From North to North West:
How North-West Caucasian Evolved from North Caucasian

Viacheslav A. Chirikba
Abkhaz State University, Sukhum, Republic of Abkhazia

The comparison of (North-)West Caucasian with (North-)East Caucasian languages suggests that early Proto-West Caucasian underwent a fundamental reshaping of its phonological, morphological and syntactic structures, as a result of which it became analytical, with elementary inflection and main grammatical roles being expressed by lexical means, word order and probably also by tones. The subsequent development of compounding and incorporation resulted in a prefixing polypersonal polysynthetic agglutinative language type typical for modern West Caucasian languages. The main evolutionary line from a North Caucasian dialect close to East Caucasian to modern West Caucasian languages was thus from agglutinative to the analytical language-type, due to a near complete loss of inflection, and then to the agglutinative polysynthetic type. Although these changes blurred the genetic relationship between West Caucasian and East Caucasian languages, however, this can be proven by applying standard procedures of comparative-historical linguistics.

1. The West Caucasian languages.[1]

The West Caucasian (WC), or Abkhazo-Adyghean languages constitute a branch of the North Caucasian (NC) linguistic family, which consists of five languages: Abkhaz and Abaza (the Abkhaz sub-group), Adyghe and Kabardian (the Circassian sub-group), and Ubykh. The traditional habitat of these languages is the Western Caucasus, where they are still spoken, with the exception of the extinct Ubykh.

Typologically, the WC languages represent a rather idiosyncratic linguistic type not occurring elsewhere in Eurasia. In phonology, they are notorious for huge consonantal inventories, reaching a maximum of eighty phonemes in Ubykh, and for minimal vocalic contrasts: three vowels in Circassian and Ubykh and only two in Abkhaz/Abaza. In grammar, these languages are characterized, on the one hand, by highly developed verbal systems: prolific verbal prefixation, polypersonalism (the coding of up to four, as in Abkhaz, and even five, as in Circassian, arguments on the verbal form). On the other hand, they have only elementary nominal inflection: Circassian has four cases, Ubykh has two, and Abkhaz/Abaza none at all. Abkhaz stands apart even among its sister-languages in expressing ergative alignment solely by the relative order of agreement markers and in having a category of nominal classes and gender, absent in Circassian and Ubykh.

---

[1] I thank Dr. B.G. Hewitt and two anonymous reviewers for valuable comments.

(1)   **Proto-West Caucasian**

                 Circassian   **Ubykh**   **Abkhaz**
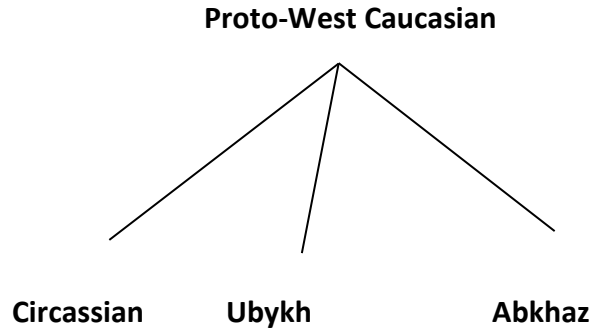
However, despite marked differences such as those mentioned here, in general all five WC languages exhibit uniformity in their overall phonological and grammatical makeup, which can be attributed to the result of shared inheritance, parallel development and millennia-long contact.

The other North Caucasian branch is Nakh-Daghestanian or East Caucasian (EC), which consists of ca. 30 languages, distributed into six groups: Nax, Lezgi, Avaro-Ando-Tsez, Lak, Dargi and Khinalygh.

In many respects, WC and EC represent very similar systems. The main parameters of their phonological structures coincide. These include the four-way distinction in laryngeal features: voiced *vs.* voiceless aspirated (or lax) *vs.* voiceless unaspirated (or strong/tense) *vs.* glottalized. The property of both systems are lateral obstruents, which are universally rare and, with some exceptions, unique in Eurasia. Another shared feature is richness of post-velar articulations and of sibilant systems (affricates and fricatives). Morphophonologically, both families are marked for the use of Ablaut. Another idiosyncratic trait uniting EC and WC families is the presence of the system of nominal classes. Morphosyntactically they are representatives of ergative alignment. By themselves, all these traits represent rather specific phenomena on the background of the languages of Eurasia.

However, in other fundamental aspects WC and EC are strikingly different: unlike polysynthetic WC languages, the languages of the EC branch are moderately synthetic with elements of analyticism. Besides, in sharp contrast to mainly prefixing WC, which have an elementary nominal inflection, EC languages are characterized by a prevailing suffixation and a developed nominal inflection.

What I purport to discuss in this paper is how WC could arrive in some important aspects to a strikingly different system from the one represented by EC, which latter, as some specialists maintain, continue the main parameters of the NC proto-language.[2]

---

[2] "While comparing the reconstructed PEC and PWC systems it became clear that the second system can be almost completely deduced from the first [one]. Thus the finally obtained Proto-North-Caucasian phonological system virtually coincides with the PEC…" (NCED 39-40).

2. A short history of WC and NC comparative research.

The genetic relationship between the WC languages was first noticed in the second half of the 18th century by the German scientist Johann Anton Güldenstädt (cf. his work published posthumously in 1834), according to whom Abkhaz and Circassian had common origin.[3] This opinion was repeated by the British author George Ellis (1788: 18), who wrote: "The Abkhas speak an original language, essentially different from all the known languages, though appearing to have a very remote affinity with that of the Circassians".

Güldenstädt's famous compatriot Peter Simon Pallas (1803), though initially having remarked about "some affinity" between Circassian and Abkhaz (Abasa) (p. 329), went on further in his book claiming that Abkhaz, despite some Circassian loanwords, had not the slightest resemblance to any European or Asiatic language.[4] The same erroneous claim is made for Circassian.[5] Pallas' misleading conclusion was echoed half a century later by the early Russian Caucasologist and the author of a Circassian-Russian dictionary, Leontij Liulie (1857): "The Circassians, i.e. Adyghes and Kabardians, speak the Adyghe language; while the Abkhazians – the Abkhaz language and both languages have not the slightest affinity between them."

Another celebrated German, Julius von Klaproth, in his *Travels in the Caucasus and Georgia*, published in 1814, literally follows Pallas' words on the lack of relationship between Circassian and Abkhaz.[6] However, in his later work *Asia Polyglotta* (1823), on examining the data, he changed his view and united both Circassian and Abkhaz into one genetic taxon, "West Caucasian" (p. 129); cf. also Klaproth (1827: 55, 82). The insightful judgments of Güldenstädt and Klaproth based on the examination of word-lists of the respective languages were supported by the German orientalist Georg Rosen (1846), who also noted the closeness of Abkhaz to Circassian. Finally, in the second half of the 19th century the great Russian Caucasologist Baron Peter von Uslar (1887: 82, 85), the author of the first Abkhaz grammar and the first grammatical sketch of Ubykh, definitively asserted the genetic kinship existing between Circassian, Abkhaz and Ubykh.[7]

In 1932, young Frenchman George Dumézil published a study of comparative morphology of the WC languages. Though this work became a valuable contribution to WC research, Dumézil's morphological comparisons were not supported by, or based on,

---

[3]"Die Abchasetische oder Abasaische und Tscherkessische Sprache haben eine Mutter sind aber so verschiedene Mundarten derselben, dass man die Verwandschaft nicht überall findet, sondern theils mühsam suchen muss. Meine Sprachproben zeigen dieses" (Güldenstädt 1834: 131-132).

[4] "Ihre ganz fremde Sprache hat, wie aus dem *Wörterbuche aller Sprachen* zu ersehen ist (wenige Tscherkessische Wörter ausgenommen), mit keiner bekannten Europäischen und Asiatischen Sprache die geringste Aehnlichkeit" (Pallas 1803: 335).

[5] "Ja vielleicht ist die Tscherkessische, mit keiner andern verwandte Sprache ursprünglich eine Art von Rothwälsch gewesen" (p. 352).

[6] "Their peculiar language has, with the exception of a few Tscherkessian words, no resemblances to any European or Asiatic tongue" (Klaproth 1814: 247).

[7] "… я извлек для себя точное убеждение в родстве адыгского языка с убыхским и абхазским" (p. 85).

a system of regular sound correspondences. Dumézil himself was aware of the methodological shortcomings of such an approach, which is clear from the foreword to his book (p. 8).

It was, again, Julius von Klaproth, who in his *Asia Polyglotta* (1823: 124) first suggested the connection between the WC and EC languages and the existence of the North Caucasian family (which he called "Caucasian") as an independent genetic taxon. Klaproth also proposed the internal classification of the "Caucasian" family into West Caucasian, East Caucasian, and Central Caucasian ("Mittel-Kaukasier"), i.e. Nakh, regarding the (North) Caucasian family as indigenous to the Caucasus and separating it from Kartvelian languages, which he saw as a genetically isolated taxon. He wrote: "Although the languages of the [North] Caucasian tribes significantly deviate from each other, and at first sight seem to be absolutely different, yet by a closer examination one does find undoubted family affinities and common points" (op.cit., 133).

A hundred years later after the publication of Klaproth's monumental work, the great Russian philologist Nikolay Trubetzkoy was the first to put the comparison of the NC languages on a solid scientific base. In his 1922 article, he insisted that "In order to prove a genetic relationship, it is necessary first of all to establish phonetic correspondences, to demonstrate their regularity, to single out the exceptions, and to scrupulously compare the grammatical forms" (p. 185). On the comparison of morphological elements only, Trubetzkoy (ibid.) remarked: "Linguists are convinced of the relationship of Greek, Sanskrit and Latin not due to more or less similar usage of the genitive or accusative cases, but due to the existence of consonantal correspondences between one or another phoneme of Greek and one or another phoneme of Sanskrit and Latin".

Having laid down rigorous methodological prerequisites for the comparative-historical study of the Caucasian languages, Trubetzkoy successfully demonstrated that methods, used to prove the relationship between the IE languages, many of which boasted ancient literary traditions, are fully applicable to unwritten languages of the Northern Caucasus through the examination of phonemic correspondences between the modern dialects. Especially compelling were regular sound correspondences established by Trubetzkoy (1922: 188-9) in the series of obstruent laterals:[8]

(2)	Circ	Ub	Abx		Circ	Ub	Abx	
	L	L	*žʲ*	:	*bLə*	*bLə*	*bžʲ*	seven
					Lə		*žʲə*	meat, flesh
	λ	λ	*šʲ*	:	*pλə*		*pšʲə*	red
					λə		*šʲa*	blood

---

[8] Transcription used in this paper: *ƛ* – voiceless obstruent lateral affricate, *ƛ:* – strong voiceless lateral affricate, *ƛ':* – strong voiceless glottalized lateral affricate, *L* – voiced obstruent lateral fricative, *λ* – voiceless obstruent lateral fricative, *λ'* – voiceless glottalized lateral fricative; the sign *:* renders vocalic or consonantal length/strength, *ᵛ* - voice, *'* - glottalization, *ʲ* - palatalization, *ʷ* - labialization.

| *λ'* | *ƛ'* | *šʲ* | : | *pλ'ə* | *pƛ'ə* | *pšʲ* | four |
| | | | | *λ'ə* | | *šʲ* | to kill (Circ, Abx); to die (Circ) |

In these examples, Abx back sibilant fricatives are innovations in comparison to more archaic Circ and Ub lateral consonants. Similar correspondences in laterals were established by Trubetzkoy (op.cit., p. 189-197) within the EC group, and finally between the EC and WC branches. Though not all of his correspondences and reconstructions now seem to be correct (see Starostin's comments in Trubetzkoy 1987: 438-447), others are still valid, cf. the correspondences between EC strong and strong glottalized lateral affricates *ƛ:*, *ƛ':* and WC voiced lateral fricative *L*:

(3)	'seven'	Avar *anƛ:-*, Archi *wiλa-*	:	Circ *bLə*, Ub *bLə*, Abx *bžʲ*
	'meat'	Andi *riλ:i*, Archi *aƛ':*	:	Circ *Lə*, Abx *žʲə*
	'ice'	Archi *muλ':a-ƛ'*	:	Circ *məLə*

From these correspondences, Trubetzkoy drew important conclusions that the presence of lateral consonants in Avaro-Andi and in WC languages cannot be fortuitous, and that lateral consonants already existed in the NC proto-language (op.cit., p. 200). He emphasized that the great typological difference between EC and WC means that their genetic relationship is not self-evident and should be specially proven.

Results of Trubetzkoy's work convinced a number of Caucasian linguists in the existence of an independent North Caucasian family. G. Deeters (1931: 290) wrote that the relationship between the NWC and NEC languages was proven by Trubetzkoy, and that the South Caucasian (Kartvelian) languages do not seem to be related to this family. In another paper, Deeters (1955: 26) asserts, referring to the works by Trubetzkoy, that there are undoubted lexical similarities between the NWC and NEC groups. K.-H. Schmidt (1972: 25) wrote that the genetic relationship between the NEC and NWC languages, after the famous 1930 article by Trubetzkoy "Nordkaukasische Wortgleichungen," must be regarded as proven. A similar idea was expressed somewhat more cautiously by the Dutch Caucasologist A.H. Kuipers (1963: 315): "The existence of a genetic relationship between N[orth-]W[est] and N[orth-]E[east] Cauc.[asian] is probable; the relations of S[outh] Cauc.[asian] to this N[orthern] group so far remain unclear … This appraisal of the possible genetic relationships between the three groups is based on the number of reasonable etymologies that have been proposed, cf. especially N.S. Trubetzkoy, "Nordkaukasische Wortgleichungen."

Nearly at the same time as Trubetzkoy, George Dumézil in the cited above 1932 book rather eloquently expressed his opinion on the North Caucasian relationship: "Que les langues caucasiennes du Nord-Ouest soient apparentées à celles du Centre et du Nord-Est (tchétchène et langues du Daghestan), ce n'est pas une hypothèse, c'est un fait" (p. 8). In view of Dumézil's disciple and a prominent Caucasologist himself, George Charachidzé

(1967: 30), the genetic relationship between the two northern families, NWC and NEC, seems to be quite certain.

The author of the present article too deems the relationship between the WC and EC families as basically proven, thanks to works by N. Trubetzkoy, G. Dumézil, A. Shagirov, B. Balkarov, and especially A. Abdokov, S. Starostin and S. Nikolayev. The overall weight of revealed lexical material common to both NC branches, and, importantly, systemic phonemic correspondences established on the basis of lexical comparisons, despite the fact that many details in the reconstruction of individual NC groups and the parental NC proto-language still have to be worked out, render the validity of the North Caucasian linguistic family beyond any reasonable doubt.[9]

The notion of genetic relationship between WC and EC is supported by quite a number of prominent Caucasian scholars, such as G. Dumézil, G. Charachidzé, M. Kumakhov, A. Shagirov, S. Kodzasov, M. Alekseev, Y. Testelets, etc. The critics of this theory so far have failed to produce any compelling argumentation, which would explain numerous lexical correspondences in basic vocabulary as observed between WC and EC families by anything other than genetic inheritance. Typically, the critique comes from authors who are not themselves historical linguists, or who work exclusively on one branch of the NC family, being unfamiliar with the other, or even from those who work on the unrelated Kartvelian family.

In modern times, the major contribution to the NC comparative studies have been made by the Kabardian scholar Auez Abdokov (1981; 1983) and two Moscow linguists Sergei Nikolayev and Sergei Starostin (NCED). The results of their work became two NC comparative dictionaries. These works, especially the great *A North Caucasian Etymological Dictionary* by Nikolayev and Starostin (NCED), became real milestones in the field of NC comparative studies. Both dictionaries contain a large number of lexical correspondences, which prove the existence of the ancient relationship between these two branches. NCED presents an elaborate system of correspondences between WC and EC phonemes established on the basis of systemic comparison of relevant lexical items of both branches. However, even with this undoubted progress, there remains much to be done in working out many details and solving many remaining problems in the reconstruction of individual NC branches and of their ancestral language.

John Colarusso (1989: 26-27) describes some of the processes within WC, which blurred the original picture of its relation to EC: "Most of the cognates in this family are hidden because the languages have levelled off an old grammatical class system in varying ways. The surviving grammatical class prefixes are primarily reflected as secondary rounding or palatalization on the consonant. This assumption produces a PNWC that closely resembles a Northeast Caucasian language".

---

[9] Cf. Chirikba (2008: 33-36) on various theories concerning the issue of genetic relationship between the indigenous Caucasian languages.

3. The Reconstruction of PWC.

At present, there exist several versions of a PWC reconstruction: the one proposed by S. Starostin (1978; NCED), the systems proposed by B. Balkarov (1979), A. Abdokov (1983), J. Colarusso (1989: 28) and by the author of the present paper (Chirikba 1996).

S. Starostin's short paper (1978) contains the chart of reconstructed phonemes with correspondences in individual languages, but offered no discussion or examples; all these appeared 16 years later in his and S. Nikolayev's *North Caucasian Etymological Dictionary* (NCED 1994; reprint 2007). A much more elaborated presentation of his PWC reconstruction is given in Starostin's review (2007) of my 1996 book.

The version of PWC reconstruction proposed by B. Balkarov (1979: 80) differs considerably from Starostin's system and contains a more modest inventory of 33 consonant phonemes and 2 vowels (*a*, *ə*). The author posits a four-fold set of bilabial and velar stops (voiced, aspirated, non-aspirated and glottalized), and labialization as a distinctive feature. The absence in his PWC scheme of dental stops and simple sibilants makes an impression of omissions due to typographic reasons, though this is just a conjecture. A. Abdokov (1983), though he is using the reconstructed PWC forms in his PNC dictionary, does not present a chart of reconstructed PWC phonemes. J. Colarusso (1989: 28) in the article devoted to the discussion of various aspects of the PWC reconstruction proposes a tentative chart of PWC phoneme system, which contains sets of voiced, aspirated, non-aspirated and glottalized consonants, as well as palatal(ized) affricates and fricatives. He does not reconstruct labialization as a distinctive feature, and presents a system of four (plus two, in parentheses) vowels.

My ideas of PWC reconstruction (Chirikba 1996) are closer to those put forward by S. Starostin. Though our reconstructed models differ in many details, they are based on the following common principles, a part of which coincide with the reconstructed systems proposed by previous authors. The PWC consonant system comprised three classes of phonemes: obstruents, resonants and glides. The obstruent system was based on a four-way contrast in the laryngeal features (voiced ~ voiceless ~ tense/strong ~ glottalized/ejective), and on a four-way timbre contrast (simple ~ palatalized ~ labialized ~ palatalized-labialized). Besides, I agree with Starostin on the need of the reconstruction of pharyngealization as a distinctive feature.

It is probably worth commenting on some of the reconstructed consonant types. In contrast to the paradigmatic richness of the class of obstruents, PWC resonants, glides and vowels were characterized by simplicity.

Though both palatalization and labialization occur in the world's languages, what is extremely rare is the phonemically distinctive combination of these features.[10] The

---

[10] However, they are possible on the phonetic level: labialized fricatives in Abkhaz, or dentolabialized consonants in isolects of Lezgi are phonetically palatalized. The rarity of a phonemically significant combination of palatalization and labialization can be explained by the insufficient articulatory and

necessity to reconstruct a set of labialized-palatalized obstruents, proposed by Starostin (cf. NCED 185, 189, etc.), is dictated by the need to account for two different sets of WC correspondences, as shown on the chart below in (6). Labialized-palatalized consonants are reconstructed for all PWC obstruent series, with the exception of the labial one (though, unlike my reconstruction, in NCED 184 the labialized-palatalized labials are also postulated). Being phonetically unstable, they were not preserved in any of the descendant languages, leaving different reflexes. The source of this correspondence – various reflexes of early PWC combinations $C+\ddot{o}$ and $C+\ddot{u}$, which were reflected in PCirc and PAbx as C^w, and in PUb as C^j.

4. The origin of the PWC phonemic system.

The phonological model of late PWC in essence did not differ substantially from that of its modern descendants. It was a "consonantal" language, with a huge qualitative and quantitative diversity of consonants and a bivocalic, "linear" vocalic system, distinguished by the degree of openness. The striking disproportion between the class of obstruent consonants and the class of vowels is explained by the fact that the timbre features, which in the majority of languages are normally in the property of vowels, in PWC were transposed to the consonants (cf. Starostin 1978: 96; NCED 43, 73, 192; Abdokov 1983: 25-29; Colarusso 1989: 26). The origin of the hypertrophic WC consonant system can thus be explained as a result of a re-analysis of the PWC CV-sequences according to the following formula (the sign ^{v} denotes the vocalic timbre):

(4)   /C+V^v/ => [C+V^v] ~ [C^v+V] => /C^v+V/

The four-fold timbre contrast in consonants ($C : C^j : C^w : C^{wj}$) can be regarded as a reflection of the original vocalic oppositions. Furthermore, the character of the vowel following the consonant (i.e. either a or $ə$) can serve as an indication of the quality of the original vowel.

(5)   <u>early PWC</u> > <u>late PWC</u>   <u>early PWC</u> > <u>late PWC</u>
        *Ca   *Ca   *Ci   *C^{j}ə
        *Cə   *Cə   *Co   *C^{w}a
        *Ce   *C^{j}a   *Cu   *C^{w}ə

However, in two cases, the reflexes in Ub are different from Circ and Abx, which suggests the reconstruction of two additional vowels:

---

acoustical contrast between the simple labialized and labialized-palatalized phonetic types (cf. Chirikba 1991: 96, 102).

8

(6)   early PWC > PWC >   PCirc   PUb   PAbx
   *Cö   *Cʷʲa   *Cʷa   *Cʲa   *Cʷa
   *Cü   *Cʷʲə   *Cʷə   *Cʲə   *Cʷə

Examples: Circ *gʷə*, Ub *gʲə*, Abx *gʷə* 'heart'; Circ *k'ʷa/ə* 'to go (a distance)', Ub *k'ʲa* 'to go', probably also Abx *k'ʷa-ša* 'to dance', etc.

On the basis of these correspondences, the following Pre-PWC vocalic system can be reconstructed: two timbre neutral, four rounded, two front rounded and two front unrounded vowels:

(7)
   *i   *ü   *u
   *e   *ö   *ə   *o
                  *a

4.1. It seems that the source of labialization could be not only vowels placed after the consonant, but also vowels preposed to it, as suggested by East Caucasian cognates, cf. the following examples:

(a) PNC *C+u* > PWC *Cʷ* :
   Avar *nisu*, dial. *nišu*, Andi *iso*, Tsez *izu*, Gin *ižu*, Xvar *īzu*, Gunz *ə̄zu*, Dargi *nusi*, Lezgi *nasu*, Bud *nusu*, cf. PWC > PAbx *ašʷə* 'cheese';
   Chech, Ing, Bats *šu*, Lak *zu*, Aghul *ču-n*, Tsax *šu*, Archi *žʷe-n*, Xin *zu-r*, cf. PWC *sʷa* 'you (pl.)'.
(b) PNC *u+C* > PWC *Cʷ* :
   Axv *ūs:i*, Cham *ūs:*, Tindi, Kar, Botl, Godob *unš:i*, Bagv *unš:*, cf. PWC > PAbx *nəšʷə* 'soil, clay'; the intermediate stage must have been early PWC *nušə*, with a metathesis (*unš-* > *nuš-*), if one regards the EC forms as original;
   Avar *oc*, Gin *üš*, Bezh, Gunz *ōs*, Dargi *unc*, Udi *us*, cf. PWC *c:ʷə* 'ox, bull'.

Sometimes a metathesis of the labialization element can be supposed in individual dialects, resulting in a cluster with initial bilabial, cf. PLezgi *c'ʷ:er* 'name'[11] (Tab *č':ʷur*, Archi *c'or*) *vs.* Ub *p'c'a* 'name', cf. CCirc *c'a*; PDargi *ʔurx:ʷi* 'sea' vs. Ub *šʷa*, but PAbx *mašəna* 'sea', probably, from an earlier *mšəna < šʷəna < *λʷə-na*, cf. CCirc *xə* (PWC *λʷə*); in both cases CCirc lost all traces of labialization altogether.

In some cases of labialization in WC, the EC correlates do not give any indication as to its source, and in this case it is PWC that can be used for introducing this feature in

---

[11] The PNC and PEC reconstructions are from NCED. Though not all reconstructed forms in NCED can be accepted without reservations, here I am more concerned with showing the general lines of the evolution of PWC, rather than with dwelling into the discussion of details of the reconstructed system.

the NC proto-form, cf. Chech, Ing *malχ* 'sun', Andi, Axv, Tindi, Godob *miλi* 'sun', Cham *miλ* 'sun, day' *vs.* PWC **ma/əλʷʲa* > Abx *a-mš*, Ub *məsʷa*, Kab *maxʷe* 'day'; Avar *piq:* 'fruit', Godob *perq:i*, Kar *biq:e* 'apricot', Lak *piq* 'bad fruit' *vs.* PWC **pq:ʷə* > Ad *pq:ʷə//pχə*, Abx *a-pħʷa* 'prune', Ub *pqə* 'a kind of prune with big fruit'.[12]

4.2. Concerning the opposition "lax ~ tense", the authors of NCED (p. 43) propose to see its source in the early distinction between long and short vowels: before long PNC vowels PWC stops and affricates turned into tense consonants. I will accept here this explanation as a working hypothesis.

4.3. We arrive thus at a rather simplified early PWC obstruent inventory, consisting of voiced (*Cᵛ*), voiceless aspirated (C[h]), and glottalized (*C'*) correlates.

(8)   *A tentative inventory of early PWC consonant system*

b	pʰ		p'							m	w
d	tʰ t'		ʒ c c'		z s		n				
			ǯ č č'		ž š		r				
			Ł ƛ ƛ'		L λ		l				
g	kʰ k'				ĝ x			j			
G	qʰ q'					ɣ χ					
	ʔ				ʕ H						

5. Theories concerning the WC root structure.
The seemingly predominantly monosyllabic WC root structure, which sets it apart from other indigenous languages of the Caucasus, has always intrigued linguists (cf. already de Charencey 1862; Bálint 1904: xi, xv, xix) and caused some of them to look at isolating languages for typological parallels.

5.1. Hyacinthe de Charencey.
In 1862, at the dawn of comparative and typological studies, the French philologist Hyacinthe de Charencey wrote about the same "primitive" monosyllabicity of Circassian

---

[12] It is interesting to note a structural and material parallelism of Abx *a-pħʷa-sa* 'damson', lit. 'prune-small' with Avar *ʕis:in-piq:* 'damson', although with a different order of constituents (Avar *ʕis:in* 'little, small', *piq:* 'fruit'). It is also interesting to note a parallelism in the fluctuation on voicedness in the initial bilabial: Abx *a-pħʷa ~ a-bħʷa* 'prune', cf. North Avar *piq: ~* South Avar *biχ*, Kar *biq:e* 'fruit(s)'.

and its sister-languages, on the one hand, and of Sino-Tibetan languages, on the other.[13] De Charencey, who tried to demonstrate not only the structural but also a genetic closeness of the indigenous Caucasian languages to Sino-Tibetan, was obviously an early precursor of modern proponents of the Sino-Caucasian hypothesis, even though the attachment of Kartvelian and Vietnamese to, respectively, North Caucasian and Sino-Tibetan families is discarded by modern research. Like late Marr and Yakovlev (see below), de Charencey regarded the monosyllabicity of WC and Sino-Tibetan root to be original and archaic and thought that the other Caucasian languages transformed their "primitive monosyllabic structure" into the "agglomerating" (i.e. agglutinative) one under the influence of IE and Turanian languages. He even tried to place the original homeland of the peoples belonging to the "monosyllabic family" in areas between Armenia and to the south of Bactria, i.e. Central Asia, and thought that later they were split in two by the Indo-Europeans invading from the north, who pushed one part of them to the gorges of the Caucasus and the other to the Himalayas, whence they then spread to China (p. 12-13).

5.2. Nikolay Marr.

The influential Russian/early Soviet philologist Nikolay Marr, the founder of the notorious "Japhetic" theory,[14] in different works vacillated, in his typical manner, between regarding Abx as a product of an "extreme" evolution and, in later work, calling it an extraordinary archaic language. Thus, in his 1912 paper (reprinted in Marr 1938: 1-33) he was objecting to the opinions expressed by Uslar (1887: 37), who regarded Abx as representing the primaeval ("infantile") state of a language on the basis of richness of its verbal forms, arguing that "even if Abx developed sophisticated verbal forms, it nevertheless possesses a degraded morphology; the loss of morphological expressiveness it compensates by syntactic means, and … in general Abx demonstrates an extreme level of development" (Marr 1938: 2). The comparison of Abx monosyllabic roots with Kart polysyllabic roots suggested to him that Abx roots were historically worn, having lost final consonants and that monosyllabicity was thus of more recent origin (ibid: 4, 27). He saw the evolution of Abx in the weakening of final syllables, which led to the loss of the original case endings, and in the increased role of prefixation, specifically noting the proclitization of originally enclitical pronominal particles (ibid: 5-6).

---

[13] "Entre toutes les langues caucasiennes, le tscherkesse et les idiômes de peuplades voisines semble se rapprocher du manière plus spéciale du tibétain et de dialectes indigènes du Népal. Dans ces deux groupes d'idiômes, nous rencontrons, en effet, la même structure primitivement monosyllabique, la même formation, à une époque postérieure, de quelques dissyllabes, par addition particule déterminatives placées d'ordinaire à la fin du mot." (p. 9-10).

[14] Marr claimed that human language went through successive structural-grammatical stages – from amorphous to agglutinative and finally to fusional, whereby each stage directly corresponded to concrete social-economical and political systems (from earliest communes to a class society).

In his later work Marr, however, radically departed from these views and started to regard Abx as frozen "on an exceptionally archaic stage of development".[15] Marr's early conclusions, though based on the comparison of Abx with unrelated Kart languages, were nevertheless productive, presenting the WC monosyllabicity not as a static and frozen remnant of the distant glottogonic past, but rather as a result of a relatively later evolution from more complex structures.

5.3. Nikolay Yakovlev.

The other great Russian Caucasologist, Nikolay Yakovlev, echoing late Marr's glottogonic ideas, spoke of the "amorphous" stage as the most archaic speech-form through which all human languages passed. He suggested that unlike other languages, the WC languages retained vivid vestiges of that ancient stage; the term "amorphous" was then used for the language type we now call "isolating", and indeed, Yakovlev's description of the "amorphous" structure (as in Yakovlev & Ašxamaf 1941: 7) by many parameters conforms to an isolating language-type.

In his grammar of Adyghe, written together with Ašxamaf, Yakovlev describes the earliest stage of the "amorphous" structure of Adyghe and the way it evolved into the polysynthetic one (pp. 209, 237-8, 380-1, 406, 408). In his view, in the ancient period the language did not distinguish vowels (monovocalism). The root had a CV-structure and was equal to a phoneme, a syllable, a morpheme, and a word: it was a unitary complex, a "syllabo-phoneme", comprised of a variable consonantal initial and an invariable (mono)vocalic finale. The words did not belong to concrete grammatical classes and lacked any inflection; their connections within the sentence were expressed by their relative order, intonation or accent. From monovocalic monosyllabic words then evolved monosyllabic words with the distinction of two vowels. Due to the growing need to create new words, compounding began to develop, hence the development of incorporation, which was followed by the development of agglutination and, finally, of polysynthetism.

Yakovlev points out the following vestiges of the "amorphous" stage in modern Adyghe (pp. 11, 208, 211, 241, 252-3, 255, 284-5, 381-2, 404, 414): the predominance of monosyllabic roots with consonant onset and vocalic finale (CV) as the primary root-type; a syllable is often equal to a morpheme ("seme"); many modern affixes can be traced back to independent roots/words; each word can become a verb or a substantive, as the reflection of the period when no formal grammatical classes of words existed, etc.

Even after the official condemnation of Marr's Japhetic theory, in his later grammar of Abkhaz finished in 1951 (and published only in 2006), Yakovlev (p. 144-145) still speaks of vestiges of the amorphous stage in the evolution of Abx: "… the majority of current polysyllabic Abx words can be analysed

---

[15]"[Мы застаем] абхазский на исключительно древней стадии развития" (Марр 1938: 381). On the eastern extreme of Asia, Marr (1936: 6) cited Chinese as being of "absolute typological antiquity" ("Китайский язык, его абсолютная типологическая древность и относительные эволюционные новшества"). Marr (1933: 243) wrote: "From this formal point of view Chinese stopped at that stage of development, when in the language of humanity there were no service [i.e. grammatical] forms, the relations between words were determined not by endings, as in Russian, but by word order. Such a phenomenon we find in the West, in the Mediterranean world, in a certain measure only on the eastern Black Sea coast in Abkhazia and in the eastern part of the Mediterranean itself, in Egypt."

into their component parts – the primary words/roots. From this, we can suppose that in some more or less distant epoch the language, from which Abx evolved, consisted of monosyllabic words/syllables. These words/syllables did not posses then any formal particles, either prefixes or suffixes. They remained unchanged in the sentence. All connections between words and their forms were expressed only syntactically, i.e. by the placing of words in the sentence, intonation, accent, gestures, real speech situation, etc. Such a language structure is usually called amorphous, isolating or monosyllabic… We find traces of the same structure elsewhere in the Caucasus (for instance, in the Circassian languages) and in other parts of the world (for example, in the majority of the Sudan languages in Africa, in the languages of Central America, in Chinese). One can even say that at a certain period of the development of society, all languages must have had such a structure. Only in Abkhaz and Circassian do we find it as a more or less preserved vestige of the past".

5.4. Alexander Genko.

Yakovlev's colleague, Alexander Genko, also spoke of residual monosyllabicity of the main word-stock of Abkhaz/Abaza and of residual analyticity of their linguistic structure, when all grammatical relations were expressed by lexical words (Genko 1955: 78; 1998: 377). Genko (published posthumously in 1998: 394) thought that the agglutinative structure of Abx evolved on the ruins of the former monosyllabic analytical one. However, he did not share (late) Marr's and Yakovlev's glottogonic views on monosyllabicity. In his grammar of Abaza, he emphasized that the predominance of monosyllabic roots cannot be used as a proof of the archaic or primitive period in the evolution of Abaza, as the comparison with other Caucasian languages demonstrates that both monosyllabicity and polysemy of Abaza words can in a number of cases be the result of later simplifications and the falling together of originally more complex and differentiated sound combinations (Genko 1955: 78).

6. From North Caucasian to West Caucasian via an analytic stage?

It is logical to suppose that at a certain period of its history, a NC dialect which gave rise to PWC, in many respects resembled its sister (later > EC) dialects. This would imply a moderately synthetic structure with a tendency to analyticism; a moderately developed nominal and verbal inflection (including Ablaut); a relatively free word order; a moderately developed vocalism and well developed consonantism.

Trubetzkoy (1930a; reprint 1987: 281-282) was certainly right in rejecting Yakovlev's theory of primordial monosyllabicity of WC. Based on correspondences between WC and EC languages, Trubetzkoy argued for the secondary nature of many WC monosyllabic roots, which were the result of complex simplification processes. However, if we put aside Yakovlev's glottogonic approach, the idea that at a certain period in its history the WC passed through an analytical or isolating ("amorphous") stage, and later, due to compounding and incorporation, turned into an agglutinative polysynthetic language type, as we know it today, seems rather productive.

We can thus surmise that early PWC was subjected to a large-scale restructuring, leading to changes at the phonological, morphological and syntactic levels.

In phonology, the changes resulted in the elimination of (nearly) all clusters by dropping one of the consonants; in the loss of many unstressed syllables; in the shift of various root structures to CVCV and CV; in the shift of vocalic timbre onto consonants, leading to the reduction of vocalic contrasts (from at least eight to a binary system) and a significant increase in the number of consonants; in the probable development of a tonal system in the place of lost consonants or syllables.

In morphology the restructuring resulted in the loss of much of the old inflection and the development of analyticism, as well as the weakening of the nominal class system.

Syntactic changes manifested themselves in the increased importance of word order, which became the main means of expressing syntactic relations – on the background of the fading cross-referencing nominal class system.

As a result, the previously mainly synthetic pre-Proto West Caucasian language became analytical, as it happened, for example, in the history of modern Germanic or Romance languages. We can further surmise that at a later stage, the increased role of incorporation and compounding, as well as proclitization of formerly independent pronouns and adverbs, resulted in an agglutinative polysynthetic polypersonal prefixing language type, which was inherited by its modern descendants.

7. The fall of early PWC syllables (PNC *(CC)VC(C)V → PWC *CV).

The comparison with EC cognates proves that early PWC underwent a radical simplification of its root structure along the lines described above. In many cases syllables in poly-syllabic words were dropped, leading to the emergence of monosyllabic roots. Largely, this involved the initial syllables, which can indicate that they were unstressed:

(9)   (C)V(C$_1$)C$_1$V$_1$ → C$_1$V$_1$

PLezgi *ʔiƛ'e 'to die, kill', cf. PWC *ƛ^{j}a/ə 'to die, kill';
PLezgi *ʔac'a- 'to know; can', cf. PWC *c^{j}a 'to know';
PAvar-Andi *ʔumco, cf. PWC *c^w:ə 'ox, bull';
PNax *mac'e, PAvar-Andi *noc':i, PTsez *nɔcə, cf. PWC *c^{j}a 'louse';
PAvar-Andi *riƛ':i, Xin lik:a, cf. PWC *Lʲə 'meat, flesh';
PAvar-Andi *ʔič^{w}a, PDargi *ʔurči, cf. PWC *č^{hjw}ə 'horse';
PAvar-Andi *rok'^{w}o, PTsez *rɔk'^{w}ə, PLezgi *jirk'^{w}, cf. PWC *g^{wj}ə 'heart'.

In other cases, it was final (probably unstressed) syllables that were lost:

(10) $C(C)V(C_1)C_1V_1 \rightarrow C(^{\vee})V$

> PAvar-Andi *colu*, PTsez *s:ɨl*, PDargi *cula*, PLezgi *sɨl:*, Xin *culoz*, cf. PWC *c:a* 'tooth';
> PAvar-Andi *cʼʷ:arhi* (Axv *cʼʷ:ari*, Kar *cʼʷ:aj*, etc.), PDargi *zuri*, cf. PWC *cʼʷa* 'star';
> PAvar-Andi *rišin* (Avar *son*, dial. *šon*, Axv *reše*, Kar *rešin*, etc.), PLezgi *s:än* (Archi
>   *s:an*, Udi *usen*), cf. PWC *sʷa/ə* 'year';
> PAvar-Andi *cʼ:iri* (Avar *c:ar*, Axv, Kar *cʼ:eri*, etc.), PLezgi *cʼʷ:er* (Tab *čʼ:ʷur*, Archi *cʼor*),
>   cf. PWC *(pʼ)cʼa* 'name'.

Incidentally, late PWC clusters were also syllable-initial, which can indicate the place of the stress – on non-initial syllables.

8. Parallel simplification processes in EC languages.

It would be wrong to suggest that it was only WC that underwent significant evolution in the phonetic shape of words. The individual EC languages too underwent considerable changes, which often parallel their evolution in WC. I adduce here but a few examples, demonstrating parallel developments in EC and WC:

> (11) Abx *a-c*, Ad *ca*, Kab *ʒa*, Ub *ca-* (PWC *c:a* 'tooth'), cf. Chech *ce-rg*, Ing *ca-rg*, Bats
>   *ca-rkʼ* (*-rg/-rkʼ*, diminutive suf.; PNax *ca*), Avar *ca* vs. Andi *sol*, Cham *salʷ*, Kar
>   *sale*, Tindi, Botl, Bagv *salu* (< PAvar-Andi *colu*), Xvar *sel*, Bezh *sila*, Gunz *sɨla* (<
>   PTsez *s:ɨl*), Dargi *cula*, Tsax *sili*, Kryz, Bud *sil* (PLezgi *sɨl:*), Xin *cul-oz* 'tooth'.
> Abx *jacʼʷa*, Ub *cʼʷa-* (PWC *cʼʷa* 'star'), cf. Avar *cʼ:ʷa*, Andi *cʼ:a*, Cham *sʼa:* (PAvar-Andi
>   *cʼʷ:arhi*), Tsez *ca*, Gin *cʷa*, Xvar, Gunz *ca*, Bezh *cã* (PTsez *cʷã*), Lak *cʼu-ku* 'star'
>   vs. Axv *cʼʷ:ari*, Tindi *c:aru*; Kar *cʼʷ:aj*, Bagv *cʼʷ:ara*, Godob *c:aji*, Dargi dial. *zure*
>   'star'.
> Circ *cʼa*, Ub *pʼcʼa*, cf. Chech, Bats *cʼe*, Ing *cʼi*, Axv dial. *cʼ:e*, Cham *sʼe:* (PAvar-Andi
>   *cʼ:iri*), Tsez *cɨ*, Gin *ce*, Xvar *cã* (PTsez *cʷẽ*), Lak *cʼa*, Dargi *zu*, Udi *c:i* (PLezg
>   *cʼʷ:er*) *vs.* Avar *cʼ:ar*, Andi, Bagv *cʼ:er*, Axv, Kar, Botl *cʼ:eri*, Tindi *cʼ:era*, Godob
>   *c:eri*, Tab *čʷ:ur*, Archi *cʼor* 'name'.
> Abx *a-cʷ*, Ad *cʷ:ə*, Ub *cʷə* (PWC *cʷ:ə* 'ox'), cf. Avar *oc* (PAvar-Andi *ʔumco*), Tsez *is*,
>   Gin *üš*, Xvar *īs*, Bezh, Gunz * õs* (PTsez *ʔõs:*), Dargi Kub *us* (PDargi *ʔunc*), Udi
>   *us* (PLezgi *jamc*) *vs.* Andi *unso*, Axv *ūnča*, Cham, Tindi *musa*, Kar, Botl, Bagv,
>   Godob *unsa*, Lak *nic*, Dargi *unc*, Lezgi, Tsax *jac*, Aghul *bec*, dial. *jacʷ*, Xin *lac*
>   'ox'.
> Ub *tʼa-kʲ* 'louse', *tʼa-cʲ* 'nit' (*-kʲ* singularity suf., *cʲ* 'egg'; PWC *tʼa*), Andi *tʼa* 'nit' (PAvar-
>   Andi *tʼa(ʔ)na*), Lak *tʼu*, Udi *t:e* 'nit' (PLezg *nätʼ*) *vs.* Avar *tʼiha*, Axv *tʼani*, Cham,
>   Tindi, Botl, Bagv *tʼana*, Kar *tʼane*, Dargi *netʼ,* Lezgi, Aghul *netʼ*, Tab *nitʼ*, Rut *nätʼ*,
>   Tsax, Archi *natʼ* 'nit'.

Abx *čə*, Circ *šə*, Ub *čʲə* (PWC **čʰʷʲə*), cf. Avar *ču* (PAvar-Andi **ʔičʷa*), Lak *čʷu vs.* Andi *iča*, Axv, Tindi, Kar *ičʷa*, Cham *iša*, Botl, Godob *iča*, Bagv *ičʷ*, Dargi *urči*, Lezgi *šiw*, Archi *nolš*, Xin *pši* 'horse'.

Abx *la*, Circ *ħa*, Ub *wla* (PWC **Hlʷa)*, cf. Avar dial. *hʷe*, Axv *χʷe:*, Tindi *χʷa:* (PAvar-Andi **χʷoʔi*), Gin, Xvar *ʁʷe*, Inxo *ʁlʷē*, Bezh *wo*, Gunz *wə* (PTsez **ʁlʷēj*), Dargi *χla*, dial. *χlʷ:a*, Tsax *χʷa*, Udi *χla vs.* Chech, Ing, Bats *pħu*, Avar *hoj*, Andi *χʷoj*, Cham, Kar, Botl *χʷaj*, Bagv *hʷaj*, Godob *χʷaji*, Tsez *ʁlʷaj*, Tab *χuj*, Aghul *ʁuj*, Rut *χij*, Kryz *χʷar*, Bud *χor* 'dog'.

9. Processes within late PWC: The formation of late PWC clusters (*CVCV > *CCV).

The comparison with EC shows that some currently monosyllabic WC roots were originally disyllabic and shortened due to the syncope of the (unstressed) vowel of the initial syllable, which gave rise to initial PWC clusters.

(12)   Avar *raq:u*, dial. *roqo* 'ashes', Lak *laχ* 'ashes, dust', Archi *laχ* 'grain peelings' *vs.* Circ *tχʷe* 'to become grey (of hair)', 'grey (of horse)', Kab *sa-tχʷe* 'ashes', Abx *qʷa* 'ashes', 'grey (colour of ashes)', Ub *qʷa* 'ashes' < PWC **tqʷa*, probably, from an earlier **dəqʷá.*
     Chech, Ing *barh*, Bats *barλ*, Avar *miλ':-*, Axv, Tindi, Kar, Botl, Bagv, Godob *biλ':i-*, Tsez *biλ-*, Archi *meλe* 'eight' *vs.* Circ *p'λ'ə*, Abx *pšʲ-*, Ub *p'λ'ə* 'four', probably, from an earlier **bəλ'ə́* (*p'* < **b* through regressive assimilation).
     Chech, Ing *mott*, Avar *mac':*, Andi, Axv, Botl *mic':i*, Tindi, Godob *mic:i*, Kar *mac':i*, Tsez, Gin, Xvar *mec*, Gunz, Inxo *mɨc*, Bezh *mic*, Lezgi, Aghul, Kryz, Bud *mez*, Rut, Tsax *miz*, Archi *mac*, Udi *muz*, Xin *mic'*, cf. Circ *bza*, Abx *a-bz*, Abaza *bzə*, Ub *bzʲa* 'tongue', from an earlier stage **bəzá/ə.*

In rare cases, however, it seems that it was EC that created new clusters by a syncope of a vowel, whereas WC kept a *plene* form, cf. Andi *onš:i*, Tindi, Kar, Botl, Godob *unš:i*, Bagv *unš:* 'earth' *vs.* PWC **nəšʷə* 'soil, clay.'[16]

In several instances the clusters in PWC appeared due to an unclear dental prefix (a fossilized grammatical class prefix?; cf. Abdokov 1983: 155), cf. the following numerals:

(13)   Avar *k'i*, Dargi dial. *k'ʷi*, Tab *q'lu*, Archi *q'lʷe*, Xin *k'u*, cf. Circ *t'ʷə* < **t'q'ʷə*, Abx *ħʷə*, Ub *t'q'ʷa* 'two'.
     Lak *χ:ul-*, Dargi *xu-*, Tab *xu-b*, Rut *xu-d*, Tsax *xo-llä*, Udi *qo*, cf. Kab *txʷə*, Abx *χʷə-ba*, Ub *šɨxə* 'five'.

---

[16] A similar solution is suggested in NCED 513; Abdokov (1983: 99) reconstructs PNC **našu-*.

10. Late PWC root structure.

Once the restructuring of late PWC had occurred, the basic resulting root structures – C(C)V and CVCV – became stable and probably did not change much over a considerable period of time. In this sense, one can note Yakovlev's remark that the WC roots as "products of the amorphous stage, represent petrified, and a not developing further historical remainder" (Yakovlev & Ašxamaf 1941: 216). The only process that was still active in late WC was a strong tendency to further transformation of the remaining CVCV roots, under the influence of (final) dynamic stress, into CCV. This can be demonstrated by the comparison of some Circ, Ub and Abx roots:

(14)   CVCV   >   CCV
         Ad *maxʷa*, Ub *məsʷa* –   Abx *a-mš* 'day'
         Ad *maʒa*, Ub *məʒa*   –   Abx *a-mza* 'moon'
         Ad *məsʲa*, Ub *məšʷa* –   Abx *a-mšʷ* 'bear'
         Ub *ɣəba*   –   Abx *a-ɣba* 'ship'

The same process was active in Abx dialects, as seen from the following examples:

(15)   Tsab, Tsw Sadz *a-baga* –   Bz, Abzh *a-bga* 'wolf'
         Sadz *a-bana*   –   Bz, Abzh *a-bna* 'wood'
         Sadz *a-šʷaqʼ(qʼ)a*   –   Bz *a-šʷqʼʷə*, Abzh *a-šʷqʼ(ʷ)ə* 'letter, book'
         Sadz *á-ʒʷaʒʷʒʷə-ra*   –   Bz, Abzh *á-ʒʷʒʷa-ra* 'to wash'

10.1. The preservation of old CV and CVCV roots.

The evidence from modern languages shows that a number of PWC roots were monosyllabic already in PNC; they include pronouns, deictics and some numerals:

(16)   Chech, Ing, Bats *so*, Rut *zɨ*, Tsax, Udi *zu*, Xin *zɨ*, cf. Abx *sa*, Circ *se*, Ub *sə-* 'I';
         Lak *wi*, Rut, Xin *wɨ*, Tsax *wu*, cf. Abx *wa*, Circ *we*, Ub *wə-* 'thou';
         Chech, Ing, Bats *šu*, Lak *zu*, Aghul *ču-n*, Tsax *šu*, Archi *žʷe-n*, Xin *zu-r*, cf. PWC **sʷa* 'you (pl.)';
         Chech *cħaʔ*, Ing *caʕ*, Bats *cħa*, Avar *co*, Tsez *sis*, Xvarsh *has*, Lak *ca*, Lezg, Tab, Rut, Tsax, Udi, Xin *sa*, cf. Abx **za*, Circ *zə*, Ub *za* 'one'.

Besides, many nominal NC disyllabic roots of the structure CVCV were preserved in WC:

(17)   Tsez *qʼalnqʼu*, Gin *qʼaqʼu* 'tubular bone', Dargi *qʼuqʼa*, dial. *qʼʷaqʼa* 'knee', cf. Abx *a-qʼʷaqʼʷa* 'back' (anat.), Abaza *qʼʷaqʼʷa* 'hip-bone'.
         Andi *borcʼːi*, Axv *bocʼːo*, Tindi *bocʼːu*, Kar *borcʼːo*, Botl *purcʼːu*, Godob *purcːu*, Tsez *buci*, Gin *buce*, Xvar *buca*, Bezh, Gunz *boco*, cf. Ad *maze*, Ub *məʒa* 'moon'.

Avar *mik:i*, Dargi *lah(w)a*, (Xaid) *lihwa*, (Urax) *lawha*, (Muir, Kajtag) *lahʷa*, (Kub) *na/exʷa*, Rut *lirxʷa/oj*, cf. Abx *a-laħʷa* 'rook, raven', Ub *daχʷa* 'dove'.

Tsez *t'umi*, Xvar *t'ema*, Bezh *t'imo* 'pigeon', Dargi *t'uma* 'owl', cf. PWC > Ub *dəma* 'hen'.

Chech *deši* 'gold', Dargi *dubsi*, dial. *dabs:e* '(red) copper', Tab *jišʷu-r* 'gold', cf. Kab *dəśe* 'gold'.

Andi, Axv, Tindi, Botl, Godob *miq':i*, Cham, Bagv *miq':*, cf. Ub *məʁʲa* 'road, way' (Abx *a-mħʷa* < **məħʷa*).

Chech, Ing *baza* 'fir-tree', Lak *wac'a* 'forest', Ad *mazə* 'forest', Ub *məʒʲə* 'prickle, thorn'.

Chech *daš*, oblique stem *doša-*, Avar *t'oxi*, Andi, Botl, Godob *t'uši*, Axv *t'oša*, Cham, Tindi *t'oha*, Kar *t'oše*, cf. Ashx *t'asa* 'lead (metal)' (Abx *a-t'sa* < PAbx **t'asa*).

11. EC-WC correspondences in affixes.

Although the analytical stage in the history of WC languages seems to be plausible, PWC might have preserved at least partially some old grammatical morphemes, which can be judged from the fact that WC and EC do in fact share, beside lexical roots, also a number of affixal morphemes. Of the comparable WC-EC correspondences in affixes the following ones can be mentioned:[17]

(18)

PWC	PEC	
*mə	**ma*	prohibitive/negative particle
*čə- (PAbx)	**č[ŭ]*	reflexive pronoun/affix
*-gʲə	**-gi /*-gu*	enclitic particle 'and'[18]
*-ra (PCirc)	**-ra*	enclitic particle 'and'
*-ba, *bə-, *ba (PAbx)	**b-*	suffix marker of numerals for non-human referents; prefix of 2nd person (fem.), personal pronoun 'thou' (fem.) (PAbx); prefixal marker denoting animals and some inanimate things or phenomena (PEC)
*-ara (PAbx)	**-ar*	plural suffix
*-la	**-l(a)*	durative suffix
*-n (PAbx)	**-na*	past tense suffix
*-m (PCirc)	**-m*	ergative/oblique (PCirc) or oblique case (PEC) suffix

---

[17] Here the PWC reconstructions are mine, PEC forms are from Trubetzkoy (1930), Abdokov (1983; 1981), NCED, Alekseev (1988; 2003), and Starostin (2007).

[18] Cf. Abx *a-gazet'-kʷa-gʲə a-žurnal-kʷa-gʲə*, Avar *gazet-al-gi žurnal-al-gi* 'newspapers and magazines'. Noteworthy is also a parallelism in the formation of negative polarity pronouns, cf. Avar *co-ni-gi*, Abx *ak'-gʲə*, Kab *zəjəč'* < *zə-jə+k'ʲ* < **zə-jə+gʲə* 'nothing', lit. 'one-and'; the same model is typical for other EC languages, cf. Lezgi *sad-ni*, Aghul *sad-ra* 'nobody', lit. 'one-and'.

PWC	PEC	
-da	*-d(a)*	optative suffix
-rə (PCirc)	*-r(a)*	participial or converbial suffix
-gʷʲa	*-gwa*	adverbial suffix
-cʲə- (PAbx)	*-ci̱*	comitative affix
-na/ə	*-n*	locative suffix (PWC),[19] genitive suffix (PEC)
-nə (PAbx, Ub)	*-na*	converbial/adverbial suffix[20]
-sa	*-se̱*	adverbial/participial (PWC), instrumental (PEC) suffix
-da	*-di̱*	directional/locative particle (PWC), locative suffix (PEC).

In a number of these cases we can probably speak of originally separate particles (as in the case of coordinating conjunctions), floating enclitics (as the negation marker, which even synchronously can function in WC as a prefix, infix or suffix) or even independent words, like pronouns (cf. the reflexive affix, the marker of ergative/oblique case),[21] which only later became incorporated in both branches into nominal or verbal paradigms.

The fact that EC orientational case suffixes, which express localization, correspond etymologically to WC orientational preverbs, indicates the derivation of both from independent adverbials or similar classes of independent words (cf. Abdokov 1983a; 1983: 75; Alekseev 1988: 174). However, it can also be that some of these cognates could have been affixal morphemes already in NC and thus inherited by both branches.

Among few genuinely inflectional affixes common to EC and WC were perhaps old class and plurality markers[22] (see above; cf. also NCED 85; Abdokov 1981: 62-3, 66-76). Old class markers are presumably traceable in Abx numerals (Abx *-ba* suf. of non-human class in numerals, as in *jʷ-ba* 'two', *pšʲ-ba* 'four', etc.) and probably in the human feminine pronoun *ba* 'thou'.

12. The late PWC's dominant root structures.

---

[19] Probably connected with verbal root *na/ə* 'be/remain somewhere' (cf. Chirikba 1996: 368).

[20] Cf. Aghul *xuru-na* 'having read', Abx *s-a-pχʲa-nə* 'it-I-having read', Rut *hagu-j-nə* 'having seen', Abx *jə-ba-nə* 'it-having seen', Archi *abu-na* 'having done', Abx *jə-qʼacʼa-nə* 'it-having done', Rut *ħagu-j-nə* 'having seen', Abx *d-ba-nə* 'him/her-having seen', Bud *siħi-ni̱* 'being', Abx *jə-qʼa-nə* 'it- being', etc. In the adverbial function: Rut *temiz-na*, Abx *jə-ckʲa-nə* 'cleanly', Rut *jəxa-na*, Abx *jə-bzəja-nə* 'well', etc. Cf. also a similar use of this suffix in temporal terms: Tab *čw-nu*, Aghul *cul-a-na*, Abx *tagala-n* 'in the autumn', Archi *iqʰ-na* 'in the day-time', Abx *a-č-nə* 'on that day' (EC forms are from Alekseev 1985: 101-102).

[21] M. Kumakhov (1984: 84) derives the Circ ergative suffix *-m* from the independent deictic pronoun *mə*.

[22] The fact that WC languages lack common plural markers, and probably only Abx preserves the old NC pluralizer, while Ub lacks any nominal pluralizers, might indicate that the process of the loss of old inflection was continued even after the split of CWC into individual languages.

The counting of various PWC root structures as presented in NCED reveals the following ratio:

(19)   VCV   -   10
        CV   -   289
        CCV   -   29
        CVCV   -   289
        all PWC roots   -   684

This shows that:

(a) PWC had relatively few roots with initial clusters and even fewer roots with initial vowels.

(b) The number of roots of the CVCV structure is in essence equal to that of the CV structure, which is rather unexpected, given the traditional view of the predominance of monosyllabic roots in WC. It was noted already by Trubetzkoy (1987: 281) that some WC correspondences are disyllabic (esp. many nouns), and this disyllabic structure should be reconstructed for the NC epoch.

The early PWC had thus a statistically greater number of disyllabic than monosyllabic roots, which means that Yakovlev's theory about the original monosyllabicity of WC roots should be abandoned (cf. Trubetzkoy 1987: 281-282; Abdokov 1981: 30). On the other hand, a great number of disyllabic roots in PWC must dispel usual objections to the possibility of establishing sound correspondences between WC and EC cognates because of the perceived monosyllabic character of the former.

13. Factors triggering the evolution of WC.

The triggering factors for the radical restructuring of a language's structure can be, on the one hand, the development of certain features inherently present in the system of the maternal proto-language in the conditions of geographic isolation from sister languages and, importantly, intensive contact with neighbouring allo-structural idioms.

One of the internal driving forces for the phonetic changes in PWC was, according to Abdokov (1981), a tendency to rising sonority (or the law of open syllable), which meant that final consonants were weakened and dropped and the syllable structure became uniformly (CV)CV. This led to a near-complete loss of old (inflectional and derivational) morphology, which was mainly suffixal (cf. Marr's early ideas presented above). Besides, it led to the appearance of a great number of monosyllabic homophonous roots/words. These latter were probably distinguished by means of tones (cf. Dybo 1989 on the WC tonal hypothesis), risen in place of the lost consonants (especially laryngeals and resonants). The mono- or disyllabic root became equal to a morpheme and a word.

In the condition of the fading system of nominal classes (which however managed to survive in Abx, cf. Abdokov 1981: 54-65), the main means to express syntactic relations

between isolated and inflection-less words had to become fixed word order (see Chirikba 2010). It is possible that ablaut too played a role, serving to distinguish grammatical forms.

The law of rising sonority helps to explain rather well the mechanism of the revolutionary "perestroika" in the word structure, as well as profound changes caused by this process in the phonemic, prosodic, morphological and syntactic systems of the early WC proto-language. It is more difficult to say, however, what triggered this process in the first place – the internal development of some of the tendencies already inherent in the proto-language or, more probably, language contact, or perhaps the combination of both.

As noted by R. Beekes (1995: 71), "languages which are isolated, and depend for change on internal factors only, undergo little change. On the other hand, languages may undergo rapid change within a relatively short span of time, especially in times of social and political upheaval. It appears therefore that the influence of other language systems remains the single most important factor underlying sound change".

The intensive language contact as the main factor responsible for the fundamental restructuring of the early PWC dialect was suggested by Trubetzkoy (1930: 111), who suggested that such deep structural deviations of WC from EC, as, for instance, the atrophy of the WC vocalic system, could be understood only by supposing a language mixture. According to him, "WC could have thus emerged through a mixture of an idiom very close to PEC with some other language". Proceeding from this, we can probably speak in terms of creolization of the early PWC dialect, which could happen as a result of migration, either of the speakers of the early PWC dialect to a new habitat which had an older population, with which they then mixed, or, vice versa, a migration of speakers of another language who moved to the territory occupied by the bearers of early PWC.[23]

In any event, it is quite obvious that these developments in PWC took place in the condition of its geographical isolation from speakers of the sister-PEC dialect(s), which in the main remained quite conservative and unresponsive to external pressure. This in turn may indicate that EC was developing in a habitat geographically more isolated from external influences. Early PWC was, as it seems, on the contrary, exposed to intensive language contact, which resulted in the above-mentioned significant re-structuring.

However, after it eventually evolved, having acquired nearly all the features of its modern make-up, late PWC (= CWC) remained stable over a considerable period of time. This might indicate that late CWC was not exposed to significant external linguistic influences or contacts, and the only factor in its slowed evolution was contact between its separated dialects.

14. Conclusions.

The comparison of PWC with EC languages suggests that late PWC underwent a fundamental restructuring of its phonological, morphological and syntactic systems.

---

[23] In the event of the migration of speakers of PWC to the Caucasus, their most probable original *Urheimat* can be placed in north-central or north-eastern Asia Minor.

Everything points to the fact that after the WC separated from common North Caucasian and before it acquired the guise which is preserved by its modern continuations, it was transformed into a different system, which was analytical, with elementary inflection and with main grammatical roles and relations being expressed by lexical means, word order and probably also by apophony and tones. The subsequent changes led to the development of compounding and incorporation.

The evolution of early PWC into late PWC included the following processes. In phonology: the weakening of the role of tones and the appearance of a dynamic stress system; the appearance of consonant clusters due to the syncope of vowels in unstressed syllables; the dominant models of root structure becoming VC, C(C)V, and CVCV. In morphology, the transformation process led to the increased role of compounding in derivation; the development of incorporation and agglutination; the incorporation of previously independent pre-verbal personal and deictic pronouns, as well as local, temporal, directional and orientational adverbs into the verbal forms; the increased role of prefixation; the development of polysynthetism. In syntax, it resulted in the weakening of the role of word order.

The main evolutionary shift from the NC dialect to the modern WC languages was thus, first, from agglutinative to the analytical language-type (due to a near complete loss of inflection), and then from the analytical to the agglutinative (poly)synthetic type.

Cross-linguistically, there are examples of similar diachronic changes in morphological type. Cf., for instance, the evolution of English from inflectional to analytical structure, or Chinese from agglutinative to the isolating type. However, an even more striking parallel to the evolution of WC is provided by French.[24] In the latter case we do know sufficiently well the stages which led the fully inflectional synthetic Latin, via Vulgar Latin, first to the analytical structure of early modern French and finally to the arguably polysynthetic-like structure of present-day colloquial (non-standard) French. Indeed, modern spoken French demonstrates how an analytical language can become polysynthetic by means of incorporation or fusion of originally discrete pronouns and grammatical words.

Let us take as an example the following phrase: *que je ne t'aime pas* 'the fact that I don't love you', pronounced in colloquial speech as [kəʃtɛˈmpa].[25] If French was an unwritten language and a field linguist would purport to describe it, one of the predictable outcomes would be its description in terms of a polysynthetic language rather than a basically an analytical language with some elementary nominal inflection, as we know it from standard textbooks. In case of the cited phrase, we would in fact have a typically WC-type polysynthetic verbal form, containing two agreement (subject and object) markers, as well as subordinating and negation markers:

---

[24] The analogy between the polysynthetic structure of WC and of modern colloquial French was suggested to me by Dr. Rieks Smeets (p.c.); see also a lively debate on this topic on the fora on the internet.
[25] The comment on the actual pronunciation of this phrase was provided to me by Dr. René Lacroix.

(20)   *kə-ʃ-t-ɛm-pa*
           SUB-1SG-2SG-love:PRES-NEG

(21) cf. Abx: *bzəja   bə-šə-zə-m-ba-wa*
           well   2SG:FEM-SUB-1SG-NEG-see-PRES:DYN:NFIN
           'The fact that I don't love you'.

From the material presented in this paper, a natural conclusion should be drawn that, in principle, there is no direct correlation between the language type/structure and its genetic affiliation. It is true, that related languages tend to maintain similar morphological structures, due to the retention of features inherited from the common ancestor; cf. for instance Baltic or Slavic languages, which preserve important features of the maternal IE system. Some other languages, on the contrary, show striking deviations from the older system.

In one or another way, Proto-West Caucasian too changed its original structural type and developed into a system, which significantly deviates from that of the related EC languages, and which for some may blur the genetic relationship between these two NC branches. However, this relationship can be satisfactorily proven by the application of standard procedures of comparative-historical linguistics, which was so eloquently put forward in the first decades of the 20th century by Nikolay Trubetzkoy and which was definitively demonstrated by modern historical linguists, Sergei Starostin, Sergei Nikolayev and Auez Abdokov.

Abbreviations:

Abx	Abkhaz	NC	North Caucasian
Abzh	Abzhywa dialect of Abx	NEG	Negative
Ad	Adyghe	NFIN	Non-Finite
AN	Akademija Nauk (Academy	PAbx	Proto-Abkhaz
	of Sciences)	PAvar-Andi	Proto-Avar-Andi
Ashx	Ashkharywa Abaza	PCirc	Proto-Circassian
Axv	Akhvakh	PDargi	Proto-Dargi
Bagv	Bagvala	PEC	Proto-East Caucasian
Bezh	Bezhta	PIE	Proto-Indo-European
Botl	Botlikh	PLezgi	Proto-Lezgi
Bud	Budukh	PNax	Proto-Nakh
Bz	Bzyp dialect of Abx	PNC	Proto-North Caucasian
Cham	Chamala	PTsez	Proto-Tsez
Chech	Chechen	PWC	Proto-West Caucasian
Circ	Circassian	PRES	Present
CWC	Common West Caucasian	PUb	Proto-Ubykh
DYN	Dynamic	Rut	Rutul

EC	East Caucasian	SG	Singular
FEM	Feminine	SUB	Subordinative
Gin	Ginukh	Tab	Tabasaran
Godob	Godoberi	Tsab	Tsabal dialect of Abx
Gunz	Gunzib	Tsax	Tsakhur
IE	Indo-European	Tsw	Tswydzhi dialect of Sadz
Ing	Ingush	Ub	Ubykh
Inxo	Inxokvari	WC	West Caucasian
Kab	Kabardian	Xaid	Xaidak dialect of Dargi
Kar	Karata	Xin	Xinalug
Kart	Kartvelian	Xvar	Khvarshi
Kub	Kubachi dialect of Dargi		

Literature

Abdokov, A.I. 1981. *Vvedenie v sravnitel'no-istoričeskuju morfologiju abxazsko-adygskix i naxsko-dagestanskix jazykov [Introduction into the Comparative-Historical Morphology of the Abkhaz-Adyghean and Nakh-Daghestanian Languages]*. Nal'čik: Kabardino-Balkarskij Gosudarstvennyj universitet.

Abdokov, A.I. 1983. *O zvukovyx i slovarnyx sootvetstvijax severokavkazskix jazykov [On Sound and Lexical Correspondences of the North Caucasian Languages]*. Nal'čik: El'brus.

Abdokov, A.I. 1983a. Glagol'nye preverby zapadnokavkazskix i padežnye formanty vostočnokavkazskix jazykov [Preverbs of the West Caucasian and Case Suffixes of the East Caucasian Languages] // *Sistema preverbov i poslelogov v iberijsko-kavkazskix jazykax*. Čerkessk, p. 136-143.

Alekseev, M.E. 1985. Voprosy sravnitel'no-istori*č*eskoj grammatiki lezginskix jazykov. *Morfologija. Sintaksis [Problems of Comparative-Historical Grammar of the Lezgian Languages. Morphology. Syntax]*. Moskva: Nauka.

Alekseev, M.E. 1988. *Sravnitel'no-istoričeskaja morfologija avaro-andijskix jazykov [Comparative-Historical Morphology of the Avar-Andi Languages]*. Moskva: Nauka.

Alekseev, M.E. 2003. *Sravnitel'no-istoricheskaja morfologija naxsko-dagestanskix jazykov. Kategorija imeni [Comparative-Historical Morphology of the Nakh-Daghestanian Languages. The Category of the Noun]*. Moskva: Academia.

Bálint-Illyés (de Szentkatolna), G. 1904. *Lexicon Cabardico-Hungarico-Latinum*. Kolozsvar: Typographeo gutenbergiano koloszvariensi.

Balkarov, B.X. 1979. *Vvedenie v abxazo-adygskoe jazykoznanie [Introduction into the Abkhazo-Adyghean Linguistics]*. Nal'čik: Kabardino-Balkarskij Gosudarstvennyj Universitet.

Beekes, R. 1995. *Comparative Indo-European Linguistics: An Introduction*. Amsterdam: John Benjamins Publishing Company.

Charachidzé, G. 1967. Position structurelle du géorgien parmi les langues caucasiques // Revue de l'École Nationale des Langues Orientales. 4. Paris: Presses Universitaires de France, p. 29-63.

Chirikba, V. 1991. *Aspekty fonologičeskoj tipologii [Aspects of Phonological Typology]*. Moskva: Nauka.

Chirikba, V. 1996. *Common West Caucasian. The Reconstruction of its Phonological System and Parts of its Lexicon and Morphology*. Leiden: Research School CNWS.

Chirikba, V. 2008. The Problem of the Caucasian Sprachbund // *Pieter Muysken (ed.). From Linguistic Areas to Areal Linguistics. – Studies in Language Companion Series (SLCS). Volume 90.* John Benjamins Publishing Company: Amsterdam/ Philadelphia, p. 25-93.

Chirikba, V. 2010. Reconstructing Proto-Syntax: The Case of West Caucasian // *Studies in Honor of Prof. Denis Creissels. Essais de typologie et de linguistique générale. Mélanges offerts à Denis Creissels. Sous la direction de Franck Floricic*. Lyon: ENS Éditions, p. 327-337.

Colarusso, J. 1989. Proto-Northwest Caucasian (or how to crack a very hard nut) // Aronson, H. (ed.). 1989. *The Non-Slavic Languages of the USSR. Linguistic Studies.* Chicago: University of Chicago, p. 20-55.

De Charencey, H. 1862. Des affinités des langues transgangétiques avec les langues du Caucase. Extrait des *«Mémoires de l'Académie des sciences, arts et belles-lettres de Caen"*. Caen: A. Hardel, 13 p.

Deeters, G. 1931. Der abchasische Sprachbau. *Nachrichten von der Gesellschaft der Wissenschaften zu Göttingen. Philol.-hist. Klasse*, 289-303. Berlin.

Deeters, G. 1955. Gab es Nominalklassen in allen kaukasischen Sprachen? // *Corolla Linguistica. Festschrift Ferdinand Sommer*. Wiesbaden: Otto Harrassowitz, p. 26-33.

Dumézil, G. 1932. *Études comparatives sur les langues caucasiennes du nord-ouest (morphologie).* Paris: Adrien-Maisonneuve.

Dybo, V.A. 1989. Tipologija i rekonstrukcija paradigmatičeskix akcentnyx system [The Typology and Reconstruction of Paradigmatic Accentual Systems] // *Istoricheskaja akcentologija i sravnitel'no-istoričeskij metod*. Moskva: Nauka, p. 7-45.

Ellis, George. 1788. *Memoir of a map of the countries comprehended between the Black Sea and the Caspian; with an account of the Caucasian nations, and vocabularies of their languages.* Printed for J. Edwards, London.

Gamkrelidze, T., Ivanov, V. 1984. *Indoevropejskij jazyk i indoevropejcy [The Indo-European Language and Indo-Europeans]*. Tbilisi: Tbilisskij universitet, vol. I.

Genko, A.N. 1955. *Abazinskij jazyk. Grammatičeskij očerk narečija Tapanta [The Abaza Language. The Grammatical Sketch of the Tapanta Dialect]*. Moskva-Leningrad: AN SSSR.

Genko, A.N. 1998. *Apsua-aurǝst ʷ žʷar. Abxazsko-russkij slovar'. Pervoe izdanie. Podgotovil k pečati, snabdil predisloviem i kommentarijami kandidat filologičeskix nauk T. X. Xalbad [Abkhaz-Russian Dictionary. The First Edition. Prepared for Publication, With a Foreword and Comments by the Candidate of Philological Sciences T.X . Xalbad]*. Suxum: Alašara.

Güldenstädt, J. A. 1834. *Beschreibung der kaukasischen Länder*. Berlin.

Klaproth, Julius von. 1814. *Travels in the Caucasus and Georgia, Performed in the Years 1807 and 1808, by Command of the Russian Government. Translated from the German by F. Shoberl.* London: Henry Colburn.

Klaproth, Julius von. 1823. *Asia Polyglotta*. Paris.

Klaproth, Julius von. 1827. Tableau historique, géographique, éthnographique et politique du Caucase et de provinces limitrophes entre la Russie et la Perse. Paris: Pontieu et Cie.

Kuipers, A. 1963. Caucasian // T.A. Sebeok (ed.). *Current trends in linguistics. Vol. 1. Soviet and East European linguistics*. The Hague: Mouton, p. 315-344.

Kumakhov, M. 1984. *Očerki obščego i kavkazskogo jazykoznanija [Sketches of General and Caucasian Linguistics]. Nal'chik*: El'brus.

Liulie, L. 1857. Obščij vzgljad na strany, zanimaemye gorskimi narodami, nazyvaemymi Čerkesami (Adige), Abxazcami (Azega) i drugimi smežnymi s nimi [A General View on the countries Occupied by Mountainous Peoples Called Circassians (Adige), Abkhazians (Azega) and Others Neighbouring to Them] // *Zapiski Kavkazskogo otdela imperatorskogo Rossijskogo Geografičeskogo obščestva, kniga IV*.

Marr, N.Ja. 1912. K voprosu o položenii abxazskogo jazyka sredi jafetičeskix [On the Question of the Position of Abkhaz Among the Japhetic Languages] // *Materialy po jafetičeskomu jazykoznaniju*. Vol. V. S.-Peterburg.

Marr, N.Ja. 1933. Značenie i rol' izučenija nacmen'šinstva v kraevedenii [The Significance and Role of the Study of an Ethnic Minority in a Region] // Marr, N.Ja. *Izbrannye raboty. Tom pervyj. Etapy razvitija jafetičeskoj teorii*. Leningrad: Izdatel'stvo Gosudarstvennoj Akademii Istorii Material'noj Kul'tury, p. 230-248.

Marr, N.Ja. 1936. Obščij kurs učenija ob jazyke [The General Course of the Teaching About the Language] // N. Ja. Marr. *Izbrannye raboty, vol. II. (Osnovnye voprosy jazykoznanija).* Leningrad: Gosudarstvennoe social'no-ekonomičeskoe izdatel'stvo.

Marr, N.Ja. 1938. *O jazyke i istorii abxazov [On the Language and the History of the Abkhazians]*. Moskva-Leningrad.

NCED Nikolayev, S., Starostin, S. 1994. A *North Caucasian Etymological Dictionary*. Moscow: Asterisk Publishers.

Pallas, P.S. 1803. *Bemerkungen auf einer Reise in die südlichen Statthalterschaften des Russischen Reichs in den Jahren 1793 und 1794. Erster Band. Mit Kupfern und Karten*. Leipzig: Gottfried Martini.

Rosen, G. 1846. *Ossetische Sprachlehre nebst einer Abhandlung über das Mingrelische, Suanische und Abchasische*. Berlin.

Schmidt, K.-H. 1972. Problemy genetičeskoj i tipologičeskoj rekonstrukcii kavkazskix jazykov [Problems of genetic and typological reconstruction of the Caucasian languages] // *Voprosy jazykoznanija*, № 4, p. 14-25.

Starostin, S. 1978. Rekonstrukcija praabxazoadygskoj sistemy soglasnyx [The Reconstruction of the Proto-Abkhaz-Adyghean Consonant System] // *Konferencija "Problemy rekonstrukcii". Tezisy dokladov*. Moskva, p. 96-101.

Starostin, S. 1999. The Problem of Genetic Relationship and Classification of Caucasian Languages: Basic Vocabulary // H. van den Berg (ed.). *Studies in Caucasian*

Linguistics. Selected papers of the Eight Caucasian Colloquium. Leiden: Research School of Asian, African and Amerindian Studies (CNWS), p. 79-94.

Starostin, S. 2007. A Review of V.A. Chirikba's "Common West Caucasian" // S.A. Starostin. *Trudy po jazykoznaniju*. Moskva: Jazyki slavianskix kul'tur, p. 682-744.

Trubetzkoy, N.S. 1922. Les consonnes latérales des langues Caucasiques-Septentrionales // *Bulletin de la Société de Linguistique de Paris*, t. 23 (№ 72). Paris, p. 184-204.

Trubetzkoy, N.S. 1930. De Verwandtschaftsbeziehungen der nordkaukasischen Sprachen // *Zeitschrift der Deutschen Morgenländischen Gesellschaft*, Bd. 84, p. 111.

Trubetzkoy, N.S. 1930a. Nordkaukasische Wortgleichungen // *Wiener Zeitschrift für die Kunde des Morgenlandes*. Bd. XXXVII, heft 1-2. Wien, p. 76-92.

Trubetzkoy, N.S. 1987. *Izbrannye trudy po filologii*. Moskva: Progress.

Uslar, P. 1887. *Etnografija Kavkaza. Jazykoznanie. Abxazskij jazyk [Ethnology of the Caucasus. Linguistics. The Abkhaz Language]*. Tiflis.

Yakovlev, N.F. 2006. *Grammatika abxazskogo literaturnogo jazyka [A Grammar of Literary Abkhaz]*. Suxum: Alašara [finished in 1951].

Yakovlev, N.F., Ašxamaf, D.A. 1941. *Grammatika adygejskogo literaturnogo jazyka [A Grammar of Literary Adyghe]*. Moskva-Leningrad: Izdatel'stvo Akademii Nauk SSSR.