

**A study of variation and change in the Greek lexicon of the  
Post-classical period**

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**UCL**

**This thesis is submitted for the degree of Doctor of Philosophy.**

## Declaration

I, Mathilde Mone Suzanne Bru confirm that the work presented in my thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

## Abstract

The aim of this study is to examine the factors that drive lexical variation and change in one of the world's longest-attested languages: Greek. This thesis collates evidence for variation and change in the lexicon of literary, para-literary and documentary sources in order to document a phase in the Greek language when the lexicon evolved often, but not always, with implications for the development of Modern Greek. The principal focus is the lexicon of the Post-classical period (c. 323 BC – AD 300), but since periodisation is arbitrary for most linguistic purposes, reference to the language of the Classical period (c. 479 – 323 BC) is also made in order to contextualise discussion of the later period. At the other end of the diachronic continuum, the thesis investigates the foundations for the development of Byzantine Greek, and the lead-up to the linguistic debates of the nineteenth century, which shaped the modern language. The lexicon is an underexplored topic in linguistics, and, unlike other features like phonology and morphology, lacks a clear typology. The thesis aims not only to add to the understanding of the diachronic development of Greek but also to develop a cross-linguistic methodology for the evaluation and analysis of lexical change. The four chapters of this thesis examine the impact of Atticism and language prescriptivism on linguistic variation in the Second Sophistic; the restructuring of the phonology of Greek, and its wide-reaching impact on the development of the lexicon; the evolving morphological system, and the effects of this evolution on word-formation; and the impact of cultural/non-linguistic factors (the growth of Christianity; the absorption of Greece into the Roman Empire; and the rapid expansion of the *koine*) on the development of the Greek lexicon.

## Impact Statement

The central impact of this study consists of its innovative exploration of lexical change in Greek, one of the longest continuously attested languages in the world. The evolution of the Greek language has been studied from multiple different angles: through the lens of its changing morphology, evolving phonology, and, increasingly, its syntax and semantics. This study focusses instead on the lexicon of Greek, an under-examined but crucial part of the language: the most notable difference between Classical Greek and the modern language spoken today lies in the words that are used. In this study I therefore examine variation and change in the Post-classical period, a period in which the lexicon changed significantly and often with implications for Modern Greek, and identify and analyse the factors causing this change. This study not only contributes to the scholarship on the Greek language, but also has wider linguistic implications: in contrast to other linguistic features such as phonology and morphology, the lexicon has been significantly understudied across languages, and so this thesis contributes to the field of linguistic research more generally, as it provides a consistent methodological framework within which to identify and evaluate lexical change. The conclusions of this thesis confirm trends that have already been observed cross-linguistically: for example, I quantitatively demonstrate in one of my chapters that the lengths of words increased over time. These findings have been published (in Bru 2023), and corroborate what has been found to hold true in other languages, notably Chinese and Arabic. Moreover, this thesis examines the relationship between cultural and linguistic change: the period under investigation is one of great cultural developments, including changes in power structures, increased language contact and borrowing between languages, and the first concrete example of a movement of language prescriptivism. In addition to demonstrating how these factors all contributed to the evolution of the lexicon, I also make numerous parallels with our contemporary world throughout the thesis: for example, I argue that my investigation of ancient linguistic prejudices can shed light on contemporary attitudes to cultural normativity. It is therefore hoped that this study will contribute to an improved understanding of lexical change across languages, as well as of the relationship between language and society.

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## Table of Contents

<b>Declaration</b> .....	- 2 -
<b>Abstract</b> .....	- 2 -
<b>Impact Statement</b> .....	- 3 -
<b>Acknowledgements</b> .....	- 4 -
<b>UCL Research Paper Declaration Form</b> .....	- 5 -
<b>List of Tables</b> .....	- 10 -
<b>List of Figures</b> .....	- 10 -
<b>Chapter 1. Introduction</b> .....	- 11 -
<b>1.1 The purpose of this study</b> .....	- 11 -
1.1.1 The Post-classical period .....	- 11 -
1.1.2 The lexicon.....	- 12 -
1.1.3 The ‘continuity’ of the Greek language .....	- 14 -
1.1.4 The sociolinguistic context .....	- 16 -
<b>1.2 The sources</b> .....	- 18 -
1.2.1 The Atticist lexica .....	- 19 -
1.2.2 The documentary papyri .....	- 26 -
1.2.3 The New Testament .....	- 27 -
1.2.4 The <i>Colloquia of the Hermeneumata Pseudodositheana</i> .....	- 27 -
<b>1.3 Thesis Structure</b> .....	- 28 -
<b>Chapter 2. Atticism and the <i>koine</i></b> .....	- 30 -
<b>2.1 The <i>koine</i></b> .....	- 31 -
2.1.1 Historical background of the <i>koine</i> .....	- 31 -
2.1.2 The <i>koine</i> and the classical dialects .....	- 33 -
<b>2.2 Atticism under the Second Sophistic</b> .....	- 39 -
<b>2.3 Ἕλληνες, κοινόν, Ἀττικοί: ancient understanding</b> .....	- 42 -
2.3.1 Ἕλληνες and κοινόν: the Greek ‘ <i>nostris</i> ’? .....	- 42 -
2.3.2 Ἀττικοί .....	- 46 -
<b>2.4 Diglossia?</b> .....	- 55 -

<b>2.5 Readership .....</b>	<b>- 57 -</b>
2.5.1 The aims of the lexicographers .....	- 57 -
2.5.2 Literary evidence .....	- 63 -
<b>2.6 Attitudes towards linguistic variation and change under the Second Sophistic-</b>	<b>66 -</b>
<b>2.7 Purifying or purified? .....</b>	<b>- 68 -</b>
<b>2.8 Summary.....</b>	<b>- 72 -</b>
<b>Chapter 3. Phonology and the Lexicon .....</b>	<b>- 74 -</b>
<b>3.1 Overview of phonological changes .....</b>	<b>- 75 -</b>
3.1.1 Vowels .....	- 78 -
3.1.2 Consonants.....	- 82 -
3.1.3 Non-Attic phonological features of the <i>koine</i> .....	- 84 -
3.1.4 Summary: Table of the phonemic inventory of Greek .....	- 84 -
<b>3.2 Contemporary linguistic commentary: the lexica.....</b>	<b>- 86 -</b>
<b>3.3 Lengthening of lexemes .....</b>	<b>- 92 -</b>
3.3.1 Background.....	- 92 -
3.3.2 Statistical analysis.....	- 94 -
3.3.3 Further notes on word lengths.....	- 99 -
<b>3.4 Morphological adaptation (1) .....</b>	<b>- 100 -</b>
3.4.1 The word-extending suffix -tov .....	- 101 -
3.4.2 Other word-extending suffixes .....	- 103 -
3.4.3 Word-extending prefixes .....	- 107 -
<b>3.5 Lexical replacement (2) .....</b>	<b>- 108 -</b>
3.5.1 Language-internal lexical replacement (2a).....	- 108 -
3.5.2 Language-external lexical replacement (2b).....	- 112 -
<b>3.6 Morphological adaptation vs lexical replacement .....</b>	<b>- 112 -</b>
<b>3.7 Summary.....</b>	<b>- 114 -</b>
<b>Chapter 4. Morphology and the Lexicon.....</b>	<b>- 116 -</b>
<b>4.1 Overview of morphological changes.....</b>	<b>- 117 -</b>
4.1.1 Verbs.....	- 117 -
4.1.2 Nouns .....	- 118 -



4.1.3 Adjectives .....	- 121 -
<b>4.2 Evidence for morphological variation and change in the lexica.....</b>	<b>- 122 -</b>
<b>4.3 Morphological adaptation (1) .....</b>	<b>- 126 -</b>
4.3.1 ‘Adaptive’ explanations: theoretical background .....	- 127 -
4.3.2 The regularising suffix -tov.....	- 129 -
4.3.3 Other suffixes.....	- 133 -
4.3.4 Compounding.....	- 137 -
<b>4.4 Lexical replacement (2) .....</b>	<b>- 145 -</b>
4.4.1 Selection of competing forms (2a).....	- 145 -
4.4.2 Lexical suppletion? .....	- 150 -
4.4.3 Semantic adaptation (2b): a case study of τὸ ὕδωρ / τὸ νηρόν .....	- 153 -
<b>4.5 Overlap between Phonology and Morphology .....</b>	<b>- 156 -</b>
<b>4.6 Summary.....</b>	<b>- 157 -</b>
<b>Chapter 5. Cultural factors of lexical change.....</b>	<b>- 160 -</b>
<b>5.1 Christianity .....</b>	<b>- 160 -</b>
5.1.1 Background .....	- 160 -
5.1.2 Christianity and lexical borrowing (1).....	- 161 -
5.1.3 Christianity and semantic change (2).....	- 164 -
<b>5.2 The Roman Empire.....</b>	<b>- 171 -</b>
5.2.1 Background .....	- 171 -
5.2.2 Borrowing from Latin .....	- 172 -
5.2.3 Borrowing in Egypt.....	- 181 -
<b>5.3 The expansion of the <i>koine</i> .....</b>	<b>- 185 -</b>
5.3.1 Geographical expansion.....	- 186 -
5.3.2 Functional expansion .....	- 189 -
<b>5.4 Summary.....</b>	<b>- 192 -</b>
<b>Chapter 6. Summary and implications for future research.....</b>	<b>- 195 -</b>
<b>6.1 Summary.....</b>	<b>- 195 -</b>
<b>6.2 Implications for further research.....</b>	<b>- 198 -</b>

<b>Bibliography .....</b>	<b>- 201 -</b>
<b>Appendix.....</b>	<b>- 218 -</b>

### List of Tables

Table 1: Types of glosses in the Atticist lexica .....	- 26 -
Table 2: Word classes in the Atticist lexica.....	- 59 -
Table 3: Datings of phonological changes by Teodorsson (1974) and Threatte (1980), table adapted from Duhoux (1987: 181–182).....	- 76 -
Table 4: Vowels in Classical Attic.....	- 79 -
Table 5: Vowels in the koine .....	- 81 -
Table 6: Phonological development over time (Classical to Post-classical period) .....	- 86 -
Table 7: Average word length over time (Classical to Post-classical period).....	- 95 -
Table 8: Occurrences of word-extending suffixes over time: nouns .....	- 105 -
Table 9: Occurrences of word-extending suffixes over time: adjectives.....	- 105 -
Table 10: Occurrences of word-extending suffixes over time: verbs .....	- 105 -
Table 11: The ‘Attic’ declension .....	- 121 -
Table 12: Number of attestations of ὄρριον (‘state granary’) by century.....	- 184 -
Table 13: Latin loanwords in Greek borrowed before 300 AD, adapted from Dickey (2023: 20–502) .....	- 230 -

### List of Figures

Figure 1: Boxplot for Number of Syllables in Nouns dataset.....	- 95 -
Figure 2: Boxplot for Number of Syllables in Adjectives dataset.....	- 95 -
Figure 3: Boxplot for Number of Syllables in Verbs dataset.....	- 96 -
Figure 4: Boxplot for Number of Syllables in Adverbs dataset.....	- 96 -
Figure 5: Boxplot for Number of Syllables in Total dataset.....	- 96 -

## Chapter 1. Introduction

### 1.1 The purpose of this study

The purpose of this study is to examine the factors that drive lexical variation and change in one of the longest attested languages in the world: Greek. This thesis investigates the development of the Greek lexicon in the Post-classical period and documents a phase in the Greek language when the lexicon changed, often but not always with implications for the development of Modern Greek. In this first section, I define the terms of the study, outline its aims, and position it in the context of Greek linguistic studies.

#### 1.1.1 The Post-classical period

In this study, the ‘Post-classical period’ refers broadly to the period between 323 BC and AD 300. I follow Rafiyenko & Seržant (2020: 1) in setting the start date of this period as the beginning of the Hellenistic period, since this marks the beginning of the ascendancy of the *koine*, which is the form of Greek that is studied in this thesis. The end date, AD 300, is a date commonly adopted as marking the end of the Roman period, for example by Threatte (1980: xxvii), who details the following periodisation: ‘Archaic Period = ca. 725 – ca. 479 BC; Classical Period = ca. 479 – ca. 323 BC; Hellenistic Period = ca. 323 – ca. 31 BC; Roman Period = ca. 31 BC – ca. 300 AD.’<sup>1</sup> The datings of Threatte are followed throughout this thesis. Particular focus is placed on the Roman period, in particular the second century AD, which is characterised by important sociolinguistic factors such as the prescription of Atticism, the rapid geographic expansion of Greek, significant bilingualism, and the spread of Christianity.

Designations such as ‘Hellenistic’ and ‘Roman’ are arbitrary cultural labels, rather than static periods of the language with transitional periods between them. Moreover, it is generally difficult to accurately date linguistic changes, especially in ancient languages. This is because a change can only be certainly dated as early as its first appearance in the written record, which

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<sup>1</sup> Other possible end dates for the Post-classical period include the sack of Rome in AD 410, or the adoption of Greek as the official language of the Byzantine Empire and decline of contact between the Eastern and Western Empire around AD 600. For this, see Dickey (2023: 5).

is almost never when it first occurred, due to the conservatism of writing relative to speech. Accordingly, reference to wider, less exact time-frames than ‘Hellenistic period’ and ‘Roman period’ is sometimes required. This thesis examines both synchronic variation and diachronic changes. While it is not always obvious, or helpful, to separate the two, an attempt is made both to describe the linguistic situation in Post-classical Greek synchronically and to piece together a chronology of changes.

There has been a number of studies focussed, either in a large part or even wholly, on features of the Greek language of the Post-classical period. The authors of these studies generally highlight that this time period is significantly under-examined compared to other periods in the history of Greek.<sup>2</sup> However, this lacuna has been, and is being, rapidly remedied: the bibliography on Post-classical Greek is now extensive,<sup>3</sup> and the ‘Postclassical Greek Network,’ an international research group run from the University of Cologne, is dedicated to ‘bringing together scholars from all over the world who have been working on Postclassical Greek from different, but especially linguistic, perspectives.’<sup>4</sup>

### 1.1.2 The lexicon

Despite the progress described above, what is generally lacking from studies of Post-classical Greek is a detailed discussion of the lexicon.<sup>5</sup> There is, for example, no index entry for ‘lexicon’ in Horrocks’ linguistic history (2010), nor do we find one in Palmer’s *The Greek Language* (1980). This constitutes a significant gap in a diachronic investigation of Greek: to a Modern Greek speaker, the most striking difference between Ancient and Modern Greek, and the greatest hurdle in accessing earlier forms of the language, is the lexicon. The fact that the lexicon is perhaps the most important feature to be considered when reconstructing not only the linguistic evolution of a language, but even history itself, is highlighted by Chantraine (1968: v, emphasis my own): ‘[I]’*étymologie devrait être l’histoire complète du vocabulaire dans sa structure et son évolution et c’est pour l’histoire du vocabulaire, reflet de l’histoire*

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<sup>2</sup> See, among others, Rafiyenko & Seržant (2020: 1), who note that ‘while the Archaic and Classical periods have received most of the scholarly attention for centuries (for a synoptic overview see Giannakis, ed., 2014; Bakker, ed., 2010), **much less attention has been paid to the Greek of later periods**, that is to Postclassical Greek.’ (Emphasis my own).

<sup>3</sup> See especially Bentein & Janse (eds.) (2021); Browning (1983); Gignac (1976 & 1981); Holton *et al.* (2019); Horrocks (2010); Palmer (1980: 174–200); and Rafiyenko & Seržant (eds.) (2020).

<sup>4</sup> <https://postclassicalgreeknetwork.uni-koeln.de/>

<sup>5</sup> With the exception of Lee (1983 & 2018).

**tout court**, que je me suis donné le plus de peine.’ Nevertheless, in historical linguistics, as well as in linguistics more generally, the study of the lexicon has been typically neglected in favour of other linguistic features such as morphology and phonology.<sup>6</sup>

An important aim of this thesis is therefore to ascertain whether there are any principles of Greek lexical change that may be applied to the study of other languages, as we have relatively little systematic knowledge about the general tendencies of lexical change across languages. Most of the research on the lexicon has been focussed on the issue of lexical semantics, and, more recently, on cognitive lexicography.<sup>7</sup> Yet these are only some aspects of the study of the lexicon, and while the question of lexical semantics is frequently mentioned, this study also focusses on other lexical features, such as word-formation and borrowing. Vocabularies are open-ended, and this means that a study of the lexicon will always seem inexhaustible compared to studies of the morphology or phonology of a language, which are by nature self-contained. Therefore this study intrinsically cannot be comprehensive and regularly relies on the use of case-studies.

Another aim of this study is to explore ways of solving what Weinreich *et al.* (1968) call the *transition problem*, that is, how linguistic features move from one stage to another. Most lexical features, as this thesis shows, did not disappear, but were instead relegated to different contexts. I do not claim to provide an explanation for all lexical changes in the Post-classical period in this thesis, as there are always, in every language, fortuitous stylistic changes that cannot be fully explained. However, I aim to present a few ideas about the mechanisms of lexical change, and, following Sapir (1921) and, more recently, Kiparsky (2014), I talk about change with reference to ‘drift,’ which can be defined as incremental change with a persistent directional tendency occurring over long periods of time.

Finally, it is impossible to talk about the evolving lexicon without also looking very closely at the development of other linguistic features of the language, notably the phonology and morphology. Chapters 3 and 4 of this thesis therefore examine the relationship between the phonology and morphology of Greek and its lexicon, and categorise and evaluate the lexical changes that came about due to phonological and morphological reorganisations in the language (an outline of each chapter is provided in §1.3).

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<sup>6</sup> This is because of the more self-contained nature of phonology and morphology, as discussed below.

<sup>7</sup> See especially Geeraerts (2010) for a theoretical overview of lexical semantics, in particular cognitive semantics, which he calls (xiv) ‘the most productive framework in present-day lexical semantics.’ Other cognitive approaches include Geeraerts (2007) and Grondelaers *et al.* (2007). Other works on lexical semantics include Wilkins (1996) and Blank & Koch (1999).

### 1.1.3 The ‘continuity’ of the Greek language

With regard to looking at linguistic evolution in Greek specifically, a common approach has been to look at what sorts of features survive into Standard Modern Greek (henceforth ‘SMG’), in order to work backwards and investigate the *terminus post quem* of these features. This approach has been justified by highlighting the continuity of the Greek language, as, for instance, Chantraine (1968: v-viii) does:

Le grec présente une histoire continue et [...] le grec d’aujourd’hui sous sa forme démotique ou puriste continue directement le grec d’Homère et de Démosthène, la langue byzantine fournissant l’anneau qui unit les deux morceaux de la chaîne. Il va de soi qu’il ne pouvait être question de donner ici une idée de l’étymologie du grec moderne, enrichi d’emprunts de toute sorte: slaves, turcs, italiens et autres. En revanche, il pouvait être utile d’indiquer à l’occasion comment un mot ancien a subsisté en grec d’aujourd’hui.<sup>8</sup>

As Chantraine notes, it is helpful in a historical linguistic study to examine instances of survival of ancient words into SMG. He also points out the presence of borrowings, which influenced lexical development. Accordingly, this thesis focusses both on what I call ‘language-internal factors’ for lexical change (which can sometimes be traced from the *koine* to the present day) and ‘language-external factors’ (which include, but are not limited to, borrowings).<sup>9</sup> The temptation to trace the development of Ancient Greek words into Modern Greek is largely due to the high preponderance of words of Ancient Greek origin in the modern language. Mackridge (1987: 310) distinguishes five different categories of such words:

(i) Words which have remained unchanged in the language since ancient times (unchanged, that is in orthography, since almost all have slightly altered phonologically): these include most of the grammatical words such as *καί*, *τί*, *πῶς*, and

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<sup>8</sup> Others who have stressed the idea of the linguistic continuity of Greek include Horrocks (2010: xiii), Joseph (2009: 349), and Janse (2019: 183). This is also emphasised in modern lexicographical works: Babiniotis (2021: 182), in his description of the nine-volume ‘Dimitrakos’ dictionary (1933-1959), which covers the entirety of the Greek language, writes that ‘following the suggestion of G. Chatzidakis, Dimitrakos applied a single form to the interpretations of each entry, a fact that accentuated in the dictionary the unitary character of the Greek language and, then, the continuity and consistency (semantic, morphological, phonological, etc.) of the language tradition of Greek.’

<sup>9</sup> Indeed, the distinction between these two types of factors will be made throughout Chapters 3, 4, and 5.

ποῦ, but also many basic nouns and other words, such as ἄνθρωπος ‘person, man’, θάλασσα ‘sea’ [...];

(ii) Words which have altered slightly in morphology: e.g. παιδί ‘child’ (< παῖς, root παιδ-), τραπέζι ‘table’ (< τράπεζα);

(iii) Words which fell out of ordinary use but have been reintroduced more or less unchanged into the modern language (internal borrowings) such as βουλή ‘parliament’, πολίτης ‘citizen’, στοά ‘arcade’ (it is of course not always possible to define what is meant by the phrase ‘fell out of use’ since a large number of ancient words were kept half-alive by the learned tradition, even though the common people were ignorant of them);

(iv) Derivatives of AG [Ancient Greek] words which have passed through the popular tradition, such as νερό ‘water’ (< AG νερόν [ὔδωρ] ‘fresh [water]’), παίρνω ‘I take’ (< AG ἐπαίρω ‘I raise’), παράθυρο ‘window’ (< AG παρά ‘next to’ + θύρα ‘door’), πάω ‘I go’ (< AG ὑπάγω ‘I lead under; I go on’); and

(v) Derivatives of AG words which have been coined in modern times e.g. λεωφορεῖο ‘bus’ (< Attic λεώς ‘people’ + root φερ/φορ- ‘carry’), πολιτισμός ‘culture, civilisation’ (< πολίτης).

These categories of words are all discussed in some way throughout this study. In this thesis, SMG refers to the official standardised form of the Greek language spoken today (η κοινή νεοελληνική). This standardised form developed from the Hellenistic *koine*, the form of the language with which this thesis concerns itself. There also exist alongside SMG other modern dialects, which developed during the Medieval period and include the dialects of Pontus and Cappadocia; Cyprus and the south-eastern islands (Rhodes etc); Crete and the Aegean Sea; the northern islands (Lesbos etc); Thrace and Macedonia; Euboea, Attica and Megara; Epirus and the Ionian islands; the Greek dialects of Southern Italy.<sup>10</sup> As Mackridge (1987: 4) points out, ‘the ones that diverged furthest from the *koine* were those of the Pontic-Cappadocian group (formerly spoken in Asia Minor), and those of southern Italy (where there are still Greek speakers today).’ He also notes that, ‘considering the difficulties of access to some of the regions in which Greek was spoken, the dialects remained remarkably close to each other’. With the exception of Tsaconian, which is a descendent of an ancient Doric dialect spoken in an isolated region of the south-west Peloponnese, the modern dialects bear no relation to the

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<sup>10</sup> For this grouping, see Thumb (1914: 197).

classical dialects, which were generally lost in the written record in the Post-classical period, as I explain in Chapter 2. The modern Greek dialects occasionally preserve forms found in the *koine* which are not found in SMG, and for this reason reference is made to dialectal forms in addition to forms found in SMG wherever relevant throughout this thesis.

We find scholarly awareness of the continuity between the Hellenistic *koine* and the modern language as early as the twentieth century, for example in Thumb (1914: 195), who makes a note of the similarities between the *koine* and SMG, while also acknowledging that ‘the distance between the written texts, even those of the most vulgar character, and the spoken language that we can reconstruct is very considerable.’ Indeed, a problem with emphasising the continuity of the Greek language too heavily and attempting to track its evolution through time is that we are not comparing like with like: the written sources of the Post-classical period are very different as linguistic evidence from our SMG sources, both written and spoken. Another problem is that we do not have equal amounts of evidence for each intervening time period, and often have to make speculative leaps when trying to match a form found in the second century AD with a form found in SMG. Finally, equally problematic is the crucial question of what exactly we are trying to track. As Joseph (2006: 6) writes, ‘a language isn't a thing, and it makes little sense to imagine one English language evolving over many centuries, rather than different English languages existing at different stages.’ Needless to say, the same can be argued for Greek, yet the belief that Greek is a single continuous language has influenced both the scholarship on the historical development of the language and – as I argue in Chapter 2 through a description of trends of linguistic prescription – its actual linguistic development. Consequently, some scholars have questioned the approach of tracing the evolution of Greek as if it were linearly continuous, for example Babiniotis (2021), who gives a sense of how the question ‘how did the ancient lexicon develop into the modern lexicon?’ depends to some degree on the concept of the modern Greek lexicon: to what extent is it a construct? As this thesis shows, it is a mistake to study a language as if its end point is the contemporary language, and every linguistic change culminated in some way to the contemporary language. The large focus on metalinguistic commentary (see §1.2 below, which details the sources used in this study) serves in part to remedy this problem.

#### **1.1.4 The sociolinguistic context**



Any study of language change and variation is inevitably a sociolinguistic study. Indeed, throughout this study, the emphasis is not simply on how historical linguists can reconstruct the chronology of language change and categorise aspects of variation in Greek but also on how contemporary speakers of the language discussed and reacted to these changes and this variation. An important aim of this study is therefore to look at variation and change from the lens of a contemporary speaker. The reason for this is that a purely theoretical reconstruction of change and variation patterns does not give us a comprehensive overview of multiple levels of the language, but rather simply gives us an idea of the discursively constructed standard. It is necessary to reconstruct as many levels of the language as possible, as a ‘language’ is in fact a cluster of varieties in interaction. Such a study must therefore closely follow any testimony given by users of the language that has survived to us, as only then can we imagine that what we are reconstructing is a faithful representation of what was actually occurring in the language. Therefore, in this thesis I propose to look at the linguistic issues of the Post-classical period from both an emic and an etic perspective, that is, by looking for evidence of awareness of language variation from contemporary users of the language as well as looking for variation in areas of the language that modern frameworks consider important. In short, I investigate linguistic variation and change in terms of what was meaningful for a contemporary user of the language.

The texts selected for this thesis therefore provide data for a sociolinguistically-orientated analysis of Greek language of the Post-classical period. The linguistic features found in the papyri and *Colloquia of the Hermeneumata Pseudodositheana* especially (see §1.2 below) have frequently been referred to as reflecting the ‘spoken language’, the ‘vernacular’, or ‘everyday spontaneous speech.’ This highlights the main difference between modern and historical sociolinguistics, namely, the type of data available in these fields: while modern linguists are able to use a range of different sources (recordings of speech, newspapers, books etc.) from which to extrapolate linguistic features, historical linguists only have access to written sources.<sup>11</sup> We can therefore only make observations about variation in written, and not spoken, language, as the former does not straightforwardly map on to the latter. This is because writing is naturally more conservative than speech, meaning both that new developments in

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<sup>11</sup> The written sources to which historical linguists have access comprise literary texts which have come down to us through the manuscript tradition (these have the additional limitation that transmission of texts often includes a process of classicisation, which eliminates non-standard features that might have reflected sociolinguistic variation), epigraphic sources, and papyri (although not usually corrupted by later alterations these have the limitation of often suffering damage done by the passage of time).

speech may not be reflected in writing until a while after they develop, and also that writing does not always reflect features such as spoken idioms.<sup>12</sup>

However, although the patterns found in the written language are not identical to those in the spoken language, writers also produce conscious and unconscious linguistic variants, some of which are conditioned by a range of circumstances and social norms.<sup>13</sup> We see these variations in the sources selected for this study, with the *Colloquia of the Hermeneumata Pseudodositheana* and the papyri providing evidence for non-native Greek writers, and the lexica, in highlighting key linguistic differences between Classical Attic and *koine* Greek, providing evidence for the language of writers of different periods, geographical locations, and social classes. It should be noted, however, that reference to ‘everyday’ language throughout this thesis refers principally to the everyday language of the educated Greek male elite. This is because the vast majority of our texts, including the texts examined in this study, were written by this small yet dominant social class.

## 1.2 The sources

There is a large variety of texts from the Post-classical period, written in different registers, genres and styles,<sup>14</sup> and therefore preserving different linguistic forms: these include literary texts (for example, poetry, historiography), para-literary texts (for example, medical, legal and military manuals), works of philosophy and rhetoric, commentaries on ancient texts, and documentary texts. However, this thesis aims to investigate, as far as it is possible, the spoken, or everyday language. Naturally, this is subject to significant variation, both synchronic (register, dialectal, social) and diachronic. With this aim in mind, I have chosen to look at the following texts: the Atticist lexica of the second century AD (described in §1.2.1), the

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<sup>12</sup> See Adams (2013: 25). These limitations prompted modern sociolinguists such as Labov (1994: 11) to refer to historical linguistics as the art of making use of ‘bad’ or ‘imperfect’ data.

<sup>13</sup> See McDonald (2015: 37).

<sup>14</sup> For these three terms, I follow the definitions of Biber & Conrad (2009: 2): ‘The register perspective combines an analysis of linguistic characteristics that are common in a text variety with analysis of the situation of use of the variety. The underlying assumption of the register perspective is that core linguistic features like pronouns and verbs are functional, and, as a result, particular features are commonly used in association with the communicative purposes and situational context of texts. The genre perspective is similar to the register perspective in that it includes description of the purposes and situational context of a text variety, but its linguistic analysis contrasts with the register perspective by focusing on the conventional structures used to construct a complete text within the variety, for example, the conventional way in which a letter begins and ends. The style perspective is similar to the register perspective in its linguistic focus, analyzing the use of core linguistic features that are distributed throughout text samples from a variety. The key difference from the register perspective is that the use of these features is not functionally motivated by the situational context; rather, style features reflect aesthetic preferences, associated with particular authors or historical periods.’

documentary papyri of the first to fourth centuries AD (§1.2.2), the New Testament (§1.2.3), and *Colloquia of the Hermeneumata Pseudodositheana* of the second to fourth centuries AD (§1.2.4), with the conviction that these can shed new evidence on the development of Post-classical Greek.<sup>15</sup> This section provides a description of each of these sources, and an explanation of why they were used.

### 1.2.1 The Atticist lexica

First and foremost, this study looks closely at the evidence for lexical change provided by our best sources of linguistic variation and change in the Greek lexicon: the works of the major Atticist lexicographers, Phrynichus, Moeris, and the Antiatticist.<sup>16</sup> These sources are useful as they provide us with direct metalinguistic commentary on the language of the time and highlight features that can only be inferred from the other sources that classical linguists have used in the past for similar studies, in particular the papyri.<sup>17</sup> As La Roi (2022: 199) has rightly pointed out, lexica have been ‘increasingly studied in the field of *ancient scholarship* but studied less within historical linguistics.’ His paper answers Tribulato's (2019: 243) call to change this narrative, and makes use of the glosses of the lexicographers as evidence for linguistic change. This is the aim of this thesis too. The study of the lexica through the lens of

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<sup>15</sup> These are not the only sources from which we might hope to gather information about ‘real’ language. Brixhe (2010: 236) for example suggests that inscriptions, notably those concerning ‘the most modest documents (epitaphs, confessions, private dedications)’ may reflect the language of the ‘real people’. However, the scope of this thesis limits the range of documents that could be examined.

<sup>16</sup> In addition to these three, we have surviving Atticist lexical works from the same period from the following authors: Aelius Dionysius, Pausanias, Philemon, and Pollux. I do not look at Aelius Dionysius due to the complex manuscript tradition of the lexicon (it was extracted from Eustathius’ Homeric commentary, and some of its contents are questionable). Pausanias’ lexicon, which is very closely related to that of Aelius Dionysius’ is also found in Eustathius’ commentary, and is also excluded as ‘one cannot assume that everything that looks like a citation from Aelius Dionysius’ or Pausanias’ lexica in Eustathius’ commentary is in fact a citation from these lexica.’ Strobel (2011: 66). Philemon’s lexicon, composed in iambic trimeter, is very incomplete, with many glosses in truncated form. Finally, Pollux, who has been shown to draw many of his glosses from Phrynichus’ *Ecloga*, did not compose a lexicon but rather an onomasticon, which contains both linguistic and encyclopaedic information, and is less useful for the purposes of this thesis. Other existing lexica, such as those of Herennius Philo (whose lexicon was previously known as the Ammonius lexicon) are not mentioned, as the lexicon itself is not Atticist, and would not fit into this content. In my choice of lexica to examine, I follow the reasoning of Strobel (2011).

<sup>17</sup> As Dickey (2016: 244) points out, ‘the usual way to find out what really happened in post-Classical Greek is to look at papyrus documents, as these are far closer to everyday conversational language and so give us a chance to see various types of changes taking place.’ However, the unique merits of the works of the grammarians and lexicographers for linguistic analysis of ancient languages has recently been emphasised with reference to Latin linguistics by Pultrová (2021: 112, 131), who takes the comments of the late Latin grammarians to be representative (or, at least, the best representation modern linguistics can hope to obtain) of what native speakers of Latin would have thought about aspects of the language (in the case of that particular article, about suppletion).

historical linguistic research is greatly facilitated by the resources of the ‘PURism in Antiquity’ (PURA) project, which aims to investigate Ancient Greek linguistic purism through the analysis of the Atticist lexica.<sup>18</sup> In particular, the *Digital Encyclopedia of Atticism* (Tribulato ed. (2022–)), a web-based platform created by PURA and containing detailed commentary about lexicographic entries and the transmission of the texts, was consulted throughout this thesis.

This thesis focusses primarily on the lexica, and secondarily on the other sources. This is because, firstly, there has been relatively little scholarship on the lexica as a source for sociolinguistic study, and I have found that they can provide useful evidence for the way in which ancient writers viewed language change and variation. Secondly, they are more concise and self-contained than the other sources, which facilitates close reading. Finally, the lexica provide us with data that the papyri, *Colloquia of the Hermeneumata Pseudodositheana*, and other texts of this period cannot provide: an overview of the language from an emic perspective. One of the problems that historical linguists face when looking to trace the development of Greek in the Post-classical period is that, while different types of texts, particularly the documentary papyri, provide evidence for variation and change in the language, this evidence is inconsistent, often due to the varied authorship of these texts. The lexica are particularly useful for a linguist as they provide direct linguistic commentary on the language as it was viewed by at least some of the contemporary Greek-speaking elite.

The lexica contain alleged *koine* Greek forms, which reflect something close to the contemporary language, and which are contrasted to their also alleged fifth-century BC Attic equivalent.<sup>19</sup> The glosses consist of a mixture of phonological, morpho-syntactic, and lexical variants, and provide us with a snapshot of second century AD *koine*, and a glimpse into lexical variation and change in everyday Greek. The Atticist lexica were written in the second and third centuries AD, after which period ‘the preoccupation with writing like a fifth-century Athenian receded, and other types of lexicon became more popular.’<sup>20</sup>

The following four sections provide the background of the lexicographers whose works are used in this study – Phrynichus (§1.2.1.1), Moeris (§1.2.1.2), and the Antiatticist (§1.2.1.3) – and an overview of what sort of linguistic information these texts provide (§1.2.1.4).<sup>21</sup>

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<sup>18</sup> <https://pric.unive.it/projects/pura/home>.

<sup>19</sup> The language of the lexica, and the Atticist movement are discussed in detail in Chapter 2.

<sup>20</sup> Dickey (2010: 17).

<sup>21</sup> I provide a more detailed introduction to these texts than to my other sources, since the lexica have been less commonly used in the linguistic study of Greek.

### 1.2.1.1 Phrynichus

The Atticist lexicographer Phrynichus was likely from Bithynia.<sup>22</sup> We know from the ninth century writer Photius (*Bibliotheca* 158) and the Suda (Φ764) that he lived in the reign of the emperors Marcus Aurelius and Commodus (161–192). Phrynichus is the author of two surviving Atticist lexica: Ἐκλογή Ἀττικῶν ῥημάτων καὶ ὀνομάτων (*Ecloga*) and Σοφιστικὴ προπαρασκευή (*Praeparatio Sophistica*). Unlike the *Ecloga*, the *Praeparatio Sophistica* does not survive in full. It was probably a long ‘detailed and discursive treatise on rhetorical style’<sup>23</sup> (the Suda speaks of 47 books, and Photius of 37), but it is preserved today only in an epitome, fragments, and a summary by Photius. Due to its fragmentary nature and the fact that it is more concerned with commenting on phrases than on individual words (often without providing *koine* alternatives, and therefore of less use to this study) the *Praeparatio Sophistica* does not form part of the key corpus of texts for this thesis, although reference will be made to it where relevant.

The *Ecloga*, however, contains 411 glosses of Attic words and phrases and their equivalents in the *koine*.<sup>24</sup> Vessella (2018: 20) suggests that it was written in the early 160s, while Nächstler (1908) and Fischer (1974) both posit a date of AD 178. A typical entry from this work comprises a condemnation of a head word or phrase from the *koine*, followed by the approved Classical Attic equivalent (or what Phrynichus believes to be the correct Attic equivalent; he occasionally gets the Attic form wrong, as do the other lexicographers). The peculiarity of the *Ecloga* compared to the other lexica is that, other than a few sequences of glosses in alphabetical order, some of which, as Strobel (2011: 106) notes, are paralleled in the consistently alphabetised Antiatticist, it does not appear to have been alphabetised.<sup>25</sup> There are three principal editions of the *Ecloga*: two from the nineteenth century – Lobeck (1820) and Rutherford (1881) – and a more modern, updated version by Fischer (1974), which is the one

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<sup>22</sup> While Suda (Φ 764) suggests that Phrynichus was from Bithynia, Photius claims he was an Arab (*Bibliotheca* 158). As Roumanis & Bentein (2023: 8) note, for Swain (1996: 55) these two different origins are not contradictory, given that sophists of his day would have ‘moved around a good deal’.

<sup>23</sup> Tribulato (2021: 171).

<sup>24</sup> As edited by Fischer (1974), who suggests that the *Ecloga* as we have it is complete and unabridged, and consisted of two books (the first book contains glosses 1–229, the second glosses 230–411), not three, as previously claimed. Tribulato (2021: 171) suggests that ‘the first word of its title, Ἐκλογή, evokes a selective process which may well have involved the abridgement of an originally longer work.’

<sup>25</sup> Many glosses are shared in the various lexica, but as certain dates have not been established for any of them, it is difficult to prove who was quoting whom (and indeed, some glosses may have been derived from earlier works, which may no longer survive).

used in this thesis (when referring to glosses I therefore go by the numbering assigned by Fischer, which differs slightly from that of Lobeck and Rutherford).<sup>26</sup>

### 1.2.1.2 Moeris

Other than through the association of his name with the lexicon, Moeris is unknown. His lexicon, comprising of 920 glosses, has been demonstrated to rely on glosses by Phrynichus, and can be dated to third century AD.<sup>27</sup> Moeris' glosses contrast the forms used by the Ἀττικοί with those of the Ἑλληνας (the forms used by the latter are also sometimes simply described as κοινόν). Sometimes, a distinction is simply made between the forms used by two different authors, as in this gloss, where a contrast is made between what Antiphon writes and what Thucydides writes.<sup>28</sup>

(1) λιθουργούς **Θουκυδίδης** (4, 69; 5, 82)· λιθοκόπους **Ἀντιφῶν**. [Moeris λ27]

Thucydides (4, 69; 5, 82) [says] λιθουργούς ('stone-cutters'); Antiphon [says] λιθοκόπους.<sup>29</sup>

Moeris' glosses are more concise than Phrynichus' and many of them are provided along with a quote or an author's name, as evidence for a particular lexical or grammatical point. Moeris therefore takes a more researched and sophisticated, and slightly less prescriptive approach than Phrynichus, insofar as his glosses are often substantiated. Moreover, Moeris usually avoids judgmental language, such as ἀδόκιμον ('not approved/disreputable'), ἄηθες ('unusual'), ἀμάρτημα ('a fault'), οἱ ἀμαθεῖς ('the uneducated') when discussing *koine* forms.<sup>30</sup>

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<sup>26</sup> Lobeck's commentary, as Roumanis & Bentein (2023: 7) point out, 'retains some value in its extensive notes and insightful commentaries.' Rutherford's commentary, written in a tone which reflects the scholar's 'evident grumpiness' (Dickey (2007: 31)) is more interesting taken as commentary on the background of the editor (who believed, much like the lexicographers, that the *koine* was sullied and impure), than as a scholarly aid to the ancient text.

<sup>27</sup> Tribulato (2021: 173).

<sup>28</sup> Strobel (2011: 180-181) has counted the number of times that Moeris quotes different authors when recommending a usage: Plato (24 times), Aristophanes (17 times), Thucydides (16 times), Xenophon (7 times); Demosthenes (5 times); Homer (twice); Euripides (once); Antiphon (once), Hypereides (once), and Isaeus (once).

<sup>29</sup> All translations throughout this thesis are my own unless otherwise noted. The use of bold characters for the emphasis of phrases, words or letters is my own throughout this thesis. For ease of cross-referencing, Greek quotes and examples are numbered throughout the thesis.

<sup>30</sup> These are all found in Phrynichus *Ecloga* 3, 25, 35, 103 *et passim*.

Several centuries later, Photius (*Bibliotheca* 157) suggests that the alphabetical order of Moeris' lexicon was original (κατὰ στοιχεῖον δὲ καὶ τοῦτο τὸ πονημάτιον).<sup>31</sup> This suggests that this text was meant as a guide for users of the language, to be used similarly to a dictionary, and contrasts with Phrynichus' *Ecloga*, which appears to have been composed to flaunt its author's erudition, rather than as a real guide to writing. Moeris' lexicon has been edited comprehensively by Hansen (1998), which is the edition used in this study.

### 1.2.1.3 The Antiatticist

From the anonymous author dubbed the 'Antiatticist' we have a lexicon of 847 glosses. The 2015 edition by Valente provides the most up-to-date edition of the text, and is the one consulted in this thesis. The author of the lexicon is unknown, and the text was anonymously transmitted under the title ἄλλος ἀλφάβητος. Valente (2015: 59) has shown that the alphabetic arrangement of the lexicon is original, and has demonstrated that it should be dated before the composition of the second book of the *Ecloga* by Phrynichus (AD 176–180). He shows that the *terminus post quem* should be given by the lexicon of Herennius Philon (ca. AD 100).

The lexicon of the Antiatticist comprises glosses of words rejected by the other lexicographers, along with a reference to an Attic literary text containing this word, as well as glosses of *koine* words next to their Attic equivalents. Much like Moeris and Phrynichus, the lexicon is prescriptive in tone, even though its alleged aim is to contradict his contemporaries' prescriptive works. As Valente (2015: 43) points out, despite his pseudonym, the Antiatticist did not intend to deny the Atticist ideal of purism, but instead had as his aim 'to demonstrate that many words rejected by the most rigorous Atticists because of their usage in the common language (συνήθεια) were to be found in some literary sources of the past.' Nevertheless, in many cases he follows his contemporaries in rejecting the same 'un-Attic' forms (for example Antiatticist γ4, in which he rejects the same form, γενέσια ('birthday') as Phrynichus does in *Ecloga* 75). Swain (1996: 53) too comments on how 'Antiatticist' is 'something of a misnomer.' As Tribulato (2021: 178) summarises, 'the Antiatticist is not anti-Atticist: it fully partakes of the Atticist climate in that it engages with the question of linguistic correctness (*hellenismos*) and its models, thus implicitly endorsing the need for a linguistic standard based on a conscious relation with Classical Greek.' The Antiatticist was driven by the same desire

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<sup>31</sup> Ironically, considering that Photius must have read the work in an attempt to perfect his Classical Attic Greek, the diminutive form πονημάτιον is not classical!

for language purity as Phrynichus, but had different rules on how to achieve it. His work is therefore a useful source for this thesis as his glosses add further detail to the language considered acceptable (or not) in the Post-classical period.

#### 1.2.1.4 The Atticist lexica: types of glosses

In order to ascertain the nature of the evidence that the Atticist lexica can provide about lexical change and variation in the Post-classical period, a database of the corpus – which comprises Phrynichus' *Ecloga*, Moeris' Lexicon, and the work of the Antiatticist – was created, and all 2,178 glosses labelled according to what sort of linguistic information they provide. This information is provided in Table 1, below. Occasionally the lexicographers themselves explain what type of gloss they are providing, for example:

(2) κράστις διὰ τοῦ κ Ἀττικοί· γράστις διὰ τοῦ γ Ἑλληνας. [Moeris κ14]

Attic speakers [say] κράστις ('grass') with a κ; Greek speakers [say] γράστις with a γ.

Here, Moeris specifies that he is drawing attention to the phonological difference between the 'Attic' and 'Greek' version. In most cases, however, the type of gloss is not specified by the author. For instance, in the following similar example of variation between a voiced and unvoiced phoneme, no reference to the specific difference between two glosses is made:

(3) ἐνώτια Ἀττικοί· ἐνώδια Ἑλληνας. [Moeris ε25]

Attic speakers [say] ἐνώτια ('earrings'); Greek speakers [say] ἐνώδια.

Therefore, the table below reflects both linguistic features that the lexicographers highlight, and, when they do not make mention of what type of contrast they are making, the difference between the two glosses established through research using the *Thesaurus Linguae Graecae* (TLG). Some labels are subcategories of others, for example, nominal gender, which can be both a feature of inflectional morphology (as nouns and adjectives decline by gender) and a feature of derivational morphology (as gender affects the derivative suffixes and formation of a noun or adjective). Seemingly superfluous labels were included to reflect any prominent or frequently occurring types of glosses (confusion of gender is a common type of gloss). In many instances, it was not obvious how best to label a particular gloss, as it could fall under more than one category. For example, Phrynichus writes:



(4) τὴν λιμὸν Δωριεῖς, σὺ δὲ ἄρρениκῶς τὸν λιμὸν φαθί. [*Ecloga* 158]

Doric speakers [say] τὴν λιμὸν ('hunger' (feminine)), but you [i.e. the Atticising reader] should say τὸν λιμὸν in the masculine.

This gloss could be labelled both as 'Rejection of non-Attic form' and 'Morphological variants (gender).' In cases like these, the approach taken was to look at each individual case and label it in a way that was thought to be the best and that most representatively characterised the gloss (here, the chosen label was 'Rejection of non-Attic word', as Phrynichus himself specifies that the form is a Doric one). While this approach is to some extent subjective, the aim in labelling these glosses was simply to provide a general overview of what sort of linguistic features, and at what frequency, the lexicographers describe. For an alternative way of categorising the glosses and slightly different but overall comparable figures for Moeris and the *Ecloga*, see Roumanis & Bentein (2023: 10) – where our figures differ, this appears to be due to our different choices of linguistic categories and double assignment on the part of Roumanis and Bentein of glosses spanning two linguistic domains (vs. my method of choosing one, detailed above).

Type of Gloss	Antiatticist	Moeris	Phrynichus	Total
Rejection of Post-classical word <sup>32</sup>	22	113	106	241
Rejection of non-Attic word <sup>33</sup>	12	42	42	96
Defence of Post-classical/non-Attic word <sup>34</sup>	54	0	0	54
Morphological variants (inflectional)	77	179	58	314
Morphological variants (derivational)	62	53	17	132
Morphological variants (gender)	13	36	15	64
Irregular <sup>35</sup> vs regular verb	8	6	0	14
Irregular vs regular adjective	7	11	10	28
Irregular vs regular adverb	4	10	2	16
Prefix variation	28	22	21	71
Rejection of compound	2	9	13	24
Syntactic variants <sup>36</sup>	20	21	18	59

<sup>32</sup> Rejection of forms and semantic usages attested from the Hellenistic period onwards only, e.g. Moeris π67.

<sup>33</sup> A word from a dialect other than Attic, e.g. *Ecloga* 178.

<sup>34</sup> Defending forms argued to be Post-classical/non-Attic by other lexicographers and promoting them over an 'Attic' form, e.g. Antiatticist α68.

<sup>35</sup> Or defective, e.g. Moeris ω12.

<sup>36</sup> Predominantly prescribing the case that should follow certain verbs and prepositions, e.g. Moeris ε37, ε38.

Accentuation	0	17	0	17
Phonological/orthographic variants <sup>37</sup>	13	90	43	146
Semantic variants	82	55	35	172
Borrowing	7	1	3	11
Definition of lexeme/phrase <sup>38</sup>	80	125	0	205
Lexemes of different registers/genres <sup>39</sup>	11	5	16	32
Generalisation/derivation of specialised form <sup>40</sup>	41	27	9	77
‘Attic’ gloss + reference (no <i>koine</i> equivalent) <sup>41</sup>	257	26	0	283
Erroneous/incomplete gloss <sup>42</sup>	47	72	3	122
<b>Total</b>	<b>847</b>	<b>920</b>	<b>411</b>	<b>2178</b>

Table 1: Types of glosses in the Atticist lexica

## 1.2.2 The documentary papyri

Papyrological sources are plentiful, and have survived mainly in Egypt, since papyrus is perishable in humid climates. The papyri are an excellent source of evidence for the sub-literary Greek of the Post-classical period, since they have been preserved in great numbers, can often be dated (either by their palaeography or because the writer has written the date on the document), and are contextually diverse. Moreover, papyrus texts are accessible through the Papyrological Navigator, which makes it possible to survey a large number of texts and gather enough data to produce reliable linguistic results.<sup>43</sup> Many different texts were written on papyrus: contracts, letters, lists, literary works and petitions are among the most common genres. Private documents such as letters in particular are thought to reflect something close to everyday language, not only of the elite, who wrote and received letters, but also of the

<sup>37</sup> Taken together, as phonology cannot always be mapped directly onto orthography (see Chapter 3).

<sup>38</sup> ‘Attic’ words which *koine* speakers no longer understand and for which they need a definition, e.g. Moeris φ10.

<sup>39</sup> E.g. Moeris ζ4 in which he rejects μίμησις (‘imitation’) which is Attic but acquires a specialised meaning in literary criticism; Moeris is perhaps warning his reader of the incorrect use of this word in certain genres or registers. Also of glosses signalling the use of a word by a specific type of speaker, e.g. children (e.g. Antiatticist κ13).

<sup>40</sup> Including derivation from that form e.g. Moeris λ17; Antiatticist α151, ζ10.

<sup>41</sup> This label is used of glosses which *only* involve an ‘Attic’ word + reference of author(s)/work(s) where the word can be found, with no *koine* equivalent or other comment (e.g. Antiatticist α1, α2, Moeris ι8).

<sup>42</sup> Either an error in labelling a particular form as Attic/*koine* (e.g. because both are equally well attested in the Attic canon) or an incomplete gloss (e.g. Antiatticist α65, α148, δ2, μ5).

<sup>43</sup> <https://papyri.info/>

illiterate, who had their letters written for them by scribes.<sup>44</sup> In this study, the documentary papyri are consulted mainly through the use of word lists and search tools.<sup>45</sup>

### 1.2.3 The New Testament

The New Testament is a useful source for evidence of features of Post-classical Greek. It was written and compiled in the late first/second century AD and its language has often been said to represent ‘an excellent example of contemporary *koine*.’<sup>46</sup> For this reason, dictionaries of New Testament Greek (including Bauer (2000)) are consulted throughout this thesis. Moulton & Milligan's *Vocabulary of the Greek Testament, illustrated from the papyri and other non-literary sources* (1929) (henceforth ‘*Vocabulary*’) is also consulted for evidence of the *koine* in ‘everyday’ texts. The Septuagint, the third century BC Greek translation of the Hebrew Bible, is also consulted for evidence for Hellenistic Greek. Moreover, the Septuagint and New Testament both provide us with a large set of word tokens, enabling us to investigate how often a certain word is used compared to another, which is useful for the analysis of diachronic changes.

### 1.2.4 The *Colloquia of the Hermeneumata Pseudodositheaana*

Like other types of ancient literature, ancient bilingual dictionaries survive in two forms: as (largely) intact works via the medieval tradition and as small fragments of ancient copies.<sup>47</sup> The dictionaries preserved in medieval manuscripts include two very large works, the Latin–Greek glossary of pseudo-Philoxenus (c. 11,000 entries) and the Greek–Latin glossary of

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<sup>44</sup> Cf. Bentein (2019: 147), Dickey (2011: 149), and Dickey (2004: 506).

<sup>45</sup> The principal resources for this are the Papyrological Navigator (<https://papyri.info/search>), the ‘Wörterlisten aus den Registern on Publikationen griechischer und lateinischer dokumentarischer Papyri und Ostraka’ (<https://papyri.uni-koeln.de/papyri-woerterlisten/>) and Trismegistos (<https://www.trismegistos.org/>).

<sup>46</sup> Rafiyenko & Seržant (2020: 3).

<sup>47</sup> Smaller glossaries dating between the first century BC and the sixth century AD are found on papyrus fragments. Most of these have been included in two volumes of bilingual glossaries by Kramer (1983; 2001) although these contain almost exclusively (with the exception of *P.Paris. 4 bis*, which is discussed in §3.4.3) glosses of archaic and technical words such as the names of the winds and stars (e.g. *P.Oxy. 46 3315*; *P.Oxy. 78 5162*) and fish (e.g. *P.Oxy. 33 2660*; *P.Oxy. 33 2660a*), Greek divinities and their Roman counterparts (*P.Mich. inv. 2458*), or running vocabulary lists (with translations in Attic Greek) for extracts from Virgil (*PSI. 7 756*; *P.Oxy. 8 1099*; portions of *P.Ness. 2 1*). These are therefore not of great use to this study.

pseudo-Cyrrillus (c. 15,000 entries), as well as many smaller glossaries, most of which are published in the *Corpus Glossariorum Latinorum* (CLG, Loewe & Goetz 1892).<sup>48</sup> The two large glossaries are mostly useful for understanding rare and archaic words, but other parts of the CLG, notably the *Colloquia of the Hermeneumata Pseudodositheana* reflect something closer to everyday language.

The *Colloquia of the Hermeneumata Pseudodositheana* are the best-known elements of the *Hermeneumata Pseudodositheana* collection which forms volume three of the CLG. They have been re-edited by Dickey (2012b; 2015), and her editions are the ones consulted in this thesis. They consist of six descriptions of daily life in the Roman world (usually containing a preface, morning scene, school/lunch/bathing scene), with parallel texts in Latin and Greek. The *Colloquia of the Hermeneumata Pseudodositheana* can be dated to between the second to fourth centuries AD,<sup>49</sup> can be assigned to the contemporary spoken register,<sup>50</sup> and contain a wide range of everyday words (e.g. foodstuffs). They are a useful source for this thesis as they show evidence for a significant amount of borrowing, language-internal lexical suppletion, and derivation and adaptation of forms, all of which are important linguistic features that are discussed in this study.

### 1.3 Thesis Structure

The purpose of this study is both to consider the synchronic variation and diachronic changes that occurred in the Post-classical period, and to establish the principles driving these changes. Using evidence from the sources described above, I argue in this thesis that the reasons for lexical change in the Post-classical period include the following: phonological changes, and the subsequent loss of plausible lexemes and innovation of new ones; morphological changes,

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<sup>48</sup> Dickey (2010: 20) suggests that there would have existed many more of these glossaries, but these do not survive via the Greek manuscript tradition, because after the fall of the Western Roman Empire the Greeks stopped learning Latin and therefore stopped copying Latin dictionaries. The ones we do have survive via the Western manuscript tradition, as they were used and adapted by Latin speakers wanting to read the New Testament and other Greek texts.

<sup>49</sup> Dickey (2012b: 51).

<sup>50</sup> As the titles and prefaces indicate, the *Colloquia of the Hermeneumata Pseudodositheana* are useful for learning to speak the languages. The language belongs to the unstigmatized, not vulgar language, appropriate to use in a school setting. However, Dickey advises caution: ‘Indeed, much contemporary conversational language can be found in the *Colloquia*, but they are far from pure examples of non-literary Latin and Greek, for they contain literary features like Greek optatives, Atticizing spellings... Some of these features were so archaic that they might have been incomprehensible if actually used in casual conversation in the later empire; clearly some of the writers involved in the production of the *Hermeneumata* had an interest in archaic literary language that occasionally trumped their interest in the contemporary conversational idiom.’ (Dickey 2012b: 48).

and subsequent developments in word-formation and replacement of morphologically complex forms; and cultural changes, which include the Atticist movement, the spread of the *koine* in the context of the Roman Empire, and Christianity. I present my findings in four chapters.

In Chapter 2 ('Atticism and the *koine*'), I describe the forms of Greek that I study throughout this thesis, and explain why the Post-classical period (and in particular the second century AD) was an important time for the development both of the Greek language, and of writers' and speakers' perceptions of language. This chapter examines the impact of Atticism on linguistic variation in the Second Sophistic, and investigates whether this movement had any lasting effect on the Greek lexicon.

The focus of the following chapters (3, 4 and 5) moves from a synchronic perspective (a description of Greek in the second century AD) to a more diachronic perspective (the evolution of the Greek lexicon from the Classical to the Post-classical period). In Chapter 3 ('Phonology and the Lexicon'), I describe the restructuring of the phonology of Greek and its wide-reaching impact on the development of the lexicon, notably with regards to word length. Chapter 4 ('Morphology and the Lexicon') examines the evolving morphological system of Post-classical Greek and the effects of this evolution on word-formation. Finally, in Chapter 5 ('Cultural Factors of Lexical Change'), I examine the impact of further cultural and non-linguistic factors (the growth of Christianity, the absorption of Greece into the Roman Empire, and the rapid expansion of the *koine*) on the development of the Greek lexicon. A concluding chapter (Chapter 6) presents the findings of this thesis, and suggests avenues for further research.

## Chapter 2. Atticism and the *koine*

It is impossible to investigate lexical change and variation in the Greek of the Post-classical period without discussing the historical background of the *koine* and of the Atticist movement, not least because the latter is responsible for so much of the lexical variation that we find in this period. This chapter reviews the scholarship on the role of the Ancient Greek dialects in the development of the *koine* and on the issue of Atticism. It examines to what extent there was a plurality of voices in the Second Sophistic, and assesses the success of the promotion of Atticism by the lexicographers. Atticism is a feature of a relatively short period in the history of the Greek language. However, it is also a symptom of a general anxiety of influence, which is referred to in the modern language as *αρχαιολατρεία* or *προγονοπληξία*. Consequently, this chapter examines the idea that what makes the Greek language so distinctive is the fact that, whatever the period, contemporary Greek is in a constant state of cohabitation with the classical language. The main aim of this chapter is to investigate what sort of influence the Atticist movement of the Second Sophistic had on the Greek lexicon, and to what extent this influence can be described a factor for lexical variation and change.

The focus of the first half of this chapter is on describing the Greek language of the Post-classical period. In the first four sections, I analyse the evidence that the Atticist lexicographers provide on the linguistic issues of the *koine*, Atticism, diglossia, and speakers' attitudes towards language variation in the Second Sophistic, with a view to describing the linguistic backdrop of the period. First, in §2.1, I define and describe the emergence of *koine* Greek, and its relationship with the other dialects, notably Attic and Ionic. Next, in §2.2, I look at the Atticist movement and the Second Sophistic. In §2.3, I investigate how Greek speakers of the Post-classical period referred to the language they were using, focussing in particular on the terms *Ἀττικοί*, *Ἕλληνες* and *κοινόν*. In §2.4, I assess whether the Second Sophistic can be described as a period of diglossia.

In the second half of this chapter I investigate the extent to which the Atticist movement can be said to have had a lasting linguistic effect on Greek. First, in §2.5, I consider the audience for whom these lexical aids were written, in order to find out what sort of Greek speakers would have been influenced by Atticising standards. In §2.6, I consider attitudes towards variation and change in the Second Sophistic, and, in §2.7, I compare the linguistic ideology of the Second Sophistic with parallel situations in fourteenth-century Italy and nineteenth-century Greece. Finally, in §2.8, I provide a short conclusion to this chapter.

## 2.1 The *koine*

### 2.1.1 Historical background of the *koine*

In their works, the lexicographers contrast the linguistic forms used by the Ἀττικοί, the users of the classical Attic dialect that was no longer spoken but was much admired at their time, with equivalent forms in the κοινόν (*koine*), which was purportedly the language used by themselves and their elite contemporaries. It is therefore important to first unpack the idea of the *koine*. The term '*koine*' is notoriously used by classical scholars in a vague and inexact way, due to its multifaceted and complex nature. Like all languages, the *koine* must first be examined in terms of its historical and cultural context. This is an insight owed to modern sociolinguistics: 'we cannot take the notion of "language X" for granted, since this in itself is a social notion in so far as it is defined in terms of a group of people who speak X.'<sup>51</sup>

A common dialect (κοινή διάλεκτος) began to emerge in Athens over the course of the fifth century BC as an expanded and adapted form of the Attic dialect, heavily influenced by Ionic morphology and vocabulary. The reason why Attic was the parent of this common dialect was because of its 'position as the most prestigious among the Greek dialects,'<sup>52</sup> which was itself due to the political power that Athens exerted in the First Maritime League, and subsequently to the fact that Athens became the centre of commerce and culture in the Greek-speaking world. The particularly strong influence of Ionic was due not only to the close genetic relationship between Attic and Ionic, but also to the strong Ionian presence in Attica, as well as to the early onset of Athenian administration in much of the Ionic-speaking territory.<sup>53</sup> This new variety of Attic (frequently termed 'Großattisch' in scholarship)<sup>54</sup> was adopted in the Macedonian court, possibly as early as the fifth century BC.<sup>55</sup> As Colvin (2009: 42) notes, 'the critical period in which the groundwork was laid for a new political *koine* was the time between the Persian wars and the Macedonian hegemony – precisely, in fact, the period which has traditionally been designated "classical" in the West.'

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<sup>51</sup> Hudson (1996: 3).

<sup>52</sup> Bubeník (1993: 11).

<sup>53</sup> Horrocks (2010: 77).

<sup>54</sup> Bubeník (1989: 175); Horrocks (2010: 75–77).

<sup>55</sup> Brixhe & Panayotou (1988: 256): 'on n'a plus le droit d'associer l'émergence de la koiné à la période hellénistique. Elle se constitue, en effet, bien plus tôt, dès le Ve siècle, dans l'Athènes cosmopolite d'alors et dans certaines régions comme la Macédoine.'

From the third century BC the *koine* spread widely beyond Greece, as the Macedonians exported it into their newly-conquered Empire, using it as the language of government and elite society, the *lingua franca* of written communication throughout the Empire. As Silk (2009: 21) notes, ‘for the Macedonian overlords, the *koine* has several apparent advantages. In the first place, it is Attic enough to offer continuity with their own earlier Atticizing. Secondly it is, again, Attic enough to count as a suitably high-prestige *lingua franca* for a new world-empire. And thirdly, as regards the existing Greek-speaking communities, many of them now familiar with Great Attic, it represents the best available approximation to a single national version of Greek.’ As we can see in documentary texts and inscriptions, the *koine* then became the official language of administration and, as a result, we have diminishing written evidence for other dialects being used as a general means of (written) communication from then on.<sup>56</sup> This is due to the fact that, in the Hellenistic period, the Greek city-states lost much of their former autonomy, with the Hellenistic monarchs controlling the external affairs of much of the Greek world and imposing a degree of centralised government on most of the old city states. In addition to the consequent routine conduct of business in the *koine*, the education system based on the reading of Classical Attic authors contributed to the steady decline in status of the local dialects. It has also been argued that what enabled the *koine* to grow as a *lingua franca* was the increase in literacy and the book trade: whilst ‘at the start of the fifth century in Athens there was no clear concept of grammaticality, since writing prose was in its infancy... over the next two centuries literacy increased and the book trade grew; language became an object of philosophical enquiry and rhetorical training, and prose as a genre became culturally central. By the end of the fourth century an Attic-based Panhellenic standard had emerged.’<sup>57</sup> Descriptions of the linguistic features of the *koine* can be found in Brixhe (ed.) (1993), Colvin (2014: 156–177), Horrocks (2010: 79–122), and Thumb (1901: 61–101), among others. The *koine* was the dialect of choice in a wide range of literary texts throughout the Empire, from the second century BC *Histories* of Polybius to the first century AD works of Plutarch, the second century AD *Meditations* of the emperor Marcus Aurelius, and perhaps most famously the third century BC Septuagint and later the New Testament and many other early Christian works. It is also the language variety found in the documentary papyri from Hellenistic and Roman Egypt, a major province of the Empire.

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<sup>56</sup> Although regional *koinai* did develop in north-west Greece (the Aetolian League), the north-central Peloponnese (the Achaean League), Sicily and Rhodes (see Bubenik (2013)).

<sup>57</sup> Colvin (2020: 84).



The *koine* was therefore the first Pan-Hellenic language in the history of Greek. It was a norm that could be used both in literary prose and in written communication, and, as posited by classical linguists,<sup>58</sup> in spoken language. The term *koine* in and of itself does not carry any connotations of whether it refers to a written or a spoken language; rather it is an almost cultural term to which a nebulous and ill-defined linguistic form is attached. For these reasons, scholars have struggled significantly to assign the *koine* to a specific register or genre of language.<sup>59</sup> This is partly due to the unavoidable problem faced by all historical linguists, namely that the only evidence to work with is the relatively small amount of written evidence that has happened to survive, and partly because the literature that does survive seems to compromise, often in unpredictable ways, between highly conservative language and what might be thought of as contemporary spoken language (this is especially true of documentary sources, such as the papyri). It is important to bear this in mind when reflecting on the *koine*, which, unlike the classical dialects, is a more abstract concept, covering different registers, and, as this chapter examines, was defined and discussed in different ways by the different writers of the Roman period. As Colvin (2009: 43) advises, ‘it is more helpful to see a *koine* as an abstract norm based on a written tradition than as something likely to emerge from the mouth of a particular speaker.’ While there are no formal regulatory bodies or dictionaries of the *koine*, the Atticist lexica provide us with evidence to understand, from an emic perspective, the origin, influences and linguistic particularities of the *koine*.

### 2.1.2 The *koine* and the classical dialects

In the Archaic and Classical periods, there were four dialect groups in Greece: West Greek, Attic-Ionic, Arcado-Cypriot and Aeolic. As late as the first century BC, and despite the prevalence of *koine* Greek throughout the Greek-speaking world, Strabo notes the existence of only four dialects, which for him were Attic, Ionic, Aeolic, and Doric:

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<sup>58</sup> For example by Mandilaras (1973: 46), in his discussion of the language of the papyri. The question of whether scholars can infer features of spoken language from written evidence has been discussed by both modern linguists (for example, Chafe & Tannen (1987)) and classicists (for example, Adams (1984: 43); Bain (1984: 24–28)). The view held in this thesis is that they can, but it must be specified when assumptions are being made and when actual evidence for spoken features can be found.

<sup>59</sup> See for example López Eire (1993: 41–57).

(5) Ἑλλάδος μὲν οὖν πολλὰ ἔθνη γεγένηται, τὰ δ' ἀνωτάτω τοσαῦτα ὅσας καὶ διαλέκτους παρειλήφαμεν τὰς Ἑλληνίδας: **τούτων δ' αὐτῶν τεττάρων οὐσῶν...** [Strabo, *Geography* 8.1.2]

And so while there have been many tribes of Greece, those which go back to the earliest time are as many in number as the Greek dialects that we distinguish: these are four in number...

Two centuries later, however, Clement of Alexandria counts the *koinē* among the ranks of the Greek dialects, and writes that the Greeks say that they have five dialects, Attic, Ionic, Doric, Aeolic, and the *koinē* (*Stromata* 1.142).

This section now describes how the *koinē* fits in among the Classical dialects. It was explained above that the parent dialect of the *koinē* is the Attic dialect. This is because, due to the political and economic expansion of Athens in the fifth century, for an educated Greek speaker, speaking Greek became equated to speaking Attic.<sup>60</sup> In a process anachronistically termed ‘Koineization’<sup>61</sup> the complex phonological sequences and morphological paradigms of Greek, principally Attic Greek, were simplified. Trudgill (2004: 89) calls this same process ‘new dialect formation’, and this resulted in a distinct, partly hybrid, partly innovative language. However, the *koinē* was not, as has been argued by some, a creolised, or pidgin version of Attic,<sup>62</sup> nor was it simply a later form of Attic, a result of the Attic dialect’s natural diachronic development. The *koinē* was instead the result of many different linguistic and cultural influences, and can also be described in terms of its own internal linguistic variation.<sup>63</sup> Bubeník (1993: 14) suggests the idea of ‘de-Atticisation’ to understand the relationship between the *koinē* and the classical dialects. He writes that the *koinē* can be described as a ‘de-Atticized Ionicized Attic’, suggesting that an important process occurring in the formation of *koinē* was the removal of features which seemed too Attic and their replacement with Ionic, the features of which ‘in some instances happen to be more or less pan-Hellenic.’

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<sup>60</sup> This is significant, as Horrocks (2010: 73) notes: ‘the emerging dominance of Attic as a written medium all the more remarkable when one reflects that at the beginning of the 5th century this was still the local dialect of a rather backward and isolated region, archaic and conservative in its grammatical structure, with its literary potential undeveloped.’

<sup>61</sup> A term first coined by Samarin (1971), and discussed in Kerswill (2010; 2013).

<sup>62</sup> See Frösén (1974).

<sup>63</sup> See Cartlidge (2014: 16): ‘the spread of the Koiné was facultative, and expressive of identity; its adoption was highly variable even within close geographical proximity. Most revealingly, there were even areas to which the Koiné did not spread.’

While Bubeník (1993: 11) suggests that ‘before the Persian wars (490 – 479), Ionic — or more specifically, its easternmost Asian variant — enjoyed the highest status among the Greek dialects’, Colvin (2009: 43) adds that it is important to recognise that ‘the literary prestige of the Ionic dialect is unlikely to have had an impact on the spoken language in the Hellenistic period: languages generally change in the direction of the lowest social variety, not the highest; and this is in fact what spoken Greek (like spoken English, in a later age), did.’ Moreover, while *early* influence from Ionic may have been due to its prestige (indeed during the Classical period ‘we witness a mutual influence of Attic on Ionic and of Ionic on Attic’),<sup>64</sup> after the Persian wars, Attic gradually replaced Ionic as the most prestigious of the dialects. Following Bubeník, the influence of Ionic on the *koiné* has been discussed at length: Swain (1996: 18) describes the ‘linguistic exchange between Attic and its closely allied Ionic sister-dialect’ in the fifth and fourth centuries BC, and Willi (2003a: 46), in his discussion of the use and trajectory of the conjunction ἵνα in the Hellenistic period, talks of the ‘birth-pangs’ of *koiné* Greek being characterised by an increasing de-Atticisation and Ionicisation of Attic.

I now examine the lexicographers’ awareness of the influence of Ionic on the *koiné* in Antiquity, and, more generally, how second century AD Greek writers discussed the relationship between the dialects and the *koiné*. We know that dialectal variation was a notable feature of Greek in the ancient world, and this variation is often commented on. For example, the second century Christian writer Tatian begins his *Oratio ad Graecos* (‘Address to the Greeks’) by addressing the issue of dialectal variation:

(6) νῦν δὲ μόνοις ὑμῖν ἀποβέβηκε μηδὲ ἐν ταῖς ὀμιλίαις ὁμοφωνεῖν. Δωριέων μὲν γὰρ οὐχ ἡ αὐτὴ λέξις τοῖς ἀπὸ τῆς Ἀττικῆς, Αἰολεῖς τε οὐχ ὁμοίως τοῖς Ἴωσι φθέγγονται· στάσεως δὲ οὔσης τοσαύτης παρ’ <ὑμῖν ἐν> οἷς οὐκ ἔχρηθ’ ἀπορῶ τίνα με δεῖ καλεῖν Ἑλληνα. καὶ γὰρ τὸ πάντων ἀτοπώτατον, τὰς μὴ συγγενεῖς ὑμῶν ἐρμηνείας τετιμήκατε, βαρβαρικαῖς τε φωναῖς ἔσθ’ ὅτε καταχρόμενοι συμφύρδην ὑμῶν πεποιήκατε τὴν διάλεκτον. [Tatian, *Oratio ad Graecos* 1.1]

Now it has happened that you [the Greeks] alone do not speak alike even in common conversation. For the way of speaking of the Dorians is not the same as that of the inhabitants of Attica, nor do the Aeolians speak like the Ionians. And, since such a discrepancy exists among you where it should not, I am at a loss at whom I should call a

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<sup>64</sup> Bubeník (1993: 13).

Greek. And, what is most strange of all, you have honoured foreign expressions, and sometimes making wrong use of barbaric words, you have made your language a blend.

In this passage, Tatian talks of the Greeks making their language a blend (συμφύρδην). This refers both to the use of loanwords (which is discussed in Chapter 5) and also to the fact that the *koine*, the form of Greek used at the time that Tatian was writing, could be seen as a blend of the different classical dialects.

Unsurprisingly, the lexicographers, who aspire to write Attic Greek, discuss a large number of Ionic words (42 Ionic forms are rejected in each of both Phrynichus' *Ecloga* and Moeris' Lexicon – this accounts for 10% of Phrynichus' glosses and just under 5% of Moeris'). They often do this without mentioning that these are Ionic in origin. It is highly plausible that this is because they were not always aware of this, since many linguistic features of the *koine* reflect early influence from Ionic, and these would have been unrecognisable as Ionic features by the second century AD. Ionic features that can be found in the *koine*, and isolated against Attic, include:

- (a) the preference for geminate -σσ- over Attic -ττ-;
- (b) the preference for consonant cluster -ρσ- over Attic -ρρ-;
- (c) the avoidance of vocalic contraction (e.g. retaining cluster -oo- rather than rendering it as -ου-);<sup>65</sup>
- (d) the preference for γῖν- over Attic γίγν-;
- (e) regularised equivalents of irregular verbal paradigms;<sup>66</sup>
- (f) the presence of substantives ending in -σις, an Ionic morphological suffix.<sup>67</sup>

The Atticist lexicographers frequently comment on these Ionic phonological and morphological features and label them as incorrect. For example, we find the rejection of features (a) and (b) in Moeris:

(7) βήττειν Ἀττικοί· βήσσειν Ἑλληνες. [Moeris β25]

Attic speakers [say] βήττειν ('to cough'); Hellenic speakers [say] βήσσειν.

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<sup>65</sup> See Bubeník (1993: 13). Phonological features of the *koine* are discussed in Chapter 3.

<sup>66</sup> See Horrocks (2010: 82). Inflectional morphology is discussed in detail in Chapter 4.

<sup>67</sup> See Sihler (1881). Derivational morphology is discussed in detail in Chapter 4.

(8) θάρρος Ἀττικοί· θάρσος Ἑλληνες. [Moeris θ20]

Attic speakers [say] θάρρος ('courage, boldness'); Hellenic speakers [say] θάρσος.

Occasionally, the lexicographers specify that a certain form is Ionic. For example:

(9) ὀσμὴ χρῆ λῆγειν διὰ τοῦ σ· διὰ γὰρ τοῦ δ, ὀδμή, Ἴόνων· [...] [*Ecloga* 62]

It is necessary to say ὀσμὴ ('smell, fragrance') with the letter σ; for [the word] with the letter δ, ὀδμή, is of the Ionians; [...]

(10) σκορπίζεται· Ἑκαταῖος μὲν τοῦτο λέγει Ἴων ὄν, οἱ δὲ Ἀττικοὶ δὲ σκεδάννυται φασίν.  
[*Ecloga* 189]

σκορπίζεται ('it is scattered'); Hecataeus on the one hand says this, since he is an Ionian, but Attic speakers on the other hand say σκεδάννυται.

(11) λαγὼς ὁ Ἀττικὸς, διὰ δὲ τοῦ ο ὁ Ἴων λαγός· τὸ λαγῶς δὲ οὐκ ἔστιν. [*Ecloga* 156]

The Attic speaker [says] λαγὼς ('hare'), but the Ionic speaker [says] λαγός with an ο; but the (word) λαγῶς does not exist.

We do, however, find some intriguing glosses in Moeris which suggest that the clear-cut distinction of Attic vs Ionic was maybe not so clear:

(12) ὧδε κοινὸν Ἴόνων καὶ Ἀττικῶν· οὕτως Ἑλληνες. [Moeris ω15]

In the language common to the Ionic and Attic speakers [one says] ὧδε ('thus'); Greek speakers [say] οὕτως

(13) διωκάθειν κοινὸν Δωριέων Ἴόνων Ἀττικῶν· διώκειν Ἑλληνες. [Moeris δ6]

In the language common to the Doric, Ionic [and] Attic speakers [one says] διωκάθειν ('to chase'); Greek speakers [say] διώκειν.

These are the only occurrences of such a gloss, which contrasts Attic and Ionic (and Doric) on one side, and the Greek used by the Ἑλληνες on the other, in the lexica.<sup>68</sup> In the second example, διωκάθειν is found in Aristophanes' *Clouds*, a canonical text in the Post-classical

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<sup>68</sup> In §2.3.1 I discuss what is meant by the language of the Ἑλληνες.

world. However, Moeris would have had to read almost no Classical Greek to believe that διώκειν was in any way a neologism or incorrect. It seems here that he reserves the label of one of the old dialects for Aristophanes and other canonical texts that he remembers reading at school, while using the term Ἑλληνες to refer to a form that is not as ‘correct’ as the forms he remembers from Aristophanes.

Ionic texts, notably Herodotus, would have been widely read by the second century AD Greek elite, and it is perhaps for this reason that the lexicographers seem to be particularly aware of Ionic forms: they were aware that their readers would have seen them and so particularly keen to discourage their use. For example, uncontracted Ionic forms (feature (c)) are also frequently rejected by the lexicographers. In Phrynichus we find, for instance, uncontracted Ionic νεομηνία (‘new moon’) next to contracted Attic νομηνία (*Ecloga* 117), and uncontracted Ionic ἰστεών (‘weaving shed’) next to Attic ἰστών (*Ecloga* 137). In Moeris, we find, for example, uncontracted ἀθρόος (‘in crowds, massed together’) next to contracted Attic ἄθρους (α33), and uncontracted βόες (‘oxen’) next to contracted Attic βοῦς (β13). However, it should be noted that most of the rejected forms were common in the papyri of that period, and were no longer understood as ‘Ionic’ by that time, but simply as *koine*. While it is possible that the lexicographers still understood these forms as Ionic, it is more likely that they were rejected simply because they were not found in the Attic canon.

We also find glosses concerning the vocalic contractions (or lack thereof) in the words for ‘brazen’ and ‘golden’ in both Phrynichus (*Ecloga* 178) and Moeris (χ28), and the reason for the rejection of the *koine* version is made explicit by Moeris:

(14) χαλκῆν χρυσῆν Ἄττικοί· **διαλελυμένως** δὲ Ἑλληνες. [Moeris χ28]

Attic speakers [say] χαλκῆν (‘brazen’) [and] χρυσῆν (‘golden’); but Greek speakers [say these] in an uncontracted form.

This shows awareness of the reason behind these rejected forms, even though he does not say explicitly that these are Ionic, just that they are contracted. This gloss is also interesting as it provides us with more information about Moeris’ view of linguistic development: the use of the adverb διαλελυμένως (‘in an uncontracted form’), referring to the adjectives used by the Ἑλληνες, suggests that they viewed the form used by the Ἄττικοί as the base, or original form, from which the Ἑλληνες extrapolated an uncontracted form. In modern grammars, the issue of contraction is discussed the opposite way, with the base or original form being uncontracted, from which a contracted version can be formed. The verb διαλύω (‘to pull apart’) is also found

in Phrynichus, but he uses it to refer to compounds and their constituent parts. This is noteworthy, as it sheds light on how the lexicographers thought of different linguistic features, and the use of this verb in the lexica is discussed in greater detail in §4.3.4.2. Moreover, while I discuss compounds in Chapter 4, I should quickly note here that the linguistic feature of compounding verbs to both extend and modify meaning is characteristic of Ionic (and, subsequently, characteristic of the *koine* as a result of influence from Ionic)<sup>69</sup> and also rejected by both lexicographers. Rejection of compound forms is a common gloss in the lexica (e.g. Moeris ε7, ο7 and Phrynichus *Ecloga* 10, 38, 92).

In addition to the phonological features described above, the lexicographers also show awareness of Ionic morphological features, both inflectional and derivational. For instance, we find glosses in which the lexicographers reject substantives ending in -σις, an Ionic morphological suffix (feature (f)), as in the following gloss:

- (15) πεποίθησις οὐκ εἴρηται, ἀλλ' ἢ τι πιστεύειν ἢ πεποιθέναι. [*Ecloga* 262]  
 πεποίθησις ('trust, confidence') is not said, but either πιστεύειν ('to trust') something or πεποιθέναι ('to be sure').

The topic of how dialectal variation and diachronic change in the derivational morphology of Greek affected the lexicon is discussed in greater detail in Chapter 4 of this thesis.

Finally, features of dialects other than Ionic are also occasionally mentioned by all three lexicographers. We saw for example that both Moeris (see example (13)) and Phrynichus (see example (4)) discuss the Doric dialect. We also find a mention of the Aeolic dialect, in the following gloss by the Antiatticist:

- (16) ἐξωμνύοντο· μετὰ τοῦ ο, **Αἰολικῶς**. [Antiatticist ε79]  
 ἐξωμνύοντο ('they were swearing in excuse'); [spelling] with an ο is Aeolic.

However, due to the nature of the *koine*, which is the true target of their polemical comments, Ionic is mentioned and described much more frequently than any other dialect.

## 2.2 Atticism under the Second Sophistic

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<sup>69</sup> Colvin (2014: 165).

This section describes the cultural background in which Atticism, a movement of language purification, occurred. The Second Sophistic is a modern term for the literary-historical period dating from around AD 50–250, which was characterised by a revival of Greek cultural nationalism and ‘strikingly flamboyant Hellenism.’<sup>70</sup> This was due in large part to a series of philhellenic emperors (Hadrian, Antoninus Pius and Marcus Aurelius), and to Roman willingness to allow Greek cities to retain a degree of autonomy.<sup>71</sup> The label ‘Second Sophistic’ was first coined in the early third century AD by the Athenian sophist Philostratus, who, in his *Βίοι Σοφιστῶν* (*Lives of the Sophists*) describes the cultural and political period he calls the δευτέρα σοφιστική (Second Sophistic) that started roughly with the birth of Plutarch and coincidentally ended around the time of his own death around AD 250. In this period, when the leading sophists evolved into an intellectual and social elite, and rhetoric and declamation were considered the most prestigious literary activities, we find the emergence of Atticism, a movement of which Phrynichus and Moeris were part.<sup>72</sup>

As Strobel (2011: 12) notes, it is important here to establish the difference between *stylistic* Atticism and *grammatical* or *linguistic* Atticism. Stylistic Atticism, which can be identified from the first century BC, notably in the texts of the literary critics Dionysius of Halicarnassus and Caecilius of Caleacte, dictated that the style (i.e. rhetorical techniques) of particular authors, most importantly the ten great orators of the Classical period, should be imitated. This was the original connotation of linguistic ἀττικισμός, which was largely a reaction against Asianism, the rhetorical practice of certain Greek and Roman orators (such as Hortensius, according to Cicero) whose style was characterised by bombastic eloquence.<sup>73</sup> Thus, the promotion of Attic as a model ‘predates the second century AD and is rooted in the classicist tendencies of the two preceding centuries, when Greek and Roman literary theory began to pay attention to the issue of *mimesis* and therefore to the models which should be set for literary style.’<sup>74</sup>

Therefore by the second century AD, stylistic Atticism had long been important to those using language in an official capacity (for example by teachers, lawyers, politicians and orators), but we see in this period that the importance of ‘purity’ of the language began to emerge as an important concept. This grammatical Atticism, which was to influence the written

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<sup>70</sup> Horrocks (2010: 132).

<sup>71</sup> Horrocks (2010: 132).

<sup>72</sup> For the historical background to Atticism, see Anderson (1993), Swain (1996), Strobel (2009), and Kim (2017).

<sup>73</sup> The term ἀττικισμός is first attested in Thucydides (3.64), who uses it in a strictly political meaning, i.e. siding with Athens.

<sup>74</sup> Tribulato (2021: 174).



language throughout all genres of prose, demanded that only the *style* of the ten great orators was to be imitated, but so too was their vocabulary, syntax and grammar, and it is in response to grammatical Atticism that the first Atticist lexica were written. Commenting on the evolution of what was a literary style into a form of linguistic purism, Tribulato (2021: 174) suggests that this was probably due both to the Hellenistic interest in the Attic dialect (citing as evidence for this the large number of Attic authors, proverbs and glosses in the scholarly works of the Alexandrian scholars) and to the evolution of Greek into a global language, which ‘contributed to deepening the gulf between the ‘international’ *koine* employed in every-day communication and the language of Classical Athens, the main predecessor of *koine*.’

What makes the Second Sophistic particularly significant is the extent to which imitating Attic writers was pursued and encouraged. Prior to the Second Sophistic, the emphasis was less on Attic authors, and more on authors considered literarily important: as Tribulato (2021: 174) notes, ‘the rhetorical and stylistic theorizations of Dionysius of Halicarnassus and Caecilius of Caleacte already tended to associate good writing with the choice of appropriate language: Attic was not yet singled out as the only suitable variety for a lofty style (Dionysius for example often praised Herodotus’ “sweet” Ionic, a view later shared by Hermogenes), but the choice of models was already practically limited to the “canonical” Attic prose-writers (Thucydides, Plato, the ten orators).’ The perception of Ionic as ‘sweet’ and the promotion of authors other than ones writing in Attic are further examined in §2.3.2 below.

To summarise, the Atticist movement dictated that the literate elite should be producing Attic Greek, rather than writing in the *koine*, that is to say, that the lingua franca should no longer be accepted as the high register written form of the language. For the lexicographers influenced by and prescribing linguistic Atticism, if a word or usage could not be found in the Attic canon, it was rejected. At least, this was the rhetoric, rather than the reality: as I will examine in §2.3.2, the Atticists were in truth striving competitively to be the source of authority themselves, rather than only relying on what could actually be found in the classical canon, and thus creating their own binary conception of Greek. It is important to note that, even before the rise of Atticism, and as early as the fifth century BC, when prose established itself as a central literary form, a gap was already present between the Greek that speakers were supposed to write (Attic prose) and the Greek that they spoke, due to the natural greater conservatism in writing (compared to the spoken language).<sup>75</sup> This gap between the written and spoken

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<sup>75</sup> See Dover (1981), who notes the differences between the language of Attic documentary inscriptions and the language of Attic prose of the same period, the fifth century BC, which reflect the differences between the archaic language that prose preserved and the more contemporary form of the language that the inscriptions reflected.

language was significantly intensified by the Atticist movement (as, because of this movement, elite writers were compelled to go back to an even older form of the language) and was in fact the reason why prescriptive works like those of Moeris and Phrynichus were necessary: the high register written Greek norm was no longer obvious or easy, even for the elite Greek speakers who would have read these lexica. Therefore the lexicographers used this opportunity to demonstrate their own erudition, under the guise of providing their peers with what they personally considered to be correct Attic. Kim (2010: 469) summarises this, writing that the comments of the Atticising grammarians present ‘an oppressive polemical milieu populated by an elite obsessed with recreating the minutiae of the Attic dialect and catching the mistakes of their peers.’

### **2.3 Ἑλληνες, κοινόν, Ἀττικοί: ancient understanding**

It is clear from the lexica that their authors have different ideas of what constitutes ‘correct’ and ‘incorrect’ language, and are not consistent among each other. This is a key issue that needs to be reconciled before any conclusions about language change, and ancient attitudes about language change, can be reached.

#### **2.3.1 Ἑλληνες and κοινόν: the Greek ‘*nostrī*’?**

The Latin grammarians, from Cicero and Quintilian to Saint Bede, when debating correct and incorrect forms, talk of *nos* and *nostrī*, that is, the language of their own educated elite readership. There was an established precedence, in Classical Latin, for prescriptivism and subsequent standardisation between around 200 BC and 100 AD.<sup>76</sup> It has been argued that, in its level of standardisation, ‘Latin broadly corresponds to modern standard languages’<sup>77</sup> and the level of codification and effective prescriptivism is clear from metalinguistic sources. By contrast, due to the wider dialectal and chronological spread of the language, it was much harder for Greek to be codified, and we find a great deal of variation, and attempts to establish different standards, across the language’s long history.

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<sup>76</sup> Clackson (2015: 37).

<sup>77</sup> Clackson (2015: 41).

Indeed, it is not as evident who *nostris* are when it comes to the lexicographers. Moeris' tripartite division may give us a clue about this. Unlike his contemporaries, Moeris not only contrasts the forms used by the Ἀττικοί with those of the Ἑλληνας, but also contrasts the forms of the Ἀττικοί with the κοινόν, and on a couple of occasions a tripartite division is made, with three different forms labelled as κοινόν, of the Ἀττικοί and of the Ἑλληνας respectively:

(17) ἐξίλλειν Ἀττικοί· ἐξείργειν Ἑλληνας· ἐκβάλλειν κοινόν. [Moeris ε21]

Attic speakers [say] ἐξίλλειν ('to throw, cast out'); Greek speakers [say] ἐξείργειν; in the *koine* [one says] ἐκβάλλειν.

(18) ῥιγῶν Ἀττικοί· ῥιγοῦν κοινόν· ῥιγοῖν Ἑλληνας. [Moeris ρ10]

Attic speakers [say] ῥιγῶν ('being cold, shivering'); in the *koine* [one says] ῥιγοῦν; Greek speakers [say] ῥιγοῖν.<sup>78</sup>

These glosses suggest that some distinction could be made, in Moeris' mind, between the language of the Ἑλληνας and the *koine*. While it is clear that both terms refer to a form or word should not be used, it is not obvious how Moeris differentiates between the two. The scholarly debate over Moeris' tripartite division between the lexical items used by the Ἀττικοί, the ones used by the Ἑλληνας, and the terms that are κοινόν has been ongoing for over 250 years, with scholars such as Pierson (1759: 389), Steintal (1863: 433), Maidhof (1912: 30–31), and Swain (1996: 52) offering various interpretations of the distinction between Ἑλληνας and κοινόν. More recently, Strobel (2011: 207) has convincingly argued that Ἑλληνας refers to writers while κοινόν refers to the common spoken language. This difference, however, seems to be slight, as more often than not the form used by the Ἑλληνας is said to coincide with the one used in the κοινόν:

(19) ἄθλιος Ἀττικοί· ἀτυχής ἑλληνικὸν καὶ κοινόν. [Moeris α96]

Attic speakers [say] ἄθλιος ('wretched'); ἀτυχής is the Greek and *koine* form.

(20) γόης Ἀττικοί· κόλαξ ἑλληνικὸν καὶ κοινόν. [Moeris γ9]

Attic speakers [say] γόης ('magician'); κόλαξ is the Greek and *koine* form.

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<sup>78</sup> This last form is unattested, and implausible.

(21) ξύμφωνος Ἀττικοί· σύμφωνος Ἑλληνες καὶ κοινῶς. [Moeris ξ2]

Attic speakers [say] ξύμφωνος ('in unison'); Greek speakers [say] and in the *koine* [one says] σύμφωνος.

Reading these glosses, it would seem that the language of the Ἑλληνες and the κοινόν is either similar or the same thing, the common, everyday language of the Post-classical period, to be contrasted with the language of the Ἀττικοί used several centuries before. Moreover, it appears that the language of the Ἑλληνες and the κοινόν is the language used in everyday speech by Moeris and his contemporaries:

(22) διάγνωσιν Ἰσαῖος (1, 21; 10, 20) τὴν ὑφ' ἡμῶν διαδικασίαν. [Moeris δ25]

Isaeus [says] διάγνωσις ('judicial decision') in 1.21; 10.20 which by us [is called] διαδικασία.

Isaeus is an Attic orator, therefore it follows that the form διαδικασία is equivalent to the Ἑλληνες/κοινόν part of the gloss. Based on the above gloss, we can posit that ὑφ' ἡμῶν more generally refers to the language that is otherwise labelled Ἑλληνες/κοινόν, such as in the following example:

(23) πελάτην τὸν ὑφ' ἡμῶν ἐργολάβον. [Moeris π72]

[They (probably 'Attic speakers') say] πελάτης ('contractor') which by us [is called] ἐργολάβος.

Consequently, a primary conclusion would be that the glosses given as the equivalent of Moeris' Attic headwords, labelled as either ἑλληνικόν or κοινόν, reflect the spoken language of the Greek educated elite in the Roman period. However, the picture is complicated by Moeris himself, with certain glosses suggesting the language of the Ἑλληνες is similar to that of the Ἀττικοί (and contrasted to the κοινόν):

(24) Οἰδίπουν Ἀττικοί· Οἰδίπουν καὶ Ἑλληνες· Οἰδίποδα κοινόν. [Moeris ο19]

Attic speakers [say] Οἰδίπουν ('Oedipus'); Greek speakers also [say] Οἰδίπουν; the *koine* form [is] Οἰδίποδα.

- (25) ἄλλοθι ἄλλοθεν ἄλλοσε Ἄττικοί· ἀλλαχόθι ἀλλαχόθεν ἀλλαχοῦ καινότερον Ἄττικοί  
καὶ Ἑλληνας. [Moeris α18]  
Attic speakers [say] ἄλλοθι ('elsewhere'), ἄλλοθεν ('from elsewhere'), ἄλλοσε ('in  
another direction'); Attic and Greek speakers [say] the newer ἀλλαχόθι ἀλλαχόθεν  
ἀλλαχοῦ.

Therefore it might be posited that the language of the Ἑλληνας is, for Moeris, that of the most educated Greeks of his own time.<sup>79</sup> This is why those forms are occasionally identical to that of the Ἄττικοί, as educated Greeks would avoid the neologisms and grammar mistakes made by the speakers of a lower variety of the κοινόν. 'Κοινόν' therefore perhaps reflects a language closer to the lower end of the linguistic continuum of educated or semi-educated speakers, i.e., more colloquial language. This would explain why these forms are often identical to those labelled 'of the Ἑλληνας', and could be contrasted to the forms labelled Ἄττικοί, as no matter their education level, Greeks of the second century AD would not have spoken classical Attic. A similar explanation has historically been suggested by Jannaris (1897) and Thumb (1901). However, as Monaco (2021: 38) has rightly indicated, this interpretation does not explain all items labelled κοινόν. For this reason there have been multiple different explanations of the distinction between words which are said to be of the Ἑλληνας and those that are described as κοινόν. For instance, conversely to what has been suggested above, Strobel (2009: 102) has argued that "'Hellenic" [...] must mean the language spoken, or maybe even written, by the majority of Moeris' contemporaries.'<sup>80</sup>

What is clear, however, is that these terms were used by the lexicographers to distinguish between one sort of language which their educated readers knew, and another sort of language, which they called 'Attic' and which they wanted to prescribe. Evidence for this can be found in Stephan (1889) who, in his study on the works of the grammarian Herodian, a contemporary of Moeris, Phrynichus and the Antiatticist, has argued that Herodian uses the term κοινόν (and linked forms ἡ συνήθεια and ἡ κοινή συνήθεια) as a contrast with the other, older dialects (principally Attic, Ionic and Aeolic). He also picks out the use of the first person plural and adverbs such as νῶν and suggests that Herodian, like the lexicographers, is contrasting an older dialect, or older dialects, with a linguistic form that was close to what was

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<sup>79</sup> This is the proposition of Swain (1996: 51).

<sup>80</sup> For further discussion on this matter, see especially Anlauf (1960: 48) and Maidhof (1912: 30–31), the latter of whom claims that 'Hellenic' refers in the lexica to the Hellenistic literary language, while κοινόν was the speech of everyday life, especially of the lower classes.

spoken in certain spheres in the Roman period. A century later, Consani (1991: 27–30), also studying the language of Herodian, has argued that κοινόν was rather used to describe a general form that was unmarked dialectally, i.e. not a distinctive feature of any one dialect. Probert (2004: 281), summarising both scholars' arguments concerning the language of Herodian, writes that 'forms said to be κοινά often happen to be the *koine* forms as well, but they are not always and therefore not necessarily.' These interpretations of the language of Herodian can inform our reading of the lexicographers, as I discuss in §2.3.2.

There has been considerable academic debate about the interpretation of the labels Ἑλληνες and κοινόν, as they are used by Moeris in particular. Whatever the exact explanation, if indeed one exists, the alternation of and contrast between the language of the Ἑλληνες and the κοινόν in Moeris exemplifies the fact that the *koine* was defined and thought about in different ways in the Roman period, with no exact consensus on how to define the 'everyday' language spoken ὑφ' ἡμῶν, 'by us'.

Finally, the difference between the language of the Ἑλληνες and the κοινόν was not one of register or sociolect: both reflect the language of the educated Greek elite, but possibly at different ends of a linguistic continuum. Moeris alone attempts some sort of distinction within the speech of his contemporaries, but, much like his contemporaries, he does not seem interested in popular or uneducated speech, since his and his contemporaries' works were intended to be an aid for writers and orators (this is suggested both by ancient commentaries, notably that of Philostratus, and by the very title of one of Phrynichus' more fragmentary lexicon, the *Praeparatio Sophistica*). As Swain (1996: 32) writes, these works aimed 'to make the language of an already highly literate class more exclusive, and perhaps to enable and encourage others to join this class.'<sup>81</sup> Therefore even glosses that are rejected certainly do not represent uneducated speech: they probably represent the everyday language of elite Greek speakers of the second century AD. This will be further examined in §2.5, which looks at the possible readership of these works.

### 2.3.2 Ἀττικοί

On the same linguistic continuum as the language that they call 'of the Ἑλληνες' and the 'κοινόν' is the language that the lexicographers call 'of the Ἀττικοί.' As I show in this section,

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<sup>81</sup> Swain (1996: 32).

this does not reflect the linguistic situation of Athens in the fifth century BC, but rather the lexicographers' interpretation of Classical Attic that they want to prescribe as the language to be used in educated writing. The lexicographers' knowledge of the Attic equivalent, the form which was found several centuries before their time, and in a dialect that was no longer spoken, came from their reading of the Attic canon of texts, and they mostly agree on the authors they consider to be part of the Attic canon. Photius provides us with the canon of Phrynichus, which was also followed by his contemporaries, and which includes:

(26) Πλατωνά τε καὶ Δημοσθένην μετὰ τοῦ ῥητορικοῦ τῶν ἑννέα χοροῦ, Θουκυδίδην τε καὶ Ξενοφῶνα καὶ Αἰσχίνην τὸν Λυσανίου τὸν Σωκρατικόν, Κριτίαν τε τὸν Καλλαίσχρου καὶ Ἀντισθένην μετὰ τῶν γνησίων αὐτοῦ δύο λόγων, τοῦ περὶ Κύρου καὶ τοῦ περὶ Ὀδυσσεΐας, τῶν μέντοι κωμῶδων Ἀριστοφάνην μετὰ τοῦ οἰκείου, ἐν οἷς ἀττικίζουσι, χοροῦ, καὶ τῶν τραγικῶν Αἰσχύλον τὸν μεγαλοφωνότατον καὶ Σοφοκλέα τὸν γλυκὺν καὶ τὸν πάνσοφον Εὐριπίδην. [Photius *Bibliotheca* 158]

Plato and Demosthenes along with the troop of the nine Attic orators, Thucydides and Xenophon and Aeschines the Socratic son of Lysanias, and Critias the son of Callaeschrus and Antisthenes with his two genuine speeches, the one on Cyrus and the one on the Odyssey; of the writers of comedy Aristophanes, along with his fellow comic playwrights, where they use Attic, and of the tragedians Aeschylus the most grandiloquent and sweet Sophocles and all-wise Euripides.

However, Phrynichus is not always consistent: he censures Xenophon and Euripides and does not cite anything from Aeschylus and Sophocles.<sup>82</sup> Moreover, the language that the lexicographers prescribe (and reject) in their glosses does not always coincide with the language that is actually found (and not found) in the Attic canon. For example, certain forms rejected by Moeris and Phrynichus on the grounds that they are 'κοινόν' or 'of the Ἑλληνες' are found in Classical Attic literary authors. For instance, the rejected form ἀπόρητος, which Moeris claims is used 'by none of the ancients' is found in Lysias, Plato, Xenophon and the tragedians:

(27) αὐτοκήρυκτον Ἀττικοί· ἀπόρητον Ἑλληνες. **παρ'οὐδενὶ τῶν παλαιῶν.** [Moeris α154]

<sup>82</sup> Cf. Durham (1913: 13).

Attic speakers [say] ἀποκήρυκτον ('publicly renounced'); Greek speakers [say] ἀπόρητον. [This was said] by none of the ancients.

Conversely, we find words glossed as Attic by the lexicographers even though they are not attested in the Classical Attic canon (at least as far as we can tell from the surviving texts), such as ἀποκήρυκτος above.<sup>83</sup> This reflects the linguistic reality of the Atticist movement: Attic Greek, rather than being fossilised in the fifth century BC, continued to develop in creative use past the Classical period, 'not only according to their own internal dynamics, e.g. through analogical extensions of inherited rules and principles, but also because the speakers who use them tend, however thorough their training, to reconceptualise traditional elements of grammar in contemporary terms.'<sup>84</sup> This is why some of the forms that the lexicographers gloss as 'Attic' or 'not Attic', appear to be incorrectly glossed (these are categorised as 'Erroneous/incomplete gloss' in Table 1): the lexica were necessary precisely because there were no hard and fast rules about what was and was not acceptable, since the language was constantly changing. Moeris' tripartite division makes him a more subtle lexicographer than his contemporary Phrynichus, whose lexicon exclusively rejects forms that he believes are not Attic (ἀναττικόν),<sup>85</sup> no matter what sort of words they are, and provides the reader with what he believes is the correct Attic equivalent of those forms. Only once does Phrynichus seem to think that a form can be found both in the current Greek language (like his contemporaries Moeris and the Antiatticist he talks of ἡ συνήθεια and describes a usage σύνηθες to refer to 'current Greek')<sup>86</sup> that he rejects and in Classical Attic:

(28) ἔφησ· ἔστι μὲν παρὰ τοῖς ἀρχαίοις, ἀλλ' ὀλίγον. τὸ δὲ πλεῖον ἔφησθα. [*Ecloga* 206]  
ἔφησ ('you (sg.) were saying'); it is found on the one hand in the language of the ancients, but rarely. On the other hand for the greater part ἔφησθα is found.

On the whole, however, the glosses of both Moeris and Phrynichus are heavily polarised into clear right and wrong forms, reflecting the lexicographers' aim to establish one single ideal of correct Greek within a complex linguistic situation, and to reject as κοινόν, ἑλληνικόν or

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<sup>83</sup> Cf. also Moeris π78, who glosses the verb ποτινάομαι ('I cry aloud') as an Attic form, even though it is only attested in the surviving sources from Plutarch onwards: ποτινώμενος Ἀττικοί· δυσφορῶν Ἕλληνες (Attic speakers [say] ποτινώμενος ('crying aloud'); Greek speakers [say] δυσφορῶν.)

<sup>84</sup> Horrocks (2014: 1).

<sup>85</sup> *Ecloga* 379.

<sup>86</sup> For example Moeris λ151; Antiatticist ε46, ε6.



ἀναττικόν any form that they did not consider to be Classical Attic Greek. These tended to reflect the everyday language of the educated elite than any form of ‘vulgar’ spoken language, although, as I discuss throughout this thesis, in many instances these also closely reflect the language found in the documentary papyri and New Testament, which itself has been argued to reflect some form of ‘everyday’ and perhaps even spoken language. Even though it is probably the language that they themselves would have been using, the lexicographers distance themselves from forms that are κοινόν, or of any dialect other than Attic (cf. §2.1.2), in order to sound ὡς Ἀττικοί (‘like Attic speakers’):

- (29) θρίδακα Ἡρόδοτος (3, 32, 3) ἰάζων, ἡμεῖς δὲ θριδακίνην ὡς Ἀττικοί. [*Ecloga* 101]  
 Herodotus (3.32.3), speaking Ionic, [says] θρίδακα (‘lettuce’), but we [say] θριδακίνην like Attic speakers.<sup>87</sup>

It is evident, however, that the lexicographers had a different understanding of the dialects than historical linguists do from the way in which they occasionally accept Homer, as well as the canonised Attic authors, as the model to follow to write pure Attic.<sup>88</sup> For example:

- (30) ἦρω χωρὶς τοῦ ι Ἀττικοί, ὡς Ὅμηρος (θ 483)· "ἦρω Δημοδόκῳ"· ἦρωι μετὰ τοῦ ι Ἑλληνες. [Moeris η9]  
 Attic speakers [say the dative] ἦρω (‘hero’) without the ι, like Homer (*Odyssey* 8.483) “ἦρω Δημοδόκῳ” (‘hero Demodocus’); Greek speakers [say] ἦρωι with the ι.<sup>89</sup>
- (31) βλαφθεῖς· ὁ ποιητής [Antiatticist β14]  
 βλαφθεῖς (‘having been harmed’); the Poet (i.e. Homer).<sup>90</sup>

<sup>87</sup> Herodotus is often mentioned in the lexica; ancient scholars were interested in the historian ‘because his Ionic dialect had become a rarity’ (Dickey 2007: 53).

<sup>88</sup> Phrynichus, the most prescriptive of the three, does not do this, and actively rejects words used by Homer, for example in *Ecloga* 114.

<sup>89</sup> Hansen prints ἦρω without the iota, and this is explained in Pellettieri’s commentary for this gloss in the *Digital Encyclopedia of Atticism*: ‘according to modern conventions, the decision to print ἦρω without the iota subscript (so Pierson 1759, 163, tacitly followed by Hansen in his reference edition) is justifiable if Moeris intended the form as an original ἦρωϊ that was subject to ‘apocope’ (i.e., omission of the final syllable ï). However, this does not appear to be the case: the Homeric example quoted by Moeris indicates that the lexicographer likely shared Aristarchus’ opinion that the form was disyllabic [...]. The model he had in mind was likely that of an ‘Attic’ isosyllabic declension ...’

<sup>90</sup> See also Antiatticist ε9, and ε30, in which he explicitly names and quotes Homer: εἶσω· ἀντὶ τοῦ ἔνδον. Δημοσθένης Περὶ τῆς παραπρεσβείας (19.251, 255), Ὅμηρος (Od. 7.13) “καὶ εἶσω δόρπον ἐκόσμηι” (ε9) and ἔκποθεν ἐμοὶ γέγονεν· Ὅμηρος (Il. 8.19)· “σειρὴν χρυσεῖην ἐξ οὐρανόθεν κρεμάσαντες”. καθόλου περιττὰς προσλαμβάνειν προθέσεις οὐκ ἦν ἄηθες τοῖς ἀρχαίοις (ε30).

While in the first gloss, it is plausible that Moeris is simply pointing out that, in this particular case, Homer uses the same form as the Ἀττικοί, rather than urging his reader to always follow Homer *per se*, the reasoning behind the second gloss is less ambivalent: the Antiatticist is defending this aorist passive participle as being good Attic usage since it is found in Homer. This type of gloss is the ‘‘Attic’ gloss + reference’ type of gloss (see Table 1), in which a form that the Antiatticist wants to prove is Attic is glossed, followed by a line, or book reference to a usually Attic author. Moeris too believes that βλαφθεῖς is the correct form of the participle:

(32) βλαφθέντες Ἀττικοί· βλαβέντες Ἑλληνες. [Moeris β40]

Attic speakers [say] βλαφθέντες (‘having been harmed’ (pl.)); Greek speakers [say] βλαβέντες.

Quoting Homer as a paradigm of correct Attic usage is an understandable error from Moeris and the Antiatticist: firstly, because Homer had always been, in Greek, the literary role model, and therefore to be imitated on stylistic grounds.<sup>91</sup> Secondly, since most of the prestige of the Attic dialect stemmed from its antiquity (Phrynichus in particular frequently refers to the users of the language that he is prescribing as οἱ ἀρχαῖοι), it should follow that Homer was a good candidate to represent the language of οἱ ἀρχαῖοι. Indeed, for these reasons, the second century BC grammarian Aristarchus of Samothrace believed that Homer was Athenian.<sup>92</sup> This idea that linguistic prestige stems from antiquity is cross-linguistically and chronologically widespread: for example, in Valla’s fifteenth century *Elegantiae linguae Latinae*, almost every author writing before and during the time of Cicero and Quintilian is considered to be writing in good Latin, while authors writing after the first century BC are considered bad. Strikingly, since Valla is writing a whole millennium later, no author writing after the sixth century AD is cited or named in an example: this suggests that Valla only considered the ancients as models of Latin usage.

Including Homer as an example for Classical Attic clearly goes against modern understanding of what constitutes the language of the Ἀττικοί. It appears instead that the concept of what the Greeks called διάλεκτος (‘dialect’) in the Post-classical period is not geographic but cultural, more akin to register, much like it was in the Classical Period. This is

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<sup>91</sup> Cf. Roumanis (2021: 106).

<sup>92</sup> Schironi (2018: 621–2).

exemplified in the famous fragment of the comedian Aristophanes (fragment 706), in which he talks of the διάλεκτος of the city being ‘middling’, that of the town being ‘feminine’, and that of the countryside being ‘servile’, and in doing so uses the term διάλεκτος to refer to what scholars today would call a register, not a dialect:

- (33) **διάλεκτον** ἔχοντα μέσην πόλεως,  
οὔτ’ ἀστείαν ὑποθηλυτέραν  
οὔτ’ ἀνελεύθερον ὑπαγροικότεραν.  
Having the middling dialect of the city,  
neither refined [and] effeminate  
nor slavish [and] rustic.

It must therefore have been much later, after the Roman period, that dialects became primarily linked to geographical, rather than literary, variation. Even in the Post-classical period, Ionic forms are often described as ‘poetic’, which suggests that the forms were linked, in the minds of the lexicographers, to the types of texts in which they were used, rather than to the language of a particular geographical region of Greece. The post-classical perception of Ionic as inherently poetic is illustrated well by Hermogenes:

- (34) εἰ δὲ καὶ ἄλλων διαλέκτων ἐχρήσατό τισι λέξεσιν, οὐδὲν τοῦτο, ἐπεὶ καὶ Ὅμηρος καὶ Ἡσίοδος καὶ ἄλλοι οὐκ ὀλίγοι τῶν ποιητῶν ἐχρήσαντο μὲν καὶ ἄλλαις τισὶ λέξεσιν ἐτέρων διαλέκτων, τὸ πλεῖστον μὴν ἰάζουσι, καὶ ἔστιν ἡ Ἰᾶς ... **ποιητικὴ πῶς**, διὰ τοῦτο δὲ καὶ ἠδεῖα. [*On Style* 2.319f]

And if [Herodotus] used some words from other dialects, this is not important, since both Homer and Hesiod and many other poets used certain other words from a range of dialects; mostly they use Ionic, and the Ionic dialect ... is somehow poetic, and sweet on account of this.

In a similar vein, Strabo describes the Ionic prose of Cadmus, Pherecydes and Hecataeus as ποιητικὴ in all aspects but metre, which also suggests a conflation, in post-classical thought, of ‘Ionic’ and ‘poetic’.

(35) εἶτα ἐκείνην [sc. τὴν ποιηστικὴν] μιμούμενοι λύσαντες τὸ μέτρον, τᾶλλα δὲ φυλάξαντες τὰ ποιητικὰ συνέγραψαν οἱ περὶ Κάδμον καὶ Φερεκύδη καὶ Ἑκαταῖον.  
[*Geography* 1.2.6]

Then came Cadmus, Pherecydes, Hecataeus, and their followers, with prose writings in which they imitated poetry, abandoning the metre, but in other respects preserving the qualities of poetry.

Phrynichus in particular often contrasts language that is ‘poetic’ and language that is ‘suited to a citizen’. For example:

(36) χθιζὸν ἀποβλητέον ὅτι ποιητικόν, ἀντί δὲ τοῦ χθιζὸν ἐροῦμεν χθεσινόν, πρὸς τὸ πολιτικὸν ἀποτορνεύοντες τὸν λόγον, ὡς καὶ Ἀριστοφάνης. [*Ecloga* 294]

One must reject χθιζόν (‘of yesterday’) because it is poetic, and instead of χθιζόν we will say χθεσινόν, polishing off the word suited to a citizen, also like Aristophanes.<sup>93</sup>

Glosses such as these suggest that the lexicographers were not so much concerned with the geographical dialect used, or even with the genre (in the above gloss, Aristophanes is said to use a word that is πολιτικός, rather than ποιητικός, even though he wrote poetry) but rather with contrasting what they believed to be the urbane, educated language with other forms of the language. When Phrynichus and his contemporaries discuss the dialects, they discuss the literary dialects, not how their contemporaries in Ionia and other parts of Greece spoke, as they had little interest in, or indeed perhaps even knowledge of, what sort of language the illiterate majority of different parts of the Greek speaking world spoke.

Moreover, a sense of linguistic diachrony can be identified in the lexica, as the lexicographers seem aware that the forms they are promoting are on the whole older than the ones they are rejecting. For instance, potential awareness of diachrony can be found in the *Antiatticist*, who, Tribulato (2021: 179) argues, demonstrates some idea that Attic and the *koine* are the same language on a diachronic continuum. Tribulato notes in particular the ‘suspiciously high number of glosses pertain to meanings and morphological elements which characterized the koine of the Imperial age but were also documented in the language of leading Classical authors. **The Antiatticist thus establishes an implicit connection between Imperial koine and Classical Greek...**’ [emphasis my own]. She argues that ‘by placing

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<sup>93</sup> Cf. also *Ecloga* 3, 157, 251, *et passim*.

Homer, Epicharmus, Herodotus and koine side by side, the lexicon's list of words recreates the linguistic continuity of Greek.<sup>94</sup>

The lexicographers' understanding of diachrony is rarely, however, made explicit, and, to the modern scholar, appears to be analogous to their understanding of dialect: inconsistent and unlike modern linguistic understanding. However, a handful of potential explicit instances of awareness of diachrony occur in Moeris a few of which are listed below:<sup>95</sup>

(37) δεικνῶσι προπερισπωμένως Ἀττικοί· δεικνύουσιν Ἕλληνες· δεικνύασι δὲ οἱ δεῦτεροι Ἀττικοί. [Moeris δ29]

Attic speakers [say] δεικνῶσι ('they show') with a circumflex accent on the penultimate syllable; Hellenic speakers [say] δεικνύουσιν; but speakers of the second Attic dialect [say] δεικνύασι.

(38) ζευγνῶσιν Ἀττικοί πληθυντικῶς καὶ περισπωμένως· ζευγνύουσιν Ἕλληνες· τὸ δὲ ζευγνύασιν τῆς δευτέρας Ἀθίδος. [Moeris ζ8]

Attic speakers [say] ζευγνῶσιν ('they yoke') in the plural and with a circumflex accent; Hellenic speakers [say] ζευγνύουσιν; but speakers of the second Attic dialect [say] ζευγνύασιν.

(39) πλυνεῖς κατὰ τὴν πρώτην Ἀθίδα· κναφεῖς κατὰ τὴν δευτέραν Ἀθίδα. [Moeris π79].

[They say] πλυνεῖς ('you will wash/card') in the first Attic dialect; [they say] κναφεῖς in the second Attic dialect.

The adjectives *πρῶτος* and *δεύτερος* used in this way have been taken as temporal in the scholarship.<sup>96</sup> In his discussion of Moeris' distinction between a primary and secondary Attic dialect, Swain labels this use of terminology as 'an unusual and rather unconvincing overscrupulousness'<sup>97</sup> on Moeris' part, probably contrasting this inclusion of detail and nuance in Moeris' apparent understanding of the history of the dialects with the lexicographer's other glosses that succeed in being both concise and vague at the same time. Swain presumably

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<sup>94</sup> Tribulato (2021: 186).

<sup>95</sup> Cf. also Moeris α18 and χ12.

<sup>96</sup> Cf. Monaco's (2021: 47–52) discussion of 'Old' and 'New' Attic.

<sup>97</sup> Swain (1996: 51).

qualifies these as ‘unconvincing’ because, in all cases, the ‘first Attic’ and ‘second Attic’ forms are both found in the Classical canon, with no apparent differences, and so these distinctions appear as somewhat pedantic. What is certain is that these are ‘unusual’: in the above three glosses, Moeris seems to show awareness of an earlier and a later form of the Attic dialect, much unlike all his other glosses. However, he does not provide any reason why a form would be innovated later on, or make any further comment about the diachronic nature of language. It is perhaps unsurprising that the instances of awareness of diachrony do not refer to the *koine*, but exclusively to different forms of Attic, as this is the form that the lexicographers were more interested in.

Evidence for a temporary reading of the terms *πρῶτος* and *δεύτερος* can also be found in the third century grammarian Herodian, a possible late contemporary of Moeris. In her chapter on ‘Accentuation in Old Attic, Later Attic and Attic’, Probert (2004) discusses what Herodian meant when he labelled a type of accentuation as ‘Attic’. She argues that this cannot possibly reflect what contemporary scholars would nowadays call Attic, that is, the language of Plato and the orators, since Herodian could not have known how they would have accentuated a word. Instead, she examines the occurrences of concordance in accentuation between the forms that Herodian labels as Homeric, *koine*, and ‘old’ and ‘later’ Attic. There is agreement in accentuation between Homer and the *koine* against ‘later Attic’, as well as between Homer and ‘old Attic’ against ‘later Attic’ and the *koine*. The second of these two concordances fits in with the view that the lexicographers were comparing old with new (this is the view of Wackernagel (1893: 38) on Herodian). Indeed, Probert (2004: 289) suspects that Herodian ‘took over a distinction between earlier and later Attic from the Hellenistic grammarians, and that these grammarians had access to information about the pronunciation of Athenians and to some sort of folk memory of Athenian accentuations that were no longer in use or perhaps used only by older or more linguistically conservative speakers.’

However, it is also possible, based on his contemporary Phrynichus’ valuation of certain Attic authors over others, that Moeris was using these terms to refer to a slightly more laudable Attic form (‘primary Attic dialect’) and a slightly less laudable but still Attic form (‘secondary Attic dialect’), as though there were a linguistic continuum of acceptability, with certain forms definitely acceptable, others definitely not, and others in various places in between. It is possible therefore that *πρῶτος* and *δεύτερος* are used here to indicate different levels of prestige, although there is a large amount of evidence in favour of the former reading.

## 2.4 Diglossia?

The texts of the lexicographers have been said to reflect a state of diglossia, that is, a period of dichotomy between the revived Attic, encouraged by writers associated with the Second Sophistic, and the *koine*.<sup>98</sup> The latter must in reality have comprised a continuum of registers, spoken and written, but these are reduced to one single form in the lexica.<sup>99</sup> The lexicographers themselves were aware of the presence of different co-existing forms of Greek, since they judged that lexical aids were necessary to distinguish between them.

However, it could be argued that the Greek language was in a state of diglossia long before the second century AD. Already in the early fourth century BC we find instances of awareness of two different types of language, as Willi (2003a) has shown in a paper comparing the language of Aristophanes' *Assembly Women* and *Plutus*. Willi finds significant lexical, morphological and syntactic differences between the plays, which cannot be explained by natural language development, as there is only a four-year time-span between the two. He therefore convincingly explains this gap as arising due to 'Aristophanes' conscious decision to write no longer in the polis-oriented, traditional style of Old Comedy, but in a new "popular" way,' and shows that the playwright was aware of the difference 'between a "pure" language respecting the established norms of the genre and a language imitating how *people* really spoke can also be formulated in *Greek* terms.'<sup>100</sup> Finally, Willi draws a parallel with the diglossic situation of nineteenth-century Greek, an idea that is also examined in §2.7: 'Aristophanes wrote his second *Plutus* not in καθαρεύουσα but in δημοτική.'<sup>101</sup>

Ferguson (1959: 336) defines 'diglossia' as 'a relatively stable language situation in which, in addition to the primary dialects of the language (which may include a standard or regional standards), there is a very divergent, highly codified (often grammatically more complex) superposed variety, the vehicle of a large and respected body of written literature, either of an earlier period or in another speech community, which is learned largely by formal education and is used for most written and formal spoken purposes but is not used by any sector of the community for ordinary conversation.' Ferguson refers principally to Arabic in his paper.

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<sup>98</sup> This claim has been made, for example, by Swain (1996: 37).

<sup>99</sup> There were at the time many vernaculars, which were not necessarily mutually intelligible. The fact that local dialects started to be lost from the written record from the third century BC onwards does not suggest that they stopped being spoken.

<sup>100</sup> Willi (2003a: 69).

<sup>101</sup> Willi (2003a: 69), although he adds in footnote 170: 'this is not to say that *modern* καθαρεύουσα and δημοτική are in any way comparable to the two Aristophanic "codes": the latter were both rooted in "real" language, whereas *modern* καθαρεύουσα and *modern* δημοτική are, to a greater or lesser extent, artificial creations.'

Yet unlike the case of supposedly diglossic Arabic, where ‘the superposed “Classical” language has remained relatively stable,’<sup>102</sup> what we find in Greek under the Atticist movement is not a straightforward dichotomy between a written norm and a spoken language. Rather, we can assume the presence of a language continuum, as the *koine* developed from Attic, and retains many of its features, and this is evidenced by the very fact that lexicographical works were required to even distinguish between the ‘Attic’ dialect and the language of the *koine*. Even the private letters written on papyri, which are often said to be the closest source to the everyday language,<sup>103</sup> occasionally present certain Atticising features,<sup>104</sup> and, conversely, literary works of the Hellenistic and Roman periods often contain evidence for the *koine*, rather than being written in strict Attic.<sup>105</sup> Ferguson (1959: 328) adds to his definition of diglossia by specifying that ‘in one set of situations only H [the high variety of the language] is appropriate and in another only L [the low variety of the language], with the two sets overlapping only very slightly,’<sup>106</sup> and this description cannot be applied to the Greek of the period between c. 323 BC and AD 300. Furthermore, the two dialects that are being compared by the lexicographers are incomparable in that the pure Attic that they are prescribing had not been spoken for centuries. The lexica reflect a push to a language that was at that time extinct in speech, although still read and to some extent written. It does not reflect, as in Arabic, two languages that are spoken in two different settings.

Moreover, the very idea of ‘diglossia’ has been much critiqued and emended since the 1950s when it was first coined by Ferguson. Most notably, the view of a stable superposed language H has been questioned by linguists such as Mitchell (1986) and Meiseles (1980), who argue that, while Classical Arabic is a fossilised earlier stage of the language, it nevertheless undergoes interference from the vernaculars of the speakers.<sup>107</sup> In Arabic too, a language continuum can be assumed, despite the temptation to talk in terms of binary oppositions. This temptation can be found cross-linguistically, for example in the writings of the sociologist Bourdieu (2001), who describes the standard language as being directly opposed to the

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<sup>102</sup> Ferguson (1959: 327).

<sup>103</sup> For example, Dickey (2011: 150), and §1.2.2 in this thesis.

<sup>104</sup> See for example Blomqvist (1995:18) and Bentein (2015: 746) in his work about the use of Atticist particles in documentary papyri.

<sup>105</sup> Notably the works of Plutarch and Polybius. In addition, Ferguson emphasises the link between the high variety of the language and religion and religious texts (the Qur’an, for example, is written in the high variety). This was not the case for Christianity and Greek, since the Septuagint and New Testament were written in the *koine* (the low variety of the language).

<sup>106</sup> Ferguson (1959: 328).

<sup>107</sup> For further reading on diglossia in the Arabic language, see Abuhamdia (1988); Brosh (2015); El-Hassan (1977); and Mitchell (1980).



language of the masses. Bourdieu (2001: 92–3) also emphasises the idea that the legitimate or prescribed language is an almost artificial language, which must be permanently upheld and prescribed by grammarians, writing that ‘la langue légitime est une langue semi-artificielle qui doit être soutenue par un travail permanent de correction [...] **Par l'intermédiaire de ses grammairiens, qui fixent et codifient l'usage légitime**, et de ses maîtres qui l'imposent et l'inculquent par d'innombrables actions de correction [...]’ (emphasis my own). This description applies just as well to the second century Atticist lexicographers, who ‘fixed and codified [what they believed to be] the prescribed language,’ as it does to the French grammarians of the twentieth century.

The evidence for Hellenistic and Roman period literary authors who did not write in pure Attic suggests that the lexicographers, rather than *reflecting* the pure, correct Attic that was the language of learned writing, were in fact *constructing* this idea. This fits in with the knowledge that there was no real binary opposition between the Attic prescribed by the lexicographers and the spoken language, but only a theoretical, constructed one.<sup>108</sup> Far from achieving their possible aim of unification and standardisation, the lexicographers’ idea of the correct language was purely ideological, as all standardised languages are: as Milroy & Milroy (1999: 19) put it, ‘it seems more appropriate to speak more abstractly of standardization as an ideology, and a standard language as an idea in the mind rather than a reality – a set of abstract norms to which actual usage may conform to a greater or lesser extent.’

## 2.5 Readership

### 2.5.1 The aims of the lexicographers

In his introductory letter to the *Ecloga*, addressed to Cornelianus, the secretary to the emperor, Phrynichus promises to point out the most common mistakes (τὰς δ' ἐπιπολαζούσας μάλιστα) made by people at the time, in response to Cornelianus’ request for a collection of all unacceptable linguistic forms (κελεύσαντος τὰς ἀδοκίμους τῶν φωνῶν ἀθροισθῆναι). However, it is clear from his ensuing glosses that these mistakes are in fact any form that he can find that does not reflect what he personally believes to be Attic. Phrynichus himself admits

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<sup>108</sup> As is examined in the conclusion to this chapter, this is also very much the case for other periods of Greek as well.

this: he expresses the hope that Cornelianus will be seen to be not just ἐξελληνίζων ('using proper Greek') but also ἐξαττικίζων ('using proper Attic') in his official function as imperial secretary. For Phrynichus, to use good Greek is not enough; it has to be Atticised. The language prescribed by Phrynichus is unrealistic, as even Classical Attic, like all languages, contained its own internal variations, and this is clear from the fact that Phrynichus sometimes finds fault with the language used by Attic writers. The glosses of the lexicographers do not constitute a general grammar or dictionary, or standardisation of the syntax, spelling and usage of Attic Greek, but rather a seemingly arbitrary collection of forms. For this reason, the lexica are a helpful source for establishing how the ancients viewed change and variation in their language, as they show us how they decided which innovations to keep and which to discard.

In §2.3 I discussed the idea of ἡμεῖς, who are the literate elite writing, and (presumably) reading the lexica. However it is important to expand on this idea of readership, and to consider at whom exactly the glosses were aimed, in order to establish the use of the lexica in the prescription of language, and their impact, if any, on the actual language of the time. In order to do this, it is necessary to look at the content of the glosses. The lexica contain a mixture of everyday words, for which it would conceivably have been useful to have 'correct' and 'incorrect' equivalents (e.g. the correct forms and usages of the pronoun αὐτός ('himself' etc.)<sup>109</sup> and the correct way to say 'to Athens', 'from Athens' and 'in Athens'<sup>110</sup>) and much less useful hapaxes or highly obscure words, for which it is difficult to find any common use (e.g. the hapaxes οἰκόσιτος and οἰκότριβα ('living at one's own expense'; 'born in the house of slaves') as 'correct Attic' alternatives for the equally obscure αὐτότροφος and οἰκογενῆ;<sup>111</sup> the rare noun κυρβασία as the correct Attic word for a πῖλος Περσικός, a Persian bonnet;<sup>112</sup> and the Attic adjective λίσφος which is compared to ἄπυγος, 'without buttocks'.<sup>113</sup>)

The word classes of forms glossed by the different lexicographers might give us a clue about the aims and intended audience of the lexica. These are presented in Table 2 below:

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<sup>109</sup> Antiatticist α4-6

<sup>110</sup> I.e. using the directional adverb suffixes -ζε, -θεν and -σιν rather than the prepositions εἰς, ἐξ and ἐν (Moeris α52-α54).

<sup>111</sup> *Ecloga* 174. See also Moeris ο25: οἰκότριψ Ἀττικοί· οἰκοτραφῆς Ἕλληνας ('Attic speakers [say] οἰκότριψ ('slave born and bred in the house'); Greek speakers (say) οἰκοτραφῆς').

<sup>112</sup> Moeris κ66.

<sup>113</sup> Moeris λ6.

Word Class	Antiatticist	Moeris	<i>Ecloga</i>
Noun	300	443	193
Verb	308	315	125
Interrogative adverb	0	2	2
Other adverb	39	39	19
Adjective	153	106	71
Preposition	6	4	1
Conjunction	1	1	0
Pronoun	11	4	2
Particle	2	2	2
Interjection/exclamation	4	0	2
Phrase	24	8	1
<b>Total<sup>114</sup></b>	<b>848</b>	<b>924</b>	<b>418</b>

Table 2: Word classes in the Atticist lexica

Roumanis & Bentein (2023: 10) have also counted up the number of word classes represented in the *Ecloga* and Moeris' lexicon, and have arrived at roughly similar figures. Of these word classes, interrogative adverbs, prepositions, pronouns and conjunctions can be said to be most 'functional,' and so glosses containing these word classes can be argued to be the most useful for a user of everyday Greek. Nouns, adjectives, adverbs and most verbs are 'content words' and while many of these would certainly have been useful for the user of Greek – for example, glosses of the correct forms of commonly found verbs such as the verb 'to be' (Moeris η2, η4), and 'to know' (Moeris η1, η3) and of commonly used nouns such as 'son' (*Ecloga* 45, 234) and 'Athenian woman' (Antiatticist α3) – these lexical groups can on the whole be considered less intrinsically functional than the first four.<sup>115</sup> This table shows a slightly more frequent tendency, proportionally, for the Antiatticist to gloss function words over content words than Phrynichus and Moeris, and a slight tendency (again, proportionally) for Phrynichus to gloss more function words than Moeris, although the numbers are too similar, especially in the latter comparison, for any real conclusions to be made. The figures in this table suggest that the

<sup>114</sup> The total numbers here are larger than the total number of glosses per lexicon. This is because some of the glosses contain more than one word – for example, in the case of *Ecloga* 33, where Phrynichus discusses both the noun ὀ/ῆ ὄμφαξ ('unripe grape) and ὀ/ῆ βῶλος ('lump of earth') to explain that they both should be feminine in Attic, not masculine as in *koine*. These comprise one gloss, but are counted as two separate words in this table. Conversely, a few of the Antiatticist's glosses (e.g. α66) are incomplete, and do not contain a headword.

<sup>115</sup> Nouns and verbs make up the majority of the glosses for each of the three lexica, something which is unsurprising given how language was understood: as Roumanis & Bentein (2023: 10) point out, 'if we consider that for Apollonius Dyscolus noun and verb constituted the kernel of the Ancient Greek sentence (Synt. 1.14), to which other elements could be added by the process of accretion, it is perhaps not surprising that these two classes are overwhelmingly represented in both lexical under consideration.'

Antiatticist may have had more pedagogical and informative aims than his contemporaries, as he chooses to gloss a larger number of function words (such as pronouns, for example, α5: αὐτοῦ· ἀντὶ τοῦ σαυτοῦ ('αὐτοῦ ('himself'); instead of σαυτοῦ')). As most of the Antiatticist's glosses contain his own corrections of the glosses found in the words of the other lexicographers, it is noteworthy that he chooses to correct a number of function words, as it suggests that, in correcting these types of glosses, he might have intended to provide his reader with a clear and realistic guide on how to write proper Greek.

Similarly, the table of types of glosses of each of the lexica included in the introduction (Table 1) can help us determine the desired audience of each of the lexicographers. Over a quarter of Phrynichus' glosses are concerned with rejecting forms that are only attested from the Roman period onwards, showing that his main focus was on rejecting forms he deemed to be too new. He also frequently rejects forms originally found in the Ionic dialect, but normalised in the *koine*, as well as forms that consist in regularising paradigms that are irregular in Attic. He makes very few attempts, unlike his two contemporaries, to provide evidence, in the form of names of authors or texts, for his glosses, which results in a lexicon that reads more like a diatribe than like a collection of well-researched Attic terms. Conversely, Moeris often substantiates his glosses with evidence from various authors of the Classical period, much like the Antiatticist, and remains a relatively neutral linguistic commentator, very rarely using the first person, and keeping his glosses short and concise. Moreover, Moeris provides many glosses which have been labelled 'Definition of lexeme/phrase' in Table 1, and which are clearly didactic in tone, as he explains that Attic speakers used to have specialised words for certain concepts, which become lost, and for which 'Hellenic speakers' need a definition as they can no longer understand them.

The following tentative conclusions can therefore be drawn from these observations: on the one hand, Phrynichus' overarching aim in composing his lexicon appears to have been to display his erudition. This has previously been attributed to his status as a non-native Greek speaker. However, by the second century AD, Bithynia, where he was likely from, was a highly Hellenised region, so no firm conclusions about his acquisition of Greek can be made. Nevertheless, the lack of alphabetical organisation, the long hyperbolic tirades against specific obscure linguistic items (for example his amusing description of a word for a small couch (κράββατος) as μῆαρός, 'foul')<sup>116</sup> suggest that his *Ecloga* was not intended to be educational, but instead to be read almost as literature, most likely by other like-minded Greek elites.

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<sup>116</sup> *Ecloga* 41.

On the other hand, the lexicon of Moeris appears to have been intended for everyday reference, as suggested both by its alphabetical order, which would have made for convenient browsing, and its inclusion of some common and useful words that may plausibly have been used in everyday language (although he also includes rarer items too). It is likely that Moeris knew of Phrynichus' works, and used them for his own lexicon. However, the fact that Moeris, focussing on condensed and succinct glosses, avoids any long tirades, suggests that he had a practical and educational purpose in mind. Moeris' readers may then plausibly have been a mixture of elite speakers, who wanted to ensure that their Greek is as correct as can be, and non-elite speakers of Greek, who were aiming to sound like the elite. Many could also have been non-native speakers of the language, much like Lucian (whose first language was presumably Syriac,<sup>117</sup> and who, as I discuss in the following section, probably read the lexica).<sup>118</sup>

Notwithstanding their differences, a factor that Moeris, Phrynichus, and the Antiatticist have in common is that all three frequently stress to their reader that that they have done their research when it comes to finding Attic words. Despite their numerous errors in incorrectly labelling forms as Attic or κοινόν, and their frequent lack of any sort of evidence (mainly on the parts of Moeris and Phrynichus),<sup>119</sup> they all aim to demonstrate their erudition, from Moeris emphasising that he himself looks for and finds particular Attic forms –

(40) διαφορότητος Πλάτων Θεαιτήτῳ [209a]: παρ' ἄλλῳ οὐχ εὔρον. [Moeris δ33]<sup>120</sup>

Plato in his Theaetetus [says] διαφορότητος ('difference'); I have not found it in any other author.

to Phrynichus' emphasis on his own findings, and extensive reading and research –

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<sup>117</sup> See MacLeod (1991: 1) and Jones (1986: 7). The latter notes that 'Lucian always refers to himself as "Syrian," or by a purely literary variation "Assyrian," and pretends that when he began his higher education he was "barbarian in speech": this phrase probably denotes accent or vocabulary rather than language, but it is possible that this writer of crystalline Greek began as a speaker of Aramaic.'

<sup>118</sup> See Strobel (2011: 84): 'The lexica of the Second Sophistic would surely have helped the non-native, yet advanced Greek speaker to attain a better knowledge of Attic, but would also have been of great use to the educated Greek elite.'

<sup>119</sup> For example, Moeris' laconic πάντοτε οὐδεὶς τῶν Ἀττικῶν. ('none of the Attic speakers [say] πάντοτε (always)') (π57), for which he provides neither evidence nor an alternative form.

<sup>120</sup> Other occurrences of the first person in Moeris include ε39, ε43, σ25.

(41) κατ' ἐκεῖνο καιροῦ· παρὰ μὲν ἄλλω τῶν δοκίμων οὐχ εὔρον, ἡγοῦμαι δὲ καὶ  
Θουκυδίδην ἐν τῇ ἡ' [7, 2, 4] μετὰ τοῦ ἄρθρου εἰρηκέναι 'κατ' ἐκεῖνο τοῦ καιροῦ'...  
[*Ecloga* 244]

κατ' ἐκεῖνο καιροῦ ('at that point in time'): on the one hand I have not found [this phrase]  
in another of the acceptable authors, on the other hand I also believe Thucydides in book  
7 [7.2.] to say, with the article, 'κατ' ἐκεῖνο τοῦ καιροῦ'...<sup>121</sup>

to the Antiatticist's detailed references to the exact text and book in which a form can be found:

(42) ἀκράχολος· Πλάτων β' Πολιτείας. [Antiatticist α7]

ἀκράχολος (quick to anger); Plato Republic book 2.

Finally, it is clear that the three lexica were, for all their differences, written by and for an elite  
writership, and had as their overarching aim to uphold a language which was, as is discussed  
in this chapter, in many ways an artificial one (and, as a result, which was described in very  
different ways by the three lexicographers). This phenomenon can be found to this day: to  
recall an earlier example, Bourdieu (2001: 87) writes, for instance, of the French elite  
attempting to defend the knowledge of a certain form of French (or Latin or Arabic) which can  
only ever have an semi-artificial ('semi-artificielle', see §2.4 above) value, despite their  
proponents' ideological affirmations that these are prestige languages:

Ceux qui veulent défendre un capital linguistique menacé, comme aujourd'hui en  
France la connaissance des langues anciennes, sont condamnés à une lutte totale... les  
défenseurs du latin ou, dans d'autres contextes, du français ou de l'arabe, font souvent  
comme si la langue qui a leur préférence pouvait valoir quelque chose en dehors du  
marché, c'est-à-dire par ses vertus intrinsèques (comme des qualités "logiques"); mais,  
en pratique, ils défendent le marché.

One language in and of itself cannot be more or less important than another: the background  
of the users of the language, and the sort of readers they have in mind, as evidenced in this  
section, is of paramount importance when studying linguistic variation.

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<sup>121</sup> Although our manuscripts of Thucydides read 'κατὰ τοῦτο τοῦ καιροῦ...'

## 2.5.2 Literary evidence

Greek authors of the Second Sophistic whose writings followed the tenets of grammatical Atticism include Lucian, Achilles Tatius, Heliodorus and Aelius Aristides. The extent to which these authors followed the lexicographers differed, however, and many literary sources of the Second Sophistic make it clear that the opinion held by the lexicographers on the Greek language was not the *communis opinio*, even among the most educated of the elite. The prescription of Atticism was criticised as early as the late first century AD, for example by Plutarch (*Moralia* 42d-e). In this section, I argue that the satire that Atticism attracted suggests that, although the movement did not escape the notice of its users, elite Greek writers of the time exercised caution and critical thinking in deciding whether or not to follow its prescriptions. For example, the philosopher and medical writer Galen criticises those who, like the lexicographers, demanded universal Atticism in language, to the extent that he claims to have written a treatise against those who condemn the perpetrators of linguistic solecisms, since he himself does not believe Atticism to be part of correct education:

(43) ἐγράφη δέ μοί ποτε καὶ πραγματεία πρὸς τοὺς ἐπιτιμῶντας τοῖς σολοικίζουσι τῇ φωνῇ· τοσοῦτου δέω παιδείας τι μῶριον ὑπολαμβάνειν τὸ ἀττικίζειν. [Galen, *De ordine librorum suorum ad Eugenianum* (61)]

And I once also wrote a treatise against the men who censure those committing solecisms in the language; I am that far from considering Atticism a part of education.

Similarly, Lucian seems to take great pleasure in mocking people who, like the lexicographers, prescribed (often incorrectly) a hyperbolic norm.<sup>122</sup> In his satirical piece *Ῥητόρων διδάσκαλος* (*Professor of Public Speaking*), Lucian criticises the new orators who are ignorant and shameless, emphasising that to become a sophist is not a trivial task, nor one that calls for little effort (οὐ μικρὸν οὐδὲ ὀλίγης τῆς σπουδῆς δεόμενον). However, while Lucian himself apparently took the harder road to becoming a sophist,<sup>123</sup> most people (such as Phrynichus and

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<sup>122</sup> The scholar and rhetorician Pollux has been identified as the teacher in Lucian's *Teacher of Rhetoric* (Hall (1981: 273–278); Jones (1986: 107–108)). Moreover, Lucian's *Lexiphanes* was 'possibly aimed against Ulpian and Pompeianus' (Sidwell 1986: 109), and his *Rhetorum Praeceptor* at Pollux (Sidwell (1986: 109)).

<sup>123</sup> Sidwell (1986: 106) argues that Lucian qualifies for the title of sophist because 'he constantly refers to his audience as "listeners" (e.g. *Prometheus es in Verbis* 7) and he uses the term of his public appointment in Gaul (*Apologia pro Mercede Conductis* 15).' However, as Sidwell also points out, Lucian is an interesting case, as he does not appear in Philostratus' collection of lives, probably because of his Syrian background and his lack of teachers.

Moeris and their readers, perhaps) are accorded greater returns without any labour, through their felicitous choice of words and ways (ἀπονητὶ γοῦν ὀρῶ τοὺς πολλοὺς μειζόνων ἀξιουμένους εὐμοιρία τῆς αἰρέσεως τῶν λόγων καὶ ὁδῶν). In *Ψευδοσοφιστῆς ἢ σολοικιστῆς* (*Pseudosophist or Solecist*), Lucian quizzes a Sophist in an imagined dialogue to see whether he can catch him out on his solecisms. The Sophist consistently makes grammatical mistakes – a lot of these are also found glossed as commonly made mistakes in the lexicographers, for example the confusion of gender (e.g. Moeris α2, α15, α16, α17, and Phrynichus *Ecloga* 85, 120, 254), confusion of number (e.g. Moeris β13, κ52, and Phrynichus *Ecloga* 344), or confusion of irregular superlative forms (e.g. Moeris ε2) – but he does not pick up on them. In this dialogue, Lucian also includes an anecdote about his friend Socrates of Mopsus, who was in the habit of poking fun at people using Atticising forms incorrectly. For example:

(44) καὶ ζυγομαχεῖν δέ τινας λέγοντος, πρὸς τὸν ἐχθρόν, εἶπε, ζυγομαχεῖς; [Lucian, *Pseudosophist or Solecist* 6]

And when someone talked about being at war with his wife, he asked whether she was a national enemy?<sup>124</sup>

Despite this mockery and apparent disdain for Atticism, both Galen and Lucian’s own language is remarkably Attic, particularly in their choice of lexicon, and it cannot be ruled out that they might have read the Atticist lexica, even if only to disagree with many of the hyperbolic, or even simply inaccurate glosses. For this reason, Schmid (1887–1896) labels Galen (and, alongside him, Plutarch) as ‘*Halbatticisten*’, in contrast to what one might call the *Vollatticisten* lexicographers discussed in this thesis. It is interesting to note instances of Lucian’s ‘relaxed’ Atticism: for example, he uses both Attic γίγνομαι and Ionic/*koine* γίνομαι (e.g. *Gallus* 30 has γίγνου but *Verae historiae* 2.12 has γίνεται).<sup>125</sup> While his prose is, on the whole, Atticising, he also uses, on numerous occasions, words that are explicitly rejected by the lexicographers, for example the adjective γελάσιμος (‘laughable’), in *Somnium* 5, which is rejected in favour of ‘more Attic’ γελοῖος by Phrynichus (*Ecloga* 403). Lucian’s inconsistency in using, and condemning, Atticising language has been noted by many scholars. For example, Sidwell (1986: 109–110) remarks that ‘in *Somnium* 16, Lucian uses ἀφιπτάμενος though he condemns ἵπτατο in *Lex.* 25.’

<sup>124</sup> Translation MacLeod (1991).

<sup>125</sup> Feature (d) in §2.1.2. This observation is of course only valid as far as the manuscript tradition can be trusted: with two close forms such as these, it is impossible to rule out scribal ambiguity and transmission problems.



The overarching commonality between Galen and Lucian on the one hand and the lexicographers on the other is that both sets of writers seem acutely aware of the importance of using the correct sort of language. This is reflected as much in the polemical language of the lexicographers, with Phrynichus, for example, claiming to be ‘disgusted’ (ἐναυτίασα)<sup>126</sup> by certain ‘greatly distasteful’ (ἀηδὲς πάνυ)<sup>127</sup> forms, some of which are ‘so wrong that not even Menander uses [them]’ (τοῦθ’ οὕτως ἀδόκιμον ὡς μηδὲ Μένανδρον αὐτῶ χρήσασθα),<sup>128</sup> as in Lucian’s satires, notably the *Lexiphanes*, in which he argues that using the right kind of language is not simply a marker of one’s education, it is also a sign of one’s sanity and health. These sardonic and subjective attitudes towards language are not alien to the modern-day reader: linguistic prescriptivism and ‘verbal hygiene’<sup>129</sup> are familiar contemporary tropes, as the next two sections will show.

Whether pro- or anti-Atticism (the Antiatticist, whose stated agenda was to call out the hyperbolic rules of Atticist writing of his contemporaries, is often inaccurate and arbitrary in his choice of glosses himself, and, as discussed in the introduction, displays many Atticising tendencies) it is evident that the debate of what language should be used was of great concern to the educated Greek elite of the Roman period. Many seem to agree that there is a fine line between writing (and speaking?) good Attic Greek, and overdoing it – as Strobel (2011: 271) points out, Pollux, although reprimanded for his declamations, is praised for his *Onomasticon* by Philostratus – although the general Atticising tendencies in all official and literary Roman period texts must lead us to assume that, on the whole, it was widely accepted that one ought to be aware of one’s language (and aim to write in Attic).

Finally, an important point is raised by Silk (2009: 24) concerning the literary implications of the Atticist movement, and in particular the regulating of the *koine*: ‘the institutionalising of the *koine*, then, has the effect of institutionalising a gulf between literary languages and others – between the functional and the artistic – which Atticism seeks to bridge, but actually makes wider still.’ The literary uses of the *koine*, he notes, were restricted to prosaic texts: Polybius’ history, Plutarch’s essays, and the Septuagint and Greek New Testament. This is why authors such as Lucian thought it right to write in Attic prose, since the *koine*, it could be argued, was a comparatively non-literary form of the language. The Atticist

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<sup>126</sup> Phrynichus *Ecloga* 167, see example 98.

<sup>127</sup> Phrynichus *Ecloga* 338; *Ecloga* 331.

<sup>128</sup> Phrynichus *Ecloga* 411. This gloss is discussed in §4.3.4.2, example 93. Cf. Durham (1913: 7), who writes that ‘for nearly two thousand years Menander’s reputation as a writer of pure Attic has been somewhat tarnished through the attacks made upon him by the atticizing grammarians of the first centuries of our era.’

<sup>129</sup> See Cameron (1995).

movement therefore arose to fill a literary vacuum, but in doing so ignored the symbiotic relationship between spoken language and literature.

## **2.6 Attitudes towards linguistic variation and change under the Second Sophistic**

In a seminal paper, Weinreich *et al.* (1968: 188) define language change: ‘not all variability and heterogeneity in language structure involves change: but all change involves variability and heterogeneity.’ The Atticist lexicographers are adverse to both variation and change: they do not accept the heterogeneity and co-existence of the common contemporary language and the old Attic dialect, and so, when several forms of a single feature are in use, they provide advice on which one to and not to use. The view that changes in the language are a form of degeneration rather than simply part of natural linguistic development is cross-linguistically and diachronically a common sociolinguistic phenomenon: as Aitchison (1998) shows in her work *Language Change: Progress or Decay?*, language change is often socially perceived as a form of decline.

For example, in his essay *Politics and the English Language* (1946), Orwell succinctly describes this attitude to change: ‘most people who bother with the matter at all would admit that the English language is in a bad way... it becomes ugly and inaccurate.’ The way that a community of speakers go about talking about change, and ‘solving’ it, however, is not always the same: Orwell, for instance, advises that ‘any struggle against the abuse of language is a sentimental archaism, like preferring candles to electric light or hansom cabs to aeroplanes. Underneath this lies the half-conscious belief that language is a natural growth and not an instrument which we shape for our own purposes.’ Conversely, the Greek elite of the Second Sophistic, seemingly unaware that language is a natural growth, decided that this ‘language decay’ could be solved, and attempted to do so by introducing and prescribing a different form of language to the one that was being used. Orwell would have been very against the sort of language they were introducing, as he suggests that the way to ‘improve’ a ‘decayed’ language would have ‘nothing to do with archaism, with the salvaging of obsolete words and turns of speech, or with the setting up of a “standard English” which must never be departed from. On the contrary, it is especially concerned with the scrapping of every word or idiom which has outworn its usefulness. It has nothing to do with correct grammar and syntax, which are of no importance so long as one makes one's meaning clear or with the avoidance of Americanisms,

or with having what is called a “good prose style.”” This is in many ways the complete opposite of what the lexicographers were trying to do to ‘salvage’ their language.

In Chapter 5, I examine the impact of linguistic contact with Latin on the Greek language in the Post-classical period, as the documentary papyri and the *Colloquia of the Hermeneumata Pseudodositheana* both show significant amount of influence from Latin. It is striking therefore that the lexicographers, in their rejection of words not found in the Attic canon, make no reference to Latin loanwords. While this suggests that contact with Latin was not felt by the literary elite to have replaced Greek’s learned vocabulary, the very phenomenon of Atticist prescriptivism reflects a desire to affirm one’s Greek identity (in terms of language) in a Roman world. This link between civilisation decline (in this case, the decline of the Macedonian Empire) and language decline is also voiced by Orwell (1946): ‘our civilisation is decadent and our language – so the argument runs – must inevitably share in the general collapse.’ Orwell’s idea that ‘decline of a language must ultimately have political and economic causes: it is not simply due to the bad influence of this or that individual writer’ can also be found in the older scholarship on the linguistic situation of Post-classical Greek.<sup>130</sup> For instance, Durham (1913: 12) in his assessment of the linguistic and cultural situation of Athens in the Post-classical period, writes: ‘after the Athenians lost their ascendancy in the affairs of Greece, their originality in literature began to decline. Loss of supremacy brought with it loss of vigour. With the rule of the Macedonian came a lessening of interest in public affairs, accompanied by a spiritual weakening.’

Language was used therefore as a sort of proxy for talking about politics, and, as Tribulato (2021: 174–5) puts it, ‘since the political discourse constructed by the Graeco-Roman educated elite rested upon a connection with the values of the Classical past, identified with those of democratic Athens and her literature, ability to employ “correct Greek” (i.e. Attic) became an important marker of cultural identity and social differentiation.’ This was not just done through choice of language – as Woolf (1994: 125) points out, the Greek elite used many different remedies to alleviate their sense of alienation in a world in which they were no longer the ruling people: ‘Dionysius’ painstaking genealogical demonstration that Romans were really Greeks after all; Plutarch’s insertion of Roman and Greek Lives in the same moral universe, and his exploration of the culture difference between the two in the *Moralia*; Pausanias’ pilgrimage through Roman Achaia in search of classical Greece; the elaborate civic

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<sup>130</sup> Although Phrynichus does include the occasional tirade against an individual author (e.g. Menander in *Ecloga* 411, see example 93 in §4.3.4.2).

ceremonials of Roman Ephesus; and of course the images and rituals associated with the imperial cult.’ All of these texts, along with the lexica, reflect the importance that was placed on establishing a sense of Greek identity through an emphasis on one’s ancestors.

## 2.7 Purifying or purified?

The section above has explained how, due to the view that language change represented a form of decline, a recurrent theme common to all three of the lexicographers is that their predecessors, οἱ ἀρχαῖοι<sup>131</sup> or οἱ παλαιοί,<sup>132</sup> knew better than the contemporary users of the language. However, despite their frequent mention of the language of the ancients, the lexicographers show very little interest in the diachronic development of their language. As discussed above, rare instances of awareness of diachrony occur explicitly only in Moeris, although we also get an implicit sense of diachronic linguistics in the others, with the mentions of the language of οἱ ἀρχαῖοι. Overall, however, they show little interest in the mechanisms, or even the presence, of linguistic change.

A parallel to this ancient view of language as a synchronic phenomenon can be found in Dante Alighieri’s *De vulgari eloquentia*, written during the author’s exile, in the early fourteenth century. At the beginning of this work (1.2–1.3), Dante draws a comparison between *quod vulgarem locutionem appellamus eam quam infantes adsuefiunt ab adsistentibus, cum primitus distinguere voces incipiunt; vel quod brevius dici potest, vulgarem locutionem asserimus, quam sine omni regula, nutricem imitantes, accipimus* (‘what we call the vernacular language, which children gather from those around them when they first begin to articulate words; or more briefly, that which we learn without any rules at all by imitating our nurses’) and *alia locutio secundaria nobis, quam Romani gramaticam vocaverunt* (‘another, secondary language which the Romans called grammar’).<sup>133</sup> Much like the lexicographers, who appear to have a hazy and self-contradictory view of the relationship between the dialects and the *koine*, sometimes arguing that the *koine* is just one of the dialects, comparable to Attic, Ionic or Aeolic, at other times suggesting that the *koine* emerges later on from the dialects and even sometimes suggesting that the dialects emerge from the *koine*, Dante exhibits constant imprecision between his conception of the relationship between the *illustre* Latin and the Italian dialects. The poet, no doubt influenced by his ‘diglossic’ linguistic background, is vague in his

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<sup>131</sup> *Ecloga* 109 et passim.

<sup>132</sup> *Ecloga* 64 et passim.

<sup>133</sup> Both translations are taken from Shapiro (1990: 47).

distinction of diachrony and synchrony: in his attempt to elevate the *lingua vulgaris* to the literary rank of Latin, he alternates between suggesting that the dialects derive from the *illustre*, and vice versa. Unlike the lexicographers, Dante does not view one of the forms as better than the other, but rather ‘chides those individuals who considered the Italian vernacular linguistically inferior to other vulgar tongues.’<sup>134</sup> Indeed, unlike Dante, who looks forward to and promotes an ‘illustrious vernacular’ in the form of Italian, Greek lexicographers of the Roman period looked back towards the past, and promoted a return to the Classical Attic dialect. The attempt at a resurgence of the fifth century BC Attic dialect as the prestige form of the language is therefore where the Second Sophistic and Dante took different routes: Dante established an *illustre* version of the vernacular as a written norm, rather than going back to Latin, while the Greek grammarians went back to Classical Attic.

A parallel can also be found later on in the history of the Greek language, with the case of the nineteenth-century ‘language question’ (το γλωσσικό ζήτημα). When the modern Greek state was created after the revolution, the Greeks needed to re-establish a form of Greek suitable for writing following the occupation, and were faced with two solutions. The purist Athenian Romantics chose, like the Atticist lexicographers, to revive a form of the Attic dialect (the καθαρεύουσα, ‘purifying (language)’), while other poets such as Dionysios Solomos prompted the creation of an elevated vernacular (Solomos, who later became the national poet and wrote the words to the Greek national anthem, had studied in Italy and was inspired by Dante). The choice of Classical Attic as the form of the language to be used by the educated elite in the nineteenth century is not surprising. When looking at the history of Greek, one is struck by the parallels. Chantraine talks of the ‘*histoire continue*’<sup>135</sup> of the Greek language, and, indeed, the Greek of today is a result of the linguistic debates of the nineteenth and twentieth centuries, which themselves were based on the Atticist movement of the second century AD. Just as δημοτική is the result of natural development of Greek over the centuries, whilst καθαρεύουσα is ‘largely borrowed rather than inherited from antiquity,’<sup>136</sup> so the *koine* is the reflection of the natural development of a single Greek language, while most literary texts of the Hellenistic and Roman periods reflect a similar borrowing from the Classical period. Therefore the promotion, during the foundation of the modern Greek state in the nineteenth-century, of the καθαρεύουσα, a sociolect which remained the official language of Greece until the 1970s, is

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<sup>134</sup> Mazzocco (1993: 25).

<sup>135</sup> Chantraine (1968: viii), cf. §1.1.3.

<sup>136</sup> Shipp (1979: 2).

very similar to the promotion of the artificially revived language of the Ἀττικοί by the second-century lexicographers.

Moreover, in both cases, influential episodes of linguistic purification and normalisation, and the promotion of an archaic, manufactured language to be used in elite communication came at a time of flux in the socio-historical context. These two periods of intense language ‘purification’ were followed by a period of relative linguistic stability, both nowadays and in the aftermath of the Post-classical period. Regarding the latter Horrocks (2010: 213) writes that ‘after the excesses of the 2<sup>nd</sup> century Atticism, the prose writers of late antiquity had combined features of classical Attic and higher registers of the *koine* into a more-or-less sustainable literary standard.’ The two situations are also similar in the way that neither the καθαρεύουσα nor the form of Attic promoted by the Atticists under the Second Sophistic were ever everyday spoken languages (although the spoken use of καθαρεύουσα was encouraged in official settings such as schools and law courts until 1976). This, as Mackridge (1990: 42) points out, is unlike any other European language at the time when the καθαρεύουσα was being promoted, since these had different styles for different usages, rather than two different languages:

In other European countries, the spoken language of a dominant group formed the basis for the national written language; but no group spoke *katharevousa*, which was (even by Hadzidakis) conceived of only as a written language. Naturally, the very existence of a different written language, which deprived the spoken language of the opportunity of being developed for use in various areas of life, kept the spoken language in a state of comparative impoverishment. This impoverishment was then used as a (somewhat circular) argument against its use in writing.

Therefore while the Second Sophistic was a short period in the history of Greek, the Atticising language that its writers encouraged reflects a more general anxiety of influence, and a tendency among Greek scholars and educated writers to hark back to the Classical language. This Classical language, in the case of both second-century and nineteenth-century Greece is an abstract idealisation of the Attic dialect, loosely and often arbitrarily defined. In both of these cases, there is a sense of a continuum, of a *purifying*, not *purified*, language – we talk of καθαρεύουσα, not of καθαρά.

Due to the ‘continuity’ of the Greek language, it is tempting to draw comparisons between different periods in its history. However, the context of the second-century Atticist

movement was different to that of the Modern Greek language debates, principally in that the nineteenth-century was marked by the creation of a nation state. Just as it would be difficult to closely compare the prescriptivism of Quintilian to the language reforms of Italian, for example, since these are the reforms of two different languages at two different periods, in a similar way it is important not to overstate the continuity of Greek.<sup>137</sup> It is also dangerous to overstate parallels in the development of Greek and Latin: while it is to a certain extent useful to compare the development of Greek with that of Latin, another culture language with a canon, there are some important differences. The most significant of these is discussed by Versteegh (2002: 62), who contrasts the development of Latin (and Sanskrit) from which many different standard languages developed, with that of Greek (and Arabic), where we find a continuation of one standard language alongside its vernacular counterparts.

Nevertheless, the temptation to compare another language's development with that of Greek has existed for a long-time, with the result that, as Trapp (1971: 239) claims, 'practically every nation in Europe has entertained the notion that its vernacular had a special relationship with Greek.' Trapp lists examples of Italian, French, and even English Renaissance writers who claim that their vernacular is more closely related to Greek than Latin (with very tenuous examples such as the presence of a definite article, or the aorist in, for example, French). While these are based on an idea that there is something special and prestigious about the Greek language, real parallels between the situation in second-century Greece, early fourteenth-century Italy, and nineteenth-century Greece can also be found, in that in each case we see a standardisation process of what is acceptable and what is not. In the case of the Greek-speaking world in particular, this standardisation process was undoubtedly a way in which the Greek elite tried to retain their independence, or sense of 'Greekness'.

Finally, the collection of papers in Georgakopoulou and Silk's edited volume *Standard Languages and Language Standard: Greek, Past and Present* (2009) shows, through the use of case-studies of various points of Greek's history, from Ancient to Modern, that the process of standardisation is an ongoing one, and the outcome of principally socio-cultural and political considerations, rather than strict linguistic ones. Therefore, in the second century 'Attic' Greek was used by the Greek elite to maintain a sense of political independence under Roman rule. In the nineteenth century, καθαρεύουσα was used as a way to return to the pre-Ottoman and pre-Byzantine roots of the language. In both cases it is clear that purist intervention arose as a

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<sup>137</sup> As Beaton (2009: 350) writes when comparing the 'diglossic' situations of the Second Sophistic and of the early twentieth century, this would be 'to simplify a complex and continuously evolving situation that existed through the intervening centuries.'

result of political issues, as language and literature were used in both periods as a way to showcase the underlying identity of the Greeks, amid conquest and conflict.

## 2.8 Summary

In this chapter I provided a definition of *koine* Greek, and a description of the historical and cultural context in which it was used (§2.1). I described the movement of Atticism, and the way in which the different forms of the Greek language were discussed under the Second Sophistic (§2.2 and §2.3). In §.2.4, I evaluated whether the term ‘diglossia’ could be used to accurately describe the linguistic situation under the Second Sophistic. I concluded that the language being prescribed by the grammarians, rather than solely representing a fossilised and archaic form of the language to be contrasted with the spoken form of the language, was also part of a linguistic continuum, since there were not always clear or distinct scenarios where the *koine* should be used over the re-analysed Attic dialect and vice versa. In §.2.5 I examined the context and readership of the Atticist lexica, which provide us with under-examined but fruitful evidence about the Greek language in the Post-classical period. The general prescription of Atticism was to a certain extent successful: the authors who criticised the writings of the lexicographers, such as Lucian and Galen, wrote in Atticising prose themselves. Attitudes towards language change and variation under the Second Sophistic, and parallels with twentieth century Britain were discussed in §2.6 and further parallels were drawn between the Atticist movement and fourteenth century Italy and nineteenth century Greece in §2.7.

It is obvious that the Atticist movement was the cause of *lexical variation* in the Post-classical period: the very existence of the lexica, which attest variant lexemes, is sufficient evidence for this. The main research question of this chapter therefore concerned *lexical change*: what effect did the Atticist movement have on the development of the everyday Greek lexicon in the Post-classical period? Linguistically, and in terms of the development of the everyday Greek language, it appears that Atticism did not cause long-term lexical change in Greek. While the effect of Atticism appears to have been significant in the Post-classical period, as we find many texts written using an Attic lexicon, rather than *koine* vocabulary, this did not alter the course of change, and reflected a different register of speech, rather than affecting the linguistic features of the *koine*. The fact that Atticism did not have a long-lasting linguistic effect is on the whole perhaps unsurprising: the Atticists were striving for distinction



and authority, and so it should perhaps be expected that their language would specifically *not* be reflected in everyday language.

Moreover, the effect of Atticism in the Post-classical period seems to a modern scholar much greater than it would have been, due to the nature of our surviving evidence, which comprises of sources largely written in the highest registers of the language. This, in itself, was an effect of Atticism, as the movement prescribed a canon of approved Attic authors, prompting the survival of this particular category of works. As the following chapters show, if one looks at the sources thought to represent something closer to the spoken register of language – chiefly the documentary papyri – the effect of Atticism appears much smaller. The archaic Attic dialect was evidently not successful in supplanting the developing *koine* vernacular, since the latter survives to be the eventual ancestor of the standard modern language.<sup>138</sup> Furthermore, the fact that purist movements rarely work is exemplified rather ironically by the case of Muslim Pontic Greek, a modern day Greek dialect that has by and large escaped the classicizing tradition. As Bortone (2009: 82) points out, ‘apart from the copious Turkish elements (to be expected, since the speakers are in Turkey), Muslim Pontic Greek has remained, in some respects, more archaic than Modern Greek – even more archaic than ‘Christian’ Pontic. A big paradox indeed, if we consider the extensive and strenuous efforts made by the Greeks, for centuries, to make *their* Greek more archaic.’

However, the non-linguistic effects of Atticism were much greater, as this movement set the tone for further prescriptive movements in the history of Greece. The attitudes towards linguistic change under the Second Sophistic are found again sixteen centuries later, with purist movements which treated the modern language ‘not as an autonomous language with its own grammatical system, but as an appendage of Ancient Greek.’<sup>139</sup> This description of the reasoning behind the language purism movement of the nineteenth century could just as easily be applied to the thoughts of the proponents of Atticism under the Second Sophistic, and so the most far-reaching impact of the Atticist movement on the development of the Greek language was the idea that a language of the past could be revived as a present-day actuality.

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<sup>138</sup> Cf. Silk (2009: 23).

<sup>139</sup> Mackridge (1990: 43).

### Chapter 3. Phonology and the Lexicon

This chapter examines another factor for lexical variation and change: that of the phonological restructuring of the Greek language in the Post-classical period. I argue in this chapter that understanding the phonological changes of this period is the logical and crucial next step in an investigation of lexical change, having established the linguistic backdrop (Chapter 2), and before looking at the morphological changes in the language (Chapter 4) and cultural factors for change (Chapter 5). For the purposes of this thesis, phonology and morphology have been artificially separated into two chapters; however, the two are intrinsically linked, and many cross-references are made between this chapter and the next.

Phonemes are the building blocks of the lexicon, and changes in the phonemic inventory of Greek had repercussions on the lexicon, with the result that everyday vocabulary changed significantly during that period. These changes are regularly illustrated in the corpus of texts selected for this study. For example, the table of types of glosses in the introduction (Table 1) shows that the lexicographers were aware that an important difference between Classical Attic Greek and *koine* Greek was the way in which words were pronounced: 10% of both Moeris' and Phrynichus' glosses involve a commentary on different phonological variants. Moreover, as this chapter examines, many of the lexical variants and innovations which the lexicographers mention in their glosses reflect the changes that the Greek language underwent *as a direct result* of the shifting of the Greek phonemic inventory. This chapter demonstrates how words either had to be morphologically adapted **(1)**, or replaced by a new lexeme **(2)** in order to reflect and adhere to the new phonological norms which are described at the start of the chapter. I define this as follows:

- 1. Morphological adaptation:** a Greek word is adapted through derivational morphology, for example through the addition of a derivational suffix. For example, τὸ κλειδίον (→ SMG τὸ κλειδί) is formed through the adaptation, using the morphological suffix -ιον, of Classical ἡ κλείς (stem κλειδ-). This happens, as this chapter shows, because of the tendency to lengthen lexemes and avoid monosyllabic forms.
- 2. Lexical replacement:** a Greek word is no longer phonologically plausible and is replaced with either **(a)** a pre-existing Greek word where there are two synonymous (and therefore, by the Principle of Parsimony, competing) forms; or **(b)** a word borrowed from another language.

- a. For example, τὸ πλοῖον (→ SMG το πλοίο) replaces Classical ἡ ναῦς, due to the general tendency to lengthen lexemes and avoid monosyllabic forms.<sup>140</sup>
- b. For example, τὸ ὄσπιτιον (→ SMG το σπίτι), from Latin *hospitium*, ‘hospitality,’ replaces ὁ οἶκος, due to a restructuring of the phonemic system and avoidance of homophony.<sup>141</sup>

These changes happened incrementally: as this chapter argues, many of the changes that are first observed in large numbers in the Post-classical period had begun in the Classical period. The aim of this chapter is to investigate both how changes in the phonological system of Greek impacted lexical change and what the Greek writers of the Post-classical period made of these changes. In §3.1, I provide an overview of phonological changes. Next, in §3.2, I discuss the evidence for linguistic awareness of phonological changes on the part of second-century AD Greek speakers. In §3.3, I examine one of the most significant overarching trends in the Greek lexicon, which is the lengthening of lexemes. Then, I examine the effects of the subsequent morphological adaptation **(1)** (§3.4) and lexical replacement **(2)** (§3.5) on the lexicon. In §3.6 I attempt to provide a typology of lexical change as it has been described in this chapter, and evaluate why particular changes occurred over others, and finally, in §3.7, I provide a conclusion to this chapter.

### 3.1 Overview of phonological changes

The phonological differences between the language of the earliest Archaic Greek texts (c. 800 BC) and that of the ‘everyday’ texts of the Post-classical period are striking and evident: the loss of quantitative distinction; the monophthongisation of the diphthongs containing /i/ and /u/, and the narrowing of multiple previously distinct vowels to /i/ are immediately obvious. What is less obvious is the timeline of these changes. The reconstruction of the phonology of Ancient Greek, from the Classical to the Post-classical period, has been a topic of much contention among scholars, and many have offered differing perspectives on the chronology of the phonological changes. This section brings together the observations that have been made

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<sup>140</sup> See §4.4.1.3 for the morphological reasons for the replacement of this noun. The relationship between phonological and morphological causes of lexical change, which are intrinsically linked and are only artificially separated in this thesis, are further discussed in §4.5.

<sup>141</sup> See §5.2.2 for a detailed discussion of the sociolinguistic reasons (which include Christianity and the spread of Latin throughout the Greek-speaking world) for the replacement of this noun.

about these changes. Particularly problematic, but of crucial importance for variation and change in the lexicon, is the evolution of the Greek vowels. Two very different schools of thought are represented by Teodorsson (1974) and Threatte (1980). Duhoux (1987: 181–182) has compared their two approaches, and the following table (Table 3), which outlines the different chronologies of changes in the Greek vocalic system, is adapted from his article:

Change	Teodorsson (1974) dating	Threatte (1980) dating
Loss of quantitative distinction	Starting in the sixth century BC, ending in 350 BC	Roman period, especially after AD 100
/ei/ > /e:/ > /i/	/ei/ > /e:/ from c. 650 BC /e:/ > /i/ 400–340 BC	/ei/ > /e:/ late sixth century – 460 BC /e:/ > /i/ standardised end third century BC
/ε:i/ > /ε:/ > /e:/ > /i/	/ε:i/ > /ε:/ fifth century BC /ε:/ > /e:/ before 400 BC /e:/ > /i/ 400–340 BC	/ε:i/ > /ε:/ fifth – fourth century BC /ε:/ > /e:/ AD 100
/ai/ > /ā:/ > /ε:/	Sixth century BC – 430 BC	Completed by c. AD 125 (no convincing example before AD 31)
/a:i/ > /a:/	Sixth to fourth century BC	Third century BC – 150/100 BC
/oi/ > /ø:/ > /y:/ > /i/	/oi/ > /ø:/ > /y:/ sixth century–430 BC /y:/ > /i/ after 350 BC	Second century AD: /oi/ > /y/
/o:i/ > /o:/	From fifth century BC – 350 BC	End of fourth century BC – 150–100 BC
/ui/ > /yi/ > /y:/ > /i/	/ui/ > /yi/ shortly after 700 BC /yi/ > /y:/ sixth century BC /y:/ > /i/ completed by 350 BC	Fourth century BC: /ui/ > /y/ before a vowel
/a:u/ > /a:/	Before 350 BC	c. 50 BC – AD 30
/ou/ > /o:/	Eighth century BC	Second half of fifth century BC
/ε:/ > /i:/	Generalised late fifth century BC	Generalised late third century BC
/ε:/ > /i/	In progress in 350 BC	After AD 150
/o:/ > /u:/	Starting ninth century BC	Completed by fifth century BC
/u/ > /y/ > /i/	/u/ > /y/ just after 700 BC /y/ > /i/ after 450 BC	/u/ > /y/ completed by 570 BC /y/ > /i/ after 300 AD
/u:/ > /y:/ > /i:/	/u:/ > /y:/ just after 700 BC /y:/ > /i:/ generalised after 450 BC	/u:/ > /y:/ mostly completed by 570 BC /y:/ > /i:/ after 300 AD
/eu/ > /ev, ef/	Generalised by fourth century BC	From c. 323 BC
/e:u/ > /ev, ef/	Completed by fourth century BC	From c. 323 BC
/au/ > /av, af/	Starting c. 350 BC	Does not give a date

Table 3: Datings of phonological changes by Teodorsson (1974) and Threatte (1980), table adapted from Duhoux (1987: 181–182)

The reason for such different reconstructions, Duhoux argues, is that the two scholars are reconstructing different sociolects, using different evidentiary bases. Teodorsson examines the sociolect of the uneducated masses while Threatte looks at that of the educated elite minority. Their two approaches should therefore be used complementarily, rather than in opposition, as together they form an account of two components of the language. The fact that there were multiple different sociolects even within the one dialect was clear even to the Ancient Greek speaker: one recalls the fragment of Aristophanes discussed in Chapter 2 (example 33), in which three different sociolects are distinguished just within Athens itself: one that is μέση ('middling'), one that is ἀστεία ὑποθηλυτέρα ('refined [and] effeminate') and one that is ἀνελεύθερος ὑπαγρικοτέρα ('slavish [and] rustic').

Other scholars who have reconstructed aspects of the chronology of the Attic and *koine* vowel systems include Horrocks (2010: 160–172), Gignac (1976: 43), Szemerényi (1987: 1338–1356), Allen (1987), and Ruipérez (1956), all of whom are more conservative than Teodorsson, whose reconstructions are sometimes labelled as 'radical' or 'controversial.'<sup>142</sup> In this chapter, the more conventional chronology of Threatte is followed for the most part, but reference is continuously made to the fact that many of the changes that we see in the written record happened much earlier, due to the relative conservatism of writing over speech.

The forms of Greek examined in this chapter are Classical Attic Greek and Post-classical *koine* Greek. These are the forms which are most relevant to an investigation of linguistic change in the Post-classical period, since the *koine* directly continued the spoken and written Attic used in the Greek-speaking world from the fifth century BC onwards. However the *koine*, as the previous chapter has shown, is not merely a later form of Attic, and so reference is also made to other dialects of Greek wherever relevant. Furthermore, the phonology of Greek and the timeline of sound changes were not homogeneous across the Greek speaking world. For example, the Greek vocalic system initially brought over to Egypt, the region from which we find a significant proportion of our documentation evidencing these changes, was more conservative than in mainland Greece.<sup>143</sup> This chapter follows the premise that, by the later date posited by Threatte, and provided in Table 3 above, each of the changes in question had already been fully effected.

The phonemic inventory of Greek changed significantly following the Classical period and so in order to examine the language of the Post-classical period, it is necessary to first establish

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<sup>142</sup> Horrocks (2010: 165).

<sup>143</sup> See Bubeník (1993).

which phonemes Greek had at its disposal to create and develop words. Therefore this chapter first establishes which phonemes were at the disposal of speakers around the fifth century BC (the Classical period), and which were available to speakers around the second century AD (the Post-classical period).

It is important first to distinguish between orthography and phonology. Phonology cannot always be mapped directly onto orthography, and variations in spelling may simply be signs of a lack of education or knowledge of a particular spelling, rather than reflections of a different type of pronunciation.<sup>144</sup> As Duhoux (1987: 187) points out, there is no known writing system (except for the IPA) which perfectly transcribes a language, and there will always be a gap between phonemes and their corresponding graphemes. Moreover, since writing is by nature more conservative than speech, new developments in speech may not be reflected in writing until sometime after these have developed. This certainly affects phonological changes, which ‘take some time to be become established since phonetic modifications do not affect the phonological system of a language from one day to the next.’<sup>145</sup> In the Classical period, spelling became standardised, with the result that, despite the significant phonological changes that are outlined in this section, words were largely spelt in the same way in the Hellenistic, Roman and Byzantine periods as they had been in Classical Greek. In the following sections, I outline the phonological changes that took place between the Classical and Post-classical periods in the vowel system (§3.1.1) and in the consonantal system (§3.1.2). I then provide a brief summary of changes that were due to influence from the Ionic dialect (§3.1.3) and, finally, I present the full phonemic inventory of Greek in the Classical and Post-classical periods (§3.1.4).

### 3.1.1 Vowels

This section describes the changes that occurred in the Attic Greek vowel system from the Classical to the Roman period as they are reconstructed in the scholarship. Attic Greek of the fifth century BC had five short vowels /a, e, i, y, o/ and seven long vowels / a:, e:, ε:, i:, y:, u:, ο:/. In addition, Classical Attic had nine diphthongs, all ending in /i/ or /u/. These are provided, next to their graphemic representation, in Table 4 below:

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<sup>144</sup> Cf. Adams (2013: 12).

<sup>145</sup> Willi (2003a: 42).

Grapheme(s)	Classical (Attic) phonemes (c. fifth century BC)
<α>	/a/, /a:/'
<ε>	/e/'
<ι>	/i/, /i:/'
<ο>	/o/'
<υ>	/y/, /y:/'
<η>	/ε:/'
<ω>	/ɔ:/'
<ει> <sup>146</sup>	/ε:/'
<ου>	/u:/' <sup>147</sup>
<αι>	/ai/'
<αυ>	/au/, /a:u/'
<ευ>	/eu/'
<ηυ>	/ε:u/' <sup>148</sup>
<οι>	/oi/'
<αι>	/a:i/'
<ηι>	/ε:i/'
<οι>	/o:i/'

Table 4: Vowels in Classical Attic

Multiple changes affected this vowel system, and these would have occurred a while before they were first attested in writing. It has been suggested that these changes first occurred in the lower levels of speech, which did not get written down, and little-by-little penetrated different registers of the language, until they finally permeated the written registers.<sup>149</sup> The reasons for this delay are two-fold: first, the relative conservatism of writing over speech, and second, because changes in the language coming from lower social levels are stigmatised: this is illustrated no better than by the Atticist lexica, which by their very existence attempt to deny that changes ever occurred.

<sup>146</sup> This represented both original /e:/ and the second long ē-vowel produced by compensatory lengthening and vowel contraction, as these two fall together especially after c. 450 BC (Threatte (1980: 172)). The diphthong /ei/ had merged with the long close vowel /e:/ in some social dialects perhaps as early as the sixth century, and in most varieties by the last quarter of the fifth century (Colvin (2020: 76)).

<sup>147</sup> Horrocks (2010: xix) suggests that by the Classical period diphthong /ou/ had merged with long vowel /u:/. This digraph also represented the more recent ō vowel, which was produced by certain contractions (e.g. ο + ο in νοῦς < νόος) and compensatory lengthenings (e.g. ἔχουσι < ἔχονσι) (Threatte (1980: 238)). Cf. Lejeune (1972: 230): ‘l’écriture comme la prononciation a, dès lors, cessé de distinguer entre ou ancienne diphthongue première syllable de τούτου) et ō secondaire (seconde syllable de τούτου).’

<sup>148</sup> /ε:u/, represented as <ηυ> was shortened to /eu/ by the fourth century in Attic (Threatte (1980: 384)).

<sup>149</sup> See especially the papers in the volume edited by Brixhe (ed.) (1993).

Owing to the traditional periodisation of Greek history into Classical and Hellenistic there is an obvious temptation to periodise the development of the language to match. As detailed above, classicists have ascribed varying dates to the changes, and these dates depend principally on the type of evidence used. For example, based on inscriptional evidence, Threatte (1980: 299) has argued that from 400 BC, <ει> gradually became pronounced as /i:/ (rather than /e:/), while Gignac (1976: 189), describing the development of the Egyptian *koine*, rather than developments in Attica and the Aegean area, dates this change later. Yet if the diphthong [ei] had become [e:] it must already have begun to change well before the Hellenistic period. This, and the other conservative datings for changes in the Greek vocalic system, are not necessarily problematic, however, if one assumes that the changes were already fully effected by the later date given in the scholarship. The process of vowel raising of /y/, /i/, /e:/ and /oi/ to /i/ is also dated to the Hellenistic period, and is suggested to have been completed by the fourth century AD (for example by Horrocks (2010: 167) and Rafiyenko & Seržant (2020: 5)) although the truth must again be that these changes were really completed earlier than that in most registers. As in all other cases, however, it is impossible to say how early, due to lack of evidence.

Other vocalic changes have been assigned to the Roman period. These include the loss of quantitative distinction, as a result of the shift of the accent from pitch to stress.<sup>150</sup> Around the same time, the vowel /ε:/ is said to have fallen together with /i:/, with the result that <η> was pronounced the same as <ι>.<sup>151</sup> Moreover, some Roman period papyri show alternation between <υ> and <ι>, suggesting that the vowel raising of /y/ > /i/ began around that period.<sup>152</sup> Another major change often dated to the Roman period (but certainly starting earlier) affected the diphthongs, which were all monophthongised. Before the Roman period, the long diphthongs /a:i/, /ε:i/, /o:i/ had come to be pronounced like the simple long vowels /a:/, /ε:/, /o:/. These changes are usually dated to the Hellenistic period because of the evidence of hypercorrection in certain Ptolemaic papyri (e.g. ἐρωτῶι for ἐρωτῶ).<sup>153</sup> Also dated to this period is the merger of the phonemes represented by <ει> and <ι> to /i/, based on forms such

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<sup>150</sup> See especially Devine & Stephens (1994: 215–23). The date of this change is disputed, and while it is generally accepted that the shift in accent took place during the Roman period, scholars have also argued for a slightly earlier dating.

<sup>151</sup> This change has been dated to the Roman period or slightly later (Dickey (2011: 152)).

<sup>152</sup> Although this, as Dickey (2011: 152) points out, ‘may have been a peculiarity of Egypt that was not generalized in other parts of the Greek-speaking world until the Byzantine period.’ This thesis will follow the earlier dating for this change, and follow the premise that the vowel was already pronounced /i/ by the Post-classical period.

<sup>153</sup> Dickey (2011: 152). Cf. also the dating of Threatte (1980: 359): ‘the iota is clearly no longer being sounded in all three diphthongs by the second half of the second century, and probably somewhat earlier.’



as εἶνα for ἴνα and ις for εἰς in the papyri.<sup>154</sup> According to inscriptional evidence, the monophthongisation of /ai/ > /e/ was complete in Attic by c. 125 AD,<sup>155</sup> although this change also certainly started earlier.<sup>156</sup> The diphthong /oi/ was perhaps one of the last to be monophthongised to /i/, as there are no examples of confusion of <υ> and <οι> until the Roman period: Threatte (1980: 323) dates the earliest examples to the late second century AD, although it has also been argued that this change, along with the change /ai/ > /e:/, began in the Hellenistic period.<sup>157</sup> Finally, by the end of the Roman period, the diphthongs /au/ and /eu/ can be proven, from papyrological evidence, to have been pronounced /af/ or /av/ and /ef/ or /ev/ respectively.<sup>158</sup> Therefore the table of graphemes and their respective pronunciations at the end of the second century AD (Table 5) looks quite different:

Grapheme(s)	Second Century AD ( <i>koine</i> ) Pronunciation
<α>	/a/
<ε>	/e/
<ι>	/i/
<ο>	/o/
<υ>	/i/
<η>	/i/
<ω>	/o/
<ει>	/i/
<ου>	/u/
<αι>	/e/
<αυ>	/af/, /av/
<ευ>	/ef/, /ev/
<ηυ>	/if/, /iv/
<οι>	/i/
<α>	/a/
<η>	/i/
<ω>	/o/

Table 5: Vowels in the koine

<sup>154</sup> Dickey (2011: 152).

<sup>155</sup> Threatte (1980: 268).

<sup>156</sup> Dickey (2011: 152).

<sup>157</sup> E.g. by Dickey (2011: 152). However, it is also possible that /oi/ remained a rounded vowel /y/ until around the eighth century AD, before falling together with /i/, its current phonemic value in SMG. For this, see, in addition to Threatte, Holton *et al.* (2019: 11–13); Schwyzer (1959: 194–196); Horrocks (2010: 162–163). This thesis will follow the dating of its earliest attestation, and follow Dickey’s suggestion that, by the second century AD, the diphthong was pronounced /i/.

<sup>158</sup> Gignac (1976: 183).

The most significant changes that affected the vowel system of Greek were the mergers of the front vowels and the monophthongisation of inherited diphthongs. Moreover, it appears that, by the second century AD, the vowel system was identical, or almost identical, to the SMG vowel system.

### **3.1.2 Consonants**

Unlike the vowels, none of the changes affecting the consonantal system were mergers. This means that, while many of the consonants, like the vowels, underwent phonetic change, this did not lead to any spelling confusions, since they remained orthographically distinct from each other. Since spelling confusions are the main source of evidence for phonological change, this makes tracing the history of the development of the Greek consonantal system more difficult. As Threatte (1980: 238) notes, a key source of evidence for phonological changes affecting consonants are transliterations of Latin or other foreign words into the Greek script, as these show us how speakers who knew how to speak Latin but not write it transcribed the sounds that they heard in the way they would render those same sounds in Greek. The most significant changes in the Greek consonantal system from the Classical to the Post-classical period can be summarised in the following two sections, where I distinguish between the stops (§3.1.2.1) and other consonants (§3.1.2.2).

#### **3.1.2.1 Stops**

Classical Greek had three series of stops: voiceless /p, t, k/ (represented by graphemes <π, τ, κ>), voiced /b, d, g/ (represented by graphemes <β, δ, γ>), and voiceless aspirated /p<sup>h</sup>, t<sup>h</sup>, k<sup>h</sup>/ (represented by graphemes <φ, θ, χ>). In SMG, the voiceless stops have remained the same, but the voiced and voiceless aspirated stops have become fricatives /β, ð, γ/j/ and /f, θ, x/, respectively. The time-frame for these changes leading up to this has been reconstructed in the following manner:

- a) Evidence from Latin (i.e. the increased frequency in the use of <β> for Latin <u>) shows that the change /b/ > /β/ occurred in the late Hellenistic period.<sup>159</sup>
- b) Although often dated later (e.g. (Threatte 1980: 442)) the change /d/ > /ð/ probably occurred as early as the fourth century BC, based on evidence from the papyri and the lexicographers (cf. Phrynichus *Ecloga* 153, discussed in §3.2, example 49).
- c) The change /g/ > /γ/ is attested as early as the fourth century BC in certain levels of speech.<sup>160</sup> This change was finalised during the Roman and early Byzantine periods throughout all levels of Greek.<sup>161</sup>
- d) In the late Hellenistic period, aspirated voiceless stops developed into fricatives: (/p<sup>h</sup>/ > /f/; /t<sup>h</sup>/ > /θ/; /k<sup>h</sup>/ > /χ/).<sup>162</sup> It has been argued based on evidence from Latin borrowings of Greek words that the first of these to change was /p<sup>h</sup>/ > /f/.<sup>163</sup>

### 3.1.2.2 Other consonants

The following changes involving the other consonants can also be identified:

- a) Initial /h/ ceases to be pronounced during the Hellenistic period.<sup>164</sup>
- b) Pronunciation of word final -v, which was weak as early as the Classical period, as its omission from Attic inscriptions suggests,<sup>165</sup> is eventually lost. This change was completed around the late Hellenistic and early Roman period.<sup>166</sup>

<sup>159</sup> Or possibly later than this, according to Threatte (1980: 442), who is not entirely convinced by the value of the increased frequency in the use of B for Latin u as evidence for a change in the Greek pronunciation of B from a labial stop [b] to a fricative.

<sup>160</sup> Cf. Threatte (1980: 440-1), and the Herodian quote of Plato *Hyperbolus* (PCG 183) which is discussed by Colvin (1999: 282): ...ὅποτε δ' εἶπεν δέοι ὀλίγον <ὀλίον> ἔλεγε' ('when he had to say *oligos* he said *olios*').

<sup>161</sup> Dickey (2011: 153).

<sup>162</sup> Threatte (1980: 446): 'φ, θ and χ were certainly true aspirate stops in the Classical period as can be seen from the numerous examples of the aspirate assimilation and aspirate metathesis... The last Attic examples of aspirate assimilation are of the third century BC...certainly the disappearance of spellings like φαρθένος, καταθιθένα, Θεμισθοκλής etc, after ca 300 BC is striking, and it is tempting to assume that their demise is due to a spirantization of φ, θ and χ.'

<sup>163</sup> Threatte (1980: 442).

<sup>164</sup> Threatte (1980: 50). Orthographically, breathings were not used in writing before the Hellenistic period, and were rare before the ninth century AD, but were occasionally used to retain the memory of where the classical /h/ had appeared.

<sup>165</sup> E.g. οἰκόρο for οἰκτίρον in *AM* 78 (1963) p119 no.4 line 1 (=SEG 22.78). Cf. Threatte (1980: 636) for further examples.

<sup>166</sup> Dickey (2011: 153).

- c) The consonant cluster /zd/ represented by <ζ> was reduced to a simple sibilant /z/ by the Roman period.<sup>167</sup>
- d) Double consonants (geminate) were no longer pronounced differently to single ones. This change took place during the Roman or early Byzantine periods.<sup>168</sup>

### 3.1.3 Non-Attic phonological features of the *koine*

In §2.1.2, I examined certain Ionic traits of *koine* Greek phonology, which include:

- a) the preference for geminate -σσ- over Attic -ττ-, e.g. Ionic/ *koine* θάλασσα (*IG* 22.236 (338/7 BC)) but Attic θάλαττα (*IG* 12.57);<sup>169</sup>
- b) the preference for cluster -ρσ- over the Attic assimilation -ρρ-, e.g. Ionic/*koine* ἄρσης (*IG* 5(1).364.10 (Laconia)) but Attic ἄρρην (*IG* 2.678B55);<sup>170</sup>
- c) the preference for uncontracted vowels over their contracted Attic equivalents, e.g. Ionic/*koine* χάλκεος -έα/ -έη, -εον but Attic χαλκοῦς, -ῆ, -οῦν (cf. e.g. *IG* 12.313.55).<sup>171</sup>

As I have discussed in Chapter 2, *koine* Greek is not a direct continuation of Classical Attic Greek, but rather an indirect continuation which has been affected by the dialect's development into the expanded, panhellenic version of administrative Attic. As a consequence, while it is mostly possible to map out a direct diachronic development between Attic Greek and *koine* Greek phonology, there are a handful of inconsistencies that cannot be explained through simple diachronic mapping of regular phonological change. The Ionic features mentioned above are the most important of these.

### 3.1.4 Summary: Table of the phonemic inventory of Greek

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<sup>167</sup> Gignac (1976: 43).

<sup>168</sup> Holton *et al.* (2019: 131–2); Dickey (2011: 153).

<sup>169</sup> Cf. Moeris β25, example (7).

<sup>170</sup> Cf. Moeris θ20, example (8).

<sup>171</sup> Cf. Moeris χ28, example (14).

The following table (table 6) shows the reconstructed pronunciation of Attic Greek and the *koine* circa 450 BC and circa 150 AD, based on the reconstructions outlined above.<sup>172</sup> For the phoneme inventory of Classical Greek, I have also followed Ringe (2011: 228), while omitting the diphthongs /ei/, /ou/ and /ui/ which he includes, since they had been monophthongised by the Classical Period (hence the the total of 36 discrete phonemes rather Ringe’s total of 39).<sup>173</sup>

Grapheme	Classical (Attic) Pronunciation	Second Century AD ( <i>koine</i> ) Pronunciation
<α>	/a/, /a:/'	/a/
<β>	/b/	/β/
<γ>	/g/	/ɣ, j/
<δ>	/d/	/ð/
<ε>	/e/	/e/
<ζ>	/zd/ <sup>174</sup>	/z/
<η>	/ε:/'	/i/
<θ>	/t <sup>h</sup> /	/θ/
<ι>	/i, i:/'	<b>/i, j/<sup>175</sup></b>
<κ>	/k/	/k/
<λ>	/l/	/l/
<μ>	/m/	/m/
<ν>	/n/	/n/
<ξ>	/ks/	<b>/ks/</b>
<ο>	/o/	/o/
<π>	/p/	/p/
<ρ>	/r/	/r/
<σ>	/s/	/s/
<τ>	/t/	/t/
<υ>	/y, y:/'	<b>/i/</b>
<φ>	/p <sup>h</sup> /	/f/
<χ>	/k <sup>h</sup> /	<b>/χ/</b>

<sup>172</sup> Horrocks (2010: xviii-xx) has a similar table for Classical Greek and SMG, and this table roughly follows the same format. This table does not include, as Horrocks does, tone, which is probably not phonemic in the Classical period, and for which the diacritics do not represent distinctive elements (the grave accent, for example, is triggered by context) or clusters such as <μπ> and <ντ> which are only relevant in a discussion of the developments that occurred beyond the time span of this thesis. Horrocks includes these since his aim, detailed in his introduction, where the tables are found, is to show the difference in the way Classical Greek and SMG are pronounced. The table also includes certain diphthongs that Horrocks omits, such as /e:u/.

<sup>173</sup> This also follows the reconstructions of Lejeune (1972), Allen (1987), and Horrocks (2010).

<sup>174</sup> Highlighted throughout the table are clusters (rather than phonemes), which are represented by a single grapheme; these are not included in the total phoneme count at the bottom of the table.

<sup>175</sup> In bold are phonemes that are repeated in the table, since they are represented graphically in more than one way, and so are not to be counted again. The phonemic value of the rough breathing is lost, and so its ‘Post-classical pronunciation’ is also made bold to signify that it should also not be counted.

<ψ>	/ps/	/ps/
<ω>	/o:/	/o/
<αι>	/ai/	/e/
<α>	/a:i/	/a/
<αυ>	/au/, /a:u/	/af/, /av/
<ει>	/e:/	/i/
<η>	/ε:i/	/i/
<ευ>	/eu/	/ef/, /ev/
<ηυ>	/e:u/	/if/, /iv/
<οι>	/oi/	/i/
<φ>	/o:i/	/o/
<ου>	/u:/	/u/
<'>	/h/	[null]
Total discrete phonemes	36	21

Table 6: Phonological development over time (Classical to Post-classical period)

As this table shows, there were fewer phonemes in the Greek of the second century AD than in the Greek of the fifth century BC: Classical Greek had an inventory of 36 phonemes in total; the Greek of the second century had 21. Naturally, the above reconstructions of phonological changes are based on the small amount of written evidence that survives, and more specifically on the even smaller amount of specific sources that scholars such as Threatte and Gignac have examined (in their case, inscriptions from Attica and papyri from Egypt, respectively). These cannot give us a fully accurate picture about the development and realisation of any one phoneme, which would also have been realised differently at any one time by different groups of speakers and in different registers. Nevertheless, they offer a broad description of the phonology of the language which is followed throughout this chapter. The following section (§3.2) lays out the contemporary evidence for the phonemic changes described above.

### 3.2 Contemporary linguistic commentary: the lexica

We saw in §3.1 that there is a significant amount of debate among scholars concerning the dating of the phonological changes detailed above. This section examines to what extent the Atticist lexica corroborate, disprove, or add to these reconstructions, in order to assess the reliability of the reconstruction of Post-classical period Greek phonology.

First, we should note that while contemporary linguistic evidence from lexicographers and other writers is often enlightening, as Chapter 2 has shown, it only goes so far, in particular when phonology and morphology are concerned. For example, Dionysius Thrax, in his *Τέχνη γραμματική*, divides Greek vowels into three categories: the short vowels ε and ο; the long vowels η and ω; and the vowels α, ι and υ, which he calls dichronous. Although he is writing in the late Hellenistic period, this summary clearly does not reflect what modern scholars know about the development of the vowel system at this period. The reconstructions and comments of the lexicographers therefore need to be closely compared to what historical linguists have reconstructed.

Moreover, there is sometimes ambiguity in the Atticist lexica about whether a particular comment is intended to reflect the lexicographer's observation about the *sound* of a word (its phonology) or the way it was *written* (its orthography). We find, for example, multiple examples of confusion between single and double consonants, which, by the time the lexicographers were writing, were no longer phonologically distinguished:

(45) ἀνειλεῖν βιβλίον **διὰ τοῦ ἑτέρου λ** κάκιστον, ἀλλὰ **διὰ τῶν δύο**, ἀνείλλειν. [*Ecloga* 21]  
 [To say] ἀνειλεῖν ('to unroll') a book with the one λ is most terrible, but [say] ἀνείλλειν, with the two.

(46) σάκος Ἀττικοί· σάκκος **διὰ δύο κκ** Ἑλληνες. [Moeris σ32]  
 Attic speakers [say] σάκος ('coarse sackcloth'); Greek speakers [say] σάκκος with two κκ.

We should probably take these glosses to be commentaries on orthography, rather than phonology, since geminate consonants were no longer pronounced (see §3.1.2.2), and we cannot assume that the lexicographers knew how Attic was pronounced. The latter example (46) is also found in Phrynichus, who attributes this orthographic variation to dialect:

(47) σάκκος Δωριεῖς **διὰ τῶν δύο κκ**, Ἀττικοὶ δὲ **δι' ἑνός**. [*Ecloga* 225]  
 Doric speakers [say] σάκκος ('coarse sackcloth') with two κκ, Attic speakers say it with one.

As we saw in Chapter 2, the lexicographers' understanding of the dialects differs from our own delineation. The concept of dialect in this period was not geographic, but cultural, more akin

to a register, and so when they refer to the language of the Δωριεῖς they are probably referring to the Doric literary dialect, not to how their contemporaries in the Peloponnese and other parts of Greece actually spoke. The noun σάκκος is indeed found more frequently in later sources, especially in the papyri and the biblical texts (in the latter it mostly refers to the coarse garment worn in mourning by the Jews). The word occurs four times in Aristophanes: σάκκος appears three times, in *Acharnians* 822, *Assembly Women* 502 and *Lysistrata* 1211, and σάκκος appears once, in *Acharnians* 745. In *Acharnians* 745, the form σάκκος is used by a Doric-speaking Megarian (Μεγαρεύς), and it is probably for this reason that Phrynichus judges that it is a Doric form.

Moreover, in another gloss, Phrynichus comments on how the verb γρυλλίζειν ('to grunt') with a double lambda is a mistake, partly due to 'the pronunciation of the double lambda':

(48) γρυλλίζειν διττὴν ἔχει τὴν ἀμαρτίαν, ἔν τε τῇ προφορᾷ καὶ τῷ σημαινομένῳ· ἐν μὲν τῇ προφορᾷ διὰ τῶν δύο λλ, ἐν δὲ τῷ σημαινομένῳ ὅτι παρὰ τοῖς ἀρχαίοις τὸ γρυλίζειν ἐστὶ τιθέμενον ἐπὶ μὲν τῆς τῶν ὑῶν φωνῆς, οἱ δὲ νῦν τάττουσιν ἐπὶ τῶν φορτικῶς καὶ ἀσχημόνως ὀρχουμένων. ἐρεῖς οὖν γρυλίζειν καὶ γρυλισμὸς συῶν, οὐ γρυλλισμὸς.  
[*Ecloga* 72]

[To say] γρυλλίζειν ('to grunt') is a double mistake, both in pronunciation and in meaning: in pronunciation on account of the double λ, and in meaning because, among the ancients, γρυλίζειν is applied to the noise of pigs, while speakers now apply it to those who dance in a vulgar and indecent way. Therefore you will say γρυλίζειν and γρυλισμὸς ('grunting') of a pig, not γρυλλισμὸς.

We find γρυλλιξεῖτε, a form that is indeed not Attic since it is Doric, in line 746 of Aristophanes' *Acharnians*, in the line immediately following the use of σάκκος by the Megarian, and also spoken by the Megarian. This confirms what has already been advanced about the composition of the lexica: it appears that Phrynichus in particular chooses his examples of forms to reject or defend based on the texts that he remembered, or had at his disposal at the time. However, in talking of the pronunciation (ἡ προφορά) of the verb



γρυλλίζειν, it is possible that Phrynichus is aware that what in this example would have been for him simply an orthographic distinction was in fact a phonological one in the past.<sup>176</sup>

Further evidence for the lexicographers' awareness of sound changes can be found in the following gloss, in which Phrynichus suggests that not only by the time he was writing in the second century AD, but even earlier (at the time of Chryssipus, the Stoic philosopher of the third century BC) <δ> was pronounced something like [θ] (graphically represented as <θ>), perhaps representing an awareness of the change /d/ > /ð/:

- (49) οὐθεὶς διὰ τοῦ θ, εἰ καὶ Χρύσιππος καὶ οἱ ἄμφ' αὐτὸν οὕτω λέγουσιν, σὺ δὲ ἀποτρέπου λέγειν· οἱ γὰρ ἀρχαῖοι διὰ τοῦ δ λέγουσιν οὐδεὶς. [*Ecloga* 153]  
οὐθεὶς ('nobody') with θ, even though Chrysippus and his followers say it that way, you must refrain from saying it; for the ancients [said] οὐδεὶς with δ.

Indeed, Threatte (1980: 472-76), dates the change /d/ > /ð/ to the fourth century BC, based on evidence for the form οὐθεὶς found on an Attic inscription dated to 378 BC. However, both Ruijgh (1986: 451) (in his review of Threatte) and Lejeune (1972: 312) disagree with Threatte's claim that <δ> was pronounced as a fricative as early as the fourth century BC. They argue instead that οὐθεὶς was a concurrent form of older οὐδεὶς between the fourth and first centuries BC because of the aspiration on the second part of the pronoun, (οὐδὲ +) εἶς: this is suggested by the fact that the form \*οὐθεμία for feminine οὐδεμία is not attested. Furthermore, as Threatte's argument for such an early date of change rests solely on this single fourth century attestation of οὐθεὶς, it is likely that Ruijgh and Lejeune are correct, and that οὐθεὶς represents a specific case.

Awareness of the phonological reasons behind orthographical variation extends to the complex vowel system. For instance, awareness of quantitative distinction is another phonological feature frequently mentioned by the lexicographers, and they use the adverbs μακρῶς and βραχέως to comment on long and short vowels respectively:

- (50) ξυρὸν μακρῶς Ἀττικοί· βραχέως Ἑλληνας. [Moeris ξ5]<sup>177</sup>

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<sup>176</sup> Or, as Gerbi suggests in her commentary for this gloss in the *Digital Encyclopedia of Atticism*, Phrynichus is warning against the hypercorrection of γρυλλίζειν, as the tendency for degemination in the Post-classical period resulted in erroneous gemination (due to hypercorrection) in words which had never been written with double consonants.

<sup>177</sup> Interestingly, all glosses beginning with ξ (of which there are only five) in Moeris concern phonological/orthographical prescriptions. This is noteworthy as it might provide a clue about how Moeris

Attic speakers [say] ξυρόν ('razor') with a long vowel; Greek speakers [say ξυρόν] with a short vowel.

Many of the changes in vowel lengths described above are in fact attested in the glosses of the lexicographers, including the merging of the front vowels:

(51) νήστης βάρβαρον, τὸ δὲ ἀρχαῖον νῆστις διὰ τοῦ ι. [*Ecloga* 298]

[To say] νήστης ('one who is fasting') is barbaric, but the ancient form is νῆστις with an ι.

The form νήστης is attested very early in the seventh century BC in the writing of the Ionic poet Semonides, and later in Aristotle and the parodic poet Matron, and is the form found in the papyri from the first century (e.g. *P.Oxy.* 8 1088.44, which has νήστητι). It is therefore likely that this particular example reflects awareness of an Ionic form which has been adopted in the *koine*, rather than of a regular phonological development in the *koine*. Moreover, the graphemes <η> and <ι> were pronounced in the same way (/i/) by the time Phrynichus was writing, so this gloss probably reflects the concern for orthography in the lexica, which seems more pertinent to the lexicographers than the phonology of the language. A final interesting example is that of Moeris o32:

(52) ὄστρια διὰ τοῦ ι μακροῦ Ἄττικοί· ὄστρεα Ἑλληνας. [Moeris o32]

Attic speakers [say] ὄστρια ('oysters') with a long ι; Greek speakers [say] ὄστρεα.

Moeris is wrong here: ὄστρειον is the Attic spelling for the word for 'oyster', and, by the time he is writing, the digraph <ει> and the grapheme <ι> were pronounced the same way. It seems here that Moeris is aware that there was a difference in pronunciation between the way the word was pronounced in Classical Attic (/i/) and the way that sounded more contemporary to him (/e/), and he attempts to render this phonological difference as best he can orthographically.

In most of these examples, the lexicographers seem to comment on orthography rather than phonology. Orthographical variation, although not always directly correlated with phonological change, is always useful to note and be aware of in the study of an ancient

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composed his lexica, of which the original alphabetical order suggests was more carefully thought out and planned than Phrynichus' comments on various sections of Classical texts that he remembered.

language's phonological development. For example, a recent paper by Stolk (2020) examines variation and change in the orthographic norms in documentary papyri. Stolk suggests in this paper that changes in the choice of lexemes and syntactic constructions may depend on chronological and geographical diversification, and finds that similar context-dependent changes could also have played a role in orthographic variation. She looks in particular at the spelling of ordinal numbers, and the noun γραμματ(ε)ιον, and notes that historical changes in orthographic practices often seem to coincide with other changes in the use of a lexeme, such as a specialization in meaning and/or its application in fixed formulae. In Egypt, the historical change from a Hellenistic kingdom to Roman rule seems to mark the innovation and spread of some of these alternative forms.

However, these examples also demonstrate why the lexica are particularly useful as a source for *phonological* change specifically, as their contents corroborate the reconstruction of the phonemic system of Greek in the second century AD. Their use for this purpose has already been demonstrated by Vessella (2018), who successfully shows that the Atticist lexica contain valuable information on the pronunciation of Greek, such as prescriptions about vowel timbre, vowel quality, prosody, and degemination, which we saw exemplified above (although he too notes the difficulty of interpreting many of these glosses, which focus on orthography rather than pronunciation).

Finally, to recall one of the themes of the last chapter, it should be noted that the Atticist movement did not have any visible, lasting impact on the phonology of Greek. While it is possible that an attempt was made by the Atticists to revive Attic pronunciation, and to 'support a pronunciation based on spelling and on specific traits of the Attic dialect as preserved in Attica in the 2nd century AD,'<sup>178</sup> this was not influential in the long term, and the phonological system of SMG developed directly from the phonology of the *koine* described above.<sup>179</sup> The phonological system of SMG was similarly unimpacted by the purist language reforms of the nineteenth century, and even the most highly educated archaisers of the time did not try to advocate an ancient pronunciation, instead rejecting any reconstructed pronunciation.<sup>180</sup> With regard to the other modern Greek dialects, there is evidence for the retention of certain archaic phonological features, for example in Muslim Pontic Greek. Along with a few other dialects, Muslim Pontic Greek retains initial unstressed vowels /ε/, /i/, /o/, /u/, e.g. /επιγα/, /εκλιδosa/,

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<sup>178</sup> Vessella (2018: 119).

<sup>179</sup> Contemporary evidence mocking these prescriptive comments about orthography/phonology, notably Lucian's *Consonants at Law*, suggests that such Atticist prescriptions were not always taken seriously even at the time.

<sup>180</sup> Cf. Bortone (2009: 84).

/ospiti/ where SMG has πῆγα, κλείδωσα, σπῆτι;<sup>181</sup> it does not have synizesis of final diphthongs /'ia/, /'eo/, /'io/; and the pronunciation of the third person personal pronoun αὐτός remained /autos/ not /aftos/, just as in Christian Pontic.<sup>182</sup>

The lexica provide us with plentiful evidence for both phonological changes and contemporary linguistic attitudes regarding these changes. The focus of the rest of this chapter is to demonstrate how we can use our knowledge of the phonological development of Greek to explain the development of another linguistic field that is far less examined, that of the lexicon.

### 3.3 Lengthening of lexemes

#### 3.3.1 Background

The table of the phonemic inventory of Greek at different time periods in §3.1.4 demonstrates how the Greek of the Post-classical period had fewer phonemes than the Greek of the Classical period. I argue in this section that the main repercussion of these phonological changes on the Greek lexicon concerned the length of the words, which became, on average, longer. This is because the fewer the number of phonemes in a language, the longer the words need to be in order for them to be distinguishable.<sup>183</sup> This has parallels in other linguistic processes, notably Menzerath's Law, according to which an increase in the size of a linguistic construction results in a decrease of the size of its constituents, and vice versa.<sup>184</sup>

In order to show that words increased in length on average between the Classical and Post-classical periods, I have collated a core sample vocabulary for both Classical Greek and Post-classical Greek, and calculated mean-average counts for the number of syllables in the core lexicon of each time period.<sup>185</sup> Following Fenk-Oczlon & Pilz (2021) and Mikros &

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<sup>181</sup> See §3.4.3.

<sup>182</sup> Bortone (2009: 83f).

<sup>183</sup> The research in this section (§3.3) has been published in Bru (2023), and the data it discusses is openly available as a CVS file stored in the Harvard Dataverse. It can be accessed here: <https://doi.org/10.7910/DVN/HKPIVU>.

<sup>184</sup> Altmann (1980: 1). Menzerath's law says (for instance): if word A has more syllables than word B, the average syllable length in A is likely to be smaller than in B. My observation is that if language variety A has more phonemes than language variety B, average word length in A would be smaller than in B. The parallel between Menzerath's Law and my observations concerning the lengthening of lexemes is that the average length of the words (= the size of the linguistic construction) increased since the number of phonemes available in the Greek language (= the size of its constituents) decreased.

<sup>185</sup> See below for a description of how the core lexicon for each stage of the language was selected. This investigation follows Nettle (1995: 360–361) in studying words in their dictionary citation form 'as typological

Milička (2014), syllable count was chosen as the measure of word length rather than number of contrasting segments, or phonemes, which is the metric used by Nettle (1995). The metric of syllable count was felt to be the best measure of word length, due to the diachronic changes in the pronunciation of graphemes.<sup>186</sup>

The source used in this study to collect a core vocabulary of Classical Greek was the complete word list, generated by the *Perseus* software, of Aristophanes' *Clouds*.<sup>187</sup> This list comprises a total of 2188 lemmas. The source used to collect the core vocabulary of Roman period Greek was Moulton & Milligan's *Vocabulary*, which collects 4671 lexemes common to both the Greek New Testament and the Roman period inscriptions and documentary papyri.<sup>188</sup> The language of Aristophanes is widely understood by historical linguists to represent the closest we can get to everyday language in the Classical period,<sup>189</sup> and the language of the New Testament and papyri is used in the same way for scholars working on the Post-classical period.<sup>190</sup> The choice of these two sources also remedies two key problems with Nettle's 1995 study: firstly, his sample size for each language is small, consisting of only 50 head-words, and secondly, these head-words were chosen at random from a dictionary, which means that one sample might include mostly rare or technical words while another might include mostly very common, everyday words, and so these might not be truly comparable. Furthermore, the dictionaries in question were of different sizes; and Nettle (1995: 361) himself admits that 'a smaller dictionary would contain generally more common, hence shorter, words.' While neither of my sources are of course comprehensive, the total number of lexemes collected is significant enough and the samples cover enough core vocabulary to give a representative sample. Although the sample for Post-classical Greek is larger than the sample for Classical Greek, both samples are of a considerable size and contain a similar ratio of different word classes.

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differences make cross-language comparisons of morphemes and words in discourse much more problematic.' Moreover, while morphological developments between the Classical and Post-classical period are another factor for lexical change (see Chapter 4), this dataset was created to facilitate an investigation of *phonological* features. Thus the number of syllables recorded for this study was for the first person singular present indicative; the nominative singular; and the masculine nominative singular form for verbs, nouns and adjectives respectively.

<sup>186</sup> Nettle's (1995) study is synchronic, and so it is less affected by this consideration. Other measures of word length include character count (ideal for Chinese, cf. Chen *et al.* (2015)) and consonant count (convenient for Semitic languages such as Arabic, which does not graphically represent most of its vowels, cf. Milička (2018)).

<sup>187</sup> <https://vocab.perseus.org/word-list/urn:cts:greekLit:tlg0019.tlg003.perseus-grc2/?page=all>

<sup>188</sup> Although only the documentary papyri that had been published by the early twentieth century, at the time of the book's publication.

<sup>189</sup> Cf. e.g. Willi (2003b).

<sup>190</sup> Cf. e.g. Bentein & Janse (2021).

The following word classes were excluded from the total count in both texts, as they are rare in both lists, and in certain cases not comparable, or irrelevant to a discussion of lexical change:

- personal names and names of places (e.g. Ἀνδρέας);
- conjunctions (e.g. ἀλλά);
- interjections (e.g. ἀλληλοῦϊα);
- particles (e.g. ἄν);
- prepositions (e.g. ἀνά);
- prefixes (e.g. ἀρχι-);
- pronouns (e.g. αὐτός);
- numerals (e.g. δέκα);
- articles (e.g. ὁ/ἡ/τό).

Therefore, from both word lists, only nouns, adjectives, verbs and adverbs were taken into account for this investigation. In total, there are 653 nouns, 365 adjectives, 794 verbs, and 129 adverbs, for a total of 1941 surveyed words ( $n_1$ ), in the Aristophanes word list. There were 1760 nouns, 612 adjectives, 1686 verbs and 224 adverbs in Moulton & Milligan's *Vocabulary*, for a total of 4282 surveyed words ( $n_2$ ).

### 3.3.2 Statistical analysis

The average syllable lengths were calculated manually, by going through the word lists and counting the number of syllables in each word. Table 7 below shows the average number of syllables for each word class, and the overall average for the Classical Greek and Post-classical Greek samples. This information is also visually represented in the boxplots below (Figures 1, 2, 3, 4 and 5), which show the distribution spread of the data.

Word class	Classical Greek (Aristophanes <i>Clouds</i> ) average word length (number of syllables) ( $\mu_1$ )	Post-classical Greek (Moulton & Milligan's <i>Vocabulary</i> ) average word length (number of syllables) ( $\mu_2$ )
Nouns	2.700	3.156
Adjectives	3.178	3.435
Verbs	3.489	3.912
Adverbs	2.287	2.808
<b>Overall average</b>	<b>3.085</b>	<b>3.475</b>

Table 7: Average word length over time (Classical to Post-classical period)

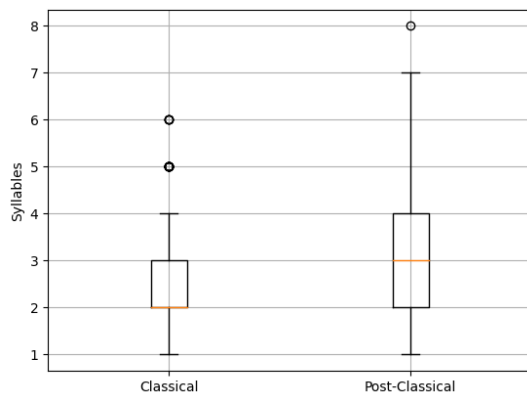


Figure 1: Boxplot for Number of Syllables in Nouns dataset

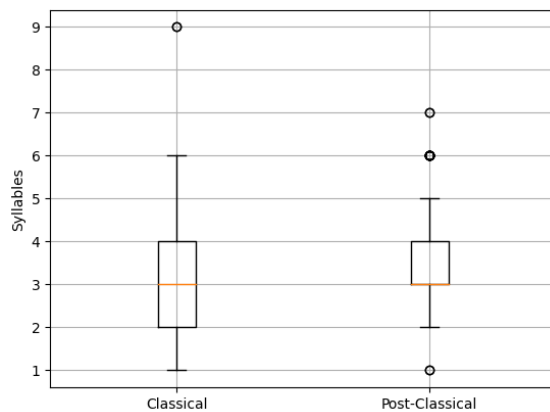


Figure 2: Boxplot for Number of Syllables in Adjectives dataset

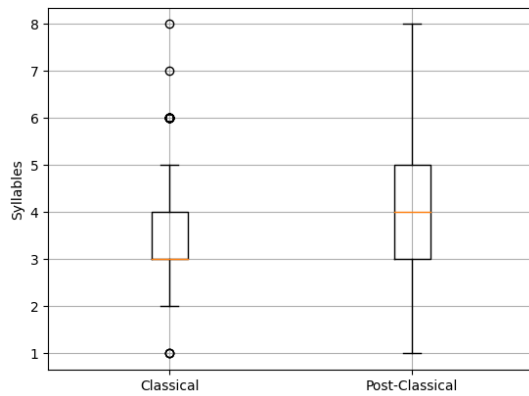


Figure 3: Boxplot for Number of Syllables in Verbs dataset

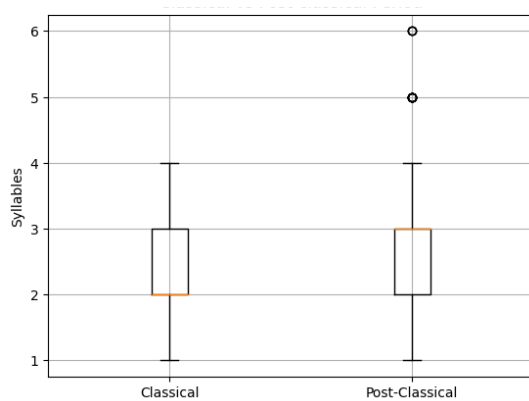


Figure 4: Boxplot for Number of Syllables in Adverbs dataset

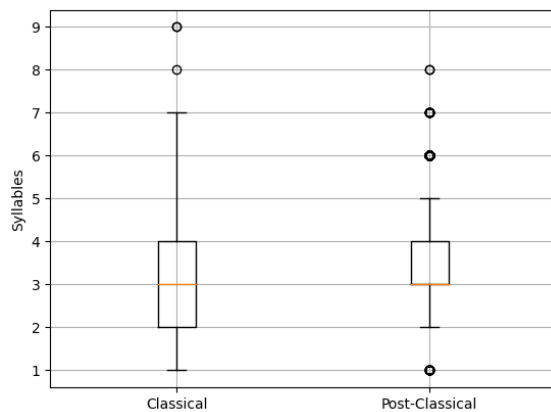


Figure 5: Boxplot for Number of Syllables in Total dataset

Using these data, I carried out two different statistical tests to determine whether the difference between the sample sizes was significant. The first of these was a two-sample t-test, which is a statistical inferential test. This was conducted on both the overall average and the average of each word class (i.e. for each value of  $\mu_1$  and each value of  $\mu_2$ ). The null-hypothesis was set so that the mean of  $\mu_1$  is equal to  $\mu_2$  ( $H_0: \mu_1 = \mu_2$ ). The alternative hypothesis was set so that  $\mu_1$



$\neq \mu_2$ . I set a significance level of  $\alpha = 0.05$ , which is standard for this type of test with this amount of data. This significance level indicates that, in order to reject the null-hypothesis, the t-value must be in the portion of the t-distribution that contains only 5% of the probability mass.<sup>191</sup> The degrees of freedom were calculated as  $df = n_1 + n_2 - 2$ . These refer to the values in a study that have the freedom to vary and are essential for assessing the importance and the validity of the null hypothesis.

The second of the two tests was a Cohen's d, which is a standardised effect size that indicates the difference between two means. The test determines whether the effect size (the value measuring the strength of the relationship between two variables) is small, moderate, or large, and to what degree of significance. This number is calculated by taking the difference between two means and dividing by the data's standard deviation. The reason for conducting two different statistical tests rather than one was to determine as accurately as possible whether the data I collected were significant, and whether the conclusions obtained from them were suitable to quote throughout the rest of this thesis. These were my results, for each value of  $\mu_1$  and  $\mu_2$ :

1. For the **average of the nouns**, because the absolute value of the statistical t-value (10.35) was greater than the critical two-tailed t-value (1.96), I rejected the null-hypothesis and accepted that  $\mu_1 \neq \mu_2$ . I therefore concluded that the mean of syllables in the nouns of the Post-classical Greek sample was significantly greater than the mean of syllables in the nouns of the Classical Greek sample, and so that my results are highly significant. Nouns in the Classical Greek sample (M [= mean number of syllables] = 2.70, SD [= standard deviation] = 0.91) had fewer syllables than in the Post-classical Greek sample (M=3.16, SD=1.09),  $t(1382) = 10.35$ ,  $p < .001$ . The Cohen's d is 0.45, showing that there is a highly significant moderate effect size.
2. For the **average of the adjectives**, because the absolute value of the statistical t-value (3.69) was greater than the critical two-tailed t-value (1.96), I rejected the null-hypothesis and accepted that  $\mu_1 \neq \mu_2$ . I therefore concluded that the mean of syllables in verbs of the Post-classical Greek sample was significantly greater than the mean of syllables in the verbs the Classical Greek sample, and so that my results are significant.

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<sup>191</sup> Later, this test was also carried out with a significance level of  $\alpha = 0.01$  and  $0.001$  (i.e. the t-value was in the portion of the t-distribution that contains 1%, and 0.1% of the probability mass. Even with these very high significance values, the null-hypothesis was rejected, and the statistical t-values were greater than the two-tailed t-values.

Adjectives in the Classical Greek sample (M=3.18, SD=1.07) had fewer syllables than in the Post-classical Greek sample (M=3.43, SD=1.02),  $t(734) = 3.69$ ,  $p < .001$ . The Cohen's  $d$  is 0.24, showing there is a significant small effect size.

3. For the **average of the verbs**, because the absolute value of the statistical  $t$ -value (9.35) was greater than the critical two-tailed  $t$ -value (1.96), I rejected the null-hypothesis and accepted that  $\mu_1 \neq \mu_2$ . I therefore concluded that the mean of syllables of the verbs of the Post-classical Greek sample was significantly greater than the mean of syllables of the verbs of the Classical Greek sample, and so that my results are highly significant. Verbs in the Classical Greek sample (M=3.49, SD=1.04) had fewer syllables than in the Post-classical Greek sample (M=3.91, SD=1.07),  $t(1591) = 9.35$ ,  $p < .001$ . The Cohen's  $d$  is 0.38, showing that there is a highly significant small-moderate effect size.
4. For the **average of the adverbs**, because the absolute value of the statistical  $t$ -value (5.55) was greater than the critical two-tailed  $t$ -value (1.97), I rejected the null-hypothesis and accepted that  $\mu_1 \neq \mu_2$ . I therefore concluded that the mean of syllables of the adverbs of the Post-classical Greek sample was significantly greater than the mean of syllables of the adverbs of the Classical Greek sample, and so that my results are significant. Adverbs in the Classical Greek sample (M=2.29, SD=0.76) had fewer syllables than in the Post-classical Greek sample (M=2.81, SD=0.98),  $t(321) = 5.55$ ,  $p < .001$ . The Cohen's  $d$  is 0.66, showing that there is a significant moderate-large effect size.
5. For the **overall average**, because the absolute value of the statistical  $t$ -value (13.13) was greater than the critical two-tailed  $t$ -value (1.96), I rejected the null-hypothesis and accepted that  $\mu_1 \neq \mu_2$ . I therefore concluded that the mean of syllables in the Post-classical Greek sample was significantly greater than the mean of syllables for the Classical Greek sample, and so that my results are highly significant. In aggregate, in the Classical Greek sample (M [= mean number of syllables] =3.09, SD [= standard deviation] =1.07) words had fewer syllables than in the Post-classical Greek sample (M=3.48, SD=1.13),  $t(3951) = 13.1$ ,  $p < .001$ . The Cohen's  $d$  is 0.32, showing there is a highly significant small-moderate effect size.

Higher  $t$ -values indicate that a larger difference exists between the two sample sets. Therefore there was a *very* significant difference between the overall average number of syllables for both samples. The difference was particularly pronounced for the nouns and the verbs, and slightly less so, but still significant, for the adjectives and the adverbs. The rest of this chapter therefore

focuses in particular on nouns and verbs, and investigate *how* it was that these words came to be longer in Post-classical Greek, looking first at morphological adaptation (1) (§3.4) and then at lexical replacement (2) (§3.5).

### 3.3.3 Further notes on word lengths

The dataset described above was created to study lexical change in Ancient Greek. However, as I have argued in Bru (2023) it is also highly re-usable for modern linguists interested in studying diachronic change in word lengths in a corpus language. Studies which have investigated variation in word lengths include Chen *et al.* (2015), Milička (2018) Nettle (1995; 1998), Wichmann *et al.* (2011), and Fenk-Oczlon & Pilz (2021). These studies have demonstrated that there is a negative correlation between phoneme inventory and word length, something which can now be shown to be true for Classical and Post-classical Greek: the Greek of the Post-classical period had fewer phonemes than in the Classical period, and, as the data show, the lexemes of the Post-classical period were longer than those of the Classical period. The majority of these previous studies has so-far focussed on *synchronic* comparison between multiple languages. For example, Nettle (1995) compares ten modern languages and repeats his findings in a 1998 paper comparing twelve West African languages, Wichmann *et al.* (2011) show using data from over 3000 languages collected in the Automated Similarity Judgment Program (ASJP) that average word length and phoneme inventory sizes are negatively correlated,<sup>192</sup> and Fenk-Oczlon & Pilz (2021) analyse parallel text material from 61 languages and also find a negative correlation between phoneme inventory size and mean length of words, measured as number of syllables.

My dataset collects relevant data on a single language *diachronically* (i.e. as opposed to its synchronic application on multiple languages which are being compared), and my findings corroborate what has been shown to be true for other individual languages, namely English and Russian (Bochkarev *et al.* (2015)), Chinese (Chen *et al.* (2015)), and Arabic (Milička (2018)): that the lengths of words in a language tend to increase over time. The study on English and Russian shows that this is the case when measured over the course of three centuries; the study on Arabic includes data from the eighth to the mid-twentieth century AD;

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<sup>192</sup> They also suggest that the lower limit to the number of phonemes that a language can tolerate is 10-12 (e.g. Pirahã, a language spoken in Amazonas, Brazil, and Rotakas, spoken in New Guinea).

while the study on Chinese includes written Chinese texts ranging from around 300 BC to the modern day. The long diachronic span of these studies, in particular the one on Chinese, suggests that this trend should hold true across languages, as it ‘basically rules out the possible limitations of the widely used synchronic approaches.’<sup>193</sup>

Furthermore, Chen *et al.* (2015) and Milička (2018) have shown that, in addition to word lengths increasing over time, there is a negative correlation between increasing word lengths and word frequencies. This is in accordance to Zipf’s Law of Abbreviation, which suggests that frequent words tend to be short.<sup>194</sup> It follows that also exists a positive correlation between word length and word complexity, or ‘entropy’, since more frequent words tend to be less complex.<sup>195</sup> To explain this, Chen *et al.* (2015: 2) invoke the ‘principle of least effort’: ‘the evolution of words is governed by the efficiency with which they can be used to communicate: word length is optimized for efficient communication.’ As a result, ‘mean word length can be seen as an indicator and a simple estimate of lexical complexity of human languages.’<sup>196</sup> Milička (2018: 87) concurs: ‘more complex vocabulary needs to be encoded by longer words.’

As Milička (2018: 88) concludes in his study of Arabic, ‘we are far from concluding that the increase of the average word length is a general law of the word length dynamics. But we can expect this pattern in other corpora of various other languages, at least for the past centuries. This is due to the increase in the complexity of society, along with the complexity of languages, which are part of the respective societies’ cultures. Language complexity manifests itself in lexical complexity, i.e. the entropy of the word frequency. In accordance with the Shannonian theory of communication, the word frequency distribution entropy is strongly positively correlated with the average word length.’ The study of word lengths in Classical through to Post-classical Greek opens up a very fertile area of research, and I intend in a future study to collect word frequencies for both my word lists in order to establish whether this correlation between increasing word length and entropy over centuries also applies to Greek.

### 3.4 Morphological adaptation (1)

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<sup>193</sup> Chen *et al.* (2015: 6).

<sup>194</sup> See Zipf (1935; 1949).

<sup>195</sup> Cf. Kanwal *et al.* (2017). In §4.3.1 I discuss the theoretical background behind the correlation between entropy and change.

<sup>196</sup> Chen *et al.* (2015: 5).

This section discusses the dynamics of word length, and other features of lexical change from a qualitative point of view. At the start of this chapter, I argued that the lexicon underwent three types of changes in order to adapt to the changing phonology of the language. The first of these (1) is morphological adaptation. Morphological adaptation can occur when phonological changes cause existing Greek words to become no longer suited to or optimal for the phonological environment. These are subsequently adapted through derivational morphology, for example through the addition of a suffix. There are other reasons besides phonological change that may prompt a pattern of morphological adaptation among certain categories of words, notably the shift away from athematic paradigms, and these are examined in Chapter 4. This section looks at the types of morphological adaptation that can be argued to have arisen as a result of phonological change.

Changes in the phonology of Greek could prompt morphological adaptation because the reduction in the size of the phoneme inventory, detailed above (§3.3), meant that Greek words risked sounding too similar to one another, and so needed to become longer. In the Greek of the Hellenistic and Roman periods, homophony arose mainly because there were comparatively too few phonemes. Homophony is problematic in a language, and causes adaptive changes. As Nettle (1998: 244) writes, ‘where segments merge, previously distinct classes of words became homophones. Speakers can tolerate a certain amount of homonymy, but often they compensate in some way. Phonological mergers are not reversible, since once the merger has occurred there is no trace of which word belonged to which class. However, speakers can make distinctions by lexical strategies.’<sup>197</sup>

It follows that monosyllabic words, which were at the highest risk of becoming homophones, had to be increasingly avoided in Post-classical Greek: indeed the data from the word lists of the *Clouds* and from Moulton & Milligan’s *Vocabulary* show a much higher number of monosyllabic words in the lexicon of the *Clouds* than in the *Vocabulary*. Words in Post-classical Greek needed to become longer because the reduction in the vowel inventory caused structural pressure on the lexicon to select variants which avoided certain sounds or sequences, in order to avoid words sounding too similar to one another. The following sections examine how morphological adaptation was used to extend the length of words.

### **3.4.1 The word-extending suffix -iov**

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<sup>197</sup> Cf. Dworkin (2010: 599), (1993: 271–272) and Samuels (1972: 67ff.), who talk of homonymic clash.

Older studies which discuss morphologically productive ways to adapt lexemes in the Post-classical period frame a significant portion of their discussion as the (increased) formation of diminutives.<sup>198</sup> Indeed, one of the most noticeable ways in which Greek dealt with the shift in the vowel system, and the subsequent loss of phonemes and of phonemic distinction especially between monosyllable words, was to derive diminutives from these forms. When scholars discuss the increase of diminutives in the Post-classical period, they discuss principally the morphological suffix *-ιον*, which in Classical Greek often has a diminutive function. This function, however, was only associated with the suffix *-ιον* from the sixth or fifth century onwards, and the suffix did not have a diminutive sense in Homer, for example.<sup>199</sup> The suffix *-ιον* became particularly productive in the Post-classical period, mostly due to its function as a common and relatively neutral morpheme which could as a result be used to extend a word without changing its semantics too much: as Chantraine (1968: 68) writes: ‘la finale *-ιον* s’est de plus en plus répandue et banalisée au cours de l’histoire du grec. Le grec moderne possède une masse de dérivés en *-ι* qui s’emploient purement et simplement pour le mot d’où ils sont tirés.’

To recall example **(1)** given at the start of this chapter, the Classical Greek word for ‘key’ is ἡ κλείς, a monosyllabic third declension noun. Papyri dated to the first/second century AD attest that the form τὸ κλειδίον started gradually replacing the original noun, which eventually led to SMG τὸ κλειδί. The regular addition of the morpheme *-ιον* resulted in the increase in the length of words that was required by the phonological environment.

Nouns containing the suffix *-ιον* were not an invention of the Post-classical period and existed in large numbers in the Classical period; among the list of the most common lemmas in Aristophanes’ *Clouds* we find eight occurrences of τὸ ἀργύριον (< ὁ ἄργυρος, ‘silver, money’), five of τὸ μεϊράκιον (< ὁ μεῖραξ, ‘young boy’), and two of τὸ παιδίον and τὸ παιδάριον (< ὁ παῖς, ‘child’). In total, there are 20 nouns formed through the addition of the suffix *-ιον* in the word list of the *Clouds*, excluding the affectionate term of endearment Σωκρατίδιον, as it is a personal name.<sup>200</sup> This accounts for 3% of the nouns. However, as we have seen, the language of the Post-classical period was marked by an efflorescence of features

<sup>198</sup> See especially Palmer (1945: 84–90), Chantraine (1933: 65–71), Debrunner (1917: 147), and Mayser (1926: 430–431).

<sup>199</sup> Chantraine (1968: 64–65).

<sup>200</sup> These are: ἀργύριον; ἰμάτιον; μεϊράκιον; χωρίον; παιδίον; θηρίον; παιδάριον; πραγμάτιον; ῥημάτιον; ὄρκιον; θύριον; ζωμίδιον; σκαλαθυρμάτιον; γνωμίδιον; δικίδιον; οἰκίδιον; πορνίδιον; σίδιον; σημειῖον; γερόντιον.

that already existed in certain strata of speech in the Classical period, a phenomenon due to the relative conservatism of written over spoken form.

Moreover, while in the Classical period, most forms in *-iov* are found *in addition to* their neutral form, without the suffix, in the Post-classical period we find that in many cases the *-iov*-extended form *replaces* the neutral form. This occurs when the *-iov*-extended form is used increasingly frequently (because of the demands of reorganisation caused by phonology, as well as other morphological reasons which are explored in Chapter 4), with the result that it eventually takes on the meaning of the neutral form (and in many cases ceases to be diminutive in meaning). As the Principle of Parsimony discourages two semantically equivalent forms from co-existing, the neutral form eventually ceases to be used, as the *-iov*-extended form is preferred.<sup>201</sup> This is the reason why we find so many more *-iov*-extended forms in the New Testament and documentary papyri, among other texts written in the *koine*: in Moulton & Milligan's *Vocabulary*, we find 87 nouns with the suffix *-iov*, which accounts for 5% of the nouns.

Unsurprisingly, we find many *-iov*-extended forms among those rejected by the lexicographers: for example, Moeris rejects τὸ ἀλλάντιον (α22 'little sausage') and τὸ ὠτίον (ο40 'ear'), suggesting that his reader should use the 'Attic' forms ὁ ἀλλᾶς and τὸ οὔς instead, and Phrynichus (*Ecloga* 53) rejects τὸ κωλύφιον (a type of meat) and suggests that ἡ κωλήν be used instead.

### 3.4.2 Other word-extending suffixes

The increase in the use of suffix *-iov* is perhaps the most obvious morphological feature of Post-classical Greek. However, *-iov* was not the only suffix available to lengthen words in Greek; we find in the Post-classical period increasing numbers of forms which were morphologically adapted (and lengthened) through the use of various suffixes. Even very common everyday indeclinable forms seem to have been lengthened: *ναί* is found as *ναίσκε* in a magical papyrus (*P.Mag.Par.* 1 3145); and both the papyri and the New Testament show evidence of *νυί* being used in addition to *νῦν*. Moreover, we find a large group of frequently recurring common suffixes which increased the length of words. Palmer (1945: 6–18) and

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<sup>201</sup> The Principle of Parsimony suggests that the most acceptable explanation or rendering of a phenomenon (in this case, a meaning) involves the fewest entities.

Browning (1983: 38) have both noted that a number of suffixes, both inherited and innovative, became extremely productive in post-classical Greek.

For the nouns, in addition to ‘diminutive’ suffixes -ιον (and -ίδιον), Browning (1983: 38) singles out the suffixes forming agent nouns -της, -εύς -εύτες/-ευτής, -άριος (which is borrowed from Latin), -ᾶς, -τρια, -ισσα; verbal abstracts -σις, -σία (the latter tends to replace -σις in later *koine*), -μός, -μα; abstract nouns of quality -ία, -ότης; nouns of place -εών -τήριον; nouns of instrument -άριον (borrowed from Latin), and -τρον. For the adjectives, he singles out adjectives of material ending in -ινος; adjectives of quality ending in -ικός -ιος; verbal adjectives formed with suffixes -τός -σιμος; and the suffix -ιανός, which is borrowed from Latin. For the verbs, Browning singles out the suffixes -έω, -όω, -εύω, -άζω, -ίζω.

Browning’s suffixes appear in both word lists consulted for this chapter, and their frequencies in the *Clouds* wordlist (the Classical Greek sample) and in Moulton & Milligan’s *Vocabulary* (the Post-classical Greek sample) are provided in the three tables (8, 9, 10) below. In order to evaluate whether the difference between the two samples is significant, and to account for the smaller size of the Aristophanes sample (1941 words) compared to the post-classical Greek sample (4282 words), a Fisher’s exact test was performed on the data. This is a statistical significance test used in the analysis of contingency tables, and mostly employed over other statistical tests when sample sizes are small, as with these data below (it would therefore have been unsuitable for the data described in §5.3). The difference was labelled ‘significant’ if the p-value was less than 0.05. The data below show that the suffixes listed by Browning are found in greater numbers overall in Moulton & Milligan’s *Vocabulary* than in the *Clouds* word list, and in, over 35% of cases, in greater numbers relative to the differing sample sizes:

Word-extending suffix (nominal)	Aristophanes <i>Clouds</i> (Classical Greek) occurrences	Moulton & Milligan’s <i>Vocabulary</i> (Post-classical Greek) occurrences	Significant difference? (at p < 0.05)
-της	0	68	yes
-εύς	8	15	no
-ευτής	1	5	no
-άριος	0	1	no
-ᾶς	0	2	no
-τρια	1	1	no
-ισσα	1	1	no
-σις	12	118	yes



-σια	0	3	no
-μός	11	53	yes
-μα	34	131	yes
-ία	29	214	yes
-ότης	5	29	yes
-εών	1	0	no
-τήριον	2	8	no
-άριον	1	11	no
-τρον	3	8	no

Table 8: Occurrences of word-extending suffixes over time: nouns

Word-extending suffix (adjectival)	Aristophanes <i>Clouds</i> (Classical Greek) occurrences	Moulton & Milligan's <i>Vocabulary</i> (Post-classical Greek) occurrences	Significant difference? (at $p < 0.05$ )
-ινος	1	20	yes
-ικός	10	29	no
-ιος	35	64	no
-τός	16	26	no
-σιμος	1	3	no
-ιανός	0	0	no

Table 9: Occurrences of word-extending suffixes over time: adjectives

Word-extending suffix (verbal)	Aristophanes <i>Clouds</i> (Classical Greek) occurrences	Moulton & Milligan's <i>Vocabulary</i> (Post-classical Greek) occurrences	Significant difference? (at $p < 0.05$ )
-έω	158	326	no
-όω	20	93	yes
-εύω	22	69	no
-άζω	20	74	yes
-ίζω	29	126	yes

Table 10: Occurrences of word-extending suffixes over time: verbs

While many of the sample sizes – especially for the nominal suffixes – were simply too small for the difference to be significant, in every case the use of these suffixes was more frequent in the Post-classical Greek sample than in the Classical Greek sample, with the exception of -εών.

Predictably, the suffixes listed above are also frequently rejected by the lexicographers. We find among many other examples, Moeris rejecting μεσίτης (μ4), προσποίησις (α100),

κατάχυσις (π13), ὠχρίασις (ω7), and Phrynichus rejecting ἐργδότης (*Ecloge* 322), αὐθεκαστότης (*Ecloge* 329), ὑπόστασις (*Ecloge* 248), πεποίθησις (*Ecloge* 262). The Antiatticist makes a direct reference to the use of morphological suffixes:

- (53) βῶμαξ· ὑποκοριστικῶς ὁ βωμός < Ἀριστοφάνης (fr. 801). (*Antiatticist* β26)  
βῶμαξ ('altar; tomb'); ὁ βωμός ('altar; tomb') in its diminutive form.

The -αξ suffix is not by our terminology diminutive, although whatever the terminology, this gloss illustrates the awareness from the lexicographers of the increasing use of morphological variants in the Post-classical period, at least at the written level. Chantraine (1968: 382) suggests that βῶμαξ, and other nouns in -αξ are Doric in origin. While it is prevalent in Doric, in Attic this suffix is associated, as Chantraine notes, with more 'popular' vocabulary, and is attested in Old Comedy, in words such as ἄνθραξ, 'coal',<sup>202</sup> δέλφαξ, 'pig',<sup>203</sup> and κόραξ, 'raven'.<sup>204</sup> In *koine* Greek, the suffix -ιον could be added to nouns ending in -αξ (stem -ακ-): for example, πιττάκιον, 'tablet, label', glossed by the Antiatticist (π33), or γαζοφυλάκιον, 'treasury', found in inscriptions (e.g. OGI225.16) and the New Testament (e.g. Luke 21:1), and glossed in Moulton & Milligan's *Vocabulary*. The suffix -άκιον then undergoes regular morphological development, losing the inflectional -ον ending, to become -άκι in the Byzantine Period. In SMG, the suffix -άκι has retained or re-acquired a diminutive meaning, and often expresses small size or affection: for example, ρυάκι, 'brook, stream' (< ρυάκιον, 'small stream' < ρυάξ, 'torrent, rushing stream'). The ending -άκι has been reanalysed as a simple diminutive suffix, and can commonly be used on most nominal stems in SMG. Examples include SMG παιδάκι, 'small child' a diminutive form of SMG παιδί, 'child' (< παιδίον 'little child' < παῖς, 'child') and SMG ποταμάκι, also 'brook, stream' < SMG ποτάμι, 'river' (< ποτάμιον, 'little river' < ποταμός 'river'). The reanalyses of παιδί and ποτάμι as neutral, rather than original diminutive forms provides further evidence for the loss of diminutive force of the suffix -ιον. Finally, the suffix -άκι is pervasive in SMG, something that would not have been predictable just from looking at Attic Greek, and which exemplifies the nonlinearity of the development of Greek.

<sup>202</sup> E.g. Aristophanes *Acharnians* 34, 332 and *Clouds* 97.

<sup>203</sup> E.g. Aristophanes *Fragments* 506.4.

<sup>204</sup> E.g. Aristophanes *Clouds* 133 and *Peace* 1221.

### 3.4.3 Word-extending prefixes

The focus of the previous section was on word-extending derivational *suffixes*, as they were particularly prevalent, and also served a morphologically-regularising purpose (see §4.3.4). However, we do find some evidence for word-extending *prefixes* in the Post-classical period. This section introduces the idea of prefixation as a late Greek phenomenon, which is discussed in detail in §4.3.4. For example, Phrynichus (*Ecloga* 60) rejects the use of the late noun τὸ **προβασκάνιον** ('charm, amulet', found from the Septuagint onwards) and instead promotes its non-prefixed Attic form τὸ βασκάνιον. While not strictly a prefix, it is also worth noting here the form 'istoma' found on a Latin/Greek bilingual glossary, written on a sixth/seventh century AD papyrus (*P.Paris. 4 bis*) and written using Roman letters.<sup>205</sup> This word is written next to Latin *buca*, and is the Greek word στόμα with the addition of a word initial /i/. A similar phenomenon occurs in Romance languages (e.g. Old French *estat* (→ *état*) from Latin *status*), and it is interesting to note an instance of this occurring in Greek, at a time when unstressed initial vowels were generally being lost.<sup>206</sup> While an isolated case, this word also exemplifies the word-lengthening tendencies in Greek at the time. Moreover, *P.Paris. 4 bis* is noteworthy for its illustrations of late Greek phenomena, many of which are discussed in the following chapter, such as οἰνάρι for οἶνος, 'wine,' and νερόν for ὕδωρ, 'water.'

Therefore, through the addition of various affixes, words in the Greek language were morphologically adapted to become longer. This topic is further examined in the following chapter, particularly in §4.3.4.1, where I investigate the Post-classical phenomenon of the large increase in prefixed and double-prefixed verbs.

Finally, we also find in the Post-classical Greek sources an increase in compound forms, which also resulted in a general lengthening of lexemes. The phenomenon of double lexical compounds is discussed in detail in the following chapter (§4.3.4.2), as there are significant morphological factors influencing this development, although naturally the formation of compounds, as longer forms, is another way in which the speakers of the language reacted to its phonological constraints. The increased use of both affixation and compounding resulted in an increase in the length of words.

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<sup>205</sup> See §1.2.4 for a brief summary of bilingual glossaries in the Post-classical period.

<sup>206</sup> See Holton & Manolessou (2010: 544).

### 3.5 Lexical replacement (2)

The previous section demonstrated how existing Greek words could be morphologically adapted in order to accommodate the changing phonological environment. In other cases, however, a lexeme that was no longer plausible or convenient could be replaced by another. Examples of this adaptation technique of selecting a competing variety for phonological reasons can be found cross-linguistically: in Latin, for example, the Umbrian word for ‘ox’, *bos*,<sup>207</sup> was probably selected over the inherited *vos* because the inherited variant was homonymous with the very common second person plural pronoun in the nominative, vocative and accusative cases, *vos*.

As detailed in the introduction, two different types of words could be used to replace the discarded word:

- a. a pre-existing Greek word which is one of two synonymous (and therefore, by the Law of Parsimony, competing) forms, or a pre-existing form that undergoes a slight semantic shift in order to semantically replace the discarded form;
- b. a word borrowed from another language (cf. Umbrian *bos*).

The first of these can be described as ‘language-internal’ lexical replacement. The second is ‘language-external’.

#### 3.5.1 Language-internal lexical replacement (2a)

By the Principle of Parsimony, if there exist two synonymous words, a language will tend to favour one, and the other will either disappear, change semantically, or change register (i.e. the two words will coexist in different registers). In the example given at the start of this chapter, τὸ πλοῖον (→ SMG το πλοίο) replaces ἡ ναῦς, due to a general lengthening of lexemes and avoidance of monosyllabic forms (as well as for morphological reasons which are discussed in §4.4.1.3). Both πλοῖον and ναῦς are found throughout the history of Greek in texts of similar genres. However, due to the phonological constraints described, πλοῖον eventually prevailed as the most common word for boat, with ναῦς being retained only in compounds and technical

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<sup>207</sup> See the entry for *bos* in the *Thesaurus Linguae Latinae*.

language. In the same way, the adverb εὖ, for similar phonological reasons, was gradually replaced by the adverb καλῶς. While both forms are found in the texts of the Post-classical period, the latter is far more frequent, and gradually takes over. εὖ occurs six times in the New Testament, while καλῶς occurs 36 times, and, in the documentary papyri, ‘an Stelle des immer seltener werdenden εὖ ist meist καλῶς getreten.’<sup>208</sup> Like ἡ ναῦς, εὖ is retained in certain conditions: ‘εὖ continues to recur in certain epistolary phrases.’<sup>209</sup>

In some cases, where a Greek word becomes no longer plausible due to changed phonological constraints, another word with a different meaning could change semantically and/or morpho-syntactically, in order to replace it. An example of this is that of the noun for ‘wine.’ The Classical Attic word for ‘wine’ is ὁ οἶνος. With the phonological change /oi/ > /i/, this common word would have become increasingly less distinctive, and easily confused with other words, more and more numerous, starting with the now-very-common sound /i/. It was therefore replaced, in the late Post-classical period by the more phonologically suited noun κρασί, which is the form found in SMG, and is derived from the Classical Greek ἡ κρᾶσις (‘a mixing/blending/compounding’). With this example, it is necessary to point out that both adaptation techniques (1 and 2) could be and were used in combination. From the fourth century BC we find attested the noun οἰνάριον, a derived form of οἶνος with the word-lengthening suffix -άριον.<sup>210</sup> Although glossed in the LSJ as having either a derogatory meaning (‘weak or bad wine’) or a diminutive meaning (‘a bit of wine’), Cuvigny (2022: 380–1) demonstrates that neither meanings are definitely attested, but rather supports the premise of Mitthof et Papathomas, who, in their commentary of *P.Eirene* 2 20.2, note that, in the papyri, οἰνάριον has neither a positive nor a negative value, but that οἶνος refers to the wine as a product (its *Stoffname*) and οἰνάριον refers to the wine already in the amphora and ready to be measured out. Cuvigny (2022: 376) adds that, in all papyrological occurrences where οἰνάριον is found in the plural, the noun should be translated not as ‘wine’ but as ‘wine amphoras’, and Kramer (2007) notes that, by the Byzantine period, the nouns οἶνος and οἰνάριον are synonymous. Indeed, the form οἰνάριον survives and is found in the Cypriot and Pontic dialects, synonymous to SMG κρασί.

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<sup>208</sup> Mayser (1926: 459).

<sup>209</sup> Moulton & Milligan (1929: 259). There are more than 200 examples of εὖ from the first century AD onwards, but these are mostly found in set phrases.

<sup>210</sup> As Cuvigny (2022: 375) notes, οἰνάριον found in several fragments from comic authors dating the fourth to the third centuries BC. Its oldest attestation dates to the fourth century BC, and is found in Demosthenes’ *Against Lacritus* 32.

Other examples of lexical replacement include ἡ φωτιά (derived from Classical τὸ φάος ‘light’ and surviving in SMG ἡ φωτιά), which replaces Classical τὸ πῦρ in the Post-classical period, due to the general lengthening of lexemes and avoidance of monosyllabic forms. Similarly, ὁ χοῖρος, which is found as early as Homer meaning ‘young pig’ (e.g. *Odyssey* 14.73) alongside the neutral form for pig, ὁ ὄς, replaces the monosyllabic ὁ ὄς by the Post-classical period, and is the form found to this day in compounds and adjectives (the word for ‘pig’ in SMG is onomatopoeic γουρούνι, but χοῖρος was the form found in *katharevousa*). Moreover, we find attested in later sources (as early as Herodotus, but becoming increasingly frequent in Polybius, Flavius Josephus, and Strabo) the noun ὁ βουνός (‘hill, mound’), which gradually replaced the Classical τὸ ὄρος; the neuter τὸ βουνό is the form found in SMG. This was perhaps due to confusion with ὁ ὄρος (‘boundary/landmark’) which would have been homonymous with τὸ ὄρος (albeit a different gender) by the Post-classical period, due to the loss of the breathing. Avoidance of homophones therefore appears to have been a significant factor in lexical change.

The Atticist lexicographers show awareness of lexical replacement of no-longer phonologically plausible words. For example, in Moeris we find the following glosses:

(54) οἷς μονοσυλλάβως Ἀττικοί· πρόβατον Ἑλληνες. [Moeris ο6]

Attic speakers [say] οἷς (‘sheep’). Greek speakers [say] πρόβατον.

(55) φθοῖς Ἀττικοί μονοσυλλάβως. ἔστι δὲ πέμμα πλατὺ ἔχον ὀμφαλόν. πόπανον Ἑλληνες. [Moeris φ13]

Attic speakers [say] φθοῖς (‘cake’). It is a flat round cake. Greek speakers [say] πόπανον.

In both of these glosses, Moeris draws the reader’s attention to the fact that the no-longer in use Attic noun is monosyllabic (μονοσυλλάβως).<sup>211</sup> A possible reading of these glosses might be that, even though both of the *koine* equivalents were already in use in Greek well before the Roman period and the advent of the *koine*, *koine* Greek speakers chose those forms, over their Attic equivalent because the Attic equivalents were monosyllabic, and, by the Roman period, it became harder and harder to distinguish one monosyllabic word from another (due to the

<sup>211</sup> The lexicographers often comment on the number of syllables a word has. For example, Phrynichus *Ecloga* 59: βιβλιαγράφος· οὕτω λέγουσιν ἐν πέντε συλλαβαῖς καὶ διὰ τοῦ α, οὐχὶ τετρασυλλάβως διὰ τοῦ ο. Cf. Aelius Dionysius σ44: σῶ· μονοσυλλάβως οἱ σῶι καὶ παρὰ Θουκυδίδη (I 74, 3). οἱ δὲ συνηθέστερον γράφουσι σῶι.

reduction in the phonemic, and particularly vocalic, inventory outlined above). In the case of the first example, τὸ πρόβατον had in fact already begun to replace ὁ οἶς in the fifth century, as the loss of /w/ in Attic made it a morphologically awkward noun (both words are found, for example, in Aristophanes' *Clouds*). However, the Attic words in question, ὁ οἶς and ὁ φθοῖς, were not monosyllabic, but disyllabic at an earlier period (the word comes from PIE \*h<sub>2</sub>ówis). The point raised by Moeris may therefore also be that οἶς was monosyllabic in Attic, but not in other dialects, including Ionic, and so there is a possibility that Moeris was not using the term μονοσυλλάβως to give the reason for the lexical change, but to comment on the Attic form as opposed to Ionic and other dialects. In this case, the reason for the lexical replacement might therefore be the change from (monosyllabic) /oi/ to /y/, which would have made the distinction between, for example, ὁ οἶς and the homonym ὁ ὕς ('pig') indiscernible. Similarly, we find in Moeris the promotion of short word noun ὄα, which may have been confused by its homonyms meaning 'hem' or a type of tree:

(56) ὄαν καὶ ἐν τῷ ὠ Ἀττικοί.<sup>212</sup> μηλωτήν Ἔλληνας. [Moeris o37]

Attic speakers [say] ὄαν ('sheep skin') and [also] with an ὠ. Greek speakers [say] μηλωτήν.

In this particular case, in addition to the phonological constraints, there is also a further motive for the replacement of ὄα with μηλωτή, that of a restoration of a transparent semantic connection (with τὸ μῆλον, 'sheep/goat', which is found in Archaic and Classical poetry).

Lexical replacement caused by phonological reasons is common cross-linguistically. In a 2007 dissertation, Martin showed that certain phonotactic patterns are more common than others. These patterns are based on articulatory ease and have a tendency for diachronic change. He demonstrates that, due to these phonotactic preferences, 'lexical items compete with synonymous items to be produced – the result over time is a lexicon consisting of words whose properties make them good at winning these competitions.'<sup>213</sup> That is to say, 'when one sound is easier to articulate than another, words containing the easier sound are given an advantage in the lexical selection process.'<sup>214</sup> While the scope of this thesis does not allow for a compilation of phonemes and/or phoneme combinations listed by order of frequency and an investigation into how these changed over time– and, although there are general tendencies,

<sup>212</sup> This is a rare case of a lexicographer conceding that there might be multiple different Attic forms.

<sup>213</sup> Martin (2007: 138).

<sup>214</sup> Martin (2007: 64).

the lack of spoken record may cause difficulties in establishing phonotactic preferences at different time – this chapter has nevertheless begun to show that the statistical properties of the Greek lexicon are shaped to a significant extent by unconscious selection patterns governed by the phonological environment.

### 3.5.2 Language-external lexical replacement (2b)

In addition to selecting and innovating forms from their own language, the Greeks also turned to other languages to find forms to replace their own. Borrowing, especially from Latin, was prevalent in the Post-classical period, and one of the aims of Chapter 5 is to examine language contact and borrowing, and to establish the reasons why certain words (rather than others) were borrowed into Greek. It is possible that one of these reasons was the change in phonological environment, and the need to replace lexemes that were no longer plausible. Perhaps the most famous borrowing from Latin into Greek, which has been kept in SMG, is the word for ‘house’. In Classical Greek, ὁ οἶκος is found. However, as with ὁ οἶνος discussed above, with the phonological change /oi/ > /i/, this common noun would have become increasingly less distinctive and easily confused with other words, more and more numerous, starting with the now very common sound /i/ (e.g. τὸ εἰκός). As a result of this, we find attested from the fourth century AD the noun τὸ (ὀ)σπίτιον,<sup>215</sup> written with or without the initial <ὀ>, a borrowing from Latin *hospitium* (‘hospitality’). ὁ οἶκος was eventually completely replaced, and τὸ σπῖτι is the form that is found in SMG. τὸ (ὀ)σπίτιον was phonologically more idiosyncratic than ὁ οἶκος due to its distinctive initial consonant cluster, and so while there are many other reasons why a language might choose to borrow a word from another (see §5.2.2 for these), it is possible that phonological needs were a motivating factor for the lexical replacement of ὁ οἶκος with τὸ (ὀ)σπίτιον.<sup>216</sup>

### 3.6 Morphological adaptation vs lexical replacement

Adaptation methods (1) and (2) are relevant to a discussion of how and why the lexicon changed in the Post-classical period. It is therefore worthwhile to establish any possible reasons

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<sup>215</sup> *P.Lips.* 1 40.18 (fourth century AD) has τῷ ὀσπιτίῳ. See §5.2.2 for a discussion on the cultural reasons for this lexical replacement.

<sup>216</sup> See §5.2.2 for further non-linguistic reasons why this particular lexical replacement occurred.



why one may be used over the other in specific circumstances, in order to begin to arrive at an understanding, or rudimentary typology, of lexical development. Language-external lexical replacement **(2b)** to solve phonological issues is rare; we find in the language a tendency to stick with existing Greek linguistic resources by adapting pre-existing words through derivational morphology **(1)** or by replacing a rejected form with another semantically equivalent (or in some cases, semantically adapted) pre-existing lexeme **(2a)**.

On the one hand, there are certain cases where lexical replacement **(2a)** is favoured simply because morphological adaptation is difficult or inconvenient. For example, in order to form an *iov*-extended form of an athematic noun, the suffix is added to the genitive stem. However, for some nouns, the genitive is irregular and therefore less easily formed,<sup>217</sup> or the addition of a suffix would result in a form that is difficult to pronounce. For example, in the case of the word for ‘ship’, examined in §3.5.1, a hiatus would occur if a *iov*-extended form were formed from its genitive, *νεώ* (\**νεώiov*). Moreover, *ἡ ναῦς* has an irregular declension, and so, since a semantic variant did exist, it seems logical for the language to select the morphologically regular variant. Lexical replacement is also prompted by the fact that languages tend to avoid having synonyms, and so these must either be reassigned semantically or socially (e.g. with one form being consigned to learned or scientific language, or in compounds), or discarded.<sup>218</sup> The choice of which to keep can be influenced by many factors, including phonological ones. It was in the Post-classical period that many of these replacements became most evident, due to the relative conservatism of writing over speech, and to the Atticist movement which brought into contrast the different varieties and forms of the language. What we see in the Post-classical period is an efflorescence of lexemes that already existed at certain levels of speech from the Classical period, the time when the phonological changes affecting lexical change began to occur.

On the other hand, morphological adaptation **(1)** was also heavily used, as evidenced by the large number of word-extending suffixes in Post-classical texts. Morphological adaptation is a useful tool to forestall the increase in homophony and homonymy that naturally occurs when the size of the phoneme inventory decreases: ‘when the number of phonemes available decreases such that the probability for homonymy increases it makes sense that words (i.e., lexical roots or stems) should grow longer.’<sup>219</sup> Words needed to get longer, and adding suffixes

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<sup>217</sup> This is further discussed in Chapter 4, which examines the levelling of irregular-looking declensions and the gradual loss of the athematic declension in favour of the thematic.

<sup>218</sup> This occurs in all languages: cf. English ‘skirt’/ ‘shirt’ which are reassigned semantically, or ‘kids’/ ‘children’ which are reassigned socially/dialectologically.

<sup>219</sup> Wichmann *et al.* (2011: 20).

to monosyllabic nouns was a regular way of ensuring that lexical roots increased in length (cases of addition of the suffix -ιον in particular to already long and distinctive nouns can be explained by analogy).

### 3.7 Summary

This chapter has shown how the loss of phonological distinctions (especially in the vowel system) led to a reduction in the phoneme inventory and changed phonological rules. This, as this chapter has demonstrated, directly impacted the lexicon of Greek, which changed *as a result* of phonological changes. Many of the changes discussed in this chapter started to take place in the Classical period, but what we find in the Post-classical period is a written record that certain lexemes had risen up, if we follow the narrative of Teodorsson, from a lower social level. These could subsequently be used in *koine* Greek written records, with the other attested lexemes (used by the higher social classes) being relegated to the Attic lexical sphere. The overall trend of the changes was towards a lengthening of lexemes. The length of lexemes in Greek has been statistically proven to have increased significantly between the Classical and Post-classical periods, a finding that confirms both big-data and cross-linguistic analyses.

This lengthening of lexemes was achieved through two principal methods: **(1)** morphological adaptation and **(2)** lexical replacement, both **(2a)** language-internal and **(2b)** language-external. This chapter has shown that the increase in suffixes, notably the suffix -ιον, was not, as has been claimed, due to a whimsical ‘predilection for diminutive formations in *koine* Greek’<sup>220</sup> but rather to the need to increase the length of words and avoid monosyllables. This chapter has also shown that the seemingly arbitrary lexical replacement of lexemes was not arbitrary, but that choices in vocabulary could be, and were, also driven by the constraints of the phonology.

It is clear from the arguments presented in this chapter that the lexicon of Attic Greek could not possibly work with Post-classical phonology. This in turn raises a pertinent question regarding the Atticist movement under the Second Sophistic: how would a rhetor like the fourth-century AD Libanius, for example, have differentiated between forms such as λύοι (third person singular present active optative.), λύει (third person singular present active indicative), and λύη (second person singular present medio-passive subjunctive)? These would have been distinguished in the fifth century BC, but certainly not in the fourth century AD. This question again points to the suggestion that Greek speakers of the Second Sophistic,

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<sup>220</sup> Gignac (1976: 228).

despite their very best intentions, could not have been diglossic, because many Attic words and morphemes would have been confused due to the different phonological system.

The example of the conjugation of λύω prompts a necessary examination of the morphology of the Greek language, which, as it has become clear in this chapter, was another direct causal factor for lexical change, and which is undertaken in the next chapter.

## Chapter 4. Morphology and the Lexicon

Just as it is not possible to disregard phonological changes in an examination of lexical change and variation, in much the same way it is necessary to consider morphological changes and variation. The table in the introduction (Table 1) shows that the lexicographers were aware of diachronic changes in both inflectional and derivational morphology. Indeed, morphology is a striking element that differentiates Attic Greek and the *koine*. The changing morphological environment affected the lexicon, and prompted the following two types of development: **(1) morphological adaptation** and **(2) lexical replacement**. This developmental dichotomy follows that of Chapter 3. In this chapter, I identify the two as follows:

1. **Morphological adaptation:** the adaptation of a Greek word through derivational morphology, for example through the addition of a derivational suffix. For example, τὸ ὠτίον (→ SMG τὸ αὐτί, ‘ear’) replaces τὸ οὖς, due to the gradual loss of the third declension paradigm (concurrent with the lengthening of monosyllabic nouns).<sup>221</sup>
2. **Lexical replacement:** the replacement of a no longer phonologically plausible Greek word with a pre-existing Greek word that is either **(a)** a competing (/synonymous) variety in Classical Greek; or **(b)** not a competing variety in Classical Greek, but one that undergoes a semantic shift in the Hellenistic/Roman period and replaces a form that is no longer plausible.
  - a. For example, λέγω (→ SMG λέω, ‘I say’) replaces φημί, reflecting a reduction of the athematic -μι verb conjugation;
  - b. For example, τὸ νηρόν (→ SMG τὸ νερό) replaces τὸ ὕδωρ, due to the gradual loss of the third declension paradigm.

In this chapter, I first provide an overview of the changes in the morphological system of Greek that occurred between the Classical and Post-classical periods (§4.1). I then investigate contemporary speakers’ awareness of morphological variation and change by examining glosses from the Atticist lexica that describe morphological features (§4.2). In §4.3, I examine

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<sup>221</sup> There is a significant amount of overlap between lexical changes caused by phonological changes and those caused by morphological changes, as the latter are often linked to, or even caused by, the former. This is particularly evident in the case of the third declension monosyllabic nouns such as οὖς. In this group of nouns, changes were brought about by the loss of vowel-length distinction and changes in pronunciation (cf. Chapter 3), which in turn may have contributed to the loss of the third declension. In §4.5, I examine the overlap between phonology and morphology.

how morphological adaptation (1) was used to resolve some of the issues affecting the lexicon caused by the changing morphological system and in §4.4 I look at how lexical replacement (2) was used as another adaptation method. §4.5 examines the overlap between phonology and morphology in this study, and §4.6 provides a summary and an attempt to establish a typology of the changes described in this chapter. Throughout, I examine evidence from the lexica and the word lists of the papyri and the New Testament, and I compare this evidence with an additional source, the linguistic data from the *Colloquia of the Hermeneumata Pseudodositheana*.

#### **4.1 Overview of morphological changes**

This section describes the morphological developments that occurred between the Classical and the Post-classical periods. The morphological system of Greek, and the changes that occurred between the Classical and Post-classical periods have been extensively studied. They are summarised by Threatte (1996), Gignac (1976: 43–44), Holton *et al.* (2019: 241–253) and Horrocks (2010: 174–187), among others. Like phonological changes, the timescale of many of these changes is contentious, due to the natural slowness of the development of new morphological features, and the gap between speech and writing.<sup>222</sup> Significant changes occurred in both the inflectional and derivational morphology of verbs, nouns, and adjectives, many of these conditioned by analogy. The changes in these three word classes are outlined below:

##### **4.1.1 Verbs**

Morphological changes that occurred between the Classical and the Post-classical period include:

- a) the loss of the optative mood and a decrease in the use of the subjunctive;
- b) the loss of the dual, with its functions taken over by the plural;

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<sup>222</sup> Cf. Willi (2003a: 58): ‘morphological innovations need much more time than lexical novelties to take roots.’

- c) the loss of the athematic -μι verb conjugation in favour of the thematic -ω conjugation;<sup>223</sup>
- d) the analogical levelling of synchronically anomalous verb endings;<sup>224</sup>
- e) the increase of the -θη aorist over the older middle aorist;
- f) the loss of the synthetic future and increase in periphrastic constructions.<sup>225</sup>

The motivating factors for many of the morphological changes occurring in the verbal system were productivity, transparency, and functional convergence. For instance, the verbs belonging to the unproductive athematic class were transferred to the thematic class (for example, δείκνυμι → δε(ι)κνύω); the analogically predictable inflection of the weak aorist gradually expanded into the morphologically untransparent strong aorist forms; and the aorist and perfect – originally distinct tense-aspect categories – increasingly came to be used interchangeably.<sup>226</sup> Similarly, the distinction between the middle and passive voice, which was never fully grammaticalised in Classical Greek – there is no distinction, for example, between the present and imperfect middle and passive indicative conjugations – was gradually abandoned altogether in Post-classical Greek.<sup>227</sup> This chapter principally focusses on the loss of the athematic -μι verb conjugation in favour of the thematic -ω conjugation, and the analogical levelling of irregular verbs, as these affected variation and change in the lexicon.

#### 4.1.2 Nouns

Changes in the inflectional morphology of the nominal system between the Classical and Post-classical periods are also widespread. These include:

<sup>223</sup> This is attested as early as Homer, where we find forms such as δεικνύουσι(ν) as the third person plural present active indicative form of δείκνυμι (rather than δεικνύασι(ν)). This gradual loss of the athematic -μι verb conjugation continued up until the modern period, and εἶμαι alone survives in SMG.

<sup>224</sup> For example, the first person plural οἶδαμεν for ἴσμεν ‘we know’, by analogy with the first person singular οἶδα ‘I know,’ or the first person plural ἐδώκαμεν for ἔδομεν ‘we gave,’ by analogy with first person singular ἐδώκα ‘I gave’. In these and other cases of irregular verbs, the stem of the singular is carried over to the plural (cf. Horrocks (2010: 82).

<sup>225</sup> It is natural that morphology should interact with syntax, in particular with regard to the verbal system. For example, Bentein’s (2013) paper on register and diachrony in Post-classical and early Byzantine Greek explores the diachronic development of three periphrastic constructions with εἶμι (with perfect, aorist and present participle) from the third century BC to the eighth century AD. Periphrases, as I show in §4.2, are well attested in the sources.

<sup>226</sup> Cf. Rafiyenko & Seržant (2020: 5–6).

<sup>227</sup> See Browning (1983: 30); Rafiyenko & Seržant (2020: 5–6).

- a) the loss of the dual, with its functions taken over by the plural (as with verbs);
- b) the loss of the athematic third declension paradigm, with nouns transferred from the third declension to the thematic second declension;
- c) the loss of the dative case, with its functions taken over by the other cases, sometimes preceded by prepositions;<sup>228</sup>
- d) the analogical levelling of the nominal system, with elimination of alternations within a paradigm.<sup>229</sup>

Thus, as Dickey (2011: 154) summarises, the morphology of nouns was simplified ‘along two dimensions: a reduction in the number of distinct cases used and a decrease in the number of different endings of each case.’ The number of different endings for each case decreased as the third declension paradigm was gradually lost. Nouns belonging to this paradigm were either replaced (this is explained in §4.4) or adapted morphologically, with the addition of a suffix which meant that they could decline like a second declension noun (this is explained in §4.3). As with many other changes that occurred at this time, this change has been attributed to the tendency towards economy and regularity in the language: ‘this drive towards simplicity, economy and regularity is simply a part of the process which lost to Greek the consonantal declension and simplified drastically the apparent irregularities of the other inflectional types.’<sup>230</sup> It should be noted that, from a synchronic point of view, there was no such thing as a ‘third declension’ in the Classical period or even in the second century AD. As Morpurgo Davies (1968: 34) points out, ‘the first grammarian from whom we have a complete description of Greek inflectional rules, Theodosius Alexandrinus (fourth century AD), lists 56 different inflectional types.’ The anachronistic use of the term ‘third declension’, much like many other grammatical labels, is nevertheless used in this thesis for clarity, to refer to the collection of inflectional types which differ from both the a-declension and the thematic declension.

The use of nominal cases in Greek is still decreasing today, with SMG (which has completely lost the dative) showing signs of the gradual loss of the genitive case. The reason for the loss of the dative has been argued to be in some parts phonological: ‘with the loss of the final i-element of the long diphthongs and the equalisation of vowel length the dative

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<sup>228</sup> See Bortone (2010: 179).

<sup>229</sup> While the first of these changes was by and large completed by the second century AD, evidence from our sources suggests that the other three were still to a certain extent ongoing, at least in the written record.

<sup>230</sup> Morpurgo Davies (1968: 36).

singular of many classes of noun became virtually homophonous with the accusative singular (given the weakness of final -v).<sup>231</sup>

Moreover, the avoidance of contraction, an important phonological feature of the *koine* which was discussed in §2.1.2 and §3.1.3, can also be attributed to the tendency towards analogical and morphological transparency in the Post-classical language. Horrocks (2010: 82) cites the example of the noun for ‘bone’, contracted to ὀστοῦν in Attic, but found as uncontracted ὀστέον in the *koine*. The contracted version would produce an anomalous paradigm, so ὀστέον is preferred ‘to maintain conformity with the regular paradigm of second declension neuters in -ov.’<sup>232</sup> In SMG, this noun, which is morphologically more complex on account of the vocalic contraction, is replaced by the less morphologically complex τὸ κόκαλο in most registers (although, due to the influence of the *katharevousa*, τὸ οστό is retained in higher registers, notably in medical language).

Phonological and morphological factors, as I explain in §4.5, are always closely linked, especially with regards to the nominal paradigms. In Chapter 3 I have shown that monosyllabic third declension nouns such as ἡ κλείς were reconfigured, at least partly because of phonological constraints. Morphological constraints were another important factor for the addition of derivational suffixes such as -ιον, as their use, in addition to being word-extending (necessary for the phonological constraints), meant that lexemes were either no longer synchronically anomalous in their morphology, or were transferred from the third to the second declension pattern (e.g. ὁ παῖς, παιδός [‘child’, third declension inflection] → τὸ παιδίον, παιδίου [‘child’, second declension]). Therefore, the reconfiguration of such paradigms of existing words and the resulting borrowing of endings from the thematic declensions were induced by both phonological and morphological constraints.

Also representative of the link between phonological factors and the processes of selection which disfavoured morphological irregularity is the lack of survival of the so-called ‘Attic’ declension into the *koine*.<sup>233</sup> The ‘Attic’ declension affected a particular subset of nouns that had first undergone the Attic-Ionic shift \*/a:/ > /ɛ:/ and then the Attic ‘quantitative metathesis’ (transfer of vocalic quantity), with the result that they declined anomalously. Thus, for example, the word for temple, which is ὁ νηός in Ionic and ὁ ναός in Doric gave Attic ὁ νεώς.<sup>234</sup>

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<sup>231</sup> Horrocks (2010: 116).

<sup>232</sup> Horrocks (2010: 82). See §2.1.2: the same occurs with the contracted/uncontracted adjectives χρυσοῦς/χρύσεος, ‘golden’ and χαλκοῦς/χάλκεος, ‘brazen’.

<sup>233</sup> Except when the words appear as the first element of compounds, as Horrocks (2010: 83) points out.

<sup>234</sup> See Méndez Dosuna (1993) and Probert (2006: 85).



	<b>Attic declension</b>	<b>Ionic declension</b>
<i>Nom. sg.</i>	νεώς	νηός
<i>Acc. sg.</i>	νεών	νηόν
<i>Gen. sg.</i>	νεώ	νηοῦ
<i>Dat. sg.</i>	νεῶ	νηῶ
<i>Nom. pl.</i>	νεῶ	νηοί
<i>Acc. pl.</i>	νεώς	νηούς
<i>Gen. pl.</i>	νεών	νηῶν
<i>Dat. pl.</i>	νεῶς	νηοῖς

Table 11: The 'Attic' declension

The 'Attic' declension owes its name to the fact that this specific paradigm is only found in Attic, and not in any other dialect. It was not adopted into the *koine* because the tendency for the language to avoid morphological irregularity was more linguistically compelling than the strong diachronic dialectal link between Attic and the *koine*. Hudson (1996: 12) has called irregular morphology a 'triumph of conformity over efficient communication', and the morphological features of the *koine* show that, by the Hellenistic period, conformity had largely ceased to triumph over efficient and functional communication.

### 4.1.3 Adjectives

Some of the changes that affected nouns also affected adjectives, namely the reduction in the number of distinct cases in use and the decrease in the number of different endings of each case. Moreover, analogically unpredictable comparative and superlative forms were largely replaced by productive formations using suffixes -τερος (comparative) and -τατος (superlative), e.g. τάχιον 'faster' for Attic θᾶπτον, comparative of ταχύς. Certain adjectives ceased to be used in the Post-classical period: in their *Vocabulary*, Moulton & Milligan note the loss of ὑμέτερος -α -ον in favour of pronominal ὑμῶν, and we also find the use of prepositional phrases such as παρά with the genitive in place of a possessive adjective, which is a typical characteristic of the *koine*.<sup>235</sup> We also find, as with the nouns, that adjectives with

<sup>235</sup> Horrocks (2010: 92).

athematic or synchronically anomalous endings tended to be replaced by thematic, analogically regular endings (e.g. ὅλος -η -ον replacing πᾶς, πᾶσα, πᾶν, see §4.4.1.2).

In §3.2, I reported the evidence for the retention of certain archaic phonological features in Muslim Pontic Greek. We find the same for morphology: in the verbal system, the ancient aorist passive has not merged with the perfect, the vocalic temporal augment is still used, and the ancient imperative in -(s)on survives.<sup>236</sup> With regard to the adjectives, we find irregular comparative /καλο/, ‘finer/more beautiful’, directly descended from Classical κάλλιον, rather than analogically regularised SMG καλύτερα, an early form of which is already condemned in the second century by Phrynichus:

(57) [...] οὐδὲ γὰρ **καλλιώτερον** οὐδὲ κρεισσότερον ῥητέον· [...] [*Ecloga* 106]

[...] For one must say neither **καλλιώτερον** (‘finer’) nor κρεισσότερον (‘better’) [...]

We also find archaic possessive adjectives like /εμον/ for SMG μου.<sup>237</sup> The changes described above affected the *koine*, and later SMG. They did not affect all dialects of Modern Greek.

#### 4.2 Evidence for morphological variation and change in the lexica

In the Post-classical period, there are notable differences between the morphology of Atticizing texts such as the works of Lucian and of texts written in the *koine*. The Atticist lexicographers notice many of these differences. One of their concerns is the analogical levelling of the verbal and nominal paradigms. For example, the transfer of athematic -μι verbs to the thematic -ω conjugation is well-documented: in Moeris, glosses concerning the morphological restructuring of a verb from the athematic to the thematic conjugation occur 11 times, and there are four examples of this in Phrynichus. Also regularly attested are periphrastic forms, which are prevalent in later Greek where a morphologically unpredictable form would have been found in Attic Greek. For instance:

(58) ἀπαλλαξείοντες Ἀττικοί· ἀπαλλακτικῶς ἔχοντες Ἕλληνες. [Moeris a26]

Attic speakers [say] ἀπαλλαξείοντες (‘wishing to be delivered from’); Greek speakers [say] ἀπαλλακτικῶς ἔχοντες.

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<sup>236</sup> Bortone (2009: 84).

<sup>237</sup> Bortone (2009: 84–85).

The form ἀπαλλαξιόντες (\*ἀππαλαξιῶ) is a desiderative form of ἀπαλλάσσω. As with many other desideratives, it is only ever attested in participial form. The rareness of desideratives in -σειῶ and the fact that it does not appear in the indicative, or in any other mood, makes the form Moeris is prescribing morphologically unpredictable, with the result that in the *koine* we find a more analogically predictable periphrastic construction instead. Garnier (2005: 6–8) notes that this particular construction, comprising of adverb + ἔχω, is commonly attested among the grammarians: ‘*parmi plusieurs périphrases possibles les grammairiens grecs donnent volontiers pour équivalent d'un ῥῆμα ἐφετικόν une périphrase du type ἐπιθυμητικῶς ἔχειν [...] On notera l'emploi de la périphrase en -ικῶς suivie du verbe ἔχειν.*’

We also find evidence for the loss of the dual, for example:

(59) ἀθανάτω ἀγήρω Ἀττικοί· ἀθάνατοι ἀγήρατοι Ἕλληνας. [Moeris α4]

Attic speakers [say] ἀθανάτω (‘immortal’ (dual)), ἀγήρω (‘ageless’ (dual)); Greek speakers [say] ἀθάνατοι (plural), ἀγήρατοι (plural).<sup>238</sup>

The other features listed in §4.1.1 include the loss of the distinction between the middle and passive voice and the reorganisation of the future paradigm. A related feature attested in the lexica is the replacement of anomalous middle futures with more analogically predictable active future endings, for instance:

(60) βιάσεται <Ἀττικοί>· βιάσει <Ἕλληνας>. [Moeris β33]

Attic speakers [say] βιάσεται (‘he will constrain’); Greek speakers [say] βιάσει.

(61) βοήσεται Ἀττικοί· βοήσει Ἕλληνας. [Moeris β36]

Attic speakers [say] βοήσεται (‘he will shout’); Greek speakers [say] βοήσει.

(62) ὁμοῦμαι ὁμεῖ ὁμεῖται Ἀττικοί· ὁμόσω ὁμόσει Ἕλληνας. [Moeris ο8]

Attic speakers [say] ὁμοῦμαι (‘I will swear’), ὁμεῖ (‘you (sg.) will swear’) [and] ὁμεῖται (‘he will swear’); Greek speakers [say] ὁμόσω, ὁμόσει.

<sup>238</sup> Other instances of glosses promoting dual forms over plural include Antiatticist α82 and Phrynichus *Ecloga* 180.

Turning now to the nominal system, we find several glosses that reflect the gradual loss of the third declension paradigm, in the form of third declension nouns which are restructured in the *koine* to become first and second declension forms: fifteen in Moeris, and seven in Phrynichus' *Ecloga*. Restructured third declension nouns include a disproportionately large number (compared to other third declension types) of third declension nouns in -ίς (genitive -ίδος), a phenomenon that I posit may be connected to the new homophony with masculine first declension nouns ending in -ής, which include nouns such as ὁ δικαστής. For example, Moeris (β22) glosses Ionic ὁ βάτος, (skate (the fish)), which he says is used in the *koine* rather than Attic ἡ βατίς (which would be homophonous with ὁ βάτης, 'walker, runner'). Moreover, we find frequent evidence for analogical levelling of synchronically anomalous paradigms. For instance, the Antiatticist comments on the promotion by other scholars and lexicographers of the defunct Attic accusative form κλεῖν (from ἡ κλείς, κλειδός 'key') over the more analogically predictable *koine* κλειῖδα:

- (63) κλεῖν· ἀξιοῦσι λέγειν, οὐ κλειῖδα. Δίφιλος Εὐνούχῳ (fr. 9). [Antiatticist 17]  
 κλεῖν ('key'); they [i.e. other lexicographers]<sup>239</sup> think it right to say this, not κλειῖδα. [It is found in] Diphilos *Eunuch* (fr. 9).

Moeris is precisely one of the scholars whom the Antiatticist accuses of promoting accusative κλεῖν over κλειῖδα:

- (64) κλεῖν Ἀττικοί· κλειῖδα Ἑλληνας. [Moeris κ45]  
 Attic speakers say κλεῖν ('key'); Greek speakers say κλειῖδα.

The confusion (and subsequent analogical reorganisation) of nominal paradigms is also well illustrated by the following gloss from Phrynichus, who explains that the confusion in the declined forms of ὁ υἱός ('son') is due to analogy with nouns ending in -ύς (such as the proper names Θησεύς ('Theseus') and Πηλεύς ('Peleus')), and he suggests that the 'incorrect' forms (in this case, the genitive singular spelt υἱέως rather than υἱέος) are formed as though from nominative \*υἱεύς:

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<sup>239</sup> For this use of ἀξιοῦσι in the Antiatticist, and why it refers to other lexicographers, see Valente (2015: 47).

(65) υιέως οί ψευδαπτικοί φασιν οϊόμενοι ὁμοιον εἶναι τῷ Θησέως και τῷ Πηλέως. [*Ecloga* 45]

Pseudo-Atticists say υιέως ('of a son') thinking that it is similar to Theseus and Peleus [i.e. in inflection].<sup>240</sup>

Another morphological topic of particular concern to the lexicographers is that of the grammatical gender of nouns, which changed in certain cases between the Classical and Post-classical period, notably, but not exclusively, in the case of second declension feminine nouns in -ος (which came to be treated as masculine).<sup>241</sup> For example:

(66) βῶλος θηλυκῶς Ἀπτικοί· ἀρσενικῶς Ἑλληνες. [Moeris β9]

βῶλος ('mound of earth') is feminine among Attic speakers; it is masculine among Greek speakers.<sup>242</sup>

With regards to the adjectives, we find morphological restructuring through the extension of the -τερος/-τατος formations. Examples of these can be found in great number in Phrynichus' glosses: *Ecloga* 46 τελευταίωτων 'last' (he suggests τελευταῖων as the Attic form); *Ecloga* 105 ἐσχατώτων 'farthest, extreme, last' (he suggests ἔσχατων); *Ecloga* 213 κορυφαιώτων 'chief' (he suggests κορυφαῖων); *Ecloga* 106 ἀμεινότερον, καλλιώτερον, κρεισσότερον 'better, more beautiful' (he suggests ἄμεινον, κάλλιον, κρεῖσσον); and *Ecloga* 382 ῥαότερον 'easier' (he suggests ῥῶον).<sup>243</sup> We also find the gloss involving the 'koine' comparative of ταχύς ('quick'), which is τάχιον ('faster') next to its Attic equivalent θᾶπτον no less than three times in the corpus: once in *Ecloga* 52 and twice in Moeris (θ18 and τ7). The morphological extension of forms like καλλιώτερος/καλλιότερος<sup>244</sup> as the comparative of καλός (rather than κάλλιον) and the general tendency towards the simplification of comparative and superlative

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<sup>240</sup> Cf. *Ecloga* 234, where Phrynichus rejects the accusative form υιέα (promoting instead υιόν), as well as Phrynichus *Praeparatio Sophistica* 118.3–4, where he again condemns the use υιέως rather than υιέος, and *Praeparatio Sophistica* 118.5–6, where he rejects the use of the nominative form υιεύς and accusative form υιέα (while promoting dative υιεῖ). See Favi's commentary on these glosses in the *Digital Encyclopedia of Atticism* for a sketch of the various stem formations and declensions of υιός in the history of Greek.

<sup>241</sup> This is because 'the Masculine gender is somehow associated with the -ος (-os) ending, rather than the Feminine, and that the Feminine is associated with -η (-ē).' Coker (2009: 39). See Coker (2009) for an examination of the changes in the Greek gender system, particularly regarding second declension nouns in -ος.

<sup>242</sup> Other glosses which refer to a change in grammatical gender include Antiatticist α64; β17; κ89 etc.; Moeris λ9; σ41; υ5 etc.; Phrynichus *Ecloga* 40, 43, 254, 282 etc.

<sup>243</sup> The comparative form ῥαότερον is found in Homeric and in Doric, so the last example is not an instance of late morphological adaptation in the Post-classical period, but rather another example of selection.

<sup>244</sup> For example *P.Oxy.* 14 1672.6, which has καλλιότερα.

forms resulted in the loss of suppletive forms (such as καλλίων).<sup>245</sup> Such glosses are also found in Moeris, for example:

(67) ἔχθιστος Ἀττικοί· ἐχθρότατος Ἕλληνες. [Moeris ε2].

Attic speakers say ἔχθιστος ('most hateful'); Greek speakers say ἐχθρότατος.

Finally, epizeuxis, such as in the repetition of adjectives in lieu of the preposition κατά followed by the accusative, is a commonly attested idiom in the lexica. This phenomenon is more syntactical than morphological, but is nevertheless worth noting in an examination of the lexicon, since it regards the use of certain lexemes in particular syntactical settings. For instance:

(68) μικρὸν μικρόν· ἀντὶ τοῦ ἀεὶ κατὰ μικρόν. Ἀντιφάνης Ἀγροίκῳ (fr. 10). [*Antiatticist* μ23]

μικρὸν μικρόν ('little by little'); instead of which always [say] κατὰ μικρόν. Antiphanes in 'The country-dweller' (fr. 10).

(69) μίαν μίαν· ἀντὶ τοῦ κατὰ μίαν. Σοφοκλῆς Ἐριδι (fr. 201). [*Antiatticist* μ24]

μίαν μίαν ('one by one'); instead of which [say] κατὰ μίαν. Sophocles in *Eris* (fr. 210).<sup>246</sup>

### 4.3 Morphological adaptation (1)

The morphological changes detailed in §4.1 and illustrated in §4.2 affected the lexicon, as they meant that words belonging to one of the paradigms that was becoming redundant needed to change in some way. As mentioned in the introduction to this chapter, the two ways to overcome these morphological changes were **(1) morphological adaptation** and **(2) lexical replacement**. This section describes how method **(1)** affected, and is reflected in the lexicon of Post-classical Greek. Firstly, in §4.3.1, I set out the theoretical framework behind the idea of 'adaptation' which was already discussed in Chapter 3, but becomes even more pertinent

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<sup>245</sup> See Gignac (1981: 145). Gignac also points out the gradual decline of the superlative in *koine* Greek, also due to regularisation and a linguistic tendency towards a turn away from inflection and towards agglutination.

<sup>246</sup> See also *Antiatticist* μ21 (μᾶλλον μᾶλλον) and μ22 (μείζον μείζον), two examples of intensification through reduplication of a comparative adverb. See Tribulato's two entries on these glosses in the *Digital Encyclopedia of Atticism*.

when it is used to describe morphological change, since adaptive explanations are mostly used to describe morphology, over any other linguistic feature. In this section, I explain why I follow an adaptive explanation of morphological change, despite the limitations. Next, I further explore the preponderance of the suffix *-iov* from the lens of morphological adaptation (§4.3.2). I then look at the use of other morphological suffixes (§4.3.3), and finally I discuss the morpho-lexical feature of compounding, which was morphologically (as well as phonologically) motivated and resulted in significant lexical change (§4.3.4).

### 4.3.1 ‘Adaptive’ explanations: theoretical background

Overall, the most common grammatical phenomenon of Post-classical Greek seems to be the regularisation of synchronically anomalous paradigms. These were frequently regularised through analogy. A possible reason for this, Willi (2003a: 58) suggests, is that regular paradigms are ‘more easily learned...thus, a mixed and open society almost automatically develops a more regular morphological system than a closed society where all language learning takes place in early childhood and where conservative native speakers have enough influence to “monitor” the language of the community members.’<sup>247</sup> This is an adaptive explanation: Willi suggests that a language that acquires a large number of L2 speakers generally develops a simplified morphology, due to the way the new speakers are likely to learn the language. Although Willi is referring to the analogical regularisations found in Aristophanes’ *Plutus*, which mark ‘a modern Attic influenced by and adapted for non-Athenians’<sup>248</sup> and which contrast with forms generally found in the Attic of Old Comedy, his observations about the learnability of certain systems also apply to the formation of the ‘international’ *koine* Greek in the Post-classical period.<sup>249</sup>

Adaptive explanations of morphological change have been criticised, notably by Meinhardt, Malouf, and Ackerman in their 2022 paper ‘Morphology Gets More and More Complex, Unless It Doesn’t.’ The authors argue that low conditional entropy, i.e. whether morphological forms are predictable or not, is not determined by any sort of adaptation in the morphology but is random (conditional entropy measures how much entropy a variable X has

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<sup>247</sup> See §5.3.1 for a detailed discussion of open and closed language societies, and how the differences between these impact lexical development.

<sup>248</sup> Willi (2003a: 58).

<sup>249</sup> See §5.3.1.

remaining if one has already learned the value of a second random variable Y). They argue for a so-called ‘neutral’ explanation, which states that ‘independent of any forces of selection, random variation (evolutionary “drift”) can cause E-complexity [the types and numbers of morphosyntactic categories] to increase.’<sup>250</sup> More specifically, they examine the sociolinguistic hypothesis that ‘languages spoken by large, diverse populations [exoteric situations] are claimed to be morphologically simpler than those spoken by small, close-knit ones [esoteric situations].’<sup>251</sup> They argue against an adaptive explanation, claiming that ‘increasing complexity may be the default state of evolutionary systems,’<sup>252</sup> and arguing that natural language qualifies as a Darwinian evolutionary system.<sup>253</sup> They conclude that, just as for biology,

Any given variant's apparent ubiquity within a population... is more likely a consequence of drift than selection. Drift models the fact that sometimes an organism (or instance of a gene, etc.) in a generation is replicated more or less often than others in the same generation as a result of chance rather than another neutral process ... that is, drift is one of the simplest ways in which a population of imperfect replicators can imperfectly replicate: a completely random subset of the population is chosen for replication (some potentially more than once), and the rest fail to replicate at all.<sup>254</sup>

Meinhardt *et al.*’s main qualm about an adaptationist explanation of language change is the complexity of the argument: they advance the principle of Occam’s razor and suggest that ‘insofar as neutral explanations of available data typically require fewer and/or weaker assumptions about what drives evolutionary change than adaptive ones do, they ought to be regarded as a priori more likely.’<sup>255</sup>

Where Meinhardt *et al.* emphasise the role of mechanisms of variation (drift), other scholars have focussed instead on the mechanisms of selection and have argued that the latter

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<sup>250</sup> Meinhardt *et al.* (2022: 213). Other proponents for a neutral explanation of morphological complexity include Ehala (1996); Kauhanen (2017), Lass (1997), and Trudgill (2016).

<sup>251</sup> Meinhardt *et al.* (2022: 212). Cf. Kusters (2003); Perkins (1992); Thurston (1987; 1992); Trudgill (2009; 2011; 2016); Wray & Grace (2007).

<sup>252</sup> Meinhardt *et al.* (2022: 213).

<sup>253</sup> Meinhardt *et al.* (2022: 216).

<sup>254</sup> Meinhardt *et al.* (2022: 224). Trudgill (2011; 2016) has argued that the explanation of drift applies for the evolution of certain English dialects, for example, and McShea & Brandon (2010: 4) concur: ‘in any evolutionary system in which there is variation and heredity, there is a tendency for diversity and complexity to increase, one that is always present but may be opposed or augmented by natural selection, other forces, or constraints acting on diversity or complexity.’

<sup>255</sup> Meinhardt *et al.* (2022: 231).



more accurately describes morphological complexity and change. The adaptationist explanation suggests that certain morphological forms are better fitted to, and are therefore selected for, certain environments.<sup>256</sup> These scholars mostly apply the adaptationist theory cross-linguistically, but their findings apply to our data: we find that morphological traits are able to shape the morphology of the language and make it ‘adapted’ to its new environment. Moreover, the bulk of Meinhardt *et al.*’s argument concerns the correlation between population size and complexity (i.e. that neutral explanations are more likely explanations for the apparent association of morphological complexity and smaller, historically more isolated population), and therefore concerns synchronic cross-linguistic situations rather than diachronic ones. The aim of this thesis is rather to describe the diachronic changes that occurred in the Post-classical Greek *koine*. With regard to the lexicon, we find trends towards simplification and regularisation and we find that the lexicon appears to ‘adapt’ to these changes. This chapter therefore refers to the morphological changes that occurred in Hellenistic and Roman period Greek as ‘adaptation methods’, while bearing in mind the limitations of such reasoning, namely that we lack empirical proof that the language is responding in a way to its external environment rather than randomly changing.

### 4.3.2 The regularising suffix -iov

The pervasiveness of the derivational suffix -iov in the Post-classical period has already been discussed in this thesis. In Chapter 3, its spread was explained by the need to lengthen words. Two further (morphological) reasons for the prevalence of this derivational suffix are the analogising of synchronically anomalous nouns and the loss of the third declension class in favour of the thematic second declension, which is explored below.

A common way to turn a third declension noun into a second declension noun was to add the suffix -iov. This suffix was common in the Classical period, being particularly productive from the fifth century BC onwards, and had a principally diminutive function.<sup>257</sup> Its polysemy resulted in its early expansion through reanalysis, i.e. from patterns such as παῖς,

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<sup>256</sup> The adaptationist explanation is proposed by Amundson (1996: 25; 2005: 127) and Lupyan & Dale (2010; 2015; 2016), the latter of whom refer to their theory as the *Linguistic Niche Hypothesis* (LNH).

<sup>257</sup> See Chantraine (1933: 64-78). While the most common function of -iov was diminutive, it also denoted a range of other meanings, notably partitive (e.g. χώρα ‘land’ → χωρίον ‘piece of land’; ἄρτος ‘loaf; bread’ → ἀρτίδιον ‘small loaf; piece of bread’; the latter example shows that the suffix could have multiple functions all at once. Cf. Cartridge (2014: 40).

(παιδ-) → παιδίον and οἶναρον (οἶναρ-) → οἶνάριον the segments -ίδιον and -άριον were generalised and used as suffixes in their own right; other extended segments include -ύδριον (e.g. μελύδριον ‘little song’, from μέλος) and -ύλλιον (e.g. ἐπύλλιον, ‘little epic’, from ἔπος). Throughout the late Classical and Hellenistic periods, and into the Roman period, there is evidence for the gradual weakening in the semantic force of the diminutive function of -ιον. Cartlidge (2014: 39) suggests the evolution of the word for ‘book’ as an example of this. Indeed, in fifth century BC authors such as Aristophanes the noun is ἡ βίβλος. A century later, in Plato (*Apology* 26d *et passim*) τὸ βιβλίον is found with that meaning. In the third-century BC, papyrus fragments attest to the forms βυβλάρια (e.g. *P.Enteux* 84) and βυβλαρίωι (e.g. *P.Cair.Zen.* 4 59581.2), and we find βιβλαρίων in the first century BC papyrus *P.Mich.* 8 504.15. Finally, a couple of centuries later we find βιβλαρίδιον in the New Testament (Book of Revelation 10:2). The restrengthening extension of the -ιον suffix throughout the Hellenistic and Roman periods (from -ιον to -άριον to -αρίδιον) suggests that the original suffix had lost most of its diminutive function. For this reason, -ιον came to be used in the Post-classical period as a general word-extending and morphologically-levelling suffix with little semantic effect.<sup>258</sup> Moreover it could, as Schwyzer (1959: 541) points out, be added to nouns regardless of their grammatical gender – ‘das ohne Rücksicht auf das grammatische Geschlecht diminuierende -ιον’ – since it no longer played the role of a diminutive suffix and so could be added to any noun to make it more morphologically predictable.

We find plenty of evidence in the lexica for the suffix -ιον as a notable feature of *koine* Greek, as the lexicographers frequently reject -ιον-suffixed forms against their non-ιον-suffixed and usually third declension equivalents. As I noted in §3.4.1, Phrynichus *Ecloga* 53 has τὸ κωλύφιον as the *koine* equivalent of Attic ἡ κωλήν -ῆνος (‘thigh, leg’), and Moeris α22 has τὸ ἀλλάντιον as the *koine* equivalent of ὁ ἀλλᾶς -ᾶντος (‘sausage’). In both these cases we see how the addition of the -ιον suffix has turned a third declension athematic noun into a second declension thematic neuter noun. The Antiatticist directly refers to the process of adding the -ιον suffix (included in its expanded forms) to nouns, which he calls ὑποκορίζεσθαι (‘to form a diminutive’):<sup>259</sup>

(70) δακτυλίδιον· οὐ δεῖν φασὶν ὑποκορίζεσθαι, οὐδ’ ἂν μικρὸν ἦ. [Antiatticist δ10]

<sup>258</sup> The use of diminutive suffixes to regularise consonant stems was not a unique feature of Greek, and also exists in Latin, for instance (e.g. *auris* ‘ear’ → *auricula*).

<sup>259</sup> Cf. example 53, §3.4.2.

δακτυλίδιον ('ring', from δακτύλιος); they say that one must not write this as a diminutive, not even when it is small.

He often uses this verb to describe forms in -ιον, alongside the adverb ὑποκοριστικῶς (μ41; λ24) and noun τὸ ὑποκοριστικόν:

(71) κρεῶδιον· οὐ φασι δεῖν λέγειν τὸ ὑποκοριστικόν. [Antiatticist κ45]

κρεῶδιον ('morsel, slice of meat', from κρέας); they say that one must not say the diminutive.

Despite the semantic weakening of the diminutive force of the -ιον suffix, this example seems to provide evidence for a synchronic phenomenon in the mental grammar, or lexical perception of speakers, through which the form would have been remembered as carrying some diminutive function even in the Roman period. Other extended forms of the -ιον suffix are also attested in the lexica, for example -ύδιον:

(72) ἐλκύδρια· τὰ μικρὰ ἔλκη. Λυσίας Κατὰ Λυσιθέου (fr. 160 S. = 213 C.). [Antiatticist ε66]

ἐλκύδρια ('small wound' from ἔλκος); small wounds. *Lysias Against Lysitheus*.

In addition, we also find the extended form -άριον:

(73) κυνάριον· οὐ μόνον κυνίδιον. Ἀλκαῖος κωμικῶς (fr. 33). [Antiatticist κ87]

κυνάριον ('little dog', from κύων); not only κυνίδιον. Alcaeus in his comedies.

(74) γυναικάριον· Διοκλῆς Μελίτταις (fr. 11). [Antiatticist γ11]

γυναικάριον ('little woman', from γυνή); Diocles *The Bees* (fr. 11).

It is not the case that all forms in -ιον are rejected, since certain forms are accepted when referring to strict diminutives. For instance, Phrynichus, the most polemical of the three, approves three different derivatives of ἡ κόρη, but condemns a fourth:

(75) κόριον ἢ κορίδιον ἢ κορίσκη λέγουσιν, τὸ δὲ κοράσιον παράλογον. [*Ecloga* 50]

They say κόριον (‘little girl’, from ἡ κόρη) or κορίδιον or κορίσκη, but κοράσιον is irregular.<sup>260</sup>

Similarly, perhaps providing the rule against which the Antiatticist (κ87) argues above (example 73), Phrynichus writes:

(76) κυνίδιον λέγε. Θεόπομπος δὲ ὁ κωμῳδὸς ἄπαξ που (fr. 90 K.) κυνάριον εἶπεν. [*Ecloga* 151]

Say κυνίδιον (‘little dog’, from κύων). But Theopompus the comedian said κυνάριον once somewhere (fr. 90 K.).

We also find a significant amount of evidence for the spread of the -ιον suffix in the *Colloquia of the Hermeneumata Pseudodositheana*. For example, in the Colloquium Celtis (52a) we find both τὸ δελφάκιον and τὸ χοιρίδιον, both meaning ‘pig’. As briefly mentioned in §3.5.1, the Classical term for ‘pig’ was the monosyllabic and morphologically difficult ὀ/ή ὄς, so the replacement with morphologically transparent, polysyllabic equivalents through the addition of the neutral and versatile suffix -ιον is unsurprising. This example, which also illustrates an instance of lexical replacement, since the -ιον suffix is added to a different stem, is further examined in §4.4.1.

The impact of the forms in -ιον in the Greek language was wide-ranging and long-lasting. For example, the SMG word for ‘eye’ is το μάτι, which derives from the -ιον-suffixed form of Classical Greek τὸ ὄμμα, i.e. ὀμμάτιον. Incidentally, the noun τὸ ὄμμα was an Ionic word, found in poetry but rare in prose: its Attic equivalent was ὁ ὀφθαλμός.<sup>261</sup> The fact that it was the derived form of τὸ ὄμμα that survived in the Greek language when ὁ ὀφθαλμός was lost highlights this tendency to preserve forms in -ιον, which could be adapted into more regular looking paradigms, due to their identical morphological suffixes. Similarly, to recall an example touched upon in the last chapter, the SMG word for ‘ear’ is το αυτί (most commonly spelt το αφτί),<sup>262</sup> which derives from the Classical Greek τὸ οὖς, via its -ιον-suffixed derivation τὸ ὠτίον. We see from the papyrological sources that the diminutive τὸ ὠτίον replaces τὸ οὖς,

<sup>260</sup> It is worth noting, with the continuity of the Greek language in mind, that only the rejected form κοράσιον survives into SMG.

<sup>261</sup> In SMG, derivatives of οφθαλμός, reintroduced by the καθαρεύουσα, are used in more elevated or technical speech (e.g. οφθαλμίατρος ‘eye doctor’; οφθαλμικός, ‘of the eye’; οφθαλμική αλοιφή, ‘eye-cream’).

<sup>262</sup> Babiniotis (2019) explains the initial <αυ> in SMG as coming from neuter plural τὰ ὠτία → (τ)αωτία → αυτία (sg. αὐτίον) → αυτί.

and the latter is very rarely found in the documentary papyri from the Roman period onwards. In the Septuagint, there are 190 occurrences of τὸ οὖς versus 17 of diminutive τὸ ὠτίον, and in the New Testament, there are 36 occurrences of τὸ οὖς versus 5 of τὸ ὠτίον (although occurrences of τὸ οὖς appear particularly in Luke, who wrote in a much more archaising language). Moreover, both Phrynichus and Moeris mention this noun. Phrynichus' comment draws attention to the complexity of the τὸ οὖς declension (in *Ecloga* 182 he censures the grammarians who suggest that the dative plural of this noun is ὄτοις rather than ὠσί), which explains why this noun was replaced by the athematic -ιον derived version, while Moeris writes:

(77) οὖς, Ἀττικῶς. ὠτίον, Ἑλληνικῶς. [Moeris ο40]  
οὖς ('ear') is Attic, ὠτίον is Greek.

The case of τὸ οὖς/ὠτίον emphasises the necessity of taking into account a range of different sources when trying to piece together the history of a word, as variations in style and register result in different observed timelines. Evidence from the documentary papyri alone would suggest that τὸ οὖς was archaic, and rarely in use by the Roman period, but evidence from the New Testament shows that this was not necessarily the case.

### 4.3.3 Other suffixes

The suffix -ιον is perhaps the most notable of the regularising derivational suffixes, principally because of its long history as a diminutive suffix in the Classical period, and its subsequent generalised spread in the Post-classical period. However, we find a wide range of derivational suffixes that are particularly characteristic of *koine* Greek.<sup>263</sup> The most common of these for the nouns, adjectives, and verbs are laid out in Tables 8, 9 and 10 respectively (§3.4.2). This section examines how these suffixes were employed as adaptation methods in Post-classical Greek.

#### 4.3.3.1 Other nominal suffixes

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<sup>263</sup> These suffixes have been described most notably by Chantraine (1933) as well as by Debrunner (1917), Maysen (1926), and Palmer (1945).

In the nominal system, in addition to -ιον, we find a range of word-extending and word-regularising suffixes: -άριος, -τρια, -ισσα, -σια, -μός (especially -ισμός and -ασμός),<sup>264</sup> -μα, etc.<sup>265</sup> These all required thematic and *a*-stem declension patterns, and their popularity and spread in Hellenistic and Roman period Greek can be attributed to the fact that an important feature of Post-classical nominal restructuring is the rejection of third declension patterns, accompanied by the promotion of first and second person paradigms. In *koine* Greek, the push away from the third declension patterns is well attested in the lexica. We find, for example, Phrynichus rejecting ἡ γογγύλη ‘turnip’ in favour of third declension ἡ γογγυλῖς (*Ecloga* 73) and ἡ θερμασία ‘heat’ in favour of ἡ θερμότης (*Ecloga* 84). The latter of these examples illustrates the pervasive suffix -σία in the *koine*. This suffix is often used to replace third declension suffixes -της and -σις – the latter of which is discussed in Chapter 2 – which are an important Ionic feature of the early *koine*, and were used to expand the vocabulary: for example these suffixes could be attached to verbal stems to form their corresponding abstract noun.<sup>266</sup> The suffix -σία is a first declension derivational ending, and therefore was more in keeping with the morphological requirements. Indeed, as Cartlidge (2014: 69) shows in his analysis of the language of Menander, the suffix -σις was no longer productive by the Roman period. Only one new coinage is found in Menander (ἡ σύμπεισις), and there are no new nouns in -σις in the papyri of the Roman and Byzantine periods. By that period, therefore, all -σις derivatives had been lexicalised, pointing to the end of a period of productivity for that suffix. Both Moeris and Phrynichus, however, frequently reject nouns formed in -σις not because they are ‘new’ but because -σις is an Ionic suffix. For example Moeris rejects ἡ προσποίησις (‘affectation’ α100); ἡ κατάχυσις (‘pouring’ π13) and ἡ ὠχρίασις (‘paleness’ ω7). Phrynichus rejects ἡ ὑπόστασις (‘plan’ *Ecloga* 248) and ἡ πεποίθησις (‘trust, confidence’ *Ecloga* 262).

#### 4.3.3.2 Adjectival suffixes

Adjectives were also regularised and extended by means of a range of suffixes, as outlined in Table 9 (§3.4.2). Of these, particularly noteworthy is the suffix -ικός. This suffix is attested in the Classical period, and in Aristophanes we start to find the extension of this suffix to form quasi-derivative adjectives such as κρουστικός ‘incisive’. This extension seems first to occur

<sup>264</sup> Morpurgo Davies (1968: 26).

<sup>265</sup> Durham (1913: 26) singles out noun-suffixes -μα, -μός, and -σις among the most prominent types of words said to be characteristic of the *koine*.

<sup>266</sup> The suffixes -της and -σις were also, however, prevalent in Attic Greek: Morpurgo Davies (1968: 26) notes that around 60% of Plato’s third declension substantives are feminine nouns formed with these suffixes.

in particular sociolects: for example, -ικός adjectives are frequently used by the dandies in the *Knights* (e.g. 1378–81), which suggests that they were viewed by Aristophanes and his audience as epitomizing the sociolect of that particular class.<sup>267</sup> This initial functional extension of the suffix facilitated its significant spread across Greek in the Hellenistic period and into the Roman period. The spread can be explained by the analogical transparency brought about by the use of this suffix: the stem is predictable, and the endings belong to the first and second declensions. Therefore, while the suffix -ικός, much like the suffix -ιον for nouns, was not new in the process of word-formation, and existed early in the history of Greek, it was nevertheless an important feature of Post-classical Greek, as we see a significant increase in the number of -ικός formations.<sup>268</sup> It continues to be productive throughout Byzantine Greek and is frequent in SMG. Unsurprisingly therefore, due this suffix's late general spread and greater pervasiveness in Ionic and Post-classical Greek than in classical Attic, adjectives formed using the suffix -ικός are frequently rejected by the lexicographers. For example, the Antiatticist (ω3) notes that his contemporaries reject the adjective φδικός ('musical'), promoting instead the adverb + participle εὖ ἄδων. Phrynichus, in his *Ecloga*, rejects the adjective βιωτικός, which is first attested in Aristotle:

(78) βιωτικόν· ἀηδὴς ἢ λέξις. λέγε οὖν χρήσιμον ἐν τῷ βίῳ. [*Ecloga* 331]

βιωτικόν ('fit for life'); the word is distasteful. Therefore, say χρήσιμον ἐν τῷ βίῳ ('useful in life').

Another productive adjectival suffix which is widely attested in Post-classical Greek, as shown in Table 9, is -ιος. Indeed, forms in -ιος are often labelled as κοινόν or of the Ἑλληνες by the lexicographers. For example:

(79) ἡμεδαπός Ἀττικοί· ἐπιχώριος Ἑλληνες [*Moeris* η15]

Attic speakers say ἡμεδαπός ('of our land/country'); Greek speakers say ἐπιχώριος.

#### 4.3.3.3 Verbal suffixes

<sup>267</sup> Willi (2003a: 43).

<sup>268</sup> For example, it is attested 29 times in Moulton & Milligan's *Vocabulary* (e.g. διδακτικός 'apt at teaching'). Durham (1913: 26) also singles this suffix out as being characteristic of the *koine*.

Finally, we find many examples of rejection by the lexicographers of Post-classical verbal derivation from nouns or adjectives found in Classical Attic, using synchronically productive verbal suffixes.<sup>269</sup> Such glosses are particularly interesting as the lexicographers show awareness of patterns of verbal derivation, and a rare awareness of some processes of language change. We find, for example, the following gloss in Phrynichus:

(80) χρησιμεῦσαι μὴ λέγε, ἀλλὰ χρήσιμον γενέσθαι. [*Ecloga* 368]

Do not say χρησιμεῦσαι ('to be useful'), but χρήσιμον γενέσθαι.

The verb χρησιμεῦσαι is a late formation (it is first attested in Lucian) from the adjective χρήσιμος, using the productive verbal suffix -εῦω. Similarly, we find that certain late formations from the noun ἡ πόλις ('city') are rejected for the same reason – i.e. that they are non-Attic late derivations – by Moeris, who gives an uncharacteristically detailed explanation of which derivations are allowed and which are not:

(81) πολιτεύειν καὶ πολιτεύεσθαι λέγεται, πολιτευτῆς οὐ λέγεται ἀλλὰ δημαγωγὸς παρὰ τοῖς Ἀττικοῖς· πολιτευτῆς δὲ παρ' Ἑλλησιν. (Moeris π76)

πολιτεύειν ('to be a citizen') and πολιτεύεσθαι ('to take part in government') are said, πολιτευτῆς ('statesman') is not said, but δημαγωγός among Attic speakers; but πολιτευτῆς is said among Hellenic speakers.

Moreover, Table 10 in Chapter 3 shows a significant increase of verbs formed with the suffix -ίζω (e.g. ἐκγαμίζω ('to marry off')) between the Classical and Post-classical period.<sup>270</sup> It also shows a slightly smaller but still notable increase in verbs formed with the suffix -άζω (e.g. ἀγιάζω ('to hallow, keep sacred')). The reason for the increase in the use of these suffixes seems evident: they are thematic, morphologically predictable, and do not come with any problems linked to vocalic contraction. Predictably, again, these are frequently rejected by the lexicographers: the Antiatticist accuses his contemporaries of rejecting κροταλίζω ('I rattle')

<sup>269</sup> Conversely, we also find examples in Phrynichus of rejections of late backformations of nouns from the corresponding allowed verb: for example, *Ecloga* 13: ἄμυναν μὴ εἴπης, ἀλλ' εἰς ῥῆμα μεταβάλλων, ἀμόνασθαι ('Do not say ἄμυνα ('self-defence'), but, changing into the verb, ἀμόνασθαι ('to guard oneself')). The noun ἄμυνα is indeed a late backformation from the verb, and found first in the first century AD, in Josephus and later texts, which is why it is rejected here by Phrynichus.

<sup>270</sup> The borrowed suffix -izo. first becomes very productive in late Latin, again probably because of its predictable and distinctive nature (see Cockburn (2021)). Durham (1913: 26) singles out verbs in both -έω and -ίζω in his list of the most prominent types of words said to be characteristic of the *koine*.



while promoting κροτέω (κ41), and λιθάζω ('I fling stones') while promoting λεύειν and καταλεύειν (λ7).

#### 4.3.4 Compounding

The main purpose of Chapter 3 was to show that, due to phonological factors, the length of words increased between the Classical and Post-classical period. We saw in §3.4 that a major way in which this increase in word length was achieved was through affixation. Another way in which the length of words increased was through compounding. Affixation and compounding are similar processes. The difference between the two is that, in affixation, a bound morpheme – which cannot exist independently – is affixed to a lexical base (e.g. the addition of -ιον to a noun), whereas in compounding two free morphemes – which can exist independently as lexical bases – are joined together to create a new lexeme (e.g. ἀπόπαλαι below, example 82). This section examines the evolution and the use of the two main types of compound in Greek: preverb and prepositional compounds (§4.3.4.1) and double lexical compounds (§4.3.4.2).

##### 4.3.4.1 Preverb and prepositional compounds

The Post-classical period witnessed a reshuffling in the use of prepositions, which is outlined by Bortone (2010: 178ff.). In addition to changes in the semantic nuances of these prepositions, we also find new formations of prepositional compounds, primarily in the form preverb + verb. The expansion of verbs with preverbs was a process which had started early in the history of Attic (it is found in Attic tragedy), but while it is not completely specific to the *koine*, we find that these are picked up by the lexicographers, who frequently reject the use of newly coined prepositional compounds, such as in this gloss from Phrynichus:

- (82) ἀπόπαλαι καὶ ἔκπαλαι ἀμφοῖν δυσχεραίνω, ἐκ παλαιοῦ γὰρ χρῆ λέγειν. [*Ecloga* 95]  
I am unable to endure both ἀπόπαλαι ('from of old') and ἔκπαλαι ('for a long time'),  
for it is necessary to say ἐκ παλαιοῦ ('of old').

We also find a large number of compounds containing εὔ. In recent scholarship, there has been some debate about whether these should be taken as compounds or as derivatives, as εὔ is both

an independent adverb and also a very common prefix. I follow Tribulato (2015: 20) in taking these as compounds. In the *koine*, it functions frequently as a preverb, and it is attested many times in the lexicographers. In Moeris, we find glossed the Post-classical verb εὐσκολῶ, which is first found in Epictetus and Josephus:

(83) εὐσκολῶ οὐδείς τῶν παλαιῶν, ἀλλὰ σχολήν ἄγω. [Moeris ε7]

None of the ancients [say] εὐσκολῶ ('I have abundant leisure') but σχολήν ἄγω.

Phrynichus also rejects several late compounds with the prefix εὐ. For example,

(84) εὐχαριστεῖν οὐδείς τῶν δοκίμων εἶπεν, ἀλλὰ χάριν εἶδέναι. [Ecloga 10]

None of the esteemed [authors] said εὐχαριστεῖν ('to give thanks'), but [they said] χάριν εἶδέναι.

(85) εὐκαιρεῖν οὐ λεκτέον, ἀλλ' εὐ σχολῆς ἔχειν. [Ecloga 97]

One should not say εὐκαιρεῖν ('to devote one's leisure'), but εὐ σχολῆς ἔχειν.

(86) εὐκερματεῖν ἀηδὲς πάνυ. ἥδιστα δ' ἂν εἴποις εὐπορεῖν κερμάτων. [Ecloga 338]

εὐκερματεῖν ('to be rich in money') is greatly distasteful. You would more pleasantly say εὐπορεῖν κερμάτων.<sup>271</sup>

The first verb, εὐχαριστεῖν, is first found in Polybius (4.72.7), becomes increasingly frequent in the Post-classical period, and is used in the Septuagint (e.g. Judith 8:25) and the New Testament (1 Corinthians 1:4), as well as papyri and inscriptions from the third century BC onwards (e.g. *P.Cair.Zen* 1 59015 (third century BC) and *IG11* (4).665 (Delos, third century BC)). Its frequency in religious texts can be attributed to its auxiliary meaning 'to pray,' which is attested in religious texts and papyri. We find constructions similar to χάριν οἶδα (in which a noun of gratitude/thanks collates with a verb of knowing) in other early Indo-European languages, e.g. Old Norse kunna þökk; Old English þanc witan. Interestingly, this formula survives, albeit as an archaic usage, in some modern European languages (e.g. New High German 'Dank wissen'), but not Modern Greek (which has ευχαριστώ). The second gloss,

<sup>271</sup> Phrynichus' Attic alternative is also a compound containing εὐ: certain εὐ compounds were indeed found in Attic Greek, such as εὐπορεῖν which is attested in Demosthenes (33.7).

about avoiding the late compound verb εὐκαιρεῖν – which is first found in third century papyri such as *P.Cair.Zen.* 1 59045, and then in Polybius (20.9.4), Plutarch (2.223d), and the New Testament (Mark 6:31; 1 Corinthians 16:12 etc.) – is also found in Moeris (ε22). The third example, εὐκερματεῖν, is found several centuries later in Photius (ε34), who writes that it is used by the fourth century BC statesman Eubulus. Other than in Eubulus fragment 144, it does not appear in other surviving texts.

Finally, in the Post-classical period we find an increase of verbs prefixed with multiple preverbs – also known as double compounds, or composites.<sup>272</sup> This doubling of prepositional prefixes is characteristic of later writers, and their relative frequency in the Post-classical period compared to the Classical period has been demonstrated, with figures set out in a table by Durham (1913: 32). In his study of *koine* words in the poet Menander, Durham finds sixteen double compounds which do not appear in classical writers, seven of which first appear in Menander (ἐπεξετάζω, παρεξάλλαττω, προεγκαλέω, συναπαιτέω, συναπαρκέω, συνέκκειμαι, and συνεκτίθημι).<sup>273</sup> Other studies have also shown that multiple preverbatation is a typical feature of later Greek: for example, in a study of the compounds of the Greek verb πλέω ‘I sail,’ Farina (2021) finds thirteen different double-preverbed forms which all first appear in the Post-classical period (ἀντιπεριπλέω, ἐπεκπλέω, ἐπιδιαπλέω, συμπεριπλέω etc.).

#### 4.3.4.2 Double lexical compounds

Like prepositional compounds, double lexical compounds are not a Post-classical Greek innovation, and plenty of compounded forms are found in Classical literature.<sup>274</sup> However, it is clear from the lexica that some compounds were seen as being more readily acceptable than others in the Second Sophistic. The Antiatticist writes:

- (87) μεγαλοψυχίαν· οὐ φασι δεῖν λέγειν, ἀλλὰ μεγαλοφροσύνην. [Antiatticist 36]  
 μεγαλοψυχίαν (‘greatness of mind’); they say that you must not say (this), but (rather)  
 μεγαλοφροσύνην.

<sup>272</sup> Zanchi (2019) provides a comparative overview of the use of multiple preverbs in a range of different Indo-European languages, showing that these existed also in earlier Greek (although they become much more common in the Post-classical period).

<sup>273</sup> Durham (1913: 33).

<sup>274</sup> See Tribulato (2015: 13–61) for an overview of compounding and the classification of compounds in Ancient Greek.

The noun *μεγαλοφροσύνη* is indeed found in earlier texts than *μεγαλοφυχία*, but the Antiatticist does not expand further on why a particular compound should survive over another, and nor do any of his contemporaries. In the same vein, particularly noteworthy are compounds regarding words relating to ‘selling.’ A reading of the lexica shows that compounds formed from *πωλέω* (‘I sell’) which is attested in Lysias and other Attic authors, were more acceptable than compounds containing *-πρατος*, from *πέρνημι* (and its alternative form *πιπράσκω*) (‘I sell’). For example:

(88) *παλίμβολον* <Ἀττικοί>· *παλίμπρατον* <Ἑλληνες>. [Moeris π68]

Attic speakers [say] *παλίμβολον* (‘sold-again’); Greek speakers say *παλίμπρατον*.

(89) *πωλητήριον* Ἀττικοί· *πρατήριον* Ἑλληνες. [Moeris π42]

Attic speakers [say] *πωλητήριον* (‘place for selling’); Greek speakers [say] *πρατήριον*.

Forms (not just compounds) derived from *-πρατος* also appear to take over Classical derivatives of the opposite verb, *ώνέομαι*, ‘I buy’:

(90) *ώνιος* Ἀττικοί· *πράσιμος* Ἑλληνες. [Moeris ω3]

Attic speakers say *ώνιος* (‘to be bought/ for sale’); Greek speakers say *πράσιμος*.

Conversely, however, we also find a rejection of the aorist participle of *ώνέω* in favour of a compound form of *πωλέω*, *ἐμπολέω* (‘I barter’):

(91) *ἐμπολήσαντες* Ἀττικοί· *ώνήσαντες* Ἑλληνες. [Moeris ε52]

Attic speakers say *ἐμπολήσαντες* (‘having bartered’); Greek speakers say *ώνήσαντες*.

Therefore it seems as though the lexicographers were aware of some sort of change occurring in the lexical field of the verb for selling/buying and its compounds, but not fully clear on exactly what it was. Since their glosses are by nature polarising, they do not take into account what was actually happening, which was in reality a symbiosis of the forms *πωλέω* and *πέρνημι/πιπράσκω*. This is exemplified, for example, in *P.Harr.* 1 109.4, a third/fourth century AD letter: (ἐάν) *δυνηθῆι πρα[θ]ῆναι, πώλησον* (‘if it is able to be sold, sell’). Perhaps surprisingly, it is the ‘Attic’ form that is eventually retained in the language: the SMG verb for ‘I sell’ is *πουλάω*, which comes from *πωλέω*, rather than *πέρνημι/πιπράσκω*, which the

lexicographers considered to be ‘un-Attic’, i.e. *koine*. This illustrates how the development from Classical to Modern Greek was not always linear and predictable: while it is true that, where there is a difference, the *koine* form often survives over the Attic form, this is not always the case.

The Atticist lexicographers’ awareness of (and contempt for) compounds is not limited to specific semantic fields. For example, we find in Phrynichus:

(92) σιτομετρεῖσθαι μὴ λέγε. **λύων** δ’ ἐρεῖς σῖτον μετρεῖσθαι. [*Ecloga* 362]

Do not say σιτομετρεῖσθαι (‘to deal out grain’). But, pulling it apart say σῖτον μετρεῖσθαι.

In Attic Greek, σιτομετρεῖσθαι did exist but meant ‘to hold the office of σιτομέτρης (one who measures and deals out corn)’. Here Phrynichus shows that it was used in the *koine* with the meaning ‘to deal out grain’ (a more literal reading of a compound formed of σῖτος ‘grain’ and μετρεῖσθαι, ‘to deal out’). This is found in Polybius and later authors. Of particular note is the use by Phrynichus of the participle λύων, referring to the action of pulling apart the compound into its original components, ὁ σῖτος and μετρεῖσθαι. The verb λύω, also found in a preverbed form, διαλύω, is regularly used by Phrynichus with reference to compounds and derived forms. This is a rare case of the lexicographers showing interest in what linguistically differentiated the ‘correct’ from the ‘incorrect’ words that they glossed. For example, he warns against the use of a form of αἰχμαλωτίζω, a late derivative of ὁ αἰχμάλωτος ‘prisoner’:

(93) αἰχμαλωτισθῆναι· τοῦθ’ οὕτως ἀδόκιμον ὡς μηδὲ Μένανδρον αὐτῷ χρήσασθαι. **διαλύων** οὖν λέγε αἰχμάλωτον γενέσθαι. [*Ecloga* 411]

αἰχμαλωτισθῆναι (‘to be taken prisoner’); this word is so wrong that not even Menander uses it. Pulling it apart therefore say αἰχμάλωτον γενέσθαι.<sup>275</sup>

Another instance of the use of the verb διαλύω in Phrynichus, this time regarding a compound, is the following:

(94) καλλιγραφεῖν, **διαλελυμένως** λέγουσιν ἐκεῖνοι εἰς κάλλος γράφειν. [*Ecloga* 92]

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<sup>275</sup> The verb αἰχμαλωτισθῆναι (aorist passive infinitive of αἰχμαλωτίζω) is a late *koine* derivative, and is first found in Diodorus Siculus, Josephus and the New Testament.

καλλιγραφεῖν ('to write beautifully'), having pulled it apart/without compounding they [i.e. Attic speakers] say εἰς κάλλος γράφειν ('to write with a view to beauty').

The compound καλλιγραφεῖν is first found in Aristotle and is rejected by Phrynichus as it does not occur in his corpus of Attic authors. The adverb διαλελυμένως, formed from the perfect stem of διαλύω, conveys the idea that this compound should be 'released' into its original components κάλλος ('beauty') and γράφειν ('to write'). The use of this adverb, as has been discussed in §2.1.2 (Example 14) is particularly interesting as it provides us with more information about the lexicographer's view of linguistic diachrony, suggesting that Phrynichus viewed the form used by his Attic ancestors as the base, or original form, from which one could extrapolate an uncontracted form. As Example 14 shows, the adverb διαλελυμένως is also used by the lexicographers to describe contracted vowels, in addition to contracted words (i.e. compounds). Further linguistic awareness of compounds is found in the following gloss, in which Phrynichus actively announces that the word he is rejecting is a compound:

- (95) χονδροκώνειον· ἀμαθὲς **τὸ σύνθετον τοῦτο** καὶ ἀλλόκοτον. [*Ecloga* 283]  
χονδροκώνειον ('mill for making groats')<sup>276</sup>; this compound is uneducated and strange.

The *Antiatticist* too shows direct awareness of compounds, also labelling them as τὰ σύνθετα, and defending the use of a couple of them:

- (96) ἐθελορήτωρ· ἐκβάλλουσι **τὰ σύνθετα**. †Θουκυδίδης†· “ἐθελοφιλόσοφος”· καὶ Θουκυδίδης (3.70.3) δὲ “ἐθελοπρόξενος”. [*Antiatticist* ε81]  
ἐθελορήτωρ ('would-be orator'); they (i.e. the other Atticist lexicographers) reject the compounds. [Thucydides says] 'ἐθελοφιλόσοφος' ('would-be philosopher'); and in Thucydides 3.70.3 [we find] 'ἐθελοπρόξενος' ('voluntary *proxenos*').<sup>277</sup>

The term τὸ σύνθετον is first used to describe compounds by Aristotle, and is also occasionally used by the lexicographers, in rare instances of interest in the grammatical properties of the

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<sup>276</sup> This form, if genuine, is a hapax, but χονδροκοπεῖον, with the meaning cited above, is found in Pollux.

<sup>277</sup> See Tribulato (2015: 222): 'Note that compounds derived from... ἐθέλω 'want'... do not express the notion 'want something', but are used to identify individuals who do something voluntarily, such as ἐθελοπρόξενος 'voluntary *proxenos*', thereby evolving into a kind of determinative compounds.' Tribulato also writes (245) that compounds with ἐθέλω as the first part of verb initial compounds were 'initially typically of Attic prose (though the first attested compound, ἐθελόπορος, is found in Anacreon).' It is therefore surprising that the Atticists whom the *Antiatticist* is presumably correcting would deem these un-Attic.

words they are describing. Other compounds that are attested from the Post-classical period onwards, especially in the papyri and the New Testament, and that are rejected by Phrynichus, include οἰκοδεσπότης, μεσοδάκτυλα, ψιλόκουρος, and χρεωλυτῆσαι, in the following glosses:

(97) οἰκίας δεσπότης λεκτέον, οὐχ, ὡς Ἄλεξις, οἰκοδεσπότης.<sup>278</sup> [*Ecloga* 349]

One needs to say οἰκίας δεσπότης ('master of the house'), not, as Alexis, οἰκοδεσπότης.<sup>279</sup>

(98) μεσοδάκτυλα· ἐναυτίασα τοῦτο ἀκούσας τοῦνομα. λέγομεν οὖν, τὰ μέσα τῶν δακτύλων. [*Ecloga* 167]

μεσοδάκτυλα ('the spaces between fingers/toes'); I was disgusted to hear this word. Therefore we say τὰ μέσα τῶν δακτύλων.

(99) ἐν χρῶ κουρίας φαθί, καὶ μὴ ψιλόκουρος. [*Ecloga* 38]

Say ἐν χρῶ κουρίας ('with skin shaven'), and not ψιλόκουρος ('smoothed-shaven').

(100) χρεωλυτῆσαι λέγει ὁ πολὺς, ὁ δὲ Ἀττικὸς τὰ χρέα διαλύσασθαι. [*Ecloga* 370]

The many say χρεωλυτῆσαι ('to discharge a debt'), but the Attic speaker (says) τὰ χρέα διαλύσασθαι.<sup>280</sup>

In Moulton & Milligan's *Vocabulary*, we predictably find a large number of compounds, which contribute to the overall high average word length of these data. With regards to prepositional compounds, we find, for example, Phrynichus' ἔκπαλαι, alongside a couple of other Roman period εκ- prefixed words: verb ἐξυπνίζω and adjective ἔξυπνος.<sup>281</sup> We also find a range of double lexical compounds, for example the Ionic compound μονόφθαλμος ('one-eyed'), which is first attested in Herodotus (3.116; 4.27) and revived in the later vernacular (it is found in the New Testament (Matthew 18:9), and is the form that survives in SMG) and is rejected by Phrynichus (*Ecloga* 107), who promotes the use of ἑτερόφθαλμος instead. However, it is not

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<sup>278</sup> Pollux (*Onomasticon* 10.21), who is not as purist as Phrynichus, agrees with him on this point. οἰκοδεσπότης is found in later texts, including the gospels, the papyri, and Josephus.

<sup>279</sup> The rejected form survives in SMG.

<sup>280</sup> The verb χρεολυτεῖν and all similar compounds of χρέος (χρεοδοτεῖν, χρεοκοπεῖν, χρεωφειλέτης, χρεωστεῖν, etc.) are late, and χρεωλυτῆσαι is first found in Plutarch.

<sup>281</sup> Related to this is the phenomenon of univerbation or crasis: ἐμμεσῶ, for example, for ἐν μέσῳ ('middle') is also found in Moulton & Milligan, and could be argued to be either a compound or crasis, both of which result in a new lexeme being formed. Similarly, we also find ἐξαστῆς for ἐξ αὐτῆς τῆς ὥρας in Moulton & Milligan.

always the case that the *koine* Greek forms found in Moulton & Milligan are the ones rejected by the lexicographers: we find glossed in Mouton & Milligan (p.42) the noun ἀνεψιός ('first cousin'), which is praised by Phrynichus in *Ecloga* 273) (he rejects ἐξάδελφος in the same gloss).<sup>282</sup> We also find many compounds which seem to have been first coined in the Septuagint or New Testament, for example ἀκρογωνιαῖος ('at the extreme angle/corner')<sup>283</sup> and ἀνθρωπάρεσκος ('man-pleaser'). Chapter 5 further discusses Christian coinages.

The increased use of compounding, in particular of a nominal and a verbal form, was therefore a prevalent feature of *koine* Greek. This feature was also characteristic of Ionic:<sup>284</sup> in a nineteenth-century article, Wolcott (1898: 149–151) demonstrates that many Greek prepositional compounds are found for the first time in Thucydides – who was heavily influenced by Ionic, as this was the language of the early historians – and notes that 'in Thucydides we meet with a greater number and variety of verbs compounded with prepositional prefixes, and of nouns derived therefrom, than in other Attic writers.' This shows the early influence that Ionic had on Attic prose. As the lexicographers rarely give a reason for rejecting a form, it is hard to be sure whether they had in mind the new preponderance of compounds in the *koine* or the existing tendency of Ionic when rejecting these compound forms. One influenced the other, but we cannot assume that the lexicographers were aware of this.

Compounding resulted in the expansion of the lexeme inventory, and the increase of compound forms may also be due to the growth of technical registers. A parallel for the expansion of the technical lexeme inventory can be found in the generalised use of Ionic technical vocabulary by Attic authors, for example, in historical prose, starting with Thucydides in the late fifth century. Although writing in Attic, Thucydides used many Ionic borrowings because, until the fifth century, Ionic was the dialect used to write historical prose (since most of the early historians were from Ionia).<sup>285</sup>

We therefore learn from both literary and metalinguistic sources that the Greek vocabulary was expanded considerably in the Post-classical period through the restructuring of existing lexemes, notably through compounding. The lexicographers offer evidence of how the Greeks manipulated their own language in order to expand it and make room for new concepts. The

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<sup>282</sup> Both forms survive in SMG: ἀνεψιός = nephew and ἐξάδελφος = cousin.

<sup>283</sup> In the context of ἀκρογωνιαῖος λίθος ('corner-stone') (Isaiah 28:16; Letters to the Ephesians 2:20). This phrase survives in SMG.

<sup>284</sup> Colvin (2014: 165).

<sup>285</sup> Many studies have looked at the Ionic features in Thucydides, notably Hoffmann & Debrunner (2013: 141–144) and López Eire (1984). Other genres which contain Ionic borrowings include medicine and philosophy, notably in Plato (see Diaz Tejera (1961)), possibly due to the influence of Ionic philosophers.



numerous glosses concerning compounds show us that this feature of derivational morphology struck the lexicographers as a noteworthy aspect of the language.

#### 4.4 Lexical replacement (2)

In addition to deriving new forms from pre-existing ones, another solution to resolve the morphological changes in the language – and the subsequent problems that this caused for the formation of certain lexemes – was to simply replace them with other, more regular-looking lexemes. This was either done by selecting one competing variety over another, more morphologically complex one, (2a), or by semantically and/or morpho-syntactically adapting a different word (2b). In this section, I first discuss lexical selection of competing forms (2a) in §4.4.1. Next, I assess whether the process discussed in §4.4.1 can be described as ‘lexical suppletion’ and provide a couple of examples to justify this idea (§4.4.2). Finally, I examine the method of semantic adaptation (2b) through a case study of the nouns τὸ ὕδωρ and τὸ νηρόν (§4.4.3).

##### 4.4.1 Selection of competing forms (2a)

###### 4.4.1.1 Competing verbal forms

The process of selection of pre-existing forms in order for words to adapt to the changing morphological requirements can be identified in all the major inflectional categories. In the verbal system, we mostly find lexical replacement of athematic -μι verbs with pre-existing, (quasi-)synonymous thematic -ω verbs. These are very well attested in our sources. In the lexica, we find, for example, Attic ἄπειμι (‘I will go away’), alongside its ‘incorrect’ *koine* equivalent, thematic ἀπελεύσομαι (*Ecloge* 24). Similarly, evidence from the documentary papyri demonstrates the increase in the use of thematic over athematic verbs, for instance in the case of the very common verb ‘to say.’ The verb ‘to say’ in SMG is λέω, which is derived from Classical Greek λέγω. Classical Greek, however, had two very common and pervasive verbs for ‘to say’, the athematic -μι verb φημί and the thematic -ω verb λέγω, both of which are attested from Homer onwards.<sup>286</sup> However, φημί gradually disappears from the

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<sup>286</sup> There are other verbs with this semantic meaning, such as ἀγορεύω, attested from Homer onwards, but φημί and λέγω stand out as being comparatively the most frequent and pervasive.

documentary papyri of the Post-classical period, and is completely replaced by λέγω. There is papyrological evidence that -μι verbs were not even understood by certain speakers of Greek by the third century AD. For example, we find instances of -μι verbs glossed with -ω verbs in an unpublished Oxyrhynchus papyrus assigned to the late third century AD, which reads: φασαν ελεγον; υπεσταν υπεσχο[ντ]ο.<sup>287</sup> These glosses are part of a school exercise on Homer *Iliad* 2, and this suggests that by the third century AD -μι verbs were not understood by schoolchildren, who had to gloss these using the -ω verb synonym that was in use in their own form of the language. Although the shift away from -μι verbs is already ‘well advanced’ at this stage,<sup>288</sup> it is only in the Post-classical texts written in the *koine* that we find written evidence that the shift away from the athematic to the thematic verb was completed.

This morphologically conditioned phenomenon is also attested in the Septuagint, where we find only 73 occurrences of φημί versus 4610 of λέγω, and in the New Testament, where we find 66 occurrences of φημί versus 1318 of λέγω. Similarly, we find some common middle verbs being gradually replaced by pre-existing synonyms which were active in form. For example, out of the variety of verbs meaning ‘to want/wish/be willing’, two very common ones in Classical Greek were ἐθέλω and βούλομαι. Both are found in Homer (where ἐθέλω is used more generally, and βούλομαι used especially of the gods, since it conveys a meaning slightly closer to ‘I will’). In Post-classical Greek, ἐθέλω → θέλω due to the loss of unstressed word initial vowels, and the latter is the form that survives in SMG.<sup>289</sup> The survival of (ἐ)θέλω over βούλομαι can be attributed to two main causes: firstly, the fact that, in Ionic, (ἐ)θέλω was the more common form (βούλομαι was slightly more common in Attic), and so, as in many other cases, it was the form inherited in the *koine*.<sup>290</sup> Secondly, the gradual loss of middle verbs in the Post-classical period would have brought about this replacement, of which the chronology can be traced in our sources: in the New Testament, we find 207 occurrences of θέλω but only 37 of βούλομαι. By contrast, in the Septuagint, written only a couple of centuries earlier, there is a much more balanced number of occurrences of each: θέλω occurs 148 times and βούλομαι 128 times.

<sup>287</sup> From φημί and λέγω and ὑφίστημι and ὑπισχνέομαι respectively. I would like to thank Chiara d’Agostino for this reference, and for providing me with photos and readings of this papyrus (58B/72(a)).

<sup>288</sup> Gignac (1976: 43).

<sup>289</sup> The verb βούλομαι does not survive. However, derivatives of the verb survive in certain high register forms such as βούλησις, a more formal version of θέλησις, most frequently used in set idiomatic phrases (e.g. ελεύθερη βούλησις (free will); λαϊκή βούλησις (will of the people); κατά βούλησις (according to each person's will); οικεία βουλήσει (willingly)), and adjectives βουλευτικός and άβουλος.

<sup>290</sup> Clackson (2019: 289).

#### 4.4.1.2 Competing adjectival forms

In the adjectival system, we find that third declension adjective  $\pi\tilde{\alpha}\varsigma$ ,  $\pi\tilde{\alpha}\sigma\alpha$ ,  $\pi\tilde{\alpha}\nu$  ('all, every'), which not only declined athematically but was also monosyllabic in many of its forms, was slowly replaced by thematic, morphologically predictable ὅλος -η -ον. This adjective, which is found alongside  $\pi\tilde{\alpha}\varsigma$ ,  $\pi\tilde{\alpha}\sigma\alpha$ ,  $\pi\tilde{\alpha}\nu$  in the Classical period, is ultimately selected, and survives in SMG (όλος -η -ο). The adjective  $\pi\tilde{\alpha}\varsigma$ ,  $\pi\tilde{\alpha}\sigma\alpha$ ,  $\pi\tilde{\alpha}\nu$  is lost and is not found in SMG except in compounds.

#### 4.4.1.3 Competing nominal forms

The replacement of third declension nouns with first and second declension nouns has already been described in §4.3.2. In addition to the method of morphological adaptation through the use of derivational suffixes outlined in that section, we also find lexical replacement. This is attested frequently in the lexica: in Moeris, for example, nine third declension Attic nouns have as their *koine* equivalents first or second declension synonyms.<sup>291</sup> Similarly, morphologically anomalous or complex words could, in addition to being regularised through derivation, simply be replaced by a more morphologically convenient (quasi-)synonym. To recall an example first given in Chapter 3, we know that the declension of ἡ ναῦς was complex, both phonologically (on account of the fact that it is monosyllabic) and morphologically. We know that it was considered morphologically tricky as Phrynichus (*Ecloga* 140) describes in depth how to decline this noun (and how not to decline it!). Indeed, ἡ ναῦς is not found in the Roman period papyri, as it is fully replaced by τὸ πλοῖον. The New Testament and Septuagint also testify to this lexical change and its chronology. While in the Septuagint, τὸ πλοῖον is found 42 times, compared to ἡ ναῦς which is only found 20 times, in the New Testament, τὸ πλοῖον is found 66 times, compared to ἡ ναῦς which is only found once, in the Act of the Apostles 27:41. Cases similar to ἡ ναῦς → τὸ πλοῖον, whereby a monosyllabic noun with an opaque stem (and therefore the unpredictable paradigm) was replaced by a polysyllabic thematic and morphologically transparent equivalent, include ὁ ὄξ → ὁ χοῖρος (SMG χοῖρος, 'pig'), and τὸ πῦρ → τὸ λαμπρόν (Cypriot Greek λαμπρόν, 'bright').<sup>292</sup> Most of these shifts to the

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<sup>291</sup> α115, α119, β18, γ22 (γηθυλλίς 'wild leek' – another example of a third declension noun ending in -ίς), δ40, δ43, ο6, ο43, φ13.

<sup>292</sup> Both of these are also replaced due to their monosyllabic nature, as discussed in Chapter 3.

polysyllabic and thematic form probably began in the Late Classical period, but their completion, or near completion, is brought in evidence in the Roman period texts.

In §4.3.2, an example of lexical replacement working alongside morphological adaptation was briefly discussed, with reference to two forms of the word for ‘pig’ that appear in the *Colloquium Celtis*, τὸ δελφάκιον and τὸ χοιρίδιον. To further expand on this, in the *Colloquia Monacensia-Einsidlensia*, we find (in section 11k) τὴν δέλφακα (accusative singular of ἡ δέλφαξ) as the Greek translation of Latin *porcellum*. Although the Greek term ἡ δέλφαξ originally referred to a fully-grown pig, here, and in later Byzantine texts, it came to mean ‘piglet,’ while the ancient word for piglet, ὁ χοῖρος, came to mean ‘pig.’<sup>293</sup> This is an example of lexical replacement, as ὁ ὕς, the common noun for ‘pig,’ was monosyllabic and morphologically difficult and had to be replaced by an easier, polysyllabic equivalent. On top of this we find, in the *Colloquium Celtis* (52a), related examples of morphological adaptation, in the form of the -ιον- suffixed form of δέλφαξ in the genitive case, δελφακίου, as the equivalent of Latin *porcellinae* (‘of a piglet’), and, one gloss above this, χοιριδίου (the -ιον- suffixed form of χοῖρος, also in the genitive case) as the equivalent of *porcinae* (‘of a pig’). This shows that ὁ χοῖρος had, by that time, already widened semantically to replace ὁ ὕς, since here it clearly means pig rather than piglet (as it is contrasted to the previous gloss (δελφακίου/*porcellinae*) and since its Latin equivalent means ‘of a pig’). It is interesting to note that this semantic change was so established that, even with the -ιον suffix, it no longer had the meaning ‘piglet’ (or indeed, it was so well established with the meaning ‘pig’, that the -ιον suffix did not bring any diminutive connotations, but rather was simply used as a morphologically regularising tool). The noun ὁ ὕς, however, like many rejected lexemes, was retained in a couple of compounds (as these do not necessarily attract the same morphological problems). For example:

(101) συβωτεῖν Ἄττικοί· ὑβοσκεῖν Ἑλληνας. [Moeris σ36]

Attic speakers say συβωτεῖν (‘to be a swineherd’); Greek speakers say ὑβοσκεῖν.<sup>294</sup>

In a similar way, the combined reading of the Septuagint and the New Testament allows us to date and trace the lexical replacement of the word for ‘fish’. The Classical Greek word for ‘fish’, ὁ ἰχθύς, needed to be either morphologically restructured or lexically replaced as it was

<sup>293</sup> Dickey 2012b: 181.

<sup>294</sup> Cf. also the noun ὑβοσκός (‘swineherd’), attested once in Aristotle.

a third declension noun with anomalous-looking endings. In this case, it was replaced by a pre-existing noun that had undergone semantic narrowing: τὸ ὀψάριον, a -ιον-suffixed form of τὸ ὄψον, ‘prepared food’ (again, the frequency and productivity of the word-levelling suffix -ιον is brought to evidence). The semantic narrowing from ‘prepared food’ to ‘fish’ is due to the fact that fish was the chief delicacy of the Athenians, as LSJ suggest, with reference to Plutarch 2.667f. and Athenaeus 7.276e.<sup>295</sup> The noun (mostly found in the plural) τὸ ὀψάριον occurs once in the Septuagint, in the Book of Tobit (2:2), and means ‘foodstuff, victuals, food’, which is the standard meaning of this word in the Classical period. However, it occurs five times in the New Testament, and in each of these occurrences it has the meaning of ‘fish’. For example:

(102) λέγει αὐτοῖς ὁ Ἰησοῦς· Ἐνέγκατε ἀπὸ **τῶν ὀψαρίων** ὧν ἐπιάσατε νῦν.<sup>296</sup> [John 21:10]  
 Jesus said to them: ‘Bring some of the fish that you have just caught’.

The New Testament provides us with the *terminus post quem* of this change, which had not yet occurred at the time of the Septuagint (where fish are called ἰχθύς in all 48 occurrences). The lexical change was clearly well underway by the first century AD, although ὀψάριον had not completely replaced ἰχθύς by then, since the latter appears 20 times in the New Testament (including in John, where we find an almost equal frequency of each word). It is worth noting that ὀψάριον had a potential rival in its replacement of ἰχθύς. We find in Aristophanes (e.g. *Clouds* 339) the noun ὁ τέμαχος being used to mean a slice of fish. Phrynichus (*Ecloga* 12) suggests that ὁ τέμαχος was used in Attic Greek to refer to fish (as food) exclusively, and its semantic scope expanded in *koinē* Greek, where it is used to mean a slice of any food (meat, bread, etc.), rather than narrowed to replace the no-longer morphologically ideal ἰχθύς. This illustrates the fact that the choice between different competing forms is not always obvious, and factors beyond pure linguistic ones are relevant have an effect on the lexical selection process. The noun τὸ ὀψάριον continues into SMG, where the word for ‘fish’ is το ψάρι ‘fish’ (with the regular loss of unstressed initial vowel). However, revival from καθαρεύουσα obscured many of the changes occurring in the languages and often resulted in synonyms: for example, two different words exist in SMG for ‘fishmonger’: το ἰχθυοπωλείο and το ψαράδικο, from the roots of the two different words for ‘fish’, the archaic one, and the morphologically conditioned newer one.

<sup>295</sup> See Janse (2019: 199).

<sup>296</sup> Other occurrences are John 6:9, 6:11, 21:9, and 21:13.

#### 4.4.2 Lexical suppletion?

Many of the changes outlined above can be argued to consist of some sort of lexical suppletion. Two word forms are in a suppletive relationship if their semantic relationship is regular but their morphological relationship is not. While the term is normally used of verbal paradigms, François (2019: 356) has demonstrated that it can be applied to certain systematic relations among lexemes, and provides as an example of a lexical paradigm the zoonymic terms {cow: calf}, {pig: piglet}, {sheep: lamb}, {horse: colt}, {goat: kid}, {dog: puppy}, {cat: kitten}, which he claims form together a paradigmatic set in which the semantic relation (the adult animal and its young) is parallel across all pairs. These lexical configurations are separate words, yet ones that form part of a regular semantic pattern in the language, which can be labelled as a lexical paradigm.

Lexical suppletion can also arise from both phonological and morphological change, with little interaction with semantic features. For example, we saw in §3.5.1 how ἡ κρᾶσις (→ SMG το κρασί) gradually replaced ὁ οἶνος ('wine'), and above how τὸ ὀψάριον (→ SMG το ψάρι) replaced ὁ ἰχθύς ('fish'). There was a period, however, in which the use of these words overlapped, and these conveyed a slightly different semantic meaning: τὸ ὀψάριον referred only to fish as a food, rather than fish the animal, which was ὁ ἰχθύς.<sup>297</sup> In much the same way, it is possible that, for some time, ὁ οἶνος referred to wine generally, while ἡ κρᾶσις / το κρασί, as suggested by the Classical meaning of the noun, ('a mixing/blending/compounding') referred to the mixed wine one would serve. These two suppositions are also based on a hypothesised parallel with the semantic development of the word that eventually gave the SMG word το ψωμί, 'bread,' and which the rest of this section will describe.

The Ancient Greek words for 'bread', which are found in Homer and subsequently throughout Classical Greek, are ὁ σῖτος and ὁ ἄρτος. The language underwent a semantic shift, whereby a derived form of the noun ὁ ψωμός 'a morsel, bit', which is also found from Homer onwards, slowly took on the meaning of 'bread'. Eventually, this replaced the pre-existing words. A combination of the Greek papyri and the New Testament permits us to date this change: the papyri provide us with the *terminus ante quem* for this change, as ψωμίον is used in the sense of ἄρτος in the papyri from the third century AD onwards, and probably as early

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<sup>297</sup> Cf. English pig/pork, cow/beef, sheep/mutton etc. In the papyri, ὁ ἰχθύς also refers to fish as food.

as the second. As Janse (2019: 194) points out, a potential *terminus post quem* is provided by a chapter in the Gospel of John, where we find:

(103) ὁ τρώγων μου τὸν ἄρτον ἐπῆρεν ἐπ’ ἐμὲ τὴν πτέρναν αὐτοῦ. [John 13:18]

He who eats my bread has lifted his heel up against me.

closely followed by the phrase:

(104) ἐκεῖνός ἐστιν ᾧ ἐγὼ βάψω τὸ ψωμίον καὶ δώσω αὐτῷ· βάψας οὖν τὸ ψωμίον δίδωσιν Ἰούδα Σίμωνος Ἰσκαριώτου. [John 13:26]

It is that man to whom I will give a morsel of bread (that) I will dip; and so having dipped the morsel of bread he gave it to Judas Iscariot, the son of Simon.

The New Testament frequently provides us with examples of lexical suppletion in action. As Janse (2019: 194) notes, these passages suggest that, at the end of the first century AD – when the Gospel of John was written – there was still a semantic difference between ὁ ἄρτος, ‘bread’ (as a whole, the collective), and τὸ ψωμίον ‘a morsel’ of the bread, since, in the second passage, the verb βάψω suggests that τὸ ψωμίον refers to a piece of the bread that is dipped, not the whole thing. Therefore while ὁ ἄρτος remained the general word for bread, τὸ ψωμίον was the bread that was broken and given to the people. It is noteworthy that the only time that τὸ ψωμίον appears is when it is given to Judas Iscariot, and is evidence for the influence of Christianity in lexical choice and lexical change (see §5.1). Judas cannot accept ὁ ἄρτος, since it is Christ’s body (it is the term used in the Gospels for transubstantiation) and he is in a state of sin, and therefore he can only receive τὸ ψωμίον. The semantic widening of τὸ ψωμίον therefore probably occurred at some point between the second and sixth centuries. The verbal derivative of τὸ ψωμίον, ψωμίζω (‘I feed’) is attested – and rejected – by the lexicographers, who prefer the verbal derivative of ὁ σῖτος, σιτίζω:

(105) σιτίζειν τὸ παιδίον Ἀττικοί· ψωμίζειν Ἕλληνες. [Moeris σ49]

Attic speakers say σιτίζειν (‘to feed’) the child; Greek speakers say ψωμίζειν.

The verb ψωμίζειν, however, *is* found in Attic, and is used by Aristophanes, Lysias and Hippocrates, among others, to refer to feeding by putting little bits into the mouth (as nurses do to children). For instance, we find in this line from Aristophanes:

(106) ἐπίσταμαι γὰρ αὐτὸν οἷς ψωμίζεται. [Aristophanes *Knights* 715]

For I know the titbits with which he is fed.

By the time of the lexicographers, however, its meaning appears to have widened semantically, and we find it twice in the New Testament as a probable synonym and potential replacement of σιτίζειν ('to feed', more generally):<sup>298</sup>

(107) ἀλλὰ ἐὰν πεινᾷ ὁ ἐχθρὸς σου, ψώμιζε αὐτόν. [Romans 12:20]

But if your enemy is hungry, feed him;<sup>299</sup>

This example suggests a slightly wider meaning than 'feeding as one does to children'. It is plausible therefore that the meaning of the verb ψωμίζειν not only changed before the meaning of its corresponding noun ψωμίον did but that it prompted the latter to analogically change as well. The semantic widening and increased use of ψωμίζειν can also be explained morphologically, since τρέφω, another Classical synonym, has aspiration in some of its principal parts (future θρέψω; aorist ἔθρεψα) due to Grassmann's Law: it is possible that this change in aspiration would have seemed morphologically unpredictable from the point of view of contemporary speakers. However, ψωμίζειν is not attested in the papyri, which is significant, as it does not survive into SMG, unlike τρέφω.

In his discussion of the development of ψωμίον, Janse (2019: 192–3) examines a passage from the fifth century AD Sayings of the Desert Fathers (Apophtegmata PG 196B-C), in which are found all three words Greek words for 'bread': σιτία, ἄρτος, ψωμίον. These, Janse points out, are all used in combination with the verb ποιεῖν, so it seems as if the speaker treats them as if they were synonymous:

(108) ὅτε ἡμην νεώτερος, εἰς τὴν ἔρημον ἕμενον. ἀπῆλθον οὖν εἰς τὸ ἄρτοκοπεῖον ποιῆσαι δύο **σιτίας**, καὶ εὔρον ἐκεῖ ἀδελφὸν θέλοντα ποιῆσαι **ἄρτους**, καὶ οὐκ εἶχέ τινα δοῦναι αὐτῷ χεῖρα. ἐγὼ δὲ ἀφῆκα τὰ ἐμά, καὶ ἔδωκα αὐτῷ χεῖρα. ὡς δὲ ἐσχόλασα, ἦλθεν ἄλλος ἀδελφός, καὶ πάλιν ἔδωκα αὐτῷ χεῖρα, καὶ ἐποίησα **τὰ ψωμία**. καὶ πάλιν τρίτος ἦλθε, καὶ

<sup>298</sup> Although ψωμίζειν with the meaning 'to feed' is not as common in the New Testament as τρέφω, which occurs nine times, it nevertheless has replaced σιτίζειν, which does not occur at all.

<sup>299</sup> See also the use of ψωμίσω in 1 Corinthians 13:3.



ἐποίησα ὁμοίως· καὶ οὕτως ἕκαστον τῶν ἐρχομένων ἐποίουν· καὶ ἐποίησα ἐξ **σιτίας**. ὕστερον δὲ ἐποίησα τὰς δύο **σιτίας** τὰς ἐμὰς, ἀποσχόντων τῶν ἐρχομένων.

When I was younger, I lived in the desert. So I took off to the bakery to make two breads, and there I found a brother who wanted to make breads, and he didn't have anyone to give him a hand. So I left my stuff, and gave him a hand. As I was at it, another brother came, and again I gave him a hand, and I made the breads. And then a third one came, and I did the same, and so I treated each of those who came, and I made six breads. Afterwards I made my own two breads, while those who came kept off.<sup>300</sup>

Despite the co-existence of these three words, at least for a short time in the Greek language's history, ψωμί(ον) eventually supplanted its rivals and became the SMG word for 'bread', both as a countable and an uncountable noun.<sup>301</sup> The metonymic expansion from the meaning 'piece (of bread)' to 'bread', Janse (2019: 198) suggests based on the Biblical evidence discussed above, must have taken place between the second and the fourth centuries.<sup>302</sup>

#### 4.4.3 Semantic adaptation (2b): a case study of τὸ ὕδωρ / τὸ νηρόν

In the examples of selection of competing forms given in §4.4.1 above, some of the competing forms were (quasi-)synonymous in the Classical period (for example, φημί and λέγω) whereas others had to be adapted, either semantically (for example, πᾶς, πᾶσα, πᾶν and ὅλος -η -ον) and/or morphologically (for example τὸ ὄψον and τὸ ὀψάριον (→ το ψάρι)) in order to replace the no-longer accepted form. An interesting example of semantic adaptation of a pre-existing lexeme in order to replace a no-longer morphologically acceptable one which I discuss below is the word for 'water'.

The Classical Attic Greek word for 'water' is the third declension neuter noun τὸ ὕδωρ, which was morphologically tricky in the *koine*, due to its athematic inflection and analogically obscure consonant stem (gen. ὕδατος). Due to the shift towards the simplification of the nominal paradigm, this noun was pre-disposed to be either restructured or lexically replaced. From the second/third century AD onwards we start to see evidence in the papyri (e.g. the late

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<sup>300</sup> Translation Janse (2019: 193).

<sup>301</sup> Thanks to the *katharevousa*, ἄρτος survives in a number of compounds (e.g. ἀρτοποιεῖο 'bakery' alongside demotic φούρνος).

<sup>302</sup> Janse also notes the parallel with English 'bread' and its West Germanic cognates, which also originally meant, according to the Oxford English Dictionary, 'piece, bit, fragment, Latin *frustum*'.

second / early third century letter *SB 28.17083* and the third century *Stud. Pal. 22.75.57*)<sup>303</sup> and in the *Colloquia of the Hermeneumata Pseudodositheana* for a gradual replacement of τὸ ὕδωρ in favour of the more morphologically predictable second declension neuter τὸ νηρόν (also spelt τὸ νερόν). This word is derived from adjective νεαρός -ά -όν ('new'), found in Homer onwards, which later undergoes semantic narrowing, and is found in papyri as early as the third century BC, in the contracted adjectival form νηρός -ά -όν, with the meaning 'fresh', usually in connection with fish (e.g. *P.Cair.Zen. 4 59616*). From there, it underwent a further semantic (specifically, metonymic) change and morphological shift and began to be used as the noun for 'water'. A search of the literature across all time periods in the *TLG* however, has not yielded any instance of the phrase 'νηρόν ὕδωρ' (other than as it is used by Phrynichus, see (109) below) suggesting that these were not used together in the written register.

In the *Colloquia Monacensia-Einsidlensia*, the evidence for the word for 'water' is particularly interesting. The Greek/Latin gloss for water in these glossaries is in most cases the Classical τὸ ὕδωρ/*aqua* (e.g. 2t), but in 11n we find the gloss τὸ νηρόν/*recentem* ('fresh water').<sup>304</sup> Dickey (2012b: 183) notes that Latin *recens* very rarely attested as a word for 'water' or 'fresh water', and suggests that this adjective is used specifically to translate the specialised meaning of Greek νηρόν. However, the converse might also be argued, that the Greek νηρόν is, in fact, a calque on Latin *recens* meaning 'cool, fresh.' The use of *recens* with this meaning is suggested by in a footnote by Ageno (1954: 152), who quotes Ovid, *Epistulae ex Ponto* 3.4.56: *illa recens pota est, nostra tepabit aqua* ('that drink is fresh, our water will be tepid'). The relative chronology of these two texts, and earlier evidence for Latin *recens* used in this way can be taken as evidence in favour of this hypothesis.

As Dickey (2012b: 182) notes, the development in Greek from 'fresh' to 'water' might therefore have occurred via an intermediate stage when the term meant 'fresh water' or 'cold water', and that seems to be its sense in the context of this colloquium. In the *Colloquia Monacensia-Einsidlensia*, there is a division between τὸ νηρόν, which refers only to cold water for drinking, and τὸ ὕδωρ, which refers to all other types of water: for example, water for handwashing is called τὸ ὕδωρ in the same section (11n).<sup>305</sup> Earlier on, however, τὸ ὕδωρ is used for all types of water (including for chilled drinking water in 2t).

<sup>303</sup> Although there is a chance that the reference in both of these may be to fresh fish. In the papyri, unambiguous examples of this semantic change start to appear frequently from the fifth century AD.

<sup>304</sup> Cf. the *Colloquium Celtis 57c*, which has νηρά/recentaria, probably with the same meaning. The gloss *recens/νεαρόν* in the *Colloquium Leidense-Stephani* (11b), Dickey (2012b: 183) suggests, comprises probably of two adjectives ('fresh/new').

<sup>305</sup> There is a potential parallel here with the semantic difference in Latin between *aqua* (any type of water) and *lympha* (clear/ spring water).

The development of τὸ νηρόν was also of interest to Phrynichus, who comments on the use of the νηρός as an adjective:

(109) νηρόν ὕδωρ μηδαμῶς, ἀλλὰ πρόσφατον, ἀκραιφνές. [*Ecloga* 27]

Never νηρόν ('fresh') water, but πρόσφατον ('fresh'), ἀκραιφνές 'pure'.

It might initially appear from Phrynichus' entry that the meaning of τὸ νηρόν as 'water' had not yet spread in the language, as it clearly still retains its adjectival meaning in this gloss, and so here the lexicographer might be providing us with a *terminus post quem* of this semantic shift. However, the fact that Phrynichus reacts so violently to the use of νηρόν as an adjective might suggest that τὸ νηρόν as a noun, which was already in use, was the real target of his comment. The lexical replacement of τὸ ὕδωρ with τὸ νηρόν/νερόν survives in SMG, where the word for water is τὸ νερό (with ὕδωρ used only in the *katharevousa* and certain compounds and idioms: βαρὺ ὕδωρ 'heavy water' (D2O); υδάτινος 'of the water'; υδραγωγεῖο 'aqueduct', υδρόγειος 'the globe' etc.).

The reorganisation of consonant stem nouns of the third declension explains a whole range of lexical changes in the Roman period. In addition to τὸ ὕδωρ being replaced by τὸ νηρόν/νερόν, another interesting example of replacement of an r-stem third declension neuter by a semantically shifted pre-existing Greek second declension noun is that of 'liver', τὸ ἥπαρ -ατος, which is replaced by τὸ συκώτιον -ου, which survives in SMG as τὸ συκώτι. This noun comes from the adjective συκωτός -ή -όν ('fed on figs') and entered the language by metonymy, via the phrase τὸ ἥπαρ συκωτόν ('fig-stuffed liver', i.e. the liver of an animal fattened up by figs). Latin offers a parallel in the expression *iecur ficatum* ('fig-stuffed liver'), as, also by metonymy, adjective *ficatus -a -um* ('fed on figs') came to be used for the liver itself (*ficatum -i*, cf. It. *fegato*, Fr. *foie*, etc.), with *iecur* (which itself is related to Greek ἥπαρ; both nouns are derived from PIE \*Hyék<sup>wr</sup>-/n-)<sup>306</sup> being lost. There is debate about which language calqued on the other: on the one hand, as the use of τὸ συκώτιον and *ficatum* can both be traced back to the Roman period, Greek elite possibly calqued the term on the Latin, aspiring to imitate the ruling Romans in force-feeding the animals to produce foie gras. On the other hand, Dickey suggests that the Greek form is the earlier one, explaining that 'it began as an adjective meaning "fattened on figs" (first attested in the second century AD, Galen, *De alimentorum facultatibus* VI.704.3), which was normally applied to the livers of pigs or poultry

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<sup>306</sup> Beekes & van Beek (2010).

that had been force-fed on figs and which then became usable as a noun meaning “fig-fattened liver” (also first attested in the second century: Galen *In Hippocratis de victu acutorum commentaria* XV.657.2). Then the Latin *ficatum* was formed as a calque on the Greek: the earliest attestation of the Latin seems to be in AD 301 in the Edict of Diocletian (4.6).<sup>307</sup> By the fourth century CE, both *ficatum* and τὸ σικώτιον had been extended to mean ‘liver’. Since both terms likely existed before their earliest surviving attestations, these cannot be used to establish a definite chronology.

#### 4.5 Overlap between Phonology and Morphology

The recurring caveat of this chapter and the previous one has been that it is simply impossible to separate phonology from morphology, as the two chapters have artificially attempted to do. This section summarises why this is the case. First and foremost, many morphological changes can be attributed to phonological concerns. For example, the loss of the subjunctive mood (and the subsequent development of new syntactic patterns) can be attributed in part to the loss of phonological distinctions between long and short vowels, distinctions which often independently differentiate the subjunctive from the indicative – the merger of the two can therefore be seen as phonetically driven.

Unsurprisingly, therefore, there is a huge amount of overlap between lexical changes caused by phonological changes and those caused by morphological changes, as the latter were often linked to, or even caused by, the former. The overlap is particularly evident in the case of monosyllabic nouns. Changes in this group of nouns were brought about, as detailed in the phonology section, by the need to increase the lengths of words due to the decrease in the phoneme inventory but also, as detailed in this chapter, by the need for morphologically unambiguous and analogically predictable paradigms, and clear distinction between the stem and the termination. Thus, the two different adaptation techniques were used on these third declension monosyllabic nouns, and we find changes such as ἡ κλείς, κλειδός → τὸ κλειδίον -ου; τὸ οὔς, ὠτός → τὸ ὠτίον -ου (1), and ὁ/ἡ ὕς, ὑός → ὁ/ἡ χοῖρος, -ου; τὸ ὕδωρ, ὕδατος → τὸ νηρόν -οῦ and ἡ ναῦς, νεώς → τὸ πλοῖον -ου (2).

Therefore shifts in the nominal paradigms can also be held responsible, along with the reduction in phonemes, for the increase in the length of words, in order to distinguish similar-looking words, and the resulting preponderance of suffixes (most notably -ιον). Most of the

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<sup>307</sup> Dickey (2012b: 179–180).

changes listed above can be explained by a combination of phonological and morphological factors. To describe one of these in greater detail, as we saw in §4.3.1, the longer Post-classical form τὸ ὠτίον (→ SMG το αὐτί) replaces the shorter Classical τὸ οὔς (1). On the one hand, the reason for this can be argued to be phonological: the reduction of the phoneme inventory resulted in a general lengthening of lexemes and avoidance of monosyllabic forms. Moreover, the need to avoid (near-)homonymic clash as a result of the reduction of the phoneme inventory (and notably in this case the mergers in the vowel system) resulted in the necessity for the addition of a suffix (here, -ιον), as it was plausible that a form like τὸ οὔς might become less easily distinguishable from other monosyllabic words beginning with a sound that was similar to /u/ (perhaps, for example ὀ/ῆ ὄς (pig)).<sup>308</sup> A suffix was therefore added to avoid any clash or confusion. On the other hand, as this chapter has shown, the change τὸ οὔς, ὠτός → τὸ ὠτίον -ου was also triggered by its anomalous inflection pattern and morphological opacity.

#### 4.6 Summary

In §3.6, I attempted to establish a typology of lexical change. I concluded that the use of language-external lexical replacement (2b in Chapter 3) to solve phonological issues is rare. We find in the language a tendency to stick with existing Greek linguistic resources by adapting pre-existing words through derivational morphology (1) or by replacing a rejected form with another semantically equivalent – or in some cases, semantically adapted – pre-existing lexeme (2a in Chapter 3). 2a was favoured when morphological adaptation was difficult, or inconvenient (e.g. the addition of the -ιον word-extending suffix on certain nouns, such as ναῶς, of which the genitive is not analogically transparent), but (1) was also heavily used, as evidenced by the large numbers of word-extending suffixes that can be found in post-classical texts.

The observations on morphological changes made in this chapter allow us to confirm this typology, and suggest further general principles for lexical change in Greek. Firstly, this chapter confirms a tendency to use adaptation method (1) frequently, with the language keeping the lexemes it already has and morphologically adapting (§4.3.2, §4.3.3) and building from them (§4.3.4) in order to keep up with the changing phonological and morphological

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<sup>308</sup> While the vowel ὀ/ῆ ὄς in pig is /i/, unlike the vowel in τὸ οὔς, which is /u/, confusion might nevertheless have been possible in quick speech.

constraints and changing semantic needs. Methods **2a** and **2b** could be used when the set of derivational tools was not sufficient, or when there was a suitable synonym which meant that adaptation was not necessary, as lexical replacement would achieve the same aim. I argued in §4.4.2 that lexical replacement can be seen as a form of suppletion. When the cost of irregular morphology and conformity is outweighed by the benefits of analogical morphological economy, we find that the irregular – or synchronically anomalous – paradigm is rejected, and replaced by a (quasi-) synonymous one (which could be semantically and/or morphologically adapted to fit the purpose (**2b**)).

Secondly, this chapter, along with the previous one, has shown that there are rules and reasoning for the structuring of the lexicon, and that, just like phonology and morphology, it can be explained as a series of synchronic choices and diachronic evolution prompted by the changing phonology and morphology of the language. There is an increasing interest in understanding lexical changes in this way in modern linguistics. Against the traditional view that the lexicon is ‘little more than a “trash-heap”- a repository of unpredictable facts that the language learner has no choice but to simply memorise’, Martin (2007: 137) finds that it is instead ‘the result of unconscious choices made by generations of speakers and listeners, and to the extent that these choices are biased, the lexicon itself will be biased.’ Martin argues that these biases are mostly caused by phonotactic preferences; the two previous chapters have argued that, inextricably linked to phonology, morphological reorganisation also affected the rejection, adoption, and retention of words.

Finally, as Kramer (2007: 33) points out in his analysis of the text of the sixth/seventh century P.Paris. 4 *bis* (cf. §3.4.3), the papyri and other documents of the Late Antique and Early Medieval period provide us with evidence for the progression from Classical Greek to the Modern Greek vernacular:

Es gilt nun, diese Bezeichnungen in ihrer geschichtlichen Entwicklung zu betrachten und vor allem das Augenmerk darauf zu richten, ob wir eine Etappe auf einer geradlinig zur modernen griechischen Volkssprache führenden Einbahnstraße beobachten können oder ob es zwischen Antike und Moderne auch Nebenstraßen gegeben hat, die Lösungen boten, von denen sich die Sprachgeschichte schließlich abgewendet hat.

As the analysis of the two previous chapters has shown, we do not find a one-way street leading straight to the modern vernacular, but rather a plethora of side streets between the ancient and modern language, including some hints of solutions from which history tells us that the

language eventually turned away. It is impossible for the development of any language to be an *Einbahnstraße*: even though many lexical (and, as grammars show us, phonological, morphological and syntactical) items may develop in a more or less predictable way, the principles of sociolinguistics show us that there are always *Nebenstraßen*.

Indeed, this has been illustrated in many of the examples given across the two chapters: for example, the survival of οινάρiv in the Cypriot and Pontic dialects but κρασί in SMG (§3.5.1), and the force of the καθαρεύουσα in providing alternatives such as το ιχθυοπωλείο to the SMG το ψαράδικο (§4.4.1.3). In a given synchronic pool, there will always be variation: the historical linguist can usually only see what survived, which gives the false allusion of an *Einbahnstraße*. The following chapter explores the linguistic *Nebenstraßen* induced by changes that cannot be wholly accounted for by the structures of the inherited phonology and morphology.

## Chapter 5. Cultural factors of lexical change

Understanding the cultural, historical and political background of the users of a language is crucial in an investigation of language change and variation. As Labov (2001 *et passim*), and his sociolinguist successors have shown, it is the speakers themselves, and their sociolinguistic context, that are at the heart of language variation and, subsequently, change. So far, this thesis has focussed principally on how the Greek lexicon developed through adaptation (often derivational) of inherited features and selection of competing forms within the Greek language itself, i.e. on the *linguistic* factors for lexical change. This chapter aims to evaluate the extent to which *non-linguistic* features played a role in the development of the Greek lexicon. While it is impossible to account for all lexical and semantic shifts in a language that are caused by non-linguistic features, I argue in this chapter that we can nevertheless distinguish three crucial cultural forces of the Post-classical period which had an important and long-lasting effect on the Greek lexicon. These are Christianity (§5.1); the absorption of the Greek-speaking world into the Roman Empire, and the need to create a new lexicon and metaphorical system to talk about the structures of the Roman Empire, its provinces and its army (§5.2); and the rapid rate of expansion, both geographical and functional, of *koine* Greek (§5.3).

### 5.1 Christianity

#### 5.1.1 Background

It is impossible to talk of the sociolinguistic context of the Greek diaspora in the Post-classical period without also mentioning the rapidly expanding new religion of Christianity, which initially spread *in Greek* primarily through the lower social classes. Even though the immediate followers of Jesus were speakers of Aramaic, Greek was the language that enabled the religion to spread around the Mediterranean, due to the language's pre-existing widespread use as a general means of communication between different regions of the Empire.<sup>309</sup> As early as the 1930s, it was argued that 'la grande révolution chrétienne' had a profound influence on the Greek language, as the 'formally and spiritually deeply renewed' ('si profondément rénové, dans la forme comme dans l'esprit') nature of Christian Greek widely influenced the language,

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<sup>309</sup> Seminal works on the sociolinguistic situation of the ancient Mediterranean and the Near East include Adams (2003); Adams, Janse, and Swain (eds.) (2002); Millar (2013); Rochette (1997); Papaconstantinou (ed.) (2010); Cotton *et al.* (eds.) (2009); Evans & Obbink (eds.) (2009); Bagnall (2011).



and caused it to change.<sup>310</sup> Naturally, Christianity had an impact on languages other than Greek too: within its first few centuries, Christianity reached speakers of Latin, Coptic, Syriac, Gothic, Ethiopic, Georgian, Armenian, Arabic, and numerous other languages.<sup>311</sup>

In this section, I argue that the principal effects of Christianity on the Greek lexicon are two-fold: (1) language-external influence, particularly the increased borrowing from Latin into Greek (this is examined in §5.1.2), and (2) language-internal changes, notably semantic shifts within the Greek language (this is examined in §5.1.3).

### 5.1.2 Christianity and lexical borrowing (1)

One of the ways that Greek dealt with the problem of needing a new vocabulary to convey new Christian concepts was by borrowing lexical items from other languages. A new religion, with a new range of different semantic concepts to convey, opened up the space for borrowing. Indeed, language-external influence on Greek is attested in the New Testament, the most important and influential Christian text. Much of the language of the New Testament, however, was based on the language of the Septuagint, the earliest extant Greek translation of the Hebrew Bible.

Two languages worth examining for their influence on Greek are Hebrew and Aramaic. This is due to the influence of the language of the Septuagint, with its Hebrew loanwords, and later the New Testament, with its Aramaic borrowings. The Septuagint was written in such a way as to closely match the Greek with the Hebrew being translated: for example, the use of clause-introducing *καί* ‘and’ renders the *wə-* ‘and’ of Hebrew in most cases.<sup>312</sup> As the authors and translators of the New Testament closely followed the language of the Septuagint, these loanwords are also found in the New Testament. In their *Vocabulary*, Moulton & Milligan provide us with examples of borrowing from Hebrew into Greek. The words in this dictionary appear not only in the Biblical texts but also in documentary papyri, which suggests that these words perhaps spread beyond the religious sphere and were in use in everyday, perhaps even spoken language. However, most of the Hebrew and Aramaic words found in the New Testament seem to refer to specifically religious concepts, and therefore cannot be said to have had a far-reaching impact on the Greek lexicon. For example, Hebrew loans *ἡ γέεννα* (‘valley

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<sup>310</sup> Grégoire (1938: 10).

<sup>311</sup> See Minets (2021: 9).

<sup>312</sup> See Rafiyenko & Seržant (2020: 4), who follow Horrocks (2010: 107) and George (2010: 268–269).

of Hinnom/ the place of future punishment’, found in Matthew 5:22 *et passim*) and σαβαώθ (‘armies’, found in Romans 9:29 *et passim*) and Aramaic loans ἐλωί (‘my God’, found in Mark 15:34 *et passim*) and χερουβίμ (‘cherubim’, found in Hebrews 9:5 *et passim*). These are all specific Jewish concepts, for which new words were needed in Greek. Classical terms such as οἱ στρατοί and ὁ θεός, for example, were not specialised enough to refer to the religious meanings that σαβαώθ and ἐλωί conveyed. The loanwords listed above are *Fremdwörter*, that is, they would have still been felt to be foreign by Greek speakers, rather than *Lehnwörter*, i.e. words that were fully integrated into the language.

Semitic words were borrowed into Greek long before the Septuagint: among the *Lehnwörter* from Semitic languages we find words such as ὁ ἀρραβών (‘caution-money’), found frequently in the papyri and New Testament, but present in the Greek language as early as the fourth century BC: it is found in Aristotle, and is the word that survives into SMG over Classical equivalent ἡ πρόδοσις (although with a semantically different meaning, ‘engagement’). Similarly, the Antiatticist, for example, draws our attention to the form ἡ μύρρα/σμύρνα ‘myrrh’, borrowed from a Semitic source akin to Hebrew mōr, ‘myrrh’, literally ‘bitterness,’ and found in Sappho. This form was well integrated in Greek, and the fact that that it had different dialectal forms (ἡ μύρρα is probably the Ionic and Aeolic form, and ἡ σμύρνα appears from the gloss to be Attic) suggests that the word may have been borrowed more than once:

(110) μύρραν· τὴν σμύρναν. Σαπφῶ β’ (fr. 44.30) [Antiatticist μ33]

μύρραν (‘myrrh’); τὴν σμύρναν. Sappho fr. 44.30.<sup>313</sup>

The Biblical translations resulted in a number of new borrowings from Hebrew into Greek in the Hellenistic period. The majority of these do not appear to have spread beyond the religious sphere, and so did not directly influence the lexicon, in the sense that basic Greek words were not commonly replaced by Hebrew and Aramaic words, as they were by Latin (see below), and Hebrew and Aramaic words do not survive in large numbers in SMG. However, as the rest of this section shows, the religions that the Hebrew and Aramaic languages conveyed did have a lasting impact on Greek in the way in which they prompted a structural shift in the lexical inventory. New words were needed for new concepts, and so the pre-existing Greek lexemes

<sup>313</sup> Other old Semitic loanwords borrowed in the Classical period or before include ἡ σησάμη (‘sesame plant, e.g. Aristophanes *Birds* 159) and perhaps most famously ὁ χρυσός (‘gold’) which is found as early as Mycenaean times.

needed to shift semantically in order to accommodate these: where language-external lexemes, for whatever reason, were not used, Greek made use of its own lexical inventory as §5.1.3 will discuss.

For other specialised Christian terms, Greek regularly turned to Latin. It is notable that the very word for ‘Christian’ in Greek, Χριστιανός, is a borrowing from Latin. Many of the Latin loanwords which are discussed in §5.2 were borrowed for use in a Christian context: for example, ὁ σύγκελλος, an ecclesiastical title derived from Greek σύν ‘with’ + Latin *cella* ‘room’, which is still used today to refer to an ecclesiastical office in the Eastern Rite churches. The language of the New Testament is diverse, due its varied authorship: for example, the Greek Gospel of Luke contains fewer loanwords from Latin, and this, along with other Atticizing features such as the use of the optative, is seen to indicate its high-register style.<sup>314</sup> The book of the Acts of the Apostles, however, which is agreed to have been written by the same author as the Gospel of Luke, contains many more Latin words, and strikingly rare Latin words, which are not attested in papyri or other literary texts: a list compiled by Dickey (2023: 603) includes λιβερτῖνος ‘freedman’ (Acts 6:9), σημικίνθιον ‘belt’ (Acts 19:12), σικάριος ‘bandit’ (Acts 21:38), χῶρος ‘north-west wind’ (Acts 27:12), εὐρακύλων ‘north-east wind’ (Acts 27:14), and ταβέρνα ‘shop’ (Acts 28:15). This, combined with the fact that the four Gospels, conveying chiefly the same story, contain varying numbers of loanwords, suggests the idea, which is discussed in detail in §5.2, that borrowing from Latin was never inevitable, or even necessarily preferable.

A recent work by Minets, *The Slow Fall of Babel* (2021), sets out to investigate ‘how language differences and language-related socio-cultural stereotypes were drawn into the process of constructing and negotiating distinctly Christian and specific confessional identities.’<sup>315</sup> In it, the author emphasises how those who first spread Christianity among foreign peoples often came from bilingual or multilingual milieux, and had to leverage their linguistic skills to convey a message as clearly as possible.<sup>316</sup> Since, by the second to mid-third centuries, Christian communities in the West had begun to use Latin,<sup>317</sup> in addition to, or instead of, Greek, it is unsurprising that Latin loanwords should start to be used in Greek of a Christian context.

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<sup>314</sup> Dickey (2023: 603).

<sup>315</sup> Minets (2021: 1).

<sup>316</sup> Minets (2021: 19).

<sup>317</sup> Prior to this, Latin is barely attested among the earliest Christian communities: the Rome-based Christian writers of the first to third centuries AD (Hermas, Clement, Justin, Tatian, Hippolytus etc.) composed their works in Greek.

### 5.1.3 Christianity and semantic change (2)

In addition to turning to language external features such as Latin borrowings to convey new Christian concepts, the Greek language also made use of language internal features. We find semantic adaption of pre-existing lexical items: the discussion of ἄρτος/ψωμίον in §4.4.2, demonstrated that Christianity was a potential factor for semantic change and language-internal lexical selection, since the religious concept of transubstantiation may have dictated the use of one word over another. Moreover, it is thanks to the influence from Christianity that ψωμίον is still used in SMG rather than ἄρτος, as the latter has acquired a religious meaning (the entry for ἄρτος in the *Triantafyllidis Dictionary* (1998) states its usage as εκκλησιαστικός ‘ecclesiastical’; it refers to the bread distributed after a special religious service). Similarly, Shipp (1979: 101–2) suggests that ‘the loss of ἄρτος in the common speech was caused by the church use, a kind of tabu, as also the loss of ὕδωρ. It would fit in well with this view that the words survived in the part of the Greek world which remained pagan into the middle ages.’<sup>318</sup> Indeed, ὕδωρ is also now used extensively in a religious context (e.g. αγιασμός των υδάτων, ‘blessing of waters’, a religious celebration which takes place during Epiphany). The adoption into the Christian register of language of pre-existing Greek words therefore affected the development of the Greek lexicon. This is cross-linguistically common: as Traugott & Dasher (2009: 46) note, religious texts commonly ‘become the locus of innovations in certain semantic domains.’

In order to further demonstrate the impact of Christianity on both semantic change and lexical innovation, I briefly discuss eighteen words on which Christianity had a long-lasting effect, not just in a Christian context, but also in the wider language. For each of the eighteen case-studies, I determine what sort of semantic/lexical change was prompted by Christianity, using the following labels: **semantic shift** (a change in the meaning of a word), **semantic narrowing** (when the meaning of a word becomes less general or inclusive than its earlier meaning), **lexical selection** (when one lexeme is selected over another), or **lexical innovation**

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<sup>318</sup> Cf. Janse (2019: 199).

(the coinage or development of a new lexeme). These eighteen short case-studies exemplify the long-term effect of Christianity on semantic change in Greek.<sup>319</sup>

### 1. ἀγάπη

An exemplary case of semantic change brought about by Christianity is that of ἀγάπη ('charity'). Derived from the Classical verb ἀγαπάω ('I show affection for'), this noun is very rarely attested before the New Testament. It is found in the Septuagint, certain Jewish authors, and in a few papyri and inscriptions of that period, to denote a variety of concepts such as romantic love (Song of Solomon 2:7) and the mutual love of God and man (Book of Wisdom 3:9).<sup>320</sup> Its current meaning in the Greek of today was first established by early Christian writers, who used it to convey the new concept of charity or Christian love (e.g. 1 Corinthians 13:1–8). This relatively new word was used instead of the well-established Classical alternatives φιλία and ἔρωσ since these already had a certain semantic strength attached to them (love of one's friends, erotic love), while ἀγάπη did not yet convey a strongly specialised meaning. The cultural phenomenon of Christianity therefore caused ἀγάπη to undergo **semantic narrowing** and to be **selected** over other possible existing variants in Greek.

### 2. ἄγγελος

Unlike ἀγάπη, this noun is found as early as Homer, and was very common in the Classical period. Up until the Post-classical period, its principal meaning was 'messenger', of any sort, but this noun undergoes **semantic narrowing** due to Christianity, as Christian writers adopt it to mean 'messenger (specifically) of god, angel'. In the same lexical field, εὐαγγέλιον is found as early as Homer with the meaning 'reward for good news', and in a Christian context is found meaning *the* good news itself, i.e. the gospel.<sup>321</sup>

### 3. ἅγιος

This adjective, meaning 'devoted to the gods, scared, holy' is not found in Homer, Hesiod or Tragedy (the form ἄγνός is used instead) and is rare in Attic. While it is found in authors such as Plato (e.g. *Laws* 729e) and the orator Antiphon (e.g. 147.7) it becomes most common in the

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<sup>319</sup> We also find new Greek words first coined in a Christian setting: Gingrich (1954: 193) lists eleven nouns and adjectives which were potentially first coined in the New Testament. However, as Gingrich himself was aware even 70 years ago, 'the list of supposed NT coinages has been drastically reduced by discoveries and researches in the field of Hellenistic Greek'. This list has been further reduced by subsequent scholarship.

<sup>320</sup> Gingrich (1954: 190).

<sup>321</sup> See Gingrich (1954: 192) and Slaten (1918: 51).

Classical period, and is frequent in the Septuagint (e.g. Exodus 26:33) and the New Testament (e.g. Hebrews 9:2). Around that time, it begins to undergo **semantic narrowing** and becomes nominalised, and its nominal form is used to designate the Christian concept of a ‘saint’ (e.g. 1 Corinthians 6:1), a meaning which persists into SMG.<sup>322</sup>

#### 4. ἁμαρτία

Derived from the verb ἁμαρτάνω (‘I err’), this noun is found in Attic tragedy (e.g. Aeschylus *Agamemnon* 1198) and Plato (e.g. *Laws* 660c), with the meaning ‘error, mistake, fault’. It is borrowed into the Christian semantic matrix, and undergoes **semantic narrowing** to describe the new concept of ‘sin’ (e.g. John 8:46), which is the meaning found to this day in SMG.

#### 5. ἀπόστολος

This noun is derived from the verb ἀποστέλλω (‘I send off’), and is found with the meaning ‘envoy, messenger, ambassador’ as well as related, military meanings (e.g. ‘naval expedition, order for dispatch’), in Attic authors such as Lysias (e.g. 19.21) and Demosthenes (e.g. 3.5). In the Septuagint, it is used in a specialised form, to refer to a ‘messenger from God’ (e.g. 3 Kings 14:6), and it undergoes further **semantic narrowing** in the New Testament, where it is used to refer to a follower of Jesus (hence English ‘apostle’). This specialised meaning supersedes all Classical meanings, and ἀπόστολος in SMG is used specifically with this Christian meaning.

#### 6. δαίμων

Δαίμων and its derivative δαιμόνιον are both found in Classical Greek to refer to a god, divinity, or fortune. It is the form taken up by both Jewish and Christian authors and undergoes **semantic narrowing** to mean ‘demon, evil spirit’ (e.g. Josephus *Antiquities* 8.2.5 and Matthew 8:31).

#### 7. διάβολος

Likewise, διάβολος, found in the Classical period with the meaning ‘slanderer’, is **semantically narrowed**, first by the influence of the Septuagint, and then by that of the New Testament, to refer to the specifically monotheistic idea of the devil. It has given the word for devil to most modern European languages.

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<sup>322</sup> Slaten (1918: 54) notes that this nominalised use of ἅγιος occurs 40 times in the Pauline epistles alone.

## 8. διάκονος

In the Classical period, διάκονος means servant (Herodotus 4.71) or messenger (Aeschylus *Prometheus Bound* 942; Sophocles *Philoctetes* 497). It is found in certain Hellenistic period inscriptions from Acarnania, Troezen and Lydia with the meaning ‘attendant/official’ (*Inscr.Magn.*109,217, *IG*9(1).486; 4.774.12; *CIG*3037), and was borrowed into Christianity, undergoing **semantic narrowing** to fill the meaning of ‘deacon’, that is, an ‘attendant’ of the church.

## 9. δόξα

This noun is found as early as Homer, and is common in the Classical period with the meaning ‘opinion, expectation.’ It is borrowed into the Christian semantic matrix, and **semantically shifts** to convey the notion of holy/celestial magnificence, glory, or beatitude.

## 10. ἐκκλησία

Another example of **semantic shift** is that of ἐκκλησία, an inherited Greek word meaning ‘assembly’ in the Classical period, but which shifts under the influence of Christianity to convey the new concept of a church, a meaning which is retained in SMG. The reason for the semantic shift is that the inherited Attic word for ‘temple’, ὁ ναός, was both morphologically too complex (see §4.1.2), and conveyed too much of a pagan meaning to be kept or revived, even in the morphologically simpler form ὁ ναός. Rather than borrowing, the Greek language again turned to the selection of its inherited forms, and made use of semantic shifts in order to convey a new idea. Procopius, writing in the sixth century, comments on this: in his description of the Christian period of Greek history, he informs his reader that ἡ ἐκκλησία was used to mean ὁ ναός.<sup>323</sup> The entry for ναός in the *Babiniotis* dictionary (5<sup>th</sup> ed, 2019) suggests that that the reason why ναός is still found in the Christian religion, in contexts such as ναός τού Αγίου Γεωργίου (‘Church of Saint George’), is related to *the continuity of the linguistic tradition*, rather than to the perception of God in Christianity.<sup>324</sup> He goes on to posit that another reason that ἡ ἐκκλησία is used in Christianity over ὁ ναός is because of the etymology of both words: ναός, from ναίω, ‘I inhabit’, could be used of the pagan gods, since they were believed to inhabit the temples. For Christianity, ἡ ἐκκλησία, from adjective ἐκκλητος, ‘summoned’, better

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<sup>323</sup> Procopius *History of the Wars* 2.9. Procopius is being deliberately archaising in pointing this out: cf. Cameron & Cameron (1964).

<sup>324</sup> το ότι η λ. ναός χρησιμοποιήθηκε και στη χριστιανική θρησκεία (ναός τού Αγ. Γεωργίου) σχετίζεται με τη συνέχεια τής γλωσσικής παράδοσης περισσότερο παρά με την περί Θεού αντίληψη των χριστιανών...

described the Church as a place of congregation, and this is the primary use of the word ἐκκλησία in early Christianity (it later becomes used refer also to the physical building).

### 11. εἶδωλον

The noun εἶδωλον is found as early as Homer, with the meaning ‘phantom/idea/insubstantial form.’ It is used first by the Jewish writers of Septuagint, and then by the Christian authors, to refer to an ‘image of a god, idol’. It therefore undergoes **semantic narrowing**.

### 12. ἐπίσκοπος

Much like διάκονος, ἐπίσκοπος, a term for another Christian office, is found in the Classical period and underwent **semantic narrowing**. Its meaning in the Classical period was ‘overseer, of any kind’. Its Christian meaning, an overseer *of the Church*, i.e. a bishop, was the one that prevailed in the language as a whole. This term, while prevalent throughout Church history, is relatively infrequent in the New Testament, occurring only five times (this is probably due to the content of the New Testament).

### 13. κύριος

By contrast, the appellative κύριος (‘lord, master’) is, next to θεός, (‘God’), the most frequent single noun in the New Testament, occurring 725 times.<sup>325</sup> This noun is a particularly interesting example of the influence of religion (in this case, as with many of the others, first Judaism, then Christianity) on the Greek lexicon. As Dickey (2001) shows, its use as an appellative was a feature of Post-classical Greek. Unsurprisingly, therefore, it is avoided by the Atticists. An entry in the *Antiatticist* about the feminine form κυρία reads:

(111)κυρίαν· οὗ φασι δεῖν λέγειν, ἀλλὰ κεκτημένην· τὸν δὲ κεκτημένον μὴ λέγεσθαι ἐπὶ τοῦ δεσπότου.<\*\*\*> Σατύρ{ικ}οις (Phryn. Com. fr. 50) “κεκτημένον” λέγει, Φιλήμων (fr. 190) “κυρίαν”. [Antiatticist κ31]  
κυρίαν (‘mistress’); they say that you should not say this, but say κεκτημένην; and do not say κεκτημένον when talking about a δεσπότης (‘master’). <\*\*\*> In the *Satyr*s (Phrynichus the Comic, fragment 50), he says “κεκτημένον” and Philemon (in fragment 190) [says] “κυρίαν.”

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<sup>325</sup> Slaten (1918: 62).



According to the Atticists, the Antiatticist claims, neither κυρία for the feminine nor κекτημένος for the masculine are allowed if one is to write in good Attic. The Antiatticist retorts with two examples taken from the comic poets Phrynichus and Philemon to argue against these rules. Interestingly, however, he gives as the equivalent of the masculine κекτημένος the noun ό δεσπότης, rather than ό κύριος. The term κекτημένος meaning ‘master,’ which is attested in only two surviving sources (two of Aristophanes’ fourth-century BC comedies), and denotes the same concept as δεσπότης.<sup>326</sup> The rise of κύριος, and its eventual replacement of δεσπότης is an example of **lexical innovation** caused by the need to refer to a new, in this case religious, concept: the Jewish writers needing a word to refer to God, their ‘lord’ as the obvious inherited alternative, δεσπότης, although semantically very similar, had pagan implications. κύριος first appears in the Septuagint, where it occurs 8591 times, and the New Testament, where it occurs 718 times. By contrast, δεσπότης only occurs 60 times in the Septuagint, and 10 times in the New Testament. It is also an example of **lexical replacement**, potentially with influence from Latin. Dickey (2001: 10) suggests that the noun κύριος (or rather, its vocative form κύριε) was originally created to provide a translation for Latin *domine*, a non-deferential form of address for which there was no equivalent in Greek. Indeed, the gloss *domine*/κύριε is found in the *Colloquia Monacensia-Einsidlensia* (5a, 11q), the *Colloquium Harleianum* (4a, 12a), the *Colloquium Montepessulanum* (4c, 9a, 16e), and the *Colloquium Celtis* (16c, 63b, (probably) 66a). This was because δεσπότης is a more subservient term, used primarily by slaves, and so would not be a good translation for *domine*, which could be used between equals. The nouns κύριος and κυρία eventually lose some semantic force, surviving in SMG as neutral forms of address (‘sir’ and ‘madam’),<sup>327</sup> and, interestingly, we also find the modern coinage δεσποινίδα, ‘miss’, a derivative of ό δεσπότης.<sup>328</sup>

#### 14. παραβολή

Giving the term ‘parable’ to most European languages, including SMG, παραβολή in the pre-Christian era means ‘juxtaposition, ‘comparison’, before undergoing **semantic shift** to refer to a concept specific to the New Testament. The semantic shift can be explained by the fact that parables *compare* two situations: the story the parable is telling and real life.

#### 15. πίστις

<sup>326</sup> Willi (2003a: 63).

<sup>327</sup> This sort of semantic weakening is cross-linguistically common, see. Dickey (1996: 106–7).

<sup>328</sup> Also interestingly, δεσπότης itself is used in SMG to mean ‘bishop’, another ecclesiastical term.

This noun first occurs in Hesiod (*Works and Days* 372) and is commonly found in Attic writers such as the tragedians (e.g. Aeschylus *Persians* 443, Euripides *Electra* 737), with the meaning ‘trust, faith’. It is borrowed into the Christian semantic matrix, undergoing **semantic narrowing** to refer specifically to Christian faith, i.e. faith in God (e.g. 1 Corinthians 13:13). The third declension noun later undergoes morphological adaptation and SMG πίστη retains the semantically narrowed meaning of religious faith (although it can also be used of religions other than Christianity).

#### 16. πνεῦμα

In the Classical period, πνεῦμα means ‘wind’ or ‘air’, but this noun undergoes **semantic narrowing** in the Post-classical period, under the influence of Christianity, to mean ‘spirit’, which is the meaning found to this day in SMG.

#### 17. πρεσβύτερος

The final of three terms denoting an ecclesiastical office, after διάκονος and ἐπίσκοπος, is πρεσβύτερος. The word meant ‘elder’ in the Classical period, but is adopted into the Christian lexis to denote an ecclesiastical position (presbyter, an elder of the Church). This is a good example of **lexical selection** as well as **semantic narrowing** as this noun was chosen over other available alternatives, such as, for example, ἱερεύς, possibly due to the latter’s pagan connotations.<sup>329</sup>

#### 18. χάρις

Finally, χάρις, an abstract noun meaning ‘grace, beauty’ in the Classical period, undergoes, due to Christianity, a **semantic shift**, as its use in Greek becomes restricted to a technical term of Christian theology, meaning ‘grace.’<sup>330</sup>

The examples above have shown that the impact of Christianity on semantic and lexical change in Greek was both wide-ranging and long-lasting. While it is beyond the scope of this thesis to go beyond a handful of case-studies, it is clear that semantic change, which is further explored

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<sup>329</sup> Gingrich (1954: 191). Nowadays, however, in SMG ἱερέας (from ἱερεύς) is also used to refer to a priest.

<sup>330</sup> Gingrich (1954: 191).

in §5.3.2 below, is intrinsically linked to the study of the lexicon, and a fertile avenue for further study.<sup>331</sup>

## 5.2 The Roman Empire

### 5.2.1 Background

The destruction of Corinth in 146 BC marked the fall of the Greek peninsula to the Roman Republic. Over the next century, Rome conquered much of what was once the Greek-speaking world. A significant linguistic consequence of this was increased language contact between Greek and Latin.

Language contact is a very important cause of language change: for linguists, one of the major distinctions between types of linguistic change is whether that change is contact-induced or not.<sup>332</sup> Contact-induced linguistic change has been systematically discussed by historical linguists since the publication of Weinreich's 1953 *Languages in Contact*, and has been treated in many seminal works, notably Thomason (2001). It is immediately obvious that contact with the Roman Empire, its language and its culture was an important factor for lexical change in the Greek of the Post-classical period. Just as, at around the same period, Latin was faced with contact with Gaulish, Germanic and Hispanic in the West, and these influenced the development of the Romance languages, the Greek-speaking East was also in contact with local languages, with notable effects on the lexicon, which is the first place where contact from other languages can be observed.<sup>333</sup> The Roman period was one of significant language contact, as Greek cohabited with Latin through most of the Empire. Although Greek remained the standard written language of most provincial administrations (including in the large provinces of Egypt, Asia Minor and Syria) after the Roman conquest, the presence of Roman officials and in particular of the Roman army introduced a large body of new terminology. The factors influencing this profound language contact include the foundation of *coloniae* (Roman outposts established in (often to some extent Greek-speaking) conquered territory to secure it), the

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<sup>331</sup> Semantic change is a rapidly developing field in cognitive linguistics. Notable works on this topic include those of Traugott & Dasher (2009), and Dworkin (2010: 598). The latter has successfully applied cognitive linguistic theory in his study of the development of certain semantic categories in the Romance languages, and concludes that while ‘cognitive semantics is not the “magic bullet” which will solve all questions on the evolution over time of word meanings... it may throw light on the processes of semantic innovation.’

<sup>332</sup> See for example Milroy (2002), Croft (2000), and McMahon (1994).

<sup>333</sup> Thomason (2001: 91).

spread of citizenship to inhabitants of the Empire, the use of Latin by governors and the army, the rise of Greeks into the equestrian service and the Senate, and the absorption of the writing of Roman history into Greek historiography, and the practice of Roman legal writing.<sup>334</sup> As a result, the great majority of loanwords in Greek in the Post-classical period were from Latin. These were extremely prevalent from then on: indeed, Holton & Manolessou (2010: 559) go as far as to claim that lexical change in Early Medieval Greek consisted mainly of borrowings from Latin. Borrowings from other languages in this period, they note, are very specific and did not spread to everyday language.

However, as I argue in this section, in addition to being a *cause* of linguistic change, language contact is also a *solution*: Greek needed a wider lexicon in order to deal with the need to describe new concepts, related to Christianity and to the Roman Empire. One of the ways it dealt with this was to borrow from other languages, and, because of the historical and political backdrop of this period, the language from which it borrowed the most in the Post-classical period was Latin.

Therefore the following section (§5.2.2) details how the Greek language conveyed cultural concepts related to the Roman Empire. Borrowings from Latin were far-reaching and long-lasting, and have been studied at length, and this section examines how these were used as a method of adaptation to the changing cultural concepts that Greek speakers needed to discuss. Greek also came into contact with other cultures, and of particular importance, due to its size and importance in the Empire, was Egypt. Evidence of borrowing from Egypt is also important due to the nature of our sources from this period: many of these were written on papyri from Egypt, making this province very well represented in terms of linguistic variation. Many Egyptian concepts were described through the use of Latin loanwords. Others, however, were described through borrowings from the Egyptian language, which in the Post-classical period was Coptic, as I briefly discuss in §5.2.3. Much has been written on bilingualism and language contact in the ancient world, but the aim of this section is quite specific: to see how language contact affects, and remedies, the lexical element of a language.

### **5.2.2 Borrowing from Latin**

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<sup>334</sup> In the late second and early third centuries, several of the major practitioners, notably Ulpian, came from the Greek world, cf. Millar (2009: 92)

Borrowing from Latin had a long-lasting effect on the Greek language. To take the following example, the Classical Greek phrase for ‘the door of the house’ is:

ἡ θύρα τῆς οἰκίας.<sup>335</sup>

In SMG, the same phrase is:

ἡ πόρτα του σπιτιού.

Most of this thesis has explored how language-internal developments shaped the Greek lexicon. These two phrases, however, demonstrate how language-internal features cannot wholly be held accountable for the wide-reaching changes that occurred in Greek between the Classical and Modern Period: language-external factors were also at play. Both the noun for ‘door’ and the noun for ‘house’ have been borrowed from Latin. The Greeks had doors and houses, and words for these, long before they borrowed the Latin terms; this section therefore examines the reasons for the apparent switch to a vocabulary heavily influenced by Latin in the Post-classical period.

Eleanor Dickey’s *Latin Loanwords in Ancient Greek: a Lexicon and Analysis* (2023) was published just in time for this thesis to make use of her comprehensive and invaluable ‘Lexicon of Latin loanwords into Greek.’<sup>336</sup> Dickey expresses the hope, in her introduction, that ‘the information collected in the Lexicon will allow further work to be undertaken...on other questions about Latin loanwords that have not yet been asked.’<sup>337</sup> More specifically, she suggests as one area of further research the following question: ‘when the same item (such as a mule, a centurion, or a date) could be represented both by a loanword and by a word of Greek etymology, what factors influenced the choice between them?’<sup>338</sup> This section attempts to answer this question, and examine *why* the Greek language might turn to external lexical items in order to adapt or increase its lexicon, rather than to language internal development, which was the topic of the previous two chapters.

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<sup>335</sup> There appears to have been a semantic differentiation between ἡ οἰκία and ὁ οἶκος from the Classical period: the entry for the terms in J. H. Thayer’s Greek-English lexicon of the New Testament reads ‘in Attic ... usage, οἶκος denotes one’s household establishment, one’s entire property, οἰκία, the dwelling itself; and in prose οἶκος is not used in the sense of οἰκία.’ The borrowing from Latin therefore seems to cover the οἰκία meaning more closely than the οἶκος one.

<sup>336</sup> Previous dictionaries of Latin loanwords in the Greek papyri include Daris (1991) and Cervenka-Ehrenstrasser & Diethart (2000). Dickey’s ‘Lexicon’ takes into account all sorts of evidence, including literature.

<sup>337</sup> Dickey (2023: 4).

<sup>338</sup> Dickey (2023: 653).

There are two main types of loanwords: words that express a new concept that could not already be expressed in the borrowing language (cultural borrowings),<sup>339</sup> and words that do not express a new concept (core borrowings). In the case of the latter, the loanword could, and often did, replace the native word originally used for that concept or restrict the native term's meaning or register.<sup>340</sup> The clearest examples of these are words for objects, animals, or plants that were known before the Roman conquest: for example ὁ βουρδών ‘mule’ for the animal originally called ὁ ἡμίονος, or τὸ κίτριον ‘citron’ for the fruit also called τὸ Μηδικὸν μῆλον.<sup>341</sup> Borrowing of core, or basic vocabulary is one of Thomason's (2001: 70) criteria for ‘intense language contact.’ An immediately surprising feature of the loanwords from Latin into Greek in the papyri of that period is the wide range of semantic categories in which borrowed words belonged: from legal terms to domestic ones, from terms for colours to military words. This is not always acknowledged in the scholarship: in his brief section on Latin loanwords in Greek, Horrocks (2010: 127–128) only mentions military and administrative vocabulary. Similarly Dubuisson (1992: 234) has observed that *‘les emprunts que le grec a fait au latin ... n’ont pas atteint également les différents domaines du lexique ni les divers niveaux de langue: ils concernent avant tout les secteurs militaire et administratif.’* Browning (1983: 40) suggests the same. While it is true that administrative and military loanwords are frequent, they do not even make up half of the loanwords found in, for example, the papyri. Latin loanwords were not confined or even largely concentrated in a few peripheral areas of vocabulary; instead they were found in virtually all semantic areas including basic vocabulary, and were borrowed to replace, or be used in conjunction with, existing Greek core vocabulary.

The difference between cultural and core borrowings, however, is not always clear-cut as certain words that appear to be core borrowings probably started off as cultural borrowings, having been borrowed in a specific semantic context for which there was no earlier Greek word, but then their meanings expanded until they duplicated existing Greek words.<sup>342</sup> Dickey lists as examples βάλτιον, which was originally borrowed from *balteum* ‘sword-belt’ a distinctive item of Roman army gear, but which was eventually generalised to refer to any type of belt, as well as βάκλον ‘stick’, βρέβιον ‘list’, δηλάτωρ ‘accuser’, κέλλα ‘room’, λίγλα ‘spoon’, μεμβράνα ‘parchment’, ὄσπίτιον ‘house’, πόρτα ‘(city) gate’, σουβλίον ‘skewer’, and

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<sup>339</sup> Many of these, Adams (2003: 485) suggests, ‘will have given some varieties of Greek a regional flavour’, that is to say, they provided a sort of *color Latinus* to what was being described.

<sup>340</sup> Dickey (2023: 14).

<sup>341</sup> Dickey (2023: 624).

<sup>342</sup> Dickey (2023: 624).

στάβλον ‘stable.’<sup>343</sup> Moreover, although cultural borrowings are sometimes seen as necessary (in that they are needed to refer to something for which no term exists in the borrowing language) and core borrowings as unnecessary (in that a term already exists), Dickey notes that ‘linguistic borrowing is never a necessary or inevitable consequence of the introduction of new concepts. Speakers of any language can create new words or usages without borrowing foreign words, as Greek speakers did with ὁ ὕπατος for consul, ὁ αὐτοκράτωρ for imperator, and Σεβαστός for Augustus. Even cultural borrowings, therefore, were a choice.’<sup>344</sup> The three examples she supplies are all elite political terms, though, and perhaps adapted at an earlier date than the examples above: i.e., they were not the result of extensive sub-elite contact, but more like deliberate adaptation by a writer such as Polybius, an interpretation of Roman structures at a non-basilectal level.

In this section I investigate why the choice of borrowing a word was made, both in cases where loanwords duplicated and even displaced older Greek vocabulary (‘core borrowings’) and in cases where the loanword was used rather than a Greek formation (‘cultural borrowings’). I do this by examining the words found in Dickey’s ‘Lexicon’, which comprises the third chapter of *Latin Loanwords in Ancient Greek*, and posit reasons why particular words were borrowed. Dickey’s work makes use of modern linguistic work on language contact, with the result that, for the first time in a study of ancient Graeco-Latin language contact, loanwords and codeswitches are not conflated, and a distinction is made between direct borrowings and derivatives (including compounds). This is important, as ‘only the former can tell us what types of words were initially borrowed, but the latter contribute to understanding how Latinate various portions of the Greek vocabulary eventually became.’<sup>345</sup> Dickey counts 820 words in total as being ‘simultaneously ancient, Latin, and loanwords in Greek,’<sup>346</sup> of which 147 are derivatives (therefore a total of 673 are direct loans). Of these, 414 Latin loanwords were directly borrowed up to and including the third century AD, the cut-off time of this investigation. This makes up around 62% of all Latin words demonstrably borrowed into Greek in antiquity. A list of these 414 words, which excludes derivatives and compounds and only includes direct loans (including direct loans with suffix and direct loans with univerbation) is included for reference in a table in the Appendix (Table 13). The list includes loanwords from Latin that were originally borrowings themselves since ‘in studying

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<sup>343</sup> Dickey (2023: 624).

<sup>344</sup> Dickey (2023: 623).

<sup>345</sup> Dickey (2023: 623).

<sup>346</sup> Dickey (2023: 2).

loanwords it is common to attribute borrowings to their immediate source rather than to their ultimate source.<sup>347</sup>

The aim of this thesis is to establish some sort of typology for language change. We have seen in Chapters 3 and 4 that a typology for language-internal change (including the reasons for favouring lexical replacement or morphological adaptation) can be posited, and this section now attempts to evaluate why the language might turn to borrowing (over language-internal strategies). I suggest three main reasons why a word might be borrowed, and describe these as follows: cultural factors, semantic factors, and phonological (and potentially morphological) factors:

#### **a) Cultural factors**

As described above, loanwords could be borrowed to express cultural concepts that were not present in Greece in the Classical and Hellenistic periods. Many of these are specifically Roman concepts (relating to Roman administration, military, geography, everyday life, etc.), for example, ὁ κεντυρίων ('centurion') and Καῖσαρ ('Caesar'). Some also relate more broadly to the Roman Empire, such as Λαδικηνός (or Λαοδικηνός) 'Laodicean' (someone from Laodicea, in the Roman province of Phrygia) and ὁ γαῖσος/τὸ γαῖσον, 'Gallic javelin.'

Cultural factors can also account for the regional variation that is sometimes found in loanword usage, as a number of loanwords appear to have failed to spread beyond a particular province or district. Many of these are unique to certain sites in Egypt, although this is probably because of the vast amount of papyrus evidence. For example, Dickey (2023: 599) notes a number of words unique to Mons Claudianus, an isolated quarry in the Eastern desert of Egypt in which both Greek and Latin speakers co-existed.<sup>348</sup> These include ἀκισκλάριος 'stonemason' (at least 32 attestations), ἀκούάριος 'water-carrier' (at least 17 attestations), and αἰῖγοι 'ill' (at least 5 attestations). Furthermore, she notes that ἀκίσκλος 'adze' is restricted to Mons Claudianus in that meaning, though it once occurs elsewhere in a different sense, and παγανικός 'civilian' occurs only at Mons Claudianus in the second century AD, though from the fifth century AD onwards it has a more widespread distribution.' In addition to the isolated Mons Claudianus, regional loanwords also existed in more connected communities in Egypt, and Dickey (2023: 600) notes some examples of these:

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<sup>347</sup> Dickey (2023: 6, fn 7).

<sup>348</sup> Dickey adds that the Latin found in papyri and inscription sin Mons Claudianus also contained Greek loanwords not found elsewhere.



The Hermopolite nome appears to have been exclusively responsible for the title ἀβρέβις and the military rank ἀστιάριος, while the Arsinoite nome had παλλιόλιον ‘small cloak’. The region of Antinoöpolis and Antaiopolis had προδηληγάτον ‘advance instructions about taxes’, and the Hermonthis region πορταρήσις ‘gate-keeper’. Oxyrhynchus and its surrounding area had Καπετωλιακός ‘Capitoline (of games)’ (compare Καπετώλια ‘Capitoline games’ and Καπετωλιονίκης ‘victorious at the Capitoline games’, which are widely distributed), and perhaps several other terms: κονδουκτόριον ‘board of contractors’ and the titles ἀννούμερος and κουροπερσονάριος.

### **b) Semantic factors**

Many loanwords were integrated into the Greek language for semantic reasons, either because a pre-existing Greek word for a concept changed meaning, so a new word was needed to take its place, or due to the development of a concept that was either more specific, or more generalised, than concepts previously described by the pre-existing Greek vocabulary, and it was felt that a new word was needed to highlight the semantic difference. For example, Greek frequently turned to Latin for words for animals, when the language was perhaps felt to be deficient, e.g. borrowing ὁ δρομεδάριος (‘camel’, from *dromedarius*). Similarly, to bring up the example given at the start of this section, in the Classical period, ἡ θύρα conveyed a relatively wide range of meanings, from the door of a house to the shutters of a window, from the door of a chariot to a gate, and so forth. It is possible therefore that πόρτα was borrowed in order to fill in a semantic lacuna in the language, and to be able to refer more specifically to the door of one’s house. In SMG, both ἡ θύρα and ἡ πόρτα are found. The former, however, is more specialised, and used of a large entrance, for example that of a stadium or church, while the latter is more commonly used as the general word for ‘door’ (e.g. for a house, car, or room). The Greek root also survives in the SMG term for ‘window’ τὸ παράθυρο, which already had a specialised form in the Classical period (ἡ θυρίς, ‘window’).

### **c) Phonological (and morphological) factors**

Setting aside the numerous examples of borrowing to convey an idea or concept for which there was no pre-existing equivalent word in Greek, it is interesting to note that borrowing was sometimes, albeit rarely, used as a method of adaptation: we see borrowing being used to overcome phonological difficulties in pre-existing Greek words, in addition to the language-

internal strategies described in detail in Chapter 3. The often quoted example of a borrowing that occurred around that period, and that completely replaced a pre-existing word, is the word that became SMG σπίτι ‘house’, which was borrowed from Latin *hospitium* and replaced Classical ἡ οἰκία/ὁ οἶκος (see above). This borrowing is first found in Greek in a fourth-century papyrus, *P.Lips.* 1 40.18, in the form τῷ ὀσπιτίῳ (dative singular of τὸ ὀσπίτιον), and it occurs in three other papyri from the sixth and seventh centuries.<sup>349</sup> It is not commented on by any of the Atticists, nor does it occur in the New Testament, suggesting that the fourth century was perhaps the *terminus post quem* of this borrowing in the language. Moreover, there are hundreds of attestations of ἡ οἰκία/ὁ οἶκος in the Roman and Byzantine period papyri, showing that the process of replacement was very gradual, and probably only took place in the later Byzantine period. The reason for the gradual replacement of a seemingly perfectly valid Greek noun with a borrowed form is perhaps phonological, as I suggested in §3.5.2: τὸ ὀσπίτιον, or το σπίτι, begins with a distinctive consonant cluster, whereas ἡ οἰκία/ὁ οἶκος begins with a diphthong <οι>, which by the second century AD had already become identified with the simple vowel /y/. It is possible that, for ease of distinction, words with more distinct sounds were retained to replace words which contained now-easily confusable vowels. There may also have been a functional prod for this change too, as the semantic differentiation between the two inherited Greek forms, the feminine and the masculine, is already visible from the Classical period (the concrete sense of ‘house’ being taken over by ἡ οἰκία, whilst ὁ οἶκος was used in a more general way, to mean ‘household/some sort of dwelling place’). Finally, influence from Christianity was another factor influencing the replacement of ὁ οἶκος. In the New Testament, this noun is frequently used, in addition to referring to a literal dwelling place, to refer to two specific concepts: that of the house of God, i.e., the tabernacle (e.g. Matthew 12:4; Mark 2:26; Luke 6:4) and that of the family of God, i.e., the Christian Church (e.g. 1 Timothy 3:15; 1 Peter 4:17). Therefore it is plausible that, in addition to the phonological reasons outlined above, as Christianity spread, another noun was required in order to distinguish between the Christian οἶκος and a literal ‘house’.

It is also likely that borrowings from Latin were used to replace morphologically no-longer feasible words, of the type described in Chapter 4, but I have not identified any certain examples. The loanwords themselves reflect some of the observations made about Post-classical morphology in Chapter 4 of this thesis. The fourth chapter of Dickey’s book discusses

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<sup>349</sup> The unstressed initial vowel was lost, giving σπίτι in SMG, but it is retained in other Greek dialects, such as Muslim Pontic Greek (see §3.2). See also the note on ὀσπίτιον in Dickey (2023: 321).

spelling and inflection, and we find familiar post-classical suffixes being used to integrate Latin loanwords into Greek: suffixes -ίζω for verbs,<sup>350</sup> -ικός for adjectives,<sup>351</sup> and -ιον, which is by far the most common suffix attached to nouns during borrowing.<sup>352</sup> Dickey's findings about -ιον confirm what was described in Chapter 3 of this thesis; she notes that -ιον is not used in the same way as the other suffixes, which performed specific semantic functions (e.g. -ία forming abstract nouns; -τωρ, -ίτης and -ᾶς forming agent nouns), since its addition to a Latin root 'rarely makes a discernible difference to a word's meaning.'<sup>353</sup> This confirms the hypothesis that, by the Post-classical period, -ιον had been semantically weakened to a (near-)neutral suffix. Compounding and prefixation were also common ways of forming Greek loanwords,<sup>354</sup> as well as borrowing Latin suffixes (such as -άριος and -τωρ).<sup>355</sup>

A possible fourth factor that could be added to the list above is that of register and language prestige, which Dickey highlights as an important factor for borrowing. She writes: 'from one perspective the prestige of the Classical language gave Latinate words an automatically low status; that perspective led to the avoidance of most loanwords in many literary texts. But another kind of prestige favoured words associated with the Romans, who were the acknowledged masters of the Greek world; that form of prestige led to the loanwords being borrowed in the first place.'<sup>356</sup> She concludes that the fact that even core borrowings are found suggests a certain element of linguistic prestige, and some borrowings will have been borrowed to some extent because of perceived prestige.

However, while lexis is a sensitive indicator of social variation and change, it is difficult to prove that speakers of an ancient language deliberately used their choice of lexicon to stylise their identity. Register variation, and the use of a loanword over a native one to show one's group affiliation can be posited with slightly more credibility for modern, spoken languages. For example, Leiwo (2012: 8) notes the SMG example of the word δωρεάν ('for free') from Classical Greek δωρεά ('gift, present'), and the Turkish loanword τζάμπα (< Turkish *caba* 'free, for nothing'), and states that register variation accounts for the difference in use between the two, with the latter belonging to a more colloquial register. Yet even in the case of this

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<sup>350</sup> Dickey (2023: 520).

<sup>351</sup> Dickey (2023: 523).

<sup>352</sup> Dickey (2023: 521): it is used to borrow at least twenty-two loanwords, which represents eight times as many borrowings as any other nominal suffix.

<sup>353</sup> Dickey (2023: 521).

<sup>354</sup> Dickey (2023: 528).

<sup>355</sup> Dickey (2023: 543-556). Suffix borrowing is associated with level 3 'more intense contact' on Thomason's borrowing scale (2001: 70-1).

<sup>356</sup> Dickey (2023: 653).

modern example, the use of borrowings from Turkish is not purely a stylistic choice: the prevalence of Turkish loanwords in Greek is also to some extent geographical, with certain endolects such as Cappadocian showing a much greater degree of language contact with Turkish than, others, such as SMG. A similar critique of ascribing too much weight to prestige hierarchies as an explanation for linguistic developments is voiced by Andersen (1988), who provides in his paper multiple counter-examples against the idea that adoption of linguistic forms is ‘motivated by the higher prestige ascribed to the adopted norms.’<sup>357</sup> He concludes that, ‘in the discussion of adoption ... it was recognized as indisputable that in numerous cases of diffusion, the adoption of other norms is motivated by the innovators’ evaluation of their new norms as more prestigious. **It may be reasonable, where no information is available on prestige hierarchies, instead of using this heavy-handed term, to posit simply an asymmetry in bonding...**and to characterize the attitude of the innovating community as exocentric.’<sup>358</sup>

Therefore, given the relative paucity of evidence for linguistic prestige hierarchies in the Roman period, and in view of Occam’s razor, it is best not to posit register as a major factor in the adoption of loanwords, and we should rather take the three factors listed above as the more economic explanation, while bearing in mind that there is always going to be random, unexplainable stylistic change. The exocentricity of the Greek-speaking world, which Andersen suggests as being the motivating reason for an innovating community to innovate, is another feature worth investigating, since the questions of social differentiation, power, and control in the multilingual Roman Empire had a significant impact on the development of the *koine*. This question is examined in §5.3 below.

Finally, the question of the survival of Latin loanwords into Modern Greek should also be considered. In chapter 8 of her book on Latin loanwords, Dickey (2023: 591, figure 8), includes a pie chart of the ultimate fate of the ancient loanwords: the majority (376) are attested in the Byzantine period but not later, just over a quarter (209) are lost during antiquity and not re-created, and roughly equal numbers are attested in SMG, but not contemporary (75), part of the contemporary vocabulary but not central (81), and a central element of contemporary vocabulary (79). Dickey calculates that ‘overall, descendants of ancient borrowings from Latin make up about 1% of the central vocabulary of modern Greek.’<sup>359</sup> These include many core vocabulary items such as ‘house’ (σπίτι) and ‘soap’ (σάπων). However, using survival into the

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<sup>357</sup> Andersen (1988: 41).

<sup>358</sup> Andersen (1988: 75), emphasis my own.

<sup>359</sup> Dickey (2023: 594).

modern language to explain the prevalence of a loanword comes with two major limitations: firstly, SMG contains a significant number of Latin-derived words that entered the language after the end of antiquity. These are loanwords that appear to have survived from ancient times, but are in reality revivals of words, and are often borrowed from Medieval Latin, Italian or other Romance languages, rather than survivals. This difference is reflected in the table in the Appendix. Secondly, as Dickey points out in an earlier work, ‘there is no evidence that etymology affects survival rates or that a word of foreign origin is more likely to be retained than a native word; hence there is no reason to assume that every loanword that became fully assimilated into ancient Greek has survived into modern Greek. So one cannot assume that lack of attestation in modern Greek necessarily means lack of integration into ancient Greek.’<sup>360</sup> Moreover, the standardisation of Greek meant that loanwords were regularly rejected in the *katharevousa*, which in turn affected the natural development of the *dimotiki*: the relationship between SMG and the ancient language is not straightforward. Nevertheless, there are still dialectal forms of Greek, and certain Latin loanwords borrowed in antiquity survive in modern dialects other than SMG. Table 13 in the Appendix contains information about whether a particular loanword survived into SMG or in modern dialects of Greek: of the 414 Latin words borrowed into Greek, 91 are found in SMG; 27 are found in dialectal forms of SMG. As mentioned above, in a couple of instances, a loanword appears to have survived, but instead was either borrowed later from a Romance language (11 examples, principally from Italian), or revived in modern times (15 examples, which are used for example for scientific terms).

The non-linguistic issues associated with the Roman Empire which caused the language to change were therefore principally the need to convey cultural Roman concepts, regional variation, and semantic change. Borrowing could but did not necessarily need to be employed to overcome these issues. Language-internal strategies were always available, whether through derivation or semantic change, but as I began to show in Chapter 3, and further demonstrated in this section, borrowing was occasionally chosen instead.

### 5.2.3 Borrowing in Egypt

The influence of the Greek language on Egyptian, and more particularly on Coptic, the latest stage of the Egyptian language, which is attested in the papyri from the late third century AD,

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<sup>360</sup> Dickey (2012a: 63–64).

has been studied at length.<sup>361</sup> This is unsurprising: Coptic was written in the Greek alphabet, and contained a large number of Greek loanwords.<sup>362</sup> Strikingly, these include numerals (ἕν [neuter form of εἶς], δώδεκα), negations (οὔτε ... οὔτε), conjunctions (ἀλλά, γάρ, μὲν, δέ, οὐδ, ὁμῶς) and verbs (γίγνομαι, εἰμί). Very few languages borrow lexemes of almost all semantic and grammatical categories to the extent found in Coptic, and this attests how far Greek influence infiltrated into the Coptic language.<sup>363</sup> Lexical borrowing the other way round, that is, from Coptic into Greek, is less prevalent in the papyrus texts, and has been much less studied. However, evidence from the vast numbers of papyri written in Greek by Egyptians indicates that there was at least some degree of bilingualism (at the start, those who wrote Coptic could also write Greek) and, with this, potential language interference among the Egyptians. As Fournet (2011: 421) puts it, if the situation with language contact between Greek and Latin was ‘diglossia with limited or imperfect bilingualism,’ with Coptic it was ‘diglossia with real bilingualism’.

Torallas Tovar, who has worked extensively on lexical interference from Coptic into Greek, has found that, in contrast to the large number of Greek words in Coptic, very few (approximately 140) Egyptian words appear to have been borrowed into Greek.<sup>364</sup> In her 2004 paper, she includes a list of all Greek words that are mentioned in the scholarship as having been borrowed from Egyptian, in addition to any words she has found in the papyri that she considers to have been borrowed from Egyptian. All of the words in this list are nouns. This implies a small degree of language contact, since nouns are more independent from syntax than verbs or adverbs (by contrast, Coptic inherited words in all word classes). All these borrowings only concerned the Egyptian variety of Greek, but they are nevertheless worth examining as Egypt was one of the most important parts of the Roman Empire, and most of our evidence for early language change comes from the papyri from Egypt. The Egyptian loanwords that enter Greek mostly refer to concepts and realities that are new or location-specific. For example, ἡ ἀλάβης (a type of Nile fish); τὸ ἄρον (Egyptian arum); ὁ φενταῖος (priest of Ptah). We also find many hapaxes, such as ὁ ἄτωρ (‘ash’) in the list, which suggests that these are perhaps simply code-switches rather than true borrowings. Finally, we find that some Egyptian terms did sometimes come to replace Greek terms, such as a term for a vessel in which to cool wine

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<sup>361</sup> See e.g. the essays in Dils *et al.* (2017).

<sup>362</sup> Förster (2002) provides a list of the Greek words in Coptic documents. The long-term project of the compilation of a *Database and Dictionary of Greek Loanwords in Coptic* is due to be completed in 2024: <https://www.geschkult.fu-berlin.de/en/e/ddglc/index.html>.

<sup>363</sup> See Ross (2003).

<sup>364</sup> Torallas Tovar (2004: 178–198).

or water, ἡ βαύκαλις / τὸ βαυκάλιον, from Egyptian *b3kt* (vase for olive oil). In the Hellenistic period, this borrowing came to replace, not only in the papyri but also in literary and hagiographic texts, the more general Greek ὁ κώθων, which could refer to a range of liquid containers anything from goblets to barrels.<sup>365</sup> Nevertheless, Torallas Tovar has shown that, overall, Coptic borrowings into Greek, unlike Greek borrowings into Coptic, remained very specialised and did not have real effect on the development of the Greek lexicon. Greek in Egypt was, on the whole, quite resistant to any language contact, perhaps due to the lasting pervasiveness of the Greek language in the official fields of administration and law, and the tendency to consign the use of Coptic, at least up to the mid-sixth century, to personal correspondence.<sup>366</sup> Moreover, Latin borrowings were often used to refer to aspects of provincial administration in Egypt: we find, for example ὁ παγάρχης ('pagarch'), ὁ ριπάρσιος ('police official in Egypt'), and ἡ ἐξακτορία ('office of a tax-collector').

After that time, the linguistic situation in Egypt was complicated by the Arab conquest. With the end of Byzantine domination, Greek lost its exclusive status for legal documents, and, as a result, the use of Coptic increased at the expense of Greek, which nevertheless continued in use until the eighth century (after which Arabic took over).<sup>367</sup> This is the start of the underexamined period that Chantraine calls the 'ring' uniting Classical and SMG,<sup>368</sup> but it appears that, whatever the factors motivating linguistic change at the time, contact with languages other than Latin was not a significant one. This is because early Arab rule tended to be practical and keen to avoid any interruption in the running of the administration, and so Greek and Coptic were kept in local administration. Arabic words found in the papyri consist almost exclusively of Arabic-specific titles: for example ὁ ἀμιρᾶς ('emir/official') of which the papyrological attestation all date from the seventh and eighth centuries) and ὁ μωαγαρίτης

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<sup>365</sup> Cf. Leroy-Molinghen (1965: 214): 'ce mot [*sic.* κώθων] disparaît peu à peu dans le grec tardif tandis que la famille βαύκαλις, βαυκάλιον prend son essor.' She shows in this paper that from the fifth century onwards, we find that the *-ων*-suffixed form τὸ κωθώνιον replaces ὁ κώθων, and itself later gets gradually replaced by Egyptian loan ἡ βαύκαλις / τὸ βαυκάλιον, which conveyed wider semantic meanings. It quickly leaves the Egyptian context, and, under the form τὸ βαυκάλιον, becomes widespread from the third century AD. It appears in Latin in the fourth/fifth century AD, and passes into the Romance languages (e.g. Italian *boccale*). It is via the Italian that SMG adopts the form το μπουκάλι ('bottle').

<sup>366</sup> See Fournet (2020) for an overview of the role of Coptic vs Greek in Late Antique Egypt. To recall the influence of Christianity on language, discussed above, it is worth noting that in this work Fournet demonstrates that the role of monasticism in the growth of the use of Coptic was of paramount importance, since it prompted the softening of linguistic constraints on such documents outside the monastic sphere.

<sup>367</sup> Fournet (2011: 441). Sijpesteijn (2013: 32) adds that there was a geographical element to the spread of the different languages in Egypt: 'while Coptic continued to be the main language for private use, Greek had made more headway in the oasis than in Upper Egypt. Likewise, Arabic became more quickly the most important language used, by Egyptian Christians and even by exclusively Coptic speakers, than further south.'

<sup>368</sup> Chantraine (1968: v-viii), see §1.1.3.

(literally ‘emigrant’, a type of soldier in the Arab army), also found in papyri from the seventh and eighth centuries.

It is noteworthy that a significant number of Latin loanwords are attested for the first time in the Greek papyrological sources of the early Byzantine period, notably in the contexts of artisanry, products, textiles and clothes. This ties in with the type of Greek loanwords that we find in the Arabic papyri of that period: most are words that refer to clothing, agriculture and farming. For example, we find an increasing prevalence of the noun τὸ ὄρριον (‘state granary’, frequently found in the plural, τὰ ὄρρια), from Latin *horreum*, from the fourth century onwards. The frequency of attestations of this noun is shown in Table 12 below:<sup>369</sup>

Century (AD)	Number of attestations
4 <sup>th</sup>	5
4-7 <sup>th</sup>	2
5 <sup>th</sup>	8
5 <sup>th</sup> -6 <sup>th</sup>	4
6 <sup>th</sup>	13
6 <sup>th</sup> -7 <sup>th</sup>	11
7 <sup>th</sup>	4
7 <sup>th</sup> -8 <sup>th</sup>	12
8 <sup>th</sup>	35

Table 12: Number of attestations of ὄρριον (‘state granary’) by century

It is interesting that this Latin borrowing should first appear in the papyri at a time when Latin was becoming obsolete even though they are never found in the period of Roman rule in Egypt, where we find a huge amount of borrowing in the Greek and Latin documents. However, this is probably due to the cultural impact of Latin, and should not be taken as evidence for bilingualism in this period. Existence of loanwords from one language to another, although suggestive of some degree of bilingualism, does not naturally suggest that bilingualism existed. This is an insight noted by Ross: ‘I prefer to attribute lexical borrowing to culture contact rather than to language contact, since lexical borrowing does occur without bilingualism and vice

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<sup>369</sup> Data taken from

[https://www.trismegistos.org/words/detail.php?lemma=%E1%BD%85%CF%81%CF%81%CE%B9%CE%BF%CE%BD&morph\\_type=noun](https://www.trismegistos.org/words/detail.php?lemma=%E1%BD%85%CF%81%CF%81%CE%B9%CE%BF%CE%BD&morph_type=noun). I have excluded the ten readings where the word is completely reconstructed, but kept partly reconstructed forms, as well orthographical variants, meaning that my total number of attestations is 94. The reason for the increase in frequency of this noun is that it appears in administrative documents, which become particularly numerous after the Arab conquest.



versa.<sup>370</sup> Unexpected Latin borrowings might also form part of more general trend in Early Byzantine Egypt towards a shift, or rethinking in the language. This was a time marked by the introduction of Arabic and the increase in importance and use of Coptic and its replacement of Greek, in administrative documents. It is under this setting of linguistic flux that Latin borrowings, which no doubt had been present in the spoken languages many centuries before, were allowed to surface into the written language. It is therefore possible that many of these Latin borrowings which appear to have first permeated the Greek language after Latin had become a ‘complete anachronism’<sup>371</sup> in the East had in fact entered basilectal Greek at an earlier date, and were only admitted to written Greek at a later period. This is almost certainly the case with the example mentioned at the start of §5.2, ἡ πόρτα, from Latin *porta*, which replaces Classical ἡ θύρα, and is first attested in a seventh century papyrus.

By the time of the Abbasids, there was no longer a need to use Greek since measures were taken in favour of the use of Arabic in government offices.<sup>372</sup> Nevertheless, in the period before this there was very little Graeco-Arabic language contact: cultural diffusion does not always correlate with any degree of linguistic diffusion.<sup>373</sup> Greek-Arabic language contact therefore falls into Thomason’s least intense language contact situations, as we find only lexical borrowing, of non-basic, highly specialised items.<sup>374</sup> These did not therefore have a lasting or significant effect on the Greek language, and there was no shift-induced interference, in contrast with Latin, where basic vocabulary is borrowed.<sup>375</sup>

### 5.3 The expansion of the *koine*

In Chapter 2, I described the historical context of the spread of the *koine* in the context of its relationship with the Atticist movement and linguistic prescriptivism in the first couple of centuries AD. However, the spread of the *koine* in and of itself was also a cause of lexical variation and change. In this final section of this chapter, I argue that the rapid geographical

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<sup>370</sup> Ross (2003: 193).

<sup>371</sup> Stroumsa (2014: 152).

<sup>372</sup> Stroumsa (2014: 151).

<sup>373</sup> Thomason (2001: 126).

<sup>374</sup> This is similar to the situation around the same period in the Levant and parts of Anatolia, where there is very little evidence of any Graeco-Persian language contact: borrowings from Persian also mainly concern features of Persian life and titles, and the few loanwords from the language of the Proto-Bulgars are all titles or names of offices, such as βoῖλᾱς, βoάoc, χαγάvoc, which are all administrative titles, see Browning (1983: 68). However, centuries later, many Turkish loanwords were to enter the Greek language under the Ottoman Empire.

<sup>375</sup> Borrowing of basic vocabulary implies a high level of contact (Thomason (2001: 70)).

and functional expansion of the *koine* was perhaps the most important cause for lexical change and variation in the Greek of the Post-classical period.

### 5.3.1 Geographical expansion

Throughout the Hellenistic and Roman periods, the use of the *koine* expanded geographically, as it spread rapidly throughout the Macedonian Empire. When a language undergoes such rapid geographical expansion, there is likely to be both change and variation, as it is learned and transmitted differently across the empire. A key concept in understanding how lexical features develop differently within different communities is that of open and closed communities. In a 1988 paper, Andersen investigates how and why speech develops differently in open and closed communities. These have also been called ‘central’ and ‘peripheral’ parts of a speech community. Andersen (1988: 74) provides the following definition for the labels ‘open’ and ‘closed’:

These are purely empirical, descriptive notions, and they correlate with the density and orientation of networks of communication, peripheral dialects being characterized by a lower density and more clearly defined orientation of lines of inter-community communication than central dialects. To focus on this functional difference between dialects and to avoid the purely spatial reading of “central” and “peripheral” it is perhaps preferable to speak of relatively “open” and “closed” dialects.

Speech in these two types of communities develops differently in all aspects of the language. For example, in the morphology of a language, he finds that ‘the greater potential for variability of usage in open communities favors a more active leveling of irregularities in these, and the lesser variability a more faithful transmission of morphological irregularity in closed communities.’<sup>376</sup> As for phonology, Andersen (1988: 61) notes that ‘deductive innovations have a completely parallel effect in the elimination of unmotivated pronunciation rules which typically follows on the heels of a phonological reinterpretation.’ This is because ‘in open communities, where there is greater variability of usage, the amount of fine-grained phonetic detail that can be successfully codified and established as traditional is perhaps limited, and the

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<sup>376</sup> Andersen (1988: 61).

diversity of systems and/or norms in contact makes the likelihood of abductive reinterpretation greater than in less open communities.’

Therefore while open speech communities provide the ideal context for change, adaptation, and indeed borrowing, closed speech communities ‘provide the ideal context not only for the faithful transmission of elaborate norms of usage, but for the gradual elaboration of such norms.’<sup>377</sup> Borrowing as a linguistic phenomenon whose development is affected by the type of community (open, closed) using the language is specifically singled out by Andersen (1988: 74), who writes that ‘these terms come into play in discussions of all types of changes, contact changes as well as internally motivated changes. Specifically in speaking of contact changes, these descriptive terms need to be supplemented with terms that characterize the attitudes communities have towards their norms, the “forces” which were the focus of interest for de Saussure, for it is evidently such attitudes, and not the actual amount of interdialectal communication, which determine the extent to which contact with other dialects have a bearing on the development of a community dialect. To describe these attitudes I have suggested terms ‘endocentric’ and ‘exocentric’.’

The terms ‘endocentric’ and ‘exocentric’ are crucial for understanding lexical change, and should be used alongside the notion of open and closed dialect communities: for example, ‘one can expect exocentric closed dialects to accept diffused innovations just like exocentric open dialects, but at a rate which is slower in proportion to the lower density of their interdialectal communicative networks.’<sup>378</sup> In the vast and expanding Greek-speaking world of the Post-classical period, there would have been endo- and exocentric communities, both open and closed, which handled lexical change in different ways. Endocentric communities are best represented by the writers of the Second Sophistic. Many of the changes described in this thesis, however, were brought about by the innovating exocentric communities: this is why features such as phonological simplification and regularisation of synchronically anomalous paradigms are first attested in sources like the papyri found in Egypt. It is because of the co-existence of

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<sup>377</sup> Andersen (1988: 73). Further categorisation is made by Ross (2003: 193), who agrees with Andersen that ‘if a community is *closed*, its members may complicate their lect, resulting in phonological compactness, morphological opacity, and suppletion – basically, whatever makes the language harder to learn and understand.’ However, Ross distinguishes between different types of open communities: ‘if a community is *open, tightknit* and *polylectal*, lexical calquing and metatypy may occur, restructuring the primary lect’s semantic organisation and at least part of its syntax (starting at the level of the clause) on the model of the secondary lect...if a community is *open, looseknit* and *polylectal*, speakers may shift from the primary to the secondary lect, leaving either no trace or reshaping the phonology of the secondary lect on the model of the primary one... if a community is *open, looseknit* and *monolectal*, its members may adopt the lingua-franca form of their lect, resulting in simplification and regularity.’

<sup>378</sup> Andersen (1988: 74).

these two types of communities that we find linguistic variation: for example, in the Post-classical period there are two words to refer to the Roman emperor: Greek coinage *αὐτοκράτωρ*,<sup>379</sup> attested in authors such as Flavius Josephus and Plutarch,<sup>380</sup> and Latin borrowing *ἰμπεράτωρ*, found mainly on inscriptions (e.g. Sherk 1969: no. 21.11 (first century BC); *IG5* 1.1454.3 (first century BC); Faraklas 1968 (first century BC); *IG12* 1.48.6 (first century BC); *IG5* 1.380.4 (second century AD)).<sup>381</sup> While *αὐτοκράτωρ* seems from our sources to be the more commonly used term, and is widely attested soon after the Battle of Actium, the use of *ἰμπεράτωρ* appears much more limited. I argue that the former was principally used by endocentric communities, while the latter was coined by certain exocentric communities, from which we have fewer surviving written sources, hence the apparent paucity of the use of *ἰμπεράτωρ*.

The authors of our Post-classical sources can conceivably be divided into two groups: the endocentric writers of the Second Sophistic, represented by literary authors such as Lucian and by the Atticists, and the exocentric others across the Greek-speaking world, such as the authors of the papyri, and potentially of the New Testament and the *Colloquia of the Hermeneumata Pseudodositheana*. Needless to say, the latter are far from forming a cohesive group, and the variation between them would have been immense. Nevertheless, they are far less well represented in our written sources, hence the tendency to lump the latter group of texts together, giving them the collective label of texts representing ‘everyday language’.

So while the Greek language was taken up by populations throughout the Empire, who added their own loanwords and phonological differences to the language,<sup>382</sup> the language of the Greek elite also changed, as they negotiated a new identity under the Roman Empire. This was a major factor in the rise of the Atticist movement described in Chapter 2: under their new Roman rulers, the Greek elite attempted a return to a restricted dialect, their own interpretation of the Attic dialect. This, as Chapter 2 has shown, did not prove successful in the long term,

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<sup>379</sup> As Bortone (2009: 79) notes, ‘the artificial creation of new words from native roots is very common and often successful. A language-engineering programme of this kind has been effected on a vast scale in Israeli Modern Hebrew, and the substitution of borrowed elements by native ones, often designed ad hoc, has been carried out in many languages, such as Swedish, Hebrew, Tamil, Croatian, French, Icelandic, Welsh, German and Lithuanian.’

<sup>380</sup> As well as the Hellenistic author Polybius (e.g. *Histories* 3.87.8.3; 5.46.6.2 *et passim*).

<sup>381</sup> Dickey (2023: 148).

<sup>382</sup> For instance in Egypt, where Coptic phonology had an impact on the phonology of the Greek spoken there: Horrocks (2010: 112-113) lists the types of phonological interference from Coptic to Greek, which include the graphic interchange of voiced plosives with their voiceless counterparts (e.g. *δι* for *τι*) and of voiceless aspirates with their unaspirated counterparts. To this list, Dahlgren (2016: 90), who proposes that the impact of Coptic on the phonology of L2 Greek usage in Egypt was so great that Egyptian Greek should be defined as an independent language variety, adds the tendency for consonant-to-vowel coarticulatory effects and the transfer of the Egyptian stress system to Greek.

and the sources show that this was not a realistic strategy for most writers or speakers. Nevertheless, this restricted dialect, to be contrasted with the non-restrictive *koine*, is remarkably well represented, to a level comparable to the *koine* sources, simply because of the nature of the authorship of ancient texts.

### 5.3.2 Functional expansion

In addition to geographical expansion, the functional expansion of the language was also a significant cause for variation. This is very much linked with the geographical expansion of the *koine*: as Greek spread across the Empire, it was used for an increasing range of different purposes, a much greater range than the localised dialects of the Classical period. As a result, we find linguistic variation: for instance, there would have been a linguistic difference between the language used by Polybius explaining Roman concepts to an (endocentric) native Greek readership and that of an average Greek speaker, for example a soldier of any heritage (Macedonian, Italian, Greek, etc.), trying to communicate with the (exocentric) Romans.

As a result of this functional expansion, new words were required, and these were coined through the processes described above, notably morphological derivation and borrowing. The expansion of Greek in the Post-classical period and its transformation into a ‘culture language’ (again, in contrast to the localised dialects of the Classical period) has been noted by scholars: Morpurgo Davies (1968: 25), for example, notes that ‘in the course of the process through which Greek becomes “une langue de culture” one notices more and more the emergence of a few suffixes which allow the unlimited formation of new words required by recent technology and more developed thought.’ Therefore functional expansion, due to the rapid spread of the *koine*, was a key factor influencing many of the changes described throughout this thesis: for example the emergence of new preverbs and suffixes, and the increase in the use of pre-existing suffixes such as *-iov* were caused in a large part by the expansion of technical and bureaucratic Greek, in addition being caused by the need to lengthen words (Chapter 3) and the need for morphological regularisation (Chapter 4).

Moreover, as a result of the functional spread of Greek, words changed in sense, as well as in form. §5.1 outlined how the spread of Christianity and the use of the Greek language as a vessel for its transmission was a key factor of semantic change. Christianity however, was not the only factor causing semantic change. As Mackridge (1990: 39–40) points out, ‘one of the failings of the histories of the Greek language from ancient to modern times has been their

concentration on changes in or the preservation of formal structures – phonetics and morphology – to the exclusion of semantic change.’ This is a lacuna which cannot be fully addressed in the scope of this thesis, but which must be noted, as it is invariably linked to the study of lexical change. This final section therefore gives some very brief examples of semantic change in the Post-classical period, taken from the Atticist lexicographers, who are often more concerned with semantic change than lexical change. In many of the glosses, the key concept being conveyed is ‘what does X mean?’ rather than ‘how does one say X in Attic/*koine*?’ For example, we find the following semasiological variables, which relate to a semantic expansion of lexemes found both in Attic and in the *koine*, in Moeris:

(112) χρήματα καὶ τὰ πράγματα καὶ τὰ ἀργύρια λέγουσιν· μόνως δὲ τὰ πράγματα χρήματα Ἀττικοί. [Moeris ξ24]

They [i.e. *koine* Greek speaker] say χρήματα for both things/matters and for money; but Attic speakers only [say] χρήματα for things/matters.<sup>383</sup>

(113) ἄρτι οἱ μὲν Ἀττικοί τὸ πρὸ ὀλίγου· οἱ δὲ Ἑλληνες καὶ ἐπὶ τοῦ νῦν λέγουσιν. [Moeris α136]

On the one hand Attic speakers [use] ἄρτι [to mean] very recently; on the other hand Greek speakers also use it to mean now.

Sometimes the semantic difference is not one of expansion, but one of a semantic shift, as in the following examples:

(114) ἄλμην τὸν ἰχθύων ζωμόν Ἀττικοί· οἱ δὲ Ἑλληνες ἄλμην τὸ ἀλμυρὸν ὕδωρ. ζωμόν δὲ ὥσπερ τῶν κρεῶν, οὕτω καὶ τῶν ἰχθύων κοινῶς λέγουσιν. [Moeris α137]

Attic speakers call the broth/sauce of fish ἄλμη. *Koine* speakers call salt-water ἄλμη. In the *koine* they call broth, both of meat and of fish, ζωμός.<sup>384</sup>

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<sup>383</sup> The noun most widely used to mean ‘money’ was τὸ ἀργύριον (it is the word found in Lysias, Demosthenes and Old Comedy). However, it is not the case that the use of χρήματα to mean money is a feature of late Greek (it is found in Plato), even though it is clear from this gloss that it had spread into the *koine*. It is found with this meaning in Hesiod (*Op.* 686), and we know from Herodotus (3.38) that this noun was used even in the singular to mean ‘money’ in the Ionic dialect. Interestingly, in SMG, χρήματα is only used to mean money, and not ‘things/matters’, as the latter meaning disappeared in late antiquity, which shows how semantic change is in a constant position of flux throughout the history of a language.

<sup>384</sup> In SMG, ἄλμη/ἄρμη refers to the salt water to preserve feta cheese in, while ζωμός is meat broth.

(115) ἀπάτη ἢ πλάνη παρ' Ἀττικοῖς· ἀπάτη ἢ τέρψις παρ' Ἑλλησιν. [Moeris α132]  
ἀπάτη means a trick/deceit amongst Attic speakers; ἀπάτη means pastime/enjoyment among Greek speakers.

(116) ἀγαθοῦ δαίμονος πόμα Ἀττικοί· τὴν τελευταίαν πόσιν Ἑλληνας. [Moeris α142]  
Attic speakers [call] πόμα [the drink dedicated to] the Good Divinity; Greek speakers [call πόμα] the last drink.

(1) ἀφηλικεστέραν τὴν πρεσβυτέραν Ἀττικοί· τὴν νεωτέραν Ἑλληνας. [Moeris α153]  
Attic speakers [call] the older woman ἀφηλικεστέρα; Greek speakers the younger woman [ἀφηλικεστέρα].<sup>385</sup>

Semantic change occurs in all languages, and the semantic changes that occurred in Post-classical Greek are particularly well illustrated by the lexicographers, who are often more interested in the change in the meanings of words than in the change of words themselves. While some of these changes can be argued to have been conditioned by Christianity, many of them do not seem to have a unifying logical explanation, but are simply the result of the regular development of the language. The semantic change of old forms to convey new ideas, such as the ones conditioned by Christianity (§5.1) is prevalent throughout SMG too, and Bortone (2009: 80) supplies us with some examples:

For modern concepts, an ancient word has often been revived, given a novel semantic nuance and a new lease on life, e.g. ὑπάλληλος subordinate → employee; ὑπουργός assistant → minister; βουλή council → parliament; κράτος sovereignty → state. Other words have been made up from Ancient Greek roots, often in imitation of the western European originals, classic examples being French *réaliser* becoming πραγματοποιῶ, German *Weltanschauung* becoming κοσμοθεωρία, and English skyscraper becoming οὐρανοξύστης.

The examples in this section illustrate how different the analysis of semantic change is from the study of phonological or morphological change. Phonology and morphology deal with a

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<sup>385</sup> Cf. also Phrynichus *Ecloga* 56. Similarly, Moeris μ15: μειράκια τοὺς ἄρρενας Ἀττικοί· μείρακας τὰς θηλείας Ἑλληνας. [Attic speakers say μειράκια (dim. of μεῖραξ) for (young) males, Greek speakers say μείρακας for young women].

finite number of basic units (phonemes, morphemes), whereas semantic change encompasses an infinite number of word and meanings. As Dworkin (2010: 585) points out, unlike phonological and morphological changes, wherein a phoneme or morpheme is usually replaced by another, ‘the acquisition by a word of a new meaning often (perhaps usually) does not entail the (immediate) loss of its earlier meaning(s). Strictly speaking, words do not acquire new meanings; speakers simply end up using them in different ways.’

#### 5.4 Summary

Chapters 2, 3 and 4 identified a number of reasons why the Greek language needed to change. These include language-internal issues, such as morphological and phonological restructuring, and language-external reasons, such as koineization, the loss of the different dialects, and the need to create one unified language, which could convey all the different necessary meanings. To these language-external reasons, this chapter has added three major cultural factors – the rise of Christianity; the Roman Empire; and the rapid geographical, diastratic and functional spread of the *koine* – which elicits changes in the lexicon. One way in which the Greek language dealt with these factors for change is through language-internal strategies, such as semantic change. Another was through language-external strategies, notably borrowing.

An important factor, cross-linguistically, for semantic change, is metaphor. This was exemplified in §5.1: with the advent of Christianity came the need for a new metaphorical matrix, and a semantic reshuffling of pre-existing Greek words, complemented by lexical borrowing, enabled new concepts to be expressed. The language of Christianity was able to influence the wider Greek language as a whole, through the influence of the religion and its texts: for early Christian writers, as Minets (2021: 7) points out, ‘the bible was the first thing they turned to in order to satisfy their curiosity about many subjects, including language(s).’ A series of case-studies showed that the influence of Christianity meant that a small but not insignificant section of Greek lexicon changed, either formally or semantically, with long-lasting effects. The importance of the Bible and the influence of early Christian writers in the period under investigation in this thesis means that Christian-specific lexemes did to some extent infiltrate the language. The significance of Christianity as a factor of change is noteworthy, but not extensive: many ‘Christian’ lexemes, far from influencing the wider language, remained in a specifically religious register. Moreover, many of the ‘Christian’



lexemes were in fact first coined, in a particular semantic sense, by Jewish writers, and then were easily adopted by Christian writers.

In §5.2 I looked at how the Greek language adapted to the need to create a new lexicon and metaphorical system to talk about the structures of the Roman empire, its provinces and its army. This section looked at language contact and borrowing from a slightly different angle than has previously been done in the scholarship. Rather than looking at the borrowed words themselves, which is the approach in the most recent work of Dickey (2023) I decided to start from the cultural and historical setting that caused a lot of these borrowings, and to look at why it was that the Greek language would sometimes use borrowing and at other times would simply stick with language-internal factors. Some languages are resistant to borrowing even if there is contact: the South Pacific nation of Vanuatu, for example, is home to 138 languages, all with distinct lexicons and little lexical borrowing. It has been suggested that this is due to a sort of egalitarian multilingualism in Polynesia, whereby no language has more prestige than another.<sup>386</sup> This was not the case for Greek, which used borrowing as an adaptation technique to deal with the phonological, morphological and semantic factors which caused the language to need to change. In this section I also argued against language prestige as the main factor affecting borrowing: while identity and prestige can be important factors in language, as in all areas of human cultural production, they do not form a complete explanation for linguistic change. Language contact, I argue, was motivated first and foremost by linguistic adaptation, whereby Greek needed words for specific concepts, and therefore used borrowings as one method of conveying them.

Whether borrowings were or were not used was in part motivated by the type of community needing to talk about a particular concept. As I argued in §5.3, a crucial factor for linguistic variation is whether a community is open or closed, and endocentric or exocentric. The co-existence of these different types of communities, and of the different linguistic forms that they coin and/or select, in turn leads to an eventual selection of forms, and linguistic change. In this final section, I argued that the rapid geographical and functional spread of the *koine*, and, consequently, the emergence of different language communities in which change was effected in different ways, was a crucial factor for linguistic variation and change. Moreover, this provides an additional explanation for many of the features of lexical change described throughout this thesis, notably the rise of certain preverbs, suffixes, and borrowing.

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<sup>386</sup> See François (2012). Cf. Kulick (1992), who finds that, in Papua New Guinea, linguistic diversity is fostered because it is viewed as a salient marker of group identity.

The spread of the *koine* was also a crucial factor for semantic change. While the scope of this thesis, which is focussed on the lexicon, does not allow for deeper examination of semantic change, this is a related and very important topic, which would add a great deal to the understanding of why the lexicon might change. It has already been successfully demonstrated by Traugott & Dasher (2009: 1) that ‘despite century-old taxonomies that suggest that meaning changes are bidirectional, e.g. generalisation and narrowing, metaphor and metonymy, when we trace the histories of lexemes cross-linguistically we in fact repeatedly find evidence for unidirectional changes.’ There are, they show, predictable paths for semantic change across different conceptual structures and domains of language function. While there is no space to do so here, it would be worthwhile to track the paths of semantic change in the Greek of the Post-classical period.

## Chapter 6. Summary and implications for future research

This thesis has examined both extralinguistic factors and internal structural causes for lexical change in the Post-classical period. Throughout, I have attempted to answer the following research question: how can we describe and explain lexical variation and change in the Post-classical period? The factors described throughout the thesis cannot explain all lexical changes in Greek. I do not doubt, that, for example, semiotic systems involving metaphors would also have shifted, and other features such as synecdoche would certainly have resulted in some lexical shifts. Nevertheless, each chapter has contributed an answer to the question of how Greek adapted to its changing linguistic and non-linguistic environment. In this concluding chapter, I first summarise the findings of each chapter (§6.1). I then outline what this thesis has added to the scholarship on language change and variation in the Greek of the Post-classical period, and on lexical change and variation in general, and discuss the implications of these findings and suggested avenues for future research on the topic (§6.2).

### 6.1 Summary

In Chapter 1, I described the reasons for such a study, and placed it into the larger context of studies on Greek linguistics. I outlined the importance of the time-period, an important time in the history of Greek which set the language up for development into SMG, and in which the first movement of language purification took place. I also argued for the importance of studying the lexicon, an under-explored topic in linguistics, and postulated that by focussing on the lexicon, we might gain an understanding of the changes of that period through a different lens, expand our knowledge of Post-classical Greek, and potentially reach different or innovative conclusions.

In Chapter 2, I explained and evaluated the linguistic background of the Post-classical period, during which *koine* Greek, the most direct ancestor of Modern Greek, was established. In this chapter, I also evaluated the impact of a series of prescriptive movements on the language. Atticism, and the texts prescribing an Atticising prose, while not having any significant *linguistic* impact, had a long-lasting effect on speakers' *perception* of the language. I examined the evidence of the lexica for the different linguistic forms of Greek in the Second Sophistic and provided a detailed definition of the *koine* and of Atticism. The works of the lexicographers make it apparent that just because there was a common dialect, the *koine*, speakers of Greek did not necessarily speak in the same way. Variation was due principally to

influence from within the language, notably the dichotomy between archaising prescriptivism and the development of an ‘international’ *koine*.

Chapters 3 and 4 closely examined language-internal factors for lexical change. In Chapter 3, I examined how problems caused by phonological changes were circumvented through lexical replacement. Phonological change was prompted by phonetic weak points in the language (e.g. the overloaded front vowel system of Attic). This, as I showed, led to lexical replacement and morphological adaptation. The most significant finding of Chapter 3 was that word lengths increased between the Classical and Post-classical periods, both as a result of regular language evolution (the same phenomenon, of a diachronic increase in word length in single language, has been found to hold true for both Chinese and Arabic) and as a result of the decreasing number of phonemes, which meant that the length of words needed to increase. The latter has parallels in other linguistic processes, notably Menzerath’s Law. Mackridge (1987: 309) observes that ‘monosyllables are few in SMG, the most common word length being two or three syllables. Words of up to eight or nine syllables are not infrequent.’ Chapter 3 provided an explanation for this feature of the lexicon of SMG, and has added to the evidence for a general cross-linguistic increase of word length. In doing so, it has disputed the claims of scholars such as Nettle (1998: 243), who writes that ‘because of the least effort properties of motor learning, learners are always likely to select shorter form (sic.) over longer ones where both are equally intelligible. Thus, over generations, word forms will be progressively reduced in length.’ My quantitative findings, and those of Chen *et al.* (2015) and Milička (2018) have shown the opposite to be the case.

In Chapter 4, I examined how third declension nouns and athematic verbs, as well as more irregular-looking paradigms, were avoided in the *koine* through morphological restructuring or through lexical replacement. I also investigated the increase in compounding, which was a common feature of *koine* Greek and which resulted in the semantic expansion of the lexeme inventory in the Roman period,<sup>387</sup> and the rise of certain suffixes, used to regularise paradigms. The emergence of new suffixes, and the increase in use of pre-existing suffixes such as -*iov*, has been much discussed, in particular with reference to the formation of new technical vocabulary.<sup>388</sup> In this chapter, I provided another reason for the rise of these suffixes, that of morphological adaptation. Following on from Chapter 3, I also considered the morphological reasons why a lexeme might be selected and replaced over another. Therefore,

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<sup>387</sup> In doing so, this thesis has succeeded in explaining the increase in suffixation, derivation, and general compounding in the Roman period, a phenomenon previously noted by scholars such as Gignac (1981).

<sup>388</sup> See, for example, Morpurgo Davies (1968: 25).

Chapters 3 and 4 show how the state of the Greek language in this period is not unlike Ewert's (1933: 280) description of the lexicon of late Latin and early French: 'the changing conditions and varying needs which a language is called upon to meet, and the wear and tear to which as an instrument it is subject, imply a constant change in vocabulary: formation or borrowing of new words; discarding or loss of old words; extension, restriction, or shifting of the meanings and functions of existing words.' The general tendency in the Greek from the Classical to the Roman period appears to have been to adapt, restructure, and tamper with the pre-existing linguistic forms, not unlike the tendency of the Romance languages to cannibalise and reorganise Latin words rather than to borrow or innovate words.<sup>389</sup>

In Chapter 5, I returned to the language-external factors that I had begun to describe in Chapter 2, and looked more closely at the cultural background of the language that has been discussed throughout the thesis. First, we can identify the rise of Christianity, and the new lexical developments that came with it. I argued in the first section of this chapter that Christianity was a key factor for semantic change, and, to a lesser extent, for lexical innovation. A more important factor for lexical innovation was the general backdrop of the Roman Empire, the cohabitation of Greek and Latin, and the need for a lexicon in Greek to convey very Roman concepts. In the second section of this chapter I looked at the ways in which the Greek lexicon dealt with this need, which included, but is not limited to, language-external borrowing, which was widespread, and had far-reaching and long-lasting linguistic implications. In the final section of this chapter, I revisited the phenomenon of the spread of the *koine*, which was first described in Chapter 2. I argued that the rapid functional and geographical expansion of the *koine* was possibly the single most important cause for lexical change and variation in the Greek of the Post-classical period, and had a repercussive effect on all the other phenomena described, from the reduction in morphological and phonological complexity to the prevalence of both borrowing and Atticisation. I also suggested that lexical variation can largely be explained by the type of linguistic community: in exocentric communities we can find a tendency towards simplification (e.g. morphological simplification) and borrowing (e.g. the use of ἰμπεράτωρ over αὐτοκράτωρ) whereas endocentric communities are characterised by increased complexity (e.g. a tendency to emulate archaic forms of the language). Finally, I

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<sup>389</sup> See Adams (2013), who looks in part at the way in which various features of the Latin language developed into the Romance languages, notably in chapter 30 (777–789), which looks at the development, from Classical Latin into the various Romance languages, of lexemes of a specific semantic group, that of anatomical terms: all the Romance words in question are descended, whether by derivation or semantic shift, from Latin.

suggested that a lot of lexical change was caused by the functional expansion of the language, and semantic change, although much of the latter cannot easily be explained.

## 6.2 Implications for further research

There are 7200 languages in the world, which can be grouped into around 400 different language families. Knowing the extent of phylogenetic diversity prompts the question of how looking so closely at such a short period of one language can be relevant for the study of linguistics more broadly. I argue in this final section that this study has helped to map the evolution of Post-classical Greek, as well as broadening scientific understanding of the principles of lexical change and variation. Its research outputs cover both theoretical methodologies and applied and applicable results, which have a reuse potential for both classicists and linguists.

Firstly, this thesis has established a typology of how lexical changes work, and this typology has the potential to be applied to other languages. In the restructuring of the lexicon of Post-classical Greek, we often find a combination of solutions for one and the same problem. For instance, in Chapter 4 I described how Attic ὁ νεός (temple) was too complex for the Post-classical morphological system. As a result, *koinē* Greek borrowed ναός from another dialect (in this case, Doric) and also used ἐκκλησία in Christian contexts because νεός/ναός was too pagan a word. We therefore see in this example both a combination of problems (Christianity needs a new lexicon and morphology must be regularised) and a combination of solutions. The methodology of starting first with the problem that needs to be solved (phonological changes, morphological developments, changing cultural factors) and then looking at how the language changes to solve these problems, is one that can be applied to other languages.

Another idea in this thesis that can be applied to the study of other languages is the problematisation of linear and teleological approaches when looking at linguistic change, especially in a modern language with a long documented history. For example, in §4.3.4.2, I observed that the SMG verb for ‘to sell’ is πουλάω, which comes from Attic πωλέω, rather than πέρνημι/πιπράσκω, which was the form more commonly found in the *koinē*. However, as this thesis has shown, it is usually the *koinē* form which survives, over its Attic equivalent, into SMG. Indeed, the development of Greek from Classical to Modern was not always linear and predictable and while I have described overarching trends, such as increases in word-length, in the use of certain suffixes, and in borrowings from Latin, none of these processes was by any means systematic or deterministic. This thesis has constantly wrestled with the temptation to

start with SMG and work backwards, detailing the incremental steps that led to it. However, as I have shown, the presence of a multitude of *Nebenstraßen* makes this teleological approach non-viable and less exact: the close reading of the sources at the time of investigation, especially the contemporary commentary on the language, paints a more accurate picture of the linguistic situation.

More closely related to this particular study, a suggested avenue for further research is to more closely examine the timeline of the changes described in this thesis. Cross-linguistically, the rate of adoption of lexical innovations can be described by S-curves (slow start, accelerating period, and slow end).<sup>390</sup> While this study described broad changes in the language, it did not provide an accurate timeline for change, mostly due to the constraints of the sources and the difficulties associated with making definite assumptions about dates for linguistic changes in an ancient language. However, it might be fruitful to single out a few case-studies of lexical innovation in Greek, and investigate whether an S-curve pattern can also be identified.

Furthermore, my work on the phonology of Greek, and how it affected the formation of the lexicon is another area that can be further developed. For example, a study examining the frequency of different phonemes and the probability of the Greek language selecting a particular phoneme or cluster of phonemes over others might yield some interesting results. While I have begun to qualitatively investigate the question for the vowel system, and suggested a tendency to avoid the common phoneme /i/ in the Post-classical period, this work could and should also be undertaken for other phonemes, and would benefit from a quantitative approach. A fruitful research question for this would be to investigate whether there is a tendency in the language to select common or uncommon phonemes in the formation of new vocabulary.

Finally, the most tangibly reusable research output of this study is the dataset created to show that the lengths of words in Greek increased between the Classical period and the Post-classical period. I have shown this quantitatively (§3.3.2), and explained how this came about qualitatively, notably through affixation (§3.4 *et passim*). I have also outlined the role of morphological factors and non-linguistic cultural factors such as koineization in prompting an overall increase in average word length. Moreover, in §3.3.3, I introduced the idea of a correlation between increasing word length and entropy, and I intend in a future study to collect word frequencies for both my word lists in order to establish whether this correlation between

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<sup>390</sup> See, for example, Altmann *et al.* (1983).

increasing word length and entropy over time also applies to Greek. As it stands, my dataset can already be of use to linguists looking for evidence to show that the negative correlation between phoneme inventory and word length is found diachronically, as well as to classicists and historical linguists looking at the diachronic evolution of Greek and in need of data showing the average word lengths in the four main inflectional word classes of Greek in two different time periods. This would facilitate studies on the evolution of the ancient language, from the Classical to the Post-classical period.



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## Appendix

This table collects the Latin loanwords in Greek borrowed before 300 AD, which are discussed in §5.2.2. The information in this table is adapted from Dickey (2023: 20–502). The table contains each loanword, with its alternative spellings (column one), the Latin word from which the loanword is derived (column two), and information about whether or not this loanword survives into SMG or a dialectal form of Modern Greek (column three). In a few instances, a loanword appears to have survived, but instead was either re-borrowed later from a Romance language (principally Italian), or revived in modern times (for example in scientific terms), and this is also specified in column three.

	Loanword	Latin	Modern Greek?
1	ἄβερτή, ἄβερτά, ἄβερτής, ἄβελτής, βέρτα (-ῆς?, ἡ or -οῦ?, ὁ) ‘backpack’	<i>averta</i> ‘backpack’, itself from ἄορτή.	No
2	ἄβόλλης, ἄβόλλα (-οῦ?, ὁ or -ης?, ἡ) ‘thick woollen cloak’	<i>abolla</i> ‘cloak’.	No
3	Ἀβοριγῖνες, Ἀβορήγινες, Ἀβωριγῖνες, Ἀβωριγῖνες, Ἀβοριγῖναι, Βορείγονοι (-ων, οἱ) ‘original inhabitants of Italy’	<i>Aborigines</i> ‘original inhabitants of Italy’.	SMG
4	ἀδιούτωρ, ἀδιούτορ, αἰούτωρ (-ορος/-ωρος, ὁ), a title	<i>adiutor</i> ‘helper’.	No
5	Ἀδριανός (-οῦ, ὁ) ‘Hadrian’ (an Egyptian month)	name <i>Hadrianus</i> .	No
6	ἀἴγροι (-ων, οἱ) ‘ill’	<i>aegri</i> , nom. pl. of <i>aeger</i> ‘ill’.	No
7	αἰράριον, ἀράριον, ἐράριον (-ου, τό) ‘public treasury’	<i>aerarium</i> ‘public treasury’.	No
8	ἀκισκλάριος, ἀκεισκλάριος (-ου, ὁ) ‘stonemason	<i>aciscularius</i> ‘worker with an adze’.	No
9	ἀκίσκλος, ἀκεῖσκλος (-ου, ὁ) ‘adze’, ‘iron part of a mill’	<i>acisculus</i> , a cutting tool	No
10	ἀκ(κ)οῦβιτον, ἀκούμβιτον (-ου, τό) ‘couch’, ‘dining room’, ‘bedroom’	<i>accubitum</i> ‘semi-circular dining couch’	No
11	ἀκο(υ)άριος (-ου, ὁ) ‘water-carrier’	<i>aquarius</i> ‘water-carrier’.	No
12	ἄκτα (-ων, τά), ἄκτον (-ου, τό) ‘acts’, ‘official records’, also a title	<i>actum</i> ‘act’.	No
13	ἀκτο(υ)άριος, ἀκτάριος, ἀκτώριος, ἀκτούριος, ἀγτουάριος, ἀκτουάρης (-ου, ὁ) ‘keeper of records’, ‘paymaster’	<i>actuarius</i> ‘keeper of records’.	No
14	ἄλη, ἄλα (-ης, ἡ) ‘squadron’	<i>ala</i> ‘squadron’.	No
15	ἀλίκλιον, ἀλίκλειον, ἀλλίκλιν, ἀρίκλιον (-ου, τό), a garment	<i>alicula</i> ‘light cloak’ (itself from ἄλλιξ ‘cloak’)	No
16	ἀλιμένα, ἀλειμένα (-ων, τά) ‘provisions’ (as responsibility of an official), maintenance allowance’	<i>alimenta</i> , plural of <i>alimentum</i> ‘provisions’.	No
17	ἄλιξ, ἄλ(λ)ηξ (ἄλικος/ἄλ(λ)ηκος, ὁ) ‘fish sauce’	<i>hallec/hallex</i> ‘fish sauce’.	No
18	ἀμικτόριον, ἀμικτόριον, ἀμικτόρειον (-ου, τό) ‘shawl’, ‘scarf’, ‘covering’	<i>amictorium</i> ‘shawl’, ‘scarf’.	No
19	ἀμπ(ο)ῦλλα, ἀμβ(ο)ῦλλα, ἀνπ(ο)ῦλλα, ἀνπούλλη, ἀμπύλλη (-ης, ἡ) ‘flask’	<i>ampulla</i> ‘flask’.	Romance
20	ἀμπούλ(λ)ιον, ἀβούλιν (-ου, τό) ‘flask’	<i>ampulla</i> ‘flask’ + -ιον.	No
21	ἀν(ν)ᾶνα, ἀν(ν)όν(ν)α, ἀν(ν)ώνη (-ης/-ας, ἡ) ‘grain supply’, ‘tax in kind’, ‘allowance’	<i>annona</i> ‘grain supply’, ‘allowance’.	Dialect

22	Ἀντώνεια, Ἀντώνια, Ἀντωνήα, Ἀντωνειν(ε)ῖα, Ἀντωνίνα (-ων, τά) ‘Antonine festival’	name <i>Antonius/Antoninus</i> + -εἰος.	No
23	Ἀπρίλιος, Ἀπρίλλ(ε)ιος, Ἀπρεῖλ(λ)(ε)ος (-α, -ον or -ου, ό) ‘April’	<i>Aprilis</i> ‘April’.	SMG
24	ἀργεντάριος (-ου, ό) ‘banker’	<i>argentarius</i> ‘banker’.	No
25	ἀρήνα (-ης, ή) ‘arena’,	<i>harena/arena</i> ‘arena’.	No
26	ἄρκα, ἄρκη (-ης, ή) ‘chest’, ‘coffin’, ‘state treasury’	<i>arca</i> ‘chest’, ‘coffin’, ‘treasury’.	Dialect
27	ἀρκάριος (-ου, ό) ‘treasurer’	<i>arcarius</i> ‘treasurer’.	No
28	ἀρμάριον (-ου, τό) ‘chest’, ‘wardrobe’, ‘safe’,	<i>armarium</i> ‘cabinet’.	SMG
29	ἀρμικούστωρ, -ορ, ἀρμοκ-, ἐρμοκ-, ἀρμορο(μ)κ-, ἀρμωρωκ-, ἀρμόρου κούστωρ, ἀρμώρων κούστωρ (-ορος/-ωρος, ό) ‘person in charge of weapons’	<i>armicustos/armorum custos</i> ‘person in charge of weapons’ + -τωρ.	No
30	ἀσ(σ)άριον (-ου, τό) ‘penny’	<i>assarius</i> ‘penny’.	No
31	ἀστᾶτος (-ου, ό), a military rank,	<i>hastatus</i> , a military rank	No
32	ἄστη, ἄστα (-ης, ή) ‘spear’, ‘auction’	<i>hasta</i> ‘spear’.	No
33	ἀστίλιον, ἀστίλλιον (-ου, τό) ‘shaft’, ‘spear’,	<i>hastile</i> ‘spear-shaft’.	No
34	ἄτριον, ἀτρεῖον (-ου, τό) ‘entrance hall’, ‘courtyard’	<i>atrium</i> ‘entrance hall’, ‘courtyard’.	No
35	αὔγο(υ)ρ, αὔγουρ (-ος, ό) ‘augur’,	<i>augur</i> ‘augur’.	No
36	Α(ύ)γοῦστα (-ης, ή) ‘empress’	<i>Augusta</i> ‘empress’.	No
37	Α(ύ)γο(υ)στάλιος, Αὔγουσάλης, Αὔγουσάλης (-α, -ον) ‘of Augustus’	<i>Augustalis</i> ‘of Augustus’.	No
38	Αὔγουστ(ε)ῖον, Αὔγουστήον, Αὔγουσταῖον, Ἀουσταῖον (-ου, τό) ‘Augusteum’,	<i>Augusteum</i> ‘temple of Augustus’ (in Rome)	No
39	Αὔγουστεῖος (-α, -ον) ‘of Augustus’,	<i>Augusteus</i> ‘Augustan’	No
40	Αὔγουστήσιοι, Αὔγουστέσιοι (-ων, οἱ), a Jewish group in Rome	<i>Augustensis</i> ‘Augustan’	No
41	Α(ῦ)γ(ο)υστος, Ἄγοςτος, Ἀούγουστος, Ἄουστος (-η, -ον) ‘of Augustus’	<i>Augustus</i> ‘of Augustus’	SMG
42	ἀψινθάτος, ἀψινθιάτος (-η, -ον) ‘flavoured with wormwood’	<i>apsinthium</i> ‘wormwood’	SMG
43	βάκλον, βάκιλον (-ου, τό) ‘stick’, ‘cudgel’	<i>baculum</i> ‘staff’,	Dialect
44	βάλτιον, βάλτεον, βάλτις, βάλτεος (-ου, τό or ό), ‘belt’	<i>balteus/balteum</i> ‘sword-belt’.	No
45	βενετιανός, οὐνετιανός (-οῦ, ό) ‘supporter of the blue circus faction’	<i>venetianus</i> ‘supporter of the blue circus faction’.	No
46	βένετος, οὐένετος, βείνετος, βέναιτος (-η, -ον and -ου, ό) ‘blue’,	<i>venetus</i> ‘blue’.	No
47	βενεφικ(ι)άριος, βενεφικ(ι)άλιος, βενεφικειάρις, βενεφικιάριος, μενεφικιάριος (-ου, ό), a title, a provider of medical aid for veterans, or a type of criminal;	<i>beneficiarius</i> , a soldier attendant on an officer or a minister attendant on a magistrate	No
48	βερεδάριος, βεριδάριος, βερηδάριος, βηριδάριος, οὐερεδάριος, οὐεριδάριος (-ου, ό) ‘courier’,	<i>veredarius</i> ‘messenger of the imperial post’.	No
49	βέρνα(ς), οὐέρνα(ς) (-α, ό) ‘home-born slave’	<i>verna</i> ‘home-born slave’.	No
50	βετ(τ)ονική (-ής, ή), a plant,	<i>vettonica</i> ‘betony’	No
51	βήλον, οὐήλον, οὐῖλον (-ου, τό) ‘covering’	<i>velum</i> ‘sail’,	No
52	βηξιλάριος, οὐηξιλάριος, οὐιξιλάριος (-ου, ό), a military rank	<i>vexillarius</i> ‘standard-bearer’	No
53	βηξιλ(λ)ατίων, βεξ-, βιξ-, οὐηξ-, οὐεξ-, οὐιξ-, -ξελ-, -ξελ- (-ωνος/-ονος, ή) ‘troop’,	<i>vexillatio</i> ‘detachment’.	No
54	βήξιλλον, οὐήξιλλον, οὐιξιλλον (-ου, τό) ‘cavalry standard’	<i>vexillum</i> ‘military standard’,	No
55	βιατικόν, οὐιατικόν (-ου, τό) ‘journey money’	<i>viaticum</i> ‘provision for a journey’.	No
56	βιάτωρ, οὐιάτωρ (-ορος/-ωρος, ό) ‘agent (for magistrate)’ ‘traveller’ (in verse inscriptions)	<i>viator</i> ‘traveller’	No
57	βικάριος, βηκάρης, βηκάριος, βικέριος, οὐ(ε)ικάριος (-ου, ό) ‘deputy’,	<i>vicarius</i> ‘deputy’, ‘substitute’.	Revival

58	βικίον (-ου, τό), βικία (-ας, ή), and βίκος (-ου, ό) 'vetch' (a plant)	<i>vicia</i> 'vetch'.	Dialect
59	βι(ν)δίκτα, οὐι(ν)δίκτα (-ης?, ή), a type of manumission	<i>vindicta</i> , a type of manumission.	No
60	βιόκουρος, οὐιόκουρος, ιόκουρος (-ου, ό) 'person in charge of roads'	<i>viocurus</i> 'one who has charge of roads'.	No
61	βίρ(ρ)ος, βείρρος, βήρος, βύρ(ρ)ος (-ου, ό) 'hooded cloak'	<i>birrus</i> 'hooded cloak'	No
62	βόνος, βῶνος (-η, -ον) 'good',	<i>bonus</i> 'good'.	No
63	βότον, βῶτον (-ου, τό) 'vow'	<i>votum</i> 'vow'.	No
64	βουρδών, βορδών, βουρτών (-ῶνος/-όνος, ό) 'mule',	<i>burdo</i> 'mule'.	No
65	βράκιον, βράκκιον, βρέκιον, βρέκειον (-ου, τό) 'trousers'	<i>bracae</i> 'trousers' + -iov.	SMG
66	βρέβιον, βρέβειον, βρεβίων, βρέπιον, βρεπίων, βρέουιον, βρέυιον (-ου, τό) 'list',	<i>brevia</i> , neut. pl. of <i>brevis</i> 'summary', 'list'	No
67	βυκάνη, βουκάνη, βυκήνη, βυκίνη (-ης, ή) 'trumpet', 'horn', f	<i>bucina</i> 'trumpet', 'horn'	SMG
68	βυκινάτωρ, βουκινάτωρ, β(ο)υκκινάτωρ (-ορος/- ωρος, ό) 'trumpeter	<i>bucinator</i> 'trumpeter'.	No
69	βυκινίζω, βουκινίζω, βυκανίζω, βουκανίζω 'blow the trumpet',	<i>bucino</i> 'sound the trumpet'	Dialect
70	βωλήτης, βωλίτης (-ου, ό), a kind of mushroom,	<i>boletus</i> 'mushroom'.	Dialect
71	Γαῖῆος or Γαίειος (-ου, ό) 'of Gaius' (an Egyptian month),	name <i>Gaius</i> + -ῆος/-ειος.	No
72	γαῖσος, γαῖσον (-ου, ό or τό) 'javelin'	<i>gaesum</i> 'Gallic javelin'.	No
73	γάλβινος (-η, -ον) 'greenish-yellow'	<i>galbinus</i> 'greenish-yellow'.	No
74	γαλεάριος, γαλ(λ)ιάριος, γαλλεώρ(ιος) (-ου, ό) 'soldier's servant'	<i>galearius/ galiarius</i> 'soldier's servant'	No
75	Γερμανί(ε)ιος, Γερμανίκης (-α?, -ον) 'of Germanicus', as masc. subst. an Egyptian month, as neut. pl. subst. a festival,	name <i>Germanicus</i> + -ειος.	No
76	Γερμανικός (-ου, ό) 'Germanicus' (a month),	name <i>Germanicus</i> .	No
77	γράδος (-ου, ό) 'stepped pedestal'	<i>gradus, -us</i> 'step'	Romance
78	Δεκέμβριος, Δεκέμβριος, Δεκάβριος, Δεκέμπερ, Δεκέμβερ (-α, -ον or -ου, ό) 'December'	<i>December</i> 'December'	SMG
79	δεκουρίων (-ωνος, ό) 'decurion'	<i>decurio</i> 'decurion'.	No
80	δελματική, δαλματική, δερματική, τερματική (-ῆς, ή) 'Dalmatian tunic'	<i>dalmatica/delmatica</i> 'Dalmatian tunic'	No
81	δηλάτωρ (-ορος/-ωρος, ό) 'accuser', 'informer'	<i>delator</i> 'accuser', 'informer'.	No
82	δηνάριον, δινάριον, δυνάριον (-ου, τό), a unit of value	<i>denarius</i> , a unit of value.	No
83	δηπόσιτον, δηπόσειτον, δηπώσετον, δεπόσιτον (- ου, τό) 'deposit'	<i>depositum</i> 'deposit'.	No
84	δηποτᾶτος, δηπουτᾶτος, δεπο(υ)τᾶτος, -πωτ- (-ου, ό) 'deputy'	<i>deputatus</i> , pf. part. of <i>deputo</i> 'delegate'	No
85	δησέρτωρ, δεσέρτωρ (-ορος, ό) 'deserter'	<i>desertor</i> 'deserter'.	No
86	διάριον (-ου, τό) 'daily wage', 'allowance'	<i>diarium</i> 'daily ration'	Dialect
87	δικτάτωρ (-ορος/-ωρος, ό) 'dictator'	<i>dictator</i> 'dictator'.	Revival
88	δισέκτωρ, δησέκτωρ (-ορος, ό), perhaps 'quarry engineer',	<i>deseco</i> 'remove a part'+ -τωρ.	No
89	Δομιτιανός, Δομιττιανός (-οῦ, ό) 'Domitian' (an Egyptian month)	name <i>Domitianus</i> .	No
90	δουκηναρία (-ας, ή) 'assessment/sum of 200,000 sesterces'	<i>ducenarius</i> 'owning or receiving 200,000 sesterces' with influence from -ία.	No
91	δουκηναρίος, δουκεναρίος, δουκινάριος, δωκεναρίος (-ου, ό), a title of rank (originally one with an assessment of 200,000 sesterces)	<i>ducenarius</i> 'owning or receiving 200,000 sesterces'.	No
92	δούξ (δουκός, ό), a title	<i>dux</i> 'leader'	No

93	δουπλικάριος, δουπλικιάριος, δουπλικίρις, δουπλεικάρειος, δουπλικιαίριος, διπλο(υ)κάρ(ι)ος, τιπλοκάριος, δοφλικάρης, δοπλικάρης (-ου, ό) ‘soldier receiving double pay’	<i>duplicarius</i> (with many alternative spellings) ‘soldier receiving double rations or double of some other reward’	No
94	δρομεδάριος, δρομαδάριος, δρομοδάριος, δρομιδάριος, δρομιτάριος (-ου, ό) ‘camel- rider’, ‘camel’,	<i>dromadarius</i> ‘soldier mounted on a camel’, itself from δρομάς ‘running camel’.	No
95	Δρουσιεύς (-έως, ό?) ‘of Drusus’ (an Egyptian month)	<i>Drusus</i> + -ιεύς.	No
96	Δρουσίλληος, Δρουσίλλε(ι)ος, Δρουσίλλα (-ον or -ης) ‘of Drusilla’ (an Egyptian month),	<i>Drusilla</i> + -ήος/-ειος.	No
97	δωνατίουον, δωνάτιβον, δον(ν)άτιβον, δωνάτιον (-ου, τό) ‘money given to soldiers as a gratuity from the emperor’	<i>donativum</i> ‘money given to soldiers as a gratuity from the emperor’.	No
98	έβίσκος, ίβίσκος (-ου, ή) ‘marsh mallow’ (a plant)	<i>hibiscum/hibiscus</i> ‘marsh mallow’	Revival
99	Είδοί, Ίδοί, Είδυοί, Είδυοί (-ών, αί) ‘Ides’	<i>Idus</i> (-uum, fem. pl.) ‘Ides’.	No
100	έκστρανήιος, έξτράνιος, έξτράνεος, έκστράνιος, έκτράνιος, έκτράνεος, έκτράνος (-α, -ον) ‘unrelated’	<i>extraneus</i> ‘outside the family or household’	No
101	έξεμπλάριον, έξομπλάριον, έξονπλάριον, έξενπλάριον, έξοπράρειον, ένξεινπλάρεινον, έξεμβλάριον (-ου, τό) ‘sample’, ‘evidence’,	<i>exemplar</i> ‘example’.	No
102	έξκέπτωρ, έσκέπτωρ, έξσκεπτωρ, έξέπτωρ, έσκέτωρ (-ορος/-ωρος, ό) ‘clerk’, ‘keeper of the minutes’	<i>exceptor</i> ‘copyist’.	No
103	έξπλωράτωρ, έξσπλωράτωρ (-ορος/-ωρος, ό) ‘scout’, ‘spy’,	<i>explorator</i> ‘scout’, ‘spy’.	No
104	έσσεδάριος, άσσεδάριος, άσσιδάριος (-ου, ό) ‘gladiator fighting from a chariot’,	<i>essedarius</i> ‘one who fights from a chariot’.	No
105	ήβοκάτος, ή(ο)υοκάτος, ίούκατος, ίούκατος (-ου, ό) ‘veteran called back into service’, ‘summoner’	<i>evocatus</i> ‘veteran specially invited by a military commander to serve under him’.	No
106	Ίανουάριος, Ίαννουάριος, Ίανοάριος, Εϊανουάριος, Ίουνουάριος (-α, -ον or -ου, ό) ‘January’	<i>Ianuarius</i> ‘January’.	SMG
107	ίμαγίνιφερ, ίμαγινιφέρος, ίμαγνιφερ, ήμ(μ)άγνιφερ, μαγνιφέρ, ίμαγνίφερ (-ερος/- ου, ό), a type of standard-bearer,	<i>imaginifer</i> ‘soldier who carried a standard bearing the image of the emperor’.	No
108	ίμπεράτωρ, ίνπεράτωρ (-ορος/-ωρος, ό) ‘commander’, ‘emperor’	<i>imperator</i> ‘commander’, ‘emperor’.	No
109	ίνδικτίων, ειנדκτίων, ένδικτίων, έμδικτίων (-ωνος/-ονος, ή) ‘period of fifteen years’, ‘tax period’, ‘periodic tax’	<i>indictio</i> ‘indiction’ (fifteen-year tax period)	SMG
110	ίντυβον, ίντ(ο)υβος, έντυβον (-ου, τό or ό) ‘endive’, ‘chicory’	<i>intubum/intibum</i> ‘endive’, ‘chicory’.	No
111	Ίούλιος, Ίουλίηος, Εϊούλιος (-α, -ον or -ου, ό) ‘July’	<i>Iulius</i> ‘July’.	SMG
112	Ίούν(ι)ος, Έούνιος, Ίώνιος (-α, -ον or -ου, ό) ‘June’	<i>Iunius</i> ‘June’	SMG
113	ιουράτωρ (-ορος, ό) ‘sworn witness’	<i>iurator</i> ‘sworn witness’	No
114	ισίκιον, εισίκιον, ίσικος (-ου, τό or ό) ‘dish of mincemeat’	<i>isicium</i> ‘minced meat’	No
115	κάγκελ(λ)ος, κάνκελλος, κάγγελος, κάγγελ(λ)ος, κάκελλος, γάγκελ(λ)ος (-ου, ό) ‘latticed barrier or balustrade’, ‘railing’, ‘gate’ (also a measure)	<i>cancellus</i> ‘latticed barrier’.	SMG
116	Καΐσαρ, Καΐσσαρ (-αρος, ό) ‘Caesar’, ‘emperor’, ‘emperor-designate’	<i>Caesar</i>	SMG
117	Καισάρ(ε)ιος, Καισάρηος, Καισάρεος, Κησάριος, Κεσάρ(ε)ιος (-ον) ‘of Caesar’	<i>Caesareus</i> ‘of Caesar’ with influence from -ειος, or perhaps <i>Caesar</i> via Καΐσαρ + - (ε)ϊος.	No

118	Καισαριανός, Καισαρειανός, Κεσαριανός, Κεσαρανός (-οῦ, ὅ) ‘member of the Caesarian party’	<i>Caesarianus</i> ‘supporter of Caesar’.	No
119	Καλάνδαι, Καλένδαι, Καλάνται, Καλάντε, Καλάδαι, Καλαδες (-ων, αἰ) ‘first day of the month’, ‘month’	<i>Kalendae</i> ‘first day of the month’.	SMG
120	καλίγιον, καλλίγιον, καλήγιον, καλείκειν, καλ(λ)ίκιον (and καλήκιον?) (-ου, τό) ‘boot’	<i>caliga</i> ‘boot’ (via κάλιξ?) + -ιον.	No
121	κάλιξ, καλ(λ)ίγη (-ιγος/-ικος or -ης, ἦ) ‘boot’,	<i>caliga</i> ‘boot’	No
122	κάλιος, κάλιος (-ου, ὅ) ‘shoe’	<i>calceus</i> ‘shoe’.	Romance
123	καμίσιον, κάμισον, κάμασον, καμάσιον (-ου, τό) ‘shirt’	<i>camisia</i> ‘shirt’	Dialect
124	κάμπιστρον, κάμπεστρον (-ου, τό) ‘loincloth’	<i>campestre</i> ‘loincloth’.	No
125	κάμπος (-ου, ὅ) ‘field’, ‘camping place’, ‘Campus Martius’	<i>campus</i> ‘field’.	SMG
126	κα(μ)υάριος (-ου, ὅ) ‘slave in charge of clothes’ ‘slave who carries schoolbooks’	<i>capsarius</i> ‘slave who carries schoolbooks or watches clothes at the baths’.	No
127	κανάλιον (-ου, τό) ‘culvert’, ‘road’	<i>canalis</i> ‘culvert’, itself from κάννα ‘reed’ via <i>canna</i> .	SMG
128	κανδήλη, κανδηλα, κανδύλη (-ης, ἦ) ‘candle’, ‘torch’	<i>candela</i> ‘candle’.	SMG
129	κανδιδατος (-ου, ὅ) ‘candidate for office’, later an official title	<i>candidatus</i> ‘candidate’.	No
130	Καπετώλιον, Καπιτώλιον (-ου, τό) ‘Capitol’, ‘citadel (in any town)’	<i>Capitolium</i> ‘Capitol’.	Revival
131	Καπετώλιος, Καπιτώλιος, Καπετώριος (-α, -ον or -ου, ὅ) ‘Capitoline’	<i>Capitolius</i> ‘Capitoline’.	No
132	κάπιτον, κάπειτον, καπητόν, καβιδειν, καπειδειν (-ου, τό) ‘ration allowance’	<i>caput</i> ‘head’	No
133	καρακάλλιον (-ου, τό) ‘hood’	<i>caracalla</i> ‘long cloak with hood’ + -ιον.	Dialect
134	κάρκαρον, κάρκαρος (-ου, τό or ὅ) ‘prison’, ‘stable’	<i>carcer</i> ‘prison’	Dialect
135	καροῦχα, καροῦχον (-ης?, ἦ or -ου, τό) ‘carriage’	<i>carruca</i> ‘travelling-carriage’.	No
136	κάρ(ρ)ον, κάρρος (-ου, τό or ὅ) ‘cart’	<i>carrus</i> ‘wagon’.	SMG
137	κασίδιον, κασσιδίων (-ου, τό) ‘helmet’	<i>cassis</i> ‘helmet’ + -ιδίων or from <i>cassid-</i> (oblique stem of <i>cassis</i> ) + -ιον.	No
138	καστέλ(λ)ος, καστέλ(λ)ον (-ου, τό or ὅ) ‘fort’, ‘water reservoir’	<i>castellum/ castellus</i> ‘fort’, ‘water reservoir’.	SMG
139	καστρήσιος, καστρίσιος, καστρήνσιος, γαστρήσιος, γαστρίσιος, -ένσιος (-α, -ον) originally ‘of the camp’, later ‘of the imperial court’	<i>castrensis</i> ‘of the (army) camp’, ‘of the imperial court’	No
140	κάστρον, κάστρα (-ου, τό or -ων, τά) ‘army camp’, ‘fort’	<i>castrum</i> ‘fort’ ( <i>castra</i> ‘camp’).	SMG
141	κατήνα, κατίνα (-ας, ἦ) ‘chain’	<i>catena</i> ‘chain’.	Romance
142	καυσάριος (-α, -ον) ‘dismissed because of illness’,	<i>causarius</i> ‘diseased’, ‘on grounds of health’.	No
143	κέλλα, κέλλη (-ης/-ας, ἦ) ‘room’, ‘chamber’,	<i>cella</i> ‘room’.	SMG
144	κελλάριον, κελλάρειον (-ου, τό) ‘cupboard’, ‘storeroom’, ‘vessel’,	<i>cellarium</i> ‘storeroom’.	SMG
145	κελλάριος, κελλάρειος (-ου, ὅ) ‘cellarer’,	<i>cellarius</i> ‘cellarer’	No
146	κεντηνάριον, κεντινάριον, κεντενάριον, κενδηνάριον (-ου, τό), a weight (of 100 pounds) and an amount of money,	<i>centenarium</i> ‘100 pounds weight’.	Dialect
147	κεντ(ο)υρία, κεντορία, κεντεριωνία, κεντερυονέα, κυντυρεία (-ας, ἦ) ‘century’	<i>centuria</i> ‘century’.	No
148	κεντ(ο)υρίων, κεντορίων, κεντηρίων, κεντοϊρίων, κεντηριον, κυντυρίων (-ωνος/ -ονος, ὅ) ‘centurion’	<i>centurio</i> ‘centurion’.	No
149	κέντ(ρ)ων (-ωνος, ὅ) ‘rag’, ‘patchwork’, ‘garment’, ‘cento’, perhaps ‘pen-wiper’,	<i>Cento</i> ‘patchwork’, with influence from κέντρον ‘goad’ when spelled with ρ.	No

150	κερβικάριον, κερβρικάριον, κερπικάριον, κερουικάριον (-ου, τό) 'pillow'	<i>cervical</i> 'pillow' with influence from -άριον, or rare <i>cervicarium</i> 'pillow'	No
151	κηυσίτωρ, κηυσείτωρ, κηυσήτωρ, κενσίτωρ, κενσήτωρ, κινσίτωρ (-ορος/-ωρος, ό), an official,	<i>censitor</i> 'registrar or taxation officer in a Roman province'.	No
152	κῆνσος, κῖνσος (-ου, ό) 'assessment for taxes', 'tribute'	<i>census, -us</i> 'census'.	No
153	κηρίολος (-ου, ό) 'wax taper or figure'?	<i>cereolus</i> 'candelabrum'	No
154	κιβάριον, κειβάρ(ε)ιον (-ου, τό) 'rations', 'provisions',	<i>cibaria, -orum</i> 'rations',	Dialect
155	κιβάριος (-α, -ον) 'of the household', 'made of coarse meal' (of bread),	<i>cibarius</i> 'concerning food'.	No
156	κιρκήσιος (-α, -ον) 'of the circus',	<i>circensis</i> 'of the circus'.	No
157	κιρκίτωρ, κερκήτωρ, κερκίτωρ, κερκείτωρ, κειρκείτωρ, κειρκείδωρ (-ορος, ό) 'inspector of frontier posts'	<i>circitor</i> 'person who goes around'.	No
158	κίρκος (-ου, ό) 'circus'	<i>circus</i> 'circus'	No
159	κίτριον (-ου, τό) 'citrus tree'	<i>citrum</i> 'citrus tree'	No
160	κίτρον (-ου, τό) 'citron' (a fruit)	<i>citrum</i> 'wood or fruit of the citrus tree'	SMG
161	κλάσ(σ)α (-ης, ή) 'fleet'	<i>classis</i> 'fleet'.	No
162	κλασσικός, κλασεικός (-ή, -όν) 'naval'	<i>classicus</i> 'naval' or <i>classis</i> 'fleet' via κλάσσα + -ικός.	No
163	κοδράντης, κουαδράντης (-ου, ό), a coin	<i>quadrans</i> 'quarter',	No
164	Κοιντίλιος, Κοιντίλλιος, Κυντίλ(λ)ιος, Κυντίλ(λ)ιος, Κοϊνκτ(ε)ίλιος, Κοιγκτίλιος (-α, -ον) 'July'	<i>Quintilis</i> 'July'.	No
165	κολ(λ)άριον (-ου, τό) 'collar'	<i>collare</i> 'collar'.	Romance
166	κολλήγιον, κολλέγιον, κολλήγειον (-ου, τό) 'council',	<i>collegium</i> 'board', 'guild'.	Revival
167	κολλητιών (-ωνος/-ονος, ό) 'filing clerk'	uncertain	No
168	κόλων (-ωνος, ό), κολωνός, κολονός (-οῦ, ό) 'colonist', 'tenant farmer'	<i>colonus</i> 'colonist', 'tenant farmer'.	No
169	κολωνία, κολωνεία, κολον(ε)ία (-ας, ή) 'colony', 'province', 'land allocation'	<i>colonia</i> 'colony'.	No
170	κομακτορία, κομακτορεία, κωμακτορεία (-ας, ή) 'bank',	<i>coactor</i> 'collector of money' via κομάκτωρ + -ία.	No
171	κομάκτωρ, κοάκτωρ (-ορος, ό), probably 'collector of money',	<i>coactor</i> 'collector of money'	No
172	κομέτιον, κομίτιον (-ου, τό) 'assembly', 'place of assembly', 'meeting'	<i>comitium</i> 'assembly'.	No
173	κόμης, κόμης (-ητος/-ιτος/-ετος, ό) 'count'	<i>comes</i> 'count'	SMG
174	κομιᾶτον, κομιᾶτος, κομ(μ)εᾶτον, κομ(μ)εᾶτος (-ου, τό or ό) 'leave of absence', 'supplies', 'reprieve'	<i>commeatus, -us</i> 'supplies', 'leave of absence'.	No
175	κομιτᾶτον, κομετᾶτον, κομητᾶτον, κωμιτᾶτον, κομιδᾶτον (-ου, τό) 'staff', 'retinue' (esp. of the emperor), 'imperial court'	<i>comitatus, -us</i> 'escort', 'attendants', 'court'.	Romance
176	κομ(μ)ενταρήσιος, κομ(μ)ενταρίσιος, κομενταρήνσιος, κομμετ- (-ου, ό) 'secretary', 'accountant', 'registrar'	<i>commentariensis</i> 'secretary'.	No
177	κομ(μ)εντάριον (-ου, τό) 'shorthand', 'magistrate's court'	<i>commentarium</i> 'notes'	No
178	κομόδιον, κομμόδιον, κωμόδιον (-ου, τό) 'gratuity'	<i>commodum</i> 'reward' + -ιον.	No
179	κονδ(ο)ύκτωρ, κονδόκτωρ, κονδούκτωρ, κοντούκτωρ, κωντούκτωρ (-ορος/-ωρος, ό) 'contractor'	<i>conductor</i> 'contractor'.	No
180	κόορτη, χώορτη, κώορτη, χόορτη, κόορτη (-ης, ή) 'cohort',	<i>cohors/chors/cors</i> 'cohort', 'farmyard'.	Dialect

181	κορνικουλάριος, κορνικλάριος, κορνικολάριος, κορνου(κ)λάριος, κορνοκλάριος, κολλικλάριος (-ου, ό) ‘assistant’	<i>cornicularius</i> ‘adjutant’.	No
182	κουαίστωρ, κο(ι)αίστωρ, κυαίστωρ, κυέστωρ, κουαέστωρ (-ορος/-ωρος, ό), a title,	<i>quaestor</i> ‘quaestor’.	No
183	κουαιστώριος, κοιαιστώριος, κυαιστώριος (-α, -ον) ‘of a quaestor’	<i>quaestorius</i> ‘of a quaestor’	No
184	κουβικουλάριος, κουβηκουλάρις, κουβουκουλάριος, κουβουκλάριος, κουβουλ(λ)άριος (-ου, ό) ‘chamberlain’	<i>cubicularius</i> ‘of the bedchamber’.	SMG
185	κο(υ)ιντάνα, κυ(ι)ντάνα, κουτάνα (-ας, ή), a tax,	<i>quintana</i> ‘street in a Roman camp where markets were held’.	No
186	κο(υ)ιντανήσιος, κυ(ι)ντανήσιος, κουτανήσιος (-ου, ό), soldier in charge of a market	<i>quintanensis</i> , a kind of soldier.	No
187	κούκκο(υ)μα, κόκ(κ)ο(υ)μα, κόκκομας, κούκ(κ)ουμος, κοκκόμανα (pl.), κοκόμανος (-ης?, ή and -ου?, ό) ‘jar’, ‘kettle’	<i>cucuma</i> ‘kettle’	Dialect
188	κουκούλ(λ)ιον, κο(υ)κκούλ(λ)ιον, κούκλιν, κοϋγλιν (-ου, τό) ‘hood’	<i>cucullus</i> ‘hood’ + -iov.	SMG
189	κουμουλάτος, κομμουλάτος (-η, -ον) ‘heaping’ (of measurements, esp. with μόδιος),	<i>cumulatus</i> ‘piled up’.	No
190	κουράτωρ, κουράτορ, κοράτωρ, γουράτωρ (-ορος/-ωρος, ό) ‘curator’	<i>curator</i> ‘curator’.	Dialect
191	κουριώσος, κουριός(σ)ος, κουριοῦσος (-ου, ό) ‘inquiry agent’ (an official), ‘informer’,	<i>curiosus</i> ‘inquiring’	No
192	κούρσωρ, κούρσορ, κούρσορ, κούλσορ (-ορος/-ωρος, ό) ‘courier’ (a title)	<i>cursor</i> ‘runner’.	No
193	κουστωδία, κοστωδ(ε)ία, κο(υ)στοδία, κωστωδία (-ας, ή) ‘guard’, ‘prison’, ‘custody’	<i>custodia</i> ‘custody’.	SMG
194	κοχλιάριον, κοχληάριον (-ου, τό) ‘spoon’, ‘spoonful’,	<i>cochlear</i> ‘spoon’	SMG
195	κουαισιωνάριος, κυαιστεωνάριος, κυεστωνάριος, κυεσσ(ι)ωνάριος (-ου, ό) ‘torturer’, ‘interrogator’	<i>quaestionarius</i> ‘torturer’	No
196	Κυριῖται, Κυριῖται, Κουῖριται (-ων, οι), ‘Roman citizens’	<i>Quirites</i> ‘Roman citizens’.	No
197	κωδικίλλος, κοδικίλλος, κωδικέλ(λ)ος, κωδικέλ(λ)ος (-ου, ό) ‘official imperial letter’, ‘codicil’	<i>codicillus</i> ‘codicil to a will’, ‘rescript of the emperor’.	SMG
198	λαγήνιον (-ου, τό) ‘little flagon’	<i>lagenae</i> ‘flagon’ + -iov	SMG
199	λαγκιάριος, λανκιάριος, λαγγιάριος, λαγγιάριος, λαχηαίριος, λαγκεαίριος (-ου, ό) ‘lancer’	<i>lancearius</i> ‘lancer’	No
200	Λαδικηνός, Λαοδικηνός, Λαυδικηνός (-ή, -όν) ‘Laodicean’	<i>Laodiceus/Laudiceus</i> ‘of Laodicea’,	No
201	λανάριος (-ου, ό) ‘wool-worker’	<i>lanarius</i> ‘wool-worker’.	SMG
202	λάρδος (-ου, ό) ‘salted meat’	<i>laridum/lardum</i> ‘bacon’.	SMG
203	Λατίνος, Λατεῖνος (-η, -ον) ‘Latin’,	<i>Latinus</i> ‘Latin’.	SMG
204	λεγεών, λεγιών, ληγιών, λεγυών, λογίων, λογιών (-ωνος/-όνος, ή) ‘legion’	<i>legio</i> ‘legion’.	SMG
205	λεγεωνάριος, λεγεωνάριος, λεγιωνάριος, λεγιονάριος, ληγιωνάριος, ληγιονάριος, λογιωνάριος (-ου, ό) ‘legionary’,	<i>legionarius</i> ‘legionary’.	Revival
206	λεκτ(ε)ίκα, λεκτική, λεττεῖκα (-ης?, ή) ‘litter’	<i>lectica</i> ‘litter’.	No
207	λεκτικάριος, λεκτεικάριος (-ου, ό) ‘pall-bearer’	<i>lecticarius</i> ‘litter-bearer’	No
208	λεντιάριος (-ου, ό) ‘linen-dealer’, ‘cloakroom attendant’,	<i>lintearius</i> ‘seller or weaver of linen’	No
209	λέντιον (-ου, τό) ‘linen cloth’, ‘napkin’, ‘towel’,	<i>linteum</i> ‘linen cloth’, ‘towel or napkin’	Dialect
210	ληγατάριος, λεγατάριος, λιγατάριος, λεγετάριος (-ου, ό) ‘legatee’	<i>legatarius</i> ‘recipient of a legacy’.	No



211	ληγα̃τον, λεγα̃τον (-ου, τό) ‘legacy’,	<i>legatum</i> ‘legacy’.	No
212	ληγα̃τος, λεγα̃τος (-ου, ό) ‘deputy’, ‘envoy’	<i>legatus</i> ‘envoy’.	Dialect
213	λιβέλ(λ)ος, λιβέλ(λ)ον (-ου, ό or τό) ‘petition’, ‘writing’, ‘document’	<i>libellus</i> ‘document’.	Revival
214	λίβερνος, λίβερνον, λίβυρνος, λίβυρνον, λύβερνος (-ου, ό or τό), a type of ship,	<i>liburna</i> ‘light, fast-sailing warship’.	No
215	λιβράριος, λιβλάριος, λειβράριος, λιβελ(λ)άριος (-ου, ό), a kind of scribe	<i>librarius</i> ‘scribe’, ‘bookseller	No
216	λίγλα, λίγγλα, λίνγλα (-ης?, ή) ‘spoon’, ‘spoonful’	<i>ligula/lingula</i> , a kind of spoon.	No
217	λοῦδος (-ου, ό) ‘gladiatorial school’, ‘games’	<i>ludus</i> ‘games’,	No
218	λουκάνικον, λοκάνικον, λυκανική (usually -ου, τό) ‘sausage’	<i>lucanica</i> , a kind of sausage.	SMG
219	λουσώριον, λουσόριον, λουσώριον (-ου, τό) ‘place for games’, ‘pleasure ship’	<i>lusorius</i> ‘used for amusement’.	No
220	λωδιξ, λωξιξ, λόδιξ (-ικος, ή) ‘blanket’	<i>lodix</i> ‘blanket’.	No
221	λωρίκα, λουρίκη (-ης/-ας?, ή) ‘corselet’,	<i>lorica</i> ‘corselet’.	No
222	λωρος, λωρον (-ου, ό or τό) ‘thong’, ‘strap’, ‘rein’	<i>lorum/lorus</i> ‘leather strap’.	SMG
223	μαγίστρατος (-ου, ό) ‘magistrate’	<i>magistratus, -us</i> ‘magistrate’.	No
224	μάγιστρος, μαγίστερος, μαγίστορος, μαγόστορος, μαγίστηρ, μάγιστερ, μαγίστωρ, μάλιστα, μαγίστωρ (-ου/-ερος/-ορος/-ωρος, ό) ‘master’ (a title)	<i>magister</i> ‘master’.	SMG
225	Μάιος (-α, -ον or -ου, ό) ‘May’,	<i>Maius</i> ‘May’	SMG
226	Μαιουμα̃ς, Μαιουμα̃ς (-α̃, ό) ‘May day’ (a festival)	<i>Maius</i> ‘May’ via Μάιος, with an unknown suffix.	No
227	μανδήλη, μανδη̃λα, μαντήλη (-ης, ή) ‘towel’	<i>mantele</i> ‘hand towel’	SMG
228	μαπ(π)ίον, μαμπίον (-ου, τό) ‘napkin’, ‘cloth’, ‘tablecloth’, ‘altar cloth’	<i>mappa</i> ‘napkin’ + -ιον.	No
229	Μάρτιος (-α, -ον or -ου, ό) ‘March’	<i>Martius</i> ‘March’.	SMG
230	μάτριξ (-ικος, ή) ‘list’, ‘roster’, ‘master register of a military unit’, ‘mother church’	<i>matrix</i> ‘list’, ‘female parent’.	No
231	ματρῶνα (-ης/-ας, ή) ‘noblewoman’	<i>matrona</i> ‘matron’.	Revival
232	μεμβράνα, μεμβρα̃ίνα, μεμβράνη, μενβρά(ε)ινα, μέμβρανον (-ης, ή or -ου, τό) ‘parchment’	<i>membrana</i> ‘parchment’.	SMG
233	μεμόριον, μημόριον, μνημόριον, μιμόριον, μημόριον, μνημόριον, μνημούρηων (-ου, τό) ‘grave monument’	<i>memoria</i> ‘memorial’,	No
234	μερμίλλον, μορμίλλον, μουρμίλλον, μυρμίλλον, μορβίλλον (-ωνος/-ονος, ό), a type of gladiator	<i>murmillio/myrmillo</i> , a type of gladiator.	No
235	μητα̃τον, μετα̃τον, μιτα̃τον (-ου, τό) ‘(military) quarters’, ‘housing’	<i>metor</i> ‘measure’, ‘lay out (esp. camps)’.	SMG
236	μιλιάριον, μειλάριον (-ου, τό), a copper vessel, a unit for measuring volume, ‘mile’, or perhaps ‘milestone’;	<i>miliarium</i> , with largely the same meanings.	No
237	μιλιάριος, μειλάριος (-α, -ον) ‘of a thousand’, ‘of milestones’,	<i>miliaris</i> ‘of a thousand’.	No
238	μίλιον, μέλιον (-ου, τό) ‘mile’, ‘milestone’,	<i>mille</i> ‘thousand’ via <i>milia passuum</i>	SMG
239	μισσίκιος, μεσσίκιος (-ου, ό) ‘discharged soldier’,	<i>missicius</i> ‘discharged’.	No
240	μόδιος, μόδιον (-ου, ό or τό), a measure and a vessel of that size	<i>modius</i> ‘peck’, a measure of 8.75 litres.	SMG
241	μονήτα, μονήτη, μονίτη, μόνιτα (-ης, ή) ‘mint’, ‘coinage’	<i>moneta</i> ‘mint’.	No
242	μοῦλα, μούλη (-ης, ή) ‘female mule’	<i>mula</i> ‘mule’.	SMG
243	μουλίον, μουλλίον (-ωνος, ό) ‘muleteer’,	<i>mulio</i> ‘muleteer’.	No
244	μοῦλος (-ου, ό) ‘male mule’,	<i>mulus</i> ‘mule’.	SMG
245	μουνικίπιον (-ου, τό) ‘self-governing community’,	<i>municipium</i> ‘self-governing community’.	No

246	Μο(υ)τουνήσιος, Μουθο(υ)νήσιος, Μοτυνήσ(ε)ιος, Μο(υ)τονήσιος, Μοθωνήσιος, Μωτωνήσιος, Μωθωνήσιος (-α, -ον), 'of Mutina (in Italy)'	<i>Mutinensis</i> 'of Mutina'.	No
247	Νερόν(ε)ιος, Νερόνιος (-α, -ον?) 'of Nero' (an Egyptian month)	<i>Neroneus</i> 'of Nero' or the name <i>Nerō</i> + -ειος.	No
248	Νοέμβριος, Νοένβριος, Νοβέμβριος, Νοουέμβριος (-α, -ον or -ον or -ου, ό) 'November'	<i>November</i> 'November'.	SMG
249	νοτάριος, νωτάριος (-ου, ό) 'notary', 'secretary'	<i>notarius</i> 'shorthand writer'.	SMG
250	νούμερος, νόμερος (-ου, ό), a military unit,	<i>numerus</i> 'corps'.	Romance
251	νοῦμ(ι)ος, νόμος (-ου, ό) 'coin'	<i>nummus</i> 'coin'.	No
252	ωμενκλάτωρ, νομενκλάτωρ, νομεγκλάτωρ, νομοκλάτωρ, νομενκουλάτωρ (-ορος/-ωρος, ό) 'name-reminder', 'name-announcer'	<i>nomenclator/ nomenclator</i> 'name-reminder'.	No
253	Νῶναι, Νόν(ν)αι (-ων, αι) 'Nones'	<i>Nonae</i> 'Nones'.	No
254	ξέστης (-ου, ό) 'pint', 'cup'	<i>sextarius</i> 'pint measure'.	Dialect
255	Όκτώβριος, Όκτώμβριος, Όκτόβριος, Όκτόμβριος, Όκτόμβριος (-α, -ον or -ου, ό),	<i>October</i> 'October'.	SMG
256	όξύγγιον, άξούγγιον, άξύγγιον, όξύγγειον, άξουγγία (-ου, τό or -ας, ή) 'tallow', 'grease', 'lard',	<i>axungia</i> 'axle-grease'.	SMG
257	όπινάτωρ, όπιννάτωρ, όπινιάτωρ, όπεινάτωρ, όπεινιάτωρ (-ορος, ό), a military official,	<i>opinator</i> 'collector of the <i>annona</i> tax'.	No
258	όπινίω, όπεινίω, όπινίων (-ωνος, ή) 'legal opinion'	<i>opinio</i> 'opinion'.	No
259	όπτίωv, ώπτι, ώπτίων (-ωνος/-ονος, ό) 'assistant', 'adjutant',	<i>optio</i> 'centurion's assistant'.	No
260	όράριον, ώράριον (-ου, τό) 'kerchief', 'scarf', 'deacon's stole'	<i>orarium</i> 'kerchief'	SMG
261	όρδινάριος, ώρδινάριος (-α, -ον) 'regular'	<i>ordinarius</i> 'regular'.	No
262	όρδινατίων (-ονος, ή) 'order' (e.g. of a list)	<i>ordinatio</i> 'arrangement'.	No
263	όρδινάτος, όρτινάτος, ώρδινάτος (-ου, ό) 'appointed' (an official title)	<i>ordinatus</i> , pf. part. of <i>ordino</i> 'appoint'.	No
264	όρ(ρ)ιάριος (-ου, ό) 'granary supervisor'	<i>horrearius</i> 'one who manages a warehouse'	No
265	όρ(ρ)ιον, ώρεϊον, ώρριον, όρρεον (-ου, τό) 'granary',	<i>horreum</i> 'granary'.	Dialect
266	ουά, ουά, an exclamation	<i>vaah</i> , an exclamation.	Dialect
267	Ουαλεντινιανοί, Ουαλεντινιοι, Ουαλεντιανοί, Βαλεντινιανοί (-ων, οι) 'Valentinians' (a Christian sect)	<i>Valentiniani</i> 'Valentinians'.	No
268	ουγγία, ουγκία, ουνκία, όγκία, όγκία, γουγκία, ώνκία, ώκία (-ας, ή) 'ounce', 'one twelfth'	<i>uncia</i> 'ounce', 'one twelfth'.	SMG
269	ουετι(ε)ρανός, βετι(ε)ρανός, ουιτρανός, όατρανός, ουτρανός, βατρανός, έτρανός, ιετρανός (-ή, -όν) 'veteran',	<i>veteranus</i> 'veteran'.	Revival
270	ουίγουλ, βίγουλ, ουίγουλος, βιγλός (-?, ό) 'watchman'	<i>vigil</i> 'watchman'.	Romance
271	όφ(φ)ικιάλιος, όφφικιάλις, όπφικάλις (-ου, ό), a title,	<i>officialis</i> 'official attending on a magistrate'	SMG
272	όφ(φ)ίκιον, όφήκιον, όπίκιον (-ου, τό) 'official appointment', 'duty',	<i>officium</i> 'duty'.	SMG
273	όψωνάτωρ, όψωνιάτωρ, όψονάτωρ (-ορος/-ωρος, ό) 'caterer'	<i>obsonator</i> 'caterer' (itself ultimately from <i>όψον</i> 'prepared food').	No
274	παγανικός (-ή, -όν) 'civilian', 'unofficial', 'lay',	<i>paganicus</i> 'civilian' or <i>paganus</i> 'civilian' via <i>παγανός</i> + <i>-ικός</i> .	No
275	παγανός, πακανός (-ου, ό) 'civilian', 'private person', 'gladiator'	<i>paganus</i> 'civilian'.	SMG
276	παλάτιον (-ου, τό) 'Palatine Hill', 'palace or court of the Roman emperor', 'palace'	<i>palatium</i> 'Palatine Hill', 'imperial residence'.	SMG
277	παλλιόλιον, παλλιώλιον (-ου, τό) 'small cloak',	<i>palliohum</i> 'little mantle' + <i>-ιον</i> .	No

278	παλλίοιον, παλλίωλον, παρίωλον (-ου, τό) 'small cloak',	<i>palliohum</i> 'little mantle'.	No
279	πά(λ)ιον, πάληον (-ου, τό) 'mantle',	<i>pallium</i> 'mantle'.	No
280	πᾶλος (-ου, ό) 'stake', 'pike', 'squad of gladiators'	<i>palus</i> 'stake'.	Dialect
281	πανάριον, πανάρειν (-ου, τό) 'breadbox', 'medicine chest', 'box'	<i>panarium</i> 'breadbox'.	No
282	παπυλιών, παπυλεών, παπυλαιών (-ώνος, ό) 'tent'	<i>papilio</i> 'tent'	No
283	παρατοῦρα, περατοῦρα (-ας, ή) 'distinctive dress', 'full dress', 'equipment'	<i>paratura</i> 'preparation'	No
284	πάτελλα, βάτελλα (-ης, ή) 'dish', 'plate'	<i>patella</i> 'little dish'.	SMG
285	πατρίκιος (-ου, ό) 'patrician man'	<i>patricius</i> 'patrician'.	SMG
286	πατριμόνιον, πατριμόνιον, πατριμούνιον, πατρεμούνιον, βατριμούνιον (-ου, τό) 'property', 'estate'	<i>patrimonium</i> '(imperial) property'.	No
287	πάτρων, πάτρον (-ωνος/-ονος, ό), πατρώνης (-ου, ό) 'patron',	<i>patrnus</i> 'patron'.	Revival
288	πεκούλιον (-ου, τό) 'personal property',	<i>peculium</i> 'personal property of a slave etc.'	Dialect
289	περεγρῖνος, περεγρῆνος, περεγρεῖνος (-η, -ον) 'foreign', 'for foreigners',	<i>peregrinus</i> 'foreign'.	No
290	πέρνα, πέρνη, πτέρνη (-ης, ή) 'ham',	<i>perna</i> 'ham'.	No
291	πίλα, πεῖλα (-ας, ή) 'pier', 'mole', 'jetty'	<i>pila</i> 'pillar', 'pier'	No
292	πιμεντάριος, πιγμεντάριος, ποιμεντάριος, πιημεντάριος (-ου, ό) 'spicer', 'apothecary'	<i>pigmentarius</i> 'dealer in paints or cosmetics'.	No
293	ποντίφεξ, ποντίφιξ (-ικος/-εκος, ό), a priestly title	<i>pontifex</i> priestly title	Revival
294	πούβλικος, πουπλικός (-η, -ον) 'public'	<i>publicus</i> 'public'.	No
295	πουλβῖνον, πουλβεῖνον, φουλβῖνον, φολβεῖνον, φουλβίν, φουλβίνα(ν), πούλβιον, πουλβ(ε)ῖνος (-ου, τό or ό) 'cushion', 'pillow'	<i>pulvinus</i> 'cushion', 'pillow'.	No
296	πραῖδα, πρέδα (-ας, ή) 'loot',	<i>praeda</i> 'loot'.	SMG
297	πραϊκόκ(κ)ιον, πρεκόκ(κ)ιον (-ου, τό) 'little apricot'	<i>praecocia/praecoqu(i)a</i> , neut. pl. of <i>praecox</i> 'apricot'	No
298	πραϊκων, πρέκων, πρέκωρ, βρέκων, βρέχων (-ωνος/-ονος, ό) 'herald'	<i>praeco</i> 'herald'.	No
299	πραϊπόσιτος, πρεπόσιτος, πρεπόσειτος (-ου, ό), a title	<i>praepositus</i> 'person in charge'.	No
300	πραισίδιον, πραισιδία, πραισειδιον, πρεσίδιον, πρασίδιον (-ου, τό) 'garrison'	<i>praesidium</i> 'garrison'.	No
301	πραιτέριτος, πρετέριτος, προτεριτός (-η?, -ον or -ου, ό) 'in arrears', 'delayed'	<i>praeteritus</i> 'former', 'past'.	No
302	πραϊτωρ, πραέτωρ (-ορος/-ωρος, ό), an official title	<i>praetor</i> 'praetor'.	SMG
303	πραιτωριανός, πραιτοριανός, πρετωριανός, πραιτωρεανός (-ή, -όν) 'praetorian'	<i>praetorianus</i> 'praetorian'.	SMG
304	πραιτώριον, πραετώριον, πρετώριον, πλετώριον (-ου, τό) 'official residence of the governor', 'residence', 'praetorian guard'	<i>praetorium</i> 'headquarters', 'praetorian guard'.	SMG
305	πραιτώριος, πραετώριος, πρετώριος (-α, -ον) 'praetorian'	<i>praetorius</i> 'praetorian'.	No
306	πραϊφεκτος, πρίφεκτος, πρόφεκτος (-ου, ό) 'prefect'	<i>praefectus</i> 'prefect'.	No
307	πριβᾶτος, πρι(ε)ιουᾶτος, πριβᾶτος, πριβᾶτος, προυᾶτος, πιβραῖτος (-η, -ον) 'private',	<i>privatus</i> 'private'	No
308	πρίγκεψ, πρίγκιψ, πρίνκεψ, πρίνκιψ, πρίγκιπος (usually -ιτος, ό), a military and civil rank	<i>princeps</i> 'first'.	SMG
309	πριγκιπάλι(ο)ς, πριγκιπάρι(ο)ς, πριγκιπάλι(ο)ς, πριγκιπάρι(ο)ς (-ου, ό) 'officer',	<i>principalis</i> 'principal'.	No
310	πριγκίπια, πριγκίπια, πριγκιπέπια (-ων, τά) 'headquarters'	<i>principia, -orum</i> 'headquarters'	No

311	πριμιπιλάριος, πριμιπιλλάριος, πριμοπ(ε)ιλάριος, πριμοπειλάριος, πριμηπηλάριος, πρ(ε)ιμπειλάριος, πρινπιλάριος (-ου, ό), a military and civilian rank	<i>primipilaris/primipilarius/primopilaris</i> 'senior centurion'	No
312	πριμίπιλον, πρ(ε)ιμ(ε)ίπειλον, πριμίπιλλον, πριμίπιλον, πρ(ε)ιμόπ(ε)ιλον (-ου, τό) 'senior centurion tax'	<i>primum pilum/primipilum</i> 'office of senior centurion'	No
313	πριμίπιλος, πρ(ε)ιμοπίλος, πριμιπείλος (-ου, ό), a military rank	<i>primipilus/ primus pilus</i> 'senior centurion'.	No
314	πρῖμος, πρεῖμος (-η/-α, -ον) 'first'	<i>primus</i> 'first'.	Romance
315	προβοκάτωρ, πρωβοκάτωρ (-ορος, ό), a type of gladiator,	<i>provocator</i> 'challenger'.	No
316	προτήκτωρ, πρωτήκτωρ, προτέκτωρ, πρωτέκτωρ, προτίκτωρ, πρωτίκτωρ (-ορος/-ωρος, ό), a title	<i>protector</i> 'guardian'.	No
317	προφασσίων, προφαστίων (-ωνος/-ονος, ή) 'declaration (of birth)'	<i>professio</i> 'formal declaration'.	No
318	πωμάριον, πομάριον (-ου, τό) 'orchard'	<i>pomarium</i> 'orchard'	No
319	πωμαρίτης, πομαρίτης (-ου, ό) 'fruiterer'	<i>pomarium</i> 'orchard' via πωμάριον + -ίτης.	No
320	ραΐδα, ρῆδα, ρέδα (-ης?, ή) 'carriage'	<i>raeda</i> 'carriage'.	No
321	ρεγεών, ρεγιών (-ωνος, ή) 'district (within a city or its suburbs)	<i>regio</i> 'region'.	No
322	ρήτιάριος, ρητιάρειος, ριτιάρης (-ου, ό), a type of gladiator	<i>retiarius</i> 'gladiator with a net'.	No
323	ρίπάριος (-ου, ό) 'water-watchman'	<i>riparius</i> 'of riverbanks'.	No
324	ρούσιος, ρούσιος, ρο(ύ)σ(σ)εος, ρουσαῖος (-α, -ον) 'reddish', 'red circus faction',	<i>russeus</i> 'red-coloured'.	SMG
325	Ῥώμη (-ης, ή) 'Rome', 'Constantinople'	<i>Roma</i> 'Rome'.	SMG
326	σαβούρα (-ας, ή) 'ballast'	<i>saburra</i> 'ballast'.	SMG
327	σάγος (-ου, ό) 'blanket', 'cloak'	<i>sagum</i> 'military cloak'.	Dialect
328	σαλάριον (-ου, τό) 'salary'	<i>salarium</i> 'salary'.	No
329	σάλγαμον, σάργαμον (-ου, τό) 'pickling material'	<i>salgama, -orum</i> 'vegetables for pickling'.	Dialect
330	σάλιος (-ου, ό), a type of priest	<i>Salius</i> 'Salic priest'.	No
331	αλτάριος, σαλτουάριος (-ου, ό) 'forester', 'steward'	<i>saltuarius</i> 'person employed in looking after an estate' and/or <i>saltus, -ūs</i> 'woodland' via σάλτων + -άριος.	No
332	σαξίφραγον, σαξίφραγγον, σαφίφραγος, σαξίφραγ(γ)α, σαρξιφάγον, σαρξιφαγές (usually -ου, τό or ό or ή), plant name,	<i>saxifragum</i> 'maiden-hair fern'	No
333	σάπων, σήπων, σάπουν (-ωνος, ό) 'soap'	<i>sapo</i> 'soap'	SMG
334	σάρδα (-ης, ή) 'sardine'	<i>sarda</i> 'sardine'.	No
335	Σατορνάλια, Σατουρνάλια (-ων, τά), a festival	<i>Saturnalia, -ium</i> 'festival of Saturn'.	Revival
336	σεκουνδαρούδης (-ου, ό), a position in a gladiatorial establishment	<i>secunda rudis</i> 'deputy to the chief instructor of a gladiatorial school'	No
337	σεκούτωρ (-ορος/-ωρος, ό), a kind of gladiator and a military aide	<i>secutor</i> 'follower' (a type of gladiator).	No
338	σέλλα (-ης, ή) 'seat', 'saddle'	<i>sella</i> 'seat'.	SMG
339	Σεπτέ(μ)βριος (-α, -ον or -ου, ό) 'September'	<i>September</i> 'September'	SMG
340	Σευήρεια, Σεβήρεια (-ων, τά) 'Severan games',	<i>Severus</i> + -ειος.	No
341	σήκρητον, σέκρητον, σίκρητον, σίκριτον (-ου, τό) 'court', 'secret', 'cabinet'	<i>secretum</i> 'secret'.	No
342	σησκουπλικάριος, σησκουπλικιάριος, σεσκουπλικάριος (-ου, ό) 'soldier receiving 1.5 times the normal rations',	<i>sesquiplicarius</i> 'soldier who receives 1.5 times the normal pay'.	No
343	σηστέριος, σεστέριος (νοῦμμος/νόμος) (-ου, ό) 'sesterce'	<i>sestertius (nummus)</i> , a sesterce coin.	No
344	σιγγλάριος, σινγλάρ(ε)ιος, σιγγουλάριος, σινγ(ου)λάριος (-ου, ό), originally a type of soldier, later a type of messenger,	<i>singularis</i> 'officer's aide'	No

345	σίγνιφερ, σιγνίφηρ, σιγνιφέρης, σιγνίφερος, σιγνήφορος (-ος/-ου, ό) 'standard-bearer',	<i>signifer</i> (gen. <i>signiferī</i> ) 'standard-bearer'.	No
346	σίγνον, σίκνον (-ου, τό) 'statue', 'place in camp',	<i>signum</i> 'sign'.	Dialect
347	σικάριον (-ου, τό) 'dagger',	<i>sica</i> 'dagger' + -άριον.	No
348	σικάριος (-ου, ό) 'bandit'	<i>sicarius</i> 'assassin'	No
349	σιλίγνιον, σελίγνιον (-ου, τό) 'loaf of siligo'	neut. of <i>siligineus</i> 'made from siligo', or possibly <i>siligo</i> (gen. <i>siliginis</i> ) 'soft wheat' + -ιον	Dialect
350	σκάλα, σκάλη, perhaps σγάλη (-ης/-ας, ή) 'stairs', 'ladder'	<i>scalae</i> 'ladder', 'stairs'.	SMG
351	σκάμνος, σκάμνον (-ου, ό or τό) 'bench', 'couch',	<i>scamnum</i> 'bench'.	SMG
352	σκ(ο)υτάριος (-ου, ό) 'shield-bearer' (a type of guard),	<i>scutarius</i> 'guard armed with a large shield'	SMG
353	σκούτλιον (-ου, τό) 'dish', 'plate',	<i>scutula</i> 'dish' + -ιον.	SMG
354	σκοουτουλάτος, σκοουτλάτος, σκουτλάτος (-ον) 'with a checked pattern'	<i>scutulatus</i> 'with a checked pattern'.	No
355	σκριβα(ς), σκρείβα(ς) (-α/-ου, ό) 'scribe'	<i>scriba</i> 'scribe'.	No
356	σκρινιον, σκρήνιον, σκρείνιον, σκρίνειον (-ου, τό) 'dossier', 'box'	<i>scrinium</i> 'writing-case'.	Revival
357	σόλιον 1, σολίνος, σολίνον (-ου, usually τό) 'slipper', 'sandal'	<i>solea</i> 'sandal' + -ιον.	Revival
358	σόλιον 2 (-ου, τό) 'seat', 'stool',	<i>solium</i> 'chair'.	No
359	σουβαλάριον (-ου, τό), a container for water (a water-bag?) and a kind of belt	<i>subalare</i> 'under-girdle'	No
360	σουδάριον, σωδάριον, σουδέριον, σουδάριον (-ου, τό) 'towel', 'napkin',	<i>sudrium</i> 'handkerchief', 'napkin'.	SMG
361	σουκ(κ)έσσωρ, σουπκέσσωρ, σεκούσωρ, σουκέστωρ, συπκέστωρ (-ορος/-ωρος, ό) 'relief'	<i>successor</i> 'successor'.	No
362	σουμμαρούδης (-ου, ό) 'chief instructor at a gladiatorial school'	<i>summa rudis</i> 'chief instructor at a gladiatorial school'	No
363	σοῦμμος (-η, -ον) 'highest in rank'	<i>summus</i> 'highest'.	SMG
364	σπεκλάριον, σφεκλάριον (-ου, τό) 'transparent stone', 'window pane made of such stone'	<i>(lapis) specularis</i> 'transparent stone'.	No
365	σπέκλον, σφέκλον (-ου, τό) 'mirror', 'window pane'	<i>speculum</i> 'mirror'.	No
366	σπεκουλάτωρ, σπεκλάτωρ (-ορος/-ωρος, ό), a military functionary	<i>speculator</i> 'scout'.	No
367	πο(ύ)ριος (-α, -ον) 'bastard', 'false'	<i>spurius</i> 'son of an unknown father'.	No
368	στάβλον, στάβλος, σταῦλον, σταῦλος (-ου, τό or ό) 'stable',	<i>stabulum</i> 'stable'.	SMG
369	στατίον (-ωνος/-ονος, ή) 'station'	<i>statio</i> 'station'	No
370	στατιονάριος, στατιονάριος, ιστατιώναρις (-ου, ό) 'member of foreigners' association'	<i>stationarius</i> 'member of a military detachment'.	No
371	στάτωρ (-ορος, ό), a position in the Roman army	<i>stator</i> 'official messenger'	No
372	στιπένδιον, στο(υ)πένδιον, ιστοπένδιον (-ου, τό) 'wages',	<i>stipendium</i> 'wages',	No
373	στολάτος (-α, -ον) (always with ματρῶνα 'matron') 'wearing a stola'	<i>stolata (matrona)</i> 'matron granted particular honours'	No
374	στράτα (-ας, ή) '(paved) street',	<i>strata</i> 'paved road'	SMG
375	στράτωρ (-ορος, ό), groom on staff of Roman officer	<i>strator</i> 'groom'.	No
376	συνψέλ(λ)ιον, συνψέλ(λ)ιον, συνψέλιον, συμσέλιον, συμψίλιον, σεμσέλιον, σεμψέλ(λ)ιον, σεμσέλιον (-ου, τό) 'bench',	<i>subsellium</i> 'low seat' with influence from συν-	No
377	σολάριον, σολάρ(ι)ον (-ου, τό) 'sun terrace'	<i>solarium</i> 'sun terrace'.	No
378	ταβέλλα (-ης, ή) 'writing tablet', 'note',	<i>tabella</i> 'tablet'.	Romance
379	ταβελλάριος (-ου, ό) 'secretary'	<i>tabellarius</i> 'clerk', 'courier'.	No
380	ταβέρνα (-ης/-ας, ή) 'shop'	<i>taberna</i> 'shop'.	SMG
381	τάβλα, τάβλη (-ης, ή) 'tablet',	<i>tabula</i> 'board'	SMG

382	ταβλάριος, ταβουλ(λ)άριος, ταβλάρης (-ου, ό) 'registrar'	<i>tabularius</i> 'book-keeper'	No
383	ταλάριον (-ου, τό) 'sandal fastened at the ankles',	<i>talaria</i> , neut. pl. of <i>talaris</i> 'of the ankles'.	No
384	τεσ(σ)αράριος, τεσ(σ)εράριος, τεσ(σ)αλάριος, θεσ(σ)αλάριος, τεσσαράλιος, θεσσάριος, θασσαλάριος, etc. (-ου, ό), military officer distributes the watchword	<i>tesserarius</i> 'soldier who circulates the <i>tessera</i> with the password'.	No
385	τίρων, τείρων, τήρων, τιρόνης, τιρώνης (-ωνος/- ονος/-ου, ό) 'recruit'	<i>tiro</i> 'recruit'.	No
386	τίτλος, τίθλος, τίτ(ο)υλος, τήτλος, τύτλος, or -ον (- ου, ό or ή or τό) 'title',	<i>titulus</i> 'title', 'inscription', 'section'.	SMG
387	τ(ο)ῦρμα, τόρμα, τ(ο)ῦρμη, τόρμη, (-ης, ή) 'troop'	<i>turma</i> 'squadron of cavalry'.	Revival
388	τριβούνος (-ου, ό) 'tribune'	<i>tribunus</i> 'tribune'.	No
389	τρ(ο)ῦλ(λ)α (-ας/-ης, ή) 'ladle'	<i>trulla</i> 'ladle'.	Dialect
390	φάβα (-ατος, τό) 'beans'	<i>faba</i> , -ae 'bean(s)'.	SMG
391	φάβριξ (-ικος, ή) 'workshop'	<i>fabrica</i> 'workshop'.	Romance
392	φαίκλα, φαίκλη, φάκλα, φέκλη, σφέκλη (-ης, ή) 'burned wine crust'	<i>faecula</i> 'dried lees of wine'.	No
393	φακιάλιον, φακιάριον, φακιο(ύ)λιον, φακιώλιον, φακιανον, πακιάλιον, etc. (-ου, τό) 'facecloth',	<i>faciale</i> 'facecloth'	SMG
394	Φαλερινός (-ου, ό) 'Falernian wine'	<i>Falernus</i> 'Falernian'	No
395	Φαλέρνος (-ου, ό) 'Falernian wine'	<i>Falernum</i> 'Falernian wine'	No
396	φαμιλία, φαμελία, φαμηλία (-ας, ή) 'family',	<i>familia</i> 'household'.	SMG
397	φαμιλίριος, φαμελιάριος, φαμηλιάριος (-ου, ό) 'member of the household',	<i>familiaris</i> 'member of the household', 'servant'.	No
398	φασίολος, φασήολος, πασίολος, φασ(ι)ωλος, φασιούλος, φασιούλους (-ου, ό) 'bean'	<i>phaseolus/phasiolus/passiolus</i> 'bean', itself perhaps from φάσηλος.	SMG
399	φασκία, φασκεία, φασκίνα (-ας, ή or -ων, τά) 'bandage'	<i>fascia</i> 'bandage'	SMG
400	Φεβρουάριος, Φεβραῖος, Φεβροάριος, Φεβράριος (- α, -ον or -ου, ό) 'February'	<i>Februarius</i> 'February'.	SMG
401	φεμινάλια, φημινάλια, φημινάλια (-ων, τά) 'trousers',	<i>feminalia</i> , -ium 'thigh- coverings'.	No
402	φετιάλιος, φητιᾶλις, φητιᾶλις (-ου/ος?, ό), a kind of priest,	<i>fetialis</i> 'fetial priest'.	No
403	φιβλατόριον, φιβουλατόριον (-ου, τό), a garment	<i>fībulatorium</i> , a garment	No
404	φίσκος (-ου, ό) 'basket',	<i>fiscus</i> 'basket'	No
405	φολιᾶτον, φουλιᾶτον (-ου, τό), a type of perfumed oil,	<i>foliatum</i> 'perfume made from aromatic leaves'.	No
406	φορμα(ε)ία, φορμαρία, φωρμαρία, φρουμαρία (- ας, ή) 'list of supplies'	<i>formula</i> 'list' with influence from -ία.	No
407	φόσσα (-ας/-ης, ή) 'ditch',	<i>fossa</i> 'ditch'.	No
408	φούνδα, ποῦνδα (-ης, ή) 'money belt',	<i>funda</i> 'strap', 'sling'.	SMG
409	φούρνος (-ου, ό) 'oven',	<i>furnus</i> 'oven'.	SMG
410	φραγγέλιον, φλαγγέλιον, φραγγέλιον (-ου, τό) 'whip'	<i>flagellum</i> 'whip' + -ιον.	SMG
411	φραγγελ(λ)όω, φλαγγελλόω 'whip'	<i>flagello</i> 'whip' or from <i>flagellum</i> 'whip' (via φραγγέλιον?) + -όω.	No
412	φρουμεντάριος (-α, -ον or -ου, ό) 'concerned with victualling'	<i>frumentarius</i> 'of the corn supply'.	No
413	φωκάριον, φοκάριον (-ου, τό) 'concubine'	<i>focaria</i> 'concubine'.	No
414	Χριστιανός, Χρηστιανός, Χρηστουανός (-οῦ, ό) 'Christian'	<i>Christianus</i> 'Christian'.	SMG

Table 13: Latin loanwords in Greek borrowed before 300 AD, adapted from Dickey (2023: 20–502)