2012.

Blank, David L. "The Organization of Grammar in Ancient Greece." In *History of the Language Sciences: An International Handbook on the Evolution of the Study of Language from the Beginnings to the Present*, edited by Auroux Sylvain, 400–17. Berlin: Walter de Gruyter, 2000.

Bohnemeyer, Jürgen, and Mary Swift. "Event Realization and Default Aspect." *Linguistics and Philosophy* 27 (2004): 263–96.

Bondarko, A. V. *Functional Grammar: A Field Approach*. Linguistic & Literary Studies in Eastern Europe 35. Amsterdam: J. Benjamins, 1991.

Borik, Olga. *Aspect and Reference Time*. Oxford Studies in Theoretical Linguistics 13. Oxford: Oxford University Press, 2006.

Borik, Olga, and Tanya Reinhart. "Telicity and Perfectivity: Two Independent Systems." Paper presented at the Symposium on Logic and Language (LOLA 8), Debrecen, Hungary, 2004.

Brinton, Laurel J. *The Development of English Aspectual Systems: Aspectualizers and Post-Verbal Particles.* Cambridge Studies in Linguistics 49. Cambridge: Cambridge University Press, 1988.

Brugmann, Karl. *Griechische Grammatik (Lautlehre, Stammbildungs- und Flexionslehre und Syntax).* 3rd ed. Munich: Beck, 1900.

Brunel, J. *L'aspect verbal et l'emploi des préverbes en grec, particulièrement en attique.* Collection linguistique publiée par la Société de Linguistique de Paris XLV. Paris: Klincksieck, 1939.

———. "L'aspect et 'l'ordre du procès' en grec." *Bulletin de la Societé Linguistique* 42 (1946): 43–75.

Burridge, Richard A. *What are the Gospels? A Comparison with Graeco-Roman Biography.* 2nd ed. The Biblical Resource Series. Grand Rapids, MI: Eerdmans, 2004.

Butler, Christopher. *Statistics in Linguistics.* Oxford: Blackwell, 1985.

Bybee, Joan L., et al. *The Evolution of Grammar: Tense, Aspect, and Modality in the Languages of the World.* Chicago: University of Chicago Press, 1994.

Campbell, Constantine R. *Verbal Aspect, the Indicative Mood, and Narrative: Soundings in the Greek of the New Testament.* Studies in Biblical Greek 13. New York: Peter Lang, 2007.

———. *Basics of Verbal Aspect in Biblical Greek.* Grand Rapids, MI: Zondervan, 2008.

———. "Breaking Perfect Rules: The Traditional Understanding of the Greek Perfect." In *Discourse Studies & Biblical Interpretation: A Festschrift in Honor of Stephen H, Levinsohn,* edited by Steven E. Runge, 139–55. Bellingham, WA: Logos Bible Software, 2011.

————. *Colossians and Philemon: A Handbook on the Greek Text.* Waco, TX: Baylor University Press, 2013.

Carlson, Greg N. "A Unified Analysis of the English Bare Plural." *Linguistics and Philosophy* 1, no. 3 (1977): 413–57.

Carlson, Lauri. "Aspect and Quantification." In *Tense and Aspect*, edited by Paul Tedeschi and Annie Zaenen, 31–64. New York: Academic Press, 1981.

Carson, D. A. "An Introduction to the Porter/Fanning Debate." In *Biblical Greek Language and Linguistics: Open Questions in Current Research*, edited by Stanley E. Porter and D.A. Carson, 18–25. Sheffield: Sheffield Academic Press, 1993.

————. *Exegetical Fallacies.* 2nd ed. Grand Rapids, MI: Baker Books, 1996.

Casati, Roberto, and Achille C. Varzi. "Introduction." In *Events*, edited by Roberto Casati and Achille C. Varzi, xi-xxxviii. Aldershot: Dartmouth, 1996.

Chamberlain, William Douglas. *An Exegetical Grammar of the Greek New Testament.* New York: Macmillan, 1941.

Clarysse, Willy. "The Zenon Papyri Thirty Years on." In *100 Anni di Istituzioni Fiorentine per la Papirologia. Atti del Convegno Internazionale di Studi, Firenze 12–13 giugno 2008*, edited by G. Bastianini and A. Casanova, 31–43. Florence: Istituto Papirologico G. Vitelli, 2009.

Collinge, N.E. "Greek (and Some Roman) Preferences in Language Categories." In *Studies in the History of Western Linguistics*, edited by Theodora Bynon and F.R. Palmer, 11–22. Cambridge: Cambridge University Press, 1986.

Collins, John J. *The Apocalyptic Imagination: An Introduction to Jewish Apocalyptic Literature.* 2nd ed. The Biblical Resource Series. Grand Rapids, MI: Eerdmans, 1998.

Comrie, Bernard. *Aspect: An Introduction to the Study of Verbal Aspect and Related Problems.* Cambridge Textbooks in Linguistics. Cambridge: Cambridge University Press, 1976.

———. *Tense*. Cambridge Textbooks in Linguistics. Cambridge: Cambridge University Press, 1985.

———. "Some Thoughts on the Relation between Aspect and *Aktionsart*." In *Functional Grammar: Aspect and Aspectuality, Tense and Temporality: Essays in Honour of Alexander Bondarko*, edited by Adrian Barentsen and Youri Poupynin, 43–49. Munich: Lincom Europa, 2001.

Croft, William. *Verbs: Aspect and Causal Structure*. Oxford: Oxford University Press, 2012.

Croy, N. Clayton. *3 Maccabees*. Septuagint Commentary Series. Leiden: Brill, 2006.

Cruse, Alan. *Meaning in Language: An Introduction to Semantics and Pragmatics*. 2nd ed. Oxford Textbooks in Linguistics. Oxford: Oxford University Press, 2004.

Dahl, Östen. "On the Definition of the Telic-Atelic (Bounded-Nonbounded) Distinction." In *Syntax and Semantics: Tense and Aspect*, edited by Philip J. Tedeschi and Annie E. Zaenen, New York: Academic Press, 1981.

———. *Tense and Aspect Systems*. Oxford: Basil Blackwell, 1985.

Dahl, Östen, and Valupillai, V. 2008. Perfective/Imperfective Aspect. http://wals.info/feature/65

Dahlgren, Kathleen. *Naive Semantics for Natural Language Understanding*. Boston: Kluwer, 1988.

Dana, H.E., and Julius R. Mantey. *A Manual Grammar of the Greek New Testament*. New York: Macmillian, 1957.

Danker, Frederick W., et al. *A Greek-English Lexicon of the New Testament and Other Early Christian Literature*. 3rd ed. Chicago: University of Chicago Press, 2000.

Davidson, Donald. "The Logical Form of Action Sentences." In *The Logic of Decision and Action*, edited by N. Rescher, 81–95. Pittsburgh, PA: University of Pittsburgh Press, 1967.

Davis, S. "The Distinction between Pragmatics and Semantics." In *The Pragmatic Perspective: Selected Papers from the 1985 International Pragmatics Conference*, edited by J. Verschueren and M. Bertuccelli-Papi, 685–93. Amsterdam: Benjamins, 1987.

de Jonge, Casper C., and Johannes M. van Ophuijsen. "Greek Philosophers on Language." In *A Companion to the Ancient Greek Language*, edited by E.J. Bakker, 485–98. West Sussex: Blackwell, 2010.

de Swart, Henriëtte. "Aspect Shift and Coercion." *Natural Language and Linguistic Theory* 16 (1998): 347–85.

———. "Mismatches and Coercion." In *Semantics: An International Handbook of Natural Language Meaning (Vol. 1)*, edited by Claudia Maienborn, et al., 574–97. Berlin: Walter de Gruyter, 2011.

———. "Verbal Aspect." In *The Oxford Handbook of Tense and Aspect*, edited by Robert I. Binnick, 752–80. Oxford: Oxford University Press, 2012.

Decker, Rodney J. *Temporal Deixis of the Greek Verb in the Gospel of Mark with Reference to Verbal Aspect*. Studies in Biblical Greek 10. New York: Peter Lang, 2001.

Declerck, Renaat. "Aspect and the Bounded/Unbounded (Telic/Atelic) Distinction." *Linguistics* 17 (1979): 761–94.

———. Review of *Event Structure,* by J. van Voorst. *Leuvense Bijdragen* 78 (1989): 275–304.

———. "Distinguishing between the Aspectual Categories '(A)telic,' '(Im)perfective' and '(Non)bounded'." *Kansas Working Papers in Linguistics* 29 (2007): 48–64.

Depraetere, Ilse. "On the Necessity of Distinguishing between (Un)boundedness and (A)telicity." *Linguistics and Philosophy* 18 (1995): 1–19.

———. "(A)telicity and Intentionality." *Linguistics* 45, no. 2 (2007): 243–69.

deSilva, David Arthur. *Introducing the Apocrypha: Message, Context, and Significance.* Grand Rapids, MI: Baker Academic, 2002.

_____. *4 Maccabees: Introduction and Commentary on the Greek Text in Codex Sinaiticus.* Septuagint Commentary Series. Leiden: Brill, 2006.

Dik, S.C., and Kees Hengeveld. *The Theory of Functional Grammar.* 2 vols. 2nd, rev. ed. Functional Grammar Series 20–21. Berlin: Mouton de Gruyter, 1997.

Dowty, David R. *Word Meaning and Montague Grammar: The Semantics of Verbs and Times in Generative Semantics and in Montague's PTQ.* Synthese Language Library 7. Dordrecht: Reidel, 1979.

———. "The Effects of Aspectual Class on the Temporal Structure of Discourse: Semantics or Pragmatics." *Linguistics and Philosophy* 9 (1986): 37–61.

———. "On the Semantic Content of the Notion 'Thematic Role'." In *Properties, Types and Meanings, Vol. II*, edited by G. Chierchia and R. Turner, 69–130. Dordrecht: Kluwer, 1989.

———. "Thematic Proto-Roles and Argument Selection." *Language* 67, no. 3 (1991): 547–619.

Duhoux, Yves. *Le verbe Grec ancien: Éléments de morphologie et de syntaxe historiques.* 2nd ed. Bibliothèque des Cahiers de l'Institut de Linguistique de Louvain, 104. Louvain-la-Neuve, Belgium: Peeters, 2000.

Edgar, Campbell Cowan. *Zenon Papyri in the University of Michigan Collection.* Ann Arbor, MI: University of Michigan Press, 1931.

Evans, Craig A. *Ancient Texts for New Testament Studies: A Guide to the Background Literature.* Peabody, MA: Hendrickson, 2005.

Evans, T.V. *Verbal Syntax in the Greek Pentateuch: Natural Greek Usage and Hebrew Interference.* Oxford: Oxford University Press, 2001.

————. "Future Directions for Aspect Studies in Ancient Greek." In *Biblical Greek Language and Lexicography: Essays in Honor of Frederick W. Danker*, edited by Bernard A. Taylor et al., 199–206. Grand Rapids, MI: Eerdmans, 2004.

Fanning, Buist M. *Verbal Aspect in New Testament Greek.* Oxford: Oxford University Press, 1990.

————. "Approaches to Verbal Aspect in New Testament Greek: Issues in Definition and Method." In *Biblical Greek Language and Linguistics: Open Questions in Current Research*, edited by Stanley E. Porter and D.A. Carson, 46–62. Sheffield: Sheffield Academic Press, 1993.

————. "Greek Presents, Imperfects, and Aorists in the Synoptic Gospels: Their Contribution to Narrative Structuring." In *Discourse Studies and Biblical Interpretation: A Festschrift in Honor of Stephen H. Levinsohn*, edited by Steven E. Runge, Bellingham, WA: Logos, 2011.

Fawcett, Robin P. "What Makes a 'Good' System Network Good?" In *Systemic Functional Approaches to Discourse*, edited by James D. Benson and William S. Greaves, 1–28. New Jersey: Ablex, 1988.

Fernandez, Paula Lorente. *L'aspect verbal en Grec ancien: Le choix des thèmes verbaux chez Isocrate.* Bibliothèque des Cahiers de l'Institut de Linguistique de Louvain 111. Louvain-la-Neuve, Belgium: Peeters, 2003.

Filip, Hana. "Aspectual Class and *Aktionsart*." In *Semantics: An International Handbook of Natural Language Meaning (Vol. 2)*, edited by Klaus von Heusinger et al., 1186–217. Berlin: Walter de Gruyter, 2011.

————. "Lexical Aspect." In *The Oxford Handbook of Tense and Aspect*, edited by Robert I. Binnick, 721–51. Oxford: Oxford University Press, 2012.

————. *Aspect, Eventuality Types, and Nominal Reference.* Outstanding Dissertations in Linguistics. New York: Garland, 1999.

Fleischman, Suzanne. *Tense and Narrativity: From Medieval Performance to Modern Fiction.* Texas Linguistics Series. Austin: University of Texas Press, 1990.

Foley, Toshikazu S. *Biblical Translation in Chinese and Greek: Verbal Aspect in Theory and Practice*. Linguistic Biblical Studies. Leiden: Brill, 2009.

Forsyth, James. *A Grammar of Aspect: Usage and Meaning in the Russian Verb*. Studies in the Modern Russian Language. Cambridge: Cambridge University Press, 1970.

Frawley, William. *Linguistic Semantics*. Hillsdale, NJ: L. Erlbaum Associates, 1992.

Frede, Michael. *Essays in Ancient Philosophy*. Minneapolis: University of Minnesota Press, 1987.

———. "The Stoic Doctrine of the Tenses of the Verb." In *Dialektiker und Stoiker: zur Logik der Stoa und ihrer Vorläufer*, edited by Klaus Döring and Theodor Ebert, 141–54. Stuttgart: Franz Steiner, 1993.

Friedrich, Paul. "On Aspect Theory and Homeric Aspect." *International Journal of American Linguistics* Memoir 28, 40 (1974): S1–44.

Garey, Howard B. "Verbal Aspect in French." *Language* 33, no. 2 (1957): 91–110.

Gilquin, Gaëtanelle, and Stefan Gries. "Corpora and Experimental Methods: A State-of-the-Art Review." *Corpus Linguistics and Linguistic Theory* 5, no. 1 (2009): 1–26.

Goodacre, Mark. "A World Without Q." In *Questioning Q*, edited by Mark Goodacre and Nicholas Perrin, 174–79. Downers Grove, IL: IVP, 2004.

Gotteri, Nigel. "The Concept of Aspect as a Privative Opposition." Unpublished Paper (1972): 1–7.

———. "Towards a Comparison of Systemic Linguistics and Tagmemics: An Interim Report and Bibliography." *Journal of the Midland Association for Linguistics Studies New Series* 7 (1982): 31–42.

———. "A Note on Bulgarian Verb Systems." *Journal of the Midland Association for Linguistics Studies New Series* 8 (1983): 49–60.

———. "A Speaker's Right to Choose: Aspects of Tense and Aspect in Polish." *Sheffield Working Papers in Language and Linguistics* 1 (1984): 72–78.

————. "When is a System Network not a System Network?" *Occasional Paper in Systemic Linguistics* 1 (1987): 5–14.

————. "Some Slavonic Questions for Systemic Linguistics." In *Language and Linguistics: Volume III in the Occasional Series: Papers in Slavonic Linguistics*, edited by J.I. Press and F.E. Knowles, 119–28. St Andrews: University of St Andrews, 1996.

————. "Toward a Systemic Approach to Tense and Aspect in Polish." In *Meaning and Form: Systemic Functional Interpretations: Meaning and Choice in Language: Studies for Michael Halliday*, edited by Margaret Berry et al., 499–507. Norwood, NJ: Ablex, 1996.

Gotteri, Nigel, and Stanley E. Porter. "Ambiguity, Vagueness, and the Working Systemic Linguist." *Sheffield Working Papers in Language and Linguistics* 2 (1985): 105–18.

Green, Valeria Annette. "A Semantic Description of Reciprocity and Motion Verbs Prefixed by ἀπό, ἐκ, πρός, and παρά in Attic and Koine Greek." Ph.D. diss., University of Michigan, 1985.

Gries, Stefan Th. "Corpus Linguistics and Theoretical Linguistics: A Love-Hate Relationship? Not Necessarily." *International Journal of Corpus Linguistics* 15, no. 3 (2010): 327–43.

Gvozdanović, Jadranka. "Perfective and Imperfective Aspect." In *The Oxford Handbook of Tense and Aspect*, edited by Robert I. Binnick, 781–802. Oxford: Oxford University Press, 2012.

Halliday, M.A.K., and Ruqaiya Hasan. *Language, Context, and Text: Aspects of Language in a Social-Semiotic Perspective*. Victoria: Deakn University, 1985.

Halliday, M.A.K., and Christian M.I.M. Matthiessen. *Construing Experience through Meaning: A Language-Based Approach to Cognition*. Open Linguistics Series. London: Continuum, 1999.

Halliday, M.A.K. *Computational and Quantitative Studies*. Edited by Jonathan Webster. London: Continuum, 2006.

Hardie, Andrew, and Tony McEnery. "On Two Traditions in Corpus Linguistics, and What They Have in Common." *International Journal of Corpus Linguistics* 15, no. 3 (2010): 384–94.

Harlow, Daniel C. *The Greek Apocalypse of Baruch (3 Baruch) in Hellenistic Judaism and Early Christianity*. Studia in Veteris Testamenti Pseudepigrapha 12. Leiden: Brill, 1996.

Harris, Roy, and Talbot J. Taylor. *The Western Tradition from Socrates to Saussure*. 2nd ed. Landmarks in Linguistic Thought. London: Routledge, 1997.

Haug, Dag. "Aristotle's *Kinesis/Energeia*-Test and the Semantics of the Greek Perfect." *Linguistics* 42, no. 2 (2004): 387–418.

Hinrichs, Erhard W. "A Compositional Semantics for *Aktionsarten* and NP Reference in English." Ph.D. diss., The Ohio State University, 1985.

Holt, J. *Études d'aspect*. Acta Jutlandica 15.2. Aarhus: Universitelsforlaget, 1943.

Horrocks, Geoffrey C., and Melita Stavrou. "Actions and their Results in Greek and English: The Complementarity of Morphologically Endcoded (Viewpoint) Aspect and Syntactic Resultative Predication." *Journal of Semantics* 20 (2003): 297–327.

Huddleston, Rodney D. *English Grammar: An Outline*. Cambridge: Cambridge University Press, 1988.

Huovila, Kimmo. "Towards a Theory of Aspectual Nesting for New Testament Greek." Unpublished M.A. thesis. University of Helsinki, 1999.

Husband, E. Matthew. *On the Compositional Nature of States*. Linguistik aktuell/Linguistics Today 188. Amsterdam: John Benjamins, 2012.

Jakobson, R. "Zur Struktur des Russischen Verbums." In *Selected Writings II: Word and Language*, 3–15. The Hague: Mouton, 1932.

James, M.R. *Apocrypha Anecdota II*. Edited by J.A. Robinson. Texts and Studies 5. Cambridge: Cambridge University Press, 1899.

James, M.R., and W. Emery Barnes. *The Testament of Abraham*. Cambridge: Cambridge University Press, 1892.

Jaszczolt, Katarzyna M. "Semantics-Pragmatics Interface." In *The Routledge Pragmatics Encyclopedia*, edited by L. Cummings, 458–62. London: Routledge, 2010.

———. "Semantics/Pragmatics Boundary Disputes." In *Semantcis: An International Hanbook of Natural Language Meaning (Vol. 3)*, edited by Klaus von Heusinger et al., 2333–60. Berlin: Mouton de Gruyter, 2012.

Jespersen, Otto. *The Philosophy of Grammar*. London: George Allen & Unwin, 1924.

Kabakchiev, Krasimir. *Aspect in English: A "Common-Sense" View of the Interplay between Verbal and Nominal Referents*. Studies in Linguistics and Philosophy 75. Dordrecht: Kluwer, 2000.

Kenny, Anthony. *Action, Emotion and Will*. Studies in Philosophical Psychology. London: Routledge & Kegan Paul, 1963.

———. *Action, Emotion, and Will*. London: Routledge, 2003.

Klein, Wolfgang. *Time in Language*. Germanic Linguistics. London: Routledge, 1994.

———. "A Time-Relational Analysis of Russian Aspect." *Language* 71, no. 4 (1995): 669–95.

———. "How Time is Encoded." In *The Expression of Time*, edited by Wolfgang Klein and Ping Li, 39–82. Berlin: Mouton de Gruyter, 2009.

Krifka, Manfred. "Thematic Relations as Links between Nominal Reference and Temporal Constitution." In *Lexical Matters*, edited by Ivan A. Sag and Anna Szabolcsi, 29–53. Stanford: Standford University Press, 1992.

———. "The Origins of Telicity." In *Events and Grammar*, edited by Susan Rothstein, 197–236. Dordrecht: Kluwer, 1998.

Kulik, Alexander. *3 Baruch: Greek-Slavonic Apocalypse of Baruch*. Commentaries on Early Jewish Literature. Berlin: De Gruyter, 2010.

Law, Vivien. *The History of Linguistics in Europe from Plato to 1600*. Cambridge: Cambridge University Press, 2003.

Law, Vivien, and I. Sluiter. *Dionysius Thrax and the 'Techne Grammatike'*. The Henry Sweet Society Studies in the History of Linguistics 1. Münster: Nodus, 1995.

Lee, John A. L. *A History of New Testament Lexicography*. Studies in Biblical Greek 8. New York: Peter Lang, 2003.

Levinson, Stephen C. *Pragmatics*. Cambridge Textbooks in Linguistics. Cambridge: Cambridge University Press, 1983.

Liddell, Henry George, et al. *A Greek-English Lexicon*. New ed. Oxford: Clarendon Press, 1940.

Louw, J.P. *Semantics of New Testament Greek*. Semeia Studies. Philadelphia: Fortress, 1982.

Louw, J.P., and Eugene A. Nida. *Greek-English Lexicon of the New Testament: Based on Semantic Domains*. 2d ed. New York: United Bible Societies, 1989.

Louw, J.P., ed. *Lexicography and Translation: With Special Reference to Bible Translation*. Rogebaai, Cape Town: Bible Society of South Africa, 1985.

Lyons, John. *Introduction to Theoretical Linguistics*. London: Cambridge University Press, 1968.

——. *Semantics*. 2 vols. Cambridge: Cambridge University Press, 1977.

Macauley, R.K.S. "Review of Comrie and Friedrich." *Language* 54 (1978): 416–20.

Maslov, I.U.S. "An Outline of Contrastive Aspectology." In *Contrastive Studies in Verbal Aspect: In Russian, English, French and German*, edited by I.U.S. Maslov et al., 1–44. Heidelberg: J. Groos, 1985.

Mateos, Juan. *El Aspecto Verbal en el Nuevo Testamento*. Estudios de Nuevo Testamento 1. Madrid: Cristiandad, 1977.

———. *Methodo de Analisis Semantico Aplicado al Griego del Nuevo Testamento*. Córdoba: Ediciones el Almendro, 1989.

Mathewson, David L. *Verbal Aspect in the Book of Revelation: The Function of Greek Verb Tenses in John's Apocalypse*. Linguistic Biblical Studies 4. Leiden: Brill, 2010.

McCoard, Robert W. *The English Perfect: Tense-Choice and Pragmatic Inferences*. Amsterdam: North Holland Pub Co., 1978.

McEnery, Tony, and Andrew Hardie. *Corpus Linguistics: Method, Theory and Practice*. Cambridge: Cambridge University Press, 2012.

McKay, K. L. "The Use of the Ancient Greek Perfect down to the End of the Second Century A.D." *Bulletin of the Institute of Classifcal Studies* 12 (1965): 1–21.

———. "Syntax in Exegesis." *Tyndale Blletin* 23 (1972): 39–57.

———. *Greek Grammar for Students: A Concise Grammar of Classical Attic with Special Reference to Aspect in the Verb*. Canberra: Australian National University, 1974.

———. "On the Perfect and Other Aspects in New Testament Greek." *Novum Testamentum* 23, no. 4 (1981): 289–329.

———. "Aspect in Imperative Constructions in New Testament Greek." *Novum Testamentum* 27, no. 3 (1985): 201–26.

———. "Time and Aspect in New Testament Greek." *Novum Testamentum* 34, no. 3 (1992): 209–28.

———. *A New Syntax of the Verb in New Testament Greek: An Aspectual Approach*. Studies in Biblical Greek 5. New York: Peter Lang, 1994.

Mealand, David L. "Positional Stylometry Reassessed: Testing a Seven Epistle Theory of Pauline Authorship." *New Testament Studies* 35, no. 2 (1989): 266–86.

———. "The Extent of the Pauline Corpus: A Multivariate Approach." *Journal for the Study of the New Testament* 59 (1995): 61–92.

Mey, Jacob L. *Pragmatics: An Introduction.* Malden, MA: Blackwell Publishers, 1993.

Miller, James E. "Tense and Aspect in Russian." Ph.D. diss., University of Edinburgh, 1970.

Mittwoch, Anita. "On the Difference between Eating and Eating Something: Activities versus Accomplishments." *Linguistic Inquiry* 13, no. 1 (1982): 113–22.

Moens, Marc. "Tense, Aspect and Temporal Reference." Ph.D. diss., University of Edinburgh, 1987.

Moens, Marc, and Mark Steedman. "Temporal Ontology and Temporal Reference." *Computational Linguistics* 14, no. 2 (1988): 15–28.

Moulton, James Hope. *A Grammar of New Testament Greek: I. Prolegomena.* 3d ed. Edinburgh: T. & T. Clark, 1908.

Moulton, James Hope, and W. F. Howard. *A Grammar of New Testament Greek: II. Accidence and Word-Formation.* Edinburgh: T. & T. Clark, 1929.

Mourelatos, Alexander P.D. "Events, Processes, and States." *Linguistics and Philosophy* 2 (1978): 415–34.

Mouton, Charles. *Aspects Grecs-aspects Russes à la lumière des traductions modernes de textes anciens.* Bibliothèque de la Faculté de philosophie et lettres de l'Université de Liège 244. Paris: Les Belles Lettres, 1986.

Napoli, Maria. *Aspect and Actionality in Homeric Greek: A Contrastive Analysis.* Milan, Italy: FrancoAngeli, 2006.

———. "Telicity as a Parameter of Aspect in Homeric Greek: Activity and Accomplishment Verbs." *Indogermanische Forschungen* 112 (2007): 124–69.

Naselli, Andrew David. "A Brief Introduction to Verbal Aspect in New Testament Greek." *Detroit Baptist Seminary Journal* 12 (2007): 17–28.

Nida, Eugene A. *A Synopsis of English Syntax*. Norman: Summer Institute of Linguistics, 1960.

———. *Componential Analysis of Meaning: An Introduction to Semantic Structures*. Approaches to Semiotics 57. The Hague: Mouton, 1975.

Nida, Eugene A., and J.P. Louw. *Lexical Semantics of the Greek New Testament*. Resources for Biblical Study 25. Atlanta: Scholars Press, 1992.

O'Brien, Peter T. *The Letter to the Hebrews*. Grand Rapids, MI: Eerdmans, 2010.

O'Donnell, Matthew Brook. "Designing and Compiling a Register-Balanced Corpus of Hellenistic Greek for the Purpose of Linguistic Description and Investigation." In *Diglossia and Other Topics in New Testament Linguistics*, edited by Stanley E. Porter, 255–97. Sheffield: Sheffield Academic Press, 2000.

———. *Corpus Linguistics and the Greek of the New Testament*. New Testament Monographs 6. Sheffield: Sheffield Phoenix Press, 2005.

Olsen, Mari Broman. *A Semantic and Pragmatic Model of Lexical and Grammatical Aspect*. Outstanding Dissertations in Linguistics. New York: Garland, 1997.

Pang, Francis G.H. "Aspect, *Aktionsart,* and Abduction: Future Tense in the New Testament." *Filología Neotestamentaria* 23 (2010): 129–59.

———. "*Aktionsart* as Epiphenomenon: A Stratal Approach to Process Typologies." In *Greeks, Jews, and Christians: Historical, Religious and Philological Studies in Honor of Jesús Peláez del Rosal*, edited by L. Roig Lanzillotta and Israel Muñoz Gallarte, 449–74. Córdoba: Ediciones el Almendro, 2013.

———. "Aspect and *Aktionsart* Once Again." In *Modeling Biblical Languages: Papers from the McMaster Divinity College Linguistics Circle*, edited by Stanley E. Porter and Christopher Land, Leiden: Brill, Forthcoming.

Pearson, Book W.R., and Stanley E. Porter. "The Genres of the New Testament." In *Handbook to Exegesis of the New Testament*, edited by Stanley E. Porter, 131–65. Leiden: Brill, 1997.

Peirce, Charles S. "Pragmatism and Pragmaticism." In *Collected Papers of Charles Sanders Peirce Vol. 5*, edited by Charles Hartshorne and Paul Weiss, 99–107. Cambridge, MA: Harvard University Press, 1965.

Perrin, Nicholas. "Reasons for Questioning Q." In *Questioning Q: A Multidimensional Critique*, edited by Mark Goodacre and Nicholas Perrin, 1–12. Downers Grove, IL: IVP, 2004.

Pinborg, Jan. "Classical Antiquity: Greece." In *Current Trends in Linguistics*, edited by Thomas A. Sebeok, 69–126. The Hague: Mouton, 1962.

Piñón, Christopher. "Adverbs of Completion in an Event Semantics." In *Perspectives on Aspect*, edited by H.J. Verkuyl, H. de Swart and A. Hout, 149–66. Dordrecht: Springers, 2005.

Platzack, Christer. *The Semantic Interpretation of Aspect and Aktionsarten: A Study of Internal Time Reference in Swedish*. Studies in Generative Grammar 8. Dordrecht: Foris Publications, 1979.

Poirier, John C. "The Synoptic Problem and the Field of New Testament Introduction." *Journal for the Study of the New Testament* 32, no. 2 (2009): 179–90.

Porter, Stanley E. "Vague Verbs, Periphrastics, and Matthew 16:19." *Filología Neotestamentaria* 1 (1988): 155–73.

———. *Verbal Aspect in the Greek of the New Testament: with Reference to Tense and Mood*. Studies in Biblical Greek 1. New York: Peter Lang, 1989.

———. "In Defence of Verbal Aspect." In *Biblical Greek Language and Linguistics: Open Questions in Current Research*, edited by Stanley E. Porter and D.A. Carson, 26–45. Sheffield: Sheffield Academic Press, 1993.

———. *Paul in Acts*. Library of Pauline Studies. Peabody, Mass.: Hendrickson Publishers, 2001.

———. "Aspect Theory and Lexicography." In *Biblical Greek Language and Lexicography: Essays in Honor of Frederick W. Danker*, edited by Bernard A. Taylor et al., 207–22. Grand Rapids, MI: Eerdmans, 2004.

———. "Verbal Aspect and Discourse Function in Mark 16:1–8: Three Significant Instances." In *Studies in the Greek Bible: Essays in Honor of Francis T. Gignac, S.J*, edited by Jeremy Corley and Vincent Skemp, 123–37. Washington, DC: Catholic Biblical Association of America, 2008.

———. "Greek Linguistics and Lexicography." In *Understanding the Times: New Testament Studies in the 21st Century: Essays in Honor of D. A. Carson on the Occasion of his 65th Birthday*, edited by Andreas J. Köstenberger and Robert W. Yarbrough, 19–61. Wheaton, IL: Crossway, 2011.

Porter, Stanley E., and Sean A. Adams, eds. *Paul and The Ancient Letter Form*. Pauline Studies 6. Leiden: Brill, 2010.

Porter, Stanley E., and Matthew Brook O'Donnell. "The Greek Verbal Network Viewed from a Probabilistic Standpoint: An Exercise in Hallidayan Linguistics." *Filologia Neotestamentaria* 14 (2001): 3–41.

———. "Theoretical Issues for Corpus Linguistics and the Study of Ancient Languages." In *Corpus Linguistics by the Lune: A Festschrift for Geoffery Leech*, edited by Andrew Wilson et al., 119–37. Frankfurt am Main: Peter Lang, 2003.

———. "Building and Examining Linguistic Phenomena in a Corpus of Representative Papyri." In *The Language of the Papyri*, edited by T.V. Evans and D.D. Obbink, 287–311. Oxford: Oxford University Press, 2010.

Porter, Stanley E., and D.A. Carson, eds. *Biblical Greek Language and Linguistics: Open Questions in Current Research*. Journal for the Study of the New Testament Supplement Series 80. Sheffield: JSOT Press, 1993.

Porter, Stanley E., and Andrew W. Pitts. "New Testament Greek Languages and Linguistics in Recent Research." *Currents in Biblical Research* 6, no. 2 (2008): 214–55.

Radday, Yehuda Thomas. *The Unity of Isaiah in the Light of Statistical Linguistics*. Hildesheim: H. A. Gerstenberg, 1973.

Radday, Yehuda Thomas, and Haim Shore. *Genesis: An Authorship Study in Computer-Assisted Statistical Linguistics*. Analecta Biblica 103. Rome: Biblical Institute Press, 1985.

Rappaport Hovav, M. "Lexicalized Meaning and the Internal Temporal Structure of Events." In *Theoretical and Crosslinguistic Approaches to the Semantics of Aspect*, edited by Susan Rothstein, 13–42. Amsterdam: John Benjamins, 2008.

Rappaport, Malka, and Beth Levin. "Building Verb Meanings." In *The Projection of Arguments: Lexical and Compositional Factors*, edited by Miriam Butt and Wilhelm Geuder, 97–131. Stanford, CA: CSLI Publications, 1998.

Rawlins, Kyle. "On Adverbs of (Space and) Time." In *Studies in the Composition and Decomposition of Event Predicates*, edited by Boban Arsenijsvić et al., 153–93. Dordrecht: Springer, 2013.

Ritz, Marie-Eve. "Perfect Tense and Aspect." In *The Oxford Handbook of Tense and Aspect*, edited by Robert I. Binnick, 881–907. Oxford: Oxford University Press, 2012.

Robertson, A.T. *A Grammar of the Greek New Testament in the Light of Historical Research*. 4th ed. Nashville, Tenn.: Broadman Press, 1934.

Robins, R.H. *A Short History of Linguistics*. 3rd ed. Longman Linguistics Library. London: Longman, 1990.

———. *The Byzantine Grammarians: Their Place in History*. Trends in Linguistics Studies and Monographs 70. Berlin: Mouton de Gruyter, 1993.

Robinson, Thomas A. "Grayston and Herdan's 'C' Quantity Formula and the Authorship of the Pastoral Epistles." *New Testament Studies* 30, no. 2 (1984): 282–88.

Rothstein, Susan Deborah. *Structuring Events: A Study in the Semantics of Lexical Aspect*. Explorations in Semantics. Malden, MA: Blackwell, 2004.

———. *Theoretical and Crosslinguistic Approaches to the Semantics of Aspect*. Linguistics Today. Amsterdam: John Benjamins, 2008.

Runge, Steven E. *Discourse Grammar of the Greek New Testament: A Practical Introduction for Teaching and Exegesis*. Lexham Bible Reference Series. Peabody, MA: Hendrickson, 2010.

Ryle, Gilbert. *The Concept of Mind*. London: Hutchinson, 1949.

Sampson, Geoffrey. *Empirical Linguistics*. London: Continuum, 2001.

———. "Quantifying the Shift Towards Empirical Methods." *International Journal of Corpus Linguistics* 10, no. 1 (2005): 15–36.

———. "Grammar without Grammaticality." *Corpus Linguistics and Linguistic Theory* 3, no. 1 (2007): 1–32.

———. "Reply." *Corpus Linguistics and Linguistic Theory* 3, no. 1 (2007): 111–29.

———. "A Two-Way Exchange Between Syntax and Corpora." In *Perspectives on Corpus Linguistics*, edited by V. Viana et al., 197–211. Studies in Corpus Linguistics 48. Amsterdam: John Benjamins, 2011.

———. "The Empirical Trend: Ten Years On." *International Journal of Corpus Linguistics* 13, no. 2 (2013): 281–89.

Sanders, E.P. "Testament of Abraham." In *The Old Testament Pseudepigrapha*, edited by James H. Charlesworth, 871–902. New York: Doubleday, 1983.

Sapir, Edward. *Language: An Introduction to the Study of Speech*. New York: Harcourt, Brace, 1921.

Sasse, Hans-Jurgen. "Recent Activity in the Theory of Aspect: Accomplishments, Achievements, or Just Non-Progressive State?" *Linguistic Typology* 6, no. 2 (2002): 199–271.

Schenkeweld, D.M. "The Linguistic Contents of Dionysius's Παραγγέλματα." In *Dionysius Thrax and the 'Techne Grammatike'*, edited by Vivien Law and I. Sluiter, 41–53. Münster: Nodus, 1995.

Schmidhauser, Andreas U. "The Birth of Grammar in Greece." In *A Companion to the Ancient Greek Language*, edited by E.J. Bakker, 499–511. West Sussex: Blackwell, 2010.

Schmidt, Daryl D. "Verbal Aspect in Greek: Two Approaches." In *Biblical Greek Language and Linguistics: Open Questions in Current Research*, edited by Stanley E. Porter and D.A. Carson, 63–73. Sheffield: Sheffield Academic Press, 1993.

Schwartz, Daniel R. *2 Maccabees*. Commentaries on Early Jewish Literature. Berlin: Walter de Gruyter, 2008.

Shain, Rachel M. "The Preverb eis- and Koine Greek *Aktionsart*." Unpublished M.A. Thesis, The Ohio State University, 2009.

———. "Exploring *Aktionsart* in Corpora: A Case Study of Koine Greek *Erchomai* and *Eiserchomai*." *Journal of Greek Linguistics* 11, no. 2 (2011): 221–48.

Shuler, Philip L. *A Genre for the Gospels: The Biographical Character of Matthew*. Philadelphia: Fortress Press, 1982.

Sioupi, Athina. "Morphological and Telicity Aspect with Accomplishment VPs in Greek." In *Crosslinguistic Views on Tense, Aspect and Modality*, edited by Bart Hollebrandse, Angeliek van Hout and Co Vet, 131–44. Amsterdam: Rodopi, 2005.

Smith, Carlota S. *The Parameter of Aspect*. Studies in Linguistics and Philosophy. Dordrecht: Kluwer, 1997.

———. "Tense and Aspect: Time Across Languages." In *Semantics: An International Handbook of Natural Language Meaning (Vol. 3)*, edited by Claudia Maienborn et al., 2581–608. Berlin: Walter de Gruyter, 2012.

Smollett, Rebecca. "Quantized Direct Objects Don't Delimit After All." In *Perspectives on Aspect*, edited by H. J. Verkuyl, H. de Swart and A. Hout, 41–59. Dordrecht: Springer, 2005.

Southern, Paul. "The New Testament Use of the Preposition κατα with Special Reference to its Distributive Aspects." Ph.D. diss., Southern Baptist Theological Seminary, 1948.

Steiner, Erich. *A Functional Perspective on Language, Action, and Interpretation: An Initial Approach with a View to Computational Modeling*. Natural Language Processing. Berlin: Mouton de Gruyter, 1991.

Stork, Peter. *The Aspectual Usage of the Dynamic Infinitive in Herodotus*. Groningen: Bouma, 1982.

Stowers, Stanley Kent. *Letter Writing in Greco-Roman Antiquity*. Philadelphia: Westminster Press, 1986.

Stunová, Anna. "Meaning vs. Context: The Russian Imperfective Past in Sequence of Events." In *Studies in Russian Linguistics*, edited by A.A. Barentsen et al., 295–319. Amsterdam: Rodopi, 1992.

Szemerényi, Oswald. "The Origin of Aspect in the Indo-European Languages." *Glotta* 65, no. 1/2 (1987): 1–18.

Talbert, Charles H. *Literary Patterns, Theological Themes, and the Genre of Luke-Acts*. Monograph Series - Society of Biblical Literature. Cambridge: Scholars Press, 1975.

Talmy, Leonard. "Lexicalization Patterns: Semantic Structure in Lexical Forms." In *Language Typology and Syntactic Description Vol. III: Grammatical Categories and the Lexicon*, edited by Timothy Shopen, 57–149. Cambridge: Cambridge Univeristy Press, 1985.

Tatevosov, Sergej. "The Parameter of Actionality." *Linguistic Typology* 6 (2002): 317–401.

Taylor, Barry. "Tense and Continuity." *Linguistics and Philosophy* 1 (1977): 199–220.

Tenny, Carol. *Aspectual Roles and the Syntax-Semantics Interface*. Studies in Linguistics and Philosophy 52. Dordrecht: Kluwer, 1994.

Teubert, W. "My Version of Corpus Linguistics." *International Journal of Corpus Linguistics* 10, no. 1 (2005): 1–13.

Turner, Nigel. "The 'Testament of Abraham': Problems in Biblical Greek." *New Testament Studies* 1, no. 3 (1955): 219–23.

Van Valin, Robert D. *Exploring the Syntax-Semantics Interface*. Cambridge: Cambridge University Press, 2005.

Vendler, Zeno. "Verbs and Times." *The Philosophical Review* 66, no. 2 (1957): 143–60.

———. *Linguistics in Philosophy*. Ithaca, NY: Cornell University Press, 1967.

Verkuyl, H.J. *On the Compositional Nature of the Aspects*. Foundations of language. Supplementary Series 15. Dordrecht: Reidel, 1972.

———. "Aspectual Classes and Aspectual Composition." *Linguistics and Philosophy* 12 (1989): 39–94.

———. *A Theory of Aspectuality: The Interaction between Temporal and Atemporal Structure*. Cambridge Studies in Linguistics 64. Cambridge: Cambridge University Press, 1993.

———. *Aspectual Issues: Studies on Time and Quantity*. CSLI Lecture Notes 98. Stanford, CA: CSLI Publications, 1999.

———. "Aspectual Composition: Surveying the Ingredients." In *Perspectives on Aspect*, edited by H.J. Verkuyl, H. de Swart and A. Hout, 19–39. Dordrecht: Springer, 2005.

———. "How (In-)Sensitive is Tense to Aspectual Information?" In *Crosslinguistic Views on Tense, Aspect and Modality*, edited by Bart Hollebrandse et al., 145–69. Amsterdam: Rodopi, 2005.

Verkuyl, H.J., et al., eds. *Perspectives on Aspect.* Studies in Theoretical Psycholinguistics 32. Dordrecht: Springer, 2005.

Von Stutterheim, Christiane, et al. "New Perspectives in Analyzing Aspectual Distinctions across Languages." In *The Expression of Time*, edited by Wolfgang Klein and Li Ping, 195–216. Berlin: Mouton de Gruyter, 2009.

Wackernagel, Jacob. *Lectures on Syntax with Special Reference to Greek, Latin, and Germanic.* Translated by David Langslow. Oxford: Oxford University Press, 2009.

Walková, Milada. "Dowty's Aspectual Tests: Standing the Test of Time but Failing the Test of Aspect." *Poznan Studies in Contemporary Linguistics* 48 (2012): 495–518.

Walton, Douglas N. *Abductive Reasoning.* Tuscaloosa, AL: University of Alabama Press, 2004.

Westfall, Cynthia Long. *A Discourse Analysis of the Letter to the Hebrews: The Relationship between Form and Meaning.* Library of New Testament Studies 297. London: T. & T. Clark, 2005.

White, John L. *Light from Ancient Letters.* Foundations and Facets. Philadelphia: Fortress Press, 1986.

Winston, David. *The Wisdom of Solomon: A New Translation with Introduction and Commentary.* Garden City, NY: Doubleday, 1979.

Yule, G. Udny. *The Statistical Study of Literary Vocabulary.* Cambridge: Cambridge University Press, 1944.

Zipf, G.K. *The Psycho-Biology of Language: An Introduction to Dynamic Philology.* Boston: Houghton Mifflin, 1935.

Zucchi, Sandro, and Michael White. "Twigs, Sequences and the Temporal Constitution of Predicates." *Linguistic and Philosophy* 24 (2001): 223–70.

Zwarts, Joost. "Prepositional Aspect and the Algebra of Paths." *Linguistic and Philosophy* 28 (2005): 739–79.