The Proto-Indo-European case system and its reflexes in a diachronic typological perspective: Evidence for the linguistic prehistory of Eurasia
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NOTE

RECENSIONI

THE PROTO-INDO-EUROPEAN CASE SYSTEM AND ITS REFLEXES IN A DIACHRONIC TYPOLOGICAL PERSPECTIVE: EVIDENCE FOR THE LINGUISTIC PREHISTORY OF EURASIA*

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In memory of Sergei Starostin, one of the greatest researchers of the history of Indo-European and non-Indo-European languages

The present paper outlines a diachronic typology of changes in case systems within the Indo-European linguistic family. This study is written in the genre of identification and definition of problem: I will not attempt to offer an exhaustive treatment of the subject. Rather, I would like to draw attention to the importance of extensive research in this field in a diachronic typological perspective, which, in my opinion, may shed light on reconstruction of the linguistic prehistory of Eurasia. First, I will summarize some well-known facts about the Indo-European case and the variety of reflexes of the Proto-Indo-European case system, outlining the most important tendencies – without entering into a discussion of details of the individual case systems as well as into details of the Proto-Indo-European reconstruction. In the second part of the paper I will make an attempt to explain some of the attested developments of the original case system as resulting from contacts with non-Indo-European languages. This, in turn, will enable us to make some hypotheses about the case systems and, in general, structural types of some non-documented substrate languages which could have triggered these changes.

1. Introductory remarks: synchronic vs. diachronic typology

Linguistic typology exhibits a regrettable imbalance of synchronic and diachronic typological studies. On the one hand, we have at our disposal a detailed *synchronic* account of several linguistic categories based on extensive typological catalogues of a variety of grammatical phenomena,

such as case, voice etc. attested in the languages of the world. On the other hand, a systematic treatment of these categories in a *diachronic* perspective is lacking. The rise, development and decline of these categories mostly remain on the periphery of typological research.

This paper aims to draw attention to this imbalance and to show the importance of results that can be obtained on the basis of diachronic typological generalisations.

2. A DIACHRONIC TYPOLOGY OF CASE SYSTEM: THREE EVOLUTIONARY TYPES OF LANGUAGES

Looking at the history of case systems attested and reconstructed in the languages of the world, we can figure out three logically possible types of development of case systems that might be called, for brevity, *evolutionary types of languages*. These include:

(i) *Case-increasing languages*, i.e. languages that attest the increase and expansion of case systems;

(ii) *Case-reducing languages*, where we observe the decline of case systems, and the number of cases is decreased;

(iii) *Case-stable languages*, where the original case systems remain basically unchanged over quite a long period of time.[1]

3. THE PROTO-INDO-EUROPEAN CASE SYSTEM AND ITS DEVELOPMENTS

3. 1. *Proto-Indo-European cases: a reconstruction*

The standard Proto-Indo-European reconstruction counts eight cases, as shown in (1) (see, for instance, SZEMERÉNYI 1990: 166ff.; BEEKES 1995: 172ff.; FORTSON 2010: 115ff.; KORTLANDT 2010: 39ff.; for brevity, I only list the endings reconstructed for the singular number):

1) *Proto-Indo-European case system*

	(Singular)
Nominative	$-s$, $-\emptyset$
Vocative	$-\emptyset$, $-e$
Accusative	$-m$
Genitive	$-(o)s$
Dative	$-(e)i$
Ablative	$-(o)s$, $-(e)d$
Instrumental	$-(e)H_1$
Locative	$-i$, $-\emptyset$

Quite interestingly, the Indo-European family provides an enormous variety of types of development: within just one family we can observe all three

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[1] For a general survey, see KULIKOV 2009.

logically possible evolutionary types of languages – that is, case-increasing, case-reducing, and case-stable languages. Most importantly, these three basic types (as well as their main sub-types, on which see below) are not chaotically distributed over the map of the Indo-European languages, but can be grouped into several subgroups, or areas.

3. 2. *Case-reducing languages*

Many Indo-European languages have reduced this original eight-case system. There are several main types of reduction.

3. 2. 1. '8 → 4-6' type: Italic, Old Celtic, Old Germanic

A number of ancient Indo-European languages which were spoken in the Western part of Europe during the last centuries of the 1st millennium BC and the first centuries of the 1st millennium AD attest a relatively moderate reduction of the original case system. These include Latin (and Italic in general), Old Celtic, and Old Germanic languages, such as Gothic and Old Norse (apparently reflecting the Proto-Germanic situation).

   Here we typically find no more than six or five cases. While the cases of core arguments are mostly well-preserved, we observe a considerable syncretism and reduction of the original system in the domain of oblique cases. For the lack of a better term, I will refer to this type of reduction in numerical terms: '8 → 4-6'.

   A typical example is Latin with its 6 cases, where the case which is traditionally called "ablative" in Latin grammars is not a direct continuation of the PIE ablative but results from the merger of three PIE oblique cases, ablative, locative and instrumental, as shown in (2):[2]

2) *Syncretism of oblique cases in Latin*

   <u>PIE</u>   <u>Latin</u>
   Abl   ↘
   Loc   →   Abl
   Ins   ↗

Importantly, all three source cases have left their traces in the singular or plural paradigms at least in some of the attested Latin declensions. Thus, the ending *-ō(d)* of the 2nd declension directly continues the PIE ending *⋆…o-ed* (*-o*-stems); abl.pl. *-īs* probably goes back to loc.pl. *⋆-oisu*; and the abl.pl. ending of the 3rd, 4th and 5th declensions *-bus* is likely to represent the ending *⋆-b^hos* (shared by Proto-Italic and Proto-Celtic), which replaced

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[2] I leave out of consideration the remnants of the PIE locative, such as *domi* or *Romae*, which do not form regular paradigm members. For more details of the history of the Latin case endings, see Beekes 1995: 172ff.; Leumann 1977: 405ff.; Gasperini 1999.

the original ending *-*ios*, presumably under the influence of the ins.pl. ending *-$b^h i$-s* (KORTLANDT 1984: 103f. = 2003: 50; see BARÐDAL & KULIKOV 2009: 473f.).

The history of the Latin ablative is instructive since it shows that phonetic processes may render distinctions between case forms opaque, thus leading to the merger of some forms, but they do not represent the *only* driving force of case syncretism. The final outcome must be the result of a complex interplay of several mechanisms.

3.2.2. '8 → 2-4' type: Balkan languages

Another type, geographically adjacent to the preceding, is attested in the Balkan area and characterized by a more considerable reduction of the Proto-Indo-European case system to 2-4 cases, typically, with the merger of dative and genitive (see e.g. JOSEPH 2010: 622), but, sometimes, with the preservation of the original vocative (as in Bulgarian or Modern Greek). Here belong such languages as Rumanian, Albanian or Bulgarian; cf. an example of Albanian "indefinite" declension paradigm (on the genesis of this declension see, for instance, ORËL 2000: 232ff.):

3) *Albanian case system*

		(*o*-stems)
Sg.	Nom.-Acc.	*dem-Ø* 'young bull'
	Gen.-Dat.-Abl.	*dem-i*
Pl.	Nom.-Acc.	*dem-a*
	Gen.-Dat.	*dem-e*
	Abl.	*dem-esh*

Note that, although the most archaic varieties of Greek (Mycenaean, Homeric) appear to be closer to the preceding, "Middle European", type of case-decreasing, and Classical (post-Homeric) Greek still had five cases (including the vocative), it shows nevertheless a clear tendency to converge with neighbouring languages as far as the case system is concerned: the dative case was lost during the Byzantine period, so that the original system eventually ends up with the four-case paradigm in Modern Greek.

3.2.3. '(8 →) 4-6 → 0(-2)' type: mainland Germanic and Romance

Finally, most of the mainland Germanic (with the notable exception of German) and Romance (except for Romanian) languages have lost their case systems entirely (except for some remnants in the pronominal declension and, in several languages, a special genitive, or possessive, form),[3] thus instantiating the '8 → zero' type. This development is mostly observ-

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[3] Perhaps of secondary origin in some languages.

able within the documented history of several Germanic and Romance languages.

3.3. Case-stable languages: '8 → 7-10' type (Baltic, Slavic, Armenian)

The most stable and conservative type, which I call "case-stable languages", is found at the northern outskirt of the Indo-European area, in Baltic and Slavic. Another language that has preserved the number of case oppositions virtually intact is Armenian.

Thus, in Lithuanian most cases can be traced back to the Proto-Indo-European case system. Moreover, in Old Lithuanian we even find, in addition, a few new locative cases.[4] The sub-system of locative cases is not preserved in the modern literary language but can still be found in some archaic dialects, spoken, in particular, in Byelorussia. The three new locatives, illative, adessive and allative, are made by attaching the postposition (?) *nǎ to the accusative form in -n and the postposition *piě (< Balt. *prei) to the locative and genitive, respectively, as shown in (4):[5]

4) *Old Lithuanian case system*

Nom.	*mìšk-as* 'forest'
Acc.	*mìšk-ą* (< *-am)
Gen.	*mìšk-o*
Dat.	*mìšk-ui*
Ins.	*mìšk-ù*
(new) Loc.	→ *mišk-è* (< *mišk-ę́)
Voc.	*mìšk-e*
(old Loc.	*mìšk-iě*)
Illative	→ *mišk-anà* (*mišk-añ*) (< *-am + na) 'into the forest'
Allative	→ *mišk-ópi* (-óp) (< *-õ + pi/piě) 'to(wards) the forest'
Adessive	→ *mišk-íepi* (-íep) (< *-iě + pi/piě) 'into the forest'

Slavic provides another instructive example of an expansion of the original case system. Although Common Slavic has lost one of the Proto-Indo-European 8 cases, merging the ablative with the genitive, we observe some interesting innovations in Russian, which has developed two new cases, "second locative" and "second genitive".[6]

The ending -ú of the "second locative" (also called *vtoroj predložnyj* 'second prepositional') case of the modern Russian "2nd declension" has been

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[4] This, in fact, points to some features of the case-increasing scenario and, in a sense, to a mixed evolutionary type, though with the prevalence of the features of the case-stable type.

[5] For details of the history of the Lithuanian case system, see, in particular, ZINKEVIČIUS 1996: 112f.; SERŽANTS 2004; KORTLANDT 2005.

[6] For the synchronic status of these two cases, see, in particular, ZALIZNJAK 1967; PLUNGIAN 2002; for their history see e.g. KIPARSKY 1967: 26ff.; HENTSCHEL 1991.

borrowed from the old declension of the stems in *-u- (the Old Russian type nom. sg. *dom-ъ* (< *dom-u-s*) – loc. sg. *dom-u* (< *dom-óu*)). Under the influence of the locatives of some nouns of this type, such as *(v) med-u* '(in) honey', -u-forms have been borrowed into the paradigm of the old *-o- type nouns, foremost of those denoting location and thus particularly common in the locative usage. The earliest attestations of this new case appear at the turn of the 13th century. Subsequently, the *-u- declension has disappeared, being ousted by the productive "second" (*-o-) declension (for general characterization of this process, see, in particular, ZALIZNJAK 1985: 375-376; PLUNGIAN 2002).

The "second genitive" (partitive) ending -u (used in Modern Russian foremost with uncountable nouns, such as *čaj* 'tea', *mëd* 'honey' or *pesok* 'sand') was also borrowed from the *-u- declension, where it was regular: nom. sg. *med-ъ* 'honey' – gen. sg. *med-u* (< *medh-ou-s*). This new genitive case has been established approximately by the 14th century.

These developments are summarized in (5), which is the relevant fragment of the modern Russian 2nd declension as compared to Old Russian (see also KULIKOV 2009: 448ff.):

5) *Russian locative ("second prepositional") and partitive ("second genitive")*

	Modern Russian 2nd declension			Old Russian *-o-type *-u-type	
Nom.	les-Ø 'forest'	čaj-Ø 'tea'	mëd-Ø 'honey'	lěs-ъ	med-ъ
Gen.	lés-a	čáj-a	mëd-a	lěs-a	med-**u**
Part.	lés-**u**	čáj-**u**	mëd-**u**	–	–
Dat.	lés-u	čáj-u	mëd-u	lěs-u	med-ovi
Prep.	les-e	čáj-e	mëd-e	lěs-ě	med-**u**
Loc.	les-**ú**	…	med-**ú**	–	–

Another illustration of the case-stable type can be found in an eastern branch of Indo-European – in Armenian. The original Proto-Indo-European case oppositions are well-preserved in this language – in spite of a number of drastic phonological developments resulting in heavy erosion of the original inflection (for details of the history of the Armenian case system, see, in particular, KORTLANDT 1984).[7]

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[7] Note that some case oppositions which could entirely disappear due to regular phonetic developments were preserved through reinforcement (see KULIKOV 2009: 451f.) of the old case forms by addi-

3. 4. *Case-increasing languages: '(8 →) 8 → 2-3 → 6-10' type*
(Indo-Aryan, Ossetic, Tocharian)

A very twisted path of development is attested in two eastern Indo-European branches, in Indo-Aryan and Tocharian, which instantiate the case-increasing type.

By the end of the Middle Indo-Aryan period, that is at the turn of the 2nd millennium AD, the Indo-Aryan languages have lost most of the conservative Old Indo-Aryan (OIA) eight-case system (which, except for minor details, is nearly identical to the case system reconstructed for Proto-Indo-European).[8] Generally, only two cases survive, direct (resulting from the merger of nominative and accusative) and oblique (mostly going back to the Old Indo-Aryan genitive); in some languages traces of some other oblique cases, such as instrumental, locative or ablative, can still be found; cf. the Sinhala instrumental case in *-en/-in* and Assamese ergative *-e*, both probably reflecting the OIA instrumental singular ending of the *-a-* declension, *-ena*. The functions of the lost cases are largely taken over by postpositions of different origin.

In New Indo-Aryan languages we observe the grammaticalization of such new postpositions, which are normally added to the oblique case form. Very often this grammaticalization results in the amalgamation of a postposition with the oblique and, hence, in the rise of a new case. Such is, for instance, the origin of the two new case endings in Sinhala (6) (for some details of this process, see KULIKOV 2009: 442):

6) *New case morphemes in Sinhala*
    a. Sinhala dat. *-ṭa* (also Khowar dat. *-te*)   <   OIA artha 'goal, purpose'
    b. Sinhala gen. *-ge*   <   OIA *gṛhe* 'in the house' (loc. sg. of *gṛha-* 'house')

In several New Indo-Aryan languages, the markers of genitive mostly go back to various derivatives of the Old Indo-Aryan verbal root *kṛ-* (*kar-*) 'make, do':

7) *New Indo-Aryan genitive*
    a. Hindi *-kā, -ke*   <   OIA part. necess. *kārya-* 'to be done'
    b. Awadhi, Maithili *-ker*   <   OIA part. pf. pass. *kṛta-* 'done, made'
    c. Bhojpuri *-kae*   <   OIA adj. *kṛtya-* 'to be done'

tional morphemes, as, for instance, in the case of the Armenian ablative ending *-ē* going back to the particle **-eti*. For a detailed discussion of phonological changes and morphological developments which, altogether, result in nearly perfect preservation of the Proto-Indo-European system of case contrasts, see, in particular, MEILLET 1936: 64ff.; GODEL 1975: 99ff.; DŽAUKJAN 1982: 85ff.; BUBENIK & HEWSON 2006: 160ff.; KORTLANDT 1984; MATZINGER 2005.

[8] For details, see BLOCH 1934; ZOGRAF 1976; MASICA 1991: 230ff.

Likewise, some dative *k*-morphemes, such as Hindi *-ko*, Oriya *-ku* or Marathi *-kē*, must reveal the vestige of the same Old Indo-Aryan root *kr̥-* (*kar-*).

In most New Indo-Aryan languages the grammaticalization of the new (quasi-)case markers is not (yet) finished: the majority of these postfixes retain the status of free morphemes. However, some NIA languages have advanced at this path farther than most other members of the group. An instructive example is Sinhala, which has for many centuries developed in the neighbourhood of Dravidian substrate language(s), such as Tamil; for examples of case paradigms, see Section 4.1.

Another instructive example is provided by Ossetic, an Indo-European (Iranian) language which lost most of the PIE cases but, eventually, has developed a nine case paradigm (for details, see CHEUNG 2008; STILO 2009; BELYAEV 2010). Next to two "old" cases, nominative and genitive, directly continuing the corresponding Proto-Indo-European cases, there are a number of new forms. Two cases are based on combinations with postpositions: dat. *-æn* may go back to *ana* (cf. Avestan *ana* 'upon, over, across') or *anu* (cf. Old Persian *anuv*, Avestan *anu* 'along, after, according to'); adessive in *-bæl* (Digoron) originates in *upari* 'above, upon, on'. A few members of the case paradigm are probably of adjectival and adverbial origin. The comitative morpheme *-imæ* (only in the Iron dialect) must reflect an adverbial morpheme, cf. Avestan *maṱ* 'together, jointly'. Two other case forms are likely to go back to denominal adjectives incorporated into the substantive paradigm. The inessive ending may reflect the adjectival suffix *-īi̯a-* (cf. Vedic *párvata-* 'mountain' – *parvatī́ya-* 'growing in the mountains'). The equative morpheme probably originates in the adjectival suffix *-vant-* (as in Vedic *tva-* 'you' *-tvắvant-* 'like you').

For similar developments in the history of the Tocharian case system (which, in several respects, resembles the developments in Indo-Aryan), see PINAULT 1989: 71ff.; BUBENIK & HEWSON 2006: 317ff.; KULIKOV 2009: 443.

3.5. *Limits of diversity*

To sum up, the amazing variety of developments attested for the Proto-Indo-European case system can be reduced to a limited number of evolutionary types. Even in spite of the fact that these historical changes are not chronologically contemporaneous with each other (thus, the developments which underlie the systems attested in Latin and Old Germanic languages must predate the middle of the 1st millennium BC, while the changes resulting in the systems attested in modern Romance and Germanic languages date no earlier than the middle of the 1st millennium AD), the corresponding types are worth comparing to each other. The existence of these, remarkably different, diachronic types, let alone the types instantiated by Balto-Slavic, with amaz-
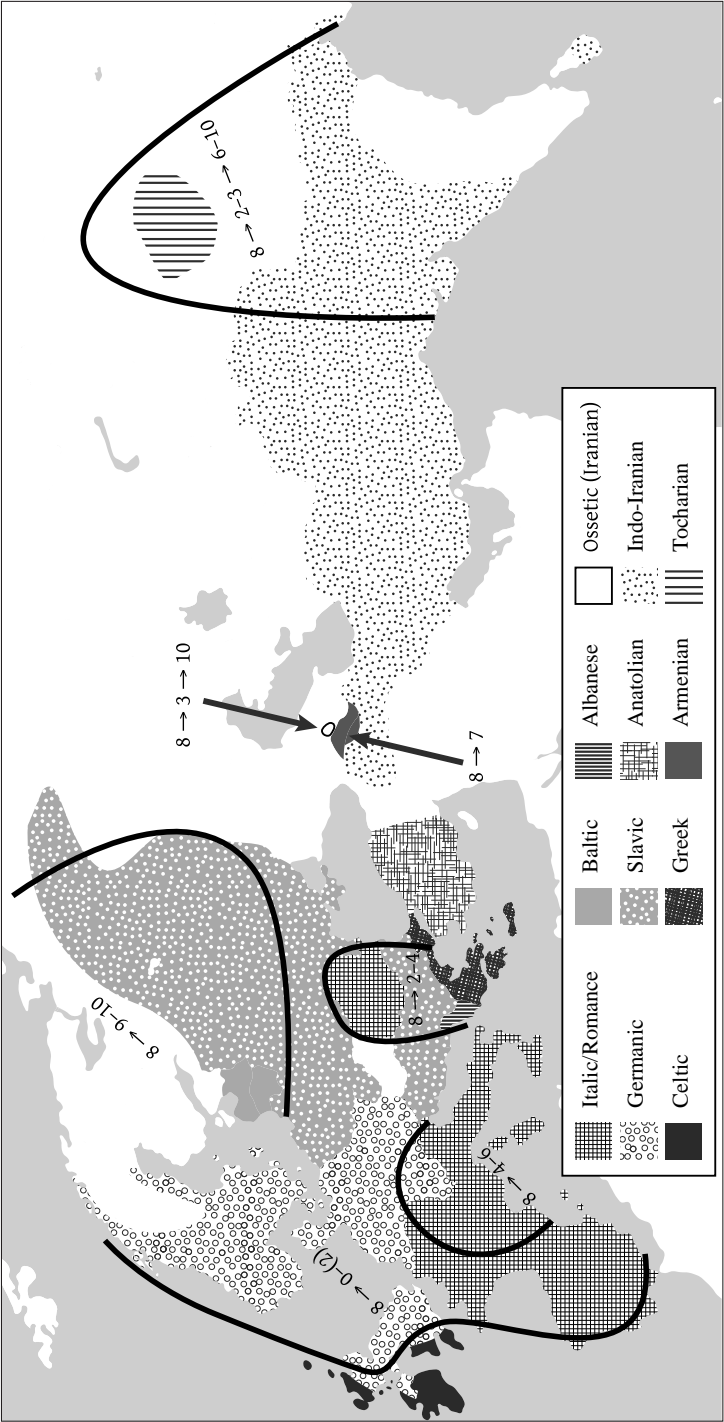
Proto-Indo-European case system and its development: the main evolutionary types.

ing stability and conservatism over millennia, requires an explanation and makes such a comparison meaningful.

4. LANGUAGE CONTACTS AS ONE OF THE SOURCES OF TYPOLOGICAL DIVERSITY

Even the above bird's eye view survey of the main evolutionary types attested for Indo-European case systems immediately raises the question: how can we account for such a variety of developments of the original eight case system?

4.1. *Indo-European case: evolutionary types and linguistic areas*

Apparently, the difference in the evolutionary type cannot be explained by phonetic changes only. For instance, both Romance and Slavic languages, or both Germanic and Middle Indo-Aryan languages were subject to the erosion of case inflection, which results in the merger of some case endings. However, in contrast with Romance or Germanic languages, Slavic shows a remarkable morphological conservatism in its case system, and in New Indo-Aryan we even observe the increase of the heavily reduced case inventories. Compensating certain crucial phonetic changes in the auslaut, Slavic has developed the category of animacy, which helped to save the nominative-accusative contrast. Thus, while for the languages that have undergone heavy reduction of the original case systems (as, for instance, in most modern Romance and mainland Germanic languages) we have at least a theoretical possibility to ascribe this development to the heavy phonetic erosion in auslaut (see, e.g., WACKERNAGEL 1920: 303), in case of case-increasing or case-stable languages (and even in case of languages which only attest weak case-decreasing) we have to look for some other, supposedly external, explanation for this trend.

    In many (or even most) cases, there are good reasons to assume that one of the main factors that determine the evolutionary type of a language is the *areal*, rather than genetic, relationship. Instructive is the case of Baltic and Slavic, which form a remarkable exception within the Indo-European family as far as the case systems are concerned. Old Lithuanian and Russian have even extended their case systems. This peculiarity must be due to the influence of the neighbouring Finno-Ugric languages with their rich systems of cases at the moment when intensive contacts between Finno-Ugric and Balto-Slavic tribes started in North-Eastern Europe[9] (see e.g. MATHIASSEN 1996: 38). Note, especially, that languages of this family instantiate the case-increasing evolutionary type, as the genesis of the Finnish declension summarized in (8), largely based on HAKULINEN 1961: 67ff. and YLIKOSKI 2011, clearly shows:[10]

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[9] There is a rich literature on this issue; see, in particular, KOIVULEHTO 1990; KALLIO 2005.
[10] I am thankful to Petri Kallio for discussing with me the Proto-Uralic reconstruction and updates to Hakulinen's reconstruction.

8) *Finnish case system and its history*

	Finnish		Proto-Finnic	Proto-Finno-Volgaic	Proto-Finno-Ugric
Nom.	*-Ø*	<			**-Ø*
Acc.	*-n*	<			**-m*
Gen.	*-n*	<			**-n*
Essive	*-na/-nä*	<			**-na*
Partitive	*-ta/-tä, -a/-ä*	<			**-ta* (*Loc.-Abl.)
Translative	*-ksi*	<		**-k-s-e*	
	Internal locative cases				
Inessive	*-ssa/-ssä*	<		**-s-na/-s-nä*	
Elative	*-sta/-stä*	<		**-s-ta/-s-tä*	
Illative	*-hVn, -ˉn, -seen*	<	**-sen, -ʒen*		
	External locative cases				
Adessive	*-lla/-llä*	<	**-l-na/-l-nä*		
Ablative	*-lta/-ltä*	<	**-l-ta/-l-tä*		
Allative	*-lle(ʹ)*	<	**-len*		
Abessive	*-tta/-ttä*	<		**-k-ta-k/-k-tä-k* or **-p-ta-k/-p-tä-k*	
Comitative	*-ine-*	<	**-i-n* (?)		

Importantly, the shared features of several geographically adjacent languages are not limited to quantitative *parameters*, i.e. to the number of cases and the general evolutionary type of language (case-increasing/case-reducing/case-stable), but also include some other, more specific, features.

Thus, the affinity of Finnish, (Old) Lithuanian and Russian is not limited to the case-increasing type (probably induced by Finno-Ugric). Baltic (Old Lithuanian) seems to have borrowed from Finnish the very *mechanism* of case-expansion (multilayer case-marking) and extended the same semantic area (locative) as the adjacent Finnish. Even the postposition (?) **nă*, which was used to form a new locative case, illative, may have been borrowed from Finno-Ugric, where the essive suffix *-na/-nä* was used to form the inessive from the adverbial stem in *-s*.

Likewise, the functions of the two new Russian cases, locative and partitive, must testify to Finno-Ugric influence (see, e.g., GRENOBLE 2010: 584). The rise of the partitive case may be due to the influence of a Finno-Ugric language (or languages)[11] with a case system that must have had a partitive. The rich system of Finnish locative cases may also have triggered and/or supported the developments resulting in the emergence of a new locative case, distinct from the old Russian locative, which has too many non-locative functions.

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[11] Many or even most of these languages must have disappeared from the linguistic scene, ousted by neighbouring (Eastern) Slavic and/or Baltic languages.

Another and, in a sense, even more instructive example of structural similarity between case systems of two languages of different genetic affiliation is provided by Sinhala as compared to (Old) Tamil (see Gair 2003: 780f.; Lehmann 1998: 80):

9) *Sinhala case system (Singular)*   *Old Tamil case system (Singular)*

Nom.	*potə* 'book'	*balla* 'dog'	Nom.	*malar* 'flower'
Acc.	*potə*	*balla(-wə)*	Acc.	*malar-ai*
Ins.-Abl.	*poteŋ*	*balla-geŋ*	Sociative-Ins.	*malar-oṭu, malar-ān̠* etc.
			Equative-Abl.	*malar-in̠*
Dat.	*potə-ña*	*balla-ña*	Dat.	*malar-kku*
Gen.-Loc.	*potē*	*balla-ge*	Gen.	*malar-atu*
			Loc.	*malar-il, malar-kāṇ* etc.

Although the new Sinhala cases cannot of course be direct Dravidian borrowings, representing Indo-Aryan inheritance, the clear *structural* parallelism between these two case systems can hardly be accidental, and we cannot help admitting the contribution of neighbouring Dravidian language(s)[12] with their well-developed and stable case systems to the coining of the Sinhala (and, presumably, some other New Indo-Aryan) case system(s) – in particular, as far as the choice of new cases to be incorporated into the paradigm is concerned.

Yet another example of striking parallelism of case systems in two geographically adjacent, but genetically unrelated, languages is provided by Armenian and Kartvelian, cf. the system of case endings in Modern Armenian (see, e.g., Dum-Tragut 2009: 68ff.; for Classical Armenian see, for instance, Schmitt 1981: 90ff.) and Georgian (see Hewitt 1995: 33ff.):

10) *Modern Armenian case system*   *Georgian case system*

Nominative	*-Ø*	Nominative	*-i, -Ø*
Accusative	*-Ø*	Narrative (= Erg)	*-m(a)*
Genitive	*-i, -u, -va, …*	Genitive	*-is*
Dative	*-i, -u, -va, …*	Dative	*-s*
Ablative	*-icʻ, -ucʻ*	Adverbial	*-ad*
Instrumental	*-ov*	Instrumental	*-it*
Locative	*-um*		
		Vocative	*-o, -Ø*

Although the structural similarity of case systems as found, for instance, between Armenian and Kartvelian or New Indo-Aryan (Sinhala) and Dravidian (Tamil) is evident enough, the character of processes and mechanisms that might underlie the historical developments requires further clarifications.

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[12] Not necessarily Old Tamil, but, possibly, structurally similar vernacular(s) spoken by some Dravidian tribes, later assimilated by Indo-Aryans.

4. 2. *Language contacts and evolution of case systems: possible scenarios*

In what follows, I will outline some mechanisms of changes within the system of cases (supposedly, relevant also for other grammatical categories) in the situation of language contact.[13]

A possible scenario of transferring case patterns from a substrate or adstrate language can be outlined as follows. Suppose, speakers of two languages, L1 and L2, are settled adjacent to each other in a contact zone. If the speakers of L2 play a dominant role, it is very likely than L2 will be learned by the native speakers of L1 – at least more often than the other way around. Usually, there are several differences in the subdivision of the semantic space of case functions (meanings) between languages. Accordingly, the native speakers of L1 may tend to reproduce some (syntactic) features of L1 even when speaking (quite an imperfect variety of) L2.[14] (Of course, there may also be a considerable amount of structural features borrowed from the dominant language L2 into the substrate language L1, but this issue will not be discussed here). For instance, we may expect that they will tend to distinguish between different uses of the case K1 in L2 (see TABLE 1 below), corresponding to cases C1 and C2 in their native language, L1 – which may result in splitting case into two new cases, K_1^a and K_1^b. By contrast, it is very likely that the opposition between K2 and K3 will be removed from the system, since it is not supported by the case syntax of L1. That is, the free variation of K2 and K3 (K2/K3) may eventually result in case syncretism (K2/3).

case functions	Cases in L1: ad-/substrate	Cases in L2: dominant		Cases in L2 as spoken by L1-speakers
	C1	K1		K_1^a
	C2			K_1^b
	C3	K2	$\rightarrow$	K2/K3 $\rightarrow$ K2/3
		K3		
	C4	K4		…
	…	…		

TABLE 1. Scenario of contact-induced changes in case system.

[13]   There is a rich literature on language contacts, starting with the seminal WEINREICH'S (1953) study: THOMASON 2001; WINFORD 2002; HICKEY 2010 (to name but a few important recent works).

[14]   Cf., in particular, Chapter 3 on "structural diffusion" in WINFORD 2002 and his discussion of the Old Norse influence on Old English, when "Norse speakers simply retained many features of their language when they 'switched' to English" (WINFORD 2002: 81); cf. also SCHRIJVER'S (2004: 221) description of the scenario of substrate influence: "We may take it that people speaking language A and adopting language B will tend to speak language B using the phonetic and phonemic features of language A". See also JOHANSON 2008; 2010: 653 on "carry-over" copying as well as SASSE 1992 and MUYSKEN 2010: 275 on contact-induced changes/restructuring.

From the variety of L2 spoken by native speakers of L1 in the zone of contact of L1 and L2, these new features may spread into the speech of native speakers of L2 (and perhaps even further, into other dialects of L2, spoken outside the contact zone). Thus, even after the disappearance of the substrate language L1, traces of its grammatical features can still be found in language(s) whose predecessor (L2) was in contact with L1.

Such could be, in particular, one of possible scenarios of the emergence of the genitive of the direct object in Slavic languages. At the time of the Common Slavic (Proto-Slavic) language, the Slaves had experienced intensive contacts with the speakers of the Finno-Ugric (Uralic) languages, spoken to the North and North-East of the Slavic linguistic area. In Finnish the direct object can be marked either by the accusative or by the partitive case, depending on the aspectual characteristics of the verb, as in (11).

11) Object-marking in Finnish (HOPPER & THOMPSON 1980: 271)
  a. *Liikemies*   *kirjoitti*   ***kirjeen***   *valiokunnalle*
     businessman:NOM   wrote   letter:ACC   committee:ALL
     'The businessman wrote a letter to the committee.'

  b. *Liikemies*   *kirjoitti*   ***kirjettä***   *valiokunnalle*
     businessman:NOM   wrote   letter:PART   committee:ALL
     'The businessman was writing a letter to the committee.'

Within the (Proto-)Slavic case system, there is no exact equivalent of the Finnish partitive, but in most of its usages, it will be rendered by the genitive, the functions and usages of which show the biggest overlapping with those of the partitive. Quite naturally, the bilingual native speakers of Finno-Ugric languages in the Finno-Ugric/Balto-Slavic contact zone could often use both accusative and genitive for the encoding of the direct object when speaking Baltic or Slavic dialects, thus copying one of the features of Finno-Ugric syntax. This syntactic borrowing could date as far as the times of Balto-Slavic unity, which might account for the spread of this feature throughout the whole Balto-Slavic area: the use of genitive direct objects in Balto-Slavic vernaculars of the contact zone could subsequently spread to the whole Balto-Slavic area and has found its way into Baltic and Slavic daughter-languages after the split of the Proto-Balto-Slavic.[15] The genitive encoding of direct objects could trigger the use of genitive form in the function of accusative, creating new accusative forms (in the animate declension), and thus, eventually, contribute to the preservation of the nominative-accusative contrast, which was endangered by several drastic phonological changes.

Similar mechanisms may be responsible for the expansion of the "locative zone" in Lithuanian and Russian case paradigms.

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[15] For details of this process, see, in particular, HOLVOET 1999: 99-116.

Likewise, the parallelism of Armenian/Kartvelian and Sinhala/Tamil systems can be accounted for as resulting from language contacts. A particularly telling example of the stable type is provided by Armenian: due to Armenian-Kartvelian contacts (on which see, in particular, VOGT 1938; MATZINGER 2005: 2, 145; CHIRIKBA 2008: 79), Kartvelian could have a stabilizing effect on the Armenian case system (preserving most of the original Proto-Indo-European system of case oppositions basically intact), which otherwise might be severely deteriorated due to dramatic phonetic changes – heavy phonetic erosion in the auslaut.

In case of Sinhala, the Dravidian (Tamil) system could not only support the old system (remaining from the Middle Indo-Aryan predecessor of Sinhala), but, also, trigger establishing new cases in the somewhat depleted (after the loss of several Old Indo-Aryan cases) nominal paradigm.

In all these cases, we probably have to do with the phenomenon that might be called "stabilizing influence" of the neighbouring (substrate or adstrate) non-Indo-European languages – "erhaltender Einfluß", mentioned as an important factor of the evolution of grammatical systems in a short but insightful paper almost a century ago by SCHWYZER (1917/1920); see also WACKERNAGEL 1920: 305; POKORNY 1936: 72 = 1968: 182. Note also that the exact degree of reduction of the original system, in most cases barely explainable by internal reasons, can often be readily accounted for as induced by structural features of the case system of neighbouring language(s).

Moreover, the agglutinating ("multilayer") mechanism of emergence of new cases in New Indo-Aryan could be largely borrowed from the adjacent agglutinating Dravidian languages and, likewise, the rise of new cases in Tocharian (albeit less evident than in the situation of the genesis of the New Indo-Aryan case systems) may be due to the influence of agglutinating languages spoken in this area (probably Altaic/Turkic).[16] Finally, the development of new cases in Ossetic must be due, as actually suggested by many scholars (see, e.g., most recently, CHEUNG 2008; STILO 2009; and, especially, a detailed discussion of possible substrates and sources of innovations in the Ossetic case system in BELYAEV 2010), to the influence of Caucasian (Kartvelian and, indirectly, Northeast Caucasian; see, in particular, CHIRIKBA 2008: 76) as well as, to a more limited extent, Turkic substrate/adstrate languages with their rich case systems.

Returning to the Western part of the Indo-European area and turning our argumentation to a proof by contradiction, we cannot help noticing the obvious fact that mainland Germanic languages, which have lost the Old Germanic case system, did not experience such stabilizing influence from the part of neighbouring languages. German appears to be an exception – but this

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[16] On Tocharian-Turkic language contacts, see, in particular, WINTER 1963. Note that all these four genetic groups, Indo-Aryan, Tocharian, Altaic and Dravidian, are now included by some scholars into the large Central-South Asian linguistic area (see HOCK 2007).

may be an exception that proves the rule: as the easternmost member of the group, it had intensive contacts with Slavic languages with their conservative case systems, which, again, could play here a stabilizing role.

5. Substrate and ancient language contacts: reconstructing linguistic prehistory

Since there are good reasons to assume the influence of substrate or adstrate language(s) to explain the type of the evolution of the original Proto-Indo-European case system in some of the attested languages, such as Balto-Slavic, Indo-Aryan, Ossetic or Armenian, it makes sense to look for similar explanations at least for some other instances of the restructuring of the Proto-Indo-European case system, in particular for some case-reducing types which I mentioned before. This of course may also hold true for some other features of the grammatical system.

In other words, it is quite possible that, next to changes which are due to purely internal reasons (phonetic changes, analogical rebuilding of paradigms, etc.), certain developments in case systems and the type of reduction of the case system can be due to the substrate or adstrate influence. This means that we can make – of course with a great caution – some assumptions about the character of the case systems (and perhaps about some other grammatical features) of these undocumented hypothetical substrate or adstrate languages and even to suggest their genetic relationships.

Thus, in the case of the 8 → 4-6 reduction, as attested in Italic, (part of) Celtic and Germanic, we might make an attempt to look for a hypothetical substrate language (or languages) with a well-established contrast between the subject and direct object (as in these languages) but with a much less elaborated domain of oblique cases as compared to what we reconstruct for Proto-Indo-European.

This hypothetical type can hardly represent the influence of a language related to modern Basque, with its rich case system. A more likely candidate would be perhaps a language of the type found, for instance, in many (ancient) Semitic languages, with threefold case contrast (nominative – accusative – genitive).[17]

The Balkan type ('8 → 2-4') exhibits much more drastic changes and greater degree of reduction of the Proto-Indo-European case system. It is often surmised that some languages of this area, in particular, Greek, could be in contact with and influenced by the language(s) of the pre-Indo-European population of this area. One such language (traditionally called Minoan) is,

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[17] On possible Semitic (or Semitic-like) substrate, see, in particular, JONGELING 1995; VENNEMANN 2003; MAILHAMMER 2011. A more cautious formulation ("a non-Indo-European language family spoken in the area between Low Countires and the Balkans (at least), which shared typological similarities with Afroasiatic") appears in KALLIO 2004: 234, n. 5, with a discussion and bibliography.

supposedly, documented in the undeciphered linear A texts. Some attempts (SERGEEV 1984; SERGEEV & CYMBURSKIJ 1984; and, more recently, P. Schrijver and W. Vermeer[18]) have been made to compare this unknown language, on the basis of its phonologic features betrayed by the linear A writing system, with the Northwest Caucasian linguistic type, represented by the modern languages such as Abkhaz or Ubykh, with their rich consonant systems, including "labialized/non-labialized", "palatalized/non-palatalized", and some other contrasts (see, for instance, PACKARD 1974: 115). As far as the case system is concerned, the North(-West) Caucasian type appears to be a better candidate than, for instance, other Caucasian language families, i.e., Kartvelian and East Caucasian (Nakh-Daghestan) with their rich case systems. Although the problem of the reconstruction of the Proto-Northwest Caucasian case system is far from its solution,[19] one might cautiously assume that it counted no more than four cases, absolutive, ergative, and one or two oblique cases (including genitive?) (for details, see KUMAXOV 1989: 30f.; STAROSTIN 2007; ALEKSEEV 2003; CHIRIKBA, forthcoming) – which matches well with systems attested in the Balkan linguistic area. The frequent nominative-accusative syncretism in Balkan languages may be due to the conflict of two different alignment strategies, nominative-accusative and absolutive-ergative.

The similarity of the Balkan and Northwest Caucasian types – however different they might appear in several respects – is not confined to the system of case oppositions. Another remarkable feature is the Balkan postpositional article that can be compared to prefixed or suffixed articles in the Northwest Caucasian languages.

Much remains unclear about possible sources of other evolutionary types. Is the total collapse of case systems in most modern Romance and Germanic languages due to the influence of some substrate language without cases (but – paying heed to the most remarkable features of this linguistic area – perhaps with the category of article, periphrastic causatives and labile verbs),[20] or was it merely an internal development due, in particular, to phonetic changes in auslaut and the subsequent erosion of inflexion? Both explanations are possible. But, at least, as in the case of Balkan languages, the former hypothesis allows us to make some plausible assumptions about the type of a hypothetical substrate language or languages which had been in contact with early Indo-Europeans many centuries before their documented history started.

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[18] Quoted in NICHOLS 2007: 791, n. 6.
[19] I am thankful to Viacheslav Chirikba for discussing with me the Proto-Northwest Caucasian reconstruction. Of course all responsibility for possible mistakes and misinterpretations is mine.
[20] On the hypothetical Northern European linguistic substrate see, in particular, SCHRIJVER 1997; 2001; BAMMESBERGER & VENNEMANN 2004.

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