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Greek

Brian D. Joseph

1 Historical Background

The Greek language forms, by itself, a separate branch of the Indo-European family. It is one of the oldest attested Indo-European languages, being attested from c. 1400 BC in the Mycenaean Greek documents found on Crete (and from somewhat later, on the Greek mainland) written in the Linear B syllabary. Except for a break in attestation between the end of the Mycenaean empire (c. 1150 BC) and roughly 800 BC, a period sometimes referred to as the ‘Dark Ages’ of Greek culture, Greek presents a continuous record of attestation for the linguist, right up to the present day.

Commonly called *Greek* in English, based on the term *Graeci* used by the Romans to label all the Greeks (though originally the name may have properly applied only to a tribe in the north-west of Greece), the language is also referred to as *Hellenic*, from the Greek stem ‘Ἑλλην-*,¹ used in the *Iliad* to refer to a Thessalian tribe but in Herodotus (and elsewhere) to designate the Greeks as a whole as opposed to barbarians; indeed, the Greeks themselves have generally referred to their language as ἑλληνική, though contemporary Greeks also use the designation ρωμαίικα, an outgrowth of their connection historically with the Eastern Roman Empire based in Constantinople.

Using a somewhat outmoded but nonetheless still widely cited putative dialect division within Indo-European, one can classify Greek as a ‘centum’ language, for it shows a distinct set of reflexes for the Indo-European labio-velars, opposed to a single set of reflexes for the Indo-European palatals and velars combined; thus, Greek shows a root *πρια-* ‘buy’ (cf. also Mycenaean *qi-ri-ja-to* ‘bought’ showing the labio-velar preserved as < q >) from Proto-Indo-European **k^wriH₂-* (cf. Sanskrit root *kṛī-* ‘buy’), a noun *κρέας* ‘meat’ from Proto-Indo-European **krewH₂S* (cf. Sanskrit *kravis-* ‘raw flesh’), and a root *κει-* ‘lie (down)’ from Proto-Indo-European **k^hei-* (cf. Sanskrit root *śī-* ‘lie’), in which the plain **k* of the proto-language and the palatal **k^h* show a merger while the labio-velar **k^w* is kept distinct. Greek also shows some particular affinities with Armenian and Indo-Iranian, sharing with these branches, for example, the past-tense morpheme **e-* (the ‘augment’), and the use of the negator **mē* (Greek μή), and with Armenian alone the vocalisation of the Indo-European ‘laryngeal’ consonants in initial

position, and some notable parallels in vocabulary (e.g. ἀλώπηξ ‘fox’ = Arm. *aluēs*, where no other Indo-European language has precisely this form, or πρωκτός ‘anus’ = *erastank’* ‘buttocks’). Moreover, Greek preserves the Indo-European vowel system (with long and short **a *e *i *o *u*) more faithfully than any other language in the family.

Differentiating Greek from the other members of the Indo-European family, though, are several particular features. In morphology, Greek innovated a (past and future) passive marker *-θη-* and elaborated the infinitival system. With regard to phonology, Greek alone in Indo-European shows voiceless aspirates (in the ancient language) as the continuation of the Indo-European voiced aspirate consonants (e.g. φερ- ‘carry’ from **bher-*, cf. Sanskrit *bhar-*); in addition, Greek lenited Indo-European **s* to *h* in many environments, ultimately losing it intervocalically (e.g. ἑπτὰ ‘seven’ from **septm̥*, cf. Latin *septem*, or γένε-ι ‘in, at, to a race, kind (dat. sg.)’ from **genes-i*, cf. Sanskrit *janas-i* ‘in the people (loc. sg.)’). Also, Greek deleted original word-final stops (e.g. μέλι ‘honey’ from **melit*, cf. Hittite *milit* ‘honey’).

Moreover, although Common Greek preserved the Indo-European labiovelars as such, to judge in part from their preservation in Mycenaean (cf. *qi-ri-ja-to* above), the ancient language is characterised by a number of complex dialectal developments with **k^w*, **g^w* and **g^wh*. Labial reflexes occur in some environments and in some dialects (e.g. pan-Greek interrogative stem *πο-* from **k^wo-*, Aeolic (Boeotian) *πέτταρες* ‘four’ from **k^wetw^r-*), dental reflexes in other environments, also dialectally conditioned (e.g. τίς ‘who’ from **k^wis*, and non-Aeolic (Attic) *τέτταρες* ‘four’), and even velar reflexes in some dialects when adjacent to **u* or **w* (e.g. εὖχ- ‘wish’ from **ewg^wh-*). Further Greek-particular developments setting the language off from other Indo-European languages include a number of complex treatments of clusters of obstruent + **y* and of clusters of resonant (**r *l *m *n *y *w*) + **s* (examples below in Section 4.1). A final diagnostic feature for Greek within Indo-European is a three-way distinction in reflexes of the laryngeal consonants, represented by *ε*, *α* and *ο* in Greek; this feature is likely to represent the continuation of a three-way Proto-Indo-European contrast in the laryngeals, but by some accounts it is a significant Greek innovation (perhaps morphologically induced).

The early attestation of Greek and the archaic nature of the Homeric epic corpus together serve to make Greek extremely important for the understanding and reconstruction of all aspects of Proto-Indo-European language and culture. In addition, the literary output of writers of Greek has throughout the ages been of utmost importance to Western culture so that Greek has a special place in a variety of humanistic pursuits, including the history of linguistics because of the native Greek grammatical tradition developed by the Alexandrians in the Hellenistic era. Finally, the long and relatively continuous attestation of the Greek language gives it a significance for general historical linguistics, as it offers a ‘window’ on the nature of language change which few other languages can provide.

With such a long historical record for the language, it is convenient, as well as conventional, to break the span up into several major periods of development. These periods are defined in part by external, especially political and historical, factors, but also reflect real linguistic developments. These periods are:

- (a) Mycenaean Greek (c. 1500–1150 BC)
- (b) Classical Greek, including Homeric Greek (c. 800–300 BC)

- (c) Hellenistic Greek, including New Testament Greek and the Roman period (c. 300 BC – AD 300)
- (d) Middle Greek, comprising Byzantine Greek (c. AD 300–1100) and Medieval Greek (c. AD 1100–1600)
- (e) Modern Greek (c. AD 1600 to the present), actually covering the early Modern era (c. AD 1600–1800) and contemporary Greek.

With such a long period of attestation for Greek, it is of course natural to find that there are some significant differences between Greek of the fourteenth century BC and Greek of the twenty-first century AD, and these differences are chronicled in the sections to follow. At the same time, though, there are some aspects of the language, occasionally isolated ones though some fit into a system, which show remarkable continuity and stability over some 3,500 years. Among these are the past tense augment ε-, still found in stressed positions in the modern language, the personal endings in the present active and medio-passive present and past (excepting the third person plural), the general structure of the nominal and verbal systems, and numerous lexical items, including some which have changed neither phonetic form (excepting the realisation of accent) nor meaning, e.g. *ἄνεμος* ‘wind’.

2 Greek in its Geographic and Social Context

Greek has been spoken in the southern Balkans since early in the second millennium BC, according to conventional accounts of the coming of the Greeks to the area. Arriving most likely in waves of different tribes over a period of several centuries, the Greeks absorbed some autochthonous groups, traces of whose language(s) can probably be seen in numerous place names and terms for native flora and fauna containing the sequences -νθ- and -σσ-, among others (e.g. *Κόρινθος* ‘Corinth’, *μίνθη* ‘mint’, *Παρνασσός* ‘Parnassus’, etc.), and possibly also in Indo-European-like words with a somewhat aberrant phonology if natively Greek (e.g. *ἀλείφω* ‘I anoint’ with a prefixed *ἀ-* and a voiceless aspirate consonant, both unexpected if the word were inherited directly from Proto-Indo-European into Greek, versus inherited Greek *λίπος* ‘fat’, from an Indo-European root **leip-*). Greek has remained in the Balkans since that early period, although it has spread to other areas as well.

In ancient times, Greek colonies were established in Cyprus (perhaps as early as the twelfth century BC) and southern Italy (c. eighth century BC), and there have been Greek speakers continuously in these places up to the present day. Similarly, colonies established in western Asia Minor were continuously peopled by Greek speakers up to the beginning of the twentieth century, when population exchanges in the 1920s between Greece and Turkey led to the relocation of most of the Greeks back to Greece. All of these settlements were renewed with further Greek speakers throughout the Hellenistic period, when Greek spread as the lingua franca for all of the eastern Mediterranean, the Middle East and into Central Asia as far east as Persia and India. Some of the pockets of Greek speakers established in that period have remained into the contemporary period, for example in Alexandria (Egypt).

In the Middle Greek period, the geographic domain of Greek became somewhat more restricted, with important centres still in Constantinople, Asia Minor in general, Alexandria, Cyprus and elsewhere in the general eastern Mediterranean area, including

Ukraine. The modern era has seen the reduction in the number of Greek speakers in all these areas except Cyprus, but also the expansion of Greek into the ‘New World’. There are now significant Greek-speaking communities in the USA (especially the urban centres of the East), in Canada, in Britain and in Australia. The speakers in Greece, Cyprus and elsewhere in the Mediterranean together with those in the ‘Hellenic diaspora’ number some 13 million today (c. ten million in Greece).

Despite the rather widespread geographic distribution of Greek throughout its history, it is Balkan Greek, i.e. Greek of the southern Balkans together with the islands of the Ionian Sea and the Aegean Sea, including Crete, that is of primary importance here. The dialect diversity in ancient times, with four main dialect groups (Attic-Ionic, Aeolic, Arcado-Cyprian and West Greek (comprising Northwest Greek and Doric)) as well as the earlier Mycenaean Greek (problematic in terms of its connections with these dialect groups), centred more on matters of detail in phonological and morphological development rather than on broad structural aspects. Thus, Attic, the dialect of Athens and the pre-eminent dialect from a cultural and political standpoint, and more generally the Attic-Ionic branch of Greek, constitute the primary and certainly best-known representative of Ancient Greek. Moreover, Attic-Ionic provided the basis for the Hellenistic koine (ἡ κοινὴ διάλεκτος ‘the common dialect’), which showed considerable uniformity across the whole area of its use. This koine, in turn, provided the basis for the Middle and Modern Greek dialects, with the exception of Tsakonian, spoken in the eastern part of the Peloponnesus, which derives directly from the ancient Doric dialect. Finally, the language of the modern Hellenic diaspora, while incorporating features, mainly lexical items, from the local dominant languages, has nonetheless remained true to its Attic-Ionic origin in terms of general structural characteristics.

Focusing on Balkan Greek is important for another reason. This particular geographic setting is crucial for understanding the development of the language in the late Middle Greek and early Modern Greek periods, and especially for understanding many of the differences, to be discussed in more detail below, between these later stages of the language and its earlier stages. Greek in these later stages shows numerous linguistic features that are found as well in other languages of the Balkans, such as Albanian, Aromanian, Megleno-Romanian, Romanian, Macedonian, Bulgarian, Romani, Western Rumelian Turkish and, to a somewhat lesser extent, Serbian. These features include various mergers of nominal case functions, especially possessive and indirect object functions in a single form, the formation of a future tense with a form of the verb ‘want’ (e.g. Modern Greek *θά* from earlier impersonal *θέλει* ‘wants’ + subjunctive marker *ύ*), the widespread use of finite complement clauses where many other languages (and indeed, earlier stages of the languages in question, for the most part) would use non-finite forms, and others of a more particular nature.

The exact nature of the relation between developments of this sort in Greek and parallel developments in the other Balkan languages is disputed; some scholars argue that Greek underwent the changes as part of its natural development and that (many of) these changes spread to the other languages from Greek, while others argue that their appearance in Greek is the result of the importation of foreign features into the language through contact with the other Balkan languages. It is more likely, though, that no single explanation can be found to be valid for all of these common features, and that some may have begun in Greek and spread from there, others may have made their way into Greek from elsewhere, and others may even be the result of a combination of Greek-internal developments enhanced or guided along a particular path through language contact.

One final aspect of the social setting of Greek that is vital to an understanding of the language concerns the extent to which a high- versus low-style distinction, inherent, probably, in all languages, has come to pervade Greek language use. In Ancient Greek, there is evidence for a distinction at least between the literary language in which most of the classical works (drama, poetry, philosophy, etc.) were written and the colloquial language as evidenced in numerous inscriptions; investigations in the 1970s into the inscriptions of the Athenian ἀγορά ('marketplace') indicated that colloquial usage was marked by pronunciations which came to be more current in later stages of the language, e.g. [i:] for [e:] and a spirantal pronunciation of the voiced stops, and observations contained in Plato's dialogue *Cratylus* provide confirmation of this point. Similarly, the Greek of the non-literary papyri of Hellenistic Egypt gives a good indication of what must have been true colloquial usage through numerous hypercorrections and mistakes in approximating 'correct', i.e. high-style, Attic Greek.

In later stages of Greek, though, a consciously archaising tendency on the part of many Middle Greek writers to 'Atticise', i.e. emulate Classical Attic Greek spelling, morphology, syntax and usage, served to create a large stylistic rift in the language. Consequently, there were writers in the Middle Greek era who wrote in a language not unlike Classical Attic Greek (though it must be noted that mistakes abound!), while others wrote in a form more in line with colloquial usage of the day, the result of several centuries of natural linguistic development from the Hellenistic koine. Even in such a speech form, though, numerous learned borrowings occur, owing to the prestige enjoyed by the archaising style. Accordingly, even 'pure' colloquial Greek, what has come to be called Demotic (Greek: δημοτική), at all times in the post-classical period has incorporated many historically anomalous and anachronistic elements; this is, of course, an expected development in a language with a long literary history available to speakers and writers at all times (compare the situation in India with regard to Sanskrit and the modern Indic languages, the Romance languages and Latin, and the Slavonic languages and Old Church Slavonic).

In the case of Greek, though, with the founding of the Greek national state in the 1820s and the desire at the time for a unified form of a national language, this stylistic rift became institutionalised and politicised. The debate over which form of Greek to use in this context, the consciously archaising so-called 'puristic' Greek (Greek: καθαρεύουσα 'purifying') or the form more based in the colloquial developments from the koine, the Demotic Greek, has occupied much of the linguistic and political energy of the Greeks since the 1820s; the current official position on the 'language question' (Greek: το γλωσσικό ζήτημα) is in favour of the Demotic, with the now-standard language being based generally on the southern (i.e. Peloponnesian) dialect.

3 Writing Systems for Greek

Greek has been written in a variety of writing systems throughout its history. The earliest written Greek is found in the syllabic system known as Linear B, in which Mycenaean Greek documents were written, generally on clay tablets. A syllabic system, related in some way to that of Linear B (though the exact details of the relationship are controversial) was also used in Cyprus in ancient times to write many of the ancient Cyprian dialect inscriptions. In addition, Greek Muslims in Crete occasionally used the Arabic alphabet to write Greek, and Greek Jews in the sixteenth century in Constantinople used the Hebrew alphabet for the same purpose.

The most enduring writing system for Greek, though, is the Greek alphabet. Adapted from the old North Semitic alphabet (traditionally, according to the Greeks themselves, transmitted through the Phoenicians) and embellished with separate signs for vowel sounds, the Greek alphabet has served the Greek language well for some 2,800 years since its introduction into Greece in the tenth or ninth century BC.

The system is basically a one-letter-to-one-phoneme system, though there are some ‘double letters’ representing clusters and at all stages some distinctive oppositions are either not represented at all (e.g. [a] versus [a:] in Ancient Greek) or represented only secondarily via clusters of letters (as with [d] versus [ð], spelled < ντ > and < δ >, respectively, in Modern Greek). Also, diacritics to represent pitch accent in Ancient Greek were not introduced until Hellenistic times (c. 200 BC) by the Alexandrian grammarians, and changes in the accentual system, from a pitch accent to a stress accent, left the writing system with more diacritics than needed for Middle and Modern Greek (though in 1982 an official orthography was adopted with but a single accentual diacritic). Moreover, the phonetic values of the letters have changed over time, so the current orthography is not as well matched with the phonological system as in earlier stages. Table 19.1 gives the information about the former and current phonetic values and transcriptions of the letters of the Greek alphabet.

4 Structural Features of Greek

Although five different periods were distinguished for the purposes of outlining the internal and external history of the Greek language over the approximately 3,500 years of its attestation, for the purpose of giving the major structural features of the language,

Table 19.1 The Greek Alphabet, with Transliteration and Pronunciation for Ancient (Attic) Greek and (Standard) Modern Greek, plus Diphthongs and Clusters

<i>Capital letter</i>	<i>Small Letter</i>	<i>Ancient phonetics</i>	<i>Usual transliteration</i>	<i>Modern pronunciation</i>	<i>Usual transliteration</i>
Α	α	[a]	a	[a]	a
Β	β	[b]	b	[v]	v
Γ	γ	[g]	g	{ [j] (/—i, e) [ɣ] (elsewhere)	y g(h)
Δ	δ	[d]	d	[ð]	d(h)
Ε	ε	[ɛ]	e	[ɛ]	e
Ζ	ζ	[zd]	z	[z]	z
Η	η	[ɛ:]	e:, ē	[i]	i
Θ	θ	[tʰ]	th	[θ]	th
Ι	ι	[i]	i	[i]	i
Κ	κ	[k]	k	[k]	k
Λ	λ	[l]	l	[l]	l
Μ	μ	[m]	m	[m]	m
Ν	ν	[n]	n	[n]	n
Ξ	ξ	[ks]	x	[ks]	ks, x (as in <i>box</i>)
Ο	ο	[o]	o	[o]	o
Π	π	[p]	p	[p]	p

Table 19.1 continued

<i>Capital letter</i>	<i>Small letter</i>	<i>Ancient phonetics</i>	<i>Usual transliteration</i>	<i>Modern pronunciation</i>	<i>Usual transliteration</i>
P	ρ	[r]	r	[r]	r
Σ	σ(ς ##)	[s]	s	[s]	s
T	τ	[t]	t	[t]	t
Υ	υ	[y]	y, u	[i]	i
Φ	φ	[p ^h]	ph	[f]	f
X	χ	[k ^h]	ch, kh	[χ]	h, x (IPA value)
Ψ	ψ	[ps]	ps	[ps]	ps
Ω	ω	[ɔ:]	o:, ô	[o]	o
	αι	[aj]	ai	[ɛ]	e
	αυ	[aw]	au	{ [av] (/ ___ +voice) [af] (/ ___ -voice)	av af
	ει	[e:]	ei	[i]	i
	ευ	[ew]	eu	{ [ev] (/ ___ +voice) [ef] (/ ___ -voice)	ev ef
	οι	[oj]	oi	[i]	i
	ου	[o:]	ou	[u]	u
	υι	[yj]	yi, ui	[i]	i
	γ before γ χ ξ	[ŋ]	n (g, kh, x/ks)	[ŋ]	n(g, h, x/ks)
	γκ	[ŋk]	nk	{ [(ŋ)g] (medially) [g] (initially)	(n)g g
	μπ	[mp]	mp	{ [(m)b] (medially) [b] (initially)	(m)b b
	μβ	[mb]	mb	[mv]	mv
	ντ	[nt]	nt	{ [(n)d] (medially) [d] (initially)	(n)d d
	νδ	[nd]	nd	[nð]	nd(h)
	τζ			[dz]	dz
	(##)'	[h]	h	∅	∅
	(##)'	∅ (absence of #h)		∅	∅

No underlining

it is more useful to examine the ancient language in contrast with the modern language. In general, then, the relevant distinction is between Classical Greek and Post-Classical Greek, for most of the changes which characterise the difference between these two stages of the language were already under way and evident in the koine of the Hellenistic period. Similarly, the differences between Middle Greek and Modern Greek are not great, and some scholars even date the beginning of the modern era to around the tenth or eleventh centuries AD. Accordingly, the whole post-classical period can be treated in a unified fashion, with the understanding that what is described in the modern language is the end-point of a long period of development from the classical language, and the stages of Hellenistic and Middle Greek defined earlier represent way stations on the road to Modern Greek; references to individual stages in particular developments, though, are made whenever necessary or appropriate.

4.1 Phonology

The consonant inventory of Ancient Greek included three distinctive points of articulation – labial, dental and velar – and three distinctive manners of articulation among the stops – voiced, voiceless unaspirated and voiceless aspirated. As noted above, in Common Greek (c. 1800 BC) and in Mycenaean Greek, there were also labio-velar consonants, which later merged with the labial, dental and velar stops under the conditions alluded to earlier. In addition, Greek had a single sibilant [s] (with [z] as an allophone before voiced consonants), the resonants [r] (with a voiceless allophone [r̥] in initial position) and [l], the nasals [m] and [n] (with [ŋ] as an allophone before velar consonants) and the glottal fricative [h]. There may have been an affricate [dʒ], though most of the evidence concerning the pronunciation of the letter < ζ > suggests it represented a true cluster of [z+d] not a unitary affricated segment (cf. spellings such as Διόζωτος for *Διὸς δωτός, literally ‘by-Zeus given’). The Common Greek [j] and [w] had been eliminated in many positions by Classical Greek, though they did remain as the second element of several diphthongs in the classical language; moreover, [j] is found in Mycenaean in several positions (e.g. *jo-i-je-si* ‘so they send’, interpretable ‘alphabetically’ as ὄς ἰενσι), and [w] occurs in many of the dialects (e.g. Mycenaean *wo-i-ko*, Doric, Thessalian and Arcadian Φοικος, where the letter < Ϝ > (‘digamma’) represents [w], to be compared with Attic οἶκος ‘house’).

By contrast to this relatively straightforward and simple consonant inventory, the vowel system of Ancient Greek was most complex. Length was distinctive and several degrees of height were distinguished as well; moreover, there were numerous diphthongs. The system of monophthongs is summarised in Table 19.2 and the diphthongal system is given in Table 19.3. It should be noted that the front rounded vowels ([y] and [y:] of Table 19.2) are characteristic of the Attic-Ionic dialect only; the other dialects had back [u] and [u:] corresponding to these Attic-Ionic vowels. Furthermore, the gaps in the short diphthongs (absence of [ej] and [ow]) are the result of early sound changes by which *ej became [eɪ] and *ow became [oɪ]. Finally, the long diphthongs were somewhat rare and had a very low functional load; in fact, early on in the classical period, [eɪj], [aɪj], [oɪj] lost their off-glide and merged with the corresponding long pure vowels.

Although there are dialectal differences in the consonants, these tend not to be in the consonantal inventory but rather have to do more with the outcome of the Common Greek labio-velars (e.g. labials generally in Aeolic versus conditioned (before front

Table 19.2 Ancient (Attic) Greek Monophthongs (IPA Symbols)

i	i:	y	y:
e	e:	o	o:
ɛ:		ɔ	
	a	a:	

Table 19.3 Ancient (Attic) Greek Diphthongs (IPA Symbols)

	ew	yj	e:j	e:w
aj	aw		a:j	a:w
oj			o:j	

vowels) dental reflexes or (elsewhere) labial reflexes in other dialects, as in *πέτταρες/τέτταρες* ‘four’ cited above), and the outcome of complex cluster developments involving obstruent plus glide combinations and resonant or nasal plus *s*. For example, generally speaking – there are several exceptional cases – *t+y* yielded a geminate *-ss-* (graphic < σσ >) in Ionic, Doric in general, Arcadian and part of Aeolic, a geminate *-tt-* (graphic < ττ >) in Attic and part of Aeolic (Boeotian), and various spellings < ζ >, < ττ >, < θθ >, which may represent developments of something like [ts], in Central Cretan (Doric), as in the feminine adjectival ending (from **-e(n)t-ya*) (*χαρί-)*εσσα (Ionic), (*Παδο-)*εσσα (Arcadian), (*οἰνοῦ-)*ττα (Attic), (*χαριτ-)*ετταν (Boeotian), (*ἔα-)*εσσα (Doric), (*ια-)*τταν (Central Cretan). Similarly, for certain classes of words and with some obscuring of dialect distribution due to analogies and some borrowings, there is a major split in the Greek dialects concerning the outcome of *t* before the vowel *i*, with West Greek and part of Aeolic (Thessalian and Boeotian) preserving *t* in this context and the other dialects assibilingating it to *s*, as in Doric εἶτι ‘(s)he goes’ versus Attic-Ionic εἶσι.

The vowel systems of the ancient dialects, however, show considerable variation, with alternations of length and quality and the outcome of various contractions serving to distinguish the dialects from one another. Particularly notable is the raising and fronting of Common Greek **a:* to [æ:] and ultimately [ɛ:] in the Attic-Ionic dialect; thus one finds Attic-Ionic μήτηρ ‘mother’ versus Doric (for example) μάτηρ from Common Greek **ma:te:r*. The fronting of [u] to [y] in Attic-Ionic has already been noted. Lengthening (often due to the loss of **s* or **y* in a cluster with a resonant) and contraction (of combinations of *e* and *o*) gave rise in Attic-Ionic to the long closed ([ɛ:] and [o:]) vowels and likewise in parts of Doric (e.g. Corinthian and Delphian) and Thessalian and Boeotian (both Aeolic), while in Lesbian (Aeolic) and Arcadian and the rest of Doric (e.g. Cretan, Laconian) long open vowels ([ɛ:] and [ɔ:]) are found as the corresponding elements. For example, Attic-Ionic has εἶμι [ɛ:mi] ‘I am’ from Common Greek **esmi*, while Doric has ἦμι [ɛ:mi]; similarly, Attic-Ionic has τρεῖς [tre:is] ‘three’ from Common Greek **treys*, while Doric has τρηῖς.

Among the peculiarities of Ancient Greek phonotactics, the following are to be noted: [r] could not occur in initial position; one finds instead the unvoiced allophone [r̥] (which has sometimes been described as an aspirated *r*). In final position, only [r], [s], [n] and vowels were permitted. Geminate consonants were permitted, though geminate labial and velar stops occur most often in onomatopoeic, nursery and expressive words. Lastly, Ancient Greek tolerated numerous consonant clusters, including a variety of initial clusters: any stop plus *r* or *l* is permitted (including #τλ-); all but **βν-*, **βμ-*, **γμ-*, **θμ-*, **πμ-*, **τν-*, **φμ-* and **χμ-* are found for stop plus nasal clusters, though φν- occurs only in a single onomatopoeic form, and τμ-, δν- and κμ- are quite rare; two stops are permitted initially if they differ in point of articulation but agree in manner and the second stop is a dental, though the voiced such clusters (βδ- and γδ-) were found in only a small number of words; and clusters of σ plus as many as two consonants occur (e.g. σχίζω ‘cut’, σπλάγχνα ‘innards’, σκνίπτω ‘pinch, nip’, etc.).

The Ancient Greek accentual system was based on a pitch accent. There were a high pitch (the acute, Greek ὀξύς, marked with the diacritic < ' >, a low pitch (the grave, Greek βαρύς; marked with the diacritic < ` >), and a contour pitch (the circumflex, Greek περισπωμένος, marked with the diacritic < ~ >) which consisted of an acute plus a grave on the same syllable and occurred only on long vowels or diphthongs. At most,

one high pitch, either an acute or circumflex, occurred per word (except for some special developments with enclitics), and all non-high syllables were considered grave.

Accent placement was predictable (for the most part – some exceptions exist) only in finite verb forms and in declined forms of certain nouns, e.g. those with antepenultimate accent in their lexical form; for such forms, the accent is said to be ‘recessive’, i.e. as far from the end of the word as permitted. Also, the placement of accent was predictable in certain morphologically definable formations, e.g. compounds with εὖ- ‘well, easy’ had recessive accent, verbal adjectives in -τος were accented on the final syllable, etc. In other contexts, accent placement was unpredictable and was therefore an element of the underlying (lexical) form of the word in question, though there were some regularities in the realisation of the accent (e.g. circumflex if the accent fell on a long penultimate syllable when the ultima was short). Thus, accent was distinctive in the Ancient Greek phonological system, for some words were distinguished only by the type of accent on a given syllable (e.g. locative adverbial οἴκοι ‘at home’ versus nominative plural οἴκοι ‘houses’) and others only by the placement of the accent (e.g. τιμά ‘two honours’ versus τίμα ‘(you) honour!’).

An overriding principle in the placement of the pitch accent in Ancient Greek is the so-called ‘Dreimorengesetz’ (Law of Three Morae, more usually referred to in English as the ‘Law of Limitation’), by which the accent could only occur on the antepenultimate, penultimate or ultimate syllable and never earlier in the word than that. With a few exceptions, this restriction can be stated in terms of morae (hence the name ‘Dreimorengesetz’), so that Ancient Greek was probably a mora-timed language (note also that syllable quantity mattered for purposes of the ancient poetic metres). This restriction gave rise to certain of the predictable aspects of the placement of accent, especially in those forms which had recessive accent. For example, a noun such as θάλαττα ‘sea’ was lexically accented on the antepenultimate syllable, as indicated by the citation form (nominative singular); in the genitive singular, though, the final syllable is long (θαλάττης) and as a result, the accent cannot stand on the antepenultimate syllable. Instead, it predictably is pulled forward to the penultimate, so that it does not stand more than three morae from the end. Similarly, a finite verb form such as κελεύω ‘I order’ was predictably accented on the penultimate syllable because the ultima is long and finite forms have recessive accent; the first person plural present form κελεύομεν and the first person singular past form ἐκέλευσα, however, are both accented on the antepenultimate syllable because the ultima is short. By contrast, the perfect middle participle of this verb, a non-finite form, had penultimate accent (e.g. in the nominative singular masculine form) even though the ultima was short, i.e. κεκελευμένος. In this way, therefore, accent placement in the verb serves also as a correlate of the morphosyntactic category of finiteness; recessive accent correlates with the presence of person and number markings on the verb, but not with the absence of such markings, in general.

With regard to the morphophonemics of Ancient Greek, three types of alternations must be distinguished: vowel alternations that represent a remnant – by then fully morphologically conditioned – of the Indo-European ablaut patterns (see pages 14–15), alternations caused by the sound changes that separate Greek from Proto-Indo-European and that distinguish the individual dialects of Greek itself, and alternations due to natural processes such as assimilation.

Within paradigms, except for a few irregular verbs (e.g. εἶ-μι ‘I go’ versus ἴ-μεν ‘we go’) with alternations between *e*-grade and zero-grade retained from the proto-language,

the vowel alternations one finds in Greek are those of length. This situation occurs in a few verbs (e.g. δίδωμι ‘I give’ versus δίδομεν ‘we give’, actually a remnant of Proto-Indo-European full-grade/zero-grade ablaut transformed in Greek into simply a length distinction) and in a large number of nominal forms of the consonant stem declension (e.g. nominative singular τέκτων ‘carpenter’ versus genitive singular τέκτων-ος, nominative singular ποιμήν ‘shepherd’ versus genitive singular ποιμέν-ος, masculine adjective ἀληθής ‘true’ versus neuter ἀληθές, etc.).

Across paradigms, between derivationally related forms of the same root, one finds alternations in vowel quality as well as quantity. For example, the inherited *e/o*-ablaut is found in numerous Greek pairs of related forms, such as λέγω ‘I say’ versus λόγος ‘word’, φέρω ‘I bear’ versus φόρος ‘tribute, (tax) burden’ (and compare also the related form φώρ ‘thief (i.e. one who bears off something)’ for a length alternation); moreover, it has a grammatical function still in forms such as present tense λείπω ‘I leave’ versus perfect λέλοιπα ‘I have left’ (and note the zero-grade reflex in past ἔλιπον ‘I did leave’). This *e/o*-ablaut interacts with the development of the labio-velars to give etymologically related (but probably synchronically unrelated) pairs such as θείνω ‘I strike’ from **g^when-yo:* versus φόνος ‘murder’ from **g^whon-os*. Transformations of the Indo-European ablaut due to sound changes are also to be found, such as in the masculine stem τέκτων- ‘carpenter’ versus the feminine τέκταινα ‘carpentress’, where the *-o/-αι-* alternation results from an alternation which in pre-Greek terms would have been **-on-∅* versus **-η-γα* (with *-αιν-* from **-ηγ-*).

Among the sound changes that left traces in morphophonemic alternations, one noteworthy one that operates in noun paradigms is the loss of final stops. Thus one finds such alternations as γάλα ‘milk’ (nominative singular) versus γάλακτος (genitive singular), or λέων ‘lion’ (nominative singular) versus λέοντος (genitive). Similarly, the loss of medial **s* created paradigmatic alternations such as γένος-∅ ‘race, kind’ (nominative singular) versus γένεα (nominative plural), from **genes-a*. Across paradigms, the developments of clusters with **y* gave rise to derivational alternations, since **-ye/o-* was an especially common present tense formative – compare παραχ-ή ‘trouble, disorder’ with the related verb παράττω (Ionic παράσσω) ‘disturb, trouble’ from **tarakh-yo:*, for example – and since **-y-* figured in other derivational processes, as with the formation of certain comparative adjectives (e.g. μέγας ‘big’ versus μείζων ‘bigger’ from **meg-yo:n*). Furthermore, in dialects with the assibilation of *t* to *s* before *i*, one finds such alternations as πλοῦτος ‘wealth’ versus πλούσιος ‘wealthy’ (and note the predictable accent-realisation difference, with circumflex in the noun versus acute in the adjective, due to the distance of the (long) accented syllable (the root) from the end of the word). In addition, the **-s-* formative, which appeared in some past tense forms, created alternations in vowel quality with the dialectal resolution of resonant plus *s* clusters, e.g. νέμω ‘I distribute’ ἔνειμα versus ‘I distributed’ (Doric ἔνημα, both from **e-nem-s-a*).

Finally, many morphophonemic alternations result from more or less natural processes that take effect when certain segments come together as the result of word formation processes. For example, assimilation in voicing is common, as seen in the pair ἄγω ‘I lead’ versus ἄξω (i.e. *ak-s-o:*) ‘I will lead’ where *-s-* is the marker for future tense, or in the pair κρύπτω ‘I hide’ versus κρύβδην ‘secretly’. Similarly, deaspiration before *-s-* occurs, as in γράφω ‘I write’ versus γράψω (i.e. *grap-s-o:*) ‘I will write’, and assimilation in aspiration to a following aspirate is found as in τρίβω ‘I rub’ versus ἐτρίφη ‘I was rubbed’ (cf. also τρίψω ‘I will rub’).

The phonology of Ancient Greek has been described in such detail here because it provides the appropriate starting point for a discussion of Post-Classical Greek phonology. The relation is not merely chronological here, for in Post-Classical Greek and on into Modern Greek, one finds that many of the same general phonological characteristics occur in the language, but with different realisations. For example, by the Hellenistic period, systematic shifts in the consonant inventory were under way – to be completed later in Post-Classical Greek – which nonetheless preserved the earlier three-way contrast but with new distinctive oppositions established. The voiced stops became voiced spirants and the voiceless aspirates became voiceless spirants, while the voiceless plain stops remained the same (in general). Thus one finds in Post-Classical Greek the system:

v	p	f
ð	t	θ
γ	k	χ

replacing the earlier *b p p^h/d t t^h/g k k^h* system. In addition, *z* became a distinctive sound (with phonemic status) and *h* was lost.

A [j] reentered the language, originally as an allophone of [γ] before front vowels and of unstressed [i] before vowels, but now it (probably) has phonemic status in the modern language and in any case is more fricated than the simple glide it presumably once was. Similarly, throughout the post-classical period, new voiced stops (*b, d, g*) arose, first as allophones of voiceless (and original voiced) stops after homorganic nasals, and later as distinctive segments (although their synchronic status is still somewhat controversial) through further sound changes that obscured the original conditioning factors. Thus the verb ἐντρέπομαι ‘I feel misgivings about’ has yielded Modern Greek ντρέπομαι [drepome] ‘I feel ashamed’ through the stages *endrep-* > *edrep-* (with reduction of nasal-plus-stop clusters, a process still present in the standard language but now sociolinguistically and stylistically conditioned, and still found in many of the regional dialects) > *drep-* (with loss of unstressed initial vowels, a sound change of Middle Greek), though conceivably the sequence was *endrep-* > *ndrep-* > *"drep-* > *drep-*. In addition, borrowings have provided new instances of voiced stops in the language (e.g. more recently μάρ ‘bar’, ντάμα ‘queen (in cards)’, γκαράζ ‘garage’, etc., but some even as early as Hellenistic times).

Finally, in Middle Greek a *ts* and a *dz* were added to the language, partly through dialectal affrications and borrowings from other languages. These sounds probably represent unitary sounds (affricates) in the modern language, but a cluster analysis cannot be ruled out entirely for them.

The major changes in the vowel system were also beginning in the Hellenistic period, though, as noted above, some of the innovative pronunciations may have been associated with an originally non-standard sociolect of Attic Greek in the late classical period. The principal changes are as follows: length became non-distinctive; the diphthongs monophthongised, with [aj] becoming [ɛ], [yj] and [oj] becoming [i] (presumably through a stage of [y], still present probably as late as the tenth century AD), and the off-glide in [e(:)w] and [aw] becoming fully consonantal, realised as [f] before voiceless sounds and as [v] before voiced ones; and several of the height distinctions were neutralised with a tendency for vowels to move to [i]. The result is that the Modern Greek vowel system (and that of late Middle Greek as well) consists of five short ‘pure’

vowels: *i e a o u*. Sequences which are diphthong-like, though perhaps still to be analysed as true sequences of vowels, have arisen through the loss of intervening consonants, as with λέει ([leĩ]) ‘(s)he says’ from Ancient Greek λέγει through the Middle (and careful Modern) Greek pronunciation [léji], and through borrowings (e.g. τσάι ‘tea’, λαούτο ‘lute’, etc.). Nonetheless, there are some words that are probably best analysed as having underlying diphthongs, e.g. γάϊδαρος ‘donkey’, which would underlyingly violate the modern equivalent of the ‘Dreimorengesetz’ if it were /γάϊδαρος/.

Since vowel length came to be non-distinctive in the later stages of Greek, it is not surprising that the principles upon which accent placement was based would change, inasmuch as vowel quantity mattered for Ancient Greek accent placement. Modern Greek generally has accent placed in the same positions in words as Ancient Greek, and the ‘Dreimorengesetz’ still holds now though as a ‘three-syllable rule’. The realisation of accent has changed, though, and Modern Greek now has a stress accent, not a pitch accent, with prominent stress corresponding to the earlier high (acute or circumflex) pitch (and note that by Middle Greek, the basis for poetic metre was syllable counting, with a 15-syllable line being the preferred metrical pattern). Modern Greek thus has some of the same accent shifts as Ancient Greek, as for example in άνθρωπος ‘man’ (nominative singular) versus ανθρώπου (genitive), but because of the absence of a phonological motivation for them, numerous levellings have occurred, resulting in stable stress throughout a paradigm (as in πράσινος ‘green’ (nominative singular masculine) versus πράσινου (genitive) from Ancient Greek πράσινος/πρασίνου, and in dialectal forms such as άνθρωπου for standard ανθρώπου). The recessive accent rule for finite verb forms no longer holds in general, but is valid for the simple past and imperfect tenses of verbs which are stem-stressed (as opposed to end-stressed) in the present (e.g. νομίζω ‘I think’ versus νόμιζα ‘I was thinking’, νομίζαμε ‘we were thinking’, νόμισα ‘I thought’, νομίσαμε ‘we thought’). Stress placement, though, is distinctive, as shown by pairs such as κοπή ‘cutting’ – κόποι ‘troubles, reward’, κύριος ‘master’ – κυρίως ‘above all, chiefly’, among others.

The major change in phonotactics concerns new final sequences which have entered the language through borrowings (e.g. final [l] in γκόλ ‘goal’ from English, final [z] in γκαράζ ‘garage’ from French, final [p] in (the perhaps now somewhat dated) πίκ-απ ‘record-player’ from French, etc.). One noteworthy change in allowable clusters, though, affected combinations of voiceless stops and combinations of Ancient Greek voiceless aspirated stops. Both types of clusters, e.g. πτ and φθ, have converged, through what has been described as a manner dissimilation, on the combination of voiceless fricative plus voiceless (unaspirated) stop. Thus earlier πτ has yielded φτ [ft], as in πτερόν ‘feather’ > φτερό (with regular loss of final *n* as well), and earlier φθ has also yielded [ft], through a stage of [fθ], as in φθάνω > φτάνω ‘I arrive’. The effects of the diglossia alluded to above can be seen especially clearly in this aspect of the phonology, for in many words of learned origin, the non-dissimilated clusters remain and both cluster types occur as stylistic variants within one and the same speaker’s idiolect even, because of the stylistic mixing induced by the diglossic situation.

For the most part, the later stages of Greek preserved the same types of morpho-phonemic alternations as Ancient Greek, though again with different phonetic realisations. Thus one now finds alternations such as γράφ-ομε ‘we write’ versus γράψ-αμε ‘we wrote’ with an *f/p* alternation (Ancient Greek *p^h/p* alternation), ανοίγ-ω ‘I open’ versus άνοιξ-α ‘I opened’ with a *γ/k* alternation (Ancient Greek *g/k* alternation), where

the structure of the alternations is the same but the segments involved have changed in part. Various morphological changes in the noun in particular have undone many of the Ancient Greek nominal alternations, as with Ancient Greek φλέψ (i.e. [p^hlep-s]) ‘vein’ (nominative singular) versus φλέβα (accusative) being remade to a paradigm with φλέβα [fleva], the continuation of the old accusative form, serving as the nominative and accusative form. One can still find the Ancient Greek alternations preserved relatively intact, though, in the archaising linguistic forms of early Post-Classical Greek on through Middle Greek and into Modern Greek; such forms are not – and probably never were – in current colloquial usage, however.

A final point about Post-Classical Greek phonology concerns some of the major differences that characterise the Modern, and to a large extent the Middle, Greek dialects. Characteristic of the northern dialect zone (north of Attica on the mainland, though excluding the urban Thessaloniki dialect, and the islands of the northern Aegean including Thasos, Samothraki, Lemnos and Lesbos, and also the more southerly Samos) is the raising of unstressed mid vowels and the deletion of unstressed high vowels. Thus one finds paradigms such as present [pirmén] ‘(s)he waits’ (cf. standard περιμένει), imperfect [pirímíni] ‘(s)he was waiting’ (cf. standard περίμενε). This syncope has also given rise in these dialects to consonant clusters not found in the standard language and the more southerly and eastern dialects (e.g. [éstla] ‘I sent’ for standard έστειλα). Another isogloss distinguishing the regional dialects is the presence of palatalisations (especially [č] for [k] before front vowels) in the southeastern dialects (of Chios, the Dodekanese islands including Rhodes, and Cyprus), in Cretan and in Old Athenian (the dialect of Attica before the establishment of the standard language in the 1820s, which survived into the early twentieth century in a few isolated pockets in Euboea and elsewhere), but not in the northern dialects (in general, though [š] for [s] before front vowels is common) nor in the standard language, based as it is on the Peloponnesian-Ionian (Island) dialect.

4.2 Morphology

It is safe to say that the general character of Greek morphological structure has remained fairly stable over the 3,500 years of our knowledge of the language, though, of course, there have been numerous significant changes as well. Greek has been a fusional language throughout all stages in its development; in Middle and Modern Greek, though, there is a distinct tendency in the direction of analytic expressions, examples of which are given below *passim*. To illustrate the fusional character of the language, one need only consider the nominal ending -ους (Ancient Greek [-o:s], Modern Greek [-us]), for it marks accusative case, plural number and masculine gender, all in a single unanalysable unit, for the so-called *o*-stem nouns. Moreover, even though there is a nominal ending -ου and another nominal ending -ς, so that one might attempt to analyse -ους as -ου plus -ς, such an analysis cannot work: -ου marks genitive singular for masculine *o*-stem nouns and -ς marks nominative singular for certain masculine and feminine consonant stem nouns in Ancient Greek and for masculine nouns in general in Modern Greek.

The relevant morphological categories for the Greek nominal system, comprising nouns, adjectives and pronouns, are as follows. In Ancient Greek, there were five cases (nominative, accusative, genitive, dative and vocative), three numbers (singular, dual and plural), and three genders (masculine, feminine and neuter). In Modern Greek, by

contrast, there are four cases (nominative, accusative, genitive and vocative), two numbers (singular and plural), and the same three genders. The loss of the dative began as early as Hellenistic Greek, though this change was not completed until well into the Middle Greek era (in part because of the pressure from the learned language in which the dative was retained). In Modern Greek, the genitive case has assumed some of the typical functions of the earlier dative case, e.g. the expression of indirect objects, but one also finds, in keeping with the analytic tendency noted above, indirect objects expressed in a prepositional phrase (σ(έ) ‘in, at, to’, from Ancient Greek εἰς ‘in, into’, plus accusative). It is worth noting as well that the genitive plural is obsolescent in Modern Greek for many nouns and for many speakers, with periphrases with prepositions, especially ἀπό ‘from’, plus accusative generally being used instead.

In both Ancient and Modern Greek, these nominal morphological categories were realised in different ways depending on the class of noun involved. In Ancient Greek, the assignment to inflectional class was based on phonological characteristics of the nominal stem, so that one finds *o*-stem nouns, *a*:-stem nouns and consonant stem nouns (including *i*- and *u*-stems as consonantal); within these stem classes, all three genders were represented, though feminine *o*-stems were rare as were masculine *a*:-stems (and neuter *a*:-stems were non-existent). In Modern Greek, the assignment to inflectional class is by and large based on gender, not phonological stem shape, so that in general, the masculine nouns are inflected alike, especially in the singular, with *-s* in the nominative singular versus *-∅* in the accusative singular and *-∅* in the genitive singular, and the feminines are inflected alike, again especially in the singular, with a *-∅* ending in the nominative and accusative singular versus *-s* in the genitive singular. As with most changes between Ancient and Modern Greek, the beginnings of this shift in inflectional class assignment can be seen early in the post-classical period. In the chart given here the inflection of six nouns is given for Ancient and Modern Greek by way of illustrating the basic patterns for these stages and of highlighting the differences between the two.

Nominal Inflection in Ancient and Modern Greek

		<i>Feminine</i>	<i>Masculine</i>	<i>Neuter</i>	<i>Feminine</i>	<i>Masculine</i>	<i>Neuter</i>
		<i>a</i> :-stem	<i>o</i> -stem	<i>o</i> -stem		<i>Consonant stem</i>	
		γνώμα:- ‘opinion’	λόγο- ‘word’	δῶρο- ‘gift’	φλέβ- ‘vein’	φύλακ- ‘watchman’	σωματ- ‘body’
Ancient Greek							
Nom.	sg.	γνώμη	λόγος	δῶρον	φλέψ	φύλαξ	σῶμα
Acc.	sg.	γνώμην	λόγον	δῶρον	φλέβα	φύλακα	σῶμα
Gen.	sg.	γνώμης	λόγου	δώρου	φλεβός	φύλακος	σώματος
Dat.	sg.	γνώμηι	λόγῳ	δώρῳ	φλεβί	φύλακι	σώματι
Voc.	sg.	γνώμη	λόγε	δῶρον	φλέψ	φύλαξ	σῶμα
Nom.	du.	γνώμα:	λόγω	δώρω	φλέβε	φύλακε	σώματε
Acc.	du.	γνώμα:	λόγω	δώρω	φλέβε	φύλακε	σώματε
Gen.	du.	γνώμαιν	λόγοιν	δώροιν	φλεβοῖν	φυλάκοιν	σωμάτοιν
Dat.	du.	γνώμαιν	λόγοιν	δώροιν	φλεβοῖν	φυλάκοιν	σωμάτοιν
Voc.	du.	γνώμα:	λόγω	δώρω	φλέβε	φύλακε	σώματε
Nom.	pl.	γνώμαι	λόγοι	δῶρα	φλέβες	φύλακες	σώματα
Acc.	pl.	γνώμα:ς	λόγους	δῶρα	φλέβας	φύλακας	σώματα
Gen.	pl.	γνώμων	λόγων	δώρων	φλεβῶν	φυλάκων	σωμάτων
Dat.	pl.	γνώμασις	λόγοις	δώροις	φλεψί	φύλαξι	σώμασι
Voc.	pl.	γνώμαι	λόγοι	δῶρα	φλέβες	φύλακες	σώματα

	<i>Feminine</i>	<i>Masculine</i>	<i>Neuter</i>	<i>Feminine</i>	<i>Masculine</i>	<i>Neuter</i>
Modern Greek						
Nom. sg.	γνώμη	λόγος	δῶρο	φλέβα	φύλακας	σώμα
Acc. sg.	γνώμη	λόγο	δῶρο	φλέβα	φύλακα	σώμα
Gen. sg.	γνώμης	λόγου	δῶρου	φλέβας	φύλακα	σώματος
Voc. sg.	γνώμη	λόγε	δῶρο	φλέβα	φύλακα	σώμα
Nom. pl.	γνώμες	λόγοι	δώρα	φλέβες	φύλακες	σώματα
Acc. pl.	γνώμες	λόγους	δώρα	φλέβες	φύλακες	σώματα
Gen. pl.	γνώμων	λόγων	δῶρων	φλεβών	φύλακων	σωμάτων
Voc. pl.	γνώμες	λόγοι	δώρα	φλέβες	φύλακες	σώματα

Notes: Accentuation in Modern Greek forms follows current official monotonic orthography, with a single accentual diacritic. The colon (:) for length in the Ancient Greek forms is given here only to indicate pronunciation; it was not a part of the Ancient Greek orthography.

Although the nominal system of Greek, especially the ancient language, shows a goodly number of inflectional categories and markers, it is the verbal system that presents the greatest morphological complexity in the language. Moreover, despite a number of reductions in this complexity between Ancient and Modern Greek, especially in the realm of non-finite verbal forms, Modern Greek still has a verbal system that is, in basic character, very like its ancient source.

Ancient Greek, for instance, distinguished three persons in verbal inflection, and three numbers (singular, dual and plural), although the combination of first person with dual number was not generally realised inflectionally in the language at all (being restricted to a handful of middle voice forms only). A significant distinction was made in the verbal system between finite and non-finite forms, with the relevant morphological distinction for finiteness being the presence of person and number markings; as noted above in the section on accentuation, though, recessive accent placement also served to distinguish finite from non-finite forms. Among the non-finite forms were several different infinitives and several different participles, as enumerated below, differing in voice, aspect and tense, and two verbal adjectives (denoting capability and obligation, respectively).

As indicated, there were inflectional categories for voice, with active, passive and middle voice being distinguished. The middle voice indicated reflexive action (though there were also available in the language overt reflexive pronominal forms), or more generally, action one undertook on one's own behalf or to one's own benefit. For example, the active βουλευῶ means 'to take counsel' while the middle βουλεύομαι means 'to take counsel with oneself, to deliberate', and the active λούω means 'to wash' while the middle λούομαι means 'to wash oneself, to bathe'. The passive was formally distinct from the middle only for future tense and simple past (aorist) forms. In addition, there were four moods, an indicative, a subjunctive, an optative (used in the expression of potentiality and for past time in indirect discourse, for example) and an imperative, all fully inflected for all the voice, number and person categories, as well as most of the temporal/aspectual categories described below.

Finally, Ancient Greek is usually described as having seven 'tenses', a present, a future, a (present) perfect, a pluperfect, a future perfect (which is usually passive), an imperfect past and a simple past (known as the aorist). In actuality, these 'tense' forms encoded two different types of distinctions – a purely temporal one of present time versus future time versus past time, and an aspectual one of action that is continuous

(imperfective) versus action that is completed (perfective) versus action that is simply taking place (aoristic). The three-way distinction is realised fully in past time forms only, incompletely in the present, and via a formal merger of two categories in the future. These relations are summarised in Table 19.4 below (adapted from Goodwin and Gulick 1958).

Illustrative examples are: present γράφω ‘I am writing’, perfect γέγραφα ‘I have written’, imperfect ἔγραφον ‘I was writing’, aorist ἔγραψα ‘I did write, I wrote’, pluperfect ἔγεγράφη ‘I had written’, future γράψω ‘I will be writing (continuous aspect), I will write (simple occurrence)’, and future perfect γεγράφεται ‘it will have been written’.

The non-finite forms show the aspectual nature of the category oppositions especially clearly, for one finds a present infinitive and participle, an aorist infinitive and participle, and a perfect infinitive and participle, corresponding to the continuous, simple and completed aspectual distinctions in the finite verbal system. In addition, though, there is a future infinitive and participle, so that the non-finite system too shows some purely temporal as well as aspectual distinctions. As with the different moods, the non-finite forms occur in all voices, so that there are as many as 13 different infinitival types and a like number of participles.

Many of the complexities of this system are retained in Post-Classical Greek and on into Modern Greek, though in some instances, there is only apparent, and not actual, continuity. Some of the differences are the result of responses to system-internal pressures, as for example, with the changes in the voice and aspect categories, while others may have been, at least in part, induced by external factors, as with the changes in the non-finite system and the future tense. Many, however, are in keeping with a tendency towards analytic expressions where Ancient Greek had synthetic ones.

The only difference in person and number categories is that, as in nominal inflection, the dual number category has been eliminated, its demise evident as early as Hellenistic Greek. The moods too have been altered. The optative began to fall into disuse in the Koine period, partly as a result, no doubt, of sound changes leading to partial homophony (in four of eight forms) with the subjunctive and (less so) with the indicative. Similarly, it is a matter of some debate even today as to whether Greek now has a distinct subjunctive mood, for there is no formal difference between the continuation of the old present indicative and present subjunctive due to various sound changes, and virtually all ‘subjunctive’ uses are marked with the element *νά*, giving an analytic counterpart to the Ancient Greek synthetic subjunctive (e.g. *να γράψεις* versus ancient *γράψῃς* ‘that you (might) write’). Finally, where Ancient Greek had synthetic forms for non-second person imperatives, Modern Greek has, again, analytic forms, marked by the particle *ἄς*, though distinct (synthetic) second person imperative forms remain.

Table 19.4 Ancient Greek Tense Aspect Relations

<i>Aspect</i>	<i>Tense</i>	<i>Present</i>	<i>Past</i>	<i>Future</i>
Continuous		present	imperfect	future
Simple occurrence		(no realisation)	aorist	future
Completed		perfect	pluperfect	future perfect

Post-Classical Greek maintains an opposition among active, middle and passive voices, though from a formal standpoint, the middle voice and passive voice are never distinct; the cover term medio-passive or even nonactive is thus perhaps more appropriate. This development seems to be a natural outgrowth of the Ancient Greek system in which the distinction was realised formally only in the aorist and future tenses but in no others. Thus in Modern Greek, and earlier stages of Post-Classical Greek as well, a form such as *πλύθηκα*, a medio-passive aorist of the verb *πλύνω* ‘wash’, can mean ‘I was washed (by someone)’ or ‘I washed myself’, with the context of the utterance generally being the only determinant of which of these interpretations is preferred.

The Ancient Greek tenses all remain in Modern Greek, but here the continuity is apparent only. In the Koine period, the perfect tense system was eliminated, with the simple past (aorist) taking over some of the old perfect functions and various periphrastic (i.e. analytic) constructions (e.g. *εἶμι* ‘be’ plus the perfect participle) taking over other of its functions. Thus there was a period in the post-classical language in which there was no formal perfect tense system. By the middle of the Middle Greek period, approximately the tenth century, though, a pluperfect arose, formed with the aorist of ‘have’ plus one continuation of the Ancient Greek infinitive (e.g. *εἶχα γράψαι* ‘I had written’, later *εἶχα γράψει*); this construction was originally used, in late Hellenistic and early Middle Greek, as a conditional but later passed over into a true pluperfect meaning. The relation between it and the *habeō* + infinitive/participle formations found in Vulgar Latin and Romance (see page 168) is uncertain, but some influence through Balkan Romance cannot be discounted. From that pluperfect, a new perfect system, with the full range of inflectional categories, was spawned; a present perfect was created consisting of the present of ‘have’ plus this continuation of the old infinitive, and later a future perfect was formed with the Middle and Modern Greek future formants, an imperative perfect arose, etc. The Modern Greek perfect system, therefore, represents a considerable elaboration within the Post-Classical Greek verbal system, and though only indirectly connected with them, parallels the Ancient Greek perfect system forms.

Similarly, Modern Greek has a future tense, just as Ancient Greek had, but again one finds an analytic expression in place of the earlier synthetic one, with only an indirect connection between the two forms. In the case of the future, though, as opposed to the perfect, there seems never to have been a period in which the future tense failed to exist as a formal category in the language. Within the Hellenistic period, the use of the older synthetic future, e.g. *γράψω* ‘I will write’, became obsolescent, with various periphrases arising to compete with it, including the present of ‘have’ plus a continuation of the infinitive and other quasi-modal constructions (e.g. *μέλλω* ‘be about to’ plus infinitive). With the passage of the ‘have’ forms into the incipient perfect system, as just described, a new future periphrasis arose, by the tenth century, completely ousting the earlier synthetic form. This was a future based on the verb ‘want’ (*θέλω*); as with the perfect, the relation between this form and similar ones found in virtually all the Balkan languages is controversial. In the medieval period, an unusual variety of future formations with this verb can be found, consisting of combinations of inflected forms of *θέλω* plus uninflected (infinitival) main verbs, uninflected (i.e. invariant third person singular) forms of *θέλω* plus inflected forms of main verbs, inflected forms of *θέλω* plus inflected forms of a main verb, the optional use of the subordinating marker *νά* and so forth; representative examples of these patterns would be *θέλω γράψει(ν)*

(infinitive), θέλει (invariant) (νὰ) γράψω, θέλω (νὰ) γράψω, all meaning ‘I will write’. Ultimately, the formation of the type θέλει (νὰ) γράψω won out, and through various reductions involving regular sound changes and various analogies, the modern standard and widespread dialectal future marker θα (e.g. θα γράψω ‘I will write’) was created.

Going along with these future formations were parallel conditional formations consisting of a past tense of the auxiliary-like verb plus a form of the main verb (compare the ἔχω ‘have’ plus infinitive future and εἶχα plus infinitive conditional of early Post-Classical Greek). These conditional formations have no formal category correspondent in Ancient Greek (the modal particle ἄν with the optative mood is the Ancient Greek potential/conditional expression), so that here too one finds an elaboration within the earlier tense/mood system.

The aspectual system too has undergone various rearrangements from the Ancient Greek system. In this case, the internal pressures within the system, partly as a result of the incomplete realisation of the aspect system within the tense system (see Table 19.4) were a major factor in the developments. The basic opposition of continuous versus punctual aspect has been maintained throughout the development of Post-Classical Greek and, with the new periphrastic formations, has been extended to the future tense as well (e.g. θα γράφω ‘I will be writing’ versus θα γράψω ‘I will write’, in Modern Greek, or θέλω γράφει(ν) versus θέλω γράψει(ν) in Middle Greek). The completed aspect category now finds expression in the new perfect system, though one can still find uses of the simple past (aorist) which signal completed action as opposed to simply past action, as with the ‘pro futuro’ use of the aorist (e.g. ἐφυγα ‘I’m about to leave’ lit. ‘I (have) left; my leaving is over and done with’).

Finally, Modern Greek, as well as Post-Classical Greek in general, maintains the Ancient Greek distinction of finite versus non-finite forms, though this opposition has undergone perhaps the greatest series of restructurings of any part of the verbal system. In particular, the realisation of the opposition has changed considerably. In Ancient Greek the imperative patterned with the finite forms in terms of accent placement and person/number markings, while in Modern Greek it patterns instead with the non-finite forms; like the participles (and unlike, for example, the indicative), the imperative allows only postposed weak object pronouns and not preposed ones, and like the participles (and again unlike the indicative), it is arguably marked only for number and not for person (cf. singular δέξ ‘(you (alone)) see!’ versus plural δέξ-τε ‘(you (all)) see!’ where the only formal difference is -∅ versus -τε and the only semantic difference singular versus plural) – recall that non-second person imperative forms of Ancient Greek gave way to analytic expressions with the marker ας in later Greek. Moreover, the number of participles has been reduced, so that Modern Greek has only a present (continuous aspect) medio-passive participle (e.g. γραφόμενος ‘being written’) and a present (continuous aspect) active participle, also called a gerundive, which generally serves only as an adverbial adjunct modifying the surface subject of a sentence (e.g. γράφοντας ‘(while) writing’).

Similarly, the category of *infinitive* has been eliminated entirely from the language, although the indications are that it was maintained until approximately the sixteenth century as at least a marginal category. The details of this development are discussed more in the following section on syntax. The only remnant of the earlier infinitive is in the new perfect system, for the second part of the perfect periphrasis (γράφει in ἔχω γράψει ‘I have written’) continues a Middle Greek analogical replacement for the Ancient Greek aorist infinitive (so also in the medio-passive, e.g. ἔχει γραφθεῖ ‘it has

been written' from Middle Greek ἔχει γραφοῦν(αι)). There is no synchronic justification, though, for treating these remnants as categorically distinct within the morphology, and they perhaps are to be considered now as the punctual aspect counterparts to the continuous aspect participles (thus γράψει versus γραφοῦν as γράφοντας versus γραφόμενος). In both the case of the reduction of the participle and the case of the demise of the infinitive, the Modern Greek situation represents the end-point of a long and gradual process whose roots are to be found in Hellenistic Greek usage of the non-finite forms.

4.3 Syntax

A considerable amount of space has been spent on the phonology and morphology of Greek, both from a synchronic standpoint for relevant periods and from a diachronic standpoint, in part because it is possible to give a fairly complete picture of these components of a language in a relatively short space. With regard to the syntax, it is of course impossible to do justice to any stage of the language in anything less than a full-sized monograph (and it is worth noting that there are numerous lengthy works dealing with individual constructions in single periods of the language). Nonetheless, a few of the especially noteworthy aspects of the syntactic combinations of the language can be mentioned, along with a sketch of their development over the centuries.

Perhaps one of the most elaborate parts of the Ancient Greek syntactic system was the system of verbal complementation. Not only were there so many non-finite forms – infinitives and participles – available which were utilised in forming complements to main verbs, but there was also a large number of finite forms, differing, as has been described, in aspect and mood, which could combine with a variety of subordinating conjunctions to form verbal complements. Thus a major part of the description of Ancient Greek syntax must deal with the question of how the moods, aspects and non-finite forms were actually used. Not surprisingly, there is a fairly complex set of sequence of tense conditions governing allowable combinations of main verb and dependent verb, especially in indirect discourse and in conditional sentences.

One significant development in the verbal complementation system in later stages of Greek is the demise of the infinitive, mentioned above in its purely morphological context. From as early as Hellenistic Greek, finite clause complements can be found in places in which Classical Greek had used an infinitive (or even participle). For example, in the New Testament, a finite clause complement competes with an infinitival complement with the adjective ἄξιος 'worthy, deserving', a context in which only an infinitive could appear in Classical Greek:

- (a) οὗ οὐκ εἰμὶ ἄξιος τὸ ὑπόδημα τῶν ποδῶν λύσαι
 whose not am/1sg. worthy the-sandal the-feet/gen. loosen/infin.
 '(One) of whom I am not worthy to loosen the sandal from his feet'
 (Acts 13.25)

- (b) οὗ οὐκ εἰμὶ ἐγὼ ἄξιος ἵνα λύσω αὐτοῦ τὸν ἱμάντα τοῦ ὑποδήματος
 I/nom. that loosen/ his the-thong/acc. of-the-sandal
 1sg. subj.
 (Jo. 1.27)

The spread of finite complementation, most usually introduced by the subordinating conjunction ἵνα (later Greek *vá* through an irregular stress shift and regular sound changes) but also with true complementisers such as the neutral ὅτι (comparable to English *that*), at the expense of infinitival complements continued throughout the post-classical era, working its way through syntactically defined classes of construction type (e.g. like-subject complements versus unlike-subject complements) and within each such class diffusing across the range of governing lexical items. By Middle Greek, the only productive uses of the infinitive were with the verbs ἔχω and θέλω in the perfect and future periphrases, respectively, though a few sporadic uses of the infinitive with other verbs (e.g. (ἦ)μπορῶ ‘can’) and as an adverbial adjunct are to be found as well.

The spread of finite complementation is complete, though, in Modern Greek, and there are no instances of non-finite complementation remaining. Thus from the standpoint of typology, Modern Greek, unlike its predecessors, is a language in which all complement verbs are fully finite, marked for person, number and tense/aspect. Greek thus now diverges considerably from the Indo-European ‘norm’, but interestingly, as noted earlier, converges on this point with the other languages of the Balkans; in fact, Greek, along with Macedonian, shows the greatest degree of infinitive loss among all the Balkan languages. As with the other Balkan areal features, the extent to which the developments with the infinitive represent an internal development in Greek (and the other languages) or a contact-induced one is debated; in this case, a combination of internal and external factors seems to provide the best account for this phenomenon within each language, Greek included, and within the Balkans as a whole.

It is to be noted, moreover, that the replacement of the infinitive by finite expressions with a verbal marker ties in with the general trend towards analytic constructions seen in the morphology. Other syntactic reflexes of this move towards analysis include comparison productively via the particle πῖό with an adjective in Modern Greek versus a bound suffix -τερος in Ancient Greek (e.g. ἀξιώτερος ‘more worthy’ > πῖό ἄξιος), and the expression of indirect objects with a prepositional phrase (σ(ε) plus accusative) versus the Ancient Greek dative case alone.

The developments with the moods and the tenses and the infinitive between Ancient and Modern Greek show also a trend towards the development of a system of preverbal markers, especially, for the future *θά*, for the subjunctive and infinitival replacement *vá*, and for non-second person imperatives *ας* (from earlier ἀφησε ‘let’, itself an imperative). A further reflection of this development is to be seen in the pronominal system of Modern Greek as compared with that of Ancient Greek. While Ancient Greek had both strong forms of the personal pronouns and weak forms, the weak forms were restricted to the oblique (non-nominative) cases only, and use of the weak genitive forms in the expression of possession was somewhat limited; true possessive adjectives were substitutable for the weak forms in all persons and numbers and were the preferred variant in the first and second person plural. In Modern Greek, by contrast, there is now a set of nominative weak pronominal forms (though they are restricted just to the third person and just to use with the deictic predicate *vá* ‘here (is)!’ and the interrogative predicate πού(ν) ‘where (is)?’), and the primary means of expressing possession is with weak genitive forms of the personal pronouns for all persons and numbers. Thus in Ancient Greek one finds both ὁ σὸς ἀδελφός (lit. ‘the your brother’) and ὁ ἀδελφός σου (lit. ‘the brother of you’) for ‘your brother’, while Modern Greek has only the latter type.

Similarly, the weak object pronouns (both accusative and genitive) of Ancient Greek have been expanded in use in Modern Greek. In particular, they are now quite commonly used to cross-index definite and specific objects, as in:

- (a) τον είδα τον Γιάννη
 him/acc. weak saw/1 sg. the-John/acc.
 ‘I see John.’ Γ and u are transposed — should
 be του Γιάννη
- (b) του (το) έδωσα τοΓ Γιάννη το βιβλίο
 him/gen. weak it/acc. weak gave/1 sg. the-John/gen. the-book/acc.
 ‘I gave the book to John.’

This feature represents another way in which Modern Greek diverges from Ancient Greek in the direction of the other Balkan languages (though again the causes for the divergence and convergence are subject to debate). For some speakers of Greek, this pronominal doubling is obligatory at least for indirect objects, while for others it is an optional process with a pragmatic (focusing or topic-marking) function.

All of these preverbal markers are amenable to analysis as prefixes (and not more independent elements), though this is controversial. Under such an analysis, the grammatical apparatus of the modern language has expanded considerably and the nature of the grammatical marking has changed from that found in earlier stages.

Two relatively stable elements of the syntax of Greek over the centuries are to be found in the syntax of the nominal system – the use of the definite article and adjectival position. The development of a definite article took place within the history of Greek, for in Homeric Greek, the form which became the Classical definite article is generally used as a demonstrative pronoun, and a few traces of this usage survive in the classical language. The definite article in classical times came to be used also as a means of substantivising virtually any part of speech or phrasal category, including adverbs (e.g. τοῖς τότε ‘to the (men) of that time’ (lit. ‘the (dat. pl. masc.) then’), infinitives, whether alone or in a verb phrase (e.g. τὸ δρᾶν ‘the acting, action’, τὸ βίαι πολιτῶν δρᾶν ‘acting in defiance of citizens’), and so on. Moreover, virtually any type of modifier, whether adverb, prepositional phrase, noun phrase or adjective, could be placed between the article and a modified noun. This construction with the definite article and modified nominals is to be found throughout the history of Greek, so that in Modern Greek in place of the ‘articular infinitive’ one finds nominalised finite clauses (e.g. το να εἶναι Ἕλληνας ‘the (fact of) being a Greek’), extended pronominal modifiers (though these can have a bookish feel, e.g. ὁ μορφωμένος στό Παρίσι γειτονάς μου ‘my educated-in-Paris neighbour’), etc.

As just noted, adjectives could in Ancient Greek, and still can in Modern Greek, appear pronominally. Throughout the history of Greek, there has been an important contrast in the position of an adjective based on its function. An adjective standing outside the article had, and still has, a predicative function, determining a clause without the necessity for an overt copular verb, e.g.:

- (a) καλὸς ὁ ἀδελφός (b) ὁ ἀδελφὸς καλός
 good (nom. sg. m.) the-brother (nom. sg.)
 ‘The brother is good.’

When the adjective occurs between the article and the noun or if no article is present, then the adjective has attributive function, and a noun phrase is determined:

- (a) ὁ καλὸς ἀδελφός (b) καλὸς ἀδελφός
 ‘the good brother’ ‘a good brother’

For the most part, other aspects of Greek word order have remained more or less stable throughout its development. In particular Greek has always enjoyed a relatively free ordering of the major constituents of a sentence, with grammatical relations and relations among constituents being encoded in the inflectional morphology, although certain patterns seem to be preferred in particular contexts (e.g. verb–subject–object order in the modern language in sentences presenting wholly new information). One area of difference, however, is in the placement of weak object pronouns, which were positioned relative to the clause in Ancient Greek (generally in second position) but are now positioned relative to the verb (with finiteness of the verb apparently mattering for pre- versus post-positioning).

4.4 Lexicon

At all points in its history, the Greek lexicon has incorporated a large number of native (inherited) lexical roots and stems. As noted earlier, some of these have remained more or less intact over the years, e.g. ἄνεμος ‘wind’, ἄλλος ‘other’; more usually, though, words in Modern Greek show the effects of regular sound changes, e.g. γράφω ‘I write’ (with [ɣ] and [f] for earlier [g] and [p^h]), μέρα ‘day’ (Ancient Greek ἡμέρα), changes in form and meaning, e.g. χῶμα ‘bank, mound (Ancient Greek); soil (Modern)’ and morphological reshaping (e.g. φύλακας versus φύλαξ – see the chart of nominal inflection). Finally, many words in the later language are built up out of native elements but with no direct ancestor in the ancient language, e.g. πιστοποίηση ‘guarantee’, and the many modern scientific terms built out of Greek morphemes by non-Greek speakers and reborrowed back into Greek, e.g. ατμοσφαίρα ‘atmosphere’.

At the same time, though, there has always been also in Greek a significant number of foreign elements. Ancient loans from Semitic (e.g. χιτῶν ‘tunic’, σαγήνη ‘large drag-net’), Anatolian (e.g. κύανος ‘dark blue enamel’, κύμβαχος ‘crown of a helmet’), and other languages of the ancient Near East can be identified, and as noted in Section 2 above, there may be numerous words in Ancient Greek taken over from the languages indigenous to Greece before the arrival of the Greeks proper. During the Hellenistic period, a major source of loanwords into Greek was Latin. During the later periods, one finds first an influx of Venetian (Italian) words and somewhat later an admixture of some Slavonic and Albanian words but mainly Turkish lexical items and phrases. More recently, loans from French and especially English have entered the language in great numbers. One final important source of borrowings in Greek has always been Greek itself; due to the long literary record of the language and the importance placed from a sociolinguistic standpoint on the literary language (recall the discussion of Greek diglossia in Section 2), there has always been pressure to borrow from the literary language into the colloquial language, so that Modern Greek now has an internal lexical stratification parallel to what is found in Slavonic or Romance.

Bibliography

With the possible exception of English, there has probably been more written on the Greek language than on any other language. Consequently, giving references for information on Greek in its various aspects is difficult. Nonetheless, it is possible to identify a number of basic and representative works on the language.

Mention must be made first of the monumental comprehensive encyclopedic volume covering the history of the language up through ancient times, Christides 2007.

Specifically for the Ancient language, grammars abound, and the most detailed available, though a bit difficult to use because of a somewhat odd arrangement of facts, is Schwyzer (1939) and Schwyzer and Debrunner (1950). This work, moreover, contains much information on the historical development of the language and on the ancient dialects. For practical purposes, the more pedagogically oriented grammars of Smyth (1920) or Goodwin and Gulick (1958) contain sufficient information for the understanding of the structure of the language. Vilborg (1960) offers a grammatical sketch of Mycenaean Greek, as does Ventris and Chadwick (1973). More specialised works include Lejeune (1972) (on the historical phonology in general, including Mycenaean), Sommerstein (1973) (a generative treatment of Attic phonology), Teodorsson (1974) (also on Attic phonology), Chantraine (1973) (on the morphology, especially diachronically), and Rijksbaron (2002) (on the syntax and semantics of the verb). The basic treatment in English of the dialects is Buck (1955).

For the Hellenistic period, the best grammars available are Moulton (1908) and Blass and Debrunner (1961), both of which deal primarily with New Testament Greek.

For Greek of the Byzantine and Medieval periods, unfortunately no standard grammar is currently available. Perhaps the best general statements on Greek of that period are the (relatively brief) description found in Browning (1982) and the somewhat more comprehensive Tonnet (1993) and Horrocks (2010). Note also specialised studies such as Pappas (2004) on weak pronouns in the Medieval period. More is available on the modern language, and many of the historically oriented works fill in some of the gaps in the literature on Middle Greek. Mirambel (1939, 1959) are standard structuralist treatments of Modern Greek, and Householder et al. (1964) provides a useful account in English. More recently, there are general grammatical descriptions, following modern linguistic principles, such as Joseph and Philippaki-Warburton (1987) and Holton et al. (1997), and two large dictionaries, by Babinotis (1998) and by the Triandafilidi Instituto (1998). Though now a bit outdated, however, Thumb (1964) is the best general work available in English, providing much on the dialects and general historical development of Modern Greek. as well as numerous sample texts. Newton (1972) is a study within the generative framework of Greek dialect phonology, including, to a certain extent, the dialect bases of the standard language, and Tzitzilis (2007) offers a fine survey of the different dialects of the modern language. Warburton (1970) and Sotiropoulos (1972) provide a modern treatment of the verb and noun respectively. As yet there is no full-length generative study of Greek syntax and semantics, though there is a growing body of such literature (especially in the pages of the *Journal of Greek Linguistics*, where other relevant studies are to be found as well; see Kalmoukos and Phillipaki-Warburton (1982) for some references, many in English, and Alexiadou and Anagnostopoulou 2000 for an updated survey). Joseph 2000 offers an annotated bibliography of important works in Greek linguistics written in English up to the mid-1990s.

It should be noted too that there are several general surveys of the Greek language, covering all or most of the stages in its development. Meillet (1920) and Palmer (1980) focus more on the earlier stages, though both treat Middle and Modern Greek as well. Browning (1982) focuses primarily on the later stages, but gives the necessary background on the early stages too. Mention can also be made of Costas (1936), Atkinson (1933), Thomson (1966) and Householder and Nagy (1972).

Finally, for those interested in studying the language itself, there are numerous books one might turn to for the various stages of the language, in particular Hooker (1991) for Mycenaean Greek, Hansen and Quinn (1992) and Balme et al. (2016, a two-volume text with accompanying workbooks) for Classical Greek, Croy (2011) for Greek of the Hellenistic period and especially New Testament Greek, and Bien et al. (2004, with a workbook) and Watts (2004, with downloadable audio) for Modern Greek.

Note

- 1 Greek forms are cited throughout in the Greek alphabet. See Table 19.1 for the pronunciation of the letters.

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