THE PRONUNCIATION OF «GREEK» WORDS IN ENGLISH

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ΠΕΡΙΛΗΨΗ

Διεθνισμοί στηριγμένοι σε αρχαία ελληνικά λεξικά στοιχεία ή υβρίδια στηριγμένα σε συνδυασμό ελληνικών και λατινικών δίνουν στον Έλληνα σπουδαστή την εντύπωση πως οι λέξεις αυτές «ανήκουν» στη γλώσσα-του, παρόλο που στη μεγάλη-τους πλειοψηφία δημιουργήθηκαν στις νεότερες γλώσσες (νεο-λατινικά, γαλλικά κτλ.), και απο αυτές έρχονται στα νέα ελληνικά. Η εντύπωση αυτή δυσχεραίνει ιδιαίτερα την εκμάθηση της προφοράς-τους. Στις περισσότερες περιπτώσεις είναι δυνατό να διατυπωθούν κανόνες αντιστοίχισης ανάμεσα στα νέα ελληνικά και στις άλλες γλώσσες, όπως τα αγγλικά. Εφόσον η νεοελληνική ορθογραφία ακολουθεί βασικά την αρχαία ελληνική γραφή («ανατολικά αλφάβητα»), οι κανόνες μπορούν να διατυπωθούν με βάση την ορθογραφία. Οι κανόνες αυτοί παραθέτονται σε τούτο το άρθρο.

Keywords
contrastive phonology English – modern Greek; internationalisms; modern Greek etymology; orthography.

0. Introduction.

One of the most persistent cases of interference in the acquisition of a second language consists in the pronunciation of words that the student knows already from his own language. Interference is particularly strong, if the student believes that the word actually «belongs» to his own language, even if this is not exactly the case. This tendency is particularly strong among Greeks, when they encounter internationalisms based wholly or partially on ancient Greek lexical elements. This natural tendency is strengthened by ideological considerations prevalent in Greek education. Even when a Greek has mastered English phonology, it is not easy for him to accept the pronunciation of either an old word such as Κνωσσός [kno'sos], in English ['naśs], or of modern creations like υποθερμία [ipoθer'mia], in English [ha-ṕθerˈmí] or the confix ψευδο- [psevðo], English equivalent ['suwdow].

1. Provenance of Greek words in English.

Words of ancient Greek origin started entering western languages in large numbers during the renaissance in three ways: (1) They entered already in ancient times into Latin, adapting to the morphophonological rules of that language, and through Latin were transmitted to the modern languages. It is to notice that the phonetic basis of Greek loans, both of those existing already in the classical as well as of those first created in the Hellenistic period, is the phonology of Hellenistic and not that of classical Greek. (On classical Greek see Lupaş 1972; Allen 1974.) (2) They are direct modern loans from the old Greek language. (3) They are modern creations based on Greek or a combination of Greek and Latin lexical elements. In all three cases a latinate model for Greek loans was established in the renaisance and this has been basically followed since. (See also Serjeantson 1935, Baugh & Cable 1978.)

It is mainly the third case of modern creations that is responsible for the existence of hundreds of thousands of this type of internationalisms in the modern languages. The vast majority among them originate as scientific and technical terms, but a large number, e.g., microbe, gravitate into common use.
1.1 Classical Greek > Hellenistic Greek > Latin:

αθλητής > athleta, ιππόδρομος > hippodromos ; απιληψία > epilepsia; φιλοσοφία > philosophia, διαλεκτική 'philosophical method' > dialectica; μουσική > musica, γραμματική > grammatica; ιστορία >

historia; γεωμετρία > geometria, αριθμητική > arithmetica; κυβερν͂ > gubernare; στρατηγία 'general's function' > strategia.

1.2 Hellenistic Greek > Latin:

γεωγραφία > geographia, αστρονομία > astronomia, αστρολογία > astrologia (in the classical language: 'astronomy'); classical θεολογία acquired a particular meaning and took in Latin the form theologia; ιεραρχία (from medieval Greek as an ecclesiastic term) > English hierarcy.

1.3 Directly from clasical Greek, possibly via Neolatin:

αρωτικός > erotic; αριστοκρατία, δημοκρατία, πολιτική > aristocracy, democracy, politics.
    Examples of modern formations see under number 2.3.

2. Provenance of congener (etymologically related) terms in modern Greek.

In modern Greek, related lexical elements may have three different sources. They can be: (1) Inherited from ancient and Hellenistic via medieval Greek, i.e., words having always existed in the popular language, following the phonological and morphological development of this linguistic form. (2) Modern learned loans from classical, and mostly Hellenistic Greek. (3) Learned loans from the international scientific vocabulary of words based on ancient Greek or hybrids of a combination of Greek and Latin lexical elements. Hybrids are usually translated in their Latin element. In the last two cases phonology may differ from that of the inherited words. (See the etymologies by Petrounias in the Λεξικό της Κοινής Νεοελληνικής 1998; further Browning 1989.)

2.1 From ancient (Hellenistic) Greek as a development ot the popular language (inherited words):

μουσική > μουσική, ανδρο- > α<u>ντ</u>ρο- (notwithstanding different spelling, in this case pronunciation is like that of the classical language), πολυ- > πολυ-.

2.2 Learned borrowings from the old language:

ανδρο- > α<u>νδ</u>ρο- (notwithstanding similar spelling, in this case pronunciation is different from that of the classical language), πολυ- > πολυ-.

    Note, e.g., the difference between αντρο- and ανδρο-, depending on their origin respectively in the popular or the learned language. In the second case an example of "spelling pronunciation" can also be noted.

2.3 Learned borrowings from Neolatin, the modern languages and the I(ntern.) S(cient.)V(ocabulary):
(Words are given in their English form, though in their majority, up to the first half of the 20th century, they were coming through French).

    acoustics, cardiology, diachrony, ecology (of German origin), electricity, kilometre, magnetism, melodram, neolithic, neoplasm, orthopedics, paleontology, pediatrics, polyester, psychology, synchrony, telegram, telephone, telescope, thermometre, uranium, utopia (formed in Neolatin by Thomas More) > ακουστική, καρδιολογία, διαχρονία, οικολογία, ηλεκτρισμός, χιλιόμετρο, μαγνητισμός, μελόδραμα, νεολιθικός, νεόπλασμα, ορθοπαιδεία/ορθοπαιδική, παλαιοντολογία, παιδιατρική, πολυεστέρας, ψυχολογία, συγχρονία, τηλεγράφημα, τηλέφωνο, τηλεσκόπιο, θερμόμετρο, ουράνιο, ουτοπία.

2.4 As a translation (calques or semicalques):

    κοινωνιολογία < (Fr.) sociologie, πολυβιταμίνες, πολυμέσα < multivatimes, multimedia.

    From the examples it becomes obvious that a combining element like πολυ- can have three different direct sources and one indirect.

3. This investigation does not concern morphology or semantics.

The intermediary of Latin may be responsible for change in endings and in derivational affixes: ^Ελένη > Latin Helena, πανάκεια > panacea. (See Leuman 1977; Allen 1978.)

Concerning semantics, divergence of meaning is due to the needs of modern civilization, but also to chance divergent development between western languages and modern Greek; e.g., English androgynous means 'hermaphrodite' – while modern Greek (already Hellenistic) αντρόγυνο is a 'married couple'.

But it is mostly modern creations that may not conform either to the semantics or the morphology of the two classical languages, since they were created to cover modern lexical needs and not as a philological exercise. (Benveniste 1966; also Petrounias 1998b regarding a contrast between modern Greek and Italian, and Petrounias (forthcoming) regarding a contrast between modern Greek and English.) Insofern as a modern Greek loan has approximately a similar form and meaning to its international source, this should not create learning problems, as is the case with: microbe μικρόβιο. But on occasion the similarity may be misleading, as was the case with androgynous, mentioned above.

In the present investigation we are concerned solely with pronunciation.

4. Reasons for the divergence in pronunciation between modern Greek and English.

The difference in pronunciation between related (congener) words is due to four factors: 1) The phonological rules of Latin. 2) Difference in evolution of the languages concerned; an evolution that in modern Greek may take a different form between words of popular («inherited words) and those of learned origin. In English, as in the other European languages, no difference between popular and learned phonology is observed in the case of internationalisms. 3) Difference in pronunciation of ancient Greek today in Greece vs. the West: On the one hand, pronunciation sometimes called «traditional» or «oriental» and on the other pronunciation called «Erasmian». (Drerup 1930, 1932; Petrounias 2001). 4) Different conventions prevalent in the orthography of the two languages, a difference witnessed also between the western languages themeselves.

5. Recognizability of the relationship.

A necessary prerequisite for establishing contrastive rules is recognizability of etymologically related words. A basic consequence of this is that many old loans, having undergone changes in Latin and then in the modern languages, do not concern the present investigation. E.g., words like monk or bishop, coming from ancient μοναχ[kh]ός or επίσκοπος (both in their Hellenistic meaning), are of no interest in this kind of investigation. But loans like idol, paradise, though old, are easily recognized. Recognition is usually obvious in more recent learned loans or new creations: ecclesiastic from εκκλησιασιαστικός, hypothermia equivalent to υποθερμία.

In some cases it is not easy to foresee if a word of Greek origin that has undergone considerable modifications is easy to recognize by a non philologist; as, e.g., is the case with words like hierarchy, or George (ιεραρχία, Γεώργιος or Γιώργος). Up to now no special investigation has been undertaken concerning recognizability.

6. Basis for the contrast: orthography.

Since modern Greek uses a more or less historical orthography, it is possible to find in it reflections of older linguistic periods. Consequently equivalence rules can be formulated on the basis of spelling. (Petrounias 2000, 2002b). It is a fact that modern Greek orthography is notoriously difficult for the Greeks themselves, as is even more so English orthography for anglophones. But for our obejective this defect can be put to good use insofar as we utilize it for the establishment of equivalence rules.

It is possible to «decipher» modern Greek orthography, i.e., to infer pronunciation from the written form, even though this can be done on the basis of complex rules. To this there are two exceptions, due to learned influence. They are: a) the spelling combination: consonantal letter followed by <any symbol for [i]> plus an actual <Vowel> may represent either hiatus or the result of synizesis (e.g., άδεια / άδεια 'permit / empty').This is due to the learned reintroduction of hiatus in the language, contrary to the older rule of synizesis. (Petrounias 2002,504). Examples under 6.1.

b) As I have repeatedly shown, the orthographic system misleadingly termed *monotoniko,* though less irrational than the older *polytoniko,* is still irrational enough, often difficult to decipher, creating unnecessary homographs, and on occasion ambiguous. (Petrounias 1999; 2002,540-555). Examples of this situation are given under 6.2.

From writing to pronunciation: Lack of predictability:

6.1 Symizesis vs. hiatus: Consonantal letter + symbol of /i/ + Vowel.

popular language	learned language
ά<u>δεια</u> [ðɟ] 'empty'	ά<u>δεια</u> [ði/ðj] 'permit'
μο<u>νοιά</u>ζω [] 'be of one mind'	ομό<u>νοια</u> [ni/nj] 'concord'
ή<u>λιο</u>ς [ʎ] 'sun'	η<u>λιο</u>κεντρικό [li/lj] he<u>lio</u>centric

6.2 Rules of the «monotoniko».

γιατί instead of a logical distinction: γιατί 'why' – γιατι 'because'
όπου instead of a logical distinction: όπου 'wherever' – οπου 'there where'
ως instead of a logical distinction: ώς 'up to' – ως 'as, like'

In all other instances, the decipherment of the written text is unequivocal. Of course, the reverse procedure, guessing at spelling from phonology, is in most instances impossible, as far as the stem of words is concerned; a fact due mainly to the reduction of vocalic sounds and the simplification of geminates.

7. The algorithm for the contrast.

The algorithm for establishing equivalence rules has to take into consideration: 1) The phonology of Latin. 2) The development of English phonology during the last centuries. 3) The development of the popular Greek language. 4) The difference between the latter and the educated idiom. 5) The manner in which ancient Greek is pronounced in Greece vs. the West. 6) Orthographic conventions of the two languages in question, as well as some divergences between the Greek and the Latin alphabet (based in its turn on the Greek alphabet called «occidental» and not on that called «oriental», which prevailed in the Greek speaking world in postclassical times). But in order for the contraposition to have also a practical value, equivalence rules have to be formulated in synchronic terms.

8. Vowels.

Concerning vowels it has to be noticed that vocalic sounds, both vowels and diphthongs, were considerably reduced in Hellenistic Greek, resulting in a system of six vowels in medieval and five in modern Greek. Dipthongs were monophthongized or their second element became a consonant. In Latin and later Latin vocalic sounds were also reduced, but English possesses a large number of vowels and diphthongs.

The pattern for this kind of borrowing was set in English in the 15th century with the so-called «ink-horn terms». This preceeds the big vowel shift. Since that period, English phonology has developed more rapidly than French or German, and considerably more so than Italian. Consequently, correspondence between the original and the present forms of such words as far as vowels are concerned is less direct in English than in the other languages mentioned, with the result that the formulation of equivalence rules between English and modern Greek is less unequivocal than it is, e.g., between modern Greek and French or Italian. (Petrounias 2000; 2002b.)

8.1 Development of vowels and of diphthongs in phonological order.

Rare possibilities are not indicated.

unr. = unstressed unreduced. Otherwise, in unstressed position often *schwa* ([ə]).

Some of the examples may not have exactly the same meaning in the two languages.

English pronunciation is here based on American rather than British Einglish, since the former shows less variation. (Cf. Gimson 1980; Kenyon & Knott 1943; Webster's 1971.)

ancient Greek [sound] <grapheme>	modern Greek sound grapheme	English sound grapheme	Examples ancient Greek	English (Amer.)
[i] [ĭ] <ι>	[i] <ι>	[aɪ] <i> [ɪ] [] unr. [aɪ]	κρίσις κριτικός απίθετον δίλημμα	crisis critical, crisis epithet dilemma
[e] <ε>	[e] <ε>	[i] [ɪ] <e> [ɛ] []		period Pericles periphrasis
[ɛ̆] <η>	[i] <η>	[i] <e> [ɛ] [] unr. [ɪ]	\ΑθηνΑ αφήμερος δημοκρατία Εεριπίδης	Athena ephemeral democracy Euripides
[y] [y̆] <υ>	[i] <υ>	[ɪ] <y>	λυρικός μυθολογία	lyrical mythology
[ŭ] <ου>	[u] <ου>	[jʊ] <o>	ο¨κουμενικός	oecumenical
[ŏ] <ου>	[u] <ου>	[jʊ] <u>	Οερανός	Uranus
[o] <o>	[o] <o>	[ɔ] [ɑ] unr. [ɑ]	δόγμα χάος	dogma chaos
[ɔ̆] <ω>	[o] <ω>	[o] <o> [ɑ] unr. [o]	ζώνη κωμωδία ζωόμορφος	zone comedy zoomorphic
[a] [ă] <α>	[a] <α>	[ᵘ] <a> [ɑ] [] unr. [ɑ]	παθολογικόν ερμονία \ΑθηνΑ φανταστικός	pathological harmony Athena phantastic
[e̯] <ει>	[i] <ει>	[aɪ] <i> unr. [aɪ]	ε-δωλον εδωλολάτρης	idol idolater
[o̯] <οι>	[i] <οι>	[ɛ]	ο¨κουμενικός	oecumemical
[a̯] <αι>	[e] <αι>	[i] <ae> [ɪ] <ae> [ɛ] <e>	Α¨ολίς Χίμαιρα παιδαγωγός	Aeolis Chimaera pedagog
[ɔ̯̆] <υω>	[o] <ω>	[]	τραγυωδία	tragedy
[ă̯] <?α >	[a] <α>			
[eʊ] <ευ>	[ev/ef] <ευ>	[ju] [jʊ] <eu>	εεχαριστία Εερώπη	Eucharist Europe
[aʊ] <αυ>	[av/af] <αυ>	[ɔ] <au>	ταυτο- -σαυρο	tauto- -sauro

Remarks:

1) [i, ĭ, y, y̆, e̯, o̯], –[e, a̯], in prevocalic position: In words of popular origin: #–C[vd.] → [j], #–C[vl.] → [ɥ] (synizesis): in words of learned origin or learned influence: → [i/j] (hiatus): e.g., of popular origin: γιατρός 'doctor', άδεια [áðja] 'empty'; learned: ιατρός 'doctor', ιατρική 'medecin', άδεια [áðia / áðja] 'permit', υάκινθος 'hyacinth'. The same vowels in the popular language: after [n] or

[l] and before another vowel in coalescence with the consonants → [ʎ] [ʝ] (palatalization): pop. ήλιος ([ʎ])
'sun', lrd. ηλιοκεντρικό ([li]) 'heliocentric'. Example with [ĕ] the word for 'old', pop. παλιός, lrd.
παλαιός; so παλαιοντολογία 'παλεοντολογία'.

2) Diphthongs αυ ευ before vd. C: [av ev], before vl. C.: [af ef].

8.2 Equivalence of vowels on the basis of orthography .

8.2.1 Single letters:

Modern Greek grapheme sound	English grapheme sound	Examples Modern Greek	English
<α> [a]	<a> [ᵘ] [ɑ] [ĭ]	παθολογικόν αρμονία Αθηνά́	pathological harmony Athena
<ε> [e]	<e> [i] [ɪ] [ɛ] [ĭ]	περίοδος Περικλής Αθηνά́	period Pericles Athena
<η> [i]	<e> [i] [ɛ] [ĭ]	Αθηνά εφήμερος δημοκρατία	Athena ephemeral democracy
<ι> [i]	<i> [aɪ] [ɪ] [ĭ]	κρίσις κριτικός επίθετο	crisis critical epithet
<o> [o]	<o> [ɔ] [ɑ]	δόγμα	dogma
<υ> [i]	<y> [ɪ]	λυρικός	lyrical
<ω> [o]	<o> [o] [ɑ]	ζώνη κωμωδία	zone comedy

The basic value of letters is given, which is mostly satisfactory in the case of internationalisms.

8.2.2 Vocalic digraphs and combinations of V+C.

Modern Greek grapheme sound	English grapheme sound	Examples Modern Greek	English
<αι> [e]	<ae> [i] [ɪ]	Αιολίδα χίμαιρα	Aeolis Chimaera
<ει> [i]	<i> [i]	είδωλο	idol
<οι> [i]	<oe> [ɛ]	οικουμενικός	oecumenical
<αυ> [av/af]	<au> [ɔ]	ταυτο- -σαυρος	tauto- -sauro
<ευ> [ev/ef]	<eu> [ju] [jʊ]	ευχαριστία Ευρώπη	Eucharist Europe
<ου> [i]	<o> [jʊ] <u>	οικουμενικός ουρανός	oecumenical Uranus

Remarks:

1) On η, ι, υ and the digraphs ει οι see   above.

2) Spellings <?α Fη yω> are no more in use; i.e., the iota subscript is not wrotten. This is of no importance, since the ancient diphthongs represented by them coalesced with other sounds already before the Hellenistic period.

[k g kн̆] [l n] + /i/ + V in words of popular origin: → [ʝ] + V;

It is obvious, that concerning vocalic sounds there is considerable equivalence in orthography but a great amount of vacillation in phonology.

9. Consonants.

There is considerably more equivalence between the two languages concerning consonants.

9.1 Development of consonants: in phonological order.

ancient Greek	modern Greek	English	Examples
sound grapheme	sound grapheme	sound grapheme	mod. Greek English
[p] <π>	[p] <π, ππ>	[p] <p, pp>	πάθος pathos
[mp] <μπ>	[b] after nasal <μπ>	[mp] <mp>	συμπάθεια sympathy
[t] <τ>	[t] <τ, ττ>	[t] <t, tt>	τηλε- tele-
[nt] <ντ>	[nd] <ντ>	[nd] <nt>	αντινομία antinomy
[k] <κ>	[k] <κ, κκ>	[k] <c, cc, k>	κωμωδία comedy
			εκκλησιαστικός ecclesiastic
			κάθαρση katharsis
	[g] after nasal <γκ> [c] before [i, e]	[ŋk] <nc>	εγκώμιο encomium
		[s] <c>	κύκλος cycle
[pн] <φ>	[f] <φ>	[f] <ph>	φιλοσοφία philosophy
[tн] <θ>	[θ] <θ>	[θ] <th>	θέατρο theater
[kн] <χ>	[x] <χ>	[k] <ch>	χάος chaos
	[ç] before [i, e]		χίμαιρα chimera
[b] <β>	[v] <β>	[b] <b>	βάρβαρος barbarous
[d] <δ>	[ð] <δ>	[d] <d>	δράμα drama
[g] <γ>	[ɣ] <γ>	[g] <g>	γραμματική grammar
	[ʝ] before [i, e]	[dʒ]	γύρος gyro-
	[g] after nasal <γκ, γγ>	[ŋg]	γάγγλιον ganglion
[s-z] <σ>	[z] before vd. C. <σ>	[z] bef. vd. C. <s>	κοσμο- cosmic
		[z] intervoc.	φυσικός physic
	[s] otherwise <σ, σσ>	[s] intervoc. <ss>	θαλασσο- thalasso-
		[s] otherwise	Σωκράτης Socrates
[m] <μ>	[m] <μ, μμ>	[m] <m, mm>	μεσο- meso-
[n] <ν>	[n] <ν, νν>	[n] <n, nn>	Νείλος Nile
[l] <λ>	[l] <λ, λλ>	[l] <l, ll>	παλαιο- palaeo-
[r] <ρ>	[r] <ρ, ρρ>	[r] <r, rr>	Ευρώπη Europe
[r̥] word initially	[r]	[r] <r>	ραψωδία rhapsody
[h] <^>	[-] <->	[h] <h>	_ελληνικός Hellenic
[zd, dz]<ζ>	[z] <ζ>	[z] <z>	ζωδιακός zodiac

Remarks:

1) Both in later Greek and later Latin the consonant [h] (the "spiritus asper" of classicists, the "δασεία"of the Greeks) was dropped, but it exists in English, and has been reintroduced in loans from Greek and Latin under the influence of the Erasmian pronunciation.

2) Geminates have been simplified both in later Greek and later Latin, while in English they are disallowed within the stem of a word; e.g., ιππ[p]όδρομος hipp[p]odrome. But intervocalic [ss] gives in English vl. [s]: θάλασσα 'sea' - thalass[s]o-

3) In the popular language there is also manner dissimilation of a voiceless consonant cluster (except cluster [sf]): [pt] → [ft], [sθ] → [st], [kt] → [xt].

4) In the learned idiom: clusters [mb] [nd] become [mv] [nð] (a "spelling pronunciation"): pop. κόμπος 'knot', lrd. κόμβος 'marine knot' (a semantic borrowing from English); pop. άντρας 'man', lrd. ανδροκρατία «androcracy».

   Some exceptions: e.g., from Greek [s]: philosophy [s], Asia [ʒ].

9.2 Equivalence of consonants on the basis of orthography

modern Greek grapheme sound	English grapheme sound	Examples modern Greek	English
<β> [v]	<b> [b]	βάρβαρος	barbarous
<γ> [ɣ] before [i, e] [ʝ] <γκ, γγ> [ŋg] [ɟ]	<g> [g] [dʒ] [ŋg] [ŋg]	γάγγλιον γύρος γάγγλιον	ganglion gyro- ganglion
<δ> [ð]	<d> [d]	επεισόδιο	episode
<ζ> [z]	<z> [z]	ζωο-	zoo-
<θ> [θ]	<th> [θ]	θέατρο	theater
<κ> [k] before [i, e] [c]	<c> [k] <s> [s]	εικόνα κύκλος	icon cycle
<λ>* [l]	<l> [l]	πολιτικός	poltical
<μ>* [m]	<m> [m]	μανία	mania
<ν>* [n]	<n> [n]	μανία	mania
<ξ> [ks]	<x> [ks]	αλέξαντρος	Alexander
<π> [p]	<p> [p]	επεισόδιο	episode
<ρ> [r]	<r> [r]	πυραμίδα	pyramid
<σ> before vd.C. [z] intervoc. [s] otherwise [s]	<s> [z] [z] [s]	κόσμος φυσική ιστορία	cosmic physics history
<τ> [t]	<t> [t]	ιστορία	history
<φ> [f]	<ph> [f]	φιλοσοφία	philosophy
<χ> [x] before [i, e] [ç]	<ch> [k]	χάος χιλιόμετρο	chaos chilometer
<ψ> [ps]	<ps> [ps] word init. [s]	έλλειψη ψευδο-	ellipsis pseudo

* "Palatalizable" consonants, besides [k g kʰ] [n l] + /i/ + V in words of popular origin: → ʃ ʎ + V (synizesis resulting in palatalization); e.g., pop. ήλιος 'sun', wile ηλιοκεντρικό in learned pronunciation often [lio] − he[lio]centric.

After the minor orthographic reform of the «monotoniko» in Greece, there is no indication for [h].

9.3 Clusters.

In general, clusters remain the same in the two languages, taking of course into consideration the equivalence between voiced [v ð ɣ] fricatives in modern Greek corresponding to stops [b d g] in English and of velar fricative [x] corresponding to a stop [k], as well as of manner dissimilation of voiceless stops in the popular language.

It must be remembered that clusters [pn ps ks kn] are disallowed word initially in English. Consequently: (c)nossus, (p)neumonia, (x)[z]erxes, (p)seudo- respectively for Κνωσσός, πνευμονία, Ξέρξης, ψευδο-.

Example of voiceless clusters: Popular language (ο)χταπόδι, learned idiom οκταπόδι − English octopus (The difference o − a is due to reintroduction of the full form cκτώ in Neolatin terminology.)

9.3.a Combination of /Vowel-nasal C-stop/: in modern Greek /Vowel-optional nasal-stop/.

The sequence /V-nasalC-voiceless stop/ has had a diverse development in Greek. Already in the Hellenistic period the voiceless stop became voiced, except in a postnasal position; i.e. [déndron] became [ðéndron]. Spelling with <νδ> and subsequent pronunciation [nð] ([ðénðron]) is a typical case of spelling pronunciation, originating in a misunderstanding of ancient Greek pronunciation by educated persons in the last centuries.

Today the nasal is subject to an «optional» deletion. In relation to this, a voiced stop may be pronounced as prenasalized. This implies that clusters [mp nt̪ c ŋk] do not exist, while in their place there is either [mb nd̪ ɟ ŋg] or [b d ɟ g], single [b d ɟ g] can be pronounced [mb nd̪ ɟ ŋg]. Prenasalized stops can appear only postvocalically. In English the sequence /nasalvoiceless stop/ is as in classical Greek, while original voiced stops are not prenasalized.

Some examples are given in the remarks above (9.1).

10. Lexical stress: Outcome of the Latin stress rule in terms of orthography.

In English, in the case of internationalisms, the Latin stress rule is followed to a considerable extent. Transposed in terms of spelling, this means the following: In words of more than one syllable the ultima is not stressed. In polysyllabic words: if in the penult of the Greek word there is one of the letters or digraphs <η ω αι ει οι αυ εθ ου> (a "heavy" syllable in AG), or if there follows an orthographic double consonant or a cluster (perhaps with the exception of stop + ρ) (a closed syllable and consequently "heavy" in AG), then the penult is usually stressed in English; otherwise stress falls on the terzultima. If there is one of the vocalic letters: α ι υ, stress position cannot be predicted in English. A derivational suffix may allocate stress; e.g., Greek -ία corresponding to Latin -ia with short [i], and thence usually in English unstressed.

Stress is indicated on English examples.

	Examples	
	Modern Greek	English
a) Stress shift		
Disyllabic with stress on ultima	θερμός	thérmos
	Κνωσ(σ)ός	Cnóssos
Penult "heavy":	Αθηνά	Athéna
letters η ω αι αυ ει ευ οι ου	Πανάκεια	Panacéa
Consnonant cluster	Όλυμπος	Olýmpus
	έλλειψη	ellípsis
Double consonantal letter	υπογλώσσιος	hypoglóssal
Penult "light":	Διογένης	Diógenes
letters ε ο	-λόγος	ˊlogist
Derivational suffixes	Ολυμπία	Olýmpia
	επικός	épic
b) No stress shift		
Disyllabic with stress on penult	κόσμος	cósmic
	τέλος	télos
Penult unstr. with letter ε ο	φαινόμενο	phenómenon
Penult stressed with lt. η etc.	Πανδώρα	Pandóra

11. From English to modern Greek.

In the reverse process, from English to modern Greek, the main difficulty in the pronunciation of vowels lies in the neutralization of unstressed vowels in English. In this case only orthography can be of help. The same is true for clusters containing a nasal plus a voiceless stop in English.

Finally, in this process the special needs of classicists would have to be taken into consideration. But these should not encounter grave difficulties with modern Greek spelling, which in principle they can master more easily than the native speakers of Greek themselves.

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