PHONEME AND MORPHEME IN KABARDIAN

(EASTERN ADYGHE)

by

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INTRODUCTION

The Kabardian language constitutes the Eastern branch of the Circassian or Adyghe language-group, the Western subdivision of which is known as Kyakh.[1] These two languages are closely related; their respective speakers soon learn to communicate with each other without much difficulty. All Circassians call themselves *ādˈəγ'a*[2] and their language *ādəγ'ˈabza*; the name "Circassian" or "Cherkes" is applied to them only by foreigners.[3] Up to the time of the Russian conquest of their territory (1864) the Circassian tribes occupied the N.-W. part of the Great Caucasus from the Taman' peninsula in the West to the town of Mozdok in the East,

[1] The two languages are also referred to as Upper and Lower Circassian respectively. In contemporary Russian terminology they are called *kabardinskii* or *kabardino-cherkesskii* and *adygeiskii iazyk*.

[2] For the transcription cf. Chapter I. The name "Adiga" is first mentioned by the Genoese Interiano, who visited the Circassians in the late 15th century (cf. Ramusio 1574:196).

[3] Thus in Turkish, Russian, and all W. European languages, also in a number of Caucasian languages, but not in those of the closest neighbors of the Circassians. In older Russian sources the name *cherkesianin* refers to Caucasian mountaineers and Cossacks indiscriminately. The origin of the name is uncertain; it is brought in connection with the Κερκέται known to the Greeks in the N.W. Caucasus (5th cent. B.C. ff.), but this identification is doubtful. The Abkhaz call the Circassians *ˈa-zx°-wa* and their country *zəx°-nˈə* (where *a-* is the definite article, and *-wa* and *-nə* are the suffixes 'people' and 'country'); the element *-z(ə)x°-* may be a mutilation of Circ. *c'əx°* 'human being', a root also recognizable in the name of the N.W. Caucasian Ζυγοί or Ζιχχοί known to the Greeks (1st cent. A.D. ff.), cf. also the name *žik-n-i* for the Circassians in the Georgian chronicle (*-n-* suff. 'plural', *-i* nominative ending). In the Kievan chronicle the Circassians are known as *kasogy*, and the Ossetes still call them *kæsæg*; this name probably derives from Turkic *qazaq* 'free man', 'vagabond', from which also Russ. *kazak* 'Cossack'. The name of the Kabardians (*q'abardˈaj*) is first mentioned by Barbaro, who visited the Caucasus in 1436, in the form "Cheuerthei" (cf. Ramusio 1574:94); its etymology is uncertain (cf. Lavrov 1956:19 ff.).

the divide between the basins of the Kuban' and of the Malka-Terek forming the approximate borderline between the Western Circassians and the Kabardians.[4] The latter occupy the area of the rivers Malka, Baksan and Cherek ("Great Kabarda") and a strip of land E. of the Terek ("Little Kabarda"). Toponymical data show that this territory once had an Alanic population (surviving today in the Ossetes); the Kabardians arrived in their present habitat from the original Circassian homeland farther to the W., probably in the 13th century, after the Alans had been weakened by the Tatar invasions.[5] The Circassian territory bordered in the S. on the Great Caucasian Chain (only in the extreme W. it extended beyond the mountains to the Black Sea coast); the neighboring peoples in the S. were, from W. to E., the related Ubykh and Abkhaz, and the Kartvelian Svan. In the SE, Kabardian territory bordered (and still borders) on that of the Iranian Ossetes, in the E. on that of the N.-E. Caucasian Ingush. The whole area in the N. was Cossack territory. Within these boundaries, enclaves were formed on the Upper Kuban', Zelenchuk and Urup rivers by the Abazinians (closely related to the Abkhaz) and the Turkic Karachay and Noghay, and at the sources of the rivers Baksan, Chegem and Cherek by the Turkic Balkar.

Culturally, the Kabardians differed from their Western relatives in that they formed a well-developed feudal community, whereas the W. Circassians preserved tribal divisions and a patriarchal structure of society.[6] This state of affairs is reflected in the languages: W. Circassian shows more marked dialect-divisions than Kabardian, which is on the whole comparatively homogeneous.

Due to their geographical location near the Darial pass and to the dominating political role they played in the Central Caucasus, the Kabardians were the first of the Circassians to come under Russian control (beginning 19th cent.). A number of Kabardians

[4] Only the dialect of the Besleney tribe, located W. of the divide in the area of the Middle Urup and Laba rivers, is closer to Kabardian than to W. Circassian (cf. Yakovlev 1930).

[5] Cf. Lavrov 1956.

[6] For details on Circassian history and culture cf. Dubrovin 1870, Lopatinskii 1891[a], Malinin 1905, Namitok 1939, Lavrov 1956, 1957, Smirnov 1957.

left their homeland at this time and settled between the Upper Kuban' and Zelenchuk rivers (the so-called "Fugitive Kabardians"). When in 1864 the Russians completed their conquest of the N.-W. Caucasus, there followed a mass-emigration of the Moslem indigenous population to the Ottoman Empire. This emigration involved also a number of Kabardians, mostly of the "Fugitive" group. The W. Circassians who remained were moved from the mountains to the valley of the Kuban'. Since then, the ethnic composition of the N.-W. Caucasus has changed further by an influx of Russians and Ukrainians and also as a result of the deportations of World War II, which did not affect the Circassians themselves but removed their Balkar, Karachay and Ingush neighbors. The gradual return of these peoples to their homeland has been announced in the USSR.

At present, Kabardian is spoken by ca. 182,000 persons in the N. Caucasus: 164,000 in the Kabardino-Balkar Autonomous Republic and 18,000 in the Karachaevo-Cherkes Autonomous Province. The speakers of W. Circassian in the USSR number ca. 88,000; they are chiefly concentrated in the Adyghe Autonomous Province. Both Kabardian and W. Circassian have the status of literary language in the USSR. The Turkish census of 1945 lists 66,691 speakers of Circassian; it is not known how many of these are Kabardians. There are smaller groups of Circassians in Syria, Jordan and Iraq.[7]

The Circassian languages[8] form together with Ubykh[9] and Abkhaz[10] the N.-W. group of the Caucasian languages; this group

[7] In the USSR the Arabic script was used for Kabardian until 1923; from 1923–1928 and from 1928–1937 two different adaptations of the Latin alphabet were in use; in 1937 the Cyrillic script was introduced (see Appendix). In the Near East various alphabets have been used; recently an attempt was made to establish an All-Circassian alphabet (cf. Csaban 1952), but this alphabet is better suited to Kabardian than to W. Circassian, several phonemic distinctions of which it fails to express.

[8] Cf. Deeters 1934, Dumézil and Namitok 1939[b], Yakovlev and Ashkhamaf 1941, Bouda, 1941. For literature on Kabardian see below.

[9] Cf. Dirr 1928[b], Dumézil 1931, von Mészáros 1934.

[10] Cf. Uslar 1888, Deeters 1931, Bouda 1940, Lomtatidze 1944, 1954, Genko 1955.

is also referred to as "Pontic" or "Abasgo-Kerketian".[11] Circassian, Ubykh and Abkhaz are mutually unintelligible but resemble each other fairly closely in their overall phonological, morphological and syntactic structure, though the phonetic character of the languages does not facilitate the establishing of sound-correspondences.[12] Besides the N.-W. group, the Caucasian languages comprise a N.-E. (also called "Caspian" or "Checheno-Lezghian") and a S. (or Kartvelian) group. The relationships between these three groups of languages, and even those between the various subdivisions of the N.-E. group, are by no means clear[13]; in any case, there are closer links between the languages of the N.-W. and the N.-E. group than between either and S. Caucasian[14]. Suggested genetic links between the Caucasian languages and other languages and language-families (Basque, Semito-Hamitic, Burushaski, Tibetan, Paleoasiatic, ancient languages of Asia Minor and Mesopotamia, etc.) are open to serious doubt.[15]

Apart from word- and phrase-lists in older accounts of travels,[16] the first description of Kabardian was published by Lopatinskii in the form of a dictionary preceded by a short grammar (1891; 1896). Subsequently, a number of texts were published by Lopatinskii and others.[17] For thirty years these publications were the

[11] Cf. Dumézil 1932, Deeters 1935, Kuipers 1955.

[12] Cf. § 41, fn. 9.

[13] General works on Caucasian: (books) Erckert 1895, Dirr 1928[a]; (articles) Bleichsteiner 1937, Dumézil 1952. For the present state of Caucasian comparative philology cf. Polák 1950, Bokarev 1954. The views of Dzhavakhishvili (1937) and Chikobava (1942), whose works were not available to me, I know only from discussions by Vogt (1942) and Deeters (1955). Especially Deeters's works are characterized by a critical restraint such as is rarely found in Caucasian comparative philology.

[14] Cf. Trubetzkoy 1922[b], 1930, Dumézil 1933.

[15] *Semitic*: Marr 1908; *Basque*: Uhlenbeck 1942, Lafon 1947, 1948, Bouda 1948, 1949, 1952; *Burushaski*: Bleichsteiner 1930, Deeters 1955:33; *Tibetan*: Bouda 1950; *others*: Marr 1920, Braun 1922, Yakovlev 1947.

[16] The oldest Kabardian word-list is given by Witsen (1705:526–8). For other early material cf. Turchaninov and Tsagov 1940:10 ff., Turchaninov 1940. Some older texts by Atazhukin and Shardanov were inaccessible to me (see Bibliography).

[17] Cf. *Sbornik materialov, etc.*, vols. XII (1891), XXI (1896), XXV (1898), XXVI (1899), XVII (1900), XXIX (1901), XLIV (1913).

only printed sources of information on the Kabardian language. The progress made in more recent years in the study of Kabardian is largely due to the brilliant work of N. F. Yakovlev, who was the first to give a detailed phonetic description of the language and to carry out a phonemic analysis (1923; 1924). Yakovlev published further an important lexical study (1927) and two grammars (1938; 1948). Mention must also be made of his W. Circassian grammar (1941), which contains many theoretical points and etymologies concerning the Circassian languages in general. A short Russian-Kabardian dictionary was published in the 'twenties by Khuranov; extensive lexical material is now available thanks to the publication of a Russian-Kabardian dictionary (Kardanov and Bichoev 1955) and of a Kabardian-Russian dictionary (Kardanov 1957), containing 30,000 and 20,000 words respectively. Some material on Kabardian dialects was published by Turchaninov (1946) and by Balkarov (1952). Turchaninov also published some historical information based on 19th cent. manuscripts in the possession of Russian libraries (1949). In the USSR a number of primers and school-grammars were published.[18] In English there exists only a brief phonetic sketch by Catford (1942). Other publications on Kabardian are included in the Bibliography.

The N.-W. Caucasian languages are unique among the languages of the world by virtue of their phonological structure, which is characterized by an extreme abundance of consonants[19] (a minimum of 48 in Kabardian, a maximum of 67 in the Bzyb'-dialect of Abkhaz) and, according to Trubetzkoy's analysis, by a "vertical" vowel-system, i.e. a system employing only distinctions of sonority or openness, to the exclusion of distinctions of brightness or front-back localization and rounding.[20] In addition, the Circassian languages have stimulated the interest of linguists by the surprising extent to which their lexical material is analyzable into a small number of short roots, and by the semantic transparency of their

[18] See introductory note to Bibliography.
[19] Some comparative statistical data are given by Milewski (1955).
[20] Cf. Trubetzkoy 1929:39 ff., 1939:87 f.

grammatical morphemes.[21] For these reasons in themselves the Circassian languages are exceptionally interesting from the point of view of general linguistic theory, and one may well agree with Yakovlev that Kabardian is "one of the most remarkable languages that have ever been the object of linguistic investigation".[22]

The present study is an enlarged version of my doctoral dissertation.[23] It aims at defining and characterizing the phonemic and the morphemic units of the Kabardian language. The course of the discussion is determined by these two points. Where necessary, other subjects are broached (structure of the word as a whole, morphophonemics, immediate constituents, case system, etc.), but the treatment of the latter is neither systematic nor complete: only such information is given as is required, in each particular instance, in connection with the main argument. The theory developed here differs both from Trubetzkoy's and from Yakovlev's, though on all controversial points it is in closer agreement with the latter than with the former: it may be regarded as a superstructure based on the foundations laid in Yakovlev's works. It is only natural that in the following pages those points should be emphasized where I differ in opinion from this scholar to whom Circassian linguistics is so much indebted.

The contents of this book are based, in addition, on extensive data obtained from native informants during the years 1949–50 and 1955–57. During the first of these periods my main source of information was Mrs. Lila Chejokoff-Altadoukoff, born at Altadokokhable (aul Kudenetovskoye, near Nal'chik). The contact-language was Russian. My greatest obligations are due to Mrs. Chejokoff for her untiring assistance. During the second period I was usefully assisted by Mr. Waleed Tash from Amman, Jordan, a descendant of the Kuban'- or "Fugitive" Kabardians (see above), who acted as an informant in a course on Field Techniques in Phonetics which I conducted at Columbia University in

[21] Cf. Yakovlev 1927:XXII ff.

[22] 1927:XLIX; cf. also Dirr in *Caucasica* VI, no. 1 (Leipzig, 1930), p. 71.

[23] *A Contribution to the Analysis of the Qabardian Language*. Columbia University, 1951.

the spring of 1957. His dialect differs from that of Mrs. Chejokoff in some morphological details only. It is a pleasure to be able to thank Mr. Tash for his contribution to my knowledge of his language. I also express my gratitude to the many members of the Circassian colony in New York and New Jersey who, on various occasions, have added to my material.[24] I am particularly indebted to Mr. Rashid Dahabsu for extensive information on the Bzhedukh dialect of W. Circassian, which provided a useful perspective in preparing this study on Kabardian.

I wish to express my appreciation to Dr. Tibor Halasi-Kun, who during three years guided my efforts in the field of Turkic philology, and who assisted me both directly and indirectly in identifying Turkic elements in Circassian. I am grateful to Dr. Carl L. Ebeling for discussing the difficult matter of transcription with the publisher, and for many useful suggestions. I thank Mr. Karl Zimmer for a number of corrections and improvements in the style of the manuscript. A special word of thanks is due to Messrs. Schoonderwoerd and Bras of the Mouton composing-room for their patient and painstaking cooperation.

My greatest obligations are also due to the Rockefeller Foundation for enabling me to carry on my work in New York during the years 1948–1951.

[24] In the following, I refer to the two informants mentioned by name as "my main informants", and to Mrs. Chejokoff as "I.C".

FIRST PART

THE PHONEMIC UNITS

I

PHONOLOGY

1. *Phonemes.*

The Kabardian language was one of the first to be subjected to a scientific phonemic analysis. In his *Tablitsy fonetiki kabardinskogo iazyka* (Moscow, 1923) the Russian Caucasiologist N. F. Yakovlev gives an inventory of the Kabardian phonemes. This inventory is here taken as a point of departure. The phonemes are listed in a chart on page 18. Their arrangement, however, differs in several respects from Yakovlev's, and a phoneme *h* has been added in view of a peculiarity of the dialect of my main informants (cf. § 3). The vowels *ə*, *a*, *ā* are written by Yakovlev ə, *e*, *a* respectively, but the notation used here reflects Yakovlev's definition of the vocalic oppositions (cf. § 12).

2. *Phonetic Data I: Voiceless, Voiced and Glottalic Consonants.*

The *voiceless* plosives are in prevocalic position aspirated fortes; they all have here an element of affrication (Yakovlev [1923:35f.] speaks of "affricated homorganic aspiration"). The affrication is minimal in *p* and *t*, the latter being distinct from the full affricate *c*; it is stronger in the phonemes articulated farther back: *k* can have a clearly audible "ich-Laut" following the explosion, and *q* is always a full affricate. In phonetic notation this more or less affricated aspiration is indicated by ˂: $p^{\text{˂}}$, $t^{\text{˂}}$, $k^{\text{˂}}/k^{x}$, q^{x}. At the end of a word the aspiration is less strong and can be altogether absent in *p* and *t*. In preconsonantal position two categories of cases must be distinguished. In the first, the group-initial consonant is similar to the non- or weakly aspirated variants in word-final position. In the second category, involving a limited number of consonant-groups (of the voiceless stops only *p* and *t* are found as initial members)

CONSONANTS

	voiceless plos.	voiceless fric.	voiced plos.	voiced fric.	glottalic plos.	glottalic fric.	nasal	trill
labial	p	f	b	v	p'	f'	m	
dental stop	t		d		t'			
dental		s		z			n	
dental affric.	c		ʒ		c'			
(alveolar)								r
pal.-alveolar		ŝ		ẑ		ŝ'		
alv.-palatal		š		ž				
lateral		ł		l		ł'		
pal.-velar pal.	k'	x'	g'	ɣ'	k''			
pal.-velar lab.	k°	x°	g°		k'°			
uvular plain	q	χ̄		ğ	q'			
uvular lab.	q°	χ̄°		ğ°	q'°			
pharyngal		ḫ		(ḥ)				
laryngal plain			h		ʔ			
laryngal pal.			j (=h')					
laryngal lab.			w (=h°)		ʔ°			

VOWELS

	short	long
high	ə	
low	a	ā

STRESS

ˈ (before a vowel)

the first member is weak both from the point of view of expiration (and hence unaspirated) and from that of muscular tension. Groups of this kind, which involve also consonants other than *p* and *t*, but whose distinction from sequences with "strong" initial members is clearest in the case of the voiceless stops, will be examined more closely in §§ 6–11 and 23. In phonetic notation such "weak" consonants will be written *π*, *τ*, etc. Yakovlev's phonemic notation does not distinguish the two kinds of sequences; in the following chapters a notation which expresses the difference will be developed.

The voiceless fricatives and *c* are usually unaspirated; only in emphatic speech can their explosive moment be accompanied by an audible glottal friction.

The *voiced* consonants are lenes in comparison to the voiceless ones, especially from the point of view of aspiration. In the speech of some Kabardians they are replaced by voiceless lenes (cf. Yakovlev 1923:38f.).

Both the voiceless and the voiced consonants – the latter in spite of being lenes – sound somewhat emphatic in Kabardian, and when occurring alone (i.e. not in groups) they often make the impression of geminates.[1]

As *glottalic* are classed all consonants characterized by closure of the glottis. Complete closure varies with a kind of glottal trill ("Knarrstimme"). In the plosives and fricatives the larynx moves downward during the implosion and adds to the compression of the air by an upward movement during the closure or constriction. The oral and glottal closures are released simultaneously.[2] The consonants *c'*, *k''* and *ŝ'* often have an element of voicing, especially in the middle of a word. This may be due to the fact that during the

[1] Cf. Lopatinskii (1891[c]): *syn* 'pylat'' but *ssyn* 'goret'' (for *sən* 'to flame', 'to burn'; *gu* 'kibitka' but *ggu* 'arba' (for *g°ə* 'cart') and numerous other examples. Also Catford (1942:17) *q'ɒs'sa* 'he arrived' (for *q'as'ā*).

[2] This distinguishes glottalic consonants from groups with *ʔ*; in the latter case the glottal release comes later than that of the preceding consonant, cf. *jəp'ʼāŝ* 'he educated him' versus *jəp'ʔāŝ* 'you (s.) dyed it'. Groups of voiceless *p* followed by *ʔ* are distinct from both *p'* and *p'ʔ* by the expiratory fortis-character and the facultative aspiration of *p*. "Weak" voiceless stops are not found before *ʔ*.

downward movement of the larynx the vocal chords are put into vibration by an air-stream which passes from the subglottal to the supraglottal cavities (cf. Trubetzkoy 1922:279); furthermore, the glottal trill which can replace the complete glottal closure can be voiced. The impression of voicedness in these consonants is strengthened by the fact that they are expiratory lenes. But in *f'* and *l'* the muscular tension is very strong; in the production of the former the lower lip is visibly pressed tightly against the upper teeth, in the latter the constriction varies with complete closure, resulting in an affricate.

3. *Phonetic Data II: Point of Articulation.*

The *labial* plosives and nasal are bilabial, the fricatives labiodental. The *dental* consonants are all articulated with the front of the dorsum; the tongue-tip is pressed against the back of the lower front teeth.[3] The *alveolopalatals* are likewise dorsal and are produced with a slight velarization or pharyngalization. Acoustically they fall between the dental and palatoalveolar fricatives. The *palatoalveolars* are characterized by a slight, wide rounding of the lips; their timbre lies between that of English *sh* and Russian *š*. The *laterals* are unilateral. They are produced by moving the tongue-mass upward; the edges of the tongue form a complete closure against the back of the upper teeth except for one narrow opening near the small molars, on the right side with all my informants. These sounds have a strongly palatal timbre (phonetically *l'*, *l'*, *l'*'); they never have the character of liquids[4] but are always

[3] For the distinction between dental affricate and cluster cf. *ʒāŝ* 'it has been thrown' versus *dzāŝ* 'we have filtered it' (about milk). In the latter word the dental friction is of a markedly longer duration. Catford (1942:16) regards the affricates *c*, *ʒ* as sequences *ts*, *dz* and interprets the affricate *c'* as the glottalic correlate of *s*, *z*. The above examples do not refute this view, as in the sequences *ts*, *dz* (as opposed to *c*, *ʒ*) there is always a morpheme-border between the two consonants, so that the distinction could be described in terms of juncture. There are other reasons, however, for regarding *c* and *ʒ* as unit phonemes, as will become clear in the following, and *c'* cannot be considered to be the glottalic correlate of *s* and *z*, cf. §10, fn. 5.

[4] Only Kabardians who have been strongly subjected to the influence of some other language (Russian, Arabic, Turkish), to the extent of being more con-

fricatives, except that the glottalic lateral often is an affricate. The palatalized *palatovelar* plosives vary in the speech of many Kabardians from prevelar stops to palatoalveolar affricates (phonet. *k'ʿ/č', g'/ǯ', kʾ'/čʾ'*); other individuals limit themselves to either one of these two series.[5] The corresponding fricatives have the same slight lip-rounding as is found in the palatoalveolars. The labialized palatovelars are articulated somewhat farther back and do not have the advanced variants that are characteristic of their palatalized correlates. The term "labialization" refers to strong, narrow lip-rounding (as distinct from the slight, wide rounding in the *š*- and *x'*-series); in *x°* there is sometimes a clearly audible bilabial friction. In all the labialized consonants the moment of labialization extends from the implosion to the release, c.q. in both directions beyond these limits, affecting neigboring vowels (cf. § 4). Of the *uvulars*, the voiceless plosives were already mentioned as strong affricates; the voiced fricatives *ǧ* and *ǧ°* have a rather wide aperture and vary with weakly rolled uvular trills, and occasionally they even have the character of glides. The pharyngal *ḫ* is comparable to Arabic ح; its voiced correlate is found only in a few Arabic loanwords and is replaced in the speech of most Kabardians by *ḫ*. Of the *laryngals*, *h* is not listed as a separate phoneme by Yakovlev. It must be included in the list of phonemes for those dialects where the plural-suffix is pronounced *-ha* (the other dialects having *-x'e*, phonemically *-x'a*) and where there are, as a result, such oppositions as *g'enæd'ˈāx'er*, phonemically *g'anad'ˈāx'ar* 'the beautiful shirt' versus *g'enæd'ˈāhar*, phonemically *g'anad'ˈāhar* 'the sewn shirts'.[6] The non-glottalic laryngals are usually voiced, except that *h* is voiceless

versant in it than in Kabardian, occasionally pronounce voiced *l* as a pure liquid, but this sound is foreign to the language.

[5] The pronunciation *č'*, etc., is now quite common in Kabardian as spoken in the USSR, where it is the orthoepic norm. It is a recent innovation; early 19th century records of the language for the most part have no instances of palatoalveolar affricates at all, some have them occasionally side by side with palatovelar stops (cf. Turchaninov 1949:51f.).

[6] According to Yakovlev (1948:344) the pronunciation *-ha* is a peculiarity of the speakers of Little Kabarda. It must be more widespread, however, as several of my informants who come from other regions use it. Both my main informants pronounce *-ha*. The West Circassian dialects all have *-x'a*.

immediately after voiceless and glottalic consonants, cf. *d'ahar* 'nuts', *f'əzhar* 'women', *c'ə'x°har* 'people', *ŝ'ə't'har* 'ditches', phonetically *d'æhar*, *f'əzhar*, but *c'ü'x°ʿar*, *ŝ'ə't'ʿar*, with voiceless ʿ. The phonemes *w* and *j* are facultatively accompanied by a slight glottal friction, especially in word-initial position. The *nasals* are voiced. The *trill r* stands apart as the only phoneme that is articulated with the tip of the tongue. It often consists of but a single tap. The trill is usually voiced but can be voiceless at the end of a word and before voiceless and glottalic consonants. It is not found at the beginning of a word.

4. *Phonetic Data III: Vowels.*

The articulation of the short vowels *ə* and *a* in terms of front-back, rounded-unrounded, and to a certain extent also in terms of high-low, depends on the surrounding consonants. Front variants (*i*, *e*) are found after laterals, palatalized palatovelars and *j*, back variants (*y*, *a*) after plain uvulars, pharyngals and *h*, *ʔ* (after the latter two consonants central vowels are also heard), back rounded variants (*u*, *o*) after labialized palatovelars, uvulars and laryngals, central variants (*ə*, *æ*) after other consonants. Before labialized consonants halfrounded vowels are found, central (*ü*, *ö*) or back (*ʊ*, *ω*) depending on what precedes, provided the preceding consonant is not labialized. There is, furthermore, a considerable amount of free variation due to the fact that the position of the articulating organs required by a following consonant can to a greater or lesser degree affect a preceding vowel; also, the maximum of speech-energy can coincide with an earlier or later part of the vocalic articulation which, between consonants of different types (e.g. rounded and unrounded, palatoalveolar and uvular) or between consonant and pause, is often polyphthongal.[7] Before the pharyngal *ḥ* there is no distinction be-

[7] This is the cause of the sometimes rather great discrepancies between the notations of different authors (and sometimes of the same author). For example, the unstressed word-final short low vowel-phoneme *a* after the consonant *k°* is in Yakovlev's phonetic notation (1923) written *ŏ^ea*, i.e. "lower mid prevelar rounded vowel, gradually losing its roundedness and changing to a lower timbre". Catford (1952) writes the same vowel in the same position *ɒ*, i.e.

tween a higher and a lower vowel. We shall write *ə* in these cases; the timbres heard vary widely, cf. *k'ə̯h* 'long', phonetically *k'iə̯h*, *k'æə̯h*, *k'iaə̯h*; after a labialized consonant: *q°ə̯h* 'boat', phonet. *q$^{x\circ}$uə̯h*, *q$^{x\circ}$oə̯h*, *q$^{x\circ}$oaə̯h*.

The phonetic symbols used for the variants of the short vowels are here summed up:

Phoneme	Front	Central		Back		
	(plain)	plain	half-rounded	plain	half-rounded	rounded
Higher	*i*	*ə*	*ü*	*y*	*ʊ*	*u*
Lower	*e*	*æ*	*ö*	*a*	*ω*	*o*

These symbols must be understood as each covering a wide range of sub-variants. For example, *i* stands for a sound close to cardinal *i* in *ji* 'eight', for a sound close to English *i* in "kit" in the word *x'i* 'sea', etc. In fact, the short vowels, which are found only after consonants, have different variants after practically every series defined as to point of articulation and presence or absence of labialization or palatalization, and the number of variants is multiplied by the influence of the consonant (or zero) that follows.

The sequences *əj*, *aj*, *əw*, *aw*, when belonging to the same syllable (i.e. when not followed by a vowel) are produced as *ī*, *ē*, *ū*, *ō* respectively (*ē* and *ō* somewhat closer than short *e* and *o*).[8] These vowels are often pronounced slightly diphthongal, especially at the end of a word, where *j*- and *w*-offglides are usually present, cf. *baj* 'rich', *bajdˈəda* 'very rich', *bajˈən* 'to be rich', phonetically *bē(j)*, *bē(j)dˈədæ*, *bejˈin*. There are, then, phonetically five long vowels:

"unrounded vowel, between half-open and open and between central and back". The word *ǧ°a* 'den', 'lair' is by Lopatinskiy given as *ǧo* or *ǧue* (Slovar' 1891 s.v. 'berloga').

[8] For a possible different pronunciation in part of the cases of *aj*, *aw* cf. §25.

the four mentioned above, and *ā*. The latter is in most cases produced as a front *a*; back variants are found in the neighborhood of uvulars and pharyngals. Long *ā* is the only vowel found in word-initial; in this position it can be accompanied by a slight glottal friction, a variant which we shall write *ʰā*.[9] Though the long vowels have sub-variants in different positions their timbres are more constant than those of the short vowels.[10]

In regard to duration the Kabardian vowels fall into three categories. The higher short vowels (phoneme *ə*) are ultrashort. They can shrink to a hardly perceptible murmured release of the preceding consonant and even disappear altogether. This happens particularly in longer words, especially – but not exclusively – in more rapid speech. Frequently a sequence of a short high vowel and a consonant is replaced by a syllabic consonant, not only in the case of *m*, *n* and *r* but also with other consonants, cf. *lʼəẑ* 'old man', phonetically *lʼʼiẑ* or *lʼʼẑ̩*. The lower short vowels (phoneme *a*) fall from the quantitative point of view between the *ə*-vowels and the long vowels (phonemically *əj*, *aj*, *əw*, *aw*, *ā*), which have the maximal duration. On the whole, the vowels have comparatively little prominence, in comparison with the consonants. The "long" vowels do not make the drawn impression of those in Czech or Hungarian but are rather comparable to the stressed vowels in Russian.

[9] Yakovlev (1948:343) mentions the dialectal pronunciation *hæ* for initial *ă*. I have not heard this variant, but cf. the discussion in §13.

[10] Before and in the stressed syllable all consonants are automatically labialized when followed by ū, ō (phonemically *əw*, *aw* not followed by a vowel). In these cases the distinction between plain and labialized uvulars and laryngals is neutralized. Examples are rare; cf. *qʼapl'an* 'to look hither *qʼa-*' and *qʼ°apl'an* 'to look behind *qʼ°a-* (something)' and the present tense form *qʼ°'awpla* (phonet. *qʼ°'ōpl'e*) meaning either 'he looks hither' or 'he looks behind it'. For the palatovelars with and without labialization cf. §5.

II

CONSONANTS

5. *Buccal Features.*

Three types of features can be distinguished in the Kabardian consonants: (a) features consisting in place and mode of articulation (labial – dental – alveolopalatal, etc.; plosive – fricative – nasal – trill; stop – affricate); (b) features consisting in the general shape of the mouth-resonator (plain – palatalized – labialized); (c) laryngeal features (voiceless – voiced – glottalic).

The features (a), referred to as *buccal features*, will in a more analytic notation which is used in the following discussions be symbolized by capitals, e.g., *P* stands for the bilabial plosive element that is common to the phonemes *p*, *b*, *p'*. The symbols for buccal features are: labial *P*, *F*, *M*; dental *T*, *C*, *S*, *N*; alveolopalatal $\hat{S}$; palatoalveolar $\check{S}$; lateral *L*; palatovelar *K*, *X*; uvular *Q*, $\bar{X}$; pharyngal *H*; trill *R*. The laryngals are phonemes with a *zero*-feature of buccal articulation, indicated by *O*. Kabardian *ʔ* should therefore not be referred to as a "glottal stop" but as a "glottalic laryngal"; the distinction plosive-fricative belongs to the buccal part of the articulation of the consonants, and the relation of *ʔ* to *h* parallels that of *p'* to *p*, *b* and not that of *p* to *f*, *v*.

The phonemes *m*, *n* and *r* are defined by buccal features only, so that the symbols *M*, *N*, *R* of the analytic notation have the same reference as the non-analytic symbols.

The analytic notation could, of course, be developed further by the use of separate symbols for "labial", "plosive", "fricative", "nasal", etc., but for our present purpose this is unnecessary.

6. *Shape of Mouth-Resonator.*

The oppositions consisting in differences in the general shape of the mouth-resonator comprise: absence versus presence of labialization (*zero* vs. °) and of palatalization (*zero* vs. '). Labialization

plays a distinctive role in the palatovelars, uvulars and laryngals,[1] palatalization in the palatovelars and laryngals.[2]

The palatovelar phonemes require a few comments. Phonetically there is a series of three prevelar stops varying with palatoalveolar affricates of a palatalized timbre; in addition there are two fricatives of the "ich-Laut" type. These are matched by three labialized velar plosives and a corresponding fricative:

$k'^{\varsigma}/\check{c}'$	$g'/\check{z}'$	$k^{\flat\prime}/\check{c}^{\flat\prime}$	x'	γ'
$k^{\varsigma\circ}$	g°	$k^{\flat\circ}$	x°	—

Yakovlev (1923:81–91) separates the two series altogether because of the differences in place and manner of articulation. Trubetzkoy (1939:125, 146) regards the phonemes of the second series simply as the labialized correlates of those of the first, in his view plain series. Both views are open to criticism. For Yakovlev there are separate mediopalatal and postpalatal "points of articulation", and there is a series of labialized phonemes without non-labialized correlates. This is not an economical interpretation. Trubetzkoy, on the other hand, oversimplifies matters. As was pointed out in § 4, fn. 10, the distinction between plain and labialized uvulars and laryngals can be neutralized as a result of automatic labialization. If, as Trubetzkoy holds, the k°-series were the labialized correlate of a plain k-series, one would expect these two series also to coincide under the abovementioned conditions. They remain distinct, however, cf. *x'apl'an* 'to look into *x'a-* (a mass, group)' and *x°apl'an* 'to look for the sake of *x°a-* (somebody)', and the present tense forms *x'°'awpła* (phonet. *x'°'ōpl'e*) 'he looks into it' and *x°'awpła*

[1] Yakovlev (1923) included (in parentheses) a phoneme $t^{\flat\circ}$ in his Table I; it is found in a few words only, e.g. *t'°'āła* 'a measure defined as the breadth of two fingers', *t'°'āš'a* 'twofold', phonetically *t'°u'āl'e*, *t'°u'āš'æ*. These forms, which cannot be opposed to an initial **t'°wā* or **t'°ūā-* must be interpreted as *t'əw'āła*, *t'əw'āš'a*, cf. *t'əw* 'two', phonetically *t'°ū(w)*.

[2] The laterals are strongly palatalized, the palatoalveolars somewhat less, but as there are no correlates with a different shape of the mouth-resonator in these series, these features need not be indicated. It is possible that the laterals, with their high timbre, belong to the palatalized division of the palatovelar group of phonemes, so that *L'* is opposed to *K'*, *X'* as "lateral" versus "dorsal", but the point need not be pressed here and the laterals are written without '.

(phonet. $x^{\circ}{}^{l}\bar{o}pl'e$) 'he looks for his sake', where automatically labialized x'° does not coincide with x°.[3] The facts are most simply accounted for by agreeing with Trubetzkoy that the whole group of phonemes is characterized by one and the same "point of articulation" (labeled "palatovelar"), and with Yakovlev that the non-labialized phonemes cannot be regarded as plain counterparts of the labialized ones. We regard them as their palatalized correlates, a plain series being absent. This avoids introducing an additional phonemic feature, is in agreement with the phonetic facts and accounts for the phonemic ones.

In analytic notation palatalization and labialization are indicated with the same symbols as are used in non-analytic transcription: ', °.

7. *Laryngeal features.*

Contrary to the features ' and °, the laryngeal features (voiceless – voiced – glottalic) are mutually exclusive. In the laryngals closed glottis (in analytic notation ˀ) is opposed to only one other type: open glottis (no indication). In the phonemes with positive buccal features the category with "open glottis" is further subdivided into voiceless and voiced phonemes, in analytic notation ˓ and ˜ respectively. The dental, palatoalveolar, palatovelar, uvular and pharyngeal fricatives lack glottalic members; so does the palatalized laryngal *j*. In the uvular plosives there is no opposition voiceless-voiced. In view of the fact that this opposition is present in the corresponding fricatives, the phonemes *q* and q° are classed as voiceless. Nevertheless, the parallelism between the uvulars *q*, q°, q', q'° and the laryngals *h*, *w*, $\hat{P}$, $\hat{P}^{\circ}$ is striking.

The nasals *m*, *n* and the trill *r* have no distinctive laryngeal articulation. Whereas *m* and *n* obviously have a feature in common with the labials and dentals, the trill stands apart from all the other consonants: it is the only one articulated with the tip of the tongue and the only pure alveolar.

[3] As these forms show, the features ' and ˓ are not mutually exclusive. In Kabardian they are found combined in positional variants only; the Bzyb'-dialect of Abkhaz has quadruplets like $\check{z}$ 'digging', $\check{z}'$ 'throwing', $\check{z}^{\circ}$ 'old', $\check{z}'^{\circ}$ 'cow', cf. Uslar 1888.

III

CLUSTERS

8. *Consonant-Groups*

It is characteristic of the consonant-groups in Kabardian that in general groups which can begin a syllable can also end a syllable. For instance, the initial groups in column I below are found as final groups in column II:

I		II	
psə	'water'	*wəps*	'plane!', 'shave!'
bžan	'goat'	*ğ°əbž*	'Tuesday'
t'k'°ə	'melt! (intr.)'	*ğat'k'°*	'melt! (tr.)'
šk'°əmp'	'bad egg'	*ğanˈəšk'°*	'chew!'
łx°ə	'give birth!'	*dałx°*	'brother (of a female)'

Exceptions are, from the point of view of the phonemic structure of the word, accidental. For instance, the group *psk'* is found both initially and finally, but *psk'* happens not to occur finally: it is found in only one morpheme: *psk'a* 'cough', and is always followed by a vowel.[1]

On the other hand, in syllable-final position a number of groups are found which do not occur in syllable-initial. These additional groups fall into two categories. In the first place, a number of groups result from the fact that the predicative endings *-ŝ* and *-t* (present and past tense respectively) can follow any base immediately, cf. *fəz* 'woman', *fəzŝ* 'she is a woman', *fəzt* 'she was a woman',

[1] The group *t'k'°* is likewise found in only one morpheme, viz. *t'k'°ə* 'melting, intr.' and there are a few other examples of this kind, but due to the fact that the vowel *ə* is dropped at the end of a word in postaccentual position, these groups can in the same morphemes appear finally, cf., for the abovementioned case, *ğat'k'°* 'causing *ğa-* to melt'.

ŝət 'being', *ŝətŝ* 'he is', *ŝətt* 'he was'. These syllable-final groups are found only at the end of a word.

The second category of specifically syllable-final groups is not limited to word-final position. It consists of groups beginning in one of the phonemes *w*, *j*, *r*, *m*, *n*,[2] followed either by a single consonant or by one of the groups which are also found in syllable-initial. Examples: *q'°ərt* 'brood-hen', *vənd* 'rook', *px'anž* 'twisted', *bʒaq'°ˈəntx'* 'fishing-hook', *pxambğ°* 'board', cf., for the last two words, the initial groups in *tx'ə* 'spine' and *bğ°ə* 'side'.

If one sets aside the abovementioned predicative endings *-ŝ* and *-t* and group-initial *w*, *j*, *r*, *m*, *n*, there remains a body of consonant-groups which have the same distribution as single consonants (found in syllable-initial and in syllable-final, in the latter case possibly preceded by one of the consonants *w*, *j*, *r*, *m*, *n*, and/or followed by one of the consonants *ŝ* or *t*). These groups will from here on be referred to as *clusters*, the term "groups" being used for consonant-sequences in general.

9. *Structure of Clusters*

The make-up of the clusters is subject to certain limitations:

a. Clusters consist of not more than three, and in the large majority of cases, of two consonants.

b. They never contain the consonant *r*.

c. As non-final members only consonants of the categories *P*, *F*, *T*, *S*, *Ŝ*, *Š*, *L*, *X̄* are found.[3]

d. Given the laryngeal articulation of the final member, that of the preceding member or members is predictable. If the final member is voiceless the preceding ones are voiceless, if it is voiced they are voiced. If the final member is glottalic, a preceding member is either glottalic or voiceless, the latter only if there is no

[2] Phonetically the *w-* and *j-* groups involve the long vowels *ū*, *ō*, *ī*, *ē* (cf. §4), e.g. *məjn* 'thousand', *sawm* 'rouble', phonetically *mīn*, *s°ōm*.

[3] The word *nt'a* 'well, . . .!', 'why, . . .!' is an exception to c. It is left out of account as a semi-interjection, together with its derivate *nt'ˈamajkˀ* 'and what is more . . .!'. The word *nt'a* has an alternative form *jˈənt'a*, where *nt'* does not figure as an initial group.

glottalic correlate (cf. the clusters *sk'', šk''*; the phonemes *s* and *š* have no glottalic counterparts). Before *w* and *j* a preceding consonant is voiced[4]; likewise before a nasal. Examples of clusters: *pŝ, bẑ, p'ŝ', st, zd. st', dw, t'P°, pŝl̥*. The clusters *st, st'* show that consonants with a different laryngeal articulation can be preceded by identical first members. In cases like *st'* there is not one homogeneous laryngeal articulation as is found in cases like *pŝ, bẑ, p'ŝ'*. This does not alter the fact that in the former cases, too, the laryngeal articulation of the non-final members is automatic.

10. *Monomorphemic and Bimorphemic Clusters*

From a morphological point of view the Kabardian clusters fall into two categories: (a) clusters the initial member of which represents a personal prefix, and (b) clusters not involving such a prefix. The clusters (a) result from the fact that in a morphologically defined category of cases the 1st and 2nd person sing. and plur. are referred to by a single consonant as follows:

1 sing. *s-, z-*	1 plur. *t-, d-, t'-*
2 sing. *p-, b-, p'-*	2 plur. *f-, v-, f'-*

The laryngeal articulation of the prefix depends on that of the following consonant according to the rule stated in §9 under d. Examples:

tən	'to give'	*stən*	*ptən*	*ttən*	*ftən*	'my etc. giving it'
g'ən	'to spin'	*zg'ən*	*bg'ən*	*dg'ən*	*vg'ən*	'my etc. spinning it'
p'ən	'to educate'	*sp'ən*	*p'p'ən*	*t'p'ən*	*f'p'ən*	'my etc. educating it'[5]
jən	'to coat'	*zjən*	*bjən*	*djən*	*vjən*	'my etc. coating it'

[4] Examples are few and always result from the morphological process mentioned in §10. The Kabardian dialects (perhaps even idiolects) differ in the treatment of these groups; some informants use voiceless consonants before *w* and *j*, e.g. *zwək''lən* (dial. *swək''lən*) 'my killing him'. Cf. also the example given by Yakovlev (1948:345, under 4). Some informants pronounce a labial fricative before a glottalic consonant voiceless instead of glottalic, e.g. *f'p'ən* (dial. *fp'ən*) 'your pl. educating it'.

[5] If – as Catford (1942:16) holds – *c'* were the glottalic correlate of *s, z*, one would expect the 1st person prefix to be *c'* before glottalic consonants; instead, it appears as *s* in this position (cf. §3 fn. 3).

A number of the clusters of this first category are identical with clusters of the second, e.g. the cluster *px'* is found in *px'ən* 'your *p-* reaping it' (cf. *x'ən* 'to reap') and also in *px'ən* 'to card' (*spx'ən* 'my carding it', etc.). Even in artificially slow and careful speech no distinction is ever made in morphologically different cases like *p-x'ə-n* 'your reaping it' and *px'ə-n* 'to card'.

11. *Notation of Clusters*

Since the laryngeal articulation of the non-final members is not distinctive, the notation of clusters contains a redundancy in so far as it does indicate this articulation. For instance, in *pŝ*, *bẑ*, *p'ŝ'*, *st*, *st'*, *psk''*, in analytic notation $P^{\text{ʿ}}\hat{S}^{\text{ʿ}}$, $P^{\sim}\hat{S}^{\sim}$, $P^{\text{'}}\hat{S}^{\text{'}}$, $S^{\text{ʿ}}T^{\text{ʿ}}$, $S^{\text{ʿ}}T^{\text{'}}$, $P^{\text{ʿ}}S^{\text{ʿ}}K''$, it suffices to write $P\hat{S}^{\text{ʿ}}$, $P\hat{S}^{\sim}$, $P\hat{S}^{\text{'}}$, $ST^{\text{ʿ}}$, $ST^{\text{'}}$, PSK'', where in each case the laryngeal articulation is indicated only once, namely in the final member, which is the independent variable. Transposed back into non-analytic notation this yields *Pŝ*, *Pẑ*, *Pŝ'*, *St*, *St'*, *PSk''*, where *P*, *S*, stand for buccal features only, the (automatic) laryngeal articulation not being indicated. This "mixed" notation will from here on be used. It is to be taken as a more convenient shorthand for full analytic notation, which is hard to read. It is important to note that the increase in the number of symbols in this mixed notation is due not to the use of *P*, *S*, etc., but to the use of *p*, *b*, *p'*, etc. for $P^{\text{ʿ}}$, $P^{\sim}$, $P^{\text{'}}$, etc. To make this perfectly clear, one more example may be given. The word *bza* 'language' is written $P^{\sim}S^{\sim}a$ in the analytic notation developed in §5–7. Both these renderings of the word contain a redundancy in that they indicate the voice feature in the initial consonant; it suffices to write $PS^{\sim}a$. This notation is adopted, but for easier readability $S^{\sim}$ is written *z*, so that the whole word is transcribed *Pza*.

In anticipation of a more detailed discussion (cf. §23) it may be mentioned here that it is as non-final members of clusters that the "weak" consonants described in §2 are found. These consonants, then, are from here on written *P*, *T*, etc.

The personal prefixes mentioned in the preceding section consist of buccal features only; they are 1 sing. *S-*, 2 sing. *P-*, 1 plur. *T-*, 2 plur. *F-*.

IV

THE VOWEL *ā*

12. *Definitions of Trubetzkoy and Yakovlev*

As a result of Trubetzkoy's interpretation of the Kabardian material furnished by Yakovlev (1923), and also of West Circassian material collected by himself (unpublished), the North-West Caucasian languages have become the classical – and so far as I know unique[1] – examples of languages with a "vertical" vowel system, i.e. one where exclusively distinctions of degree of openness (acoustically: of sonority) are phonemic. In this way, Trubetzkoy distinguishes a close vowel "ə", a medium vowel "e" and an open vowel "a". Yakovlev uses the same symbols, but his definition of the vocalic oppositions is different from Trubetzkoy's: he defines "a" not as a maximally open vowel but as a vowel characterized by length (cf. 1923:108 and 1927:4, fn. 2). Trubetzkoy rejected this classification of the Kabardian vowel phonemes (cf. 1925:280); as is well known, in his interpretation the differences of duration are regarded as "concomitant", the degree of aperture or sonority being the "relevant" characteristic. This interpretation is in so far arbitrary as in certain positions, particularly after uvulars, pharyngals and laryngals, the degree of aperture of Trubetzkoy's "e" (our *a*) is not different from that of his "a" (our *ā*). In these cases the vowels are distinguished by their duration. As Trubetzkoy (1939:88) himself remarks: "nach Laryngalen und ungerundeten Hintervelaren ist dieser Quantitätsunterschied deutlich vernehmbar". In the same paragraph Trubetzkoy states that in Abkhaz the realization of the vowel of medium degree of aperture is less variable than in Circassian; it appears in most positions as "a", a sound "das sich vom maximal-schallvollen Vokal hauptsächlich durch seine kürzere Dauer unterscheidet". Here the weakness of

[1] Cf. also Hockett 1955:85.

Trubetzkoy's "vertical" interpretation is even more apparent: it is no longer based on three degrees of aperture or on three degrees of sonority of vowel-timbres as such, but on three degrees of speech power in vowels taken as a whole, combining distinctions due to timbre and distinctions due to duration. If the "main distinction" between two vowels is a matter of duration, there is no reason to reinterpret it as a question of sonority. It is clear that Yakovlev's definition of the Kabardian vowels sticks closer to the facts, even though Kabardian *a* is more variable than its Abkhaz analogue, and consequently more often distinguished from *ā* by other features in addition to duration.

13. *ā in Syllable-Initial*

Trubetzkoy's three-degree vertical vowel-system having been rejected in favor of Yakovlev's interpretation, a further reduction suggests itself. There are a number of indications that *ā* in syllable-initial represents a sequence *ha*, and in other positions a sequence *ah*.[2]

ā is the only vowel found in syllable-initial, *a* and *ə* always being preceded by a consonant or cluster. *ā* is not found in postaccentual position. The sequence *ha*, on the other hand, occurs only in the plural suffix (cf. §3), which is limited to postaccentual position, so that *ā* and *ha* are in non-contrastive distribution. If syllable-initial *ā* is interpreted as a sequence *ha*, the defectiveness in the distribution of the phoneme *h* is reduced, and all Kabardian syllables uniformly have a consonantal initial.

From the phonetic point of view the variation $^{h}\bar{a} - \bar{a}$ (§4) has its analogue in the occurrence of spirantized and semivocalic variants in the other non-glottalic laryngals *j* and *w*, so that the following phonetic proportion can be set up:

$$h^{\circ}o\text{-} : wo\text{-} = h'e\text{-} : je\text{-} = {}^{h}\bar{a}\text{-} : \bar{a}\text{-}$$

(phonemically: *wa-* *ja-* *ha-*)

[2] The following analysis is hinted at by Yakovlev, cf. 1923:108: "Long *a* in Kabardian can in part of the cases also go back to *ha* lengthened in the middle of a word after a consonant." Neither here nor in his subsequent publications (in so far as they were accessible to me) does Yakovlev elaborate the point.

The initial part of the variant *ā* is here, as it were, the semivocalic variant of *h*.

14. *ā Not in Syllable-Initial I: Patterning*

Syllable-initial *ā* having been analyzed as a sequence *ha*, there remain the occurrences of *ā* in other positions, i.e. after consonants. Here *ā* is, phonetically speaking, matched by other long vowels: *ī*, *ē*, *ū*, *ō*, which represent the phoneme-sequences *əj*, *aj*, *əw*, *aw*. This in itself suggests the interpretation of the corresponding vowel *ā* as a sequence *ah*. This interpretation is corroborated by two heterogeneous sets of facts: the behavior of the stress and morphophonemic alternations.

The stress in Kabardian is not a feature of morphemes but of words as a whole. It falls in general before the last consonant or consonant-group of the word, not counting certain grammatical affixes which do not influence the position of the stress. Behind the stress a word-final *ə* is dropped. Examples (to facilitate comparison of forms a sign for the stress is written in monosyllabic words):

l'ə	'man'	*ẑ'ə*	'old'
		k'°'a	'go!'
l'əẑ	'old man'		
l'ək'°a	'messenger' (lit. 'man-go')	*f'ə*	'good'
l'əf'	'good man'		
l'əẑ'əf'	'good old man'		
l'ək'°'af'	'good messenger'		
l'ək'°aẑ'əf'	'good old messenger'	*-Šx°a*	'great'
l'əẑəf''əŠx°a	'great good old man'		

The above examples show how the stress moves down to the end of the word according as elements are added, so that in each case it falls before the last consonant or cons. group, except in words consisting of a single open syllable, where it cannot do so. If an element is prefixed to such a word, the stress moves to the beginning of the word to assume its regular position:

x̄°ˈə	'ripen!'	*mə-*	negative prefix
k'°ˈa	'go!'		
məx̄°	'unripe'		
mˈək'°a	'not going', 'false (money)'		
Tk'°ˈə	'melt! (intr.)'	*ğa-*	causative prefix
		wə-	2nd pers. sing. pref. (actor in imperative)
ğˈaTk'°	'melt! (tr.)'		
wəmˈək'°a	'don't go!'		
wəməğˈaTk'°	'don't melt it!'		

These examples show how the stress moves back from an open monosyllable to assume its position "before the last consonant (-group) of the word" when an element is prefixed. It remains in this position when further prefixes are added.

Now, if prefixes are added to a monosyllable ending in *ā* the stress does not move back but remains on *ā*:

x̄°ˈə	'ripen!'	*x̄ˈaj*	'move!'
mˈəx̄°	'unripe'	*məx̄ˈaj*	'motionless'
k'°ˈa	'go!'	*k'°ˈā*	'having gone'
mˈək'°a	'not going', 'false'	*mək'°ˈā*	'not having gone'

As these examples show, final *ā* has a different effect on the stress than the vowels *a* and *ə*. Its influence on the stress parallels that of a sequence VC. If the last two forms in the right column are written *k'°ˈah*, *mək'°ˈah*, the behavior of the stress is accounted for by the general rule: it falls immediately before the last consonant of the word.

The notation *ha* for *ā* in syllable-initial and *ah* for *ā* in other positions will from here on be used. The analysis of postconsonantal *ā* into a sequence *ah* further reduces the defectiveness of the distribution of *h*, and it reduces the number of vowel phonemes by one, *ā* now being eliminated in all positions.

Phonetically, the sequences *Cī*, *Cē*, *Cū*, *Cō*, *Cā* (where *C* stands for any consonant) have in common that they end in a long vowel; phonemically they are now uniformly interpreted as ending in non-glottalic laryngals: *j*, *w*, *h*.

15. *ā Not in Syllable-Initial II: Morphophonemic Considerations.*

The interpretation of non-syllable-initial *ā* as a sequence *ah* is supported by morphophonemic considerations. In order to show this, certain peculiarities of morphemes of the form *ja* and *wa* (in various meanings) must be discussed at this point.

Frequently a combination of a morpheme *CV* (where *C* represents any consonant or cluster and *V* a vowel *ə* or *a*) with a morpheme *ja* or *wa* results in a sequence *Caj* or *Caw*. For instance, the combination of *na* 'eye' and *ja* 'bad' results in *naj* 'malice' (for the semantics of this compound cf. *f'ə* 'good' and *naf'* 'benevolence'). The combination of the prefixes *ŝə-* 'there' and *ja-* '3d pers. sing. actor (present tense)' results in *ŝaj-*, cf. *Tx'ə* 'write it!', *ŝəTx'* 'write it there!', *jaTx'* 'he writes it', *ŝajTx'* 'he writes it there'. As these examples show, *Cə* + *ja* and *Ca* + *ja* both result in *Caj*; in the resulting unit, morphemes must be separated *C-aj*, since the vocalic characteristic of the initial morpheme can be either *ə* or *a* and is without consequence for the combination. The second morpheme, which independently or initially appears as *ja*, has in these combinations the form *-aj*. Similar examples can be given for morphemes *wa* or *-aw*. The process just described will be referred to as *fusion*. The alternant *ja*, *wa* will be called the *independent* form of the morpheme, the alternant *-aj*, *-aw* the *fused* form.

In some cases a morpheme is found in fused form only. Such is the case, for instance, with the derivative suffix *-aj* 'that of . . .', 'the one of . . .'[3] with which derivative names of trees, countries, etc. are formed, cf. *mə* 'wild apple' and *m-aj* 'wild apple tree', *da* 'nut' and *d-aj* 'nut tree', *wərˈəs* 'Russian' and *harəs-ˈaj* 'Russia', *cə* 'wool' and *c-aj* 'Cherkeska' (Caucasian national men's costume; literally 'the one of wool'), etc.[4] It is convenient to set up a hypo-

[3] Etymologically this suffix cannot be separated form the 3d person prefixes *jə-*, *ja-* and from the deictic root in *j-aj* 'his' (independent possessive pronominal expression), where this root is followed by the very suffix under discussion (literally 'the one of that one').

[4] In West Circassian this morpheme appears in its non-fused form, e.g. *majˈa* 'apple tree'. In Kabardian fusion is a recent phenomenon; early 19th century records of the language still give *mmiye*, *mie* 'apple tree', etc., cf. Turchaninov 1949:53–56.

thetical independent form in these cases on the basis of comparison with morphemes of which both fused and independent forms occur, and to speak of morphemes *ja*, *wa* found in fused form only.

Now that *ā* after a consonant has been analyzed as a sequence *ah*, the abovementioned alternations *ja*/*-aj* and *wa*/*-aw* can be matched with an alternation *ha*/*-ah*. There are in Kabardian two morphemes with the meaning 'plural'. One of these is the plural suffix *-ha*. This suffix belongs to the category of morphemes that do not influence the position of the stress[5] and can be followed only by other morphemes belonging to this same category. Hence it is found only in postaccentual position. Examples: *l'ə* 'man', *l'ˈəhar* 'men', absolutive case *-r'*, *l'ˈəẑhar* 'old *-ẑ-* men, abs.'. The second morpheme for 'plural', which can now be identified with the one just mentioned, appears as "long *ā*" (i.e. *ah*) among the prefixes, cf.:

jaTx'	'he writes it'	*jahTx'*	'they write it'
jəTx'ˈənŝ	'he is *-ŝ* to write it'	*jahTx'ˈənŝ*	'they are to write it'
jəwˈəna	'his house'	*jahwˈəna*	'their house'

It is clear that in the right column we have nothing else than combinations of morphemes *ja-* or *jə-* '3d person' with the morpheme *ha* 'plural' which appears here in its fused form *-ah*. The analogy with the alternations *ja*/*-aj* and *wa*/*-aw* is perfect; again, the vowel in the preceding element becomes recessive, *Cə* + *ah* and *Ca* + *ah* both yielding *Cah*.

[5] By a "morpheme not influencing the stress" is meant a morpheme that allows violations of the rule "the stress falls before the last cons. or cons.-group of the word", e.g. the case endings *-r* 'absolutive', *-m* 'relative', *-wa* or *-w* 'modal', *-k'ˈa* 'instrumental' and the predicative endings *-ŝ* (present) and *-t* (past), cf. *wˈəna* 'house', *wˈənar*, *wˈənam*, *wˈənaŝ*, etc. (but cf. *wənˈaf'* 'good house', where the addition of *f'ə* 'good' causes the stress to move from the first to the second syllable of *wəna*). A morpheme is also said not to influence the stress if it allows a violation of the rule stated in such a way that morphemes like the above "do not count", e.g. the demonstrative prefix *mə-*, the presence of which in a word entails the presence of an absolutive or relative ending, does not influence the stress, cf. *l'ˈə* 'man', *məl'ˈər* 'this man, abs.' (but cf. *jˈəl'ər* 'his man, abs.', where the addition of *jə-* 'his' causes the stress to move away from *l'ə*). For the sake of convenience morphemes not influencing the position of the stress will hereafter be referred to as "stressless".

Just as it is the case with certain morphemes *ja* and *wa*, there are also morphemes *ha* which are found in fused form only, e.g. the suffix meaning 'past', cf.

ğə	'weeping'	*ğ-ah*	'past weeping', 'having wept'
k'°a	'going'	*k'°-ah*	'past going', 'having gone'

The hypothetical independent form *ha* is set up on the basis of comparison with the plural morpheme, where both fused and independent form occur.

16. *Summary.*

In the above paragraphs it was shown that (a) phonetic facts, (b) phonemic patterning, (c) the behavior of the stress and (d) morphophonemic considerations all converge to the analysis of syllable-initial *ā* as a sequence *ha* and of *ā* in other positions as a sequence *ah*.

a. Phonetically, the sequences *ja*, *wa*, *ha* all show the same variation of spirantized and (semi)vocalic forms, and *aj*, *aw*, *ah* are parallel in being pronounced as long vowels.

b. In the system which includes a vowel *ā* (whether in Yakovlev's or Trubetzkoy's definition) all syllables have a consonantal initial except that *ā* can occur in syllable-initial, and conversely, no vowel other than *ā* is found in syllable-initial. Furthermore, the distribution of the phoneme *h* is extremely defective. In the system presented here all syllables have a consonantal initial. The defectiveness of the distribution of *h* is greatly reduced; except that it does not occur before *ə*[6] it has the same distribution as other consonants (syll.-init. and syll.-fin.) and it shares some special features with *w* and *j*, for instance, it can appear before a syllable-final consonant or cluster, cf. *lahğ°* 'seeing', *jahTx'* 'they write it' (cf. §8; *h* must now be added to the list of phonemes which can occur in this position).

c. In the notation of Yakovlev and Trubetzkoy word-final *ā* influences the stress in a different way than the other vowels; in the

[6] There is one exception to this statement, cf. §27.

present system word-final *ah* influences the stress in the same way as other sequences VC.

d. Finally, *h* also parallels the other non-glottalic laryngals in that the alternations *ja*/*-aj* and *wa*/*-aw* are matched by an alternation *ha*/*-ah*.[7]

[7] In his latest work on Kabardian (1948) Yakovlev operates with five long vowel phonemes: *ā*, *ē*, *ō*, *ī*, *ū*, for *ha*/*ah*, *aj*, *aw*, *əj*, *əw* respectively. This is probably dictated by practical purposes and may even be theoretically justified in view of the large number of Russian loans that are being adopted in the language. In any case, *ā* is not separated from the other "long vowels", and in this respect Yakovlev's various interpretations of the Kabardian vowel system are superior to Trubetzkoy's.

V

THE VOWEL *ə*

17. *ə in Postaccentual Position.*

The information given so far on the vowel *ə* is here recapitulated. Phonetically it varies from an ultrashort high vowel to a feature of syllabicity in a following consonant; especially in longer words it is easily dropped; it is always dropped at the end of a word in postaccentual position (cf. § 8 fn. 1 and § 14). The latter is the traditional way of describing such alternations as *l'ə* 'man' versus *zəl'* 'one man' (cf. *zə* 'one'), *ẑə* 'old' versus *l'əẑ* 'old man', where *l'ə* and *ẑə* appear behind the stress in word-final as *-l'* and *-ẑ*. Yakovlev (1923:102) speaks in these cases of the "positional variant of a syllable", Catford (1942:17) uses the expression "zero-variant of ə". In such cases *ə* can reappear behind the stress if certain stressless endings are added, cf. *l'əẑ* 'old man', *l'ˈəẑər* 'the old man, abs.'. The vowel *ə* is not restored in all cases where endings are added, however, cf. *l'əẑŝ* 'he is an old man', where the predicative ending *-ŝ* follows the base in its clipped form.

A larger unanalyzable unit, e.g. *fəz* 'woman' (which, unlike *l'əẑ*, does not contain two units *Cə* found in the same meaning outside this particular combination, as are *l'ə* and *ẑə*) behaves with regard to the presence or absence of *ə* in the same way as a compound like *l'əẑ*: the forms *l'əẑ*, *l'ˈəẑər*, *l'əẑŝ* can be matched with the forms *fəz*, *fˈəzər*, *fəzŝ*.

Though there are only a small number of stressless endings, it would require a rather long list to state all the cases where *ə* does or does not appear postaccentually. This is due to two reasons. In the first place, several endings can be combined in the same word, in which case *ə* may or may not appear not only at the border between base and ending, but also at the border between endings.

In the second place, the appearance of *ə* depends not exclusively on the ending but also on what precedes it. For instance, *l'əâ* 'old man' and *fəz* 'woman' combined with the absolutive ending *-r* result in *l'ˈəâər*, *fˈəzər*; on the other hand, the word *bəj* 'enemy' in combination with the same ending gives *bəjr* (phonetically *bīr*). In the existing descriptions of Kabardian the question of the appearance of *ə* behind the stress, where dealt with at all, is treated incompletely; references are made to a few specific endings before which *ə* is or is not "restored".[1] However, the appearance of *ə* in postaccentual position can be described without reference to particular morphemes, it is predictable on the basis of the phonemes other than *ə* in the sequence.

In the first place, *ə* appears only after consonants, never after *a*. In the second place, *ə* never appears before a consonant followed by *a* (e.g. *q'ak'°ˈaž* 'come back!', *q'ak'°ˈažma* 'if he comes back') except that after plosives, fricatives and glottalic laryngals it appears facultatively before *-ra*, e.g., *k°ˈadra* or *k°ˈadəra* 'often'. The rule for the remaining cases can be stated most simply by dividing the Kabardian consonants into four categories: I: plosives, fricatives and glottalic laryngals; II: *m*, *n*, *r*; III: *w*, *j*; IV: *h* (in fused *-ah*). The vowel *ə* appears between two consonants if the first one belongs to I or II and the second one to II or III; otherwise it is absent. Of the examples given above, *l'əâŝ* and *fəâŝ* represent the case I – I, *l'ˈəâər* and *fˈəzər* the case I – II, and *bəjr* the case III – II. Other examples: *bəjŝ* 'it is an enemy' (III – I); *sawj* 'I am coating it (the frame of a house) with clay' (III – III); *k'°ahŝ* 'he went' (IV – I), *jahj* 'they are coating it' (VI – III).[2]

[1] E.g., Yakovlev (1948:272) mentions the predicative ending of the present tense as the only one before which final *ə* is not restored. There are several other cases, however, e.g. the past predicative ending *-t* and the negative predicative ending *-ʔəm* (dial. *-q'əm*), cf. *fəzt* 'she was a woman', *fˈəzʔəm* 'it is not a woman'. Yakovlev does not deal at all with the appearance of *ə* between endings.

[2] The four categories established here exhaust the inventory of consonants with the exception of *h* not in fused *ah* and not followed by *a* (cf. the exception mentioned in §16, fn. 6). Rather than complicate the rules, it may be simply pointed out here that *ə* also appears between *h* not in fused *ah* and a following *w*. This does not violate the rules given, but the problems connected with this

These examples suffice to show that the appearance of *ə* – or, what amounts to the same thing, of a syllabic peak – depends on the sonority of the other sounds in the sequence.[3] E.g., the addition of the suffix *-r* to *fəz* results in an additional syllabic peak because the sonority of *r* is high as compared to that of *z*; the addition of the same suffix to *bəj* does not result in an additional syllabic peak because the sonority of *r* is lower than that of the preceding (semi-) vowel, so that *r* forms the closing part of the syllable. A consonant followed by *a* constitutes the rising part of a syllable, and therefore does not itself give rise to another syllabic peak, cf. *fˈzəm* versus *kʾ°ˈažma*.

In this way, the presence or absence of *ə* is not distinctive in postaccentual position, and since in the stressed syllable itself the absence of *a* implies the presence of *ə*, the rule holds that *from the beginning of the stressed syllable down to the end of the word the vowel ə does not play a distinctive role.* A transcription without *ə* is for this part of the word unambiguous. For instance, the word *sˈəğərtaʔəm* 'I was not weeping' can be unequivocally written *sˈğrtaʔm*. According to the rules formulated above, *ə* is present (a) under the stress, (b) between *ğ* and *r*, and (c) between *ʔ* and *m*. The word "between" is inexact, because *ər*, *əm* are in free variation with *r̥*, *m̥*, the latter variants being the usual ones in not deliberately

sequence can only be dealt with in their proper setting (§26). Two identical phonemes of category III merge into one, e.g. *lʾəj* (phonet. *lʾˈij*) 'eight *j* men', morphophonemically *lʾə-j-j* 'man-his-eight', cf. *lʾəjŝ* 'three *ŝ* men', *lʾəjxʼ* 'six *xʼ* men', etc. For sequences involving enclitics cf. §27, fn. 15.

[3] Cf. Fletcher (1953:86) "The pure vowels are the most powerful sounds... The semi-vowels are next to the pure vowels in phonetic power. Of these, n is the weakest and r the strongest. It is interesting to note that the unvoiced fricatives, sh and ch, have powers comparable to the semi-vowels. Next follow the stop and fricative consonants..." Fletcher's statements are based on measurements of English speech-sounds (cf. his chart on p. 84), but they are in agreement with the Kabardian phenomena as well. The facultative presence of an additional syllabic peak in *kˇˈad(ə)ra* (but not in *qʾakʾ°ˈažma* etc.) is correlated to the relatively high power Fletcher finds in r among the semivowels. The high power in the voiceless palatal fricatives, and the fact that similar sounds can in many languages appear as non-syllabics in positions where semivowels can only appear as syllabics suggests that in these languages it is the power due to a harmonic source, and not that due to a noise source, that plays a role in this respect.

slow and careful speech. In fact, the typical Kabardian pronunciation is imitated most easily if one pronounces the word without vowels other than *a* and with a stress immediately after the initial consonant: the result will show the predominance of consonants over vowels that is typical of Kabardian speech, and the syllabic peaks will be determined automatically by the stress and by the sonority of the sounds in the sequence. If *r̥*, *ĭ*, etc., are regarded as the syllabic variants of *r*, *j* etc., and these variants are classed together as phonemes, then the rules formulated above can be reduced to the simple statement that these phonemes appear in their syllabic variants (a) under the stress and (b) when in contact only with phonemes of an equally or less sonorous class in the case of *m*, *n*, *r*, and of a less sonorous class in the case of the other consonants.

18. *ə in Preaccentual Position.*

Next must be examined the occurrences of *ə* in the part of the word that precedes the stressed syllable. About the initial syllable of the word the same can be said as about the stressed one: the absence of *a* implies the presence of *ə*, since the word-initial consonant or cluster is by definition followed by a vowel. Here, too, *ə* is automatic and need not be written. For instance, the word *pəlˈahŝ* 'it hung' (phonetically *pʻəlˈˈāŝ*) can be unequivocally written *plˈahŝ*. Note that this word cannot be read "*πlˈāŝ*", as a cluster *πlˈ* is according to §11 written *Pl*, cf. *Plˈahŝ* 'he looked'.

The presence vs. absence of *ə* can therefore be distinctive only in that stretch of a word that begins with the second and ends with the pretonic syllable, i.e. only in words that have at least two syllables before the stressed one. It is, then, precisely in the cases where it is dropped most easily – viz. in longer words – that *ə* can be distinctive. This in itself suffices to raise doubts about the status of *ə* as a phoneme.

Furthermore, the presence vs. absence of *ə* cannot differentiate morphemes but only morpheme-sequences. "Minimal pairs" are hard to find, and where they can be given both words contain the same sequence of morphemes, cf.

a. *haľ'əẑəd'ədar* 'that *ha-* very *-d'əda* old *ẑə* man *ľ'ə* (abs. *-r*)'
b. *haľ'əẑd'ədar* 'that same *-d'əda* old man (abs.)', (cf. Engl. "that very man").

The words (a) and (b) are distinguished by the presence (a) versus absence (b) of *ə* between the consonants *ẑ* and *d*. The presence of *ə* in such cases depends on the makeup of the word in terms of immediate constituents. Leaving aside the prefix *ha-* and the ending *-r*, the IC's in the above examples are:

a. (*ľ'ə*) – (*ẑə* – *dəda*) '(man) – (old – very)'
b. (*ľ'ə* – *ẑ*) – (*dəda*) '(man – old) – (very, same)'

The above words exemplify the general rule that *ə* is absent at the border between two IC's both of which contain more than one single consonant or cluster. On the other hand, if one or both IC's contain but one consonant or cluster, then *ə* appears at the border. It makes no difference whether the IC with only one consonant precedes or follows; in (a) both *ẑə-* and *ľ'ə-* precede the IC with which they are combined. For the opposite case cf. *haľ'əẑəf'd'ədar* 'that same good *-f'-* old man', where the IC's of the base are: ((*ľ'ə* – *ẑə*) – *f'*) – (*dəda*).[4]

19. *ə Eliminated Postaccentually.*

Since *ə* is not distinctive on the level of the morpheme it is preferable to eliminate it from the system of phonemes. In the cases where *ə* is automatic, its elimination obviously involves no detriment to the notation. On the contrary, it has the double advantage of being more economical and of solving the problem of whether or not to write *ə* in cases of free variation as in *k°'adra* or *k°'adəra* (§17), this variation now being relegated to the domain of phonetics. But the advantages of a system without a phoneme *ə* are especially obvious in the statement of the morphological facts. If *ə* is considered a phoneme, the morphology must cover "alternations" like *ľ'ə/ľ'* in *ľ'ə* 'man', *ľ'ə-r* 'the man, abs.' versus *zə-ľ'* 'one man', *ľ'-ah-ŝ* 'he was a man', 'he behaved bravely', etc. What is more, one

[4] And 'that very good, old man' is *haľ'əẑf'əd'ədar*, where *f'ə-* forms an IC with *-d'əda*.

first has to make a decision on how to separate morphemes, for it is actually arbitrary to split *zəl'* into *zə-l'* rather than *z-əl'*[5] or even *z-ə-l'* (where *-ə-* is regarded as a connective). It is needless to sum up the pros and cons of these alternatives; in the cases under discussion here all difficulties vanish as soon as the fact is taken into account that the short high vowel plays no role on the level of the morpheme and that its appearance is automatic. The morpheme 'man' is *l'*, the morpheme 'old' is *ẑ*. In isolation they are pronounced *l'ʹi* and *ẑə*, if they are combined the first consonant is stressed[6]: *l'ˈẑ*, phonetically *l'ʹiẑ*. Used in this way, the symbols *l'*, *ẑ* etc. stand for consonantal articulations which can be either primarily explosive, in which case they are followed by an automatic syllabic peak in the form of a short high vowel as in *l'ʹi* 'man', *l'ʹiẑ* 'old man' or of a syllabic feature in a following consonant as in the variant *l'ʹ$\hat{ẑ}$* of the latter word, or which can be primarily implosive, in which case they appear as a syllable-final consonant in free variation with a syllabic consonant, cf. *-ẑ* in the above examples.[7]

The notation without *ə*, besides removing the necessity of de-

[5] At first glance, it may seem preferable always to separate morphemes after *ə*, since an alternant in *-ə* appears in independent forms like *l'ə*, *f'ə*, etc , and one has then only two alternants: *l'ə/l'*, etc But in this way the statement of the morphological facts will be more complicated; it becomes particularly awkward in cases like the one quoted at the end of §18: in *ha-l'ə-ẑə-f'-dˈəda-r* the choice of *f'* (rather than *f'ə*) is determined (a) by the fact that it is the final member of a larger IC and (b) by the fact that this IC is followed by another larger IC (larger: containing more than one single cons. or cluster). If, on the other hand, one works with three alternants: *f'ə*, *əf'* and *f'* one can state more simply that the alternant *əf'* appears when the morpheme forms an IC with what precedes it.

[6] We shall say that a consonant is stressed when the maximum of speech-power immediately follows its explosive moment. This means that if the maximum of speech-power coincides with a syllabic consonant (as a variant of *ə* plus cons., cf. §4, end), the consonant preceding this syllabic is defined as stressed. In the same way, in *dˈaj*, *dˈah*, etc., initial *d-* is considered to be stressed; where morphemes are separated we write *dˈ-aj*, *dˈ-ah*, etc.

[7] If one starts from a system of phonemes which includes a vowel *ə*, then the character of a consonant (or cluster) in terms of implosive – explosive comes under the heading of positional variation: a cons. is primarily explosive before *ə*, *a*, and primarily implosive in other positions. Phonetically, the presence of a short high vowel implies that the preceding consonant is explosive, but its absence does not imply that a consonant is implosive. In Kabardian the short high vowels are easily dropped; the character of consonants in terms of ex-

scribing morpheme-alternants with and without *ə*, of making decisions with regard to the separation of morphemes, and of making special statements for cases of free variation, eliminates many other complications in the morphological description of Kabardian. Consider, for instance, the absolutive case-forms of the words *fəz* 'woman' and *bəj* 'enemy', which are *f'əzər* and *bəjr* respectively. Both bases are of the type CVC; with the first, the ending *-r* is preceded by *ə*, with the second it is not. Or again, consider the same case-form and the present predicative form of the word *fəz*, which are *f'əzər* and *fəzŝ* respectively. In both cases an ending consisting of a single consonant is added; in the first case *ə* appears, in the second it does not. In the notation without *ə* these incongruities disappear, the above words are written *f'z*, *b'jr*, *f'zr*, *b'jr*, *f'zŝ*, exhibiting one single pattern.

An interesting difference between the notations with and without *ə* appears if one considers the question: in what cases is it necessary to write a sign for the stress in each notation? The stress can distinguish otherwise identical words in cases where a stressless morpheme is homophonous with a morpheme that is not,[8] e.g. *w'ənak'a* 'house, instr. *-k'a*' versus *wən'ak'a* 'back part *k'a* of a house', *h'adar* 'father, abs. *-r*' versus *had'ar* 'that *ha-* nut *da*, abs.' Since the stress can be distinctive by itself, a symbol for it is needed

plosive – implosive is maintained longer (as the speech-tempo increases), so that from this point of view, too, it must be regarded as the basic phenomenon, the short high vowels being a concomitant feature of explosive consonants. It is in this connection interesting to quote an observation made by Yakovlev (1923: 56–59, footnotes!) on the articulatory mechanism of the laterals, of which he gives a particularly detailed description as these sounds were not dealt with by Sievers in his *Grundzüge der Phonetik*. Yakovlev remarks that the "*t*-element" that is present in the acoustic impression made by these sounds is in syll.-initial connected with the end of the articulation (l'^{t^s}-, l'^{d^h}-) and in syll.-final with the beginning (-$^{t}l'$, -$^{d}l'$). The strong release, resp. setting, of the almost complete closure formed by the tongue against the back of the upper teeth results in an acoustic effect reminiscent of the dental stops. The above pairs of consonants exemplify the contrast of explosive versus implosive articulations. If one starts from this contrast, then the short high vowels are automatic. Of course, the choice between explosive and implosive consonants is automatic or distinctive in the same positions as was *ə*.

[8] For the rules governing the stress cf. §14; for stressless morphemes cf. §15, fn. 5.

in any notation. In a notation with *ə* a symbol for the stress must in general be written in *words containing more than one vowel.* No stress-mark need be written in *l'əẑ* 'old man', *bəjr* 'enemy, abs.'; the stress must be indicated in *l'ˈəŠx°a* 'great man', *fˈəzər* 'woman, abs.'. No stress need be written in *məbə* 'this one, rel.' (consisting of the stressless demonstrative prefix *mə-* and a stem *bə* 'relative case') because final *ə* is necessarily stressed. As these examples show, the necessity of writing the stress is determined by the vowels in the word, and here, again, morphologically parallel cases like *l'ə-ẑ* and *l'ˈə-Šx°a* fall in different categories. The notation with *ə* somehow misses, at every step, the "genius of the language". It is clear that the position of the stress is the primary phenomenon, from which, in combination with other factors, the appearance of *ə* results, and not vice versa. This state of affairs is reflected in the system without *ə*. Here indication of the stress is necessary in all words *containing more than one single consonant or cluster.* The above words are written, in this notation: *l'ˈẑ*, *bˈjr*, *l'ˈŠx°a*, *fˈzr*, *mbˈ*. Apart from the initial consonant, the only phonemic difference between the words *ŝ'əb* 'back' and *məbə* 'this one, rel.' consists in the different position of the stress: *ŝ'ˈb* versus *mbˈ*.

20. *ə Eliminated Preaccentually.*

Next must be considered the non-automatic occurrences of *ə*. In the "minimal pair" quoted in §18: *hal'əẑəd'ˈədar* 'that very old man' vs. *hal'əẑd'ˈədar* 'that same old man' the presence of *ə* depends on syntagmatic factors. If *ə* is regarded as a separate phoneme, it must in cases like this also be regarded as a separate morpheme, since it can be present or absent in otherwise identical morpheme-sequences. This leads to difficulties, for if *ə* is a morpheme in the compound *ha-l'ə-ẑ-ə-d'ˈəda-r*, then it is a morpheme also in its constituent *ẑ-ə-d'ˈəda* 'very old'; but if this constituent appears by itself the appearance of *ə* between *ẑ* and *d* is automatic (first syllable, cf. §18), and if *ə* is given morphemic status in the automatic positions one would have to define it also in cases like *fˈəz-ə-r* 'woman, abs.' vs. *bəj-r* 'enemy, abs.', where only a purely phonetic definition is possible. And phonetic elements would have

to be included even in the case *ha-l'ə-ẑ-ə-d'əda-r* vs. *ha-l'ə-ẑ-d'əda-r*, since no such distinction is possible if for *-ẑ-* 'old' a morpheme with *a* is substituted, e.g. *-Šx°a-* 'great', cf. *hal'əŠx°ad'ədar* 1. 'that very great man', 2. 'that same great man'. The difficulties involved in considering *ə* a separate morpheme are as serious as those encountered when *ə* is regarded as a part of a morpheme.

The solution here is the same as the one given in § 19: *ə* is neither a morpheme nor part of a morpheme, because it is not a phoneme; it is only *part of a phoneme*, being the concomitant syllabic feature of the explosive variant of a consonant. The difference between the members of the "minimal pair" quoted at the beginning of this section consists in the fact that in the first word *ẑ* is of the explosive type (phonetically *ẑə*) whereas in the second word it is implosive (phonetically *əẑ* or *ẑ̚*). By eliminating *ə* from the system of phonemes this difference is reduced to a matter of *juncture*. We shall speak of *syllabic juncture* between two consonants (or clusters) in case the first one is of the explosive type, i.e. where in the old notation *ə* appears between the two consonants, and of *non-syllabic juncture* in case the first member is implosive, i.e. where in the old notation *ə* is absent. The rule given in § 18 can now be restated as follows: in preaccentual position consonants or clusters appear in non-syllabic juncture if the first one forms and IC with what precedes it and the second one forms an IC with what follows it.[9] In our phonemic notation the symbol ":" will be used to indicate preaccentual non-syllabic juncture, and *ə* is eliminated. Where morphemes are separated, the symbol ":" will be combined with

[9] This rule must be taken as an abbreviation, as, strictly speaking, not phonemes but morphemes enter into IC's. It can be stated in a form that is both simple and exact only after the notions "segment" (chapter VI) and "morpheme" (chapter IX) have been developed.

The IC rule is not the only one that governs juncture. There are two categories of morphemes that are always in non-syllabic juncture with what follows. The first of these comprises all non-initial prefixes with a non-glottalic laryngal, those with *a* always appearing in fused form in this position, so that this category comprises the prefixes *-j-*, *-aj-*,, *-w-*, *-aw-*, *-ah-*, regardless of their meaning and morphological status. The second category contains the connectives, a morphological category to be defined in chapter VIII. These two categories of morphemes share also the characteristic of being stressless.

the sign for morpheme-borders as follows: ÷. The "minimal pair" is now written, without and with morpheme-separation:

haɬ'ẑdˈdar *ha-ɬ'-ẑ-dˈda-r* 'that very old man, abs.'
haɬ'ẑ:dˈdar *ha-ɬ'-ẑ÷dˈda-r* 'that same old man, abs.'

It may be pointed out that the notation which employs *ə* has to use this symbol five times in writing these two words, whereas the symbol for non-syllabic juncture appears only once. The same proportion obtains in longer texts.

21. *Summary.*

The facts pertaining to the phonemic interpretation of the short high vowels are briefly summed up here. The short high vowels are not distinctive on the level of the morpheme. Their presence or absence depends partly on phonetic criteria (the "automatic" positions: from the beginning of the stressed syllable to the end of the word), and partly on syntagmatic criteria (the "distinctive" positions: from the second to the pretonic syllable). Considering *ə* a separate phoneme leads to serious complications in the description of the morphology, necessitates arbitrary decisions with regard to morpheme borders, does not allow a clear separation of the phonological and morphological levels, and leads to unelegant rules in accounting for the most simple facts of the language. These difficulties are eliminated by regarding sequences of a consonant plus a short high vowel as unit phonemes, which have vowelless implosive variants. These variants are in part of the cases automatic and in part of the cases distinctive on a syntagmatic level; in these latter cases, then, there is a juncture-distinction. When the first of two adjacent consonants or clusters is implosive we speak of non-syllabic juncture, indicated by ":"; its counterpart, syllabic juncture, receives no indication. As is well known, features of juncture are often easily suppressed, and this accounts for the fact that the short high vowels in Kabardian are so easily dropped. The interpretation of the opposition *ə* versus *zero* as a juncture-phenomenon also solves the apparent paradox that this opposition is phonemic only under circumstances where it is suppressed most readily, viz. in longer words.

VI

SEGMENTS

22. *The "Vocalic" Oppositions.*

In the preceding chapters certain changes were made in the system of Kabardian phonemes as drawn up by Yakovlev and Trubetzkoy. These changes remain not without consequences for the interpretation of the Kabardian phonemic pattern as a whole.

The elimination of *ə* and *ā* from the inventory of phonemes leaves *a* as the only "vowel". Its status in the language must now be reappraised. This is done most simply by applying the standard procedures of phonemic analysis in the light of the conclusions reached in chapter V. The first step is to compare such pairs of words as the following (given in phonetic notation):

fə 'decay!'	*sə* 'burn!'	*ŝə* 'three'	*šə* 'horse'
fæ 'skin'	*sæ* 'knife'	*ŝæ* 'sell!'	*šæ* 'milk'
l'i 'blood'	*x'i* 'sea'	*x°u* 'millet'	*ẖy* 'carry!'
l'e 'leg'	*x'e* 'reap!'	*x°o* 'sinew'	*ẖa* 'dog'.

All these words have in common that they consist of a primarily explosive consonant followed by a syllabic. The second member of each pair is distinct from the first exclusively by a *feature of openness*. The next step is to extend the comparison to such quadruplets as:

šə 'horse'	*jiš* 'his horse'
šæ 'milk'	*j'išæ* 'his milk'

The additional words in the right column have an identical initial *ji-*; in the first this is followed by a primarily implosive consonant, in the second by a consonant with both strong implosion and explosion, followed by an open vowel. Indicating the presence of the features "strong implosion", "strong explosion", "syllabic" and

"openness" by a plus-sign and their absence by a minus-sign, we have (disregarding initial *ji-*):

	Implosion	Explosion	Syllabic	Openness
šə	−	+	+	−
(ji)š	+	−	−	−
šæ	−	+	+	+
(ji)šæ	+	+	+	+

From this table it can be seen (a) that explosiveness and the presence of a syllabic are correlative, and (b) that openness is the only feature that consistently distinguishes the first pair of words (−) from the second (+). In phonemic notation the symbol *a* is retained, but its reference is redefined as "feature of openness" instead of "vowel". The presence of the feature of openness *a* entails the presence of a syllabic peak and of a strong explosion in a preceding consonant, but the latter two correlative features are also found without *a*, in some cases distinctive (syllabic vs. non-syllabic juncture), in others automatic. With *a* they are automatic.

The feature of openness (hereafter "open feature", for short) does not occur independently; it is found only in combination with consonantal features. In this respect it parallels the features of palatalization and labialization. The presence or absence of the open feature *a* may be regarded as a third feature due to the *shape of the mouth-resonator* (cf. §6), besides ′ and °. The oppositions based on these features correspond to the basic vocalic oppositions as found in many languages, cf. *a-′-°* and the vowels a-i-u. In Kabardian, which lacks a distinction of vowels and consonants, these "vocalic" features are but one aspect of a whole which contains "consonantal" features (buccal and laryngeal) as well. A form like *ŝa* 'selling' is a unit phoneme, distinct from *ŝ* 'three' by the presence of the open feature *a* in the same way as *x̄°* 'becoming' is distinct from *x̄* 'net' by the presence of the labial feature °. The feature *a* stands in so far apart, however, as it is found in combination with all possible bundles of consonantal features, whereas ′ and ° are limited in their occurrence to specific types of buccal articulations.

23. *Clusters.*

In §8 clusters were defined, and in §11 a new notation was developed for them. In this new notation only the distinctive features in a cluster are symbolized and the expression of automatic ones is avoided. This notation of clusters and the dropping of *ə* from the transcription are not independent of each other; the latter presupposes the former. And the new notation of clusters is necessary because it covers certain phonemic distinctions which are left unexpressed in the transcription of Yakovlev and Trubetzkoy. A few examples may illustrate this.

In the transcription of Yakovlev and Trubetzkoy the words *pəl* 'hanging, intr.' and *plə* 'getting hot' are both considered to contain the same consonant phoneme *p*. In our notation the first word consists phonemically of two single consonants: *pˈl*; the second word consists of a cluster *Pl*. So far, the two transcriptions are phonemically equivalent, except that the second one contains no redundancies and is therefore more economical.[1] This equivalence still holds if to the above words the past-tense suffix *-ah* is added, cf. *pəlˈā* and *plā* in the notation of Y.-T. compared to *plˈah* and *Plˈah* in ours. But in the middle of a word the transcription of Y.-T. does not distinguish between a cluster on the one hand, and two single consonants in non-syllabic juncture on the other hand, cf. *mPlˈahpʾar* 'this *m-* point *pʾa* of observation *Pl-ah-*, abs.' versus *np:lˈahpʾar* 'the expensive *łahpʾa* flag *nəp*, abs.', in the notation of Y.-T. *məplˈāpʾar* and *nəplˈāpʾar*, where weak cluster-initial *π* and strong independent *p* receive the same treatment. The relation between the two notations is summed up in the following table:

Phonetically:	*-pʿəl-*	*-pl-*	*-πl-*
Our transcription:	*-pl-*	*-p:l-*	*-Pl-*
Transcription of Y.-T.:	*-pəl-*	*-pl-*	

As the table shows, the notation of Y.-T. could easily be revised so

[1] This can be seen at a glance if one converts both transcriptions into full analytic notation: the first has *PʿəLʿ* and *PʿLʿə*, ten instances of four symbols which do not include the stress-mark; the second has *Pʿˈ Lʿ* and *PLʿ*, eight instances of four symbols including the stress-mark.

as to express the distinction between *-pl-* and *-πl-*, for instance by introducing a symbol for "open juncture" and writing this between the two consonants in the phonemic transcription of the first of these two sequences. But it is impossible to drop *ə* from the transcription even if such a juncture-symbol is employed, as in that case the notation of *-pʿəl-* will still coincide with that of *-πl-*. A second juncture-symbol will have to be introduced, either in the first of these two sequences (where *ə* could be retained and redefined as a juncture-symbol[2]), or in the second. This would make the transcription of Y.-T. equivalent to ours from the point of view of the distinctions rendered. But it would needlessly complicate matters, as it would involve writing two juncture-symbols (for the occurrence of both of which rules would have to be stated in the morphology), while the necessity of writing one of these two arises exclusively from the fact that the transcription contains a redundancy, viz. the indication of an automatic laryngeal feature in a cluster-initial consonant. If an equivalent notation can be achieved by omitting the indication of the automatic feature and of one of the junctures, this is obviously preferable. This is what we do, and we use the remaining juncture-symbol for the less frequent type of juncture[3].

The distinction between clusters and sequences of independent consonants in non-syllabic juncture cannot in all cases be made on the basis of the phonetic material alone. It is clearest in the middle of a word, cf. the example given above, and e.g. *q'aPŝˈahr* 'the one who crept *Pŝ-ah* hither *q'a-*, abs.' versus *q'ap:ŝˈahr* 'the sold *ŝ-ah*

[2] This is not a technicality: the rules for the appearance of *ə* are less awkward if *ə* is regarded as a juncture-feature than as a part of a morpheme-alternant. But it is simplest to state the conditions under which *ə* is absent, and in our transcription it is the absence of *ə* (non-syllabic juncture) that is symbolized.

[3] A juncture between two complex IC's is necessarily less frequent than a juncture involving at least one simple IC, as the occurrence of the former presupposes at least two of the latter. The symbol ":" is used for the type of juncture that is found between two complex IC's (in addition the cases §20, fn. 9). The term "complex" is at this stage to be taken as "containing more than one single consonant or cluster"; after §24 it can be replaced by "plurisegmental", which ultimately will turn out – with certain reservations – to be coextensive with "polymorphemic".

sack *q'ap*, abs.', where the distinction between weak cluster-initial *π* and strong independent *p* can easily be observed in slow speech. It must be noted that the difference consists in the amount of energy allotted to the consonant and not – at least, not primarily – in the point of onset of the syllabic stress: the same distinction can be made in *q'ˈaPŝ* 'creep hither!' versus *q'ˈapŝ* 'it is -*ŝ* a sack', where both sequences are in syllable-final.[4] In this position the distinction is slighter and more easily dropped. It is also clearer in sequences with an initial plosive than in sequences with an initial fricative. In the most "unfavorable" case, that of a sequence with an initial fricative in syllable-final, no distinction seems to be made at all. Due to the limitations in the makeup of clusters, and to the fact that syllable-final sequences comparable to clusters can only arise with the predicative endings -*ŝ* and -*t*, examples are extremely rare, but e.g. in *mˈaŜt* 'it freezes' (cf. *Ŝt* 'freeze!') and in *ɬˈaŝt* 'he was strong *ɬaŝ*' no difference can be observed in the pronunciation of the final sequence. At this point, then, a morphological element enters into our phonemic notation. The difference in notation, in these cases, is based (a) on the fact that in morphologically parallel cases the distinction can be made in other consonant-sequences, and (b) on the fact that in the same sequence the distinction can be made in other positions.

24. *Segments.*

In §8 it was pointed out that clusters have in general the same distribution as have single consonants. In this respect the Kabardian clusters differ from those in languages like English or German, where they are in many cases limited to specific positions in the word. In stating the rules for the stress as well as for juncture one constantly has to make reference to a class containing the "single consonants and clusters", and no rule ever requires the separation

[4] One informant's reaction to such pairs was that in the case of *Pŝ* there is "not a *p* but more a kind of *m* or *p'*." Lopatinskii (Slovar' 1891) writes sometimes *b* for cluster-initial *P-* not in combination with a voiced consonant, e.g. *pyˈubŝ'yn* 'nakosit'' (for *pwPŝ'ˈn* 'to mow'), *zebq'yryx̌un* 'raspadat'sya' (for *zaPq'rx̄ˀˈn* 'to fall apart').. Both these facts find their explanation in the weak articulation of the cluster-initial component.

of these two. Strictly speaking, the term "cluster" is misleading: it suggests a sequence of two phonemes, whereas Kabardian units like *Pŝ*, *Tx'*, etc. do not consist of a sequence of two phonemes; in comparison to *ŝ*, *x'*, etc., they merely possess an additional *feature P*, *T*, etc., a feature of the same order as are the features *Ŝ* and *X* in *ŝ* and *x'* (analytically *Ŝ*ʿ and *X*ʿ'). One needs for Kabardian a term that will include both "single consonants and clusters". Since the latter differ from the former only in having one or two additional buccal features, and since these complexes are strictly limited in their makeup so that they can easily be summed up (see below), they could be included under the term "consonant" or "phoneme". But as the complexes of features which make up these units are of an unusual type, and the units themselves are considerably more numerous than are the phonemes in other languages, we prefer to use the more neutral term *segment*. A segment, then, is any unit of the type *p*, *pa*, *x'*, *x̌°a*, *Ps*, *Tx̌°a*, *PSk*'', etc. Such a unit is characterized by (a) one laryngeal feature (ʿ, ˜ or ʾ); only the segments *m*(*a*), *n*(*a*) and *r*(*a*) have no distinctive laryngeal articulation, and in the segments with a *zero* buccal feature there is no distinction between ʿ and ˜; (b) by features consisting of the general shape of the mouth-resonator (', ° or *zero*; *a* or *zero*) and (c) by one or a complex of buccal features (*P*, *F*, *T*, *PS*, *TX*, etc.). In the following, a segment without *a* will be called a *close segment* (e.g. *t*, *Ps*, *Tx'*), a segment with *a* an *open segment* (e.g. *ta*, *Psa*, *Tx'a*). The symbols *Σ*, *Σa* will be used to refer to close and open segments in general; the expression *Σ*(*a*), then, stands for any segment in general. For the sake of convenience segments will be called "uni-", "bi-" and "triconsonantal" according as they have one, two or three buccal articulations.

In summing up the Kabardian segments the presence or absence of *a* will be left out of account, as it is independent of the further makeup of the segment.[5] Furthermore, segments which do not

[5] A close segment *h* is not found independently but only under conditions where all open segments lose their feature *a* (§26). In West Circassian a close segment *h* occurs in word-initial as an actor- or possessive prefix 3d person, the pronunciation after a pause is *hə* (cf. Yakovlev 1941:409).

occur otherwise than as a result of the morphological process discussed in §10, i.e., which always involve one of the person-prefixes *S-*, *P-*, *T-*, *F-*, will not be listed. These prefixes can in principle be combined with any segment; their occurrence is limited by morphological, and not by phonological factors.[6] Finally, the uniconsonantal segments need not be listed again, as this list would be identical with the list of the "consonants" in the table on p. 18.

The remaining segments are listed in two charts on p. 57. Those found only in borrowed words are put in parentheses. As these charts show, the segments follow a definite pattern. In the large majority of cases they consist of *P*, *T*, *S*, *Ŝ* or *Š* (in complementary distribution[7]) or *L* followed by a plosive or fricative articulation of a type produced farther back. Four segments consist of a fricative feature plus *-t*; in only one of these is the point of articulation of the first buccal feature more front than that of the second, namely in *Ft*, which is marginal, however, in being the only pluriconsonantal segment with *F*. Three segments have initial *X̄* followed by a more advanced buccal feature; these segments are exceptional in that they are not found initially, though with regard to stress and juncture they are on a par with the others.[8] The triconsonantal segments follow the same pattern as the biconsonantal ones: if their constituents are "XYz", then there are in six out of the seven cases corresponding segments "Xy" and "Yz" among the biconsonantal ones, e.g., *PŜt* can be compared to *Pŝ* and *Ŝt*; the only

[6] None of the triconsonantal segments is found under the morphological conditions where these prefixes can appear, so that there are no fourconsonantal segments. Segments *r*, *ra* are found only in affixes which cannot be combined with personal prefixes, hence rule b. in §9.

[7] The usage – with informants as well as in printed sources – varies and sometimes deviates from the pattern presented here (dialect of LC). It is possible that in some dialects *Ŝ* and *Š* are not in complementary distribution in these cases. The newest Kabardian dictionary (Kardanov 1957) gives *Šk'°ˡmp'* 'bad (egg)' but *ğanŜk'°ˡn* 'to chew', *Ŝtˡan* 'to take' but *wŠtˡn* 'to set (a dog) on (somebody)', *Šk'a* 'calf' but *Tḫamˡŝk'a* 'poor'. The functional yield of the opposition *Ŝ–Š* in these complexes is very low, which accounts for the vaccillation in pronunciation with some speakers and for the elimination of a direct distinction with others.

[8] The special status of these and a few other segments in the language will be discussed in §35.

Biconsonantal Segments	FINAL COMPONENTS															
INITIAL COMPONENTS	p	t d t'	c ʒ c'	s z —	ŝ ẑ ŝ'	š ž —	ł l ƚ'	k g k''	k° g° k'°°	x' γ' —	x° —	q'	x̄ ğ̄ —	x̄° ğ̄° —	ḫ —
F		Ft													
P			Pʒ Pc'	Ps Pz —	Pŝ Pẑ Pŝ'	Pš Pž —	Pł Pl Pƚ'	(Pg') Pk''		Px' Pγ' —		Pq'	Px̄ Pğ̄ —	Px̄° Pğ̄° —	
T								Tk''	Tk'°°	Tx'	Tx°		Tx̄	Tx̄°	Tḫ
S		St Sd						Sg' Sk''	Sk° Sk'°°				Sx̄ —		Sḫ —
Ŝ , Š		Ŝt						Šg' Šk''	Šk'°°	Šx'	Šx°		Ŝx̄ Ŝğ̄ —	Ŝx̄° —	Ŝḫ —
L	(Lp)								(Lk°)		Lx°	Lq'	Lx̄		Lḫ
X̄			X̄c	(X̄s)		X̄š									

Triconsonantal Segments	FINAL COMPONENTS				
INITIAL COMPONENTS	t	k' k''	k'°°	x̄ —	ḫ —
PS	PSt	PSk' PSk''			
PŜ, PŠ	PŜt		PŠk'°°		PŜḫ
ST				STx̄	

exception is *PSk'*, which is not paralleled by a segment **Sk'* (but cf. *Sk'* and *Sg'*).

25. *The Segments ja and wa.*

As was set forth in § 15, morphemes consisting of a segment *ja*, *wa* or *ha* can have alternants *-aj*, *-aw* or *-ah*. Now that *a* no longer symbolizes a vowel phoneme but a feature of openness in a segment, the transcription *-aj*, etc., can no longer be taken as indicating an inversion of phonemes in a sequence. The transcription can be maintained, but it must be understood as indicating a particular kind of juncture between a segment *Σ(a)* and a following segment *ja*, etc., which can be called *fusional juncture*.

As a result of fusional juncture, the notiatons *Σaj*, *Σaw* can refer to two morphologically different states of affairs: in part of the cases a segment *Σ(a)* is combined with a fused segment *ja* or *wa*, resulting in *Σ-aj*, *Σ-aw*, and in part of the cases a segment *Σa* is combined with a segment *j* or *w*, resulting in *Σa-j*, *Σa-w*, where there is no fusion but a plain combination of an open and a close segment. Yakovlev (1923, 1927) does not distinguish the two types of sequences in his transcription. In careful speech, however, there is at least a facultative distinction between such pairs of words as *d'-aj* 'nut tree' and *d'a-j* 'coating the walls of a house *j* together with *da-* (someone)'. The difference consists partly in the degree of openness and the length of the vowel, partly in the degree of muscular tension in the final laryngal. The variants of *d'-aj* run from a long vowel to a halfdiphthong, whereas *d'a-j* can be pronounced as a full diphthong with a slightly more open vowel and a stronger second component (phonet. *dæj*). The same distinction (apart from the initial consonant) can be made between *Ps'-aw* 'all' and *ŝ'a-w* 'thrusting *w* (something) under *ŝ'a-* (something)' (phonet. *ŝ'æw*). Cases like *d'a-j*, *ŝ'a-w* are rare; in word-final position they are limited to imperative and participial forms of the verbs *j* 'coating the walls of a house with clay' and *w* (only with prefixes) 'beating', 'thrusting', verbs which are themselves not common, the first because of its meaning, the second because in most

combinations it appears in the form *wa*. In phonemic notation the above distinctions can be expressed by using the symbol ":" to separate segments in the cases of the type *d'a-j*, *ŝ'a-w* as follows: *d'a:j*, *ŝ'a:w*. No confusion can arise from the fact that ":" is also used to indicate non-syllabic juncture, because in the latter case this symbol can never be found after the symbol *a*, non-syllabic juncture being possible only between two segments the first of which is either close (cf. §20) or fused (e.g. *daj:c'k'°* 'little *c'k'°* nut-tree').

A sequence *Σaj*, *Σaw* containing a fused segment *ja*, *wa* behaves with regard to juncture and stress in the same way as any sequence *Σ(a)Σ*, cf. for the stress *ž'am* 'cow', *žam'ẑ* 'old cow' and *d'aj* 'nut-tree', *daj'ẑ* 'old nut tree', and for juncture *žamẑ'f* 'good old cow', *žam:c'k'°* 'little cow' and *dajẑ'f* 'good old nut-tree', *daj:c'k'°* 'little nut-tree'. As these examples show, a fused segment can be stressed (*daj'ẑ*)[9] and be in syllabic (*dajẑ'f*) and in non-syllabic (*daj:c'k'°*) juncture with a following segment.

Due to the identical behavior of sequences that involve a fused segment and sequences that do not, morphologically different sequences of the type *Σ-aj* versus *Σa-j* can also be observed in positions other than word-final, and are here actually more frequent, as the cases not involving fusion are not limited to the above-mentioned verbs *j* and *w* but include any unit beginning in segments *j* or *w*, cf. *žaj'n* 'to sleep *ž-aj*' (inf. suffix *-n*) versus *ẑa:j'n* 'large *jn* mouth *ẑa*'. In these cases the distinction is less clear and more easily dropped than in word-final; it is clearest when the first segments contains a uvular or pharyngal, cr. *ǧaj'n* 'to lament *ǧ-aj*, inf.' (phonet. *ǧej'in*, *ǧæj'in*) and *(ja)ǧa:j'n* 'to cause *ǧa-* (him) to coat *j*' (phonet. *jeǧæj'in*, *jæǧaj'in*). The difference consists in the fact that in the case with fusion the vowel has closer variants (stronger influence of the feature of palatalization in *j*), whereas in the case without fusion the vowel is more strongly influenced by the preceding consonant, and consequently, with a preceding uvular, has more open variants. If a dental, alveolopalatal, palatoalveolar or labialized palatovelar precedes it is doubtful whether a distinction

[9] Cf. §19 fn. 6, where the word "consonant" may now be replaced by "segment".

can be made in not artificially careful speech; if the preceding consonant is palatalized (including the laterals, where palatalization is not phonemic) the two kinds of sequences are not distinguished. The situation here is similar to the one discussed in §23: in a series of morphologically identical cases a distinction is sometimes made and sometimes absent, and in some cases clearer than in others. This sliding scale, from a clear distinction to no distinction, can be described in phonetic terms. Here, as in §23, we shall agree to express the distinction in all the instances of the morphological class in some members of which the distinction is observable, i.e., we write *Σa:j* in all cases which are of the morphological type *Σa-j* (as opposed to *Σ-aj*).

26. *The Segment ha.*

In chapter IV "long ā" was analyzed as a sequence *ha* or *ah*. As the choice between these two was determined by position (resp. syllable-initial and syllable-final), at that point the objection might have been raised that the two were in complementary distribution. Our subsequent analysis, which led to the elimination of vowel phonemes and to the replacement of "phonemes" by "segments", has changed this situation. The non-fused segment *ha* and the fused segment *ah* are not in complementary distribution, cf. *mhˈažar* 'this *m*- billy-goat *haža*, abs. *-r*' versus *mˈahžar* 'the comb, abs.' (phonetically resp. *məˈāžær* and *mˈāžær*).[10]

In certain cases (to be defined morphologically) a segment *Σa* loses its feature of openness before a following segment *j* or *w*, i.e., the combination results not in *Σa:j*, *Σa:w* but in *Σj*, *Σw*. This is the case, among others, when an unstressed open segment is followed by the stressless modal case-suffix *-w*.[11] Thus, the modal

[10] Cf. also *Pˈhar* 'men, abs.' versus *Pˈahr* 'the one who died, abs.', where in both cases the initial segment is stressed.

[11] The Kabardian dialects vary in the treatment of the modal ending. In some it is always *-wa*, in others there are alternating forms *-wa*/*-aw*, while still others have *-wa*/*-w*. The dialect treated here (that of LC) belongs to the last group; it has *-wa* after stressed and after fused segments, e.g. *Pˈwa* 'man, mod.', *dˈawa* 'nut, mod.', *bˈajwa* 'rich, mod.', *kʼəˈahwa* 'having gone, mod.', and *-w* after unstressed, non-fused segments, e.g. *Pˈžw* 'old man, mod.' and the examples given in the text.

case of *w'na* 'house' is *w'nw*. As a result of this, the plural suffix *-ha* can lose its open feature, cf. *ǧ* 'weeping', *ǧ'ha* 'id., by several subjects', *ǧ'hw* 'id., modal case' (phonet. *ǧ'yhvw*, *ǧ'yhū*). When such a sequence *-hw* is preceded by an open segment, the symbol ":" is again needed to distinguish a non-fused from a fused sequence (cf. §25), e.g. *k'°'a:hw* 'going *k'°a*, plur., mod.' (phonet. *k'°'ohvw*) versus *ŝ'ahw* 'they *-ah-* thrust *w* it under *ŝ-* it' (phonet. *ŝ'āw*).

The examples of the use of ":" for non-fusional juncture are here summed up. It can be seen from the list that in this application the symbol ":" can be dispensed with if morpheme-borders are indicated:

Phonetically	Phonemically	Morphologically	Meaning
dē(j)	*d'aj*	*d-aj*	'nut tree'
dæj	*d'a:j*	*da-j*	'coating together with...'
πs°õ(w)	*Ps'aw*	*Ps-aw*	'all'
ŝ'æw	*ŝ'a:w*	*ŝ'a-w*	'thrusting under...'
ŝ'āw	*ŝ'ahw*	*ŝ'-ah-w*	'they thrust it under it'
k'°'ohvw	*k'°'a:hw*	*k'°a-h-w*	'going, pl., mod.'

Examples with a fused segment *ah* which would parallel cases like *d'aj – daj'ẑ* cannot be given. For such a case to present itself there would have to be an IC *Σah* which could be combined with a non-stressless morpheme *Σ(a)*. The only cases where the construction of such a combination would seem possible would be those with the suffix *-ah* 'past tense' (cf. §15, end). For instance, in combination with *la* 'painting' this suffix yields the form *l'-ah* 'having (been) painted[12]'. Since the past-tense suffix is not a stressless suffix (cf. *k'°až'ah* 'having gone *k'°a* back *-ž*', but *k'°'ažha* 'going back, plur.' with stressless *-ha* 'plural'), the combination of this form with *ẑ* 'old' would have to result in **lah'ẑ*. The informants understand this form as "with an old cover of paint" (LC: "s staroi pokraskoi")

[12] The verb *la* 'painting' is both transitive and intransitive, hence the two meanings of *l'-ah*.

and pronounce it, upon request, *l'ā'əẑ*, but forms with the past tense suffix *-ah* do not enter into such combinations and the example is artificial[13].

Otherwise, segments *ha* occur only (a) as initial segments in plurisegmental units, eg. *h'ada* 'father', *had'γ'a* 'Circassian'; (b) as a prefix expressing plural number; (c) as a connective.

a. The combination of a morpheme consisting of a single segment and a unit beginning in *ha-* gives the same result as it does in the case of units beginning in other segments, cf. *mh'adar* 'this *m*-father, abs.' (phonetically *mə'ādœr*), *jh'ažar* 'his *j*- billy-goat' (phonet. *ji'āžœr*), *zhad'γ'a* 'one Circassian'. In the 3d sing. possessive form of the words *h'ada* 'father' and *h'ana* 'mother' there are alternative forms with fusion: *j'ahdar*, *j'ahnar*. When a plurisegmental IC is combined with another plurisegmental unit beginning in *ha-*, the latter always appears in fused form, cf. *ŝq'°'ahda* 'father of wife' (*ŝ'q'°* 'wife's family' and *h'ada* 'father'), *had'ahna* 'parents' (*h'ada* 'father' and *h'ana* 'mother'), with the usual neutralization of the opposition *a-zero* in the segment preceding the fused one. As these examples show, the fused segment *-ah-* is stressless. When the preceding segment is not stressed, IC-initial *-ah-* is reduced to an open feature in that segment, e.g. *ŝq'°ad'aẑ* 'old father-in-law (of husband)'.

b. c. As a prefix and as a connective, *-ah-* is governed by the rule stated in § 20, fn. 9 (2nd paragraph) for certain prefixes and for all connectives. Due to this rule and to the fact that cases like **lah'ẑ* are excluded, while IC-initial *-ah-* before the stress is reduced to *a*, fused *ah* is always in non-syllabic juncture with a following segment, so that the symbol ":" is superfluous after *ah*, the only possible pronunciation of a sequence *Σ-ah-Σ* being *ΣāΣ*. Unlike IC-initial *-ah-*, the plural prefix *-ah-* is never reduced and always

[13] An adjective, e.g. *ẑ* 'old' can be suffixed to nominal stems; forms in *-ah* 'past' are excepted in spite of the fact that they are nominal stems. The only Kabardian noun ending in *ah* is the word *b'ah* 'kiss' (borrowed from Turkic-Arabic *bâh* 'kiss" (thus in Balkar) and connected by popuar etymology with *b'ahwa* 'breathing'); the word is used only in the expression *b'ah x°aŝ'n* 'to kiss, trans.' (lit. 'to make/do *ŝ'-n* to *x°a-* (someone) *bah*'), where it does not enter into further combinations.

appears in this form regardless of the position of the stress. For connective *-ah-* cf. §32 (particularly fn. 4) and 34.

27. *Conclusion.*

The Kabardian word as a phonemic unit, i.e., a unit in the plane of form or expression, can be completely described in terms of the following elements: (a) *segments*, made up of buccal features (*P*, *F*, etc.), mouth-resonator features (′, °, *a*), and a laryngeal feature (ʿ, ˜, or ʾ)[14]; (b) *juncture*, comprising two categories: syllabic vs. non-syllabic (:) and fusional vs. non-fusional (:); and (c) *stress* (ˈ). The notation achieved in this way is in all cases unambiguous, i.e., it can be mechanically converted into a phonetic transcription of any degree of precision; on the other hand, it indicates more than is justified on phonetic grounds alone in some of the cases where it distinguishes between a single segment and a sequence of two segments in non-syllabic juncture (§23) and in some of the cases where a sequence involving a fused segment is distinguished from one that does not (§25).

Our investigation was limited to the word as such. A complete set of symbols for the phonological structure of Kabardian would have to include a symbol for juncture between words, possibly a symbol for juncture between words and enclitics[15] and several

[14] It is worth pointing out that the voiceless consonants cannot be regarded, in our system, as the unmarked (or zero-) counterparts of the voiced ones, or vice versa. Both contain a positive feature. If one would drop the symbol, say, for voicelessness from the notation, the representations of the segments *p*, *t*, etc., and of segment-initial *P*, *T*, etc., would coincide, causing failure to differentiate words like *pˈahŝ* and *Pˈahŝ* (cf. §18).

[15] Enclitics have no stress of their own and do not influence the position of the stress in the word they follow. In this respect they act like endings. But with regard to juncture they act like separate words, e.g. the enclitic *kʾ′ŝʾa* 'as long as' (phonetically *kʾ′išʾæ*) has a syllabic juncture between *kʾ′* and *ŝʾ* where in the postaccentual part of the word there would be an automatic non-syllabic juncture (§17). The enclitic *j* 'and' does not coalesce with a preceding *j* (§17, fn. 2) and is in the dialect of LC pronounced *ī* after any preceding sound, thus giving rise to unique sequences (e.g. in combination with *da* 'agree!' the result is phonetically *dˈæī*, different both from *dˈaj* and from *dˈa:j* (§25), and unique in having *ī* after a vowel). The Kabardian dialects vary in the treatment of this enclitic; that described by Yakovlev has *j* and not *ī* in cases like the one

symbols for sentence-intonation. These aspects of Kabardian phonology lie outside the scope of the present study.

A few final examples may demonstrate the way in which various statements made within the framework of the traditional analysis are affected by the change to the present system.

In the traditional analysis the word *dajẑ* (phonet. *dē(j)ẑ*) 'he *-aj-* combs *ẑ* it together with *d-* him' consists of four phonemes. The word ends in a consonant-group *-jẑ*; the stress falls before this final consonant-group, but it need not be written as there is only one syllabic. The word contains three morphemes: *d-aj-ž*. The first morpheme has an alternant *da-* (cf. *da-ẑ* 'comb it together with him') the choice of the alternant *d-* is automatic before *-aj-*. The second morpheme has an alternant *ja-* (cf. *ja-ẑ* 'he combs it'). The choice of the alternant *-aj-* is not automatic but depends on the morphological status of the element in question (*Rule*: non-initial prefixes *ja-*, *wa-*, always change to *-aj-*, *-aw-*). The final morpheme has an alternant *ẑə* (cf. *ẑə-n* 'to comb'); the choice of the alternant *ẑ* is automatic in postaccentual position, but this presupposes that the position of the stress is given, cf. the comparable word *mawbˈə* 'that one (near you), rel.', where the final morpheme is stressed. The position of the stress is not automatic but depends on the morphological status of the elements that make up the word (*Rule*: demonstrative prefixes such as *maw-* are stressless, hence *mawbˈə*, determinative prefixes such as *d(a)-* are not, hence *dajẑ*).

In the traditional analysis the word *dajˈəẑ* (phonet. *dejˈiẑ*) 'old *ẑ* nut-tree *d-aj*' consists of five phonemes. The stress again falls "before the last consonant of the word", but it must be written since there are two syllabics and the position of the stress is not predictable on phonetic grounds alone (§ 19). The word consists of three morphemes: *d-ajə-ẑ*, the second one has an alternant *-aj* (cf. *d-aj-cˈˈəkˈ°* 'little nut-tree') and an – in this case hypothetical – alternant *ja*. The choice of the alternant *-ajə-* is not automatic but depends in the first place on the morphological status of the ele-

just mentioned (1948:260, 340). Due to their meanings the enclitics are probably always combined with special features of phrase- and sentence-intonation ("coordinate members", etc.); for our purpose it suffices to signalize the problem.

ment in question (*Rule*: a prefix *ja-* has no alternant; morphemes *ja* have such an alternant). In the second place, the choice of *-ajə-* depends on the makeup of the word in terms of IC's: this alternant appears when the morpheme is the final member of a larger IC which is combined with another IC containing not more than one single consonant or cluster, provided that this other IC belongs to the category that influences the stress (cf. *d-aj'ə-ẑ* versus *d-aj-ŝ* 'it is a nut-tree' with the stressless predicative ending *-ŝ*).

In the present system the above two words are written *d'ajẑ* and *daj'ẑ* respectively. Both consist of three segments, the second of which is fused: *d-aj-ẑ*. Each segment is a morpheme. The first one of these has an alternant *da-*, the choice of *d-* is automatic before *-aj*. The final morpheme has no alternants. The second morpheme has an alternant *ja* (in the second word hypothetical). The choice of the alternant *-aj* is not automatic, but depends on the morphological status of the element in question (*Rule*: a non-initial prefix *ja-*, and the morphemes *ja* 'that of . . .', *ja* 'bad', etc., as final member of an IC, appear in fused form). The difference between the two words consists solely in the position of the stress: in *d'ajẑ* the initial segment is stressed, in *daj'ẑ* the second segment (cf. § 19, fn. 6). The position of the stress is not automatic (*Rule*: the stress falls on the prefinal segment of the word not counting stressless morphemes). In *d'ajẑ* the fused segment, being a prefix, is stressless (*Rule*: §20, fn. 9), in *daj'ẑ*, where it is not a prefix, it influences the stress.

The complication that is present in the material must, of course, be reflected in any description. But it turns up in different places. The present treatment has the advantage that the phenomena are described in terms of fusion and stress, both of which are needed in the description of the Kabardian word in any case, and that it eliminates the alternations *ẑ/ẑə* and *aj/ajə*. In the words under discussion the appearance of *ə* is automatic; in cases where it is not, it is in the present system a question of juncture rather than of morpheme-alternants. In this way, the awkward statement on the choice of *-aj-* vs. *-ajə-* is replaced by a simple statement on juncture between plurisegmental constituents.

Those "consonant-groups" of the traditional system which in §8

were defined as "clusters" appear in our analysis as "segments". The remaining groups, i.e. those beginning in *m, n, r, j, w, h,* do not figure as groups but as sequences of two segments in non-syllabic juncture. Now, in the traditional "order of description" first the phonemic makeup of a word (including *ə*) is given, and then the stress is defined as falling on the vowel preceding the last consonant or cons. group (not counting certain affixes). In the word *Šk'°ˈəmp'* 'bad egg', lit. 'crush *Šk'°ə* -shell *p'*" the stress follows the rule, but some statement must account for the fact that the morpheme *-m-* (meaning vague) in this combination appears in the form *m* and not *mə*, cf. *wəmˈəp'* 'don't *-mə-* you *wə-* educate *p'* (him)', where another morpheme with *m* in a comparable position in the word appears as *mə*. This becomes a lexical matter: besides the morphemes with the usual alternation *C/Cə* one has to have a class of morphemes that have no alternant with *ə*. In our interpretation (*Šk'°ˈmp'* versus *wmˈp'*) there are two homophonous morphemes *m*; the difference between them consists in the fact that the first one is stressless whereas the second one is not – the situation is exactly the same as in *dˈajẑ* versus *dajˈẑ*. The "morphemes without an alternant in *-ə*" are for us stressless and always in non-syllabic juncture with a following segment. This class of morphemes contains certain prefixes and the connectives (cf. § 20, fn. 9), elements which occupy a special place with regard to the makeup of a word in terms of IC's.

SECOND PART

THE MORPHEMIC UNITS

VII

SUBSEGMENTAL MORPHEMES

28. *Extrovert and Introvert Forms.*

In the first part of this study the Kabardian word was examined from the point of view of its phonemic units. The *segment* was established as the smallest recurrent unit above the level of the phonemic feature. In the second part the investigation is continued from the point of view of the morphemic units. First will be examined the subsegmental morphemes, i.e. morphemes consisting of part of a segment[1].

Very frequently the alternation of a close and an open segment – i.e. of *zero* versus *a* – corresponds to certain differences in meaning which fall into several categories but can be brought under a common denominator. The following cases can be distinguished:

a. The difference consists in direction outwards (*zero*) versus inwards (*a*) of an action or process, e.g. *š* 'leading (out of)' vs. *ša* 'leading (into)'; *ʒ* 'throwing (out of)' vs. *ʒa* 'throwing (into)'.

b. The difference consists in directedness of an action or process towards a goal (*zero*) versus objectless action (*a*), e.g. *g'* 'spinning, transitive' vs. *g'a* 'id., intransitive'; *Tx'* 'writing, trans.' vs. *Tx'a* 'id., intr.'; *j)a-Pł* 'looking (intr.) at him *ja-*' vs. *Pła* 'looking'.

c. The difference consists in attributive or "case"-form (*zero*) vs. adverbial form (*a*), e.g. *z* 'one', *ŝ* 'three' vs. *za* 'once', *ŝa* 'three times' (so with all numerals from 1 to 10); cf. further the relative endings *-m* and *-ma* in *l'ˈ-m jaStˈnwŝ* versus *l'ˈ-ma jaStˈnwŝ*, both meaning 'man *l'* in-relation-to *-m(a)* I shall give it to him *ja-*', with the difference that *-m* points outward to another word in the syntagm and is taken up by the indirect-object prefix *ja-* 'to him', whereas *-ma* signifies the absence of such a direct relation and gives the

[1] Cf. the alternation of voiceless and voiced consonants in English *use, house, wreath* versus *to use, to house, to wreathe*, where one can speak of a "subphonemic" or "subsegmental" morpheme.

word an "adverbial" status. The English equivalent of the first sentence is 'I shall give it to the man', that of the second 'I shall give it to him if he is (behaves like) a man'. In the same way, the absolutive suffix is *-r* as indicator of the subject-case,[2] but *-ra* in certain adverbial suffix-combinations, e.g. *k'°ˈa-wa-ra* 'while going'.

In all these cases a *zero*-form pointing outward (a) in space, (b) to a grammatical object, (c) to another closely connected word in the syntagm, is opposed to an *a*-form that does not. Where such an opposition exists, the *zero*-form is called the *extrovert* form of a morpheme, the *a*-form the *introvert* form.[3]

The alternation *zero-a* is not found in all cases where the above-mentioned differences in meaning are present, e.g. *la* 'painting' is both transitive and intransitive and covers the use of both *g'* and *g'a* (see above under b); the same is true of *Pǩ* 'strewing', 'sowing'. Nor is an alternation of *zero-* and *a-* forms necessarily accompanied by the introvert-extrovert distinction in the content, cf. the etymologically related verbs *Ŝt* 'freezing' and *Ŝta* 'being frightened', which are both intransitive. In spite of this, the alternation is a living process in Kabardian; it is characteristic that in cases of conflict between the distinctions mentioned under (a) and (b) above, the distinction (a) has preference: one says *x'ˈa-Tx'a* 'registering', 'entering (a word into a book or list), trans.', literally 'writing it into a mass or group *x'a-*', where the inward direction of the action requires the introvert form *Tx'a*, even though the form is transitive and the morpheme for 'writing' in other cases can have the extrovert form *Tx'* according to the distinction (b). The alternation is by no means universal in the larger morpheme-categories of verbs and adjectives, but it is found in all the members of the limited morpheme-class containing the numerals from 1 to 10, and in the whole system of relational suffixes: extrovert abs. *-r*, rel. *-m*; introvert abs. *-ra*, rel. *-ma*, and in the "peripheral" cases[4]: modal *-wa* and instrumental *-k'a*.

[2] The Kabardian subject corresponds in general to the English subject of intransitive and object of transitive verbs.

[3] Yakovlev uses the tems "centrifugal" and "centripetal", cf. 1941:40, 1948:81.

[4] Cf. Jakobson's fundamental article on the general theory of cases (1936).

29. *Other Cases of Alternation Zero–a.*

There are many cases where forms distinguished by presence versus absence of *a* have an element of meaning in common, but where the relation is not so close as in the examples given in §28. In many cases it may have been so at one time, but the two forms have drifted apart. The simplest deviation consists in a narrowing or extension of the meaning in one member of a pair which the other member does not share. For instance, *Pž(a)* means 'counting', trans. and intrans. respectively, but only *Pža* is also found in the meaning 'bewailing (a dead person)', cf. *ğ'Pža* 'weeping-bewailing, intr.' (*ğ* 'weeping') and the noun *ğr:Pž'ar* 'crybaby'. The words *l'* 'stifling to death', 'tearing to pieces' (about wild animals; trans.) and *l'a* 'fading', 'withering', 'dying' (intr.) are farther apart, though both the common element of meaning and the opposition extrovert-introvert are clear. In *ŝ'* 'earth', 'land', 'soil' and *ŝ'a* 'bottom', 'lower part' (cf. also the prefix *ŝ'(a)-* 'under') the common element of meaning is further reduced and the difference *zero-a* does not correspond to any definite feature in the content. The same is true of the forms *Ŝt* and *Ŝta* quoted in §28.

There are also many cases where the difference *zero-a* distinguishes morphemes with completely unrelated meanings, e.g. *m* 'wild apple' and *ma* 'smell', *ğ* 'weeping' and *ğa* 'year', 'season'. But such cases are not more numerous than those where identical segments are found with unrelated meanings, e.g. *š* 1. 'horse', 2. 'kinsman', 3. 'milking', 4. 'leading (out)', etc. Furthermore, in the majority of cases a morpheme which independently or in productive combinations appears in one of the two forms is found in certain fixed compounds in the other, cf. *l* 'blood' but *l'a-Pq'* 'tribe' (lit. 'blood-stem'), *l* 'meat' but *l'a-Ps* 'bouillon' (lit. 'meat-water'), *f'* 'good' but *g°'-f'a* 'rejoicing' (lit. 'heart-good'), *ʒa* 'tooth' but *ʒ'ğ°a* 'mouse' (lit. 'tooth-gnaw'), *-la* suff. 'container' e.g. in *Ps'-la* 'water-vessel', *Tx̄°'-la* 'butter-container', etc., but *Tx'-l* 'letter', 'book' (lit. 'writing-container').

A number of prefixes have forms with and without *a* according to whether or not they are the last segmental prefix before the base of the word (i.e. not counting the person-prefixes *S-*, *P-*, *T-*, *F-*, cf.

§30). For instance, the direction-prefix *q'(a)-* appears as *q'a-* in *q'ˡa-t* 'give it here!', *q'a-P-tˡ-n* 'your *-p-* giving it here', but in its close form in *q'-zˡa-t* 'give it here to me *-za-*', *q'-za-P-t-ˡn* 'your giving it here to me'.[5]

A few morphemes require the feature *a* in a preceding segment, e.g. *-ŝ* 'lodging',[6] cf. *š* 'horse', *ša-ŝ* 'horse-stable', *g'ˡad* 'chicken', *g'adˡa-ŝ* 'chicken-coop', and *-ğ°* 'companion',[7] cf. *nˡPẑ* 'age', *nPẑˡa-ğ°* 'age-companion', *dˡğ°* 'thief', dğ°ˡ*a-ğ°* 'thief's mate'.

In §26 mention was made of the fact that before certain morphemes *j* and *w* a segment loses its feature *a*. The opposition *zero-a* is neutralized before *ḫ* (§4) and before a fused segment (§15). From this, in combination with the phenomena discussed in the last two sections it follows that the meaning of a unit *Σ(a)* is connected primarily with its "consonantal" features and only secondarily with its character in terms of open vs. close.

30. *Subsegmental Prefixes.*

The prefixes for 1st and 2nd person singular and plural, which were discussed in § 10 and § 11 (end) form another category of cases where a feature of a segment – in this case an initial consonantal feature – has morphemic status. There are also segmental personal prefixes, which are used in other morphological functions than the subsegmental ones. For the sake of comparison, the segmental and subsegmental personal prefixes and the corresponding personal pronouns are here summed up:

[5] The terms *prefix* and *base* have to be defined morphologically (cf. Kuipers 1955:200). All Kabardian dialects have prefixes which always consist of a close segment, prefixes which always consist of an open segment, and prefixes with alternation according to the above rule, but the dialects vary in their distribution of prefixes over the latter two categories.

[6] This suffix is etymologically related to the prefix *ŝ-* indicating location and to the root *ŝ* 'being', cf. *j-ah-ŝˡ-ŝ* 'one of them', lit. 'being *-ŝ* at their *j-ah-* location *ŝ-*'.

[7] Otherwise than as a suffix this morpheme is found in the compounds *ğ°ˡ-sa* 'companion', *ğ°ˡ-na* 'edge', 'border' (cf. also *ğ°nˡa-ğ°* 'neighbor', lit. 'border-companion'); etymologically, *ğ°* in this sense may be related to *Pğ°* 'side', cf. §30.

	Segmental		Subsegmental	Pronoun
	Initially	Medially		
1 sing.	*s(a)-*	*-z(a)-*	*S-*	*sa*
2 sing.	*w(a)-*	*-(a)w-*	*P-*	*wa*
1 plur.	*d(a)-*	*-d(a)-*	*T-*	*da*
2 plur.	*f(a)-*	*-v(a)-*	*F-*	*fa*

The subsegmental prefix consists of the buccal feature found in the corresponding segmental prefix and pronoun except in the 2nd person sing., where *P* corresponds to a feature of labialization.

Besides these personal prefixes there are a number of cases where a segment-initial *P-* (seldom *T-*) is apparently of secondary origin, cf. *Pʒa* 'chisel' and *ʒa* 'tooth', *Pŝ* 'measuring (dry substances)' and *ŝ* 'measuring (spaces)', *Pğ°* 'side' and the first element in *ğ°ˡ-na* 'edge', 'border', *Pq'* 'frame', 'bone' and *q'* 'being stunned', 'stony ground', *Pla* 'burning', 'shining' and *l* 'burning', *Tx̄°a* 'scraping asunder' and *x̄°a* 'filing'. No meanings, however vague, can be stated for these segment-initial components[8]; from a synchronic point of view *Pʒa*, etc. may be considered to be single morphemes.

31. *Conclusion.*

There are two categories of cases where a feature of a segment has a clearly definable morphemic status: (1) in the pairs distinguished as extrovert (*zero*) versus introvert (*a*), and (2) in segments containing a personal prefix *S-*, *P-*, *T-*, or *F-*. In the latter cases it is useful to separate the prefix from the rest of the segment in morphophon-

[8] The segment-initial components may be of various origin. In some cases a *P-* or *T-* initial developed phonetically between a nasal connective (cf. §33) and a following segment, e.g. in *tˡnTx°a* 'vein' (cf. *t* 'blood' and *x°a* 'sinew'), **g°ˡmk'a* > *g°ˡPk'a* 'back part *k'a* of a cart *g°*', *Px̄ˡamPğ°*/*Px̄ˡaPğ°* 'plank', 'board' cf. *Px̄a* 'wood' and probably the abovementioned morpheme *(P)ğ°* 'side', cf. also *Pğ°a* 'broad', *wˡPğ°* 'spreading, trans.'. Once such an epenthetic *-P-* or *-T-* had developed, it may have been retained in other positions (cf. Greek **ἄμροτος* 'immortal' > ἄμβροτος, from which βροτός 'mortal' and subsequently ἄβροτος 'immortal'). – In other cases a segment-initial *P-* may result from a merging of two segments (cf. §31). The subsegmental personal prefixes doubtlessly go back to segmental forms, and the alternation *w(a)-*/*P-* suggests that e.g. in *Pŝ* 'measuring' *P-* may go back to the unproductive but frequent verbalizer *w-*. (cf. Dumézil 1939[a]).

emic notation: *S-x'ˡ-n* 'my reaping it', *P-x'ˡ-n* 'your reaping it', etc., where *P-x'ˡ-n* is phonemically identical with *Px'ˡ-n* 'to card' (*S-Px'ˡn* 'my carding it', etc., cf. §10). On the other hand, it is pointless to separate *a* from its segment in morphophonemic notation, as in principle any segment-morpheme can have forms with and without *a*; and even if one would limit such a separation to the clearcut cases discussed in §28, then all the notation *g'-a*, etc., would achieve would be to convey that this is an introvert form which has an extrovert counterpart under some regular heading "(trans. – intrans.", "elative – illative", etc.), while the same type of information could not be conveyed in the opposite case, namely that of extrovert forms like *g'*. It is preferable to speak in all cases of the "close" (or extrovert) and "open" (or introvert) forms of the same morpheme, and not to set up a separate morpheme *a* 'introvert'.[9]

Other cases of partial phonemic-semantic resemblance of segments are rare and isolated, e.g. *k°* 'core', 'center' and *g°* 'heart', *Ps* 'water' and *jˡa-Pz* 'slops' differ in their laryngeal feature only (for the latter word cf. *ja* 'bad'?). In a few cases a pluriconsonantal segment evidently originated from a merging of two simpler segments, cf. *Lḫa* 'laying down' (*l* 'lying' and *ḫ(a)* 'carrying', so: 'to ly-carry'); *Psk'* 'washing', 'bathing' (*Ps* 'water' and *k'ˡa* 'pouring'); *PŜt* 'coming to a boil', 'rising' (said about milk; *Pŝŝ*

[9] Otherwise Yakovlev, who (1948:305 f.) distinguishes five different suffixes *-ə* and *-a* each: (a) trans.-intrans.; (b) attrib. and adverb. numerals; (c) elative and illative verbs; (d) petrified "case"-forms, as required in certain combinations; (e) case-forms in pers. pron. and prefixes. For (a)-(c) cf. §28; (d) comprises cases like *lˡa-Ps* (§29), where an interpretation 'water in the meat' (*sic*; better Yakovlev 1927:IX: 'water to the meat') is possible; in (e) the *a*-forms of the personal elements are classed as casus rectus and the close forms as casus obliquus. To this the objection must be made that the *a*-form, which characterizes not only the independent pronouns but also the indirect-object prefixes, can hardly be designated as casus rectus versus the close form, which characterizes the subject-prefixes. On the other hand, this state of affairs is covered exactly by the terms introvert-extrovert as defined in §28: the subject-prefix is closely connected with the action-expression; it is the only prefix that cannot be absent from such an expression. The indirect object, and the facultative independent reference to a person (subject, actor, various kinds of object) outside the verbal complex are clearly of a more peripheral nature, hence the introvert form. It seems arbitrary to regard either form as "unmarked", and therefore we prefer to proceed as suggested above.

'swelling' and a segment *t* which may be identified with the unproductive verbal suffix *-t(a)* with a vague meaning, sometimes 'up', 'on'); *j*$^{|}$*-PŜḫa* 'creeping into a cavity *j*-' (*Pŝ* 'creeping' and *ḫa* 'going', 'entering', so: 'to creep-enter'); the suffix *-Pz* referring to the female of a species (*š* 'horse', *š*$^{|}$*-Pz* 'mare', etc.) may be a contraction of the bisegmental unit *f*$^{|}$*z* 'woman'; the suffix *-Pc'a* in *Pzw*$^{|}$*-Pc'a* 'black thrush' (cf. *Pz*$^{|}$*w* 'bird', *Pzw*$^{|}$*-Ŝx̄°a* 'grey thrush' and *Ŝx̄°a* 'grey') a contraction of *f'*$^{|}$*c'a* 'black'. This summing-up exhausts the more or less transparent cases; though each instance is isolated in itself, the group as a whole shows that merging of segments, when it took place, happened in cases where the result could conform to the general rules for the structure of segments stated in §24. Like the segments with a secondary *P-* or *T-* (§30), those which can be shown to result from a coalescing of two segments may be regarded as single morphemes.

VIII

CONNECTIVES

32. *Connective -ah-.*

Very frequently a sequence of two open segments ($\Sigma a \Sigma a$) appears in the form Σˈ*ah*Σa if the first segment is stressed. In the traditional terminology this state of affairs is expressed by the statement that "the vowel *a* changes to *ā* when stressed and followed by a syllable which contains the vowel *a*". From our point of view, a stressless fused segment *-ah-* is inserted between two open segments the first one of which is stressed. For instance, the combination of the segments *fa* 'hide', '*skin*' and *ğ°a* 'dried out', results in *f*ˈ*ahğ°a* 'pale', and the addition of the suffix *-ğa* '-ness' to the latter form results in *fağ°*ˈ*ahğa* 'paleness'. Between two segments one of which is close, *ah* does not appear under the abovementioned conditions, cf. *f*ˈ*aẑ* 'old *ẑ* hide', *f*ʾˈ*əğa* 'goodness'.

The segment *ah* does not appear in all cases where the necessary conditions are fulfilled. Phonetically, its occurrence is limited in that it fails to appear if the first of the two segments is or contains *ḫa*, *ha* or *ʔa*, cf. *ʔ*ˈ*aPŝa* 'wrist' (*ʔa* 'arm' and *Pŝa* 'neck') but *l*ˈ*ahPŝa* 'ankle' (*la* 'leg'), *ŜḪ*ˈ*ag°a* 'short-headed', 'hornless' (*Sḫa* 'head') but *p*ˈ*ahg°a* 'blunt-nosed' (*pa* 'nose'). Morphologically, the occurrence of *-ah-* is limited in that it remains absent if the second segment represents a grammatical suffix, and in most cases if the first segment represents a grammatical prefix, e.g. *s*ˈ*ak*ʾˈ*a* 'with a knife' (*sa* 'knife' and instr. suff. *-k*ʾˈ*a*), *d*ˈ*ak*ʾ°*a* 'go *k*ʾ°*a* with him *da-*' (but *q*ʾˈ*ahk*ʾ°*a* 'come here *q*ʾ*a-*!'). Finally, *-ah-* fails to appear in a number of cases which can only be stated in lexical terms. For instance, it is present in the combination *wan*ˈ*ahŝ*ʾ*a* 'saddler' (*w*ˈ*ahna* 'saddle', *ŝ*ʾ*a* 'making'), but not in *wan*ˈ*aŝ*ʾ*a* 'new *ŝ*ʾ*a* saddle'. The segment *ah* practically never fails to appear in compounds with narrowed or transferred meaning, the cases where it remains absent

being limited to combinations *ad hoc*, though in many of the latter it does appear. Two compounds with *k'a* 'tail', 'back part' may exemplify this rule: *wn'ak'a* 'back part of a house *w'na*' but *ẑ'ahk'a* 'beard' (lit. 'mouth *ẑa* -tail').

In a few exceptional cases *-ah-* appears under phonetic conditions other than the ones mentioned above, e.g., it is found in several (not all) combinations with the close segments *ğ* and *ğ°*, cf. *ŝ'ahğ* 'bottom', 'lower part' (*ŝ'a* 'bottom'), *m'ahğ* 'he weeps *ğ*' (cf. *m'aƛ'* 'he behaves like a man *ƛ'*'), *ƛ'ahğ°* 'seeing'.[1]

The material adduced above is sufficient to show that the appearance of *ah* cannot be treated as a purely phonetic phenomenon.[2] It is also impossible to state a hard and fast morphological rule for its occurrence.

The solution to the problem posed by the appearance of the segment *ah* in the abovementioned cases is suggested by a few pairs of compounds where *ah* is absent in one and present in the other member, cf. *n'aŜx̄°a* 'a grey *Sx̄°a* eye *na*' versus *n'ahŜx̄°a* 'grey-eyed'. Such cases suggest a historical connection of *-ah-* with the plural morpheme *-ha/-ah-* (cf. §15). The combination *n'-ah-Ŝx̄°a* meant originally 'eye-s-grey' (cf. English "longlegs"), whereas *n'a-Ŝx̄°a* is simply 'eye-grey', cf. also *wan'-ah-ŝ'a* 'saddle-s-make', 'saddler' versus *wan'a-ŝ'a* 'saddle-new'.[3] In present-day Ka-

[1] The suffix *-ğ* in *ŝ'ahğ* 'bottom' is originally identical with *-ğa* in *f'ğa* 'goodness'. In many cases there are alternative forms, e.g. *f'c'ahğ(a)* 'blackness' (*f'c'a* 'black'). The sequence *-ahğ* has become regarded as a suffix by itself and can be used after close segments, e.g. *f'ğa* 'goodness' has an alternative form *f'ahğ*. Some of the words with *-ah-* before a close segment have alternative forms without *-ah-*, e.g. *ğ'ahğ°/ğ'ağ°* 'causing *ğa-* to dry *ğ°*'. On the other hand, whereas in other cases *-ah-* disappears if the preceding segment is not stressed, it can be retained in the cases just mentioned: *łağ°'n/łahğ°'n* 'to see' (infinitive suff. *-n*), and in some combinations it is never dropped, e.g. in *ŝ'ahğ*. – For *ah* in borrowings cf. §39.

[2] As such it is dealt with by Trubetzkoy (1925:280).

[3] Yakovlev (1923:VIII) quotes the following forms from the dialect of Little Kabarda: *šw'pa* 'the first *-pa* horseman *šw*', *šw'ahpa* 'the horseman in front (of a group)'. This example suggests that in part of the cases the segment *-ah-* 'plural' may originally not have been a suffix of the first, but a prefix of the second element ('cavalry their-first', in Kabardian *š'w j'ahpa*, in W. Circassian *š'w h'ap*). Yakovlev (1923:IX f.) remarks that "the vowel *ă* is a kind of plural-

bardian the meaning 'plural' has faded (in some cases more than in others), and *-ah-* is best described as a *connective*. As such it may have been introduced in cases where originally no plural-morpheme was present, e.g., in *p'-ah-ŝ'a* 'mustache', (lit. 'nose *pa-* bottom *ŝ'a*'). The phenomena as a whole are strikingly similar to those in some Germanic languages, where old grammatical morphemes have likewise developed into connectives (cf. German "Blum*en*garten"), where the occurrence of connectives is also unpredictable ("Meer*es*spiegel" but "Meerbusen", "Bind*e*wort" but "Zeigwort") and where the plural form is often the basis for compounding ("Wörterbuch", "Händedruck"). The only difference is that in Kabardian the appearance of *-ah-* is limited by phonetic factors.[4]

33. *Connective -m-, -n- and -r-.*

Besides connective *-ah-*, there is a much smaller group of cases where a segment *-m-*, *-n-* or *-r-* appears between two segments; like *-ah-*, these elements are stressless. Examples: *Šk'°'mp'* 'bad egg' (*Šk'°* 'squeeze', 'crush' (in compounds only) and *p'(a)* 'shell'), *l'amb* 'footprint' (hollow left in a surface; cf. *la* 'foot' and *b* 'hole', 'hollow' (in comp.)), *ḫanTx̄°'Ps* 'millet soup' (*ḫa* 'barley', in compounds:

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formative and, when appearing at the border between two roots, becomes apparently a morpheme which universalizes the meaning of the whole combination." The present analysis is in agreement with this view, and here again we must reject Trubetzkoy's criticism of Yakovlev (cf. the preceding footnote).

[4] As the cases *ŝ'ahğ*, *l'ahğ°*, etc., show, these phonetic limitations are not absolute, cf. also Yakovlev's example in the preceding footnote from the dialect of Little Kabarda, where *-ah-* appears after a close segment. The "two open segments"-rule is binding for contemporary productive cases, cf. *ŝ'-ah-la* 'milk *ŝa* -container' versus *Ps'-la* 'water *Ps* -container'; it can be extended to fixed compounds like *Tx'-ah-wa* 'kicking' (about horses, lit. 'back *Tx'* -beating *wa*', infinitive *Tx'a-w'a-n*, where the first segment of the compound in unstressed position appears as *Tx'a*. But as the independent form of 'back' is *Tx'*, one could also say that in this compound *-ah-* appears after a close segment, and is reduced to *a* when this segment is not stressed, in the same way as it happens in the cases discussed in §26 under (a). Historically, this may be correct for part of the cases, but it cannot be said with certainty in any particular case, as forms independently consisting of a close segment may have *a* in compounds (§29). The "two open segments"-rule is the simplest way of describing the contemporary facts.

'cereals in general', *Tx̄°* 'butter' and *Ps* 'water'), *q'°ˡ(n)Tx'* 'fishing rod' (orig. 'fish-spear with hook', cf. *q'°* 'handle', 'haft' and *Tx'* 'hook' (in comp.)), *ǧ°ˡrca* 'bad (dry) grass' (*ǧ°* 'drying out' and *c(a)* 'hair', 'wool', in comp. also 'grass'; cf. also *g°ˡahrca* 'fuel of dung and straw' ("kizyak")). In a number of cases these elements are found inserted in compounds the meaning of one member of which is vague, e.g. with *-d* (cf. *š* 'horse' and *šˡd* 'donkey', *d* 'sewing' and *dˡd* 'awl'): *lˡ(n)d* 'shining' (*l* 'burning'), *fˡand* 'wine-skin' (*fa* 'skin'), *vˡnd* 'rook' (*v* 'ox'); with *-ž*: *Px'ˡanž* 'wrong', 'twisted' (*Px'a* 'back part', 'far end'), *Pǧ°ˡnž* 'oblique', 'crooked' (*Pǧ°* 'side'); in *Pˡanła* 'through for dough' (*-ła* 'container') the meaning of initial *Pa-* is unclear, in *Ŝx̄°ˡahnt'a* 'blue-green' (*Ŝx̄°a* 'blue-grey') that of final *-t'a*, etc. Sometimes forms with and without infix exist side by side, cf. *q'°ˡ(n)Tx'*, *lˡ(n)d* above, *šˡa(n)t* 'chair', *g'ˡa(r)š* 'beans', etc.[5]

Some of these cases show clearly that *-m-*, *-n-* and *-r-* go back to the relative (*-m*) and absolutive (*-r*) case-endings (with *m* usually changed to *n* before consonants other than labials). In this way, *lˡamb* is a contraction of **ła-m b* 'foot-rel. hole', 'hole of a foot'. The word *ǧ°ˡrca* may be explained as **ǧ°ˡ-r ca* 'dry-being grass'. The formation of such compounds is not a productive process, and in many cases the original function of *-m-/-n-* and *-r-* is no longer transparent; these elements are therefore best described as connectives. Whereas formations with connective *-ah-* can be compared to German compounds like "Händedruck", those with connective *-m-/-n-* supply a parallel to the German type "Landsmann" (orig. genitive or relative); the few cases with *-r-* stand apart, as does the German third connective in words like "Bindewort".

Connective *-ah-* can appear in combination with one of the other connectives, cf. *Pŝˡ-ah-m-p'a* 'collar' (*Pŝa* 'neck' and *p'a* 'cover'); in present-day Kabardian the plural suffix can be followed by the

[5] The Circassian dialects vary with regard to the presence of these connectives, and these doublets are probably the result of dialect-mixture. Cases of variation in *type* of connective are rare, cf. Kab. dial. *g'ˡarš* 'beans', W. Circ. (Bzhedukh) *ʒ'ančˡ*; Kab. *k°ˡmb* 'hole', 'hollow', W. Circ. *k°ˡmb*, except Bzhedukh, which has *k'°ˡrb* (cf. Kab. *k°* 'core', 'center', as a verb: 'cramming', 'stuffing', and *b* 'hole', 'hollow').

absolutive and relative endings, and a form of this kind may go back to **Pŝ'a-ha-m p'a* 'cover of necks'.

Examples where the presence or absence of a connective makes a difference in meaning, as in *n'ahŜx̄°a* vs. *n'aŜx̄°a* (§32), can be given in only one group of cases involving another connective, namely *-n-*, which in these cases is opposed to connective *-ah-*, cf. *n'-ah-ša* 'squint-eyed' versus *n'a-n-ša* 'eyeless', *l'-ah-ša* 'lame' versus *l'a-n-ša* 'legless', *ʔ'a-ša* 'one-armed' versus *ʔ'a-n-ša* 'armless' (cf. *na* 'eye', *ła* 'leg', *ʔa* 'arm'; after the latter, connective *-ah-* is excluded, cf. §32). In contemporary Kabardian the presence of the absolutive and relative endings *-r*, *-m* signifies definiteness of the referent (*ł'-r* '*the* man'), and bare stems can refer to singular as well as plural (*ła* 'leg', 'legs', 'pair of legs'); in view of this and of the fact that in cases like the above the word with *-n-* indicates a total impairment and that without *-n-* a partial one, the original difference between *n'ahša* and *n'anša* (<**n'amša*) may have been: 'with eye-defect' versus 'with defect of *the* (or: *his*) eyes'.

34. *Conclusion.*

The infixes *-ah-*, *-m-*/*-n-* and *-r-* have in common that they are stressless, that they are always in non-syllabic juncture with a following segment, that their use is sometimes facultative and varies dialectally. They are collectively described as connectives, and as such their behavior is in some detail comparable to that of connectives in other languages.

The connectives *-m-*/*-n-* and *-r-* are responsible for the occurrence of "syllable-final consonant-groups beginning in *m*, *n*, *r*" (cf. §8), e.g. *f'and* 'wine-skin', *fan:d:c'k'°* 'little *c'k'°* wine-skin'. Connective *-ah-* behaves in the same way as non-initial prefixes *-(a)j-*, *-(a)w-*, *-ah-* (§ 20, fn. 9) and together with these accounts for syllable-final groups beginning in *j*, *w* (§8) or *h* (§16), e.g. *l'ahğ°* 'seeing', *ŝ'ahğ:ŝ'al* 'lower', 'under-' (adjective; lit. 'bottom under *ŝ'a-* -lying *l* '). Phonemically, these "syllable-final consonant groups" are cases of non-syllabic juncture, and these cases form a category not covered by the IC-rule (§20). From the point of

view of IC analysis, both the connectives and the prefixes occupy a special place. The former, by their very nature, bear a relation to a combination of a preceding and a following morpheme rather than to either of these in particular. As to the prefixes, there are a number of classes of these, the members of which follow each other in a definite order in the word,[6] one and the same class sometimes being represented by more than one prefix. Here, too, the IC situation has special features paralleling those found in the case of the connectives. The subject-prefix (Engl. subj. or dir. obj.) is the first in the sequence; it is the one prefix that is never absent from bases built on verbs, and for this reason may be said to form an IC with the base of the word. Any other prefix, then, bears a relation to the combination of subject-prefix (preceding) and base (following). Cases of non-syllabic juncture not covered by the IC rule are found where this type of situation obtains. In the prefix-part of the word they are limited to prefixes with non-glottalic laryngals; these prefixes are always in non-syllabic juncture with what follows. The other segmental prefixes are always in syllabic juncture with the following segment.[7]

The fact that connective *-m-/-n-* and *-r-* are stressless may be explained on the basis of their going back to stressless endings. The same is true of connective *-ah-* in so far as it goes back to the plural suffix. Where it goes back to a plural prefix *ha-*, it shares the stresslessness of all fused IC-initial segments *ha* (cf. §26).

[6] Cf. Kuipers 1955:202.

[7] The dropping of the short high vowels – in phonemic terms, the replacing of syllabic by non-syllabic juncture – is nowhere more common than in the prefix part of the word, where in certain combinations it is the rule rather than the exception even in careful speech. For instance, the negative prefix *m-*, when preceded by another prefix, is practically always pronounced purely implosive, without following vowel; the same is true of the indefinite-relative actor prefix *z-*, e.g. *wmp'|ank'* 'don't *-m-* you *w-* chatter!', *szłağ°|ahr* 'the one who *-z-* saw me *s-*' are usually pronounced *wump'|ænk'*, *səzł'öğ°|ār*, but the pronunciation *wumәp'|ænk'*, *səzәł'öğ°|ār* is possible, whereas e.g. in *sj:Pł|ahŝ* 'I *s-* looked into *-j-* it' only the pronunciation *sïɲł'|âŝ* is possible (never **sijiɲł'|âŝ*).

IX

SEGMENT AND MORPHEME

35. *Unisegmental Morphemes.*

By "unisegmental morpheme" is meant a morpheme consisting of a single segment, e.g. *t* 'giving', *pa* 'nose', *-r* 'absolutive ending' *Tḫa* 'god', *PSk'a* 'coughing'. A superficial morphemic analysis of a Kabardian text suffices to establish the fact that over three quarters of the total number of morphemes in the sequence are of this type. This is in part due to the fact that practically all grammatical elements, which tend to recur in texts, are unisegmental. But the unisegmental type of morpheme is also very frequent in the lexical part of the word. A more thorough analysis of the lexical inventory of Kabardian allows the breaking up of the large majority of plurisegmental units into unisegmental morphemes. The problems involved here will be discussed in §37.

On the other hand, if one considers all occurring segments (cf. the charts on p. 18 and 57), then only a few of them are not found to appear as single morphemes. In the following list of examples only one meaning of each segment is given; where possible, free forms are quoted. Morphemes found only in compounds are marked "i.c.". Where possible, open and close segments with unrelated meanings are given. If either the close or the open form of a segment is not found at all, it is marked "n.f.".[1] Examples of unisegmental morphemes:

[1] Verbal roots occurring only with prefixes are quoted without comment if the meanings of prefix and root are clearly separate (e.g. *t* 'standing' is always preceded by a local prefix, e.g. *ŝ-* 'there', *ŝ'a-* 'under', *t-aj-* 'on'). – A segment is marked n.f. if it is not found independently, i.e. in a position (phonetic or morphological) where its open or close counterpart could also occur, e.g., the close counterpart of *Šk'a* 'calf' is listed as n.f., though it does occur in *Šk'ʲj* 'eight calves', in a morphological combination where all open segments lose their feature *a* (as is the case before certain segments *j* and *w*, cf. §26).

Uniconsonantal segments: *p* 'choking with anger' (only with prefixes: *z-g°ˈa-p* 'angry'), *pa* 'nose', *b* i.c. 'hollow', 'hole', *ba* 'much', *p'* 'bringing up', *p'a* 'shell', *f* 'rotting', *fa* 'skin', *v* 'ox', *va* 'ploughing', *f'* 'good', *f'a* i.c. 'point', 'spike', *m* 'wild apple', *ma* 'smell', *t* 'standing', *t(a)* 'giving,(in)tr.', *d(a)* 'sewing, (in)tr.', *da* 'nut', *t'* 'ram', *t'(a)* 'digging, (in)tr.', *c* 'wool', *ca* i.c. 'wool', *ʒ* 'reason', *ʒa* 'tooth', *c'(a)* 'defecate', i.c. 'lay (eggs), tr.', *c'a* 'name', *s* 'sitting', *sa* 'knife', *z* 'one', *za* 'cornel-fruit', *-n* suffix 'infinitive', *na* 'eye', *ŝ* 'three', *ŝa* 'raw fat', *ẑ* 'old', *ẑa* 'mouth', *ŝ'* 'earth', *ŝ'a* 'new', *š* 'horse', *ša* 'milk', *ž* 'coalescing', *ža* 'running', *l* 'blood', *ła* 'leg', *l* 'flesh', *la* 'painting', *l'* 'man', *l'a* 'dying', *k'* 'twig', *k'a* 'spleen', *g'(a)* 'spinning, (in)tr.', *-g'a* suffix 'bad', 'without', *k'''* 'handle', 'haft', *k'''a* 'tail', *x'* 'sea', *x'(a)* 'reaping, (in)tr.', *γ'* i.c. 'cursing', *γ'a* 'testicle', *k°* 'core', *k°a* 'thigh', *g°* 'heart', *g°(a)* 'pounding, (in)tr.', *k'°(a)* 'going', 'covering (a distance), tr.', *x°* 'millet', *x°a* 'sinew', *q* only in the unanalyzable unit *bˈahq/bˈaq* 'cowshed'[2] and in *qˈʔa* 'please!', where *-ʔa* may be identical with the emphatic suffix *-ʔa*, but the meaning of *q* is unclear; *qa* 'graveyard', *q'* 'loosening', 'throwing open' (only with prefixes: *z-g°ˈa-q'* 'unbuttoning'), *-q'a* suffix 'blunt', *x̌* 'fishing-net', *x̌a* i.c. 'tying up', *ǧ* 'weeping', *ǧa* 'year', *q°* 'farting', *q°a* 'pig', *q'°* 'handle', 'haft', *q'°a* 'son', *x̌°* 'male', *x̌°a* 'filing', *ǧ°* 'drying out', *ǧ°a* 'burrow', 'hole', *ḫ* 'carrying', *ḫa* 'dog', *h* n.f., *ha-* prefix 'that', *ʔ* i.c. 'hand', 'holding', *ʔa* 'hand', *j* 'eight', *ja* 'bad', *w-* verbalizer, Engl. "be-" in "becloud", *wa* 'hail', *ʔ°* 'mouth', 'opening', *ʔ°a* 'thrashing', *-r(a)* suffix 'absolutive'.

Biconsonantal segments: *Ft* 'sex-organs (male and female)', *Fta* n.f., *Pʒ* 'chisel', *Pʒa* 'fish', *Pc'* 'lie', *Pc'a* 'fermenting', *Ps* 'water', *Psa* 'soul', *Pz* 'female', *Pza* 'language', *Pŝ* 'prince', *Pŝa* 'neck', *Pẑ* 'yoke', *Pža* 'horn', *Pŝ'* 'ten', *Pŝ'a* 'price', *Pš* in *Pšˈna* now 'accordeon', formerly 'a bowed string-instrument', possibly containing the suffix *-na* 'object', 'implement'; further only in the unanalyzable

[2] This word is probably a borrowing, as it contains *ah* under phonetic conditions other than those stated in §32, and because of the free variation *ah/a* (cf. §39). I know of no Turkic analogue; Abazinian has the word in the form *baq'*; cf. also Georgian *bak'i* 'fenced-in place'.

units *Pš'n* 'paying off (a debt)' and *l'aPš* 'a god, patron of the smiths' (also *l'aPŝ*); *Pša* 'cloud', *Pž* 'counting', *Pža* 'door', *Pl* 'getting hot', *Pl(a)* 'looking (at)', *Pl* 'seven', *Pla* 'snake', *Pl'* 'four', *Pl'a* 'shoulders' *Pg'* only in *h'aPg'* 'glass', 'windowpane', borrowed from Ossetian, cf. Oss. *avg* with the same meaning; *Pg'a* n.f., *Pk''* 'pounding', 'trampling' (leather, a road, etc.), *Pk''a* 'garret', *Px'* 'carding', *Px'a* 'back part', *Pγ'* 'waist', *Pγ'(a)* 'cursing, (in)tr.', *Pq'* 'bone', *Pq'a* i.c. 'agricultural strip', *Px̄* 'carrot', *Px̄a* 'wood', *Pğ* n.f., *Pğa* 'breast', *Px̄°* 'daughter', *Px̄°a* 'grasping', *Pğ°* 'nine', *Pğ°a* 'carcass', *Tk''* i.c. 'tough', 'tart', *Tk''a* n.f., *Tk''°* 'melting', *Tk''°a* i.c. 'melting', *Tx'* 'spine', *Tx'(a)* 'writing, (in)tr.', *Tx°* 'five', *Tx°a* 'five times', *Tx̄* 'peeling', *Tx̄a* 'living prosperously', *Tx̄°* 'butter', *Tx̄°a* 'gray', *Tẖ* n.f., *Tẖa* 'god', *St* n.f., *Sta* 'sharp', 'piercing' (?), only in *m'ahSta* 'needle' and *lan'Sta* 'scissors', cf. the common noun-prefix *ma-* (before an open segment followed by connective *-ah-*); the initial part of *lan'Sta* is unclear; *Sd* only in *waSd'ğa* '(pine-)torch', 'candle', 'lamp' (cf. its derivate *waSdğ'aj* 'pine tree'), unanalyzable in Kabardian (but cf. § 41, fn. 10); *Sda* n.f., *Sg'* only in the reduplicated form *Sg''Sg'* 'trembling', *Sg'a* n.f., *Sk''* n.f., *Sk''a* 'spark(ling)', 'splinter', only in *m'ahSk''a* 'glowing coals', also 'red' (cf. prefix *m-ah-*), *l'ahSk''a* 'splinter' (1- unclear), and *x̄°'ahSk''a* 'spark' (cf., with secondary initial *P-* (§ 30) *x̄°'aPSk''* 'lightning'; the meaning of *x̄°a-* is possibly 'burning', cf. *x̄°'ahPsa* 'wish', 'desire' and *Psa* 'soul'), *Sk°* n.f., *Sk°a* only in *x̄°'ahSk°a* 'layer of ashes' (meaning unclear, for the initial segment cf. the preceding word); *Sk''°(a)* 'pinching', only in *p''ahSk''°a* 'pinching, intr.' and *ja-p''aSk''°* 'pinching someone or something *ja-*' (cf. *p'a* 'shell', 'cover', 'outer layer', etc.); *Sx̄* n.f., *Sx̄a* only in *t''ahSx̄a* 'shaky', 'weak' (cf. *t''aht'a* 'getting soft'; *Sx̄a* is undoubtedly a result of merging of segments (§ 30) and contains *x̄(a)* 'knitting', 'tying up', but the origin of *S-* is unclear); *Sẖ* 'pitying', *Sẖa* n.f., *Ŝt* 'freezing', *Ŝta* 'being frightened', *Šg'* n.f., *Šg'a* only in *t'ahŠg'a* 'plaited top-piece for a cart, used in transporting maize, etc.', unanalyzable; *Šk''* n.f., *Šk''a* 'calf', *Šk''°* i.c. 'crushing', *Šk''°a* n.f., *Šx'(a)* 'eating', *Šx'a* 'gluing', *Šx°* 'sour milk', *Šx°a* 'bridle', *Ŝx̄(a)* i.c. 'fine-grained', *Ŝğ(a)* i.c. 'fine-grained' (for occasional semantic relationship of

segments differing in their laryngeal feature cf. §31), *Ŝx̄°(a)* 'sorcery', 'poison' (the close form only in *ʔ°ˈaŜx̄°* 'raving', cf. *ʔ°* 'mouth' and *ʔ°a* i.c. 'uttering'), *Ŝḥ* 'similar', *Ŝḥa* 'head', *Lp* only in *hˈalp* 'a mythical horse', probably borrowed from a Turkic language (cf. *alp* 'hero'), *Lpa* n.f., *Lk°* only in *mˈLk°* 'property', borrowed from a Turkic language (cf. *mülk* 'property'), *Lk°a* n.f., *Lx°(a)* 'giving birth, (in)tr.', *Lqʾ* only in *ḥˈaLqʾ* 'bolt', 'latch' (analysis uncertain) and in a few borrowings; *Lqʾa* n.f., *Lx̄* n.f., *Lx̄a* only in *mˈahLx̄a* 'husband of daughter or sister' (prefix *m-ah-*, see above under *Sta*, *Skʾʾa*; *Lx̄a* may be a result of the merging of *l* 'blood' and *x̄a* 'tying up'[3]; *Lḥ* n.f., *Lḥa* 'laying down', *X̄c* only in *lˈahX̄c* 'offshoot' (etymology uncertain; *X̄c* probably contains a merged segment *c(a)* 'wool', 'hair', 'grasslike vegetation'), *X̄ca* n.f., *X̄s* only in *mahX̄sˈma* 'a millet beverage' (a borrowing from Turkic, cf. the W. Circassian form *bahX̄sˈma* and Turk. *baqsun*, Kazan'-Turk. *maqsima* 'id.'), *X̄sa* n.f., *X̄š* only in *lˈahX̄š* 'kettle-chain' (etymology uncertain; *X̄š* probably contains a merged segment *X̄(a)* 'tying up', 'connecting'; the initial segment may be identical with *-la* 'container'); *X̄ša* meaning uncertain, in *lˈahX̄ša* 'low' (cf. *lˈahγʾa* 'high' and *lˈahg°a* 'short-legged', 'low', with initial *la* 'leg') and in a few borrowings.

Triconsonantal segments: *PSt* only in *jgʾˈPStw* 'now' (cf. *jgʾˈ* 'now' and the modal suffix *-w*; *PSt* may contain, in merged form, the combination *ŝ-t* 'being', consisting of the local prefix *ŝ-* and the root *t* 'standing'; for the change of *Ŝ* to *S* cf. *sˈt* 'what?' < **ŝ-t*[4]; *PSta* n.f., *PSkʾ* n.f., *PSkʾa* 'coughing', *PSkʾʾ* 'washing', *PSkʾʾa* 'shuddering', *PŜt* 'boiling (intr., about milk)', *PŜta* n.f., *PŠkʾʾ°* 'being hidden', *PŠkʾʾ°a* n.f., *PŜḥ* n.f., *PŜḥa* 'creeping into', *STx̄* i.c. 'scratching', *STx̄a* n.f.

As this summing-up shows, the non-occurring segments are evenly divided among the open and the close category. Out of 95 uniconsonantal segments, one (*ha*) lacks a close counterpart; out of 90 biconsonantal segments, 11 lack an open, and 11 a close counterpart; out of 8 triconsonantal segments, 2 lack an open and

[3] Cf. Yakovlev 1948:273; otherwise Rogava 1956:33.

[4] Cf. the form *ŝˈd* 'what?' in several W. Circassian dialects.

4 a close counterpart. The parallelism between the tri- and the biconsonantal segments that was signalized in §24 (end) does not extend to the *a-zero* characteristic, as only in one case the "missing" units match: both *PŠk'°* and *Šk'°* lack an open counterpart. All this goes to show that the non-occurrence of certain segments is accidental rather than systematic.

Of the uniconsonantal segments, *q* is the only one not found with a definite meaning or as a separate constituent in an otherwise identifiable unit.[5] Of the pluriconsonantal segments not found as morphemes, only *Lp* in the borrowing *h'aLp* deviates from the general pattern; the unique segments in the borrowings *h'aPg'*, *m'Lk°*, *mahX̄s'ma*, and those in *waSd'ğa*, *t'ahŠg'a*, *ḥ'aLq'* are all matched by closely similar unisegmental morphemes, cf. *Pk'*, *Lx°*, *X̄š*, *Sta*, *Šk'a*, *Lx̄a*.

Several segment-morphemes are found only as second elements of compounds (particularly with the prefix *ma-/m-ah-*). In the case of *m'ahSta*, *m'ahSk'a* and *x̄°'ahSk°a* these segments can nevertheless be matched initially by segments containing a subsegmental prefix *S-* (e.g. *Sk'ark''ahŝ* 'he left me *S-* alone'). In the case of *m'ahLx̄a* the final segment, though not found initially, is nevertheless in a class with segments that are, cf. *Lx°a* and *Lḥa*. The situation is different with the segments *X̄c*, *X̄s* and *X̄š(a)*, which are found only as non-initial components of segment-combinations and cannot be matched with any comparable mono- or bimorphemic segments in word-initial, so that here a whole class of segments is excluded from that position. This is the closest the Kabardian language comes to limiting a specific type of "consonantal complex" (other than those beginning in *j*, *w*, *h*, *m*, *n*, *r*) to certain positions in the word. In all other respects these units are on a par with the others. The fact that the speakers of Kabardian have no difficulty in pronouncing them in isolation is here mentioned for what it is worth; it is perhaps more significant that the segment

[5] In connection with the parallelism that exists between the uvular plosives and the laryngals from the phonetic point of view (§7) it may be pointed out that it also extends into the semantic domain, in so far as *q* and *h* are the only uniconsonantal segments not found as separate morphemes.

X̌ša is used in borrowings to represent several foreign combinations (cf. §39).

Many segments – particularly among the uniconsonantal ones and the biconsonantal ones beginning in *P-* – have a wide variety of references, between which there is sometimes an associative connection, in which case one speaks of polysemy, whereas in other cases the meanings diverge widely, in which case one speaks of homophony. Though both terms have their raison d'être it is impossible to draw a clear borderline between the two. Polysemy is particularly characteristic of morphemes with somatic references,[6] e.g. *Ŝha* 'head', 'upper part' (roof, ceiling, summit, seed vessel of flower, ear of corn, riverhead), 'beginning' (of space, of time, crossing of roads), 'important part or member' (place of honor, head of group), 'spherical part' (bulb), 'covering part' (sleeve), etc., also 'self'; *k'a* 'tail', 'end' (of space or time), 'back part', 'far part', 'part that sticks out or hangs down', i.c. 'egg', cf. further *n'ahk'a* 'outside corner of eye *na*', *ẑ'ahk'a* 'beard' (*ẑa* 'mouth'), etc. Though the applications of e.g. Kabardian *Ŝḫa* do not range much farther afield than those of English "head", the two cases are by no means equivalent, as Kabardian lacks the numerous alternatives with a more limited semantic field that are found in English (roof, top, chief, bulb, etc.), so that polysemy plays a much larger role.

Examples of homophony: *š* 'sibling', 'horse', 'milking, tr.', 'leading out', 'setting one's teeth on edge', 'getting tired', i.c. 'salt', 'millet', 'crooked'; *j* 'file', 'eight', 'coating the walls of a house with clay', derivative suffix (cf. *k'* 'brushwood', 'twig' and *k'j* 'wattle'[7]), prefix 'inside (a space)', prefix '3d person', i.c. and as an enclitic 'and'; *Pŝ* 'feudal lord', 'creeping', 'swelling', 'getting tired', 'kneading', 'measuring', i.c. 'ten'. In a case like *Ps* 'water', 'river', 'shining', 'sneezing', i.c. 'string', 'sun-ray', 'thin (about cylindrical objects)', 'planing', it is hard to decide what comes under the heading of polysemy and what under that of homophony[8].

[6] Cf. Yakovlev 1923:LXIV ff.

[7] This suffix is etymologically identical with the suffix *-aj* mentioned in §15, and with the 3d person prefix *j-*.

[8] Even greater are the difficulties involved in establishing historical con-

The information on the unisegmental morphemes is here summed up: they make up well over three quarters of the total number of morphemes in running texts; as out of 193 segments only seven are not found as units that can be readily isolated as morphemes, they include 96% of the total of occurring segments; due to polysemy and homophony they have a high semantic yield per unit.

36. *Plurisegmental Units I: Formal Aspect.*

By a "plurisegmental unit" is meant a sequence $\Sigma^1(a)\ \Sigma^2(a)\ \ldots\ \Sigma^n(a)$ which either occurs independently or as a single constituent in a larger combination. In practice it will suffice to limit our discussion mainly to bisegmental lexical units.

From the formal point of view there is no difference whatsoever between compounds of unisegmental morphemes like *l'ˡ-ẑ* 'old man', *dˡ-aj* 'nut tree' and unanalyzable plurisegmental units like *fˡz* 'woman', *bˡaj* 'rich', etc. As to their external relations: with regard to stress and juncture they are undistinguishable. Apart from the stressless morphemes, the position of the stress can be described in terms of units $\Sigma(a)\Sigma(a)\ \ldots$ regardless of the morphological status of these units. As to syllabic and non-syllabic juncture, this is a question of immediate constituents, and from this point of view it makes no difference, of course, whether or not the components of a given unit $\Sigma(a)\Sigma$ are found with comparable meanings outside this unit: both *l'ˡ-ẑ* and *fˡz* enter as wholes into larger combinations like *l'-ẑˡ-f'* 'good old man', *fzˡ-f'* 'good woman' *l'-ẑ÷c'ˡk'°* 'little old man', *fz÷c'ˡk'°* 'little woman'.

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nections between various meanings of segments. Yakovlev (1941:209 ff.) probably goes too far in deriving *x'* 'sea', 'reaping', 'taking', i.e. 'descending' all from an original 'collecting (food) while bending down', and *ǧ°* 'drying out, intr.', *ǧ°a* 'time', 'reddish', 'cavern', 'burrow', 'roaring' and *ǧa* 'summer', 'year' all from an original 'drying in the sun (about food, for conservation)'. One can, after all, always establish some sort of associative chain between different meanings. But in several cases there is in the present-day language a chain of meanings connecting widely disparate notions, e.g. *k'"(a)* 'tail', 'haft', 'handle', 'way of handling', 'manner' (e.g. *ŝ'ˡk'"a* 'behavior', 'manners', cf. *ŝ'* 'doing'; *k'°ˡak'"a* 'walk', 'gait', cf. *k'°a* 'going'), 'sort', 'kind' (e.g. *hak'"aq°ˡak'"a* 'wild animals', lit. 'dog-kind-pig-kind', *q'°ak'"aPγ'ˡk'"a* 'uneven terrain', lit. 'ravine-ish-mountain-ish') and finally 'instrumental case' (cf. Yakovlev 1923:XXVI f.).

The parallelism between analyzable and unanalyzable units also extends into the domain of syntactic valence. The possibilities of occurrence in specific environments (where sameness of meaning is presupposed both for a given unit $\Sigma(a)\Sigma(a)$ in different environments and for a given environment of different units $\Sigma(a)\Sigma(a)$) are, of course, different for different units. But these differences never depend on whether or not a given unit is an analyzable compound, but rather on whether or not it is a compound *ad hoc*. An example may demonstrate this. The compound *ad hoc* *l'*-*ẑ* 'old man' and the unanalyzable unit *f*'*z* 'woman' differ in their syntactic valence in that *f*'*z* is found in combination with *ẑ* 'old' (cf. *fz*'-*ẑ* 'old woman'), whereas *l'*-*ẑ* is not. In this respect, *f*'*z* goes together with *l'* 'man', and not with *l'*-*ẑ*. But the compounds *l'x̄*°'*ẑ* 'hero', lit. 'man *l'* -mature *x̄*° -old *ẑ* ', *dğ*°'*ẑ* 'wolf', lit. 'thief *dğ*° -old *ẑ* ' do occur in combination with *ẑ* 'old': *l'x̄*°*ẑ*'*ẑ* 'old hero', *dğ*°*ẑ*'*ẑ* 'old wolf', and go in this respect together with *l'* 'man' and *f*'*z* 'woman' versus *l'*'*ẑ* 'old man'. In other words, the unit which stands out by virtue of its different syntactic valence is the compound *ad hoc*, whereas the unanalyzable unit goes together with the analyzable compounds with narrowed meaning.

More striking than this paralllelism in external behavior is the fact that unanalyzable plurisegmental units are not different from compounds in their phonemic makeup. There is no preference for certain types of segments in initial, medial or final position in unanalyzable units. The compound *l'*'-*ẑ* consists of two close segments; so does the unanalyzable unit *f*'*z*. The compound *l'*'-*ğa* 'manliness' consists of a close and an open segment; so does the unanalyzable unit *d*'*ğa* 'sun'. The compound *d*'-*aj* 'nut-tree' contains a fused segment; so does the unanalyzable unit *b*'*aj* 'rich'. The compound *p*'-*wa* 'stopping (oxen by striking *wa* them on the nose *p*-)' contains a non-fused segment *wa*; so does the unanalyzable compound *d*'*wa* 'talisman'. This parallelism goes so far that in one respect it gives rise to a paradoxal situation: the stressless segments *-m-*, *-n-*, *-r-*, *-ah-* which occur as connectives between the constituents of certain compounds, usually with narrowed or transferred meaning, are found in unanalyzable plurisegmental units as

well. In particular the segment *ah* is practically never absent from such units if the phonetic conditions stated in §32 are fulfilled, cf. *w'ahna* 'saddle', *g°'ahŝa* 'princess', 'doll', *n'ahŝa* 'cucumber' (with *-ẑ* 'old': *wan'a-ẑ*, *g°aŝ'a-ẑ*, *naŝ'a-ẑ*). Some of the doublets with and without an inserted element concern unanalyzable units, e.g. *š'a(n)t* 'chair', 'bench'. One cannot speak of "connectives" in cases where single morphemes are involved; if plurisegmental morphemes are allowed, one must speak of morpheme-alternants *wahna/wana*, *šant/šat*, etc. On the other hand, in compounds *-ah-*, etc., must be described as separate morphemes, as their presence or absence can make a difference in meaning. In this way, what is formally one and the same phenomenon must be described under two entirely different headings. In §38 an alternative solution will be put forward.

37. *Plurisegmental Units II: Semantic Aspect.*

In §35 it was pointed out that the unisegmental morphemes cover an extensive semantic field due to polysemy and homophony. The true extent of the field of application of these morphemes can be realized only if one considers the role these morphemes play in compounds. The Kabardian language makes a surprisingly extensive use of compounds of unisegmental morphemes, in many cases even for the expression of quite simple every-day notions for which e.g. the Indo-European languages have special morphemes. Examples of compounds[9]:

na-Ps	'tear', cf. *na* 'eye', *P*s 'water'
na-f	'blind', cf. *na* 'eye', *f* 'decaying'
na-Pc'	'false', cf. *na* 'eye', *Pc'* 'lie', 'falsehood'
na-g°	'face', cf. *na* 'eye', *g°* i.c. 'surface'
na-ʔa	'care', 'attention', cf. *na* 'eye', *ʔa* 'hand', 'holding'
na-x°	'light', cf. *na* 'eye', *x°* i.c. 'white', 'light'
na-f'	'kindness', cf. *na* 'eye', *f'* 'good'

[9] In the examples in this and the following section compounds are written without stress-mark, i.e. they are considered by themselves, apart from specific positions in which they are used. This makes it unnecessary to write connective *-ah-*, which appears in all the combinations mentioned when the conditions of §32 are fulfilled.

n-aj 'malice', 'anger', cf. *na* 'eye', *ja* 'bad'
ʔa-pa 'finger', cf. *ʔa* 'hand', *pa* 'nose', 'front'
ʔa-ɬa 'glove', 'mitten', cf. *ʔa* 'hand', *ɬa* i.c. 'container'
ʔa-Pl'a 'embrace', cf. *ʔa* 'hand', 'arm', *Pl'a* 'shoulder'
ʔa-sa 'tame, cf. *ʔa* 'hand', *sa* 'accustom oneself'
ʔa-za 'skilful', cf. *ʔa* 'hand', *za* 'turning'
g°-f'a 'joy', cf. *g°* 'heart', *f'* 'good'
g°-Šx°a 'daring', cf. *g°* 'heart', *Šx°a* 'great'
g°-ʔa 'sorrow', cf. *g°* 'heart', *ʔa* 'holding'
ʔ°-Ps 'spittle', cf. *ʔ°* 'mouth', *Ps* 'water'
ʔ°-pa 'lips', cf. *ʔ°* 'mouth', *pa* 'nose', 'front'
ʔ°-Lḫa 'bribe', cf. *ʔ°* 'mouth', 'entrance', *Lḫa* 'laying down'
ẑa-k'a 'beard', cr. *ẑa* 'mouth', *k'a* 'tail'
ẑa-Pq' 'chin', cf. *ẑa* 'mouth', *Pq'* 'bone'
pa-ŝ'a 'mustache', cf. *pa* 'nose', *ŝ'a* 'bottom'
pa-sa 'early', cf. *pa* 'nose', 'beginning', *s(a)* 'arriving'
k'a-sa 'late', cf. *k'a* 'tail', 'end', *s(a)* 'arriving'
ɬa-g° 1. 'sole', cf. *ɬa* 'foot', 'leg', *g°* i.c. 'surface'
2. 'floor' (two possible references of "foot-surface"!)
fa-ǧ°a 'pale', cf. *fa* 'skin', *ǧ°* 'drying out', *ǧ°a* i.c. 'yellow', 'reddish', 'brownish' (color of withered vegetation)
ɬa-Pq' 'tribe', cf. *ɬ* 'blood', *Pq'* 'bone', 'stem'
g°-Pǧ°a 'field', cf. *g°* i.c. 'surface', *Pǧ°a* 'broad'
Pša-Pl 'twilight', cf. *Pša* 'cloud', *Pl* 'blazing', 'glowing', i.c. 'red' (color of red-hot metal)
Pl-Ŝḫa 'Monday', cf. *Pl* 'seven', *Ŝḫa* 'head', 'beginning' (the seven-day week beginning with Monday is one of the remnants of ancient Christianity in Circassian culture)
Pŝ-ɬ' 'serf', cf. *Pŝ* 'feudal lord', *ɬ'* 'man'
ŝ'a-ɬa 'boy', 'young', cf. *ŝ'a* 'new', 'young', *ɬ* 'flesh'
da-Lx° 'brother (of a woman)', cf. *da-* pref. 'together with', *Lx°* 'giving birth'
q'°a-š 'brother', cf. *q'°a* 'son', *š* 'sibling'
š-Pχ° 'sister', cf. *š* 'sibling', *Pχ°* 'daughter'
Pχ°-ẑ 1. 'married female relative (sister, daughter, aunt)',
2. 'divorcee'; for both cf. *Pχ°* 'daughter', *ẑ* 'old'

Compounds consisting of more than two segments can be broken down into IC's, e.g. *š-ğa-ža* 'races' contains *š* 'horse' and *ğaža* 'causing *ğa-* to run *ža*', cf. also *š-ğa-ža-š* 'race-horse'. A very frequent type of compounds are those with partial reduplication[10]:

ʔa-Pqʾ÷ła-Pqʾ	'body', cf. *ʔa* 'hand', *ła* 'foot', *Pqʾ* 'bone', 'frame'
ʔa-kʾ°a-ła-kʾ°a	'handy', 'skilful', cf. *ʔa* 'hand', *ła* 'foot', *kʾ°a* 'going'
ʔa-ğ°÷ła-ğ°	'paralysis', cf. *ʔa* 'hand', *ła* 'foot', *ğ°* 'drying out'
ʔa-da-wa-de	'tools', cf. *ʔa* 'hand', 'holding', *wa* 'beating', *-da* 'tool'; also separately *ʔa-da* 'tongs', 'pincers', *wa-da* 'hammer'
ḫa-Pŝ÷x°-Pŝ	'wingless insects and worms', cf. *ḫa* 'barley', 'cereals', *x°* 'millet', *Pŝ* 'creeping'
ŝʾa-la-ğ°a-la	'youth', cf. *ŝʾa* 'new', 'young', *ğ°a* 'being', 'becoming', *l* 'flesh'
lʾa-qʾ°a-lʾa-š	'nobility', cf. *lʾ* 'man', *qʾ°a* 'son', *š* 'sibling'
Pza-gʹa-na-gʹa	'nasty', cf. *Pza* 'tongue', *na* 'eye', *gʹa* i.c. 'bad'

In a great many cases plurisegmental units can be partially identified with unisegmental morphemes but contain components which are either unique, or recur in various combinations without allowing a definite meaning to be established for them. Examples of such "formatives": *ba-* in *ba-ma* 'stench', (cf. *ma* 'smell'), *ba-ca* 'spring-wool' (cf. *c(a)* 'hair', 'wool'), *ba-gʹ* 'spider' (cf. *gʹ* 'spinning'), *ba-g°* 'pimple', (cf. *g°a-na* 'lump', 'bump'); *ma-* in *ma-ẑa* 'comb' (cf. *ẑ* 'combing'), *ma-cʾa* 'locust', (cf. *cʾa* 'louse', *cʾ-v* 'beetle'), *ma-x°a* 'day', 'happy' (cf. *x°(a)* i.c. 'light'), *ma-za* 'moon', 'month' (cf. *za* 'turning'); *ha-* in *ha-fa* 'armor' (cf. *fa* 'hide', 'skin'), *ha-Pğ°a* 'nest'

[10] These compounds bear a certain resemblance to the very widespread (Uralic, Altaic, Kartvelian, etc.) reduplicative words with consonant-insertion or -variation, e.g. Turkish *beyaz* 'white', *bembeyaz* 'snowwhite', Georgian *xili* 'fruit', *xilimili* 'fruits', But whereas these compounds can be derived from the simplicia by formal rules (usually involving insertion or substitution of a labial), the Circassian ones do not follow formal rules of this kind and are furthermore semantically analyzable.

(cf. *ğ°a* 'den', 'lair'), *ha-da* 'father', *ha-na* 'mother' (cf. the hypocoristic forms *da-da*, *na-na*, the suffix *-na* for female animals, also the W. Circ. forms *t(a)*, *n(a)*); *-ta* in *Pẋ°a-ta* 'grasping' (cf. *Pẋ°a* 'grasping'), *ṗ°a-ta* 'discussing' (cf. *ṗ°a* 'uttering', *ṗ°* 'mouth'), *k'°a-ta* 'move, intr.' (cf. *k'°a* 'going'); *-d* in *š-d* 'donkey' (cf. *š* 'horse'), *l-(n÷)d* 'shine', 'glitter' (cf. *l* 'burning', 'shining'), *d-d* 'awl' (cf. *d* 'sewing'), *fa-(n÷)d* 'wine-skin' (cf. *fa* 'skin'), etc. Cases with unique constituents are also quite numerous. For example, in *g°-Pẑa* 'anger' the first element is undoubtedly *g°* 'heart', a morpheme often found in compounds expressing emotions (cf. the examples in the list above), but the second segment cannot be identified with other instances of *Pẑ(a)* (or even of *ẑ(a)*); its meaning cannot be identified as "angry", as often in such compounds much more concrete and specific notions are involved, e.g. in *g°n!af* 'stupid', lit. 'blind-hearted'. Other unidentifiable segments are found in such pairs as *k'(a)-ḫ* 'long'[11] and *k'a-ŝ* 'short', *ła-X̌ša* 'low' and *ła-γ'a* 'high', where the initial segments may be identified with *k'a* 'tail' and *ła* 'leg' in view of the compounds *k'a-g°a* 'docktailed', 'short (ab. clothes, etc)' and *ła-g°a* 'short-legged', 'low (in general)', (cf. *g°(a)* i.c. 'surface', 'flat', 'truncated') where the semantic development from a specific to a more general meaning is still clear. But the morphemes *ḫ*, *ŝ*, *X̌ša* and *γ'a* in these words cannot be identified with a sufficient degree of probability. Again other cases are encountered in the compounds with partial reduplication, e.g., *k'(a)-ḫ÷l'(a)-ḫ* 'long', 'lasting', a compound which contains the abovementioned *k'(a)-ḫ* 'long' and confirms its bimorphemic status; the segment *l'(a)* in its second constituent again cannot be identified. This second constituent, then, consists of two unidentifiable segments. If such a unit is found by itself, as is the case, for instance, with *fz* 'woman', it is traditionally called a single morpheme.

In many cases it is difficult to decide whether or not a given plurisegmental unit is polymorphemic. The difficulty itself is met in all languages; it arises from the vagueness of the criterion of

[11] Before *ḫ(a)* the opposition between open and close segments is neutralized (§4); for etymological purposes we write *Σ(a)* in these cases.

"semantic resemblance" which is employed. But the number of the "doubtful cases" in Kabardian is exceptionally large. Since the *a-zero* characteristic of a morpheme is often secondary, each unit $\Sigma(a)\Sigma(a)$ allows comparison with two units Σ and two units Σa, each of which may have several widely diverging groups of references. The semantic analysis of bisegmental units yields a continuous range of cases, from transparent compounds like *ṗ°-Ps* 'spittle', lit. 'mouth-water', via more or less doubtful cases like *ǧ°ag°* 'road', which may contain *ǧ°(a)* 'withered' and *g°* 'surface',[12] down to unanalyzable units like *fz* 'woman'. It is impossible to draw a borderline somewhere between the type *ṗ°Ps* and the type *fz*; there is nothing but a gradual decrease of transparency in the combinations, or ,in other words, a gradual increase of what may be conveniently called their "semantic fusion".

The arbitrariness of putting down one unit $\Sigma(a)\Sigma(a)$ as a compound and another as a single morpheme becomes especially clear in cases like that of the second component in *k'ʼ(a)-ḫ÷l'(a)-ḫ* (see above). Here a totally intransparent unit must be considered bimorphemic for morphological reasons. The same situation obtains in another group of cases. There is in Kabardian a group of prefixes roughly corresponding to English prepositions and adverbs like "on", "in", "under", etc.[13] These prefixes, which are defined on the basis of their position in the string of prefixes that can precede the base of a word, and which can be separated by several other types of prefixes from the latter, often exhibit a high degree of semantic fusion with the base (cf. in English the meanings of "give", "up", "in", "out" and of "give up", "give in", "give out", etc.). For instance, the combination of the prefix *ŝ'(a)-* 'under' and the base *ʒa* which by itself means 'throwing (into)' is found in the meaning 'beginning', cf. *ŝ'-z'-aw-ʒa* 'I *-z-* begin *ŝ'- . . . -ʒa*' (*-aw-* process-prefix). In spite of the high degree of semantic fusion, *ŝ'(a)-* and *ʒa* in this combination must be treated as separate morphemes, if only because of their separability in the paradigm. But if there existed a noun *ŝ'aʒa* meaning 'beginning',

[12] Cf. Yakovlev 1941:211.

[13] Cf. Kuipers 1955:202 (no. 4: determinative prefixes).

then one could not with certainty or high probability identify either *ŝ'a* or *ʒa* (the pitfalls of morpheme-identification may be illustrated by the fact that in this case one might be tempted to think of *ŝ'a* 'new' rather than of *ŝ'a* 'bottom', etc.). In this way, a combination of segments with a high degree of semantic fusion must in one case be considered bimorphemic, whereas in other cases of the same degree of transparency one has no other way but labeling it a single morpheme, due to insufficient "semantic resemblance" to other, identifiable units.

The facts brought forward in this section are the semantic counterpart of those discussed in §36. It is possible to distinguish between compounds *ad hoc*, i.e., compounds the meaning of which follows from those of their components plus that of a grammatical process, and, on the other hand, compounds with semantic fusion, i.e., compounds with narrowed, extended or transferred meaning, in varying degrees down to unanalyzability. But it is impossible to draw a borderline anywhere within the latter category.

38. *Formal Definition of the Morpheme.*

In the last two sections it was shown that unanalyzable plurisegmental units, except for their being unanalyzable, are in no way different from compounds of unisegmental morphemes. With regard to syntactic valence they go together with compounds that have a narrowed or transferred meaning. They also parallel the latter in always having a segment *ah* under the phonetic conditions stated in §32. It was furthermore shown that admitting plurisegmental morphemes leads to arbitrariness and contradictions, besides involving the necessity of making heterogeneous statements about homogeneous phenomena. It is therefore preferable to drop the notion "plurisegmental morpheme" altogether and to consider all plurisegmental units as compounds. As far as the formal aspect is concerned, this interpretation accounts for the perfect parallelism between analyzable and unanalyzable units both with regard to their own makeup and to their behavior in the word as a whole; furthermore, the phenomenon of the appearance of *-ah-* between

segments allows a uniform description in terms of a connective. As to the semantic aspect, it is no longer necessary to draw a borderline where there is nothing but a gradual transition, or to treat separable units differently from unseparable ones with a comparable degree of semantic fusion. Unanalyzable plurisegmental units are simply compounds with a maximal degree of semantic fusion. This definition accounts for the conformity of the behavior of these units with that of analyzable compounds with narrowed or transferred meaning.

There are some 500-750 bisegmental units that are not readily analyzable. The total of the *possible* units of this type equals approximately the square of the number of segments (open and close segments to be counted as separate units; adjustments necessary due to possibility of neutralization of the opposition *a-zero* in the first, and of fusion in the second segment tend to cancel each other from the numerical point of view). The total number of possible segments, counting as possible all segments summed up in §35, i.e., including the 29 missing counterparts of occurring open and close segments, is 222, so that the possible bisegmental units number close to 50,000. The unanalyzable bisegmental units constitute ca. 1.5% of this possible total. On the other hand, of the 222 possible segments, 29 are not found independently and 7 cannot be isolated as separate morphemes (four of these in borrowings), so that the percentage of realization of the unisegmental morphemes is 84%. If one includes those missing counterparts that do occur dependently (cf. §35, fn. 1), then this figure is raised to 92%. Such scanty data as are available on the realization-percentages of morphemes in other languages[14] show that even for

[14] For only a few languages figures comparable to the above can be quoted. In *Javanese* (Uhlenbeck 1950) the realization-percentage of morphemes CV is 76%, of CVC 48%, of VC 23%, of CVCVC 4% (among the morphemes with two vowels, which make up 85% of all root-morphemes, this is the largest class). In *Arabic* (Greenberg 1950) ca. 20% of the possible threeconsonantal roots occur (considering as possible all combinations except those with identical first and second consonants). The following figures are not strictly comparable to ours as they concern free forms (with certain morphological limitations) and not morphemes: *German* (Trubetzkoy 1939:239 and Menzerath 1954 respectively) CV 31.8%, 48%, VC 28%, 21%, CVC (Menzerath) 15%; *French*

a favored type 84% is exceptionally high; whether 1.5% is low for a secondary type depends on what shall be considered a type in each language, but it is extremely low for a type defined as consisting of two phonemic units. Of the more than ten million possible threesegmental combinations the native part of the lexicon furnishes only a few isolated examples, all of which belong to the "doubtfully analyzable" cases. Here the term "percentage of realization" loses its meaning. These quantitative relations express the peculiar structure of the Kabardian lexical material.

Larger untransparent units are found particularly in names of plants and of economically unimportant animals.[15] But precisely in such larger units semantic fusion is counterbalanced by morphological transparency, cf. the following examples:

	1	2	3	4	5	6	
(a)	*ḫa* -	*n*÷*d*		*-r*	÷*q'°a*	*-q'°a*	'frog'
(b)	*ḫa* -	*n*÷*d*		*-r*	÷*q'°a*	*-ɬa*	'shepherd's-purse'
(c)	*ḫa* -	*n*÷*d*		*-ra* -	*Pǧ°a*		'butterfly' (dial. *ḫan:t'raPǧ°a*)
(d)	*š* -	*n*÷*d*		*-r*	÷*x̄°*	*-aw*	'lizard' (dial. *šn:dr:x̄°aj*)
(e)	*q'a-*	*n*÷*d*		*-ra* -	*ʒa*	*-l*	'June bug'
(f)	*ja* -	- *l*		*-r*	÷*q'a*	*-š*	'crawfish' (dial. *ḫalr:q'aš*)
(g)	*š* -	- *k'*	*-r*	÷*t'*		*-m*	'fir-cone'
(h)	*ḫa*	- *p'a*		- *c'a*			'worm'
(i)	*x̄°*	*-m*÷*p'a*		- *c'a*		*-g'*	'ant'
(j)	*x̄°*	*-m*÷*b*		- *l*		*-aj*	'hop'

(Trubetzkoy l.c.) CV 73%, VC 26%; *English* (Malone 1936) CV 75.5%, VC 31%. Cf. also Mathesius (1929) for the combined types CVC, VCVC, CVCV, CVCC, CCVC in *Czech* 3.1%, in *German* 5.4%. The language from this point of view most similar to Kabardian is *Chinese*; in literary *Pekinese* (Haenisch 1931:129) ca. 1400 syllables are found, out of a possible total of 1680 (86%), and all of these are morphemes. These figures are given for a rough comparison only; with the exception of literary Pekinese, where 100% of the occurring units are morphemes and where there are no morphemes of other types, the percentages quoted for all these languages lie between those for the Kabardian primary (84% or 92%) and secondary (1.5%) type. Our interpretation of the Kabardian morphemic pattern amounts to bringing it on a level with that of Chinese.

[15] These have a peripheral status from the point of view of morpheme-structure in many languages, cf. e.g. Uhlenbeck 1950:266.

	1	2	3	4	5	6	
(k)	*ḫa*	*-m÷b*			*- l*	*-w*	'rainworm'
(l)	*ḫa*	*-m÷g°*	*-r*		*- z*	*-aj*	(unidentified plant)
(m)	*ḫa*	*-m÷c'a*			*- ẑ*	*-aj*	'white bream'

Though few of these words are quite transparent, they allow a kind of collective analysis. The first segment *ḫa* in (a, b, c, h, k, l) may be identified with *ḫa* 'barley', 'cereals', the first segment *x̄°* in (i, j) with *x̄°* 'pasturing'; this yields for (h) and (i), in combination with *p'a* 'place': 'cereals-place', 'field' and 'pasturing-place', 'meadow' (cf. independently *x̄°ˈp'a* 'pasture'[16]). The second segment, where present, is a connective. The third segment in (a, b, c, d, e) can be identified as the formative *-d* (cf. §37); for *p'a* in (h, i) see above; *b* in (j, k) may be identified as *b* 'hole', 'burrow'. The fourth segment, where present, is the absolutive ending *-r(a)* reduced to a connective or a root-formative (cf. *Px'* 'tying up', *Px'ˈ-r* 'sheaf', *Px'ˈ-r-r* 'id., abs.'). The fifth segment in (i) and possibly also in (h) is identical with *c'a* 'louse', cf. also *ma-c'a* 'locust' and *c'-v* 'beetle'. The sixth segment in (d, j, k, l, m) is one of the derivative suffixes *-(a)j*, *-(a)w*; that in (g) may be identified with *m* 'wild apple' (cf. English "fir apple", Dutch "dennenappel"). In (a), the last two segments are probably sound-imitative; the component *ʒal* in (e) occurs independently with the meaning 'willow'; *-ẑ-aj* in (m) is otherwise found as a diminutive suffix, it is found in the word for 'fish' *Pʒaẑˈaj* and it is possible that (m) contains this word in a mutilated form, though Kabardian has a word *ḫaPʒaẑˈaj* 'pike' (lit. 'dogfish'). With a lesser degree of certainty some additional segments in these thirteen words could be identified; the point is, however, that even if words like *jalr:q'ˈaš* 'crawfish', *šn:dr:x̄°ˈaw* 'lizard' remain semantically unexplained, they are obviously of the same type as *han:dr:q'°ˈahq'°a* 'frog', *x̄°m:p'ac'ˈag'* 'ant' which can be analyzed into unisegmental components and whose morphological structure is clear.

Only in a few cases does one find a tendency in plurisegmental units with semantic fusion to behave as units *sui generis* from the

[16] Cf. Yakovlev 1923:XI.

formal point of view. The word (c) above shows a dialectal variation involving the substitution of one dental stop for another, and this substitution is characteristic of this particular word. A more striking example of a formal peculiarity of plurisegmental units as such (and the only one of its kind) is furnished by the words *m'ahf'a* 'fire' and *m'va* 'stone', which have the dialectal variants *n'ahf'a* and *n'va*. As these are the only two fixed bisegmental compounds where the first segment contains *m* and the second a labial fricative, one can say that in these dialects under the stated conditions *m* is dissimilated to *n*. This rule, then, applies to a specific *type* of bisegmental unit with high semantic fusion; due to the small number of these units themselves, the rule applies in only two instances. These cases are interesting in so far as they indicate how a language like Kabardian might develop into a different type from the point of view of morphemic structure. Due to their small number they do not stand in the way of a formal definition of the Kabardian morpheme as a segment, as pointing them out is much less of an encumbrance for the description than would be the various consequences entailed by admitting plurisegmental morphemes.

Thus, with the exception of the subsegmental prefixes, the Kabardian morpheme is formally defined as a unit $\Sigma(a)$. The Kabardian lexicon can best be arranged by listing each segment, stating the meanings in which it occurs independently and/or in productive compounds, and then quoting all compounds with semantic fusion in which it occurs, including the unanalyzable cases, so that each bisegmental unit of this type occurs twice, each trisegmental unit three times, etc.[17]

39. *Borrowings.*[18]

Within the category of borrowed elements a distinction can be made between cases that do not exhibit any characteristics setting

[17] The author is preparing such a dictionary, which will take into account also West Circassian material.

[18] Before the recent strong influence of Russian, the overwhelming majority of the recognizable borrowings in Kabardian were taken from Turkic languages, which in many cases had themselves borrowed these words from Arabic or

them off from the indigenous part of the lexicon, and cases that deviate from it to a greater or lesser extent.

It is possible that certain segments represent older borrowings; e.g., *ŝa* 'a hundred' may have been adopted from some *satəm*-language. But in the absence of historical data such comparisons remain uncertain.[19] In the case of plurisegmental units borrowings are more easily recognizable even if they are not formally distinct from native words. Examples: *m'al* 'sheep' (T. etc. *mal* 'property', 'animal owned'), *p'l* 'elephant' (T., B. *fil*, N. *pil*, *bil*), *q'ʾahla* 'town', 'fortress' (T. *kal'e*, N., B. *qal'a*), *q'ʾahma* 'dagger' (T. *kam'a*, K., N. *qam'a*), *š'arx̄* 'wheel' (T. *çark*, B. *carx*, K. *čarx*), *t'nš* 'quiet' (T. *dinç* in *baş dinç* 'at peace', B. *tinc*, *tinš*, N. *tyn'yš*). The words *q'ʾahla* and *q'ʾahma* contain, from the Kabardian point of view, connective *-ah-*, as is the rule in compounds with semantic fusion; if the initial segment is not stressed, the connective is dropped in the same way as in native words, cf. *q'al'aẑ* 'old town', *q'am'af'* 'good dagger'. In some cases, possible borrowings allow an interpretation on the basis of native material, or are subjected to folk-etymologies. The word *p'ahša* 'leader' can be analyzed as consisting of *pa* 'nose', 'front' and *ša* 'leading', and it is interpreted in this way by the

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Persian. The Circassians were in contact both with Kipchak Turks (Balkar, Karachay, Nogay, Crimean Turks) and with Oghuz Turks (S. Crimea, Ottoman Empire). In the following, Turkic words and borrowings in Turkic are quoted in Ottoman Turkish, Balkar, Karachay and Noghay, abbreviated T., B., K., N. respectively. Turkish words are quoted in the official orthography (with indication of stress and vowel-length), Balkar and Karachay words in the transcription of Pröhle (for B. cf. Pröhle 1914–15, for K. cf. Pröhle 1909), Noghay words are transcribed from the official Cyrillic orthography (cf. Baskakov 1956).

[19] The comparisons of this kind that have been proposed are all unconvincing. For instance, Yakovlev (1923:VI, and again 1941:239) sees in *wa* i.c. 'weather', 'sky' an older borrowing from Arabic *hawā'*, but this root is undoubtedly native, if only because of the large number of compounds expressing every-day notions in which it is found, cf. *w'a-s* 'snow', *w'a-Šx'* 'rain', *w'-ah-fa* 'sky', *w'-ah-ja* 'storm', *w'a-ǧ°* 'drought', etc., with further derivations like *wa-f'a-g°* 'zenith'; independently, *wa* means 'hail'. Lopatinskiy's comparison of *Tḫa* 'God' to Greek θεός is likewise unconvincing; the root may originally have meant 'life', 'spirit', cf. *Tḫ'ala* 'stifling', 'killing', *Tḫam:š'ǧ°* 'liver', *Tḫam:b'l* 'lung', possibly also *Tḫ'aŝ'* 'washing', though these comparisons are admittedly doubtful.

Kabardian speakers, though its similarity to T. *paş'a* suggests that it may be a borrowing. In the case of *naŝ'ahna* 'target', 'shooting-mark', etymologized by the native speakers as 'eye *na* -measuring *ŝa* -instrument *-na*', T.-Pers. *nişān'e* 'sign', 'mark' seems to have been modified by folk-etymology. A more subtle way of assimilating foreign words to the native pattern is found in the original adaptations of Russ. *karand'aš* 'pencil' and *kart'ofel'* 'potato', in Kabardian rendered as *q'an:dr'ahŝ*, *k'ʼan:t'r'awf* (now in the literary language replaced by forms which are closer to the original: *q'aran:d'ahŝ*, *k'ʼar:t'awf*); the older forms, which survive in the speech of the less educated, duplicate the pattern of the compounds discussed in §38 (cf. in particular a-e).

The words *h'aPg'* 'glass' (Ossetian *avg*), *m'Lk°* 'property' (T. etc. *mülk*) and *mahX̄s'ma* 'a millet beverage' (Kazan-T. *maqsima*) were already signalized in §35 as containing segments not found in the native part of the lexicon but conforming to the general pattern of the latter. In the first of these words the group-initial labial fricative *v* has been changed into the frequent segment-initial labial plosive element *P-*, in the last, the group-initial uvular plosive *q* has been changed into segment-initial *X-* as found in other units. Another example of adaptation of foreign sound-complexes to fit the Kabardian pattern is furnished by the words *h'aX̄ša* 'money' (T. *akçe*, B. *axc'a*, K. *ačx'a*, N. *akš'a*), *b'awX̄ša* 'purse' (T. *bohç'a*, N. *bokš'a*), *m'ahX̄ša* 'camel' (origin unknown, but undoubtedly a borrowing), cf. *X̄ša* in the native word *l'ahX̄ša* 'low'. Initial *r-* receives a prothetic segment, e.g. *wr's* 'Russian', *haraz'* 'content' (T. etc. *rāz'ı*).

Where possible, foreign rounded vowels are represented by labialized consonants, cf. *g°'al* 'lake' (T. *göl*, B., K., N. *köl*), *q'°l'q'°* 'service', 'post' (T. *kull'uk* 'servitude', B., K. *qull'uq*, N. *kull'yk*), *m'Lk°* 'possessions' (T. etc. *mülk*). Otherwise, foreign *i*, *u*, *ü*, *e*, *o*, *ö*, *a* are usually represented by *j*, *w*, *aj*, *aw*, *ah* (in non-syllabic juncture with a following segment), e.g. *d'jn* 'religion' (T. etc. *din*), *dw:n'aj* 'world' (T. etc. *dünyā*, *duny'a*), *d'ajla* 'stupid', 'insane' (T. *del'i*, B., K. *tel'i*), *s'awm* 'rouble' (T. *som* 'massive', B., K. *som* 'rouble'), *q'ʼ'ahz* 'goose' (T. *kaz*, B., K., N. *qaz*). From

the point of view of form by itself these words can be duplicated by native words, e.g., *s'awm* can be compared to *Ps'awm* 'all, rel. case *-m*' and to *s'awt* 'I *s-* give *t* it (process-form *-aw-*)'. But in native words a complex Σ'*aw*'Σ is possible only if final -Σ represents a stressless ending, or if *-aw-* is a fused (and hence stressless) prefix.[20] In other words, *s'awm* has formal parallels in Kabardian, but as a base-unit it deviates from the native pattern. The same is true of *m'jn*, etc. In cases like *q'ahz* one can compare native words like *l'ahğ°* (§23), with connective *-ah-* under phonetic conditions other than the regular ones. Borrowings of this type behave like the comparable native compounds also in this respect, that *-ah-* is sometimes dropped and sometimes retained if the preceding segment is not stressed: one says *q'ahz:c'k'°* or *q'az:c'k'°* 'little goose'. These borrowings as a group differ from the native compounds, however, in having *ah* before sounds other than uvular fricatives, and in showing a tendency to reduce it to *a* even if the preceding segment is stressed, e.g., *q'aht* 'layer' (T. *kat*) has the alternative form *q'at*.

Finally, there are cases which cannot be duplicated by native words at all, e.g., *haraz'* 'content' (T. *raz'ı*) has a deviating position of the stress; *Ṗḥ:l'* 'relatives' (T. *eh'il*, poss. *ehl'i*) has an irregular stress and a non-syllabic juncture in a threesegmental word not involving a connective or a prefix, which is impossible in native words. Such cases are very rare outside the large group of recent borrowings from Russian. The latter must be seen in the light of a direct knowledge of Russian on the part of the majority of the present-day speakers, a knowledge often amounting to bilingualism. In the same way, the pronunciation *ḥ* in words like *ḥalam'at* 'amazing', 'interesting' (now *ḫalam'at*) was a direct result of the teaching of the Koran in the *medrese*. Whereas this result of the influence of Arabic has practically disappeared, the impact of Russian makes itself increasingly felt. A discussion of its effects falls outside

[20] The only exception is the word *n'awba* 'today' < **n-wa-ba* (cf. §41, fn. 10), where the behavior of the segment *wa* irregularly parallels that of the prefixes; the word belongs to the small class of adverbial expressions not formed with the modal suffix *-w(a)*.

the scope of this brief account of borrowings, which aimed only at outlining, in a general way, the different positions occupied by various loan elements, ranging from complete congruence with the native pattern to greater or lesser deviations from it, resulting in a more or less marginal status of the elements involved.

CONCLUSION

40. *Phonological Remarks.*

The phonemic units of the Kabardian language consist of conglomerates of features which have been labeled "segments". When used in isolation these units are produced in the form of an open syllable with one, two or three consonants. The phonemic notation developed in the present work takes a middle course between that of Yakovlev and Trubetzkoy, who render what is phonetically "*πsə*" as *psə*, and, on the other hand, a notation which would represent each segment by a different symbol and write the above-mentioned unit as ψ. We write *PS*ʿ, where *P* and *S* indicate buccal features and ʿ a laryngeal feature; in a practical notation the laryngeal feature and the last buccal feature of the segment are combinedly symbolized by a lower case letter: *Ps*.

The most striking characteristic of the Kabardian phonemic system is the absence of an opposition consonant-vowel. The segment has consonantal as well as vocalic features; it can appear in syllabic and non-syllabic positions. The segments are, in a manner of speaking, all semivowels. The occurrence of consonants other than *m*, *n*, *r*, *l*, *j*, *w* in vocalic positions is not entirely without example in the Indo-European languages. Benveniste (1935:161 f.) has pointed out certain facts in Indo-Iranian which are reminiscent of the state of affairs in Kabardian. The alternation

**w¹er-w-*	**wr-¹eu-*	**wr̥-n-¹eu-*	(*vrn¹oti*)
**l¹ei-k-*	**ly-¹ek-*	**li-n-¹ek-*	(*rin¹akti*)
**bh¹en-g-*	**bhn-¹eg-*	**bhn̥-n-¹eg-*	(*bhan¹akti*),

where *r*, *y*, *n*, etc. appear as vowels when separated from the suffix by a nasal infix, has exceeded its limits and is sometimes used in the case of roots with a consonant-final, e.g. *dabh-* 'to deceive' has in Avestan a present *dəbənao – db-n-ao*, where *b* is "en quelque sorte

un *b* voyelle". This exceptional case in Avestan exemplifies what is the rule in Kabardian, where any segment can be "a kind of vowel".

The newer theories on pre-Indo-European envisage a system of phonemes which parallels that of Kabardian (and of the N. W. Caucasian languages in general) in several respects: the rich consonant-system, the absence of a system of vowels, and the development of the latter as a result of combinations with various laryngals. Compare:

I.-Eur.		Latin	I.-Eur.		Latin
$*\partial_1 e$-	>	*é*	$*e\partial_1$	>	*ē*
$*\partial_2 e$-	>	*ă*	$*e\partial_2$	>	*ā*
$*\partial_3 e$-	>	*ŏ*	$*e\partial_3$	>	*ō*

and the following phonemic-phonetic correspondences in Kabardian:

Phonemic	Phonetic	Phonemic	Phonetic
ja	*h'e/je*	*aj*	*ē*
ha	*hæ/ʰā/ā*	*ah*	*ā*
wa	*h°o/wo*	*aw*	*ō*

The general resemblance from the phonological typological point of view is obvious[1]; it must be left to specialists in the Indo-European field to determine whether or not certain details of the Kabardian phonological structure can help in solving certain problems of Indo-European, e.g., the alternation *zero-a* (§§28, 29), fusion (§15) and the presence or absence of a connective *-ah-* (§32) all furnish material reminding one of the quantitative Ablaut, while the effects of different kinds of juncture – syllabic vs. non-syllabic (§20) and fusional vs. non-fusional (§§25, 26) – seem strong enough to be able to leave traces when the phonological system develops into a different type. Phenomena of this kind may give a hint as to one respect in which I.-E. reconstructions are oversimplifications, and possibly can be taken into account in the consideration of certain problems of detail.

[1] Cf. also Allen 1956:172 f. for Abaza and Indo-European.

From the point of view of general phonological theory the following implications of this study are of interest. The existence of "vertical" vowel-systems must be seriously doubted. They had been observed only by Trubetzkoy, and only in the N. W. Caucasian languages.[2] The existence of languages in whose vowel-system the *a*-process is the only distinctive one, while no languages are found which limit themselves to the *u-i*-process, posed for Jakobson (1941:58 ff.) an "untenable paradox": in the consonant-systems distinctions of brightness (*p--t*-process) are primary, distinctions of sonority (*p, t--k*-process) secondary; if this hierarchy is extended to the vowel-systems, too, then this would mean that here the accessory *a*-process can appear independently, whereas the basic *u--i*-process is nowhere found without the accessory one. Jakobson ingeniously solves this paradox by assigning to consonant- and vowel-systems opposite basic characteristics – a solution that fits well in the framework of his general theory, which regards the opposition consonant-vowel as the basic one in all phoneme-systems. In our opinion, the paradox itself does not exist, as the N. W. Caucasian languages, in their "vocalic" oppositions, follow the common *a-i-u*-scheme (§22). This does not refute Jakobson's views on the hierarchy of features in vowel- and consonant-systems; only the N.W. Caucasian languages cannot be cited as evidence for them.

Our analysis of Kabardian does contradict, however, the view that the opposition consonant-vowel is at the basis of any system of phonemes. The Kabardian segment is undifferentiated in this respect, and in this way the language can rather be adduced in support of the thesis of van Ginneken (1939) that the existense of vowel-systems is an innovation in the languages of the world.[3] The evidence does not go beyond proving that a "vowelless" language, as envisaged by van Ginneken, can, and indeed does, exist; but the existence of such a type does not necessarily mean that it represents a definite stage in the development of language in general.

It may be pointed out in conclusion that the fact that the altern-

[2] Cf. Trubetzkoy 1929:39 ff.; 1939:87 f.
[3] Cf. van Ginneken 1938; 1939[a]; 1939[b].

ation *a-zero* is very common without change of meaning (§29), whereas the features ' and ° bear the same constant relation to the content as do the other features of the segment, lends support to Stumpf's idea (1926:338 ff.), rejected by himself, that the *u--i-* process is more primitive than the *a*-process, though with the same reservations as in the case of van Ginneken's theory. The question of the possible archaism of Kabardian will be taken up again in the next section.

41. *Lexicological Remarks.*

The Kabardian morpheme was formally defined as a segment (§38), so that the morphemic units from the formal point of view coincide with the phonemic ones (§24). This result was arrived at on the basis of comparison of analyzable compounds with unanalyzable units (the two being formally indistinguishable), on an evaluation of the consequences of admitting plurisegmental morphemes, and on statistical considerations. This definition of the Kabardian morpheme does take meaning into account, but only distributively, and not for each individual case. It must be emphasized that the traditional definition of a "morpheme" as a "minimal meaningful unit" is vague, even if "meaningful" is taken as relative to the observer, and not the user, of a language.[4] The native speaker of a language uses, but does not analyze it; he forms productive compounds according to the grammatical rules of his

[4] The often overlooked but important question of the distinction between language, use of language and observation of language is set forth with great lucidity by Reichling (1935, *passim*): The distinction entails more than the simple truth that observations made by informants on their language are usually wrong. A glaring example of the unreliability of morphological analysis and semantic identification on the part of the speakers is given by Yakovlev (1948: 255): his Kabardian informants, when asked which part of the word *wm'k'°a* 'don't go!' (lit. 'you, sing. *w-* not *-m-* go *k'°a*') means 'not', usually answered "*w-*", even though both the 2nd pers. sing. prefix *w-* and the negative prefix *m-* are often found as the only prefix preceding a base, e.g. *wk'°'an* 'your going', 'you . . . to go', *mk'°'an* 'not going', 'not . . . to go', and one easily arrives at an analysis different from the first reaction of the speakers by comparing the forms *k'°a* 'go!', *wm'k'°a* 'don't go!' (both addressed to one person), *f'k'°a* 'go!', *fm'k'°a* 'don't go!' (addressed to several persons, cf. the 2nd pers. plur. prefix *f-*).

language, but each compound with narrowed or transferred meaning is acquired and used by him as a unit, and applied according to (more or less arbitrary) custom (cf. the meanings of English "pigtail"). The observer of language, on the other hand, proceeds with his analysis beyond the productive cases, and has nothing else to go on but formal and semantic resemblance; he is bound to find a sliding scale of more or less transparent cases in any language. In Kabardian, this state of affairs is particularly evident due to the morphological-statistical relations obtaining in the language, and also to the very extensive use that is made of compounding, resulting in all possible gradations of what we have called "semantic fusion" (§37).

Semantic fusion may be due to a variety of factors. The meaning of a compound may change until it has lost all semantic connection with its original components. Or the components may change in meaning or disappear altogether, leaving the compound as an unanalyzable unit. Or separate components and compound may drift apart as a result of changes in form affecting the one and not the other. The operation of these causes is furthermore influenced by a variety of factors. A compound consisting of units which each have a large array of different meanings loses its semantic connection with the latter more easily than a compound the constituents of which have no homonyms and a minimal degree of polysemy. A tendency, say, to dissimilation can affect only units with phonetically similar constituents. The status of the compound in the language, both from the formal and the functional point of view, is also a factor (functional yield of its phonemic features, frequency of use, etc.). To these intralingual factors there must be added such interlingual ones as dialect-mixture and borrowing. Finally, for historical-etymological purposes, folk-etymologies and reinterpretations of modified native material must be taken into account.

It is obvious that the operation of these various factors results in a formal-semantic situation which defies strict categorization. Of course, the complication which is present in the material must be reflected somewhere in the description of the language. In the view propounded in this study, it is as a whole relegated to the lexicon,

which deals with what is individual in language. This has the double advantage of simplifying the description of the grammar (particularly in the matter of morpheme-alternants, cf. §36), and of keeping together all phenomena involving semantic fusion (idioms, combinations of prefix plus root with specialized meanings, etc., and finally, "unanalyzable compounds").

The unisegmental structure of the Kabardian morpheme must be taken into account for the purposes of comparative linguistics. It is possible that the Kabardian roots ultimately go back to units of a different structure, whether to an even smaller number of primitive clicks, as van Ginneken holds,[5] or to plurisyllabic units, as is maintained by Trubetzkoy.[6] But even in present-day Kabardian there are compelling arguments for not admitting plurisegmental morphemes, and the evidence is strongly in favor of Yakovlev's view[7] that all unanalyzable plurisegmental units (except borrowings, of course) once were transparent compounds and go back to independent unisegmental morphemes. Comparisons of plurisegmental units with words in distantly or hypothetically related languages are therefore a priori suspect, especially if these units are analyzable and if their semantic structure is different from that required by the comparison. A few examples requiring a minimum of comment follow here[8].

W. Circ. *lağ°ˈ* 'coeval', which is compared to Basque *lagun* 'companion', 'comrade', 'spouse', 'assistant' (Bouda 1948 no. 4) undoubtedly contains the suffix *-ğ°* 'companion' (cf. §29, especially fn. 7). Its meaning is exclusively 'coeval', and not 'comrade' (for the latter one uses W. Circ. *nPžˈ'ağ°*, Kab. *nPžˈağ°* 'coeval', 'comrade', cf. W. Circ. *nˈPž'*, Kab. *nˈPž* 'shadow', 'age' and the same sufflx *-ğ°*). The initial segment may be identical with *la* in W. Circ. *č'ahlˈa*, Kab. *šˈahla* 'boy' and possibly with *l* 'flesh'.

W. Circ. *šahk°ˈa* (Kab. *šˈahk°a*) 'wax' is compared to Basque

[5] Cf. §40, fn. 3.

[6] Cf. Trubetzkoy 1930:91.

[7] Cf. Yakovlev 1927, *passim*; 1941:206 ff.; 1948:229 ff.

[8] The following examples are taken from W. Circassian, which furnished Bouda the material for those of his Basque-Caucasian comparisons which concern Circassian. Where Kabardian equivalents exist, they are quoted.

e-zko 'wax' (Ibid. no. 9), but the meaning 'wax' is contained in initial *ša-*; *šahk°ˈa* is the empty honeycomb or unrefined beeswax, while refined wax, and also wax in general, are called W. Circ. *šafˈ*, Kab. *šˈax°*. The second segments in these units are *k°a* 'cramming', 'stuffing' and W. Circ. *f*, corresponding regularly to Kab. *x°*, 'white'.

W. Circ. *jahtˈˀa* (Kab. *jˈahtˈa*) 'clay', 'dirt' is compared to Basque **ith(a)*, which according to Bouda's examples means 'water' rather than 'mud' (Ibid. no. 22). In Circ., the idea 'dirt', 'mud', etc., is contained in *tˈa*, cf. *ʔatˈaˈlˈahtˈa* 'slush', 'mire', a compound with partial reduplication of the type discussed in §37. The segment may be identical with *tˈa* in the reduplicative compound *tˈˀˈahtˈa* 'getting soft'. The initial segment can be compared to *ja-* in *jˈaPz* 'slops', cf. *Ps* 'water' (§31) and possibly *ja* 'bad'.

W. Circ. *Psˈj* (Kab. *Psˈaj*) 'fir tree' is compared to Basque *i-zei*, *i-zai* 'poplar' (Bouda 1949 no. 53), for which purpose Bouda analyzes *P-sˈj*. But the analysis into segments yields immediately the common derivative suffix *-(a)j* (cf. §15), which is especially frequent in names of trees (cf. *x°ˈaj* 'ash tree', *Pžˈaj* 'plane tree', *žγˈˈaj* 'oak', etc.). The first element *Ps(a)* may be connected with *Ps* 'thin', etc. (cf. §35).

W. Circ. *bˈl* 'hiding, intr.' (Kab. id.) is compared to Basque *j-abal* 'cowardly', 'weak', 'to be frightened', 'to quiet down', 'quiet' (Ibid., Nachtrag no. 35), with the comment that the meanings of the Basque word are summarized by that of the Circassian one in an unsurpassable way. But the Circ. compound (now found only with the causative prefix *ğa-* in *ğabˈl* 'hiding, tr.') clearly contains *b* 'hollow', 'burrow', 'lair' and *l* 'lying (down)', and the original meaning was 'retiring into one's burrow'; for the type of compound cf. *ğ°ˈal* 'lying down', 'going to bed' (*ğ°a* 'den', 'lair', etc.).

It is obvious that comparisons involving analyzable plurisegmental units give cause for serious doubt, as they presuppose that the compound already existed in the same form at the time of the alleged common ancestral language (in the case of Caucasian and Basque at least 4-5000 years ago); and this doubt must be extended to unanalyzable units also, as these are nothing but compounds

with complete semantic fusion, and at best are on the average older than the analyzable ones. Because of the lesser time-depth required, the objection against "plurisegmental comparisons" is somewhat less stringent in the case of comparisons between N.W. and N.E. Caucasian, though here, too, isolated comparisons of this kind (without added comparisons involving the separate constituents) are unconvincing. Examples:

m'ahx°a 'day' is compared to Chechen *malx̄* 'sun', Andi *mili* 'sun', etc. (Trubetzkoy 1930 no. 29) but can be analyzed as containing the prefix *ma-* (§35) and the root *x̄°(a)* 'white', 'light' (the Circassian word has also the meaning 'happy'). In the same way, *m'ahza* 'moon', 'month', compared to Chechen *but* 'id.' (Gen. *bettin*, with *tt* < Proto-East-Caucasian **ʒ*), Avar *moc'c'* 'id.', etc. (Ibid. no. 30) and *m'ahf'a* 'fire', compared to Chechen *c'e*, Avar *c'a* 'id.', etc. (Ibid. no. 38) allow etymologies within Circassian which would invalidate these comparisons, cf. the same prefix *ma-* and the roots *za* 'turning' and *f'a* i.c. 'sharp point', 'stinging', etc.

ğ°'ahğ°a 'thunder' is compared to Chechen *q'auq'ar*, Avar *ğuğaze* 'to thunder', etc. (Ibid. no. 35), but it cannot be quoted as an argument for the existence of bisyllabic roots in Proto-North-Caucasian (thus Trubetzkoy, Ibid. p. 91) as it is a reduplicative compound of the root *ğ°a* 'roaring', 'bleating', etc. (for other reduplicative sound-imitative compounds in Kab. cf. *ŝ'ŝ* 'neighing', *b'b* 'fluttering', *k'''ahk'''a* 'chirping', etc.).

n'aht'a 'forehead' is compared to Avar *nodo* 'id.', etc. (Ibid. no. 64) but more probably contains *na* 'eye', which figures in several compounds referring to (parts of) the face, cf. *n'ahpa* 'face' (*pa* 'nose', 'front'), *n'ag°* 'face' (*g°* 'surface'), *n'ak'°* 'cheek' (*k'°* unclear), etc. The final segment *t'a* is unclear (possibly 'surface', 'outer or upper part', cf. *t''ahx̄°a* 'scratching' and *x̄°a* 'filing', *Pŝ''ahnt'a* 'courtyard' and *Pŝ'a* 'weeding', also *t'* in *t''s* 'sitting *s* down', *t''l* 'lying *l* down').

w'na 'house' is compared to Chechen *ben* 'nest', *bun* 'house' (Ibid. no. 75) but can be explained as a combination of the prefix *w-* (usually verbalizing, but occasionally found in nouns, cf. *w'g'* 'round dance' and *g'* 'spinning', *w'Ŝğa* 'implement for husking

millet' and *Ŝğa* i.c. 'fine-grained') and of the root *na* 'remaining' (cf., from the semantic point of view, English "abide" and "abode"; Dutch "ver-blijf" meaning 'abode' parallels the Circassian word morpheme for morpheme).

For comparative purposes one should start from single segments,[9] even those plurisegmental units which are unanalyzable are suspect of being original compounds, and their value for comparison is lower according as the time-depth required is greater. One may rather expect an etymological analysis of a number of these units to result from a comparison with morphemes in closely related languages such as Abkhaz and Ubykh[10].

[9] It may be pointed out here that the difficulties are considerable: since each segment is both a phonemic and a morphemic unit by itself, one does not find series of comparisons involving the same phonemes (as, for instance, in Indo-European one has a whole series of comparisons involving palatal **k'*, etc.). Various attempts have been made to circumvent this difficulty. Dumézil (1932) hoped that a comparison of morphological elements would yield phonetic correspondences which could then be extended to other lexical units, but the resultas of Circassian-Ubykh-Abkhaz comparison are so far meagre. Lomtatidze (1953) makes the interesting attempt of starting from a series of segments in Circassian, namely those instances of Kabardian *ŝ, ẑ, ŝ'* which correspond to W. Circ. *ŝ, ẑ, ŝ'*, and of determining, on the basis of purely structural considerations, what could be the corresponding series in Abkhaz. She arrives at the conclusion that the series corresponds to Bzyb-Abkhaz *c', ʒ', c''*, except for part of the instances of *ŝ, ẑ*, which correspond to *s', z'*. Lomtatidze's reasoning is lucid enough, but her conclusion is substantiated by only three actual comparisons, two involving Circ. *ŝ'* – Abkh. *c''*, and one Circ. *ẑ* – Abkh. *z'*. The method deserves wider application, though much spade-work in the way of collecting lexical dialect-material remains to be done first.

[10] It will be possible to look for older layers of borrowings only in the residue of unanalyzable units that will remain after such a study. Trubetzkoy's attempt at identifying older Iranian elements in Circassian (1922[a]) was therefore premature. Most of his alleged borrowings (other than proper names) are analyzable within Circassian itself: *w'ahja* 'storm' has nothing to do with the god of the wind *Vāyu-* of the Vedas, but contains *wa* i.c. 'sky', 'weather' and *ja* 'bad' (cf. *w'af'* 'nice weather'; the same components, but without the connective, in *waj:Ps'aj* 'foul weather', cf. §37); the word *waSd'ğa* (W. Circ. *waSt'ğ*) 'candle', 'light', 'lamp', orig. '(pine-)torch' (cf. *waSdğ'aj* 'pine tree', lit. 'the one of the torch', cf. §15) needs not be explained on the basis of an Iran. **us-dağa*, but probably contains the W. Circ. root *St* 'burning'; the word *nž'aba* (W. Circ. *nč'apa*) 'last night', 'tonight' cannot be connected with an Iran. **nū-xšapar* 'this night' as it contains the root *ža* i.c. 'night' (cf. *ž'a-ŝ* 'night', *ž'-aj* 'sleeping') and is paralleled by *n'awba* 'today' < **n-wa-ba* (cf. *wa* i.c. 'sky') and by *n(a)ğ'-*

In conclusion, a few words may be said about the possible archaism of Kabardian (and of the N. W. Caucasian languages in general). The external conditions for conservatism, in language as well as in other cultural matters, were certainly present in the case of the speakers, who have inhabited the inaccessible mountains of the N. W. Caucasus since times immemorial [11]and, due to the fact that the main passes through the Caucasus are located in the central and eastern part, remained comparatively free from foreign influences. The major impact on their language and culture has been that of Turkic peoples, but this impact seems to have been strongest in relatively recent times and, unlike so many other languages, Circassian has not yielded to the assimilative powers of Turkic. It is quite conceivable that under these conditions of comparative isolation ancient linguistic characteristics, which long since disappeared elsewhere, could survive until the present day.

As to the language itself, it was pointed out in §40 that in comparison to the Indo-European languages Kabardian phonology undoubtedly exhibits archaic features; it resembles in several respects the oldest stage that can be reconstructed for this language-family. Furthermore, the extremely small number of the Circassian morphemes and the use made of compounds of these for the expression of many simple, every-day notions, can also be interpreted as an archaic trait. One can conceive how compounds like *n'aPs* 'tear', *ʔ'apa* 'finger', *š'Px°* 'sister', etc., might gradually lose their transparency and, after a number of phonetic simplifications, give

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ahba 'last year' (cf. *ğa* 'year'; for the initial and final segments in these words cf. Yakovlev 1948:117 and, less convincing, 243); the word *x°'ada* 'like', 'similar' does not go back to an Iran. **x°atah* (Skt. *svatas*) but consists of the prefix *x°a-* 'in favor of', 'for', 'to' and the root *da* 'agreeing', as is shown by the negative form *x°(a)m'da* 'unlike' (with the negative prefix *m-*).

[11] It is not known when the linguistic ancestors of the N.W. Caucasian peoples arrived in their present habitat. Geographical and ethnic names contained in Greek and Roman authors around the beginning of our era (Strabon, Pliny) prove that at that time they were already present in the N.W. Caucasus. It is doubtful whether the name Κερκέται has any connection with the name "Cherkes", "Circassian" (unknown to the Circassians themselves); if so, then the evidence reaches a half millennium farther back in time (Hellanikos, fr. 109).

rise to biconsonantal roots of the Proto-Indo-European type, or, with the numerous unisegmental pre- and suffixes that exist in the N. W. Caucasian languages, to triconsonantal roots of the contemporary Semitic type. The groups of compounds containing an identical component, e.g. *g°-* 'heart' in units referring to emotions, *wa-* 'sky' for meteorological phenomena, *ḫa-* 'barley', 'cereals' for notions connected with vegetation and agriculture, suggest how a classification-system of the Bantu type might originate.[12] To this must be added the fact that almost all the grammatical morphemes of the language can be connected with independent nominal, verbal or deictic roots.[13] Indeed, the Circassian languages, with their curious phonemic and morphemic units, come close to the idea of an "Ursprache" as envisaged by van Ginneken.

But assigning the Circassian languages such a place in a general evolutionary scheme presupposes accepting the theories of van Ginneken *in toto*, and particularly, accepting his idea that oral language originated quite recently, possibly as late as in the 5th or 6th millennium B.C., and was preceded by gesture-language. If one rejects this idea, and assumes that oral language is as old as homo sapiens himself, then it is impossible, of course, to see in any contemporary language archaic features of this absolute order. In that case one can see in the Circassian languages the result of a more complex monosyllabic language which in a certain period of its history had a tendency to make all syllables open, as it happened in French, in Old Church Slavonic and to a certain extent in the likewise monosyllabic Pekinese language.

Only a painstaking comparison, based on fairly complete material, of the Circassian dialects among themselves, and of the results of such a comparison with similar results of comparative Abkhaz dialectology and with Ubykh material, can form the basis for a solution of these problems – a solution which will also have to await the results of similar work on the N. E. Caucasian lan-

[12] Yakovlev (1941:215) thinks that the Circassian language once knew such a division of nouns in classes, and expresses his intention to devote a separate study to this question. As far as I know, this has not been published.

[13] Cf. Yakovlev 1927:XXIII-XXXIII.

guages. Unfortunately, there is a great lack of comprehensive dictionaries of the North Caucasian languages. It is sincerely to be hoped that the linguists of the Soviet Union, who for many years have been occupied with the more practical tasks of developing systems of orthography, writing compendia for native teachers and compiling practical dictionaries, will now find the time and the means for the publication of comprehensive dictionaries, taking into account dialect-material and, as much as is possible, the rapidly disappearing vocabulary connected with those aspects of the ancient culture of the Caucasian peoples which now belong to the past. The recently published Kabardian-Russian dictionary[14] which was compiled by a group of native speakers and contains a large number of words connected with the old culture of the Kabardians, is an important step in this direction.

[14] Kardanov (Ed.) 1957.

APPENDIX

KABARDIAN ALPHABETS

Phonemic See chart p. 18 1	Official 1937/8-present 2	Official 1928–1937 3	Official 1923–1928 4	Official Until 1923 5	Lopatinskii Sbornik Mat. 6	Kube Csaban (Syria, Jordan) 7	Yakovlev 1927 8	Marr's Japhetidolog. Transcription 9
p	п	p	p	پ	п	p	p	φ
f	ф	f	f	ڢ	ф	f	f	f
b	б	в	b	ب	б	b	b	b
v	в	w	v	ڤ	в	w	w	v
p'	пI	ɼ	ph	ٻ	п'	pv	p, py	p̱
f'	фI	ƛ	fh	ڡ	ф'	fv	f, fy	f̱
m	м	m	m	م	м	m	m	m
t	т	t	t	ت	т	t	t	ϑ
c	ц	c	c	ث	ц	ts	c	ϑ̇
s	с	s	s	س	с	s	s	s
d	д	d	d	ل	д	d	d	d
ʒ	дз	ʒ	ʒ	ڶ	ʒ	dz	ʒ	ď
z	з	z	z	ز	з	z	z	z
t'	тI	ţ	th	ط	т'	tv	t, ty	ţ
c'	цI	ç	ç	زٓ	ц'	tsv	c, cy	ṫ
n	н	n	n	ن	н	n	n	n
r	р	r	r	ر	р	r	r	r
ŝ	щ	7	ş	ص	ç	c	ç	ʂ
ẑ	жь	ʐ	ʐ	ظ	ʒ̧	zh	ʐ	ʒ
ŝ'	щI	7̵	ch	ض	ç'	cv	ç, çy	ʂ̱
š	ш	ş	š	ش	ш	cs	ʃ	ш
ž	ж	ƶ	ž	ژ	ж	j	7	ȷ
ł	лъ	ļ	ļ	ڵ	ль	tl	ļ	ƕ
l	л	l	l	ل	l	l	l	l
ł'	лI	£	lh	ڷ	ль'	tlv	l, ly	ƕ̱

1	2	3	4	5	6	7	8	9
k′	к, ч	ч	k	چ(ک)	к	ç	k	ϑ̣ (q_1)
x′	х	x	x	خ̈	х	x	x	ħ
g′	дж	g	g	چ(گ)	г	g	g	ḓ (g_1)
γ′	г	ɔ	5	خ̈	ɔ	gh	ɔ	γ
k’′	кI	ķ	k_1	چ(گ)	к’	çv	k, ky	ṭ (k_1)
k°	ку	kv	ku	کو	ку	ku	$k_\circ$	$q_\circ$
x°	ху	xv	xu	خو	ху	xu	$x_\circ$	$ħ_\circ$
g°	гу	gv	gu	گو	гу	gu	$g_\circ$	$g_\circ$
k’°	кIу	ķ v	k_1u	گو	к’у	kvu	$k_\circ$, $k_\circ$y	ķ$_\circ$
q	кхъ	q̧	qh	ڨ	k‘	q	q, qy	q̣
x̄	хъ	ꭓ	x̌	خ.	x‘	xh	ꭓ	q̇
ğ	гъ	ɋ	ɔ	ح.	5	qh	ȷ	ğ
q’	къ	q	q	ق	k	q	q	k̇
q°	кхъу	q̧v	qhu	ڨو	k‘y	qu	$q_\circ$, $q_\circ$y	q̣$_\circ$
x̄°	хъу	ꭓv	x̌u	خو.	x‘y	xhu	ꭓ$_\circ$	q̇$_\circ$
ğ°	гъу	ɋv	ɔu	غو	5y	qhu	ȷ$_\circ$	ğ$_\circ$
q’°	къу	qv	qu	قو	**ky**	qu	$q_\circ$	k̇$_\circ$
ḫ	хь	ɦ	ɦ	ح	ẖ	h	h	ħv
ʔ	I	ħ	h,`	ڽ(ء)	’	v	y	ɣ
ʔ°	Iу	ħv	ù	ئو	’у	vu	v	ɣ$_\circ$
j	й (е, я)	j	j	ى	j	y	ı	y
w	у	v	u	و	ў	w	u	ɷ
ə	ы	ь	y	۷	ы	i	e, ɘ	ə
a	э	e	e	°(ه)	e	e	e, ᴇ	e
əj	ый, й	i(j)	yj, i(j)	ىٮ(ى)	ый, й	iy, y	əı	$i^{ı}$, əy
aj	е, ей	ej	ej	مى(ە)	e	é	eı	$\bar{e}^{ı}$, ey
əw	ыу, у	u	yu, u	هو(و)	ыу, у	u	əu	$\bar{u}^{u}$, $ə^{ɷ}$
aw	эу, о	o	eu, o	و°(ۆ)	o	o	eu	$\bar{o}^{u}$, $e^{ɷ}$
ā	а	a	a	ا	a	a	a, ᴀ	a

Remarks on the Alphabets

(The numbers refer to the columns in the list)

1. The phoneme *h* is not represented in the list, as all other transcriptions write "*a*" for the sequences *ha* and *ah*. In the literary dialect the plural ending is *-x'a*, and not *-ha* (cf. §3).

2. The first draft of the Cyrillic alphabet, introduced in 1937, contained the symbols ', кх and ль, which were replaced by I, кхъ and лъ respectively in 1938. The single letter к is used only in borrowings from Russian. The letters е, я stand for *ja*, *jah*. The transcription of the sequences *əj*, *aj*, *əw*, *aw* is not consistent in any alphabet except Yakovlev's. The modern orthography retains, as a rule, "а" in cases where in pronunciation *ah* is reduced to *a* (§§26, 32), but not consistently.

8. In Yakovlev's transcription the vowel-symbols Е, Э, А indicate that the preceding consonant is glottalic (in the same way as in the Russian alphabet я, ю, etc., indicate that the preceding consonant is palatalized). His symbol "у" has, *mutatis mutandis*, the same function as Russian ь. The economy of this procedure is elegantly set forth in Yakovlev 1927:XXXIX ff.

9. Marr's Japhetidological transcription is in part based on (mostly chimerical) etymological criteria rather than on phonetic ones; as a result, it is extremely confusing from a phonetic point of view.

Due to the complex phonological structure of the language involved, none of the practical alphabets is wholly satisfactory. The disadvantage of the present Cyrillic script is that it uses many digraphs (or rather, polygraphs), which tends to lengthen the written words of the language (which is polysynthetic as it is). To give an extreme example: the word *q°ˈḥ* 'ship', consisting of two uniconsonantal segments – or, in the traditional terminology, of two phonemes – is written with six letters: кхъухъ. On the

other hand, the carrying through of a one-to-one correspondence between phonemes and letters results in the necessity of introducing a number of new symbols in any standard alphabet (nos. 3 and 5 go a long way in this direction). The native speakers unanimously prefer the latter alternative, which, however, has obvious practical disadvantages (typewriting, telegraphy, etc.). The present official alphabet has the merit of adding only one symbol ("I") to standard Cyrillic.

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