## INDO-URALIC AND ALTAIC

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Elsewhere I have argued that the Indo-European verbal system can be understood in terms of its Indo-Uralic origins because the reconstructed Indo-European endings can be derived from combinations of Indo-Uralic morphemes by a series of well-motivated phonetic and analogic developments (2002). Moreover, I have claimed (2004b) that the Proto-Uralic consonant gradation accounts for the peculiar correlations between Indo-European root structure and accentuation discovered by Lubotsky (1988). My reconstruction of the Indo-Uralic phonological system is essentially the same as Sammallahti's for Proto-Uralic (1988), except for the fact that I reconstruct palatalized resonants \*r' and \*l' for his dental spirants \* $\delta$ and  $*\delta'$ . In particular, I think that the large number of Indo-European plosives is the result of a secondary development. Though it is quite possible that Indo-Uralic had a larger number of consonants than can be reconstructed for Proto-Uralic, I see no compelling evidence for this. The simplest assumption is that the Indo-Uralic proto-language was identical with Proto-Uralic. Indeed, it seems possible to derive Nivkh (Gilyak) from the same proto-language, as I have indicated elsewhere (2004a).

As far as I can see, both Indo-Uralic and Nivkh (Gilyak) belong to the larger Uralo-Siberian language family which is now partly reconstructed by Fortescue (1998) and Seefloth (2000) on the basis of evidence from Uralo-Yukagir, Chukotko-Kamchatkan and Eskimo-Aleut. All of these languages belong to Greenberg's Eurasiatic language family (2000), which in addition comprises Altaic (Turkic, Mongolian, Tungusic), Korean, Japanese and Ainu. There can nowadays be little doubt about the reality of an Altaic language family including Korean and Japanese (see especially Robbeets 2003), though the reconstruction of Proto-Altaic is extremely difficult because of its very large time depth. The position of Ainu remains unclear (at least to me).

It is easy to criticize Greenberg's methodology, but this leaves the basic question about the correctness of his Eurasiatic hypothesis open (see now Georg & Vovin 2003). One should regard his list of grammatical elements, like Pokorny's Indo-European dictionary (1959) and Starostin's Altaic dictionary (2003), as a collection of possible rather than actual cognates which must be subjected to further analysis. My reconstruction of Indo-Uralic retains 27 of Greenberg's 68 grammatical elements, and I find 12 out of these 27 in Nivkh (Gilyak). We may wonder how many of these can now be reconstructed for Altaic. Here I shall take Sta-

rostin's list of Proto-Altaic grammatical elements (2003: 221-229) as my point of departure. I shall refer to Greenberg's numbering as G1-G60.

Starostin reconstructs personal pronouns 1sg. \*bi, 1pl. \*ba, \*bu, obl. \*min-, \*man-, \*mun-, 2sg. \*si, 2pl. \*su, obl. \*sin-, \*sun-, Mongolian 2sg.  $\check{c}i < *t^hi$  and 2pl.  $ta < *t^ha$ . Besides, there are forms with a velar nasal in the first and a dental nasal in the second person, which "may have originally been restricted to some oblique cases" (Starostin 2003: 225). It seems to me that these forms are compatible with Indo-Uralic G1 \*mi 'I', \*me 'we', G4 \*ti 'thou', \*te 'you', G54 \*-u 'self' and G25 \*-n genitive (cf. Kortlandt 2002: 221, 225). The Indo-Uralic \*m- may have spread from the genitive if it was not the phonetic reflex of an original labial plosive. The Altaic forms with a velar and a dental nasal may reflect \*mn- and \*tn-with syncope before a following suffix. The alternation between \*s- and \*th- in Altaic suggests that we must start from 2sg. \*si < \*thi and 2pl. \*tha, with restoration of the plosive in Mongolian and generalization of the fricative in Tungusic; the form is limited to the singular in Turkic (where the plural is \*sir') and Japanese and unattested in Korean. The assibilation of \*ti to \*si is also found in the Indo-European branch of Indo-Uralic (cf. Kortlandt 2002: 221) and in modern Finnish.

Starostin reconstructs demonstrative pronouns \*sV, \*ko, \*la, \*o 'this' and  $*\check{c}^ha$ , \*e, \*i,  $*t^ha$ ,  $*t^he$  'that'; I reconstruct Indo-Uralic demonstratives G8 \*i/e, G11 \*t- and G12 \*s-. If the reconstruction of Proto-Uralic \*ti 'this' and \*tu 'that' is correct, it is possible that Proto-Altaic \*sV 'this' and  $*t^ha$  'that' are the result of a secondary development. However this may be, the identification of Indo-European \*so with Finnish  $h\ddot{a}n$  'he, she' <\*s- seems to be perfect. Thus, Altaic \*e, \*i,  $*t^ha$ ,  $*t^he$ , \*sV can be identified with Indo-Uralic \*i/e, \*t-, \*s- while Altaic \*o may be compared with G54 \*u (cf. Kortlandt 2002: 225). It is possible that the latter is also found as a suffix in the stem \*meno 'self, body' which functions as a reflexive pronoun. The Altaic interrogative pronoun  $*k^ha$  'who' may be identical with the Indo-Uralic interrogative G60 \*k-.

The Altaic plural suffix \*- $t^h$ - can be identified with the Indo-Uralic plural suffix G15 \*-t. The Altaic accusative suffix \*-t- may be identical with the Indo-Uralic accusative G24 \*-t- if the latter is the phonetic reflex of an original labial plosive, as in the first person pronoun. The Altaic genitive has a velar, dental or palatal nasal, which points to \*-t- followed by other suffixes. This is supported by the fact that \*-t- with its also found as a dative, locative and instrumental case suffix. As in Indo-European (cf. Kortlandt 2002: 222), it appears that the genitive G25 \*-t- developed into a general oblique singular ending in Altaic. Alternatively, it may have merged with the locative G30 \*-t- which may be compared with the Altaic dative, locative and instrumental suffix \*-t- which may be compared with the Altaic dative, locative and instrumental suffix \*-t- which may be compared with the Altaic dative, locative suffix \*-t- which may be compared with the Altaic dative, locative suffix \*-t- which may be compared with the Altaic dative, locative suffix \*-t- which may be compared with the Altaic dative, locative suffix \*-t- which may be compared with the Altaic dative, locative suffix \*-t- which may be compared with the Altaic dative, locative suffix \*-t- which may be compared with the Altaic dative, locative suffix \*-t- which may be compared with the Altaic dative, locative suffix \*-t- which may be compared with the Altaic dative, locative suffix \*-t- which may be compared with the Altaic dative, locative suffix \*-t- which may be compared with the Altaic dative, locative suffix \*-t- which may be compared with the Altaic dative, locative suffix \*-t- which may be compared with the Altaic dative.

Other case suffixes may be compared with the dative G26 \*-ka and the ablative G33 \*-t. Starostin reconstructs partitive \*-ga, dative or directive \*- $k^hV$ , and allative \*-gV, all of which may be related to the Indo-Uralic dative suffix \*-ka. Since the

Indo-European evidence points to a number of different vowels after the velar consonant (cf. Kortlandt 2002: 224), it is quite possible that several cognates of the Altaic suffixes merged in Indo-European. Similarly, the Altaic dative or locative \*-du, \*-da, comitative or equative \*- $c^ha$ , and instrumental or ablative \*- $d\tilde{z}V$  (which function as an ablative in Turkic, Mongolian and Japanese, respectively) may all be related to the Indo-Uralic ablative suffix \*-t, which could be followed by other suffixes (cf. Kortlandt 2002: 222). Indeed, the distinction between Japanese genitive t0 and dative or locative t1 and between Turkic dative \*-t2 and Tungusic directive \*-t3 suggests that the locative G31 \*-t4 may have been added to other suffixes so as to provide a (stronger) locative meaning, in the same way as Indo-European replaced the original ablative ending by \*-t4 in its local use in order to differentiate it from its instrumental use (cf. Kortlandt 2002: 222).

The Altaic deverbative nominal suffixes \*-m- and \*-l- (Starostin 2003: 177, 187) can be identified with the Indo-Uralic nominalizer G39 \*-m- and participle G45 \*-l-. The Altaic gerund \*-jV and past tense \*-thV (Starostin 2003: 227) may be identical with the Indo-Uralic nominalizer G38 \*-i- and participle G43 \*-t-. The combination of the Altaic desiderative or inchoative \*-s- and factitive or intensive \*-g- (Starostin 2003: 207, 209) may be found in the Indo-Uralic conative G53 \*-sk-. The Altaic \*-s- is also found by itself in Indo-European and may be identical with the IE root \*es- 'to be' (cf. Kortlandt 1997: 169). I am inclined to identify the Altaic negative verb \*e-, Mongolian ese 'not', with the Uralic negative verb \*e-(cf. Collinder 1960: 247) and the IE root \*es-, with loss of the original negative particle G56 \*ne in Altaic (as in modern French). The Proto-Altaic verb \*era 'to be' (Starostin 2003: 515) is evidently a derivative of the same root.

Thus, I find evidence for 20 Indo-Uralic grammatical elements in Altaic: first person G1 \*m, second person G4 \*t, demonstratives G8 \*i/e, G11 \*t, G12 \*s, plural G15 \*t, accusative G24 \*m, genitive G25 \*n, dative G26 \*ka, locatives G29 \*ru, G30 \*n, G31 \*i, ablative G33 \*t, nominalizers G38 \*i and G39 \*m, participles G43 \*t and G45 \*l, conative G53 \*sk, reflexive G54 \*u/w, and interrogative G60 \*k. I conclude that the reality of an Eurasiatic language family is very probable. The historical relationship between the Altaic and Uralo-Siberian language families remains to be specified. We must reckon with the possibility that these are the two main branches of the Eurasiatic macro-family. Further research should therefore aim at separate reconstructions of Proto-Altaic and Proto-Uralo-Siberian before other possible inner and outer connections are taken into consideration.

Fortescue dates the dissolution of the Uralo-Siberian and Uralo-Yukagir language families to 8000 and 6000 BP or 6000 and 4000 BC, respectively (1998: 182, 219, and maps 3 and 4). Sammallahti dates the dissolution of Proto-Uralic and Proto-Finno-Ugric to the 5th and 4th millennia BC, respectively (1988: 480), and these are identical with my datings for the dissolution of Indo-Hittite and of nuclear Indo-European (2002: 217). While I date the dissolution of Indo-Uralic to the end of the 7th millennium (ibidem), Starostin dates the earliest split of Proto-

Altaic to the 6th millennium (2003: 236). We may conclude that Proto-Indo-Uralic and Proto-Altaic may have been contemporaries (6000-5500), that Proto-Uralic and Proto-Uralo-Yukagir may have been the same thing and contemporaneous with Proto-Indo-Hittite (4500-4000), and that Proto-Finno-Ugric and nuclear Proto-Indo-European may again have been contemporary languages (3500-3000). This puts the dissolution of the Uralo-Siberian language family in the 7th millennium. It now becomes attractive to identify the latter with the abrupt climate change of 8200 BP or 6200 BC, when severe cold struck the northern hemisphere for more than a century. The catastrophic nature of this disastrous event agrees well with the sudden dispersal and large-scale lexical replacement which are characteristic of the Uralo-Siberian languages.

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