Standard Modern Greek

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Modern Greek is a descendant of Classical Greek and is spoken today by approximately 11,000,000 people living in Greece. In addition, it is spoken (with various modifications) in large Greek immigrant communities in North America, Australia and elsewhere. Although the Modern Greek dialects had largely been shaped by the 10th c. A.D. (Browning 1983), the linguistic situation in Greece has been one of *diglossia* from the middle 19th c. (the early beginnings of the independent Greek state) and until 1976. The High and Low varieties of Greek diglossia are known as *Katharevousa* and *Dhimotiki* respectively. Katharevousa was a purist, partly invented, variety that was heavily influenced by Classical Greek; the term Dhimotiki, on the other hand, loosely describes the mother tongue of the Greeks, which was confined to oral communication. In 1976 the use of Katharevousa was officially abolished and gradually a new standard based on Dhimotiki as spoken in Athens has emerged. This variety is adopted by an increasingly large number of educated speakers all over Greece, who choose it over regional varieties (Mackridge 1985). In spelling, Modern Greek has kept many of the conventions of Ancient Greek, although several simplifications have taken place since 1976. Perhaps the most dramatic of these has been the decision to stop using accent and breath marks (which have not had phonetic correspondents in the language for nearly 2,000 years); these marks were replaced by one accent on the stressed vowel of each word with two or more syllables. The variety described here is Standard Modern Greek as spoken by Athenians. The sample text in particular is based on recordings of two Athenian speakers, a male in his mid-twenties and a female in her mid-thirties. Both speakers read the passage twice in relatively informal style.

Consonants

The consonant system of Greek comprises voiced and voiceless plosives and fricatives, nasals, and liquids.

	Bilabial	Labio-dental	Dental	Alveolar	Velar
Plosive	p b		t d		k g
Fricative		f v	θ ð	s z	x ɣ
Nasal	m		n		
Tap				ɾ	
Lateral approx				l	

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p	'pirʊ	*πήρα*	'I took'
t	'tino	*τείνω*	'to tend'
k	'komʊ	*κόμμα*	'comma'
b	'birʊ	*μπύρα*	'beer'
d	'dino	*ντύνω*	'to dress'
g	'gɐmʊ	*γκάμα*	'range'
f	'fɐsi	*φάση*	'phase'
θ	'θɐmʊ	*θέμα*	'topic'
x	'xomʊ	*χώμα*	'soil'
v	'vɐsi	*βάση*	'base'
ð	'ðɐmʊ	*δέμα*	'parcel'
ɣ	'ɣomʊ	*γόμα*	'rubber'
s	'sʊʊ	*σώα*	'safe' fem.
z	'zʊʊ	*ζώα*	'animals'
m	'monos	*μόνος*	'alone'
n	'nomos	*νόμος*	'law'
ɾ	'ɾimʊ	*ρήμα*	'verb'
l	'limʊ	*λίμα*	'nail-file'

Plosives. The voiceless plosives are unaspirated with very short VOTs. The voiced plosives are fully prevoiced and often—especially in more formal speech—accompanied by prenasalisation, which can vary in duration from being very brief to taking up almost the entire closure of the plosive; in fast speech prenasalisation is rarer and voiced plosives are sometimes lenited to fricatives (Arvaniti & Joseph in press). Voiced plosives never appear prenasalised word-initially or in clusters in which they are preceded by /r/ or /l/ (e.g. [bɐɾ'buni] 'red mullet' is never pronounced *[^{m}bɐɾ^{m}buni]). The prenasalisation of voiced plosives is also subject to sociolinguistic variation. Specifically, prenasalisation seems to be in decline, with younger Athenian speakers producing few or no prenasalised tokens (Arvaniti & Joseph in press). However, because of the possibility of prenasalisation, there is considerable disagreement as to whether the voiced plosives should be treated as separate phonemes (e.g. Householder 1964) or as sequences of homorganic nasal+voiceless plosive in which the plosive assimilates for voice to the nasal (e.g. Newton, 1972).

Nasals. Greek has only two nasal phonemes, /m/ and /n/. However, in clusters nasals share the place of articulation of the plosives and fricatives they precede; e.g. [ɐɱfi'vɐlo] 'I doubt', ['ɐɲjiɣmɐ] 'touch', ['ɐŋxos] 'stress'.

Rhotics. Greek has one rhotic sound. This is pronounced as an alveolar tap [ɾ] word-initially and intervocalically, or when it is followed by another consonant; in fast speech

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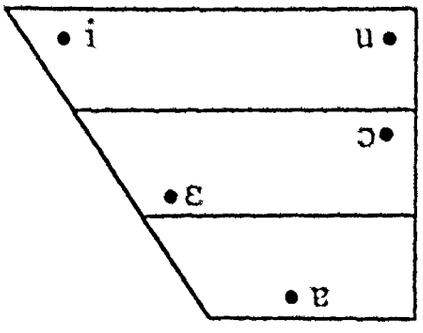
it may be pronounced as an alveolar approximant. In clusters in which it is preceded by a plosive or a fricative it is pronounced as a short trill.

The palatal consonants of Greek. Before the front vowels /i/ and /ɛ/ all the velar consonants ([k], [g], [x] and [ɣ]) have palatal allophones ([c], [ɟ], [ç] and [j] respectively). The palatal allophones of the velars appear also when the consonants are followed by a sequence of /i/ and a back vowel (/ɐ/, /o/ or /u/), when all three segments form *one* syllable. In such cases, the vowel /i/ is not pronounced and thus the palatal consonants appear before back as well as front vowels; e.g. [pɐ.ˈnɐ.cɐ] πανάκια 'small cloths' (cf. [pɐ.ˈnɐ.ci] πανάκι 'small cloth'). Despite the fact that the palatal consonants may appear before all vowels, alternations like [pɐ.ˈnɐ.ci]-[pɐ.ˈnɐ.cɐ] suggest that it is best to treat them as allophones of their velar counterparts, resulting from the presence of an underlying /i/. /l/ and /n/ also have palatal allophones when they are followed by /i/ and another vowel, if the two vowels are in the same syllable; again, /i/ is not pronounced in these cases; e.g. [ðu.ˈʎɐ] δουλειά 'work'; [ˈbɐ.ɲo] μπάνιο 'bath'; (c.f. [ðu.ˈli.ɐ] δουλεία 'slavery'; /ðɐ.ni.o/ δάνειο 'loan').

Vowels

Greek has a typical five vowel system /i ɛ ɐ o u/. /i/ and /u/ are rather peripheral close front and back vowels respectively. The mid-vowels are usually transcribed as /e/ and /o/; unlike /o/, which is indeed close-mid, /e/ is between close-mid and open-mid in quality and closer to the latter, and hence more accurately transcribed as [ɛ]. Similarly, the low vowel is usually transcribed as /a/, although it is central in quality and somewhat raised, and thus more accurately transcribed as [ɐ]. Jongman, Fourakis & Sereno (1989) present formant values for Greek vowels that clearly show the front mid vowel to be rather open in quality, the back mid vowel to be rather close, and the low vowel to be rather central.

i	pis	πεις	'you say' subj.
ɛ	pɛs	πες	'say' imper.
ɐ	pɐs	πας	'you go' subj.
o	pos	πως	'how'
u	pu	που	'where'



The Greek vowels do not exhibit much variation in terms of quality. In casual speech unstressed /i/ and, to a lesser extent, /u/ become devoiced and even elided. The factors that trigger devoicing are not fully understood. However, it can safely be stated that devoicing is mostly triggered by the presence of voiceless consonants flanking the high

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vowels and is more common when the vowel is in a syllable immediately following a stressed syllable (Dauer 1980).

The high vowel /i/ is realised differently depending on the position it occupies in the syllable. Specifically, when /i/ is followed by another vowel *in the same syllable* (and is not preceded by one of the consonants with palatal allophones), then it is pronounced as a palatal fricative, which is voiced after voiced consonants and voiceless after voiceless ones; e.g. ['lɐ.ðʝɐ] λάδια 'oils', [ɣɐ.'tçɐ] γατιά 'kittens' (c.f. ['lɐ.ði] λάδι 'oil', [ɣɐ.'ti] γατί 'kitten'); but ['ɐ.ði.ɐ] άδεια 'leave' (cf. ['ɐ.ðʝɐ] άδεια 'empty' neu.pl.). In /m/+/i/+vowel sequences forming one syllable, /i/ is pronounced /ɲ/, e.g. [mɲɐ.'lo] μυαλό 'brain' (cf. [mi.ɛ.'los] μυελός 'bone marrow').

Conventions

Greek shows several types of juncture phenomena, mostly, but not exclusively, between proclitics (such as articles, weak forms of pronouns, and the negative particles [ðɛn] and [min]) and their hosts. When word-initial voiceless plosives are preceded by a proclitic that ends in /n/ they become voiced; the nasal may assimilate for place of articulation to the following plosive or be elided; e.g. [toŋ gɐθiʝi'ti] τον καθηγητή or [to gɐθiʝi'ti] 'the professor' ACC. (/ton kɐθiʝi'ti/). The final /n/ of proclitics is elided (with some exceptions) when the host begins with a fricative or a liquid; e.g. [to 'filo mu] τον φίλο μου 'my friend' (/ton 'filo mu/), [ti 'ɾotisɐ] την ρώτησα 'I asked her' (/tin 'ɾotisɐ/). When word-final /s/ precedes a word-initial voiced consonant (and the two words belong to the same intonational phrase) /s/ becomes voiced; e.g. [o kɐ'fɛz lɛ'cɐzi] ο καφές λεκιάζει 'coffee stains' (/o kɐ'fɛs lɛ'cɐzi/). Generally, word-final consonants resyllabify, if the following word (within the same phrase) begins with a vowel. Sequences of identical consonants across word boundaries are simplified, except in very formal and careful speech; e.g. [o 'mɐno si'koθicɛ] ο Μάνος σηκώθηκε 'Manos got up' (/o 'mɐnos si'koθicɛ/). Sequences of identical vowels across word boundaries also degeminate, unless (a) vowel elision will result in a stress clash or (b) *both* vowels are stressed; e.g. [i 'portɐ 'niʝi] η πόρτα ανοίγει 'the door opens' (/i 'portɐ ɐ'niʝi /). Vowel elision also takes place between certain sequences of different vowels; which vowel is elided depends on a complex combination of stress patterns, relative vowel sonority and the morphological role of the vowels (e.g. the verb-initial past tense marker /ɛ/ is more likely to be elided than a word-initial /ɛ/ that belongs to the word's stem). When neither of the vowels is elided, the sequence is often pronounced as a short diphthong, e.g. ['inɛɐ̯'pɑ̯ifɐzmɐ] είναι από ύφασμα '[it] is of cloth' (/'inɛ ɐ'po 'ifɐzmɐ/]).

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Stress and rhythm

Greek is a language with "dynamic" stress. Stressed syllables are distinguished by being generally longer and/or having higher amplitude than unstressed syllables; stressed vowels are also more peripheral in quality than unstressed ones but the differences are not large. The most reliable measure of stress in Greek is amplitude integral or total amplitude, a measurement combining the duration and amplitude of a sound and thus giving a better indication of the vowel's loudness (Arvaniti, 1994; 2000).

Greek words carry only one stress, in one of their last three syllables. The position of stress is largely determined by morphology and is phonologically unpredictable. There are several pairs and triplets of words distinguished solely by stress location. The only case in which a Greek word carries two stresses is when it is stressed on the antepenult (or the penult) and is followed by one (or two) enclitic(s). In these cases, a second stress appears on the penultimate syllable of the whole group, e.g. [ɐfto'cinito] 'car' but [ɐfto,cini'to mu] 'my car'; ['ðosɛ mu] 'give me' but [ˌðosɛ 'mu to] 'give me it'. As can be seen in the examples, the added stress becomes the primary stress of the group. There has been discussion in the literature about whether Greek has additional levels of stress, such as "rhythmic stress" (e.g. Nespor & Vogel 1989). Acoustic evidence so far does not support this claim (Arvaniti 1992, 1994).

Transcription of recorded passage

o vo'ɾʝes 'co̝iʎoz 'mɐlonɐn | ʝɐ to 'pço̝s ɐptuz 'ðʝo 'in o ðinɐ'totɛros |
'otɐ 'nɛtiçɛ nɐ pɛ'ɾɐsi ɐpo bro'stɐ tus | 'ɛnɐs tɐksi'ðʝotis pu̝ fo'ɾusɛ 'kɐpɐ ‖
'otɐn to 'niðɐn | o vo'ɾʝes 'co̝iʎo simʝfonisɐn |
o'tio̝pço 'sɛkɐnɛ to dɐksi'ðʝoti nɐ 'vɣɐli ti 'gɐpɐ tu |
θɐ θɛo'ɾu^{n}dɐn o 'pço ðinɐ'tos ‖
o vo'ɾʝes 'ɐrçisɛ 'totɛ nɐ fi'sɐi mɛ mɐ'niɐ | ɐ'lo̝soso pɐri'sotɛro fi'susɛ |
'toso pɐri'sotɛro tili'ɣotɐn mɛ ti 'gɐpɐ tu̝o tɐksi'ðʝotis |
'ospu o vo'ɾʝes ku'ɾɐstics cɛ stɐ'mɐtisɛ nɐ fi'sɐi ‖
'totɛ 'co̝iʎo 'sɐrçisɛ mɛ ti si'ɾɐ tu nɐ 'lɐ^{m}bi ðinɐ'tɐ |
cɛ 'ɣriɣoro̝o tɐksi'ðʝotis zɛ'stɐθi̝cɛ 'c ɛvɣɐlɛ ti 'gɐpɐ tu ‖
'ɛtsi o vo'ɾʝes ɐnɐ'gɐstics nɐ pɐrɐðɛ'xti |
'oti 'co̝iʎos 'inɛ 'pço ðinɐ'tos ɐp ɐ'fton ‖

Orthographic version

Ο βοριάς κι ο ήλιος μάλωναν για το ποιος απ' τους δυο είναι ο δυνατότερος, όταν έτυχε να περάσει από μπροστά τους ένας ταξιδιώτης που φορούσε κάπα. Όταν τον είδαν, ο

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βοριάς κι ο ήλιος συμφώνησαν ότι όποιος έκανε τον ταξιδιώτη να βγάλει την κάπα του θα θεωρούνταν ο πιο δυνατός. Ο βοριάς άρχισε τότε να φυσάει με μανία, αλλά όσο περισσότερο φυσούσε τόσο περισσότερο τυλιγόταν με την κάπα του ο ταξιδιώτης, ώσπου ο βοριάς κουράστηκε και σταμάτησε να φυσάει. Τότε ο ήλιος άρχισε με τη σειρά του να λάμπει δυνατά και γρήγορα ο ταξιδιώτης ζεστάθηκε κι έβγαλε την κάπα του. Έτσι ο βοριάς αναγκάστηκε να παραδεχτεί ότι ο ήλιος είναι πιο δυνατός απ' αυτόν.

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