VERB MORPHOLOGY OF MODERN GREEK:

A DESCRIPTIVE ANALYSIS

by

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CHAPTER 1

INTRODUCTION

1.00: The Study. A survey of the available linguistic literature indicates that descriptive investigations of Modern Greek--a language spoken in several dialects by some nine million people in the southeastern part of Europe and by several million more in different corners of the earth--are few indeed. The fact that in not one of these investigations is there a complete description of the phonology of this language is a strong indication of the lack of adequate descriptive studies of Modern Greek. In short, it can be safely stated that to date no description of Modern Greek, using modern linguistic techniques, has been made. Since, however, a complete description of this language would constitute too broad and ambitious an undertaking, the analysis, using modern linguistic techniques, of only one aspect of the grammar of Modern Greek, namely, the morphology of the verb, has been undertaken as the concern of this dissertation. In addition, this study includes an outline of the phonology of the language, since a morphological description presupposes a phonemic analysis.

1.10: Relevant Scholarship. In addition to a considerable number of prescriptive grammars, as for example,

Louis Roussel, Grammaire descriptive du romeique littéraire (Paris: Garnier, 1930) [the title here is misleading] and Manolis A. Triandaphyllidis, Neoelliniki Grammatiki (Athens: Organismos Ekdoseos Sxolikon Vivlion, 1941), there exist only three books and one dissertation on Modern Greek that are relevant to the main concern of the present study: Henry and Renée Kahane and Ralph L. Ward, Spoken Greek, two volumes, (New York: Henry Holt and Company [Spoken Language Series], 1945-6); Hansjakob Seiler, L'Aspect et le Temps dans le Verbe Néo-Grec (Paris: Société d'Edition 'Les Belles Lettres,' 1952); Julian T. Pring, A Grammar of Modern Greek (London: University of London Press, 1955); and James Macris, "An Analysis of English Loanwords in New York City Greek," unpublished doctoral thesis, Columbia University, 1955.

The first book is primarily concerned with teaching students Modern Greek by the so-called "Army method." It does not contain an explicit statement of the phonology;[1] nor is there enough evidence of what might be called a systematic structural approach to the language. It is a useful work, however, in that it is rich in material that can be used in an analysis of the grammar.

The same criticisms may be applied to Seiler's book, the sources of which are literary texts, written folk tale texts, and folk songs, with no material drawn directly from

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[1]The claim, for example, that "Our transcription is phonemic rather than phonetic." (Vol. 1, Author's Preface) turns out to be inadequate since the Kahanes's transcription is found to be morphophonemic.

the spoken language. However, this works attempts to define the characteristics of aspect and tense of the verbal system and thus has served as a valuable point of reference for the present study. One major difference between this study and Seiler's work is that here aspect is considered an obligatory marker in any verb form, while it is considered a non-obligatory marker in some verb forms by Seiler.

Pring's work attempts to present, by the use of a phonetic transcription, a sketch of Modern Greek grammar. While Pring attempts no phonemic interpretation of the data and makes no claim to any syntactical analysis, his book has been quite useful in that it provides, in addition to some limited information on the verb, a basis of comparison for the phonetic material gathered for this analysis.

Macris's dissertation is primarily concerned with the investigation of loanwords in Greek spoken in New York City. His chapter on the phonology of Modern Greek is the closest explicit description encountered on this topic, but suffers on two points: (1) synchronic, diachronic, and morphophonemic statements are often confused and (2) the reader is constantly expected to accept phonemic interpretations without being given evidence for these interpretations.

In addition to the above material, there are a number of articles written on Modern Greek, most of which are not directly relevant to this study since the authors concern themselves either with a syntactical aspect of the language (such as Henry and Renée Kahane, "Syntactical Juncture

in Modern Greek," Language XXI, No. 2 [1945], 93-95) or with the historical development of an aspect of the language, without carrying it into Modern Greek to any appreciable extent (for example, Ralph L. Ward, "The Loss of Final Consonants in Greek," Language XXII, No. 2 [1946], 102-108). The few remaining articles are discussed in the following chapters as a relevant point occurs. For a complete list of the books and articles consulted during this study see the bibliography.

1.30: Material. While the scholarly works cited in the preceding section have been used to some extent as reference material, the material upon which this study is directly based is the spoken language. The phonemic sketch is based on only one of the various dialects of Modern Greek, namely, that dialect spoken by two informants who were born, raised, and educated in Athens, Greece, and who have not been away from Greece longer than twenty months.[2] The term Modern Greek, therefore, will refer to this particular dialect throughout the discussion on phonology. The morphemic analysis--the primary concern of the present study--is based upon material elicited from the same two informants used to describe the phonology and upon the speech of the author, who is a native speaker of Alexandrian Greek (a dialect spoken by Greeks living in Alexandria, Egypt) and whose

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[2]The informants are 22 and 27 years old and had never traveled outside Greece prior to their arrival to the United States. The younger informant is a graduate of Salvanos Gymnasium, while the older one is a graduate of the Ogdoon Gymnasium (Salvanos and Ogdoon are private high schools in Athens). Neither informant has attended an Athenian college or university.

speech differs from Athenian Greek primarily in phonology.[3] The term Modern Greek, therefore, is extended to cover the speech of this third informant throughout the description of the morphology of the verb.

1.40: Organization of the Study. The present study is presented in four chapters. The phonemic sketch of Modern Greek is given in Chapter 2, and consists of a discussion of the segmental phonemes and the stress phoneme, as well as the justifications for the interpretations given. Chapter 3 is a statement and discussion of the normalizations made in order to simplify the statements of allomorphic distribution. These normalizations concern the velars which must always be followed by /j/ before /i/ and /e/, and a number of morphophonemic alternations occurring (1) independent of boundary, (2) at word boundaries, and (3) at morpheme boundaries.

Chapter 4 is a general introduction to the description of the verb morphology. The basic assumptions and methodology underlying the analysis are given, as well as a morphological definition of the verb and its constituents. In addition, the basis upon which the verbs have been divided into classes is discussed and exemplified by a set of appropriate paradigms.

The description of the various stem and suffix alternations that occur in the Greek verb construction and

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the conditions under which they occur are fully discussed in Chapter 5. These alternations are divided into phonologically conditioned and morphologically conditioned alternations, and are discussed in that order. A discussion of stress in verbal forms is included in this chapter.

Finally, a summary of the conclusions reached during this investigation is given in Chapter 6.

CHAPTER 2

PHONOLOGY

2.00: Introduction. While there are both segmental and suprasegmental phonemes in Modern Greek, this discussion will be limited to the segmental phonemes and stress phoneme only, since these alone are relevant to the primary concern of this dissertation.

Modern Greek has five vowel phonemes, nineteen consonant phonemes and one stress phoneme. These will now be described in that order.

2.10: Vowels. /i,u,e,o,a/. /i/ and /u/ are high, while /e/ and /o/ are mid vowels.[1] The members of these two pairs are characterized by a difference in both tongue position and labialization: the front vowels /i,e/ have the lips neutral; and the back vowels /u,o/ have the lips rounded.[2] /a/ is a low central vowel. In the speech

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[1] A certain amount of allophonic variation has been observed for the mid vowels. The exact conditioning factors are not immediately apparent, however, and must therefore await a more detailed phonetic investigation of Modern Greek.

[2] The statements that (1) /i/ and /e/ each have an allophone /j/ in hiatus (Andre Mirambel, Grammaire du Grec Moderne [Paris: Librairie C. Klincksieck, 1949] and James Macris, "An Analysis of English Loanwords in New York City Greek," unpublished doctoral thesis, Columbia University, 1955 [microfilmed]) and (2) /i/ in unstressed position has an allophone /j/ (Julian T. Pring, A Grammar of Modern Greek

of one of the informants the vowel /u/ has an allophone [w] varying freely with [u] before a stressed /i/; the sequence /uí/ occurs only in the two forms /uíski/ 'whiskey' and /sanduíts/ 'sandwich'. Since the conditions in which [w] occurs can be phonemically specified, there is no need to posit a new phoneme /w/.[3]

Vowels in initial and medial position are slightly lengthened when stressed and are slightly nasalized when followed by a nasal. In unstressed position all vowels are qualitatively centered. Furthermore, when the high vowels /i/ and /u/ occur unstressed in voiceless surroundings (e.g., when preceded by a voiceless consonant and followed by a voiceless consonant or are in utterance final position), they may have voiceless allophones, [I] and [U], in free variation with their voiced counterparts; thus, ὄχι 'no' when followed by voiceless consonants or when in utterance final position varies freely: [ɔ́x'I] ~ [ɔ́x'i] /óxji/; also τὸ νύχι σου κόπηκε 'your fingernail is cut' varies freely:

[London: University of London Press, 1955]; Donald C. Swanson, "English Loanwords in Modern Greek," Word XIV No. 1 [1958] 26-46; Henry and Renée Kahane and Ralph L. Ward, Spoken Greek, 2 vols, [New York: Henry Holt and Company (Spoken Language Series), 1945-6]; and James Macris [in his thesis]) are here rejected because of the existence of contrasts in these positions between [e] and [j] and [i] and [j]: θειά [θeá] 'goddess' and θεία [θjá] 'aunt'; ὄπιον [ɔ́pion] 'opium' and ὁποιον [ɔ́pjon] 'whomever'.

[3]For a somewhat different interpretation of [w] see Swanson, "English Loanwords in Modern Greek" (ibid): "The only certainly borrowed phoneme is English w, both as a consonant and a second element in the diphthongs aw, ow." (p.30). Such an interpretation does not seem necessary for the data examined in this study, since no contrast between [u] and [w] could be found.

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[nix'IsU kɔ̀pIk'e] ~ [nix'isu kɔ̀pik'e] /nixjisu kò̀pike/. Voiceless allophones of vowels do not occur in careful speech, however.

2.11: Distribution of Vowels. Any vowel can occur initially, medially, or finally within an utterance, but only /e,o,a,u/ occur as the sole constituent of an utterance.

2.12: Clusters of two dissimilar vowels occur freely in any position within an utterance except initially; in initial position only /i,e,a,o/ occur as the first member of a two vowel cluster. Clusters of three dissimilar vowels occur in any position within the utterance but are restricted to sequences of the type /iVV/ and /oVV/ (in which the first V cannot be /u/) in initial position and /ViV/ in medial and final position. Examples: ἱερά [ierá] 'holy' /ierá/, ἀόρατος [aórratos] 'invisible' /aórratos/, θέατρον [théatron] 'theatre' /théatron/, ἀκούει [akúi] 'he hears' /akúi/, φαί [fai] 'food' /fai/, θα φάη [fái] 'he will eat', /fái/, οἱ ἀετοί [iaeti] 'eagles' /iaeti/, ὁ ἀσώματος [oasómatos] 'the blind (man)' /oasómatos/, (τῆς) Ἀγλαΐας [aglaías] 'Aglaia's' /aglaías/, χρυσοχοεῖα [xrisoxoía] 'jewelry shops' /xrisoxoía/.

Clusters of identical vowels are restricted to /ii/, /oo/, and /aa/[4] in utterance-initial position and to /ii/, /ee/, /oo/, and /aa/[4] in utterance-medial and final position. Examples: ἡ ἱλαρά [iilará] 'measles' /iilará/, ὁ ἀραιός

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[4]The cluster /aa/ occurs only in the following proper names: Ἀαρών 'Aaron' /aarón/, Ἀβραάμ 'Abraham' /avraám/, and Ἰσαάκ 'Isaac' /isaák/.

[oorɛ́os] 'handsome' /ooréos/, καίεται [kɛ́ɛte] 'it burns' /kéete/, ζῶον [zɔ́ɔn] 'animal' /zóon/, κύριοι [k'írii] 'gentlemen' /kjírii/, Θεέ μου [θɛɛ́] 'my God!' /θeé/.

2.20: <u>Consonants</u>. /<u>p</u>,<u>t</u>,<u>k</u>,<u>b</u>,<u>d</u>,<u>g</u>,<u>f</u>,<u>θ</u>,<u>x</u>,<u>v</u>,<u>δ</u>,<u>γ</u>,<u>s</u>,<u>z</u>, <u>l</u>,<u>r</u>,<u>m</u>,<u>n</u>,<u>j</u>/.[5]

2.21: <u>Palatalizing Phoneme</u>: /<u>j</u>/. /j/ is a palatalizing phoneme which occurs only between a consonant and a vowel, i.e. occurs only in the type of sequence /CjV/. The

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[5]For different interpretations of consonants see Swanson's "English Loanwords in Modern Greek" (op.cit.); Andre Mirambel, "L'opposition de ts a dz en grec moderne," <u>Bulletin de la Société de Linguistique de Paris</u> XLVI, No. 132 (1950), 58-68, and <u>Grammaire du Grec Moderne</u> (op.cit.); James Macris, "An Analysis of English Loanwords in New York City Greek," (op.cit.); Henry and Renee Kahane, "The Tense System of Modern Greek," <u>Omagiu lui Iorgu Iordan</u> (Academia Republicii Populare Romine), 1958, 453-74.

Mirambel, the Kahanes (by statement), and Swanson (by implication) interpret [γ'] phonemically as /j/. Macris has no /j/ phoneme. Swanson lists [x'] and [w] as separate phonemes (although in private he has stated that he no longer is willing to consider [x'] as a separate phoneme). Mirambel and Macris interpret [ts] and [dz] as the unit phonemes /ts/ and /dz/.

In the present analysis the affricate clusters [ts] and [dz] have been phonemically interpreted as a sequence of two consonants, since [ts] and [dz] do not have the same distribution as any other unit phoneme (such as /p/) but do have the same distribution as any other two-consonant cluster (such as /st/). While Macris offers no reasoning for his interpretation, Mirambel interprets [ts] and [dz] as the unit phonemes /ç/ and /ʒ/, essentially on the grounds that examples such as [tsíros] and [dzíros] contrast and that since one cannot substitute either a /t/ or /s/ in the first example or a /d/ or /z/ in the second example without changing the meaning, the cluster and any other single phoneme are mutually substitutable. Since this mutual substitution is possible in all environments, both clusters contrast with unit phonemes and thus [ts] and [dz] constitute unit phonemes. This argument is here rejected, since it can easily be seen that if carried to its natural conclusion, every cluster in the language can be reduced to a unit phoneme.

For my interpretation of [γ'], [x'] and [w] see sections 2.21 and 2.00 respectively.

decision to interpret /j/ as a palatalizing phoneme is based on the following considerations.

In Modern Greek every non-vocoid has a palatalized counterpart with which it contrasts in initial and medial position (only non-palatalized non-vocoids occur finally); for example, [p] in θά πῆς [θapis] 'you will say' contrasts with [p'] in θά πιῆς [θap'is] 'you will drink', and [ɣ] contrasts with [ɣ'] in γάλι [ɣaʎi] 'cat' and γιάλι [ɣ'aʎi] 'why'. Furthermore, the distribution of these palatalized and non-palatalized non-vocoids is strikingly asymmetrical:

Non-palatalized non-vocoids occur:

a) in final position

b) in initial and medial position before non-vocoids

c) in initial and medial position before vowels:

non-velars occur before /i,u,e,o,a/

velars occur only before /u,o,a/

Palatalized non-vocoids occur:

in initial and medial position before vowels only:

[p',n',l',k',g',x',ɣ'] occur before /i,u,e,o,a/

[b',t',d',f',v',s',z',θ',ð',r',m'] occur only before /u,e,o,a/.

The problem arises, therefore, of how to interpret palatalized non-vocoids. Should they be interpreted as unit phonemes, the result would be a rather large phonemic inventory, the bulk of which would consist of a list of pairs whose only contrastive feature is [']. A more important objection would arise in the need for complicated phono-

-tactic statements due to the considerable asymmetry in distribution: non-palatalized velars would not occur before /i,e/, while palatalized non-velars, except /p',n',l'/, would not occur before /i/. Furthermore, only non-palatalized consonants would occur in utterance final position and before other consonants.

Should the palatalized non-vocoids, as was done in this analysis, be interpreted as /Cj/, a consonant plus a palatalizing phoneme /j/,[6] then the above objections would be eliminated: the phonemic inventory is reduced by a considerable number of phonemes and a less complicated phonotactic statement is possible; namely, consonants may occur in all three positions within an utterance, before other consonants, and before vowels--velars occur only before /u,o,a/, and non-velars occur before all five vowels.

There is one case, however, on the basis of which the decision to interpret a palatalized non-vocoid phonemically as /Cj/ may be seriously questioned; namely, the interpretation of [j] as /ɣj/. Objections may be raised, on the phonological level, toward interpreting a single segment (the phone [j]) as a <u>sequence</u> of phonemes. The simplification of the morphophonemic description of the language which this interpretation makes possible, however, seems to be sufficient justification.

Should [j] be interpreted as /j/, the distribution

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[6]The possibility of interpreting a palatalized non-vocoid as a consonant plus /i/ is not possible because of the existence of such contrasts as [ɔ̀pion] 'opium' and [ɔ̀p'on] 'whomever.'

of the allomorphs of the morpheme {-e} 'third person singular past tense' would have to be stated as follows:

/je/ after /k,g,x/

/e/ elsewhere;

and all verb forms whose basic alternant ends in /ɣ/ would exhibit such alternations as /ɛ́faɣ-a/ 'I ate' versus /ɛ́faj-e/ 'he ate'. Should the segment be interpreted as /ɣj/, however, both statements could be simplified. The distribution of the allomorphs of {-e} can be stated more generally:

/je/ after <u>velars</u> (i.e. /k,g,x,ɣ/)

/e/ elsewhere;

and bases ending in /ɣ/ would have only one variant--/ɛ́faɣ-a/ and /ɛ́faɣ-je/. It should be noted that this interpretation produces a simplification of the phonotactics of the language as well: /ɣ/ no longer is the only consonant (other than /j/ itself) which cannot occur before /j/.

2.22: <u>Stops</u>. /p,t,k/ are voiceless fortis unaspirated stops, while /b,d,g/ are voiced lenis unaspirated stops. /p,b/ are bilabial, /t,d/ are dental, and /k,g/ are velar: πολύ 'much' /poli̱/, μπορεί 'he can' /bori̱/, Δώρα 'Dora' /dóra/, τώρα 'now' /tóra/, γκαβός 'blind' /gavós/, κόμμα 'comma' /kóma/.

2.23: <u>Spriants</u>. /f,θ,x/ are flat voiceless fricatives, /v,ð,ɣ/ are flat voiced fricatives, /s/ is a grooved voiceless fricative, and /z/ is a grooved voiced fricative. /f,v/ are labiodental, /θ,ð/ are interdental, /x,ɣ/ are velar, and /s,z/ are alveolar: φάρος 'lighthouse' /fáros/,

βάρος 'weight' /város/, θείος 'uncle' /θíos/, δύο 'two' /ðío/, χάμω 'on the floor' /xámo/, γάμος 'wedding' /ɣámo/, σάλι 'shawl' /sáli/, ζάλη 'dizziness' /záli/.

2.24: Liquids. /l/ is a voiced alveolar lateral, and /r/ is a voiced alveolar flap: λίγα 'few' /líɣa/, ρίγα 'ruler' /ríɣa/.

2.25: Nasals. /m,n/ are voiced nasals. /m/ is bilabial and /n/ is alveolar: μισεῖ 'he despises' /misí/, νησί 'island' /nisí/. /m/ before /f,v/ is labiodental, [ɱ]: συμφωνῶ [siɱfonó] 'I agree' /simfoní/. /n/ before /k,g,x,ɣ/ is velar, [ŋ]: ἐγγόνι [eŋgóŋi] 'grandson' /engóni/, ἔλεγχος [élexos] 'report card' /élenxos/, ἐγγραφή [eŋɣrafí] 'enrollment' /eŋɣrafí/.

2.26: Distribution of Consonants. All consonants except /j/ occur in utterance-initial and medial position; in these positions velars occur before /u,o,a/, and non-velars (except /j/) occur before all vowels. /p,t,k,b,d,g,f,s, z,v,l,r,n,m/ (all consonants except /ɣ,ð,x,θ and j/) occur in utterance-final position.[7]

2.27: In utterance-initial position there are clusters of two or three consonants; medially, there are

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[7]It is interesting to note, however, that /p,t,k,b, d,g,f,z,v,l,r,m/--twelve out of the possible fourteen finally occurring consonants--occur in undeclinable nouns; i.e. in morphemes which fill the syntactic slot noun but which do not exhibit all the morphological characteristics of any other morpheme filling the same slot. Examples: πικάπ [pikáp] 'victrola' /pikap/, κοντάκ [kodák] 'kodak' /kodák/, γκόλφ [gólf] 'golf' /gólf/, σωφέρ [sofér] 'chauffer' /sofér/, τράμ [trám] 'streetcar' /trám/.

clusters of as many as four consonants, although these are limited.[8] Only /ts,dz,ks,st,lf,lm,rt,rs,nd,nk,rts,nks/ occur in utterance-final position.[9] Table 1 shows all the two-consonants clusters of Modern Greek.

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[8]By 'medially' in reference to consonant clusters will be meant <u>within words</u> (minimal free utterances). Utterance-medial clusters straddling word boundaries can be predicted from the lists of final and initial consonants and consonant clusters.

[9]Again, it should be noted that the entire number of final clusters occur only in undeclinable nouns. Examples: μάτς [màts] 'match' /màts/, φίλμ [fílm] 'film' /fílm/, σόρτς [sórts] 'shorts' /sórts/, τάνκς [tánks] /tánks/ 'tanks'.

TABLE 1

TWO-CONSONANT CLUSTERS

	p	t	k	b	d	g	f	θ	x	v	ð	ɣ	s	z	m	n	l	r	j
p	pt						pf						ps			pn	pl	pr	pj
t				tb				tθ					ts		tm	tn	tl	tr	tj
k	kp	kt					kf	kθ	kx				ks		km	kn	kl	kr	kj
b																	bl	br	bj
d														dz			dl	dr	dj
g											gð						gl	gr	gj
f	fp	ft	fk					fθ	fx				fs			fn	fl	fr	fj
θ															θm	θn	θl	θr	θj
x		xt						xθ							xm	xn	xl	xr	xj
v											vð	vɣ		vz	vm	vn	vl	vr	vj
ð																		ðr	ðj
ɣ											ɣð				ɣm	ɣn	ɣl	ɣr	ɣj
s	sp	st	sk				sf	sθ	sx										sj
z				zb						zv		zɣ			zm		zl	zr	zj
m	mp			mb			mf			mv						mn			mj
n		nt	nk		nd	ng		nθ	nx		nð	nɣ	ns						nj
l	lp	lt	lk	lb	ld		lf	lθ		lv	lð	lɣ	ls		lm	ln			lj
r	rp	rt	rk	rb	rd		rf	rθ	rx	rv	rð	rɣ	rs		rm	rn	rl		rj
j																			

Clusters that are underlined in Table 1 occur both initially and medially; the remaining clusters occur only medially.

The distribution of three-consonant clusters is shown in Table 2.

TABLE 2

THREE-CONSONANT CLUSTERS

Initially: skn

Initially and Medially: spl, spr, str, skl, skr, sfr, ftj, Clj, Cnj, and CC_vj.

Medially:

xt-	rθ-		fp-	lf-		mp-		kp-		kp-				
st-			kt-	xθ-		lt-		mp-		fp-				
lt-	nδ-		ft-	nθ-		nt-	-s	ks-	-t	fk-	-l			
rt-	rδ-		xt-	rθ-		rt-		fs-		nd-				
mb-	ps-	-j	mb-	sx-	-r	fk-		nx-		ng-				
nd-	ts-		nd-	gδ-		rk-				kθ-				
ng-	ks-		ng-	nδ-										
rf-	tr-		kf-	nɣ-		kp-		nd-		rfx				
tθ-						sp-	-n	rd-	-z					
						vɣ-		ng-		rθm				

C_v in the above table denotes a velar consonant, and C any consonant which precedes /l/, /n/, or a velar in Table 1, except /tnj/, /bnj/, /lnj/, and /tlj/, which do not occur in either position. Clj, Cnj, and CC_vj can occur initially only if the first two members of the cluster have been underlined in Table 1.

An interesting phenomenon concerning three-consonant clusters is that while in most cases the last two members of these clusters can occur elsewhere between vowels, both in initial and medial position, in a very few cases they can occur as clusters only in medial position; e.g. /gδ/.

Clusters of four consonants have /k/ or /f/ as the first member, /s/ as the second member, and /r/ as the final member of the cluster: /kstr/ in ἐκστρατεία 'expedition' /ekstratía/, /kspr/ in ἔξπρές 'express' /eksprés/, and /fstr/ in Αὐστρία 'Austria' /afstría/.

2.30: Stress. There is only one stress phoneme in Modern Greek: /'/ or loud stress.[10] Stress increases the loudness of the vowel affected in any position within the utterance and slightly lengthens it only in utterance-initial and medial position. There is at least one stress phoneme in every utterance. If there is only one stress phoneme within the utterance, it will occur on only one of three vowels: the last, second to the last (penultimate), or third to the last vowel (contepenultimate) in the utterance: πίνω [plno] 'I drink' /plno/, πεινῶ [pinɔ́] 'I am hungry' /pinó/, ζάμι [dzámi] 'window pane' /dzámi/, ζαμί [dzamí] 'mosque' /dzamí/, σιδηρόδρομος [siðirɔ́ðromos] 'train' /siðiróðromos/, τί [tí] 'what' /tí/.

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[10] In any pair of utterances which are composed of the same segmental phonemes, loud stress may contrast with at least one more element of loudness; namely, extra loudness or ['']; for example, ['] in ἀδελφή μου [iaðelfímu] 'my sister' contrasts with [''] in [iaðelfímu] 'my sister (not yours)', and again ['] in κάτσε [kátse] 'sit down' contrasts with [''] in [kátse] 'sit down (don't stand)'. This phenomenon, however, is interpreted to be a part of the total intonational system and therefore outside the scope of this analysis.

CHAPTER 3

NORMALIZATION

3.00: Introduction. There are several morphophonemic alternations in Modern Greek, which, when phonemically transcribed, complicate to a considerable extent the statements of allomorphic distribution. A number of these alternations occur in free variation, independently of the identification of the morpheme or morpheme-class. Because of this, it has been possible to normalize[1] their transcription, and in so doing, appreciably simplify the statements of allomorphic distribution.

Another possible normalization that would simplify the statements of allomorphic distribution involves the velars /k,g,ɣ,x/ which must always be followed by /j/ before /i/ and /e/. Since there never is a contrast between a velar followed by /j/ and a velar not followed by /j/ in this environment, it has been decided to normalize the transcription of these sequences by omitting the /j/.[2] Having made this normalization, it no longer will be necessary to specify

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[1]As defined by Charles Hockett, "Problems of Morphemic Analysis," Language XXIII, No. 4 (1947), 321-43.

[2]The allomorph /jé/ of the passive imperfective morpheme {-o-}, however, will be consistently written /jé/, since this is the form that occurs after non-velars as well as velars.

the /j-/ allomorphs of such morphemes as {-i} 'third person singular non-past' and {-e} 'third person singular past' determined by the preceding velar.

The morphemic alternations which permit normalization are of three types: I. Variations which occur independently of boundaries, II. Variations which occur at word boundaries, and III. Automatic variations which occur at morpheme boundaries. The alternations of type I are further divided into two groups depending on whether the choice of normalization is (1) arbitrary or (2) determined. The following is a statement of the variations which were observed and the morphophonemic transcription resulting from normalization.

3.10: Variations Independent of Boundary.

A. Arbitrary

1. /l,n/ before /i/ may vary freely with /lj,nj/:[3]
πολύ 'much' /polí/ ~ /poljí/; λίγο 'little' /líγo/ ~ /ljíγo/; νησί 'island' /nisí/ ~ /njisí/; σκόνη 'dust' /skóni/ ~ /skónji/.

B. Determined

1. /x/ after /s/ may vary freely with /k/:
σχολείο 'school' /sxolío/ ~ /skolío/
σχέδιο 'plan' /sxéðjo/ ~ /skéðjo/.

2. /k/ before /t/ may vary freely with /x/:
κτίζω 'I build' /ktízo/ ~ /xtízo/; πλεκτρισμός

[3]Demetrius J. Georgacas, however, in "Remarks and Corrections on Pring's A Grammar of Modern Greek," Orbis VII, No. 2 (1958), 536-58, contends that only /lj,nj/ occur before /i/ (p. 539).

'electricity' /ilektrizmós/ ~ /ilextrizmós/.

Henceforth, /k/ ~ /x/ before /t/, /x/ ~ /k/ after /s/, /l/ ~ /lj/ and /n/ ~ /nj/ before /i/ will be morphophonemically transcribed as /k,x,l,n/ respectively.

3.20: Variations at Word Boundaries.

A. Vowels

1. At word boundaries sequences of two identical vowels may be phonemically realized as a single vowel:

τί εἶπες 'what did you say?' /ti ípes/[4] ~ /típes/

καὶ ἐγώ 'and me' /ke eγó/ ~ /keγó/

θὰ ἀγοράσης 'you will buy' /θa aγorásis/ ~ ~ /θaγorásis/.

2. At word boundaries sequences of two dissimilar vowels may be phonemically realized as a single vowel according to the following order:

a) If one of the vowels is /a/ and the other is /i,e,o,u/, /a/ prevails:

θὰ εἶμαι 'I shall be' /θa íme/ ~ /θáme/

τὸ ἄσχημο 'the ugly' /to ásximo/ ~ /tásximo/

μοῦ ἀρέσει 'I like it' /mu arési/ ~ /marési/.

b) If one of the vowels is /o/ and the other is /i,e,u/, then /o/ prevails:

μὲ ὀνομάζει 'he names me' /me onomázi/ ~ ~ /monomázi/; τὸ εἶδα 'I saw it' /to íδa/ ~ ~ /tóδa/.

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[4]The space indicates a word boundary.

c) If one of the vowels is /u/ and the other is /i,e/, then /u/ prevails:

μού είπε 'he told me' /mu ípe/ ~ /múpe/

μού έδωσε 'he gave me' /mu éðose/ ~ /múðose/.

d) If one of the vowels is /e/ and the other is /i/, then /i/ prevails:[5]

σε είδα 'I saw you' /se íða/ ~ /siða/

και είπε 'and he said' /ke ípe/ ~ /kípe/

με είδε 'he saw me' /me íðe/ ~ /míðe/.

The above vowel alternations are summarized in the following table.

TABLE 3

VOWEL ALTERNATIONS

a + a,o,u,e,i = a

o + o,u,e,i = o

u + u,e,i = u

i + e,i = i

e + e = e

Henceforth, sequences of two identical or dissimilar vowels which may be phonemically realized as a single vowel at word boundaries will be morphophonemically transcribed as a sequence of two vowels, /VV/.

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[5]The Kahanes and Ward, however (Spoken Greek, op.cit. pages 38-39), state that the reverse is true; i.e. if one vowel is /e/ and the other is /i/, /e/ prevails; while Mirambel (Grammaire du Grec Moderne, op.cit. page 27) and Pring (A Grammar of Modern Greek, op.cit. pages 18-20) essentially agreeing with the Kahanes and Ward, make exceptions of what in the data of this study is the rule.

B. Consonants

1. At word boundaries, /p,t,k/ or the sequences of phonemes /ps,ts,ks/ after /n/ vary freely with /b,d,g,bz,dz,gz/ respectively:
την πόρτα 'the door' /tin pórta/ ~ /tin bórta/
την τσάντα 'the purse' /tin tsánda/ ~ /tin dzánda/
την κόρη 'the daughter' /tin kórin/ ~ /tin górin/
την ξέρω 'I know her' /tin kséro/ ~ /tin gzéro/.

2. At word boundaries, /n/ before /b,f,v/ varies freely with /m/; the phoneme sequences /n + b,d,g,f, v,θ,ð,s,z,x,ɣ,l,r,m/ may vary freely with the second member of the sequence:
Δεν μπορώ 'I cannot' /ðen boró/ ~ /ðem boró/ ~ ~ /ðe boró/; Δεν φωνάζω 'I am not shouting' /ðen fonázo/ ~ /ðem fonázo/ ~ /ðe fonázo/; την μάνα 'mother' /tin mána/ ~ /ti mána/; δεν θέλω 'I do not want' /ðen θélo/ ~ /ðe θélo/; την κυρία 'Mrs.' /tin kiría/ ~ /tin giría/ ~ /ti giría/.

3. At word boundaries, /s/ before a voiced consonant other than /l,r/ varies freely with /z/:
πές μου 'tell me' /pes mu/ ~ /pez mu/
της ζωής 'of life' /tis zoís/ ~ /tiz zoís/ ~ ~ /tizoís/.

Henceforth, at word boundaries, /p,t,k/ ~ /b,d,g/ and /ps,ts,ks/ ~ /bz,dz,gz/ after /n/ will be morphophonemically transcribed as /p,t,k,ps,ts,ks/ respectively; /n/ ~ /m/ before /b,f,v/ and /n/ ~ ∅ before /b,d,g,f,v,ð,θ,s,z,x,ɣ, l,r,m/ will be transcribed as /n/; finally, /s/ ~ /z/ before

a voiced consonant will be transcribed as /s/.

3.30: <u>Automatic Variations at Morpheme Boundaries</u>. At morpheme boundaries, sequences of two identical consonants are phonemically realized as a single consonant:

τῆς σώνω 'I save her' /tis sóno/ = /tisóno/

τῶν νερῶν 'of the waters' /ton nerón/ = /tonerón/.

Henceforth, however, sequences of two identical consonants which are phonemically realized as a single phoneme at morpheme boundaries will be morphophonemically transcribed as a sequence of two consonants.

CHAPTER 4

VERB MORPHOLOGY OF MODERN GREEK: INTRODUCTION

4.00: Transcription. The transcription in this and the following chapter is normalized; that is, certain changes that can be predicted from the conditioning factors stated in Chapter 3 are not indicated in the transcription.

4.10: Basic Assumptions and Methodology. The basic assumptions and methodology underlying the analysis[1] of the verb morphology are as follows:

A. Assumptions[2]

1. Every Greek verb can be fully described as a sequence of continuous morphemes; namely, stem morpheme(s) followed by morphemes of voice-and-aspect and tense-or-mood.
2. The same morpheme may have different phonemic shapes, the variants being either in complete free variation or conditioned by the phonemic or morphemic environment.
3. While one of the allomorphs of a given morpheme

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[1]So-called "periphrastic" constructions (e.g. the verb éxo 'I have' together with a past participle éxo yrápsi 'I have written') are excluded from this study.

[2]Compare these with the assumptions made by Bernard Bloch in "English Verb Inflection," Language XXIII, No. 4 (1947), 399-418.

may be zero, no morpheme has zero as its only allomorph.

4. Variants of different morphemes may have the same phonemic shape.

5. Phonemically different forms that occur in the same environment, but that are not in complete free variation with each other, are morphemically different.

B. Methodology

1. That morphemic segmentation was made, wherever possible, which simplifies the morphophonemics of the stem rather than the morphophonemics of the suffix.

2. Other things being equal, that morphemic segmentation was made which reduces homonomy to a minimum.

3. That morphemic segmentation was made which eliminates "orders" of zero allomorphs in a verb construction; i.e., there should be no more than one zero allomorph in any given verb construction.[3]

4.20: Definitions. Morphologically, the verb is defined to be a sequence of certain morphemes, each having a fixed position, the sum of which constitutes a unique construction. This construction is made up of two parts: the

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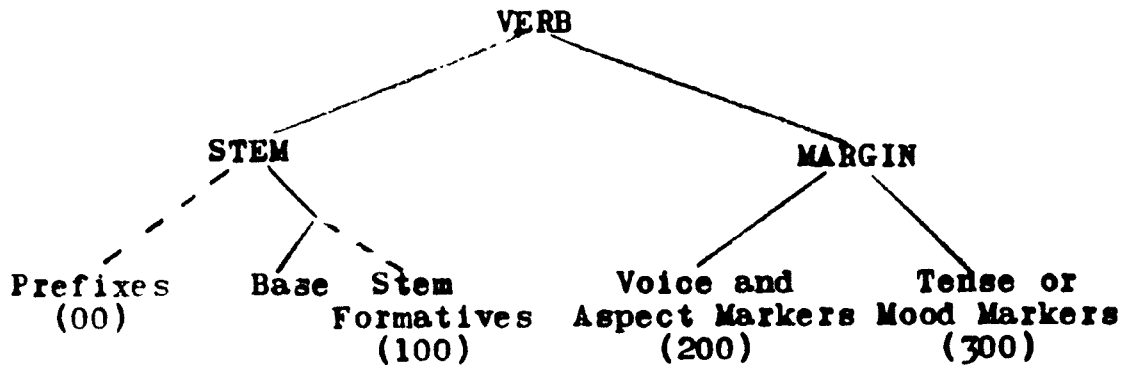
[3]This decision was made primarily to avoid oversegmentation of phoneme sequences.

stem and the margin. The stem consists of a base (or less frequently, of two bases) or a base plus affixes; while the margin consists of suffixes. The following is an IC representation of the verb:



The elements of the stem and margin now remain to be defined.

I. Stem

A. Base

Verb base (Vb)

A base to which the suffix class 200 may be immediately added.

Non-verb base

A base which in verbal constructions must always be immediately followed by suffix class 100. Since certain members of suffix class 100 occur only after certain non-verb bases and not after others, non-verb bases have been divided into two groups: denominative and deadjectival. A denominative base (Nb) also occurs as the stem of a noun, and a deadjectival base (Ab) also occurs as the

stem of an adjective.

B. Prefixes

Prefix Class 00

A class of morphemes immediately preceding the base or stem. The occurrence of this class is non-obligatory; when it does occur, it modifies the lexical meaning of the base or stem. Examples: ksana-kóvo 'I cut again' from ksana- 'again' and kóvo 'I cut'; kse-kurázo 'I relieve' from kse- 'negation' and kurázo 'I tire'.

C. Stem Formatives

Suffix Class 100

A class of morphemes immediately following the base. The occurrence of this class is non-obligatory and it never terminates the verb construction. Members of this class are used only to form verb stems from bases and other than "verbalizing" have little or no semantic content in themselves. Examples: the -az- in etimázo 'I prepare' from the adjective étim-os 'ready'; the -iz- in yirízo 'I turn', or 'come back' from the noun yír-os 'turn.'

II. Margin

A. Voice-and-Aspect Markers

Suffix Class 200

The class of morphemes which immediately follows the base or suffixes of class 100. The occur-

-rence of this class is obligatory. It never terminates the verb construction. Members of this class indicate simultaneously the categories of aspect--perfective and imperfective--and voice--active and passive. Examples: the -å- in kumåo 'I swing'; the -ús- in kumúsa 'I was swinging'; the -s- in kúnisa 'I swung'; the -jé- in kunjéme 'I am being swung'; the -jó- in kunjómuna 'I was being swung'; the -θik- in kunìθika 'I was swung'.

B. Tense-or-Mood Markers

Suffix Class 300

The class of morphemes following suffixes of class 200 and terminating the verb construction. The meanings conveyed by this class are number and person and tense or mood; that is, members of this class indicate first, second, and third person, singular and plural, past, non-past, or future tense;[4] or the second person singular imperative mood. Examples: the -o in akúo 'I hear'; the -is in ménis 'you stay'; the -e in kápnise 'he smoked', the -ame in xásame 'we lost'; the -ete in ʃavázete 'you are reading'; the -ndusan in filjóndusan 'they were kissing'; the -e in vyále 'take out!';

[4]The term 'future' is restricted to margins consisting of suffix 211 or 212 plus suffixes 301-306 only (see Table 4), and which occur only after one of the future particles, θa or na.

the -a in <u>rṓta</u> 'ask!'.

4.21: <u>Summary</u>. The morphological definition of the verb in Modern Greek may now be rigorously formulated as follows:

1. V(erb) S(tem) = ± 00 + Base ± 100
2. M(argin) = + 200 + 300
3. Verb = Verb Stem + Margin.

4.30: <u>Verb Classes</u>. The verbs in Modern Greek have been divided into five classes established on the basis of stems which have a similar selection of allomorphs of suffix class 200.[5]

<u>Class I</u>. Only stems of this class, to which the majority of verbs belong, may take the allomorphs -'3∅- and -'∅- of suffix 201.[6] This class is divided into subclasses on the basis of which allomorphs of suffix 211 are added to the stems to form the active imperfective: subclass A stems take the allomorphs -'3s- and -'s-, while subclass B stems take the allomorphs -'3∅- and -'∅-. Examples: <u>γraf-'∅-o</u> 'I write' and <u>plen-'3∅-ame</u> 'we were washing' are both class I verbs but <u>eγrap-'3s-a</u> 'I wrote' is class I-A and <u>eplin-'3∅-a</u> 'I washed' is class I-B.

<u>Class II</u>. Only stems of this class, the second largest in number, may take the allomorphs -u̱s-, -'3aγ-, -a̱-,

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[5]The verb 'to be' constitutes a sixth class, which is described in Chapter 5, section 4.

[6]See Table 5 for the specific suffixes cited and Chapter 5, section 2 for the interpretation of the stress marks and the numeral 3.

and -Ø'- of suffix 201. Examples: aɣap-ú̀s-a aɣap-'ʒaɣ-a 'I was loving'; pin-á̀-o ~ pin-Ø'-o 'I am hungry'.

Class III. Only stems of this class may take the allomorph -á̀- of suffix 221. The few verbs (less than a hundred) belonging to this class appear in the passive construction only and are active in meaning. Examples: kim-á̀-me 'I sleep'; fov-á̀-se 'you are afraid'.

Class IV. Only stems of this class may take all the allomorphs of suffix 201. Four verbs belong to this class. Examples: kitaz-'Ø-o ~ kɪt-Ø'-o ~ kit-á̀-o 'I look'; kitaz-'ʒØ-a ~ kit-ú̀s-a ~ kit-'ʒaɣ-a 'I was looking'.

Class V. In the imperfective aspect, stems of this class occur only before certain allomorphs of suffix 221, and in the perfective aspect, they occur before certain allomorphs of suffix 211. Whenever the three verbs belonging to this class are in the passive construction, they are active in meaning. Examples: kaθ-'ʒo-me 'I sit'; ɛkat-'ʒs-e 'I sat'; θa kat-'s-o 'I shall sit'; kat-'s-e 'sit!'. In one class V verb the allomorph -'ʒØ- of suffix 211 varies freely with the allomorph -'ʒik- of suffix 212 before allomorphs of suffixes 311-316 only: ɣin-'ʒo-me 'I become'; eɣin-'ʒØ-a ~ ~ ɣin-'ʒik-a 'I became' ; θa ɣin-'Ø-o 'I shall become'.

4.31: Paradigms. In order to facilitate reading the analysis in Chapter 5, the following verbs have been chosen for illustrative paradigms: ɣrá̀fo 'I write' class I-A, fé̀rno 'I bring' class I-B, aɣapó̀ 'I love' and ponó̀ 'I ache' class II, fovà̀me 'I fear' and eɾɣà̀zome' 'I work' class

III, kitázo 'I look' class IV, and γínome 'I become' class V. It should be understood that unless otherwise stated, the variations indicated for these verbs apply to any member of the class they represent.

The following table gives the suffixes involved in the formation of the various margins and the grammatical meanings they convey. The abbreviations given will be used in the paradigms which follow and elsewhere hereafter.

TABLE 4

TENSE, VOICE, AND ASPECT FORMATION

Active Imperfective Non-past Tense (AIN)	=	201 {-ús-} + 301-306
Active Imperfective Past Tense (AIP)	=	201 {-ús-} + 310-316
Active Perfective Past Tense (APP)	=	211 {-s-} + 310-316
Active Perfective Future Tense (APF)	=	211 {-s-} + 301-306
Active Imperfective Imperative Mood (AII)	=	211 {-ús-} + 321
Active Perfective Imperative Mood (API)	=	211 {-s-} + 321
Passive Imperfective Non-past Tense (PIN)	=	221 {-o-} + 301-306
Passive Imperfective Past Tense (PIP)	=	221 {-o-} + 310-316
Passive Perfective Past Tense (PPP)	=	212 {-θik-} + 310-316
Passive Perfective Future Tense (PPF)	=	212 {-θik-} + 301-306
Passive Perfective Imperative Mood (PPI)	=	212 {-θik-} + 321

CLASS I-A

	AIN	AIP	APP	APF	AII
Sg 1	ɣráfo	éɣrafa	éɣrapsa	ɣrápso	ɣráfe
2	ɣráfis	éɣrafes	éɣrapses	ɣrápsis	API
3	ɣráfi	éɣrafe	éɣrapse	ɣrápsi	ɣrápse
Pl 1	ɣráfume	ɣráfame	ɣrápsame	ɣrápsume	
2	ɣráfete	ɣráfate	ɣrápsate	ɣrápsete[9]	
3	ɣráfun(e)[7]	ɣráfane[8]	ɣrápsane[8]	ɣrápsum(e)	

	PIN	PIP	PPP	PPF	PPI
Sg 1	ɣráfome	ɣrafómuna	ɣráftika	ɣraftó	ɣrápsu
2	ɣráfese	ɣrafósuna	ɣráftikes	ɣraftís	
3	ɣráfete	ɣrafótane	ɣráftike	ɣraftí	
Pl 1	ɣrafómaste	ɣrafómaste	ɣraftíkame	ɣraftúme	
2	ɣráfeste	ɣrafósaste	ɣraftíkate	ɣraftíte	
3	ɣráfonde	ɣrafóndusan[10]	ɣraftíkane[8]	ɣraftún(e)	

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[7]A parenthesis indicates free variation; that is, the form resulting when the parenthesis is omitted (ɣráfune) varies freely with the form preceding the parenthesis (ɣráfun).

[8]ɣráfane varies freely with éɣrafan; ɣrápsane with éɣrapsan; ɣraftíkane with ɣráftikan.

[9]ɣrápsete may vary freely with ɣrápste.

[10]Instead of (ɣrafó)-ndusan, the Kahanes and Ward, Mirambel, and Pring (Spoken Greek, Grammaire du Grec Moderne, and A Grammar of Modern Greek, respectively, op.cit.) list (ɣrafó)-ndane, which did not occur in my data.

CLASS I-B

	AIN	AIP	APP	APF	AII
Sg 1	fə́rno	ə́ferna	ə́fera	fə́ro	fə́rne
2	fə́rnis	ə́fernes	ə́feres	fə́ris	API
3	fə́rni	ə́ferne	ə́fere	fə́ri	fə́re
Pl 1	fə́rnume	fə́rname	fə́rame	fə́rume	
2	fə́rnete	fə́rnate	fə́rate	fə́rete[12]	
3	fə́rnun(e)	fə́rnane[11]	fə́rane[11]	fə́rum(e)	

	PIN	PIP	PPP	PPF	PPI
Sg 1	fə́rnome	fernə́muna	fə́rəika	ferəə́	fə́rsu
2	fə́rnese	fernə́suna	fə́rəikes	ferəə́s	
3	fə́rnete	fernə́tane	fə́rəike	ferəə́	
Pl 1	fernə́maste	fernə́maste	ferəə́kame	ferəə́me	
2	fə́rneste	fernə́saste	ferəə́kate	ferəə́te	
3	fə́rnonde	fernə́ndusan	ferəə́kane[11]	ferəə́n(e)	

[11]fə́rnane varies freely with ə́fernan; fə́rane with ə́feran; ferəə́kane with fə́rəikan.

[12]fə́rete may vary freely with fə́rte.

CLASS II

	AIN	AIP	APP
Sg 1	ayapáo/ayapó[13]	ayapúsa/ayápaya	ayápisa
2	ayapás	ayapúses/ayápayes	ayápises
3	ayapái/ayapá	ayapúse/ayápaye	ayápise
Pl 1	ayapáme/ayapúme	ayapúsame/ayapáyame	ayapisame
2	ayapáte	ayapúsate/ayapáyate	ayapisate
3	ayapáne/ayapún(e)	ayapúsan(e)/ayapáyane[14]	ayapisane[14]

	APF	AII	PIN
Sg 1	ayapiso	ayápa	ayapjéme
2	ayapisis	API	ayapjése
3	ayapisi	ayápise	ayapjéte
Pl 1	ayapisume		ayapjúmaste/ayapjómaste
2	ayapisete[15]		ayapjéste
3	ayapisun(e)		ayapjúnde/ayapjónde

	PIP	PPP	PPF	PPI
Sg 1	ayapjómuna	ayapiθike	ayapiθó	ayapisu
2	ayapjósuna	ayapiθikes	ayapiθís	
3	ayapjótane	ayapiθike	ayapiθí	
Pl 1	ayapjómaste	ayapiθíkame	ayapiθúme	
2	ayapjósaste	ayapiθíkate	ayapiθíte	
3	ayapjóndusan	ayapiθíkane[14]	ayapiθún(e)	

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[13]A slanted line (/) indicates free variation.

[14]ayapáyane varies freely with ayápayan; ayapisane with ayápisan; ayapiθíkane with ayapiθíkan.

[15]ayapisete may vary freely with ayapiste.

CLASS II

	AIN	AIP	APP
Sg 1	ponȁo/ponȍ	ponȗsa/pȍnaγa	pȍnesa
2	ponȁs/ponȋs	ponȗses/pȍnaγes	pȍneses
3	ponȁi/ponȋ/ponȁ	ponȗse/pȍnaγe	pȍnese
Pl 1	ponȃme/ponȗme	ponȗsame/ponȃγame	ponésame
2	ponȃte/ponȋte	ponȗsate/ponȃγate	ponésate
3	ponȃne/ponȗn(e)	ponȗsan(e)/ponȃγane[16]	ponésane[16]

	APF	AII	PIN
Sg 1	ponéso	pȍna	ponjéme
2	ponésis	API	ponjése
3	ponési	pȍnese	ponjéte
Pl 1	ponésume		ponjȗmaste/ponjȍmaste
2	ponésete[17]		ponjéste
3	ponésun(e)		ponjȗnde/ponjȍnde

	PIP	PPP	PPF	PPI
Sg 1	ponjȍmuna	ponéθika	poneθȍ	ponésu
2	ponjȍsuna	ponéθikes	poneθȋs	
3	ponjȍtane	ponéθike	poneθȋ	
Pl 1	ponjȍmaste	poneθȋkame	poneθȗme	
2	ponjȍsaste	poneθȋkate	poneθȋte	
3	ponjȍndusan	poneθȋkane[16]	poneθȗn(e)	

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[16]ponȃγane varies freely with pȍnaγan; ponésane with pȍnesan; poneθȋkane with poneθȋkan.

[17]ponésete may vary freely with ponéste.

CLASS III

	PIN	PIP	PPP	PPF
Sg 1	fováme/fovúme	fovómuna	fovíθika	foviθó
2	fovάse	fovósuna	fovíθikes	foviθís
3	fováte	fovótane	fovíθike	foviθí
Pl 1	fovúmaste/fovómaste	fovómaste	foviθíkame	foviθúme
2	fováste	fovósaste	foviθíkate	foviθíte
3	fovúnde/fovónde	fovóndusan	foviθíkane[18]	foviθún(e)

PPI

fovísu

	PIN	PIP	PPP	PPF	PPI
Sg 1	erγázome	erγazómuna	erγástika	erγastó	erγásu
2	erγázese	erγazósuna	erγástikes	erγastís	
3	erγázete	erγazótane	erγástike	erγastí	
Pl 1	erγazómaste	erγazómaste	erγastíkame	erγastúme	
2	erγázeste	erγazósaste	erγastíkate	erγastíte	
3	erγázonde	erγazóndusan	erγastíkane[19]	erγastún(e)	

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[18]foviθíkane varies freely with fovíθikan.

[19]erγastíkane varies freely with erγástikan.

CLASS IV

	AIN	AIP
Sg 1	kitázo/kitáo/kitó	kítaza/kitúsa/kítaya
2	kitázis/kitás	kítazes/kitúses/kítayes
3	kitázi/kitái/kitá	kítaze/kitúse/kítaye
Pl 1	kitázume/kitáme/kitúme	kitázame/kitúsame/kitáyame
2	kitázete/kitáte	kitázate/kitúsate/kitáyate
3	kitázun(e)/kitáne/kitúne	kitázane[20]/kitúsane/kitáyane

	APP	APF	AII
Sg 1	kítaksa	kitákso	kítaze/kíta
2	kítakses	kitáksis	API
3	kítakse	kitáksi	kítakse
Pl 1	kitáksame	kitáksume	
2	kitáksate	kitáksete[21]	
3	kitáksane[20]	kitáksun(e)	

	PIN	PIP	PPP	PPF	PPI
Sg 1	kitázome	kitazómuma	kitáxtika	kitaxtó	kitáksu
2	kitázese	kitazósuna	kitáxtikes	kitaxtís	
3	kitázete	kitazótane	kitáxtike	kitaxtí	
Pl 1	kitazómaste	kitazómaste	kitaxtíkame	kitaxtúme	
2	kitázeste	kitazósaste	kitaxtíkate	kitaxtíte	
3	kitázonde	kitazóndusan	kitaxtíkane[20]	kitaxtún(e)	

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[20]kitázane varies freely with kítazan; kitáyane with kítayan; kitáksane with kítaksan; kitaxtíkane with kitáxtika

[21]kitáksete may vary freely with kitákste.

CLASS V

		PIN	PIP	APP	APF
Sg	1	ɣínome	ɣinómuna	éɣina/ɣínika	ɣíno
	2	ɣínese	ɣinósuna	éɣines/ɣínikes	ɣínis
	3	ɣínete	ɣinótane	éɣine/ɣínike	ɣíni
Pl	1	ɣinómaste	ɣinómaste	ɣíname/ɣiníkame	ɣínume
	2	ɣíneste	ɣinósaste	ɣínate/ɣiníkate	ɣínete
	3	ɣínonde	ɣinóndusan	ɣínane[22]/ɣiníkane[22]	ɣínun(e)

API	PPI
ɣíne	ɣínu

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[22]ɣínane varies freely with éɣinan; ɣiníkane with ɣínikan.

CHAPTER 5

VERB MORPHOLOGY OF MODERN GREEK: MORPHOPHONEMICS

5.00: Introduction. In this chapter, a description shall be given of the various stem and suffix alternations that occur in the verb construction and the conditions under which these alternations occur. These alternations have been divided into phonologically conditioned and morphologically conditioned alternations and shall be discussed in that order. A section on stress is also included since it is relevant to morphologically conditioned alternations.

5.10: Phonologically Conditioned Alternations. The following are the phonologically conditioned alternations that have been observed.

1. In morpheme initial position:
   a) /θ/ after /s,f,x/ is /t/:
      klís-tika 'I was shut', fér-θika 'I was brought, γráf-tika 'I was enrolled', rotí-θika 'I was asked', petáx-tika 'I was thrown', trelá-θika[1] 'I became mad, insane'.
   b) /p,t,k/ after /n/ are /b,d,g/ respectively:
      θa páθ-o 'I shall suffer', sin-baθó and by condition 2g, sim-baθó 'I like'; tir-ó 'I look at',

[1]The dash indicates morpheme boundaries.

sin-dirό 'I support'; krin-o 'I judge', en-grino 'I approve'.

2. In morpheme final position:

a) /f,v/ before /s/ is /p/:
yráf-o 'I write', éyrap-sa 'I wrote'; ráv-o 'I sew', érap-sa 'I sewed'.

b) /z/ before /s/ is /ø/:
mavriz-o 'I blacken', mávri-sa 'I blackened'
δjavάz-o 'I read', δjáva-sa 'I read'.

c) /ɣ,x,g/ before /s/ is /k/:
aniɣ-o 'I open', ánik-sa 'I opened'
tréx-o 'I run', étrek-sa 'I ran'
sfig-o 'I squeeze', ésfik-sa 'I squeezed'.

d) /p/ before /θ/ is /f/ and /k,g/ before /θ/ is /x/:
paralip-o 'I omit', paralif-θike and by condition la paralif-tike 'it was omitted'; plék-i 'she knits', plex-θike and by condition la, plex-tike 'it was knitted'; sfig-o 'I squeeze', sfix-θike and by condition la, sfix-tike 'it was squeezed'.

e) /v,z,ɣ/ before /θ/ are /f,s,x/ respectively:
ráv-o 'I sew', ráf-θike and by condition la, ráf-tike 'it was sewed'; mavriz-o 'I blacken', mavris-θike and by condition la, mavris-tike 'it was blackened'; aniɣ-o 'I open', anix-θike and by condition la, anix-tike 'it was opened'.

f) /n/ before /s/ and before /θ/ is /ø/. But in five verbs /nθ/ remains: apoθarinθike, δiefθinθike, molinθike, apomakrinθike.

malón-o 'I chastize', málo-sa 'I chastized',
skotón-o 'I kill', skotó-θike 'he was killed'.

g) /n/ before /b,f,v/ is /m/ and in a small number of lexical items varies freely with /ɸ/:[2]
sin-érxome 'I recover', sim-fonó 'I agree';
sin-oʃévo 'I accompany', sim-véni 'it happens'.

h) /s/ and /f/ before a voiced consonant are /z/ and /v/ respectively:
pros-kaló 'I invite'; proz-yióno 'I land'
ef-tixó 'I prosper'; ev-loyó 'I bless'.

5.20: Stress. Stress may occur on the last, second to the last, and third to the last (and no other) vowel of a verb. In this analysis the stress on verb forms is considered to be an integral component of the allomorphs of class 200 suffixes. This means that no other morpheme in the verb construction has stressed allomorphs.

By choosing this interpretation, all stresses in verb forms can be predicted in a simple manner. The alternative is to regard stress everywhere as a part of the phonemic shape of the allomorph within which it occurs. The consequences of this alternative interpretation are illustrated by the following forms.

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[2]These items are: emboʃízo ~ eboʃízo 'I hinder'; enxirízo ~ exirízo 'I operate'; simbaθó ~ sibaθó 'I like'; sinxoró ~ sixoró 'I forgive'; sinférni ~ siféri 'it is advantageous'; sinxízo ~ sixízo 'I upset'; sinxéro ~ sixéro 'I congratulate'; singinó ~ siginó 'I touch'.

Verb Form	Stem	Segmentation	
		Suffix 200	Suffix 300
aγapó 'I love'	aγap-	ø-	ó (VS + 201 + 301)
aγápa 'love!'	aγáp-	ø-	a (VS + 201 + 321)
aγapiθó 'I shall be loved'	aγapi-	θ-	ó (VS + 212 + 301)
aγápise 'love!'	aγápi-	s-	e (VS + 211 + 321)
aγapísame 'we loved'	aγapí-	s-	ame (VS + 211 + 314)

For the stem {aγap-} at least five allomorphs are needed: aγap-, aγáp-, aγapi-, aγápi-, aγapí-. Note the occurrence of these variants within the total paradigm (Chapter 4, section 3); the distribution of these allomorphs then, can be stated only in some complicated form as the following:

1. aγap- occurs before:
   a) The allomorphs -ús-, -á-, -ø-, and -áγ- of suffix 201. However, this stem can occur before the allomorph -áγ- only when -áγ- is followed by suffixes 314, 315, and 316.
   b) The allomorphs -jé-, -jó-, and -jú- of suffix 221.
2. aγáp- occurs before:
   a) The allomorph -áγ- of suffix 201 only when it is followed by suffixes 311, 312, and 313.
   b) The allomorph -ø- of suffix 201 only when it is followed by suffix 321.
3. aγapi- occurs before:
   a) The allomorph -θ- of suffix 212 and suffixes 301-306 only.
   b) The allomorph -θik- and suffixes 314-316 only.

4. <u>aɣápi-</u> occurs before:

   a) The allomorph -s- of suffix 211 and suffixes 311, 312, 313, and 321 only.

5. <u>aɣapí-</u> occurs elsewhere.

Given this interpretation, all class II verb stems would have at least five variants, the remaining verb stems would have at least two variants, and all verb classes would require allomorphic statements essentially as complex as the one given. Furthermore, the suffixes of class 300 would have stressed and unstressed allomorphs, as can be seen from the following paradigms:

forð	'I wear'	ɣráfo	'I write
forís	'you wear'	ɣráfis	'you write'
forí	'he wears'	ɣráfi	'he writes'
fórume	'we wear'	ɣráfume	'we write'
foríte	'you wear'	ɣráfete	'you write'
fórune	'they wear'	ɣráfun	'they write'

Obviously, an interpretation by which the stem and the suffixes can be fully described in terms of allomorphs of a single class of morphemes is more elegant and economical.

The stress component of suffix class 200 shall be indicated in the following four ways:

1. A stress mark before the allomorph will indicate that the vowel immediately preceding the allomorph is stressed. Examples: <u>ɣnef-'Ø-o</u> (ɣnéfo) 'I gesture' (I: VS + 201 + 301); θa <u>meleti-'s-o</u> (meletíso) 'I shall study' (I: VS + 211 + 301).

2. A stress mark after the allomorph will indicate that

the vowel immediately following the allomorph is stressed. Examples: for-Ø'-o (forǒ) 'I wear' (II: VS + 201 + 301); θa krif-t'-o (kriftǒ) 'I shall hide (myself)' (I: VS + 212 + 301).

3. A number three (3) and a stress mark before the allomorph will indicate that stress falls on the antipenultimate, or the penultimate if the total verb has only two vowels. Examples: iposxe-'3θik-a (iposxéθika) 'I promised' (III: VS + 212 + 311); ekl-ep-'3s-e (éklepse) 'he stole' (I: Vb + 113 + + 211 + 313); bik-'3Ø-a (bǐka) 'I entered' (I-B: VS + 201 + 311).

4. A stress mark on the allomorph itself will indicate that the stress is always on this allomorph. Examples: xor-á-o (xorâo) 'I fit' (II: VS + 201 + 301); trav-ús-a (travúsa) 'I was pulling' (II: VS + 201 + 311).

5.30: Morphologically Conditioned Alternations. The discussion of these alternations is divided into two parts: suffix allomorphs and allostems.

5.31: Classification of Affixes. The morphemes that are involved in the verb construction are listed in Table 5. Except in class 00, the classes are indicated by centuries and the subclasses are indicated by decades within the class. Units indicate individual morphemes.

TABLE 5

AFFIXES

Prefix Class 00		Suffix Class 100		Suffix Class 200		Suffix Class 300	
01:	andi/and	101:	ar	201:	ʉs/'3aɤ/å	301:	o/me
02:	iper				ø'/'3ø/'ø	302:	is/s/se
03:	ksana/ksan	111:	az			303:	i/ø/te
04:	para/par	112:	en/in	211:	'3s/'s	304:	ume/me
		113:	ev		'3ø/'ø		maste
11:	amfi/amf	114:	iz	212:	'3θik/'3tik	305:	ete/ite
12:	ʃis	115:	on		θ'/t'/'3ik		te/ste
13:	ef	116:	ern		ø'/'s	306:	une/un
14:	ek/ex						ne/nde
15:	epi/ep			221:	'3o/'3e		
16:	kse/ks/eks				jɛ̈/jɑ̈/jɔ̈	311:	a/muna
17:	meta				ʉ/l/å	312:	es/suna
18:	peri/per					313:	e/tane
19:	pro					314:	ame/maste
20:	pros					315:	ate/saste
						316:	ane/an
31:	ana/an						ndusan
32:	apo/ap						
33:	ðja/ʃj					321:	e/a/ø/u
34:	en						
35:	ipo/ip						
36:	kata/kat						
37:	sin						

5.32: Formation of the Verb Stem. The following is a description of the affixes that are involved in the formation of the verb stem.

Prefix Class 00. Most verb bases in Modern Greek may be expanded by prefixes, with a modification of the meaning of the verb as the result. The prefix class is not divided in terms of any "type" of prefix, but simply in terms of order of occurrence. Although they may combine with one another, the upper limit of prefixes that precede a verb base is two (and rarely, three). The following prefixes constitute class 00.

Subclass 0. The definitive characteristic of this subclass is that it always precedes and is never preceded by the other prefix subclasses. Members of this subclass cannot precede each other in a verb construction.

01: andi-/and-

Prefix 01 indicates that the action of the verb is directed back to someone. The allomorph andi- occurs before consonants; and- occurs before vowels. Examples: andi-mil-Ø'-o 'I talk back' (01 + Nb + 301 + 301); and-apo-δon-'Ø-o 'I give back', 'reciprocate' (01 + 32 + + Vb + 201 + 301).

02: iper-

Prefix 02 indicates excess. Examples: iper-v-en-'Ø-o 'I exceed the limits' (02 + Vb + 112 + 201 + 301); iper-aγap-Ø'-o 'I love in excess, very much' (02 + Nb + + 201 + 301).

03: ksana-/ksan-

Prefix 03 indicates repetition. The allomorph ksana- is used before consonants; ksan-, before vowels. Examples: ksana-xtip-Ø'-o 'I knock again' (03 + Vb + 201 + 301); ksan-aku-'Ø-o 'I hear again' (03 + Nb + 201 + 301).

04: para-/par-

Prefix 04 indicates excess, error, or certitude. The allomorph para- is used before consonants; par-, before vowels. Examples: para-kan-'Ø-o 'I overdo' (04 + Vb + + 201 + 301); par-aku-'Ø-o 'I hear wrongly' (04 + Nb + + 201 + 301); para-kser-'Ø-o 'I know with certitude' (04 + Vb + 201 + 301).

Subclass 10-20. The definitive characteristic of this subclass is that although it may be preceded (but not followed) by subclass 0, it can precede but never be preceded by subclass 30. Members of this subclass cannot precede each other in a verb construction.

11: amfi-/amf-

Prefix 11 indicates doubt. The allomorph amfi- occurs before consonants; amf- occurs before vowels. This prefix occurs only with the verb base val- 'to put'. Examples: amfi-val-'Ø-o 'I put to doubt, " doubt' (11 + + Vb + 201 + 301); amf-eval-'3Ø-a ~ amfi-val-'3Ø-a 'I doubted' (11 + Vb + 211 + 311).

12: δis-

Prefix 12 indicates difficulty, unpleasantness, or

pain. Examples: ʃis-kol-ev-'Ø-o 'I make difficult' (12 + Nb + 113 + 201 + 301); ʃis-tix-Ø'-o 'I suffer' 'I am poor' (12 + Nb + 201 + 301).

13: ef-

Prefix 13 indicates ease or pleasantness. Examples: ef-tix-Ø'-o 'I prosper, I am happy' (13 + Nb + 201 + 301); ev-loɣ-Ø'-o 'I bless' (13 + Nb + 201 + 301); ef-kol-in-'Ø-o 'I make easy, facilitate' (13 + 112 + 201 + 301).

14: ek-/ex-

Prefix 14 indicates that the action of the verb is directed outward from the speaker. The allomorph ex- occurs only with the verb timó 'I honor'; ek- occurs elsewhere. Examples: ek-fɾ-az-'Ø-o 'I express' (14 + Vb + + 111 + 201 + 301); ex-tim-Ø'-o 'I respect' (14 + Nb + + 201 + 301).

15: epi-/ep-

Prefix 15 indicates that the action of the verb is directed on, upon, or back to an object. The allomorph epi- is used before consonants; ep-, before vowels. Examples: epi-men-'3Ø-a ~ ep-emen-'3Ø-a 'I insisted upon' (15 + Vb + 211 + 311); epi-stɾef-'Ø-o 'I give or come back' (15 + Vb + 201 + 301).

16: kse-/ks-/eks-

Prefix 16 indicates that the action of the verb is negated or directed outward or beyond an object. The allomorph kse- occurs before consonants; ks-, before vowels.

Examples: kse-xor-iz-'Ø-o 'I single out, distinguish' (16 + Nb + 114 + 201 + 301); ks-aplon-'Ø-o 'I spread or stretch out' (16 + Vb + 201 + 301); kse-kol-Ø'-o 'I unglue' (16 + Nb + 201 + 301).

The allomorph eks- occurs in eks-akuluθ-Ø'-o 'I continue (literally, I follow out)' (16 + Nb + 201 + 301).

17: meta-

Prefix 17 indicates that the action of the verb is through, over, or on, an object. Examples: meta-fern-'Ø-o 'I move (literally, bring over)' (17 + Vb + 201 + 301); meta-fr-az-'Ø-o 'I translate' (17 + Nb + 111 + 201 + 301); meta-xir-iz-'ʒo-me 'I use' (17 + Nb + 114 + 221 + 301).

18: peri-/per-

Prefix 18 indicates that the action of the verb is directed around or about an object. The allomorph per- is lexically conditioned: it occurs only with the verb patǒ 'I step'; peri- occurs elsewhere. Examples: peri-men-'Ø-o 'I wait around' (18 + Vb + 201 + 301); peri-ɣraf-'Ø-o 'I describe' (18 + Vb + 201 + 301); per-pat-Ø'-o 'I walk' (18 + Nb + 201 + 301).

19: pro-

Prefix 19 indicates that the action of the verb is carried out or on time. Examples: pro-xor-Ø'-o 'I progress, march on' (19 + Vb + 201 + 301); pro-lav-en-'Ø-o

Examples: kse-xor-iz-'Ø-o 'I single out, distinguish' (16 + Nb + 114 + 201 + 301); ks-aplon-'Ø-o 'I spread or stretch out' (16 + Vb + 201 + 301); kse-kol-Ø'-o 'I unglue' (16 + Nb + 201 + 301).

The allomorph eks- occurs in eks-akuluθ-Ø'-o 'I continue (literally, I follow out)' (16 + Nb + 201 + 301).

17: meta-

Prefix 17 indicates that the action of the verb is through, over, or on, an object. Examples: meta-fern-'Ø-o 'I move (literally, bring over)' (17 + Vb + 201 + 301); meta-fr-az-'Ø-o 'I translate' (17 + Nb + 111 + 201 + 301); meta-xir-iz-'ʒo-me 'I use' (17 + Nb + 114 + 221 + 301).

18: peri-/per-

Prefix 18 indicates that the action of the verb is directed around or about an object. The allomorph per- is lexically conditioned: it occurs only with the verb patδ 'I step'; peri- occurs elsewhere. Examples: peri-men-'Ø-o 'I wait around' (18 + Vb + 201 + 301); peri-ɣraf-'Ø-o 'I describe' (18 + Vb + 201 + 301); per-pat-Ø'-o 'I walk' (18 + Nb + 201 + 301).

19: pro-

Prefix 19 indicates that the action of the verb is carried out or on time. Examples: pro-xor-Ø'-o 'I progress, march on' (19 + Vb + 201 + 301); pro-lav-en-'Ø-o

'I reach on time' (19 + Vb + 112 + 201 + 301); pro-tim-Ø'-o 'I prefer' (literally, I value out) (19 + Nb + 201 + 301).

20: pros-

Prefix 20 indicates that the action of the verb is directed downward, forward, or toward putting together. Examples: pros-tet-'Ø-o 'I add' (20 + Vb + 201 + 301); pros-fern-'Ø-o 'I offer' (20 + Vb + 201 + 301); proz--yi-on-'Ø-o 'I land' (20 + Nb + 115 + 201 + 301).

Subclass 30. The definitive characteristic of this subclass is that it never precedes subclass 0 or subclass 10-20; however, unlike the others, members of subclass 30 may precede each other in a verb construction.[3]

31: ana-/an-

Prefix 31 indicates that the action of the verb is directed up, over, in the open, or out of reach. The allomorph ana- occurs before consonants; an- occurs before vowels. Examples: ana-fern-'Ø-o 'I bring up, or into the open' (31 + Vb + 201 + 301); an-eval-'3Ø-a ~ ana-val--'3Ø-a 'I put aside, postponed' (31 + Vb + 211 + 311); ana-lav-en-'Ø-o 'I take over, undertake' (31 + Vb + 112 + + 201 + 301).

32: apo-/ap-

Prefix 32 indicates completion. The allomorph apo-

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[3]Further division of subclass 30 because of this phenomenon was found to be undesirable due to the considerable amount of overlap that would result between the members of the subclasses.

occurs before consonants; ap-, before vowels. Examples: apo-trel-en-'Ø-o 'I make completely insane' (31 + Nb + + 112 + 201 + 301); and-apo-ʃo-'3s-a 'I gave back completely, repaid in full' (01 + 32 + Vb + 211 + 301).

33: ʃja-/ʃj-

Prefix 33 indicates that the action of the verb is directed up, down, or through an object. The allomorph ʃja- occurs before consonants; ʃj-, before vowels. Examples: ʃja-krin-'Ø-o 'I see through, distinguish' (33 + + Vb + 201 + 301); ʃj-oriz-'Ø-o 'I appoint' (33 + Vb + + 201 + 301).

34: en-

Prefix 34 modifies the action of the verb in such different ways that it was found impossible to bring it under a common denominator of any kind; therefore, only examples of its use are given: en-genj-az-'Ø-o 'I inaugurate' (34 + Nb + 111 + 201 + 301); em-boʃ-iz-'Ø-o 'I hinder' (34 + Nb + 114 + 201 + 301); en-ʃja-fer-'3o-me 'I care' (34 + 33 + Vb + 221 + 301); en-xir-iz-'Ø-o ~ ~ e-xir-iz-'Ø-o 'I operate on (a patient)' (34 + Nb + + 114 + 201 + 301).

35: ipo-/ip-

Prefix 35 indicates that the action of the verb is directed backwards or is completed under something. The allomorph ipo- occurs before consonants; ip-, before vowels. Examples: ipo-yraf-'Ø-o 'I underwrite, sign' (35 + Nb +

+ 201 + 301); ip-aku-'Ø-o 'I obey' (35 + Vb + 201 + 301); ipo-xre-on-'Ø-o 'I put under debt, obligate' (35 + Nb + + 115 + 201 + 301).

36: kata-/kat-

Prefix 36 indicates completion or that the action of the verb is directed downwards or is carried to an excessive degree. The allomorph kat- occurs before a vowel; kata- before a consonant. Examples: kata-trex--'Ø-o 'I run down, I persecute' (36 + Vb + 201 + 301); kat-ur-Ø'-o 'I urinate' (36 + Nb + 201 + 301); en-gata-lip-'Ø-o 'I disappear, desert' (34 + 36 + Vb + 201 + 301); kata-fil-Ø'-o 'I cover with kisses (kiss excessively)' (36 + Nb + 201 + 301).

37: sin-

Prefix 37 indicates union or accompaniment. Examples: sin-oʃ-ev-'Ø-o 'I walk with, accompany' (37 + + Nb + 113 + 201 + 301); sim-baθ-Ø'-o ~ si-baθ-Ø'-o 'I am attracted to, like' (37 + Nb + 201 + 301); si-maz--ev-'Ø-o 'I put together in the proper place, clean up' (37 + Nb + 113 + 201 + 301); sin-xor-å-o ~ si-xor-Ø'-o 'I forgive' (37 + Nb + 201 + 301).

Suffix Class 100. Suffixes of class 100 are added to the verb base, or some other stem used as the verb base, to form verb stems of classes I, III, and IV. These suffixes are productive.

101: -ar-

Suffix 101 is added to noun bases to form verbs of class I-A. The majority of these noun bases also occur in undeclinable nouns. Examples: kumand-o 'a command' and kumand-ar-'Ø-o 'I command' (Nb + 101 + 201 + 301); kort-e 'courtship' and kort-ar-'Ø-o 'I court' (Nb + 101 + + 201 + 301).

Suffix 101 was made a subclass because it is the only suffix in class 100 which cannot always be immediately followed by a member of suffix class 200; that is, in forming the past tense, -ar- must always be immediately followed by -iz- (114) before a member of class 200.

111: -az-

This suffix is added to verb bases to form verb stems of class I, III, and IV verbs. Examples: fr-az-'Ø-o 'I plug, seal' (Vb + 111 + 201 + 301); kit-az-'Ø-o 'I watch' (Vb + 111 + 201 + 301). This suffix may also be added to non-verb bases to form verb stems of class I and III verbs; e.g., fon-i 'voice' and fon-az-'Ø-o 'I call, shout' (Nb + 111 + 201 + 301); etim-os 'ready' and etim--az-'Ø-o 'I prepare' (Ab + 111 + 201 + 301).

112: -en-/-in-

This suffix is added to verb bases to form stems of class I-B verbs. Examples: anev-en-'Ø-o 'I climb' (Vb + 112 + 201 + 301); katev-en-'Ø-o 'I climb down' (Vb + 112 + 201 + 301). This suffix is also added to non-verb bases to form verb stems of class I-B verbs.

Examples: tix-i 'luck' and tix-en-'Ø-o 'I chance' (Nb + + 112 + 201 + 301); kser-ós 'dry and kser-en-'Ø-o 'I dry' (Ab + 112 + 201 + 301).

The allomorph -in- occurs in apo-makr-in-'Ø-o 'I put at a distance' (32 + Ab + 112 + 201 + 301), ef-kol--in-'Ø-o 'I make easy' (13 + Nb + 112 + 201 + 301), en-θar-in-'Ø-o 'I encourage' (34 + Nb + 112 + 201 + 301); -en- occurs elsewhere.

113: -ev-

This suffix is added to noun bases to form verb stems of class I-A and III verbs; e.g., fit-ó 'a plant' and fit-ev-'Ø-o 'I plant' (Nb + 113 + 201 + 301); érot-as 'love' and erot-ev-'ʒo-me 'I fall in love' (Nb + 113 + + 221 + 301). This suffix may also be added to adjective bases to form verb stems of class I-A only; e.g., xrisim--ev-'Ø-i 'it is used' (Ab + 113 + 201 + 303) and xrísim-os 'useful'; sten-ós 'tight' and sten-ev-'Ø-o 'I tighten' (Ab + 113 + 201 + 301).

114: -iz-

This suffix is added to noun bases to form verb stems of class I-A, III and IV verbs. Examples: arx-iz-'Ø-o 'I begin' (Nb + 114 + 201 + 301) and arx-í 'beginning'; ɣial-í 'glass' and ɣial-iz-'Ø-o 'I shine' (Nb + 114 + 201 + + 301).

This suffix is also added to adjective bases referring to color and noun bases referring to nationality to form verb stems of class I-A. This suffix, when used with

noun bases referring to nationality, indicates that the speaker is ridiculing someone mimicking a native of a particular nation. Examples: kokin-iz-'Ø-o 'I redden, blush' (Ab + 114 + 201 + 301) and kókin-os 'red'; áspr-os 'white' and aspr-iz-'Ø-o 'I whiten' (Ab + 114 + 201 + + 301); yál-os 'a Frenchman' and yal-iz-'Ø-o 'I mimic a Frenchman' (Nb + 114 + 201 + 301); amerikán-os and amerikan--iz-'Ø-o 'I mimic an American' (Nb + 114 + 201 + 301).

115: -on-

This suffix is added to noun bases to form verb stems of class I-A verbs. Examples: pliy-í 'wound' and pliy-on-'Ø-o 'I wound' (Nb + 115 + 201 + 301); lefter-já 'liberty' and lefter-on-'Ø-o 'I liberate' (Nb + 115 + + 201 + 301).

116: -ern-

Suffix 116 is added to noun bases to form verb stems of class I-B verbs. The majority of these noun bases also occur in undeclinable nouns. Examples: yúst-o 'pleasure' and yust-ern-'Ø-o 'I like' (Nb + 116 + 201 + 301); trómb-a 'a pump' and tromb-ern-'Ø-o 'I pump' (Nb + 116 + 201 + + 301).

5.33: Description of the Margin.

Suffixes of Class 200. Suffixes of class 200 are added to bases or immediately after members of suffix class 100 to form perfective and imperfective stems of active or passive voice.

201: -ús-/-'ʒaɣ-/-á-/-Ø'-/-'ʒØ-/-'Ø-

This suffix is added to bases or members of suffix class 100 to form active imperfective stems. Examples: ɣel-ús-a 'I was laughing' (Nb + 201 + 311); mil-á-o 'I talk' (Nb + 201 + 301); vasan-iz-'Ø-o 'I am torturing' (Nb + 114 + 201 + 301).

The allomorphs -ús- and -'ʒaɣ- occur before suffixes of subclass 310 and after stems of class II and class IV verbs;[4] in most of these verbs, they occur in free variation.[5] Examples: paṭ-ús-a ~ paṭ-'ʒaɣ-a 'I was stepping' (II: Nb + 201 + 311); kiṭ-ús-e ~ kiṭ-'ʒaɣ-e 'he was looking' (IV: Vb + 201 + 313). The allomorphs -á- and -Ø'- occur before suffixes of subclass 300 and after stems of class II, class IV, and four class I verbs;[6] they occur in free variation before suffix 301 in most class II and

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[4]However, -ús- and -'ʒaɣ- do not occur in skázo (class IV) 'I burst'; only -'ʒØ- occurs.

[5]It is simpler to list the verbs in which this alternation does not occur; in all these verbs (except skázo) only the allomorph -ús- occurs before suffix subclass 310: Class II: apató 'I deceive', ðistixó 'I suffer', katandó 'I result in', lizmonó 'I forget', oðiɣó 'I drive', paraksiɣó 'I mind', paratiró 'I notice', penó 'I praise', simbaθó 'I like', timoró 'I punish', aðikó 'I do an injustice', aðiaforó 'I am indifferent', aferó 'I subtract', aporó 'I am amazed', arɣó 'I am late', boró 'I am able', ðikjoloɣó 'I justify', ðjeró 'I divide', efkeró 'I am free', efxaristó 'I thank', ekseró 'I make an exception', eksiɣó 'I explain', eneɣó 'I act', enoxló 'I bother', epiθimó 'I wish', evloɣó 'I bless', foroloɣó 'I tax', θeoró 'I deem', zó 'I live', ipoxoró 'I retreat', kaliɛɣó 'I cultivate', misó 'I hate', nostalɣó 'I yearn', ofeló 'I benefit', poθó 'I desire', prospaθó 'I try', steró 'I deprive', topeθetó 'I put in place'; Class IV: listed in footnote 4.

[6]ɾévɣo 'I leave', vɣéno 'I go out', sfirízo 'I whistle', and tréxo 'I run'.

IV verbs,[7] and before all other suffixes of subclass 300 in a few class II verbs,[8] all the class IV verbs (except those listed in footnote 4), and in four class I verbs (listed in footnote 6). The allomorph -å- also occurs before suffix 305 and after the stem el- of the verb érxome 'I come'.

The allomorphs -'ø- and -'ʒø- occur after stems of class I and IV verbs and before suffixes of subclass 300 and 310, respectively.

Before subclass 310, the allomorph -'ʒø- is in free variation with -ás- and -'ʒaɣ- in all class IV verbs (except skázo). Before suffixes of subclass 300, the allomorph -'ø- varies freely with -å- and -ø'- in all class IV verbs except skázo--in this verb -'ø- varies freely with -å- only.

The following are examples of the occurrence of the

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[7]Again, it is simpler to list the verbs in which the alternation -å- ~ -ø'- does not occur before suffix 301; in all these verbs only the allomorph -ø'- occurs before suffix 301: Class II: those of footnote 5 starting with aðikó 'I do an injustice' plus filáo 'I keep' and excluding éksiɣó 'I explain' and évloɣó 'I bless'.

[8]The class II verbs in which the laternation -å- ~ ~ -ø'- occurs before suffix 301-306 are as follows: akuluθó 'I follow', ðistixó 'I suffer', foró 'I wear', zitó 'I ask', kaló 'I invite', ikonomó 'I manage', karteró 'I wait for', kelaiðó 'I warble', kinonó 'I take communion', klirinomó 'I inherit', krató 'I hold', lizmonó 'I forget', oðiɣó 'I drive', paraksiɣó 'I mind', pariɣoró 'I console', pató 'I step', perifronó 'I ignore', pirovoló 'I shoot', ponó 'I ache', proskinó '" worship', protimó 'I prefer', proxoró 'I progress', sizitó 'I chat', simbaθó 'I like', sinxoró 'I forgive', stenaxoró 'I upset', tilefonó 'I telephone', timoró 'I punish', tiranó 'I torture', voiθó 'I help', xirokrotó 'I cheer', zoró 'I fit'.

suffixes of this subclass: piʃ-u̇s-a ~ piʃ-'ʒaɣ-a 'I was jumping' (II: Vb + 201 + 311), ʃips-å-o ~ ʃips-ø'-o 'I thirst' (II: Vb + 201 + 301), zon-'ø-o 'I fasten' (I: Nb + 201 + 301), aʃi-az-'ʒø-a 'I was emptying' (I: Ab + 111 + 201 + 311); kitaz-'ʒø-a ~ kit-'ʒaɣ-a ~ kit-u̇s-a 'I was looking' (IV: Vb + 201 + 311); fis-å-o ~ fis-ø'-o 'I blow' (II: Vb + 201 + 301).

The allomorph -'ʒø- occurs before suffix subclass 310; -'ø-, before suffix subclass 300. Examples: fov-iz-'ʒø-a 'I was scaring' (Nb + 114 + 201 + 311), zest-en-'ø-o 'I warm' (Nb + 112 + 201 + 301), rav-'ʒø-ame 'we were sewing' (Nb + 201 + 314), din-'ø-ete 'you are dressing' (Vb + 201 + 305).

The allomorphs -'ʒø- and -'ø- can also occur before suffix subclass 320; when they do, the allomorph -'ʒø- occurs after multi-vowel stems of class I and class IV verbs, and -'ø- occurs elsewhere. Examples: aliv-'ʒø-e 'rub!' (I: Vb + 201 + 321); vaf-'ø-e 'paint!' (I: Vb + + 201 + 321); kit-az-'ʒø-e 'look!' (IV: Vb + 111 + 201 + + 321); eksiɣ-'ø-a 'explain!' (II: Vb + 201 + 321).

211: -'ʒs-/-'s-/-'ʒø-/-'ø-

This suffix is added to bases and suffixes of class 100 to form perfective stems of active voice. Examples: aɣora-'ʒs-a 'I bought' (Nb + 211 + 311), θa paxin-'ø-is 'you will get fat' (Vb + 211 + 302); ʃiava-'ʒs-e 'read!' (Vb + 211 + 321), kser-an-'ʒø-e 'it dried' (Ab + 112 + + 211 + 313).

The allomorphs -'ʒs- and -'s- occur after stems of class I-A, II, and IV verbs, after the class V base kat- 'sit', and before suffixes of subclass 310 and 300, respectively; -'ʒØ- and -'Ø- occur after stems of class I-B verbs, the base irθ- 'I come', and before suffixes of subclasses 310 and 300, respectively. Examples: parati-'ʒs-a 'I gave up' (Vb + 211 + 311), θa yera-'s-is 'you will grow old' (Vb + 211 + 302), kaṭa-lav-'ʒØ-a 'I understood' (I-B: 36 + Nb + 211 + 311), θa maθ-'Ø-i 'he will learn' (I-B: Vb + 211 + 303).

The allomorphs -'ʒs-, -'s-, and -'Ø- may occur before members of subclass 320; when they do, the allomorph -'Ø- occurs after one stem of class I-A, one stem of class V, and in a small number of class I-B verbs.[9] The allomorph -'s- occurs after single-vowel stems of class I and IV verbs, and in one verb of class V;[10] -'ʒs- occurs elsewhere. Examples: kop-'s-e 'cut!' (I: Vb + 211 + 321); spa-'s-e 'break!' (IV: Vb + 211 + 321), kat-'s-e 'sit!' (V: Vb + 211 + 321); kokin-i-'ʒs-e 'redden!' (I: Ab + + 114 + 211 + 321); zulik-'ʒs-e 'squeeze!' (II: Vb + 211 + + 321); maδ-i-'ʒs-e 'pluck!' (IV: Vb + 114 + 211 + 321).

212: -'ʒθik-/-'ʒtik-/-θ'-/-t'-/-'ʒik-/-Ø'-/-'s-

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[9]The verbs in which the allomorph -'Ø- occurs before members of subclass 320 are as follows: anevẹ̀no 'I climb', katevẹ̀no 'I climb down', pivẹ̀no 'I go', sopẹ̀no 'I keep silent', (in this verb, the allomorph -'Ø- is in free variation with -'ʒs-), vvẹ̀no 'I go out', akṵo 'I hear', (in the last two verbs, the allomorph -'Ø- is in free variation with -'s-), ẹ̀rxome 'I come'.

[10]The verb is kå̀θome 'I sit'.

This suffix is added to bases and suffixes of class 100 to form perfective stems of passive voice. Examples: alif-'ʒtik-a 'I was rubbed' (Vb + 212 + 311), ksera-'ʒθik-e 'it withered' (Vb + 212 + 313), θa pene-θ'-o 'I shall be praised' (Vb + 212 + 301), θa ery-as-t'-o 'I shall work' (Nb + 111 + 212 + 301).

The allomorph -'s- occurs after stems of verbs of classes I, II, III, and IV, and before suffix subclass 320. Examples: peʃ-ep-'s-u 'torture yourself!' (I: Vb + 113 + 212 + 321), pone-'s-u 'have pity!' (II: Vb + + 212 + 321), onir-ep-'s-u 'dream!' (III: Vb + 113 + 212 + + 321), spa-'s-u 'hit yourself!' (IV: Vb + 212 + 321).

The allomorph -∅'- occurs before members of suffix subclass 300; and -'ʒik- occurs before members of suffix subclass 310 in only a small number of verbs.[11] Example: ka-'ʒik-a 'I was burned' (Vb + 212 + 311), θa ka-∅'-o 'I shall be burned' (Vb + 212 + 301).

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[11]The verbs in which these allomorphs occur are the following. Since in most of these verbs the allomorph -∅'- varies freely with -t'-, and -'ʒik- varies freely with -'ʒtik-, the verbs are listed in their passive perfective formation, first person singular: vaf-'ʒik-a ~ vaf-'ʒtik-a 'I was painted', θa vaf-∅'-o ~ θa vaf-t'-o 'I shall be painted'; vrax-'ʒik-a ~ vrex-'ʒtik-a 'I was wet', θa vrax-∅'-o ~ ~ θa vrex-t'-o 'I shall be wet'; yin-'ʒik-a ~ eyin-'ʒ∅-a 'I became'; yraf-'ʒik-a ~ yraf-'ʒtik-a 'I enrolled', θa yraf-∅'-o ~ yraf-t'-o 'I shall enroll'; kop-'ʒik-a ~ kof--'ʒtik-a 'I was cut', θa kop-∅'-o ~ θa kof-t'-o 'I shall be cut'; pniy-'ʒik-a ~ pnix-'ʒtik-a 'I was choked', θa pniy-∅'-o ~ ~ pnix-t'-o 'I shall be choked'; katastraf-'ʒik-a ~ katastref--'ʒtik-a 'I was ruined', θa katastraf-∅'-o ~ katastref-t'-o 'I shall be ruined'; xar-'ʒik-a 'I was glad', θa xar-o'-o 'I shall be glad'; fan-'ʒik-a 'I appeared', θa fan-∅'-o 'I shall appear'; drap-'ʒik-a 'I was ashamed', θa drap-∅'-o 'I shall be ashamed'; ka-'ʒik-a 'I was burned', θa ka-∅'-o 'I shall be burned.'

The allomorphs -θ'- and -t'- occur before members of suffix subclass 300, while -'ʒθik- and -'ʒtik- occur before members of suffix subclass 310; -t'- and -'ʒtik- occur after fricatives, -θ'- and -'ʒθik- occur after vowels and any consonant other than a fricative. Examples: θa ksis-t'-o 'I shall scratch myself' (Vb + 212 + 301), θa fili-θ'-is 'you will be kissed' (Vb + 212 + 302), yir-is-'ʒtik-e 'it was turned' (Nb + 114 + 212 + 313), ofeli-'ʒθik-a 'I was benefited' (Vb + 212 + 311).

221: -'ʒo-/-'ʒe-/-j̇e̊-/-j̇ů-/-j̇o̊-/-ů-/-i̊-/-å-

This suffix is added to suffixes of class 100 or directly to bases to form passive imperfective stems. Examples: plisj-az-'ʒo-me 'I am being approached' (Ab + + 111 + 221 + 301), trav-j̇ů-maste ~ trav-j̇o̊-maste 'we are being pulled' (Vb + 221 + 314), fov-å-se 'you are afraid' (Nb + 221 + 302), mir-iz-'ʒe-se 'you are smelling yourself' (Vb + 114 + 221 + 303).

The allomorphs -'ʒo- and -'ʒe- occur with stems of class I, III, IV, and V verbs. The allomorph -'ʒo- occurs before suffixes 301, 304-306, and 311-316; -'ʒe- occurs before suffixes 302, 303, and 305. Examples: sin-oδ-ev- -'ʒo-maste 'we are being accompanied' (I: 37 + Nb + 113 + + 221 + 304), kov-'ʒe-te 'it is being cut' (I: Vb + 221 + + 303), fen-'ʒe-ste 'you seem' (III: Vb + 221 + 305), kitaz-'ʒo-me 'I look at myself' (IV: Vb + 221 + 301), erx-'ʒo-me 'I come' (Vb + 221 + 301). Furthermore, in a few verbs of class III, the allomorph -'ʒo- varies freely

with -ú- before suffix 304 and suffix 306.[12] Examples: fov-'3o-maste ~ fov-ú-maste 'we are afraid' (Nb + 221 + + 304), kim-'3o-nde ~ kim-ú-nde 'they are sleeping' (Vb + 221 + 306).

The allomorphs -jé-, -jú-, and -jó- occur with stems of class II verbs and a small number of class III verbs.[13] The allomorph -jé- occurs before suffixes 301, 302, 303, and 305; -jó- occurs before suffixes 304, 306, and 311-316; -jú- also occurs before suffixes 304 and 306 and always in complete free variation with -jó- . Examples: Class II: pariyor-jé-se 'you are consoled' (Nb + 221 + 302), trip-jó-saste 'you are being pricked' (Nb + 221 + 315), vast-jó-maste ~ vast-jú-maste 'we are being held' (Vb + 221 + 304), tiran-jó-nde ~ tiran-jú-nde 'they are being tortured' (Nb + 221 + 306); Class III: var-jé-me 'I am tired' (Vb + 221 + 301), var-jó-maste ~ ~ var-jú-maste 'we are tired' (Vb + 221 + 304), var--jó-ndusan 'they were tired' (Vb + 221 + 316).

The allomorphs -ú- and -í- occur in imperfective stems of a small number of class II verbs, and in two class III verbs--peripiúme 'I treat kindly' and sinenoúme 'I communicate'. The allomorph -ú- occurs before suffixes 301, 302, and 306; -í- occurs before suffixes 302, 303, and 305. Examples: Class II: mis-ú-me 'I am hated'

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[12] fovúme 'I am afraid', θimúme 'I remember', kimúme 'I sleep', and lipume 'I regret'.

[13] These verbs are: arnjéme 'I deny', katarjéme 'I curse', varjéme 'I am tired', and xazmurjéme 'I yawn'.

(Vb + 221 + 301), θeor-i̯-te 'it is deemed' (Nb + 221 + + 303), ðikjoloɣ-i̯-ste 'you are making excuses' (Nb + + 221 + 305), ðier-u̯-nde 'they are being divided' (Nb + + 221 + 306);[14] Class III: sineno-i̯-se 'you are communicating' (Vb + 221 + 302), sineno-u̯-nde 'they are are communicating' (Vb + 221 + 306).

In five verbs of class II and one of class III, the allomorph -u̯-, before suffix 301, is in complete free variation with -je̯-, and with -ju̯- and -jo̯- before suffixes 304 and 306. The allomorph -i̯- is in complete free variation with -je̯- before suffixes 302, 303, and 305 in these same verbs. Examples: efxarist-je̯-me ~ efxarist- -ju̯-me 'I am pleased (Nb + 221 + 301), efxarist-i̯-se ~ ~ efxarist-je̯-se 'you are pleased' (Nb + 221 + 302), efxarist-jo̯-nde ~ efxarist-ju̯-nde ~ efxarist-u̯-nde 'they are pleased' (Nb + 221 + 306).[15]

The allomorph -a̯- is used to form passive imperfective stems of a number of class III verbs.[16] It occurs before suffixes 301-303 and 305 and is always in complete free variation with -u̯- before suffix 301. Examples: kim-a̯-se 'you are sleeping' (Vb + 221 + 302), lip-u̯-me ~

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[14]The remaining verbs are: aðiko̯ 'I do injustice', aferо̯ 'I subtract', ðierо̯ 'I divide', ekserо̯ 'I make an exception', eneryo̯ 'I act', enoxlo̯ 'I bother', foroloɣo̯ 'I tax'; and sterо̯ 'I deprive'. The passive imperfective of the remaining class II verbs are formed with the allomorphs -je̯-, -jo̯-, and -ju̯-.

[15]The other class II verbs are ðikjoloɣo̯ 'I make excusses', eksiɣo̯ 'I explain', evloɣo̯ 'I bless', and ofelo̯ 'I benefit'. The class III verb is paraponje̯me 'I complain'.

[16]These are the same verbs listed in footnote 12.

$\sim$ lip-á-me 'I regret' (Nb + 221 + 301).

Suffixes of Class 300. Members of suffix class 300 are added immediately to members of suffix class 200 to complete the formation of the verb. These suffixes indicate tense or mood, and person and number.

Subclass 300. Suffixes of subclass 300 indicate non-past tense,[17] number and person.

301: -o/-me

This suffix indicates the first person singular, non-past tense. The allomorph -me is used after suffix 221; -o is used elsewhere. Examples: θa pin-á-o $\sim$ $\sim$ θa pin-Ø'-o 'I shall be hungry' (Nb + 201 + 301); plen-'ʒo-mę 'I am being washed' (Vb + 221 + 301); kuval-á-o $\sim$ kuval-Ø'-o 'I carry' (Vb + 201 + 301); tiliy-'ʒo-me 'I am being wrapped' (Vb + 221 + 301); pez-'Ø-o 'I play' (Vb + 201 + 301); θa kseχa-'s-o 'I shall forget' (Vb + 211 + 301).

302: -is/-s/-se

This suffix indicates the second person singular, non-past tense. The allomorph -se occurs after suffix 221; -s and -is occur elsewhere: -s after stems ending in a vowel, -is, after stems ending in a consonant. Examples: vrex-'ʒe-se 'you are being wet' (Vb + 221 + 301); ary-Ø'-is 'you are late' (Vb + 201 + 302); θa vap-'s-is

[17] See footnote 4, Chapter 4, however, for the restricted use of the combinations 211 or 212 + 301-306.

'you will paint' (Vb + 211 + 302); amol-á-s 'you let loose' (Vb + 201 + 302).

The allomorph -s is in complete free variation with -is in the present tense of a number of verbs belonging to class II. Examples: for-á-s ~ for-Ø'-is 'you wear' (Vb + 201 + 302); ðistix-á-s ~ ðistix-Ø'-is 'you suffer' (VS + 201 + 302); telefon-á-s ~ telefon-Ø'-is 'you telephone' (VS + 201 + 302).[18]

303: -i/-Ø/-te

This sufrix indicates the third person singular, non-past tense. The allomorph -te occurs after suffix 221; -t and zero occur elsewhere: zero only in the present tense and in complete free variation with -i in the majority of verbs belonging to class II.[19] Examples:

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[18]The remaining class II verbs in which this free variation occurs are: akuluθó 'I follow', zitó 'I ask', ikonomó 'I manage', kartero 'I wait for', kelaiɛó 'I warble', kinonó 'I take communion', klironomó 'I inherit', krató 'I hold', lizmonó 'I forget', oðiyó 'I drive', kalo 'I invite', paraksiyó 'I offend', pariyoró 'I console', pató 'I step', perifronó 'I ignore', pirovolo 'I shoot', ponó 'I ache', proskinó 'I worship', protimó 'I prefer', proxoró 'I progress', sizitó 'I chat', simbaθó 'I like', sinxoró 'I forgive', stenoxoró or stenaxoró 'I upset', timoró 'I punish', tiranó 'I torture', voiθó 'I help', xirokrotó 'I cheer', xoró 'I fit'.

[19]The verbs of class II in which the free variation between -i and -Ø does not occur are the following (in these verbs only the allomorph -i occurs): aðjaforó 'I am indifferent', aporó 'I am amazed', aryó 'I am late', arki 'it is sufficient', boró 'I can', ðisarestó 'I displease', efkeró 'I am free', epiθimó 'I desire', zo 'I live', iðopió 'I inform', ipireto 'I serve', ipoxoró 'I retreat', kalieryó 'I cultivate', nostalyó 'I yearn', pliroforó 'I inform', poθó 'I yearn', prospaθó 'I try', aðikó 'I do injustice', aferó 'I subtract', ðikeoloyó 'I justify', ðieró 'I divide', efxaristó 'I thank', ekseró 'I make an exception', eksiyó 'I explain',

ʃjavaz-'ʒe-te 'it is being read' (VS + 221 + 303); ayap-å-i ~ ayap-å-ø 'he loves' (VS + 201 + 303); trex--'ø-i 'he runs' (VS + 201 + 303); θa xar-i-'s-i 'he will donate' (VS + 211 + 303); kend-å-i ~ kend-å-ø 'she embroiders' (VS + 201 + 303); trelen-'ʒe-te 'he is becoming mad' (VS + 221 + 303).

304: -ume/-me/-maste

This suffix indicates the first person plural, non-past tense. The allomorph -maste occurs after suffix 221; -ume and -me occur elsewhere: -me after stems ending in a vowel, -ume after stems ending in a consonant. Examples: ynor-iz-'ʒo-maste 'we know each other' (VS + 221 + + 304); apand-å-me 'we answer' (VS + 201 + 304); kapn--iz-'ø-ume 'we smoke' (VS + 201 + 304); θa yel-å-me 'we shall be laughing' (VS + 201 + 304); θa zvis-t'-ume 'we shall be erased' (VS + 212 + 304).

The allomorph -me is in complete free variation with -ume in the present tense of the majority of the verbs belonging to class II.[20] Examples: xal-å-me ~ ~ xal-ø'-ume 'we destroy' (VS + 201 + 304); laxtar-å-me ~ ~ laxtar-ø'-ume 'we yearn' (VS + 201 + 304); pern-å-me ~ ~pern-ø'-ume 'we pass' (VS + 201 + 304).

305: -ete/-te/-ite/-ste

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enerɣo 'I act', enoxlo 'I bother', evloɣo 'I bless', foroloɣo 'I tax', θeoro 'I deem', miso 'I hate', ofelo 'I benefit', stero 'I deprive'.

[20]This free variation does not occur in the same verbs of class II listed in footnote 18. In these verbs only -ume occurs.

This suffix indicates the second person plural, non-past tense and imperative mood.[21] The allomorph -ste occurs after suffix 221; -ete, -te, and -ite occur elsewhere. The allomorph -ite occurs after certain allomorphs of suffix 212 and in a small number of class II verbs,[22] while -ete and -te occur elsewhere: the latter after stems ending in a vowel and the former after stems ending in a consonant. Examples: agalj-az-'ʒe-se 'you are being embraced' (VS + 221 + 305); θa zal-is-t'-ite 'you will get dizzy' (VS + 212 + 305); oðiɣ-Ø'-ite 'you drive' (VS + 201 + 305); mil-á-te 'you speak' (VS + 201 + + 305); ɣðin-'ʒe-ste 'you are undressing' (VS + 221 + 305).

The allomorph -te is in complete free variation with -ite in the active present tense of a small number of class II verbs;[23] while -te may vary freely with -ete when it occurs after stems not ending in /k/ and before suffix 211. Examples: akuluθ-á-te ~ akuluθ-Ø'-ite 'you are following' (VS + 201 + 305); voiθ-á-te ~ voiθ-Ø'-ite 'you help' (VS + 201 + 305); ɣrap-'ʒs-ete ~ ɣrap-'ʒs-te 'write!' (VS + 211 + 305); θa kera-'ʒs-ete ~ kera-'ʒs-te 'you will treat' (VS + 221 + 305); rufik-'ʒs-ete 'suck' (VS + 211 + + 305).

306: -une/-un/-ne/-nde

This suffix indicates the third person plural,

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[21]For a discussion see footnote 25.

[22]In the same class II verbs listed in footnote 19.

[23]In the same class II verbs listed in footnote 18.

non-past tense. The allomorph -nde occurs after suffix 221; -une, -un, and -ne occur elsewhere: -une in complete free variation with -un, after stems ending in a consonant; -ne after stems ending in a vowel. Examples: ʃan-iz-'ʒo-nde 'they borrow' (VS + 221 + 306); pin-'Ø-une ~ ~ pin-'Ø-un 'they drink' (VS + 201 + 306); θa fa-'Ø-ne 'they will eat' (VS + 201 + 306); kim-ɑ̊-nde 'they sleep' (VS + 221 + 306); ʃixn-'Ø-une ~ ʃixn-'Ø-un 'they show' (VS + 201 + 306). Furthermore, the allomorph -ne is in complete free variation with -une and -un in the present tense of the majority of verbs belonging to class II.[24] Examples: sinxor-å-ne ~ sinxor-Ø'-une ~ sinxor-Ø'-un 'they forgive' (VS + 201 + 306); pul-å-ne ~ pul-Ø'-une ~ ~ pul-Ø'-un 'they sell' (VS + 201 + 306); tiran-å-ne ~ ~ tiran-Ø'-une ~ tiran-Ø'-un 'they torture' (VS + 201 + + 306).

Subclass 310. Suffixes of subclass 310 indicate past tense, number and person.

311: -a/-muna

This suffix indicates past tense, first person singular. The allomorph -muna occurs after suffix 221; -a occurs elsewhere. Examples: em-boʃ-iz-'ʒo-muna 'I was being hindered' (VS + 221 + 311); θavm-az-'ʒØ-a 'I was admiring' (VS + 211 + 311); kol-jo̊-muna 'I was being glued' (VS + 221 + 311); akumb-'ʒaɣ-a ~ akumb-ɑ̊s-a 'I

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[24] In all class II verbs except those listed in footnote 19.

was leaning' (VS + 201 + 311).

312: -es/-suna

This suffix indicates past tense, second person singular, The allomorph -suna occurs after suffix 221; -es occurs elsewhere. Examples: kur-ef-'ʒtik-es 'you got a haircut' (VS + 212 + 312); skot-on-'ʒo-suna 'you were being killed' (VS + 221 + 313); ɛklap-'ʒs-es 'you cried' (VS + 211 + 312); kaθar-iz-'ʒo-suna you were being cleaned' (VS + 221 + 312).

313: -e/-tane

This suffix indicates past tense, third person singular. The allomorph -tane occurs after suffix 221; -e occurs elsewhere. Examples: leɣ-'ʒo-tane 'he was named' (VS + 221 + 313); niki-'ʒθik-e 'he was conquered' (VS + 212 + 313); xtip-jó-tane 'he was hitting himself' (VS + 221 + 313); ɣirn-'ʒaɣ-e ~ ɣirn-ús-e 'he was returning, turning' (VS + 201 + 313).

314: -ame/-maste

This suffix indicates past tense, first person plural. The allomorph -maste occurs after suffix 221; -ame occurs elsewhere. Examples: θim-'ʒo-maste 'we are remembered' (VS + 221 + 314); afksi-'ʒs-ame 'we increased' (VS + 211 + 314); pandr-ev-'ʒo-maste 'we were being married' (VS + 221 + 314); anɛv-as-'ʒtik-ame 'we ascended' (VS + 212 + 314).

315: -ate/-saste

This suffix indicates past tense, second person plural. The allomorph -saste occurs after suffix 221; -ate occurs elsewhere. Examples: metr-jɓ-saste 'you were being measured' (VS + 211 + 315); meθ-ɖs-ate ~ meθ-'ʒaɣ--ate 'you were getting drunk' (VS + 201 + 315); ana-kat--ev-'ʒo-saste 'you were being mixed up' (VS + 221 + 315); ʃakr-iz-'ʒØ-ate 'you were crying' (VS + 201 + 315); ʃin-'ʒo-saste 'you were giving yourselves' (VS + 221 + 315).

316: -ane/-an/-ndusan

This suffix indicates past tense, third person plural. The allomorph -ndusan occurs before suffix 221; -ane and -an occur in complete free variation elsewhere. Examples: ɣjatr-ev-'ʒo-ndusan 'they were being cured' (VS + 221 + 316); ʃi-or-is-'ʒtik-ane ~ ʃi-or-is-'ʒtik-an 'they were appointed' (VS + 212 + 316); melet-ɖs-ane ~ ~ melet-ɖs-an ~ melet-'ʒaɣ-ane ~ melet-'ʒaɣ-an 'they were studying' (VS + 201 + 316); ʃokim-az-'ʒo-ndusan 'they were being tried' (VS + 221 + 316); pastr-ep-'ʒs--ane ~ pastr-ep-'ʒs-an 'they cleaned up' (VS + 211 + 316).

Subclass 320. Suffixes of subclass 320 indicate second person singular, imperative mood.[25]

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[25]The second person plural of the imperative mood is identical in form with the allomorphs -ete, -te, -ite, and -ste of suffix 305; for example, ɣraf-'Ø-ete (VS + + 201 + 305) which means both 'you are writing' and 'write!' There is no need to posit a separate morphological form for this person since there is no morphological way one can distinguish the two functions.

321: -e/-a/-Ø/-u

This suffix is used to form the second person singular of the imperative mood. Examples: xten-i-'s-u 'comb your hair!' (VS + 212 + 321); zit-'Ø-a 'ask!' (VS + + 201 + 321); kuni-'3s-e 'move!' (VS + 211 + 321).

The allomorph -u occurs after suffix 212; e.g., ksir-i-'s-u 'shave!' (VS + 212 + 321); yiatr-ep-'s-u 'cure yourself!' (VS + 212 + 321); petak-'s-u 'throw yourself!' (VS + 212 + 321). In one verb, however, the allomorph -u occurs after suffix 211 and varies freely with -e: ak-'Ø-u ~ aku-'3s-e 'listen!'

The allomorph -Ø occurs after suffix 211 in three class I-B verbs: pe-'s-Ø 'say!' (VS + 211 + 321); ðe-'s-Ø 'see!' (VS + 211 + 321), and vre-'s-Ø 'find!' (VS + 211 + + 321). Moreover, in two class I-B verbs it alternates freely with -a: be-'s-Ø ~ emb-'Ø-a 'get in!' (VS + 211 + +321); vye-'s-Ø ~ evy-'Ø-a (VS + 211 + 321).

The allomorph -a occurs after stems of verbs belonging to all classes except class III.[26] The allomorph -e occurs elsewhere. Examples: ipiret-'Ø-a 'serve!' (II: VS + 211 + 321), klironom-'Ø-a 'inherit!' (II: VS + 211 + 321); anev-'Ø-a 'climb up!'(I: VS + 211 + 321); kit-'Ø-a 'look!' (IV: VS + 211 + 321); yir-ep-'3s-e 'ask!'

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[26]The verbs in which the allomorph -a occurs are the following: Class I: anevéno 'I climb', béno 'I enter', katevéno 'I go down', sopéno 'I keep quiet', (in this verb -a alternates freely with -e: sópa~sópase), vyéno 'I go out', sfiró 'I whistle', tréxo 'I run'; Class II: all verbs of this class; Class IV: kitázo 'I look', maðízo 'I pluck'; Class V: érxome 'I come'.

(I: VS + 211 + 321); skundi-'3s-e 'push!' (II: VS + 211 + + 321); filay-'3Ø-e 'keep!' (IV: VS + 201 + 321); yin-'Ø-e 'become!' (V: VS + 211 + 321).

4.34: Allostems. The definitions given in Chapter 4 for grouping verbs into classes do not account for the allostems that might occur; for example, the knowledge that a certain verb belongs to class I-B rather than class II does not indicate the different forms that the stem of this verb may have. It has been decided, therefore, to divide each class into "types," according to the different shapes a given stem may have. Type, then, refers to a grouping of stems on the basis of similar allomorphic alternations, while class refers to a grouping of stems on the basis of similar selection of suffix allomorphs.

The distribution of the stem variants of each type for the most part is given in terms of suffix class 200, and when relevant, in terms of classes 200 plus 300. The following is a description of the different types of stem variants occurring within each verb class. Unless otherwise stated, the allostems are listed in parentheses in order of occurrence before the members of suffix class 200; i.e., first allostem before suffix 201, second before subclass 211, third before subclass 212, and fourth before subclass 221. A dash indicates that the allostem does not occur before that particular suffix. The stem variants occurring as a result of the conditioning stated under phonologically conditioned alternations are neither grouped into types nor, whenever possible, listed for class I verbs

only.

I. Class I

Two general statements can be made regarding the stem variants of the stem types belonging to class I:

1. Single-vowel stems have augmented allomorphs beginning with /e/ before margins containing only one vowel; multi-vowel stems never do. Examples: trex-'Ø-o 'I run', past tense: etrek-'3s-e 'he ran'; plen-'Ø-o 'I wash', past tense: eplin-'3Ø-e 'he washed'; xorev-'Ø-o 'I dance', past tense: xorep-'3s-a 'I danced'.
2. A stem ending in a vowel has a freely varying form ending in /ɣ/ before 201 + 311-16, the active imperfective past tense. Examples: aku-'Ø-o 'I hear', past tense: aku-'3Ø-a ~ ~ akuɣ-'3Ø-a 'I was hearing'; fte-'Ø-o 'I am at fault', past tense: efte-'3Ø-a ~ eftɣ-'3Ø-a 'I was at fault'.

In the following description of the stem types of class I-A and I-B, /e/ and /ɣ/ allostems shall not be further listed.

II. Class I-A

Stems of class I-A always have the same allostems occurring before suffixes 201 and 221 and at least one other different allostem occurring either before suffix 211 or 212. A maximum of two allostems, therefore, shall be listed for stems belonging to this subclass: one occurring before suffix 211 and the

other before suffix 212. Verbs of each type are listed in the form containing suffix 201.

Type 1

A stem ending in /z/ before suffixes 201 and 221 has allostems ending in /k/ and /x/ before suffixes 211 and 212. Examples: angiz-'Ø-o 'I touch' (VS + 201 + + 301), angik-'ʒs-a 'I touched' (VS + 211 + 311), angix-'ʒtik-a 'I was touched' (VS + 212 + 311).

The verbs belonging to this type are:
alázo 'I change' (alak, alax), anestenázo 'I sigh' (anestenak, —), angízo 'I touch' (angik, angix), arázo 'I land' (arak, —), arpázo 'I grab' (arpak, arpax), ðistázo 'I hesitate' (ðistak, —), ðjatázo 'I order' (ðjatak, ðjatax), fonázo 'I call' (fonak, —), frázo 'I seal' (frak, frax), kitázo 'I watch' (kitak, kitax), nistázo 'I am sleepy' (nistak, —);[27] pézo 'I play' (pek, pex), pízo 'I thicken' (pik, pix), pirázo 'I bother' (pirak, pirax), sfázo 'I slaughter' (sfak, sfax), sfirízo 'I whistle' (sfirik, sfirix), tázo 'I promise' (tak ~ tax), trízo 'I grind' (trik, —), tromázo 'I frighten' (tromak, tromax), tsúzi 'it burns' (tsuk, —), vuljázo 'I sink' (vuljak, vuljax).

Type 2

The stem has one form ending in /r/ before suffixes 201 + 300, another ending in /iz/ before suffixes

[27]The stem nistak- varies freely with nista-.

201 + 310, and a third ending in /i/ before either suffixes 211 + 300 and 211 + 310 in a number of verbs. Examples: kornar-'Ø-o 'I blow the horn' (VS + 201 + 301), kornariz-'3Ø-a 'I was blowing the horn' (VS + 201 + 311), kornari-'3s-a 'I blew the horn' (VS + 211 + 311), θa kornari-'s-o 'I shall blow the horn' (VS + 211 + 301).

Since these verbs do not occur in the passive voice, the number of allostems listed below is confined to three: the first before suffixes 201 + + 300, the second occurs before 201 + 310, the third occurs before 211 + 310 and 211 + 300. These verbs are the following:

angazåro 'I reserve' (angazar, angazariz, angazari)
barkåro 'I embark' (barkar, barkariz, barkari)
blofåro 'I bluff' (blofar, blofariz, blofari)
ɣuståro 'I like' (ɣustar, ɣustariz, ɣustari)
fumåro 'I smoke' (fumar, fumariz, fumari)
kornåro 'I blow the horn' (kornar, kornariz, kornari)
kortåro 'I court' (kortar, kortariz, kortari)
kumandåro 'I command' (kumandar, kumandariz, kumandari)
lustråro 'I shine' (lustrar, lustrariz, lustrari)
mandåro 'I mend' (mandar, mandariz, mandari)
parkåro 'I park' (parkar, parkariz, parkari)
parlåro 'I prate' (parlar, parlariz, parlari)
pasåro 'I pass' (pasar, pasariz, pasari)
serviro 'I serve' (servir, serviriz, serviri)

trakáro 'I collide' (trakar, trakariz, trakari)

tratáro 'I treat' (tratar, tratariz, tratari)

trombáro 'I pump' (trombar, trombariz, trombari)

voltáro 'I cruise' (voltar, voltariz, voltari)

Type 3

An allostem ending in /k/ occurs before suffix 211 in the following two verbs:

prízo 'I swell' (prik, pris)

ftéo 'I am at fault' (ftek, __)

Type 4

In the following verbs a stem ending in either a consonant or a vowel before suffix 201 or 221 ends in /s/ before suffix 212. Examples: ksin-'Ø-o 'I scratch' (VS + 201 + 301), ksis-'ʒtik-a 'I scratched myself' (VS + 212 + ʒ11).

zvíno 'I turn off' (zviz, zvis); klíno 'I shut' (kli, klis); ksíno 'I scratch' (ksi, ksis); pjáno 'I grab' (pja, pjas); akúo 'I hear' (aku, akus); píθo 'I convince' (pi, pis); pláθo 'I mold' (pla, plas).

Type 5

a) A stem ending in a consonant or consonant cluster before suffix 201 and 220 has an allostem ending without this consonant or consonant cluster before suffix 211 and in one case, before suffix 212. Example: aleθ-'Ø-o 'I grind' (VS + 201 + 301), θa ale-'s-o 'I shall grind' (VS + 211 + 301),

ale-'θik-e 'it was ground' (VS + 212 + 701). This alternation takes place in the following verbs: alέθo 'I grind' (ale, ale); njόθo 'I feel' (njo, —); pέfto 'I fall' (pe,—); ekθέto 'I reveal' (ekθe, —); ipoθέto 'I assume' (ipoθe, —); kata--θέto 'I put' (kataθe, —); metaθέto 'I transfer' (metaθe, —); prostέto 'I add' (proste, —).

b) In addition to losing the consonant before suffix 211, the following two verbs also have allostems which vary freely before this suffix. anaθέto 'I make responsible', anaθe-'ʒs-a ~ aneθe--'ʒs-a 'I made responsible; ðiaθeto 'I dispose' ðiaθe-'ʒs-a ~ ðieθe-'ʒs-a 'I disposed'.

Type 6

It was previously stated that stems ending in /n/ lose this /n/ before the perfective morphemes {-s-} and {-θik-}. In addition to losing the /n/ before these morphemes, the following verbs have stems which have a vowel different from that which preceded the /n/ before suffixes 201 and 221. Examples:

anasten-'Ø-o 'I resurrect' (VS + 201 + ʒ01)

anasti-'ʒs-a 'I resurrected' (VS + 211 + ʒ11)

anasti-'ʒθik-e 'he was resurrected' (VS + 212 + ʒ13)

One allostem is listed since the stem of these verbs is the same before both of the perfective morphemes. The vowel alternations are as follows:

a) e/a: xortέno 'I become full' (xorta)

b) a/i: afksάno 'I increase' (afksi)

c) i/o: ðino 'I give' (ðo)

d) e/i: amarténo 'I sin' (amarti)

arosténo 'I become ill' (arosti)

parasténo 'I mimic' (parasti)

Type 7

The stem forms occurring before suffix 221 differ from stem forms occurring before suffixes 201 and 211 in both the last vowel and consonant of the stem form in the following two verbs:

vizen-'Ø-o 'I breast feed' (VS + 201 + 301)

vizak-'ʒs-a 'I breast fed' (VS + 211 + 311)

vizax-'ʒtik-a 'I was breast fed' (VS + 212 + 311)

kle-'Ø-o 'I cry' (VS + 201 + 301)

eklap-'ʒs-a 'I cried' (VS + 211 + 311)

klaf-'ʒtik-a 'I was cried for' (VS + 212 + 311).

Type 8

In one verb the stem ends in a vowel before suffix 201, but in /f/ before suffix 211:

anapne-'Ø-o 'I inhale' (VS + 201 + 301)

anapnef-'ʒs-a 'I inhaled' (VS + 211 + 311).

Type 9

In one verb the stem form occurring before suffixes 201 and 221 varies freely with a different stem form occurring before suffix 212. The difference between these two allostems lies in their last vowel.

katastref-'Ø-o 'I destroy' (VS + 201 + 301)

katastref-'ʒo-me 'I am destroyed' (VS + 221 + 301)

katastraf-'ʒik-a ~ katastref-'ʒtik-a 'I was destroyed'

(VS + 212 + 311).

Type 10

In one verb, the stem has one form before 201 + + 300 and 221 + 300 and another before 201 + 310 and 211 + 310. The difference between these two allostems lies in their second vowel. This verb has no passive past tense.

epitrep-'ø-o 'I allow' (VS + 201 + 301)

epetrep-'ɜø-a 'I was allowing' (VS + 201 + 311)

epitrep-'ɜe-te 'it is allowed' (VS + 221 + 313)

epetrep-'ɜs-a 'I allowed' (VS + 211 + 311).

Type 11

In the following verbs, the stem form that occurs before 211 + 310 varies freely with a different stem form before 211 + 320:

afi-'ɜs-a 'I let' (VS + 211 + 311)

θa afi-'s-is 'you will let' (VS + 211 + 302)

but afi-'ɜs-e ~ a-'ɜs-e 'let!' (VS + 211 + 321).

The allomorph afi- may vary freely with a- before 211 + 305:

afi-'ɜs-ete ~ afi-'ɜs-te ~ a-'ɜs-ete ~ a-'ɜs-te 'let!' (VS + 211 + 305).

B. Class I-B

Stems belonging to class I-B have been divided into ten types as follows.

Type 1

a) The stem has only one form occurring before all

four suffixes of class 200. Example: apoθarin-'Ø-o 'I discourage' (VS + 201 + 301), apoθarin-'3Ø-a 'I discouraged' (VS + 211 + 311), apoθarin-'3o-me 'I am discouraged' (VS + 221 + 301), apoθarin-'3θik--a 'I was discouraged' (VS + 212 + 311).

The verbs of this type are simply listed, since the stem of these verbs have only one form: akslzo 'I am worthy', apoθarino 'I discourage', δieθino 'I direct', efkolino 'I facilitate', elpizo 'I hope', kano 'I make', perimeno 'I wait', prepi 'I must'.

b) The stem has one form before suffixes 201, 211, and 221, and another freely varying form before suffix 212 in two verbs:

apomakrin-'Ø-o 'I put at a distance' (VS + 201 + + 301), apomakrin-'3Ø-a 'I put at a distance' (VS + + 211 + 311), apomakrin-'3o-me 'I am being put at a distance' (VS + 211 + 301), apomakrin-'3θik-a ~ apo--makri-'3θik-a 'I was put at a distance' (VS + 212 + 311); molin-'Ø-o 'I infect' (VS + 201 + 301), molin-'3Ø-a 'I infected' (VS + 211 + 311), molin-'3o-me 'I am being infected' (VS + 221 + 301), molin-'3θik-a ~ ~ moli-'3θik-a 'I was infected' (VS + 212 + 311).

Type 3

The stem form occurring before suffix 211 varies freely with a different stem form in the present tense in one verb:[28]

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[28]This variation does not occur in the expanded form ipofero 'I suffer'.

fern-'ø-o ~ fer-'ø-o 'I bring' (VS + 201 + 301)

efern-'3ø-a 'I was bringing' (VS + 201 + 311)

efer-'3ø-a 'I brought' (VS + 211 + 311)

fern-'3o-me ~ fer-'3o-me 'I conduct myself' (VS + + 221 + 301)

fer-'3eik-a 'I conducted myself' (VS + 212 + 311).

Type 4

The stem form occurring in the present tense varies freely in the past with a different stem form occurring only in the past tense in the following four verbs:

1) amfival-'ø-o 'I doubt' (VS + 201 + 301), amfival-'3ø-a ~ amfeval-'3ø-a 'I doubted' (VS + 201/211 + 311)

2) anaval-'ø-o 'I postpone' (VS + 201 + 301)
anaval-'3ø-a ~ aneval-'3ø-a 'I postponed' (VS + 201/211 + 311)
anaval-'3e-te 'it is being postponed' (VS + + 221 + 303)

3) apoval-'ø-o 'I expell' (VS + 201 + 301)
apoval-'3ø-a ~ apeval-'3ø-a 'I expelled' (VS + 201/211 + 311)
apoval-'3e-te 'he is being expelled' (VS + + 221 + 303).

4) epimen-'ø-o 'I insist' (VS + 201 + 301)
epimen-'3ø-a ~ epemen-'3ø-a 'I insisted' (VS + 201/211 + 311).

Type 5

The stem has the same form before suffix 201 and

221 and a different one before suffix 211. The difference is in the last vowel of the stems; therefore, the verbs of this type are grouped according to the difference in vowel alternation. Whenever a stem occurs before suffix 212, it has the same form that occurs before suffix 211. Example: xondren-'Ø-e 'I become fat' (VS + 201 + 301), xondren-'ȝØ-a 'I was becoming fat' (VS + 201 + 311), xondrin-'ȝØ-a 'I became fat' (VS + 201 + 311). The following are the verbs of type 5, according to vowel alternation:

1) e/i: akrivéno 'I make expensive' (akriven, akrivin, —)
farδéno 'I widen' (farδen, farδin, —, —)
févγo 'I leave' (fevγ, fiγ,[29] —, —)
ftoxéno 'I become poor' (ftoxen, ftoxin, —, —)
kondéno 'I shorten' (konden, kondin, —, konden)
makréno 'I lengthen' (makren, makrin, —, makren)
méno 'I stay' (men, min, —, —)
omorféno 'I beautify' (omorfen, omorfin, —, —)
paxéno 'I become fat' (paxen, paxin, —, —)

[29]The allomorph fiγ- alternates freely with fi- before suffix 321 (-e).

plėno 'I wash' (plen, plin, pli, plen)

plutėno 'I become rich' (pluten, plutin, —, —)

varėno 'I become heavy' (varen, varin, —, —)

xondrėno 'I become fat' (xondren, xondrin, —, —)

2) In addition to the vowel alternation e/i, the stems of the following three verbs loose their final consonant before suffix 211:

parageln-'Ø-o 'I order' (VS + 201 + 301)

paragil-'ʒØ-a 'I ordered' (VS + 211 + 311)

sern-'Ø-o 'I drag' (VS + 201 + 301)

esir-'ʒØ-a 'I dragged' (VS + 211 + 311)

sern-'ʒo-me 'I am dragging myself' (VS + 221 + + 301)

sir-'ʒoik-a 'I dragged myself' (VS + 212 + 311)

steln-'Ø-o 'I send' (VS + 201 + 301)

estil-'ʒØ-a 'I sent' (VS + 211 + 311)

steln-'ʒo-me 'I am sent' (VS + 221 + 301)

3) e/a: anasėno 'I breathe' (anasen, anasan, —, —)

ɣlikėno 'I sweeten' (ɣliken, ɣlikan, ɣlika, ɣlika)

zestėno 'I warm' (zesten, zesta, zesta, zesten)

kserėno 'I dry' (kseren, kseran, ksera, kseren)

kutsėno 'I limp' (kutsen, kutsan, kutsa, —)

mikrėno 'I make small' (mikren, mikran, —, —)

peθėno 'I die' (peθen, peθan, —, peθen)

pikrėno 'I make bitter' (pikren, pikran, pikra, pikren)

trelėno 'I madden' (trelen, trelan, trela, trelen)

4) In addition to the vowel alternation e/a, the stems of the following two verbs lose their final consonant before suffix 211.

ɤðern-'Ø-o 'I skin' (VS + 201 + 301)

eɤðar-'ʒØ-a 'I skinned' (VS + 211 + 311)

pseln-'Ø-o 'I chant' (VS + 201 + 301)

epsal-'ʒØ-a 'I chanted' (VS + 211 + 311)

Type 6

In the following verbs, one stem form occurs before suffixes 201 and 221, another before suffix 211, and still another before suffix 212.

ðern-'Ø-o 'I hit' (VS + 201 + 301)

eðir-'ʒØ-a 'I hit' (VS + 211 + 311)

ðern-'ʒo-me 'I am being hit' (VS + 221 + 301)

ðar-'ʒθik-a 'I was hit' (VS + 212 + 311)

spern-'Ø-o 'I sow' (VS + 201 + 301)

espir-'ʒØ-a 'I sowed' (VS + 211 + 311)

spar-'ʒθik-a 'I was sowed' (VS + 212 + 311).

Type 7

In the following verb the stem has one form begin-

-ning with /i/ before 201 + 310 and 211 + 310, and another form not beginning with /i/ elsewhere:

kser-'Ø-o 'I know' (VS + 201 + 301)

ikser-'3Ø-a 'I knew' (VS + 201/211 + 311).

Type 8

In one verb, the stem form that occurs before suffixes 201, 212, and 221 alternates with a different form that occurs before suffix 212.

vrex-'Ø-o 'I wet'

evrek-'3s-a 'I wet' (VS + 211 + 311)

vrex-'3o-me 'I am being wet' (VS + 221 + 311)

vrax-'3ik-a ~ vrex-'3tik-a 'I was wet' (VS + 212 + + 311).

Type 9

A stem ending in /z/ before suffix 201 has an allostem ending in /l/ before suffix 211 in two verbs:

vaz-'Ø-o 'I put' (VS + 201 + 301)

eval-'3Ø-a 'I put' (VS + 211 + 311)

vyaz-'Ø-o 'I take off' (VS + 201 + 301)

evyal-'3Ø-a 'I took off' (VS + 211 + 311)

Type 10

In a number of verbs, a stem ending in /en/ or /ern/ before suffix 201 has an allostem ending without /en/ or /ern/ before suffix 211. Example: tixen-'Ø-i 'it happens' (VS + 201 + 301), tixen-'3Ø-e 'it was happening' (VS + 201 + 311), etix-'3Ø-e 'it happened' (VS + 211 + 311). The verbs of this type are the following:

angazérno 'I reserve' (angazern, angazar, —, —)

barkérno 'I embark' (barkern, barkar, —,—)

bloférno 'I bluff' (blofern, blofar, — —)

ɣustérno 'I like' (ɣustern, ɣustar, —, —)

fumérno 'I smoke' (fumern, fumar, —, —)

kumandérno 'I command' (kumandern, kumandar, —, —)

lavéno 'I receive' (laven, lav, —, —)

lustrérno 'I shine' (lustrern, lustrar, — —)

maθéno 'I learn' (maθen, maθ, —, maθ)

paθéno 'I suffer' (paθen, paθ, —, —)

parkérno 'I park' (parkern, parkar, —, —)

pasérno 'I pass' (pasern, pasar, —, —)

tixéno 'it happens' (tixen, tix, —, —)

trakérno 'I collide' (trakern, trakar, —, —)

tratérno 'I treat' (tratern, tratar, —, —)

trobérno 'I pump' (trobern, trobar, —, —)

voltérno 'I cruise' (voltern, voltar, —, —)

Every stem ending in /ern/ has already been listed in class I-A, type 2, as a stem ending in /r/; for example, barkérno 'I embark' appears in class I-A, type 2, as barkáro. This dual listing can best be justified on the basis of the following argument. The perfective past of barkáro is barkari-'3s-a and that of the verb barkérno is barkar-'3ø-a. Now, either the stems barkari-, barkar- are different and therefore the suffixes -'3s-, -'3ø- are the same, or the stems are the same and therefore the suffixes are different. Since suffixes -'3s- and -'3ø- have already

been assigned as allomorphs of the same active perfective morpheme {-s-} (each allomorph characterizing a particular subclass of class 1), it follows that the stems barkari-, barkar- must be considered different. This situation is similar to brothers and brethren in English, where the decision to consider -s and -n allomorphs of the plural morpheme {-s} is followed by the decision that brother- and brethre- are different stems, despite the similarity in meaning.

C. Irregular Class I Stems

The following is a list of class 1 verbs, the stem variants of which cannot be described in any simple manner. In listing the allostems, the abbreviations given in Table 3 are used. Allostems beginning with /e/ are again not listed. An asterisk before a verb indicates that the stem variant never begins with /e/ before 211 + 3210 and sometimes before 201 + 310. The stem forms that are not listed do not occur.

anevėno 'I climb'
AIN = aneven
AIP = aneven
APP = anevik
APF = anev
AII = aneven
AIP = anev

*bėno 'I enter'
AIN = ben
AIP = ben

	APP = bik	
	APF = b	
	AIT = ben	
	API = emb∼be	
*ẹ́xo 'I have'	AIN = ex	
	AIP = ix	
	APP = ix	
	AII = ex	
*θẹ́lo 'I want'	AIN = θel	
	AIP = iθel	
	APP = iθel	
katevẹ́no 'I go down'	AIN = kateven	
	AIP = kateven	
	APP = katevik	
	APF = katev	
	AII = kateven	
	API = katev	
kẹ́o 'I burn'	AIN = ke	PIN = ke
	AIP = ke ∼ keɣ	PIP = ke
	APP = kap	PPP = ka
	APF = kap	PPF = ka
	AII = ke ∼ keɣ	PPI = kap
	API = kap	
*lẹ́o 'I say'	AIN = le	PIN = leɣ
	AIP = le ∼ leɣ	PIP = leɣ
	APP = ip	
	APF = p	
	AII = leɣ	

*lẻo 'I say'	API = pe	
*pẻrno 'I take'	AIN = pern	PIN = pern
	AIP = pern	PPP = par
	APP = pir	PPF = par
	APF = par	
	AII = pern	
	API = par	
*piγẻno 'I go'	AIN = piγen ~ pa	
	AIP = piγen	
	APP = piγ	
	APF = pa	
	AII = piγen	
	API = am ~ ad (in sg.)	
*pĩno 'I drink'	AIN = pin	PIN = pin
	AIP = pin	
	APP = ipj	
	APF = pj	
	AII = pin	
	API = pj	
simvẻni 'it happens'	AIN = simven	
	AIP = sineven	
	APP = sinevik	
	APF = simv	
sopẻno 'I quiet'	AIN = sopen	
	AIP = sopen	
	APP = sopa	
	APF = sopa	
	AIP = sopen	

sopéno 'I quiet'	API = sop ~ sopa	
tróo 'I eat'	AIN = tro	PIN = troɣ
	AIP = tro ~ troɣ	PIP = troɣ
	APP = faɣ	PPP = faɣo
	APF = faɣ	PPF = faɣo
	AII = tro	PPI = faɣo
	API = fa	
*vɣéno 'I go out'	AIN = vɣen	
	AIP = vɣen	
	APP = vɣik	
	APF = vɣ	
	AII = vɣen	
	API = evɣ ~ vɣe	
*vlépo 'I see'	AIN = vlep	PIN = vlep
	AIP = vlep	PIP = vlep
	APP = iδ	
	APF = δ	
	AII = vlep	
	API = δe	
*vrisko 'I find'	AIN = vrisk	PIN = vrisk
	AIP = vrisk	PIP = vrisk
	APP = vrik	PPP = vre
	APF = vr	PPF = vre
	AII = vrisk	
	API = vre	

II. Class II

With the exception of eleven verbs, the allostems of

the class II verbs are determined by class membership; i.e., allostems of class II verbs end in a consonant before suffixes 201 and 221, in either i or e before suffix 211, and the same vowel before suffix 212, or in a before suffix 211, and as before suffix 212.

The eleven exceptions are unlike the rest of class II in that before suffix 211, the allostem ends in ak or ik, before suffix 212 the allostem (if it occurs) ends in ax or ix, and before any other member of suffix class 200, the allostem ends like any other allostem of a verb of class II; for example, pet-Ø'-o 'I throw' (VS + 201 + 301), pet-ús-a 'I was throwing' (VS + 201 + 311), petak-'ʒs-a 'I threw' (VS + + 211 + 311), pet-jé-me 'I am being thrown' (VS + + 221 + 301), petax-'ʒtik-a 'I was thrown' (VS + 212 + + 311).

The eleven verbs are grouped into one type with two divisions based on the stem vowel. Two allostems are listed: the first occurs before suffix 211 and the second, before suffix 212. A dash indicates that the allostem does not occur.

1) ik/ix:

fisó 'I blow' (fisik, —); zulú 'I squeeze' (zulik, —); piðú 'I jump' (piðik, —); rufú 'I sip' (rufik, —); skundú 'I push' (skundik, —); travú (travik, travix); vastú 'I hold' (vastik, vastix);

vutó 'I dip' (vutik, vutix ~ vuti); vrondó 'I knock' (vrondik ~ vrondi, —).

2) ak/ax:

petó 'I throw' (petak, petax); filáo 'I watch' (filak, filax) [The stem of this verb has an allostem filay- before suffix 221.]

III. Class III

The majority of verbs belonging to this class have stems with one form before suffix 221 and another before 212. The allostems occurring before suffix 212, however, are phonologically conditioned and therefore there is no need to list such forms. The remaining verbs belonging to this class have been divided into two types as follows:

Type 1

In the following verb, the stem has only one form occurring before the different subclasses of suffix class 200: estánome 'I feel'.

Type 2

In a number of verbs, the stem has one form occurring before suffix 212 and a different form occurring before suffix 221. Example: drep-'ʒo-me 'I am shy' (VS + 221 + ʒ01), drap-'ʒik-a 'I was ashamed' (VS + 212 + ʒ11), θa drap-ø'-o 'I shall be ashamed' (VS + 212 + ʒ01). The first allostem that appears immediately after the first parenthesis occurs before suffix 221, the second before suffix

212. Type 2 verbs of class III are the following:

arnjéme 'I refuse' (arn, arni)

éfxome 'I wish' (efx, efxi)

fovúme 'I fear' (fov, fovi)

θimúme 'I remember ' (θim, θimi)

kimúme 'I sleep' (kim, kimi)

lipúme 'I regret' (lip, lipi)

prosέfxome 'I pray' (prosefx, prosefxi)

sinenoúme 'I communicate' (sineno, sinenoi)

stavrokopjéme 'I cross myself' (stavrokop, stavrokopi)

xazmurjéme 'I yawn' (xazmur, xazmuri)

katarjéme 'I curse' (katar, kataras)

sévome 'I respect' (sev, sevas)

ipósxome 'I promise' (ipos, iposxe)

paraponjéme 'I complain' (parapon, parapone)

varjéme 'I am lazy' (var, vare)

drépome 'I am shy, embarassed' (drep, drap)

fénome 'I appear' (fen, fan)

xérome 'I am glad' (xer, xar)

sixénome 'I dislike' (sixen, sixa)

stékome 'I stand' (stek, sta)

IV. Class IV

The allostems of the five verbs belonging to this class can best be described by a list. The arrangement of the allostems is the same as that made for irregular class I verbs.

kitázo 'I look' AIN = kitaz∼kit PIN = kitaz

kitȧzo 'I look'	AIP = kitaz ~ kit	PIP = kitaz
	APP = kitak	PPP = kitax
	APF = kitak	PPF = kitax
	AII = kitaz ~ kit	PPI = kitak
	API = kitak	
maδȧzo 'I pluck'	AIN = maδiz ~ maδ	PIN = maδiz
	AIP = δiz ~ maδ	PIP = maδiz
	APP = maδi	PPP = maδis
	APF = maδi	PPF = maδis
	AII = maδiz ~ maδ	
	AIP = maδi	
skȧzo 'I burst'	AIN = skaz ~ sk	
	AIP = skaz	
	APP = ska	
	APF = ska	
	API = ska	
spȧzo 'I break'	AIN = spaz ~ sp	PIN = spaz
	AIP = spaz ~ sp	PIP = spaz
	APP = spa	PPP = spas
	APF = spa	PPF = spas
	AII = spaz ~ sp	PPI = spa
	API = spa	

V. Class V

The verbs belonging to this class are γȉnome 'I become', ἐrχome 'I come', and kȁθome 'I sit'.

The stem of γȉnome has one form (eγin-) which occurs only before 211 + 310, and a second form (γin-)

which occurs elsewhere. The allomorph eɣin- is phonologically conditioned--it occurs only before margins consisting of a single vowel--and varies freely with the allostem ɣin-. Examples: ɣin-'ʒo-me 'I become' (VS + 221 + 301), ɣin-'ʒo-muna 'I was becoming' (VS + 221 + 311), ɣin-'ʒik-a ~ eɣin-'ʒØ-a 'I became' (VS + 212 + 311) ~ (VS + 211 + 311), ɣin-'ʒik-ame ~ ~ ɣin-'ʒØ-ame 'we became' (VS + 212 + 314) ~ (VS + + 211 + 314).

The allostems of kaθome can best be described by a list:

kaθome 'I sit'

PIN = kaθ

PIP = kaθ

APP = kaθi ~ kat ~ ekat[30]

APF = kaθi ~ kat

API = kaθi ~ kat

The allostems of érxome can best be described by a list:

érxome 'I come'

PIN = erx

PIP = erx

APP = irθ

APF = rθ

API = el

5.40: The verb 'to be'. The preceding description of the verb construction in Modern Greek does not apply to

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[30]The allostem ekat- occurs only before 211 + 310 and is phonologically conditioned: it occurs only before margins containing a single vowel.

the verb ĺme 'I am', for the morphology of this verb is unique, as can be seen from its paradigm:

Active Non-past Tense	Active Past Tense
ĺme	ĺmuna
ĺse	ĺsuna
ĺne	ĺtane
ĺmaste	ĺmaste
ĺste	ĺsaste
ĺne	ĺtane

Therefore, the verb 'to be' must be considered a separate class, class VI, with the following morphemic segmentation:[31]

a) base: /i/ 'existence'

b) Active imperfective suffix: 201 (-'3Ø-)

c) Tense suffixes:

1) Non-past Tense

Sg	1	-me	Pl	1	-maste
	2	-se		2	-ste
	3	-ne		3	-ne

2) Past Tense

Sg	1	-muna	Pl	1	-maste
	2	-suna		2	-saste
	3	-tane		3	-tane

This segmentation increases the allomorphic inventory of suffix subclasses 300 and 310 by three allomorphs (-ne 'third person singular, non-past tense', -ne 'third person plural,

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[31]Any segmentation other than that given is considered impossible, since it would result in a contradiction of the principle of non-contrastive distribution.

non-past tense', -tane 'third person plural, past tense'), and characterizes the verb 'to be' as the only verb in this language in which the allomorphs -me, -se, -te, etc. can be added to suffix 201.

CHAPTER 6

CONCLUSIONS

6.10: Phonology.

1. a) There are five vowels in Modern Greek: /i,u,e,o,a/.

   b) The high vowels /i/ and /u/ in unstressed position and in voiceless surroundings may have voiceless allophones, [I] and [U], which are in free variation with their voiced counterparts.

2. a) There are nineteen consonant phonemes in Modern Greek: /p,t,k,b,d,g,f,θ,x,v,ð,ɣ,s,z,l,r,m,n,j/.

   b) Every palatalized non-vocoid is interpreted as a consonant plus a palatalizing phoneme /j/.

   c) The affricate clusters [ts] and [dz] have been phonemically interpreted as a sequence of two consonants: /ts/ and /dz/.

3. There is one stress phoneme in Modern Greek: /'/.

6.20: Verb Morphology.

1. The verb in Modern Greek is composed of a stem and a margin. The stem consists of a base (or less frequently, of two bases) or a base plus affixes (a prefix and/or a stem formative suffix). The margin

consists of two groups of obligatory suffixes called (1) voice-and-aspect markers, and (2) tense-or-mood markers, which also indicate person and number.

2. There are two aspects--perfective and imperfective--, two morphologically marked tenses--non-past and past--, two numbers--singular and plural--, and three persons--first, second, and third--in Modern Greek.

3. The verbs in Modern Greek have been divided into six classes and twenty-four types. Class refers to a grouping of stems on the basis of similar selection of suffix allomorphs, while type refers to a grouping of stems on the basis of similar allomorphic alternation.

4. Stress is considered an integral component of the allomorphs of the voice-and-aspect suffixes.

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