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The development of systematic apophony as an areal linguistic feature in the indigenous and early contact languages of the Caucasus

The paper examines the consonantal alternations observed in many root-morphemes of both Northern and Southern Caucasian languages which, it contends, do not occur at random but which are set apart from other forms of sound change by their being predictably phonemic, regular, and systematic.[1]
The paper calls these alternations "systematic apophony" and contends that they once functioned like their vocalic counterparts, the ablaut systems, as a key component in the word-building process of ancient core vocabularies. Lexical comparisons of the Western Adyghe languages and of the Eastern Caucasian languages, where much of the original sound system has remained intact, suggest that the resulting system of semantic differentiation continued to evolve over many centuries towards increasing complexity within the Northern Caucasian languages. Though no longer productive, this process has bestowed a legacy nowhere more evident than in the Eastern Caucasian languages where both phonological conservatism and minimal lexical drift have converged to preserve an archaic system of semantic differentiation.

The paper contends that this system was subsequently transmitted through a reductive process as an areal linguistic feature to both the pre-Kartvelian language and to other early contact languages of the Transcaucasus, including a form of the pre-Indo-European language. The following examples, reconstructed from the Eastern Caucasian languages, illustrate the system's central mechanism and its opposing four categories of obstruent articulation which, in this case, are reconstructed from forms of an interrelated uvular series: (1) the *aspirated unvoiced* form, **q wə-* 'to bite; voice', (2) the *non-intensive (*or *lenis) glottalic* form, **q'wə-* 'to say; mouth', (3) the *non-continuous voiced* form **ǧwə-* 'to suck; udder', and (4) the *intensive unvoiced* forms, both non-aspirated and ejective, **q:wə-* 'food' and **q':wə-* 'to speak out'.[2] In addition to this "primary level" of apophony, a "derivative class" which involves a shift in register, in this case from uvular to velar, was also elaborated. Examples include: (1) **k wə-* 'to eat', (2) **k'wə-* 'mouth', (3) **gwə-* 'to say', (4) **k:wə-* 'the throat; necessities'; and **k':wə-* 'to swallow'. It is clear from these examples that abundant evidence for semantic redundancy exists among the derivative root-morphemes, and the paper cites still other minimal pairs of related root-morphemes, each representative of a principal sound group and its derivatives. The paper also addresses the pioneering works of both Rogava and Schmidt which detail an identical phonological process in two West Circassian languages, Shapzug and Bzhedug. Here levels of semantic differentiation approximate those of the Eastern Caucasian languages, a feature which may suggest that the Adyghe languages once shared with the Eastern Caucasian languages a common attribute transmitted through a diachronic process rather than through the transmission of an areal linguistic feature.

The paper asserts that processes analogous to systematic apophony are also demonstrable in both pre-Kartvelian and pre-Indo-European languages but that they have resulted in marginal derivative forms, a trait which, the paper contends, is indicative of a *fragmented* transition process or "an areal mode of transmission". This process would have acted only over a few generations during periods of contact between speakers of these languages and those of an earlier stage of the Northern Caucasian languages. The following minimal pairs are of particular interest as they are cited as having "related forms" in both the Kartvelian and the Northern Caucasian languages. They may, in fact, provide a possible link to a mechanism for areal feature transfer: (1) **k ar-* 'bare rock' and

**k'ar-* 'large rock', (2) **ts wə-* 'drop, dew' and **ts'wə-* 'drop; to milk', (3) **č ə-* 'to chop off' and **č'ə-* 'to cut', (4) **q wə-* 'voice' and **q'wə-* 'to cry out', (5) **t wə-* 'to snow', **t'wə-* 'to wet; lake', **t':wə-* 'udder' and (6) **k ur-* 'heel' and **k'ur-* 'leg'.[3] The paper observes that the Indo-European data present a greater *paucity* of alternating morphemic sets than in pre-Kartvelian and an absence of any secondary elaboration. this finding bears testimony to the presence of a reductive process in the transmission of this areal linguistic feature into the pre-Indo-European language (PIE). The following examples of minimal pairs from PIE are proposed in the paper: (1) **dhei-/*dhī-* 'to see' and **dei-/*dī-* 'to seem, to shine brightly', (2) **bhā-* 'to speak' and **beu-* 'to cry out', (3) **g^{w}hau-/*g^{w}hawə-* 'to call' and *(*gei-/*goi-/*gī-* 'to sing, to scream').[4] No "derivative class" forms are extant among the pre-Indo-European forms.

The paper concludes by surveying six other languages of historical and regional interest for vestiges of systematic apophony; these are Hattic, Luvian, Classical Armenian, the Hurro-Vannic and Euskaric (Basque) languages.[5] While the four former languages do not reveal any trace of the process, evidence of particular interest was identified in both Hurrian and Euskaric with the following findings: (1) many semantically related root-morphemes with alternating initial sounds are demonstrable for both languages but their kinship is obscured by the loss of certain initial uvular and velar sounds (*q', *q , *k', *k': but not *qh, *x); with the restoration of these sounds, however, an underlying systematic apophony with multiple derivatives clearly reveals itself; and, (2) this same process elucidates certain anomalies of *devoicing* in positions where *voicing* would normally be expected. The original intensive *unvoiced obstruents* (*k:, *t:, *s: etc.) have persisted uniquely as the frozen *unvoiced simple* equivalents (/k/, /t/, /s/ etc.), appearing to defy the phonotactic restrictions of both languages. The paper observes that an awareness of systematic apophony will likely clarify this and numerous other phonological inconsistencies arising from the comparative study of phonological processes within the languages of the Caucasus, cognate or not. In turn, this course of investigation may ultimately clarify the transmission process itself for both complex and simple areal features.

Notes

1. Root-initial apophony was first described by Schmidt (1962: 49), who expanded upon the "harmonic groups" described by Rogava (1946: 5) and earlier by Axvlediani (1938: 42).
2. (1) **q wə-* produced the root morpheme for Andi *q'ammi* 'he bit' (Gudava 1964: 139), Lak *qap* 'a bite' (Zhirkov 1962: 282), Chechen *qalla* 'to bite' (Nichols 2004: 132); (2) **q'wə-* produced Lak *q'ats'* 'mouth', *q'aq'ari* 'throat', Dargi *q'a'a* < **q'wa.q'wa* 'throat', *q'ak* 'mouth'; Lezgian *q'am* 'throat', Chechen *q'amqarg* 'throat', *q'urd* 'mouthful' (Bokarev 1981: 22; Zhirkov 1962: 161); (3) **ǧwə-* produced Avar *ǧwari* 'udder', Lak *q'wal*, Lezgian *reğü*, Tabasaran *xäv*, Archi *qval* 'udder' (Bokarev 1981: 26); **q':wə-* produced Akhvakh *e-tɬ':u-* 'to speak', Lak *u-či:n* 'to say' and Chechen *'a.xa* 'to cry (of animals)' from earlier **q':wa-q'a* (Klimov 2003: 483).
3. For **k ar-* and **k'ar-*: Georgian *k'ark'ari* 'bare rock', *k arapi* 'cliff, rock' (Cherkesi 1950: 98, 217); for **ts wə* and **ts'wə* cf. Klimov (1998: 265, 310, 311); for **č -* and **č'-*, cf. Klimov (1998: 275, 322); and for **q wə-* and **q'wə-* cf. Klimov (1998: 339, 245); for **t wə-*, **t'wə-*, **t':wə-* cf. Klimov (1998: 73, 185, 110, 191); and for **k ur-/*k'ur-* cf. Klimov (1998: 95, 219).
4. Alternation is presented here between *voiced aspirates* and *voiced non-aspirates*, which have arisen in Proto-Indo-European, according to Gamkrelidze and others, from unvoiced glottalic obstruents of the pre-Indo-European language (Gamkrelidze 2003: 513). The examples of root morphemes are taken from Pokorny (1953: 243, 183, 105, 97, 413, 355).
5. "Euskaric" is applied to the former isolate, Basque, and its extinct ancestor, the Aquitanian language; although formal comparisons with indigenous Caucasian protolanguages are yet to be established, they have historically evoked over the past century much discussion by authors Georges Dumézil, Réné Lafon, Karl Bouda and Prince N.S. Trubetzkoy due to their compelling morphological and lexical parallels with the Caucasian indigenous languages.

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