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Typology and Historical Linguistics

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4.1 Introduction

4.1.1 Language Typology and Historical Linguistics: The Early Days

The development of language typology and historical linguistics has been deeply intertwined from the very beginning of linguistic research. When scholars got interested in comparing languages, thereby opening the way to the scientific study of language, their attention was caught both by the evidence for genetic relatedness among languages and language families, and by similarities and contrasts in language structure. The birth certificate of historical-comparative linguistics is conventionally considered Sir William Jones's (1786) communication at the Asiatic Society; this brought about a sudden growth of comparative studies, leading to the publication of Franz Bopp's (1816) book *Über das Conjugationssystem der Sanskritsprache in Vergleichung mit jenem der griechischen, lateinischen, persischen, und germanischen Sprache*, traditionally considered the starting point of modern comparative-historical linguistics. Also at the juncture between the eighteenth and the nineteenth centuries, brothers August and Friedrich von Schlegel noted some structural diversity among Indo-European (IE) languages, later extending their observations to other language families. The resulting tripartite classification of language types provided the foundation for morphological typology and received its most renowned treatment in Wilhelm von Humboldt's (1836) book, *Über die Verschiedenheit des menschlichen Sprachbaues und ihren Einfluss auf die geistige Entwicklung des Menschengeschlechts*.

Such a parallel development could not exist without frequent exchanges between the two disciplines, and sometimes even overlap. Indeed, early typologists generally viewed language types as being instantiated in language families, and accordingly thought that languages belonging to the same family also belonged to the same type. Following this view, languages could not change type during their history. It must further be

remarked that historical-comparative linguistics started out as being comparative, rather than historical, and for some decades concentrated on the assessment of language relatedness, rather than on language change and language reconstruction, the latter remaining unexplored on account of early consideration of Sanskrit as the language from which the other IE languages evolved.

Also, early linguists used to attach different qualitative evaluations to languages and language types. They viewed the fusional type of ancient Indo-Aryan as instantiating the highest possible level of perfection, with other language types located on different qualitative levels with respect to it. When the idea of language change as possible evolution or decay was brought into the picture, possible typological change was incorporated into it. This led to the evolutionary model worked out by August Schleicher, who thought that in prehistory Pre-Indo-European (PIE) had evolved, passing through an isolating stage, followed by an agglutinating one, and reaching perfection when it became fusional. Even though this model of evolution was implemented without being based on actual research on language typology, it still demonstrates an early interest of comparative-historical linguistics in typology.

A real theory of language change was worked out only starting with research on sound laws by the Neogrammarians. It was the rise of their awareness of the historical dimension of language, along with the discovery that Sanskrit could not be the language from which other languages originated and that accordingly PIE needed to be reconstructed, that made historical-comparative linguistics really historical, and no longer only comparative. Two major foci emerged at this time: in the first place, earlier historical stages, including prehistoric ones, were reconstructed based on the extant results of language change. In the second place, language change itself, including possible patterns and triggering factors, started to be increasingly studied, with research on language variation later also entering into the picture.

4.1.2 Language Typology and Historical Linguistics: Areas of Contact and Mutual Influence

Areas of contact and possible interaction between language typology and historical linguistics are numerous. Often, papers devoted to this topic virtually limit the discussion to possible contributions of language typology to language reconstruction (see, e.g., Comrie 1993; Shields 2011). This seems to imply that the task of historical linguistics basically consists in reconstruction. However, this is certainly not the case, as the study of language change is equally basic, if not more relevant to historical linguistics. To be sure, language reconstruction and language change are not two separate matters, as in order to reconstruct an older language stage one must have a good understanding of the changes that have occurred between that stage and the

one that provides the data for reconstruction. The difference is more a matter of focusing on either issue. However, as I will show, focusing one's attention either on reconstruction or on language change has different implications as to the way in which the two fields of language typology and historical linguistics can relate to each other.

Interest in language reconstruction remains prominent especially within Indo-European linguistics, also extending to other language families. Typological considerations have been a frequent and nowadays common feature of attempts to reconstruct proto-languages. In section 4.2 I discuss some major trends of research and proposed reconstructions worked out in the framework of assumptions regarding typological plausibility of proto-languages. I argue that such reconstructions are not without problems, as they are often based on too strong assumptions regarding proto-languages (e.g. typological consistency). In this field, contributions have been basically moving in one direction only, that is, from language typology to historical-comparative linguistics.

Research focused on patterns of language change does not rely on such a rich tradition of contacts with language typology. However, there are many ways in which the study of language change and language typology can relate to each other: one can, for example, focus on the typology of changes, as does Hock (2010), or one can test assumptions concerning what are possible or impossible (or at least unlikely) changes, as well as beliefs in the directionality of language change. In fact, as I show in section 4.3, it is in this field that historical linguistics can reciprocate the contribution received from language typology and show whether and to what extent generalizations are warranted.

4.2 Language Typology and Language Reconstruction

The field in which language typology can offer the most important contribution to historical linguistics is usually considered to be language reconstruction. In an important paper of 1993, Bernard Comrie pointed out that 'we can ask of a particular reconstructed language whether it is consistent with what we believe to be constraints on human languages, and if the answer is negative then we should seriously reconsider the reconstruction' (1993: 76). However, things are not as simple as one could expect, as Comrie also shows in his discussion. For example, the fact that clicks are virtually unknown outside Khoisan languages does not prevent the reconstruction of such phonemes for Proto-Khoisan, given their presence in all Khoisan languages (Comrie 1993: 76 and §4.2.4 of this chapter). In this section, I briefly survey some well-known attempts at PIE reconstruction based on considerations from language typology, and discuss their limits (§§4.2.1–4.2.3). Then I illustrate some issues arising from reconstruction in a selection of other language

families (§4.2.4). I argue that many such issues are raised by the way in which language relatedness can be assessed and by reliance on the genealogical tree model, and show that areal typology and research on contact-induced change can help disentangle especially intricate situations (§4.2.5).

4.2.1 Typological Plausibility

Typological plausibility has been advocated as a basic parameter for the acceptability of language reconstruction ever since at least Jakobson's famous remark at the 1958 Congress of Linguists, when the scholar pointed out that the reconstructed system of PIE stops had no typological parallels in any known language, thus paving the way for the rise of the glottalic theory (OJakobson 1958; Gamkrelidze and Ivanov 1995; Hopper 1973). In fact, in the traditional reconstruction the three featured series of PIE stops include three phonemes, distinct in terms of phonation (Comrie 1993: 8) between voiceless, voiced and voiced aspirate. So, for example, bilabial phonemes are phonetically reconstructed as in (1).

- (1) *[p] *[b] *[b^h]

Jakobson pointed out some major shortcomings of this reconstruction. In the first place, apparently no known language has voiced aspirates without also having voiceless aspirates. In the second place, precisely bilabials raise another problem, connected with the infrequency of the voiced stop *[b]. According to Jakobson, if one bilabial stop is missing in the phoneme inventory of a language, it is likely to be the voiceless one. In addition, PIE roots cannot contain two voiced stops, another typologically unlikely feature. Notably, none of the IE languages reflects such a system: in particular, languages that preserve aspirated stops either have only voiceless aspirates, as Ancient Greek in (2), or have both voiced and voiceless aspirates, as Indo-Aryan in (3).

- (2) Ancient Greek stops: /p/ /b/ /p^h/

- (3) Old Indo-Aryan stops: /p/ /p^h/ /b/ /b^h/

Following the 'new look', PIE stops are viewed as being realized as including a voiceless stop with an aspirated allophone corresponding to the voiceless stop of the traditional reconstruction, a glottalized stop corresponding to the voiced stop, and a voiced (or murmured) stop also with an aspirated allophone corresponding to the voiced aspirate stop of the traditional reconstruction. This is summarized in (4).

- (4) a. Traditional PIE
 *[p] *[b] *[b^h]
 b. New look
 *[p]/[p^h] *[p'] *[bʌ]/[b^hʌ]

From a typological point of view, the ‘new look’ has several advantages. In the first place, the presence of a glottalized stop in the place of the voiced one explains both the rarity of the bilabial formerly voiced, and now glottalized stop, and the constraint on root structure. Indeed, in phonological systems that feature glottalized stops, [pʰ] is often missing, due to its articulation, and it is also often the case that two glottalized stops cannot occur in close sequence.

The glottalic reconstruction has been variously criticized. I will not dwell longer on contrasting opinions of supporters and opponents among Indo-Europeanists (a summary can be found in Shields 2011), but note that shortly after its appearance the allegedly unlikely system traditionally reconstructed for PIE has been detected in Bario Kelabit, an Austronesian language (Blust 2006), and later also in Kwa languages (see below). Comrie (1993: 82) points out that the traditional definition of voiced aspirates as one of the types of phonation of the PIE stop system is inaccurate, or even ‘phonetically untenable’, as languages with so-called voiced aspirates realize such phonemes as breathy voiced stops. Having stated this, he argues that the main reason for viewing the reconstructed system as typologically inadequate lies in the fact that Indo-Aryan languages, which feature breathy voiced stops, either also have voiceless aspirates, as Sanskrit did (cf. (3)), or have lost aspiration altogether, as in the case of Sinhala. In addition, Panjabi has simplified the system by losing breathy voiced stops, hence becoming similar to Ancient Greek (cf. (2)), and Malayalam, a Dravidian language which has borrowed heavily from Indo-Aryan, features a variant in which breathy voiced stops have not been preserved, and have merged either with plain voiced stops or with voiceless aspirates. Hence, as Comrie (1993: 83–4) points out, the data in support of the idea that a language cannot have breathy voiced stops without also having voiceless aspirates are areally biased, as all languages which are normally cited belong to a restricted area well known for extensive contact. In fact, breathy voiced stops also exist in other areas, and it may well be the case that some Kwa languages, most notably Mbatto, feature the three series of the typologically unlikely system of PIE, as shown in Stewart (1989).

4.2.2 Typological Consistency

Also in the 1970s, typological consistency has been advocated in the field of syntax, starting with the pioneering work of W. P. Lehmann. In his *Proto-Indo-European Syntax* (1974), Lehmann offered a complete syntactic reconstruction of PIE, based on the implicational universals in Greenberg ([1963] 1966). Lehmann strived to show that PIE was a consistent SOV language, similar to Turkish or Japanese, sometimes disregarding comparative evidence. His book raised an animated debate

and various reactions, including proposals for completely different reconstructions (see, e.g., Friedrich 1975), which point towards a flaw in the methodology. Indeed, the attempt to reconstruct a rigid type disregarding the range of word order variation attested in the ancient Indo-European languages, or focusing on only a selection of languages, led to contrasting results, and proved to be misleading. Equally misleading was the assumption that the proto-language could necessarily be reconstructed as typologically consistent. This and other shortcomings are discussed in Jeffers (1976), who points out, among other things, that Lehmann's criteria for considering certain structures archaic or innovative is often circular (basically, constructions are considered archaic if they support the reconstruction which is largely assumed a priori; see further Shields 2011; Clackson 2007: 158). To sum up, one can subscribe to Hopper's claim that notions such as 'dominant', 'basic' and 'underlying' in reference to word order typology are often adduced to 'eliminate troublesome alternances' and sustain uniformity 'in the face of manifest intralanguage variation' (Hopper 2008: 253). Comparative evidence offers little support for the reconstruction of PIE as a strict OV language, such as Japanese, as many of the ancient IE languages have at best a slight tendency towards OV, and even Hittite, the most strictly OV, has an alternative and comparatively frequent verb-initial order. (See Luraghi 1995 and Bauer 2011 on initial verbs in Hittite. An occurrence of a VO clause following an OV one from Cuneiform Luvian, another IE language of the Anatolian group, can be found in example (10), in which the imperative *aiuddu* is in sentence-initial position and hosts P2 clitics.)

The fact that PIE was not reconstructed as a free word and constituent order language, but rather forced into a rigid type, provides an example of how low reliance on comparative evidence ends up in missing typologically important facts about PIE sentence structure. Indeed, very well-known features of word order in ancient IE languages, such as the existence of P2 clitics (first described in Wackernagel's classic paper of 1892) or the occurrence of discontinuous constituents, had to be rediscovered in other, more exotic languages before raising the attention of typologists. So properties of non-configurational languages, such as those which became popular after Hale (1983) and include free word order, discontinuous constituents and free use of null anaphora (Baker 2001), had long been known to students of Vedic Sanskrit or Ancient Greek (Luraghi 2010). Consider examples (5) and (6) from Jirwarli, a now extinct Pama-Nyugan language.

- (5) Jirwarli
Kutharra-rru **ngunha** *ngurnta-inha* **jiluru.**
 two-now that lie-PRES egg(NOM)
 'Now those two eggs are lying there.' (Austin 1993)

- (6) *Bijbulaka-ardi angkurla maya-nya-ardi kurrubardi-rni-warndi kuwarrku.*
 jump-HAB NEG hit-2SG-HAB boomerang-FOC-INST nothing
 ‘It jumps up and you can’t hit (it) with a boomerang or anything.’
 (Pensalfini 2004: 24)

In (5) the verb splits the NP *kutharra-rru ngunha jiluru* ‘those two eggs’, which is discontinuous, while in (6) the subject of the first sentence becomes the direct object of the second but is not overtly realized in either sentence. Discontinuous constituents are well known and widely studied in the classical languages; an example is (7).

- (7) Ancient Greek
ál̥la apodeksámenos megála érga
 other:ACC.PL.N perform:PART.AOR.NOM.SG great:ACC.PL.N deed:ACC.PL.N
 ‘Having performed other great deeds.’ (Herodotus, *Histories* 1.59)

In example (7) the verb splits the NP *ál̥la megála érga* ‘other great deeds’, which is discontinuous. (This frequent pattern is called a type of hyperbaton [transposition]; for a full account of different types of split constituent in Greek, see Devine and Stephens 2000).

Null arguments, and in particular null referential direct objects, are perhaps less studied but have received attention in recent years (see, e.g., Luraghi 1997; Haug 2012; Keydana and Luraghi 2012). Both a null subject and a null object occur in (8).

- (8) Vedic Sanskrit
sadyó jātá óṣadhībhir vavakṣe
 just born.PART.PF.NOM.SG.M plant(F).INST.PL grow.PF.MID.3SG
yádi vārdhanti prasvò ghr̥tēna
 when increase.PRES.3PL shoot(F).NOM.PL clarified.butter(N).INST.SG
 ‘Just born, (Agni) has grown by means of the plants, when the shoots increase (him) with clarified butter.’ (RV 3.5.8ab)

Example (8) contains two sentences. In the first, the subject is not overtly expressed. It becomes the direct object of the second sentence, again without being overtly expressed. This example provides a parallel to example (6) from Jirwarli.

As languages such as Sanskrit or Greek also have a long attested history, along with extensive sources available for most stages, features connected with configurationality, with free word order or with any other issue can be studied diachronically in much detail. However, the one-way relation between typology and comparative historical linguistics favoured by the methodology implemented in Lehmann (1974) initially prevented comparative-historical linguists to play a more interactive role in singling out typologically relevant generalizations. Remarkably, some of the implicational universals initially viewed as relevant in Greenberg (1966) proved not to hold on closer scrutiny. In particular, Dryer (1992) has shown that

there is no significant correlation between the position of A(djective) and N(oun) and the position of V(erb) and O(bject), as the order NA predominates in all types of language. The geographical distribution highlighted in Dryer's papers points to a concentration of co-occurring AN and OV orders in languages of Eurasia. Note further that several IE languages of Europe feature the orders AN and VO. Following Lehmann's approach, the occurrence of the AN order in such languages provided evidence for reconstructing a strict OV order in PIE: an unwarranted generalization results in circularity.

In addition, word and constituent order has been shown to be an areal feature, rather than be distinctive of genetic affiliation. Nichols (1995) surveyed twenty-six features and found that 'word order was the only one to emerge as areal and not genetic on all counts performed' (Nichols 2003: 304). Dixon (1997: 21) is even more explicit and writes: '[s]imilarity in constituent order is ... the least useful feature to try to reconstruct for a proto-language'. In fact, the stability of word order in time is connected with its consistency within a linguistic area (§4.2.5), and in such a framework reconstruction raises issues regarding contacts in prehistoric times, about which we presently have very little knowledge.

4.2.3 Binarism in PIE

A complete reconstruction of PIE based on typological assumptions, including the glottalic theory, OV word order and an active alignment system, was published in Russian by Thomas Gamkrelidze and Vjaceslav V. Ivanov in 1984 as *Indoevropaeskij jazyk i indoevropaitsi*. The English translation, *Indo-European and the Indo-Europeans*, appeared only ten years later, in 1995. The most important trademark of PIE grammar is the assumption of 'binarism' in PIE grammatical structure (1995: 233). Binarism is a basic feature of active languages, as described in Klimov (1974, 1977; see Nichols 1992: 8–12 for a brief survey), and implies the existence of active and inactive nouns, and of active and stative verbs. Gamkrelidze and Ivanov set out to illustrate binarism in PIE nouns by highlighting the existence of doublets for case endings; for example, they consider the genitive endings *-os and *-on, which are traditionally considered the forms of the singular and of the plural respectively, as being number indifferent and connected with classes of nouns. The two-gender system reconstructed for Pre-Indo-European, based on Brugmann's (1891) observation concerning the comparatively recent rise of the feminine gender (see Luraghi 2011), lends itself quite easily to an interpretation that views PIE nouns as divided into active and inactive. This had been pointed out originally by Meillet (1921: 228), who called attention to pairs such as Greek *húdor* (neuter)/ Latin *aqua* (feminine) 'water', or Greek *pûr* (neuter)/ Latin *ignis* (masculine) 'fire', and argued that their existence attests to an opposition between

inactive and active entities. The neuter gender was characteristic of inactive entities, while nouns denoting active entities are either masculine or feminine in the IE languages and belonged to the animate gender in the PIE two-gender system.

The PIE gender system has been a popular topic of research in recent years, in the framework of growing interest for the typology of noun classification systems. For example, Matasović (2004) regards his own reconstruction of the PIE gender system as having virtually no typological parallel. According to Matasović, as a large number of inanimate nouns are in the animate classes (i.e. they are either masculine or feminine) in the IE languages, animacy was a secondary feature for gender assignment. He considers the mass/count distinction as primary and shows that mass nouns are indeed mostly neuter. He further indicates Ket, a Yeniseyan language, as the closest parallel to PIE. Ket has a three-gender system, with a masculine and a feminine which also contain nouns of objects and abstractions, while the neuter gender contains only nouns of masses and fluids, that is, non-count nouns. Note, however, that according to Matasović (2004), the reconstructed system of PIE, unlike Ket, also included abstract nouns in the non-count class, which later split out and provided the basis for the feminine gender.

Based on the typology of gender systems, Luraghi (2011) showed that a three-gender system with one gender for animate and inanimate count nouns, one for abstract nouns and one for mass nouns is very unlikely. She points to the existence of numerous neuter count nouns in the IE languages and argues that the feminine gender arose out of a split within the animate gender, giving a semantic motivation to an otherwise morphologically motivated class of nouns formed with the suffix *-h₂*. The presence of inanimate count nouns in all three genders is more easily understandable in the framework of the existence of active and inactive nouns, as outlined above. Note, however, that some of Gamkrelidze and Ivanov's assumptions in this respect are not supported by the data. For example, they thought that the two genitive endings mentioned above were in origin connected with active (**-os*) and inactive (**-om*) possessors, but comparative evidence does not support this reconstruction.

Binarism is also instantiated in the two series of verbal endings, active (**-mi*) and perfect (**-Ha*), which, according to the authors, are reflected in the two conjugations, in *-mi* and in *-hi*, of the Hittite verb. (Note that the origin of the *-hi* conjugation is still a matter of debate, and its connection with the PIE perfect is far from being generally accepted; see, among others, Jasanoff 2003.) Gamkrelidze and Ivanov view the PIE middle as having originated from the perfect with the initial function of indicating version (1995: 289): the auto-benefactive function of the middle (as in Skr. *yajati* 'he performs a sacrifice for someone else' vs. *yajate* 'he performs a sacrifice for himself') is thus seen as having primacy over other

functions of the middle voice. This is a rather controversial reconstruction that does not rest on comparative evidence, as the auto-benefactive function of the middle voice, well known from Sanskrit and Ancient Greek, is absent from other languages, such as Hittite (see Luraghi 2012), which is in general one of the languages most valued by Gamkrelidze and Ivanov for their reconstruction.

4.2.4 Language Typology and Reconstruction Outside Indo-European

Language reconstruction is not a practice limited to Indo-European linguistics even though no other language family has raised such a massive effort aimed at reconstruction as the IE language family did in the course of the nineteenth century. Some language families have been proposed based on typological similarity, rather than on the actual existence of sets of phonological correspondences, as is the case for Uralo-Altaic. Even the Altaic grouping has sometimes been stretched to include Korean and in some versions Japanese, which are best regarded as isolate. This has been a widespread tendency in the past, still deriving from early assumptions concerning overlap between language families and language types, and is now being abandoned. Even though such a practice is incorrect, it reflects difficulties in establishing relations among languages: this is the first problem that language reconstruction must face when dealing with less known language families. I return to this issue later on in this section and in section 4.2.5.

To be sure, there are numerous reasons why language reconstruction outside the IE family has never experienced similar progress, and these are not limited to the assessment of language relatedness. In the first place, most language families simply do not rely on such massive attestations and on a long written tradition as the IE languages do. In addition, time depth is sometimes much greater, and the proto-language to be reconstructed represents a stage much farther back in time. This is the case for Afroasiatic, a language family with extensive written sources that reach back to an even earlier age than the IE languages: however rich the attestations, reconstructible pairs of cognates are limited and remain highly controversial (Gensler 2014: 195; Ehret 1995).

Recent reconstructions of proto-languages outside the IE domain vary as to the extent to which they rely on assumptions from language typology. The reconstruction of Proto-Khoisan phonology, for example, has been framed with typological considerations concerning its plausibility. This is not surprising, given the existence in these languages of such marginal phonemes as clicks (cf. §4.2.1). In this vein, Güldemann (2013: 35) points out that 'there exist systematic implicational relations between certain features due to inherent properties of the relevant sounds' and argues that certain phonemes can occur only in the case that other specific phonemes

do. According to Güldemann, Khoisan languages turn out to have very little in common, except for clicks. However, the areal distribution of clicks is such that they fail to single out Khoisan languages as opposed to other non-Khoisan African languages (Güldemann 2013: 36): this means that one cannot even be so confident as to their reconstruction, as it is not clear what proto-language one can reconstruct.

Getting back to Afroasiatic, Gensler (2014) offers a typologically informed discussion of the often assumed development of Proto-Afroasiatic (PAA) **d* > Egyptian **ʕ*. This change in phonation involves pharyngealization of a stop, which is hard to explain, and implies assuming an early Egyptian stage at which the phoneme /ʕ/ did not exist, following a PAA stage at which the same phoneme did exist. Gensler (2014: 197) points out that as a phoneme realized as **ʕ* is reconstructed for PAA, it would be more likely to assume that in some cases Egyptian /ʕ/ derives from the PAA /ʕ/, rather than only from PAA /d/. As Gensler argues, such a reconstruction would turn out in a ‘scenario whereby a non-pharyngeal sound merges with an existing pharyngeal’, that is, an easier to accept option in terms of pharyngeogenesis than ‘a scenario where a voiced pharyngeal, ex nihilo, enters a system which previously had none, ... and frees [one] from having to posit the strange absence of **ʕ* in earliest Egyptian, despite the highly probable existence of **ʕ* in pre-Egyptian Afroasiatic’.

A typologically informed morphosyntactic reconstruction is worked out for Proto-Carib in several works by Spike Gildea (e.g. Gildea 1998, 2000). Being concerned with morphosyntax, rather than with phonology, Gildea cannot rely on sound correspondences. In order to make sense of possible comparanda, he grounds his reconstruction in grammaticalization theory. As Kuteva and Heine (2008: 215) put it, grammaticalization theory ‘has as its goal to describe the way grammatical forms arise and develop through space and time, and to explain why they are structured the way they are’. In order to achieve this goal, grammaticalization theory makes assumptions based on typological comparison. It follows, then, that Gildea’s enterprise is intimately connected with typological plausibility. Moreover, theories of language change play a crucial role here. According to Gildea (2000: vii–viii):

within grammaticalization theory – much of which was originally based on attested historical change – linguists have identified many consistent patterns in the evolution of grammar ... This allows us to identify likely cognates and, from among these, to identify which is the likely source and which are innovative forms. We have also learned a great deal about the mechanisms of change, including reanalysis, analogical extension, and contact-induced grammatical change, and we can now recognize the sorts of modern grammatical patterns indicative of each process. This makes it possible for us to approach comparative data with real hope of reconstructing the sources of the great diversity seen in modern languages.

Gildea (1998) approaches the reconstruction of the verbal system, or alignment type, in Proto-Carib. Being confronted with no less than seven different systems in the modern languages, he sets out to assess the relative degree of innovation of grammatical forms, based on knowledge from grammaticalization processes, reanalysis and analogy, and concludes reconstructing an inverse alignment type for Proto-Carib.

Among other things, Gildea (2000: vii) mentions ‘the almost universal directionality from independent, concrete lexical item to bound, abstract grammatical morpheme’ as one of the factors that enable language reconstruction based on grammaticalization theory. As I discuss in section 4.3.3 the assumption of unidirectionality has recently been challenged within research on (de)grammaticalization, and knowledge about attested changes is of crucial importance for assessing the existence and the possibility of less frequent and typologically less likely changes.

4.2.5 Language Relatedness and Areal Typology

As I pointed out in section 4.2.4, according to Güldemann (2013) the phonological reconstruction of Proto-Khoisan is especially complex, among other reasons because of the areal distribution of phonemes, by which the Khoisan languages do not stand out as a group as opposed to other, non-Khoisan neighbouring languages. This is just a hint [as/at] to the importance of language contact, and its possible consequences on our understanding of language relatedness. In the early days of historical comparative linguistics, language contact played virtually no role in reconstruction. To be sure, it was clear that the individual IE languages had borrowed some features from neighbouring languages, as the Indo-Aryan retroflex stops, but the relative time shallowness of the IE language family along with the wealth of historical records allowed linguists to have a high degree of confidence in their reconstruction and in the emerging pattern of language relatedness, which they imagined as the progressive splitting out of languages from groups and subgroups, thus devising the familiar family tree model.

Late nineteenth-century research on language variation had already called into question the viability of such a rigid model. Moreover, research on areal linguistics, starting with the by now classic example of the Balkan languages, made it clear that languages in intensive contact situations tend to develop common features that go beyond genetic affiliation, and linguistic areas tend to display a high density of certain typological features, possibly much less frequent as average distribution over the world (clicks in African languages are a case in point). Typological convergence, along with lexical borrowing, tends in the long run to give a similar cast to previously unrelated languages. Based on evidence from Australian languages, for which we have virtually no written documentation and no

insight into earlier stages, Dixon (1997: 97) proposes an alternative model of language evolution and suggests that ‘the beginning of a language family is likely to lie in the type of linguistic situation that is produced by convergence within a linguistic area.’ According to Dixon, most periods are characterized by ‘equilibrium’, which favours convergence, whereby languages do not split repeatedly from one another, as the family tree model suggests: much to the contrary, this could only be the result of ‘punctuation’, brought about by major historical events. Thus, periods of equilibrium give rise to similarity which cannot be interpreted as genealogical relatedness (see further Aikhenvald and Dixon 2001).

Remarkably, even comparative linguists working on ancient IE languages had already ventured to propose such a scenario. For example, Pisani (1971: xxix, my translation) points out that ‘even though presently High and Low German can be considered as forming a unit with respect to English, this was not the case at the end of the first millennium, when Saxon in Northern Germany and Anglo-Saxon formed a similar unit with respect to German varieties’ and concludes that PIE was ‘simply a linguistic stage that we can reach through comparison, following many other stages, in which divergences among varieties may have been bigger or even fundamental’. In such a perspective, a proto-language is created by close convergence among languages at a certain stage in time, and from the way it comes about internal variation must be viewed as one of its trademarks, something that many comparative linguists find hard to implement into their theory of reconstruction (the debate on the reconstruction of word order is an example; see §4.2.2).

Dixon’s notions of equilibrium and punctuation have been variously criticized. Watkins (2001), based on evidence from the Anatolian linguistic area, shows that the development of a number of common features, concerning both phonology and morphosyntax, among IE and non-IE languages of ancient Anatolia happened in a limited time span, contrary to Dixon’s theory (and, as Watkins correctly notes, this is also the case for other IE linguistic areas, such as the Balkans). Ross (2001: 153–4) points out that contact-induced change and genealogical divergence are not mutually exclusive. Very important in this respect is the issue of borrowability: what can be borrowed and in what way? As contact among languages of ancient Anatolia also sheds light on types of contact-induced changes, I return to this issue in section 4.3.2.

Research on linguistic areas is one of the fields in which historical linguists can make a major contribution to language typology: as I have already noted, some otherwise infrequent features can occur with high frequency in linguistic areas, and it is knowledge of the historical development in well-documented areas that can help us single out areal features in less-documented areas. Knowledge about attested language changes can provide us with insights concerning our understanding of language relatedness, and the likelihood of different models for proto-languages for

language families whose history is unknown: changing subgrouping of German varieties illustrated above is an example. Moreover, as I discuss in section 4.3, language contact can also explain the occurrence of otherwise unlikely developments and shed light on the directionality of possible changes.

4.3 Language Typology and Language Change

Bybee (1988: 351) writes that ‘if we are to explain similarities across languages, then we must explain what factors govern the establishment of one set of grammatical conventions rather than another’. Following this view, explanation of linguistic phenomena and explanations underlying language universals can only be found in diachrony. To be sure, linguists of different persuasions may not all agree with this claim. Kiparsky (2008: 52), for example, speaks of ‘principled separation’, a sort of division of labour between synchronic and historical explanation: while the former captures absolute universals, the latter can explain typological generalizations. However, most typologists tend to agree with Bybee and conceive of diachrony as the proper dimension in which one should look for explanations. Inasmuch as language typology is concerned with language universals, diachrony acquires a crucial importance, and the understanding of language change plays a major role for language typology. As I will show in this section, the methodology by which historical linguists try to make sense of the data they use to study language change differs greatly from the methodology used by typologists. The integration of both methodologies could bring major advances, not only in historical linguistics but also in language typology.

In this section I address types of language change, including universal tendencies (§4.3.1), contact-induced change and borrowability (§4.3.2) and the issue of directionality in language change (§4.3.3).

4.3.1 A Typology of Language Changes

Hock (2010) proposes a typology of language changes. He points out that ‘sound changes can be classified in terms of whether they are possible or likely (“natural”), or impossible or unlikely (“unnatural”) ... sound changes can be classified in terms of their expected regularity, with dissimilation, metathesis, and distant assimilation singled out as normally irregular’. This view explains, for example, why the change /h/ > /s/ is frequent, as opposed to the unattested contrary change. Sound changes are subject to universal tendencies, among which Hock mentions ‘the Sonority Hierarchy, the tendency toward Open Syllables, and the Avoidance of Trimoraicity’. As an example of the implications brought about by the Sonority Hierarchy, whereby syllables preferably have

increasing sonority in the onset and decreasing sonority in the coda, Hock shows that 'if certain changes' introduce violations of the Hierarchy, they are repaired by other changes, such as the metathesis in (9).

(9) Proto-Iranian *čaxra*- 'wheel' > *čaxr* (apocope) > *čarx* (metathesis)

It must be noted that this tendency is by no means universal and that violations of the Sonority Scale not only exist but can also prove quite stable in time: so, for example, the disfavoured syllable onset /sk/ existed in Latin (*schola* 'school'), and they were 'regularized' through the addition of an epentetic vowel in some Romance languages (cf. Spanish *escuela*) but remained in others (Italian *scuola*).

Hock then discusses other types of change, including analogical change and change in word order. The latter type of change is strictly connected with typology, as word order change is discussed in the framework of Greenberg's (1966) universals (cf. §4.2.2). Hock ends his paper with a short survey of the effects of contact on language change. His conclusion is relevant for the present discussion: 'in all of these cases, it is contact that is responsible for typological change, and not the other way around. In fact, with the exception of certain phonological tendencies such as the Sonority Hierarchy, typology generally does not seem to play a major role in motivating linguistic change' (2010: 68).

4.3.2 Language-Induced Change

In the preceding parts of this chapter, I have already referred to the importance of language contact, both for research on historical linguistics and for language typology. As noted in section 4.2.5, language contact may explain otherwise 'unnatural' conditions, such as high density of certain typological rare features. They can even explain the rise of such rare features. For example, in her study of typological rarities Harris (2008: 65) includes among developments that led to the Georgian split case-marking system the '[d]evelopment of an evidential, probably as a result of areal pressure'. (Notably, evidentiality is a grammatical phenomenon known to diffuse via language contact, as shown in Aikhenvald 2004.)

Even irregularities in the observed directionality of language change can be explained as favoured by language contact. As an example, let us consider changes concerning morphological typology. The idea that change in morphological technique follows a precise direction is not new: already Schleicher proposed a theory by which PIE had passed through an isolating, then an agglutinating, and then a fusional stage, and that modern languages were decaying from what he viewed as the 'perfect' fusional type, and becoming increasingly analytical, i.e. isolating (see §4.1.1). In more recent times, such a cyclical evolution is captured, for example, by Whaley's (1997: 138) schema reproduced in in Figure 4.1.

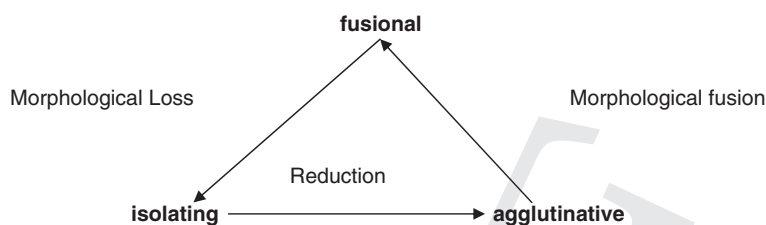


Figure 4.1 Directionality in morphological change

Whaley does not even consider the possibility that change goes in the contrary direction. Such a type of change, however, is attested. Examples are Armenian and Cappadocian Greek, both of which changed from the original fusional type to the agglutinative type under the pressure of neighbouring Turkic languages. The change from a fusional to an agglutinative type fits Thomason's (2003: 688) definition of contact-induced change as any linguistic change 'that would have been unlikely, or at least less likely, to occur outside a specific contact situation'. It also relates to the issue of directionality: I return on this important matter in section 4.3.3.

Contact-induced change raises the question of borrowability. According to Thomason (2001) virtually anything can be borrowed, even though known examples of language contact show that some items are borrowed less easily than other (bound morphemes as opposed to lexical items, for example; see Weinreich 1963). Limitations on borrowability are discussed in Curnow (2001) and Aikhenvald (2006), who argue that, in spite of the facilitating action of pre-existing structural similarities, various social factors are also at play, and 'the claim that only "typologically compatible" systems can influence each other is erroneous' (Aikhenvald 2006: 2-3). Recent studies on borrowability also indicate that some lexical items are less likely than others to be borrowed (see Wichmann and Wohlgemuth 2008; Haspelmath and Tadmor 2009). Within linguistic areas, especially in the domain of bound morphology, morphological borrowing may not result in the direct borrowing of affixes, but rather consist in the reinterpretation of an affix which already exists in the target language and takes over a function of an affix of the source language. As Weinreich (1963: 39) puts it:

If the bilingual identifies a morpheme or grammatical category of language A with one in language B, he may apply the B form in grammatical functions which he derives from the system of language A. What leads the bilingual to establish the interlingual equivalent of the morphemes or categories is either their **FORMAL SIMILARITY** or **A SIMILARITY IN PRE-EXISTING FUNCTIONS**.

Such a type of development is known from various linguistic areas. As an example, let us consider Anatolia in the second millennium BCE. Watkins

(2001) points to a number of common features of language of different genetic affiliation, including Indo-European (Anatolian), Semitic (Akkadian) and two isolates, Hattic and Hurrian (the latter related to Urartean, a language attested in the first millennium BCE in the Lake Van area in Eastern Anatolia). Among common features that characterize all or part of these languages, Watkins mentions split ergative alignment, and the almost obligatory usage of sentence-initial connectives and long chains of sentence-initial particles; he also points to developments in the phonological system of the Anatolian languages, including the retention of PIE laryngeals and change in phonation of stops.

Peculiarities in NP structure have also been shown to be due to contact. In several Anatolian languages, the inherited genitive has been replaced by denominal adjectives. This replacement was fully accomplished in Cuneiform Luvian (second millennium BCE), as shown in (10).

(10) Cuneiform Luvian

<i>zas=</i>	<i>pa=</i>	<i>ta</i>	<i>kuwatin</i>	<i>zammitatis</i>	^{NA4} <i>harati</i>
DEM.NOM	CONN	PTC	as	flour:NOM	grindstone:ABL
<i>auimmi</i>	<i>auiddu=</i>	<i>pa=</i>	<i>sta</i>	<i>malhassassis</i>	EN-as
come:PART.NOM	come:IMP.3SG	CONN	PTC	ritual:ADJ.NOM	lord:NOM
<i>haratnati</i>	<i>waskulimmati</i>				
offence:ABL	sinful:ABL				
'As this flour has come from the grindstone, so may the Lord of the ritual (i.e. the person for whom the ritual is performed) come from sinful offence.' (KBo 29.6 i 22-24)					

In (10) the NP *malhassassis* EN-as 'the Lord of the ritual' does not contain the genitive of the noun *malhass-* 'ritual', as this noun, in much the same way as all other Luvian nouns and pronouns, does not have a genitive form. The function of the genitive, here to encode a nominal modifier, is fulfilled by an adjective with the suffix *-assi-*. This suffix has the only function of supplying missing forms of genitives in noun inflection. The suffix has cognates in other IE languages, and derived adjectives can show a distribution similar to genitives in other languages as well, but crucially only in some of the Anatolian languages does the derived adjective systematically replace the genitive case (Luraghi 2008, forthcoming a). Stefanini (1969) suggests that substitution of adnominal genitives by adjectives in Luvian is due to the influence of a Hurrian construction called suffix copying. By suffix copying, genitive modifiers also take the case of the head noun they modify, as shown in (11).

(11) Hurrian

<i>eni(i)=n(a)=až(v)e=ne=da</i>	<i>šarri=ne=da</i>
god-ART.PL-GEN-ART.SG-DIR	king-ART.SG-DIR
'To the king of the gods.' (from Wilhelm 1995: 118)	

In (11) the genitive modifier bears not only number (plural article) and case (genitive) suffixes that indicate its function but also number (singular article) and case (directive) suffixes of the head noun. The second set of suffixes has the effect of creating agreement between the head noun and the modifier. Notably, Hurrian is an agglutinative language, while Luvian and other Anatolian languages are fusional. Luvian modifiers replicated the Hurrian construction with means appropriate for an IE language with fusional features: the use of a derivational suffix followed by an ending by which the adjective agrees in case and number with the head noun is in fact the closest parallel that a fusional language can offer for suffix copying (see Luraghi 1994).

Luraghi (1994, 2008) also suggests that another adnominal construction attested in Anatolian languages is the outcome of contact with Hurrian. This construction is case attraction, as shown in (12).

- (12) Hittite¹
- | | | | | | |
|------------|------------|---------------|---------------|----------------------------------|-------------------|
| <i>nu=</i> | <i>kan</i> | <i>GAL-in</i> | <i>arunan</i> | <i>^PKu(ma)rbiyaza</i> | <i>É-irza ...</i> |
| CONN | PTC | big:ACC | sea:ACC | K.:ABL | house:ABL |
- uwater*
bring:PRT.3PL
'They brought the big sea out of Kumarbi's house.' (StBoT 14.11 16–17)

In (12) the modifier *^PKu(ma)rbiyaza* 'of god Kumarbi' agrees in case and number with the head noun *É-irza* 'house(abl)'. Notably, Hittite has a genitive case, and constructions such as the one in (12) often alternate with genitive constructions in copies of the same text. Case attraction constructions are comparatively recent in Hittite, as they are not attested in Old Hittite, and later copies of Old Hittite texts show instances of replacement of adnominal genitives by agreeing modifiers (Luraghi forthcoming a). Case attraction also occurs in Classical Armenian and has been explained by Vogt (1932) as being the result of contact with Georgian. In fact, Georgian also features suffix copying, in the same way as Hurrian. Hence Vogt's explanation (1932: 75, my translation):

In Georgian the case ending of the head noun ... is repeated after all modifiers, [including] noun phrases which already contain the expression of a case relation ... The difference ... is that Georgian allows cumulation of case endings whereas in Armenian the ending that marks the constituent forces away the ending that expresses the relation between head and modifier. Since the two languages have different [morphological] means, facts are not the same in detail.

Thus, both case attraction and replacement of genitives with adjectives are borrowings of suffix copying constructions from agglutinative to fusional languages: morphological typology explains different ways of achieving the same effect, namely agreement between a head noun and a nominal modifier.

Remarkably, however, extensive bilingualism among speakers of languages that feature different typological means can lead to typological change, as I have shown above: it is indeed Armenian that shows how a fusional language may develop into an agglutinative one due to language contact. Effects of contact phenomena on Anatolian and Armenian NPs reviewed above can teach us that the morphological type of a language has consequences for the way in which bound morphology can be borrowed: in the case in question, languages remained fusional and variously adapted a process typical of agglutinative morphology to the fusional type. (This is also addressed in Aikhenvald 2006.) However, later developments in Armenian indicate that type stability is not absolute, and that even a comparatively unlikely change, such as the change from the fusional to the agglutinative type, can be brought about by extensive contact. Thus, Hock's prediction (2010: 68) is borne out, as it is 'contact that is responsible for typological change' (see §4.3.1).

4.3.3 Language Change and (Uni)directionality

The issue of directionality in language change has been discussed especially in connection with grammaticalization. Several attempts at singling out relevant instances of the contrary process, degrammaticalization, have encountered strong hostility from proponents of unidirectionality (see Norde 2010 for a survey). In some cases, even admitted cases of degrammaticalization are discarded as irrelevant, as in Haspelmath (2004), even though, as pointed out in Norde (2010), ignoring or discrediting unwelcome evidence is obviously 'not at the top of anybody's hierarchy of epistemic goodness' (Lass 2000: 214). Luraghi (2005) argues that unidirectionality matters so much for certain scholars because 'the idea of finding exceptionless principles in language change appeals to many linguists, who wish to give a more "scientific" look to their discipline ... The claim that, no matter what the data say, change is unidirectional reminds one of the Neogrammarian's attitude toward the *Ausnahmslosigkeit der Lautgesetze* [lack of exceptions to sound laws], modelled after the *Ausnahmslosigkeit der Naturgesetze* [lack of exceptions to natural laws] which was then the trademark of biology.'

In fact, counterexamples to unidirectionality have been found and are well described, and include instances of degrammation, deinflectionalization and debonding (see Norde 2010 on this classification, and Luraghi 1998 for examples and discussion of deinflectionalization). As a result of an increasing volume of work on degrammaticalization over the last two decades this phenomenon has been promoted 'from a non-existent phenomenon to a generally recognized independent type of change' (Norde 2010). Needless to say, it is the accurate description of individual historical changes that has brought about this change of attitude, with the result that the effect that the existence of a specific type of change has been accepted in the framework of grammaticalization theory, which is of major

importance for language typology. I will not discuss further known instances of degrammaticalization here. Rather, I will concentrate on the directionality of semantic extension, another issue that is often discussed in typological work in order to explain existent polysemies and to predict possible or unlikely developments.

It is normally assumed that semantic change proceeds from concrete to abstract, and that space precedes other relations, for example in patterns of polysemies affecting semantic roles encoding. This is indeed confirmed by known changes: for example, the Latin preposition *ad* 'to', which indicated concrete spatial relations (direction and location) in Classical Latin, extended to more abstract relations, such as addressee and recipient in Vulgar Latin, and its cognates in most Romance languages have replaced the dative case, as shown in examples (13) and (14).

(13) Latin

suos obsides, quos Crasso dedissent
 POSS.3PL.ACC.PL hostage:ACC.PL REL.ACC.PL C.:DAT give:SBJV.PF.3PL
 'The hostages that they had given Crassus.' (Caes. G 3.8)

(14) Italian

Gli ostaggi che avevano dato a Crasso
 the hostages that they.had given to Crassus
 'The hostages that they had given Crassus.'

A frequent semantic extension of direction markers, such as the Latin preposition *ad* or English *to*, leads these morphemes to encode other abstract roles, such as purpose. This type of development has been reported from numerous languages of different genetic affiliations, as shown in the cross-linguistic survey in Rice and Kabata (2007), who summarize their findings as follows: 'the single most prevalent cohort sense of an ALLATIVE is to mark PURPOSE' (p. 472). Rice and Kabata's sample includes English, and among English prepositions those listed as allative are *to* and *for*. Both can indicate direction and purpose, so their pattern of polysemy supports the authors' claim. Rice and Kabata view semantic extension from concrete (spatial) meaning to more abstract meanings such as purpose as a grammaticalization process, in line with Heine, Claudi and Hünemeyer (1991). They explain their methodology as follows: 'Taking a cognitive/typological approach, we have developed a preliminary and multi-streamed implicational hierarchy of sense extension based on data from 44 genetically and areally diverse languages' (Rice and Kabata 2007: 452). They then survey some patterns of polysemy involving allative, purpose and other frequently related meanings, such as beneficiary and recipient (pp. 254–60). However, the diachrony of semantic extensions is stipulated rather than grounded in the analysis of actual data. Indeed, it is true that 'being most basic, physical space is the domain that spawns the most ... figurative extensions causing language change' (pp. 261–2), but

this does not per se rule out the possibility of semantic extension developing in the contrary direction. One does not need to look very far to find one such example, as I will show describing the diachrony of English *for*, French *pour* and cognate prepositions in Germanic and Romance languages.

As pointed out in Rice and Kabata (2007: 454–5), English *for* displays an array of meanings, including (their list) allative, duration, benefactive, perceptual target, experiencer, purpose and exchange. Let us focus on allative, benefactive and purpose, shown in examples (15)–(18) (from Rice and Kabata 2007: 455).

- (15) *She headed **for the exit**.*
- (16) *This book is **for you**.*
- (17) *Some soup **for dinner**.*
- (18) *He runs every day **for his health**.*

Cause/reason can also be added to this list, as in example (19).

- (19) *The thief ran away **for fear** of being arrested.*

Rice and Kabata (2007: 453) remark that ‘there has been relatively little contemporary research charting the synchronic breadth and historical depth’ of this preposition. However, historical information is available and easily accessible. A perusal of Bosworth and Toller ([1898] 1921) indicates that the preposition *for* in Old English already indicated purpose, cause/reason, exchange and beneficiary, as Modern English *for*, but it did not indicate allative (Luraghi forthcoming b). Based on a corpus study, Robbins (1998) shows that the allative meaning came in quite late, only in the fifteenth century, at the stage of Early Modern English. Notably, the same development is attested for Romance prepositions that derive from Latin *pro* ‘for’.

Latin *pro* indicated exchange, beneficiary and cause/reason. Its meaning extended to purpose only in Vulgar Latin, and is common in the early Romance languages, in which corresponding prepositions mostly encode purpose and reason. In Old French, only purpose and reason are indicated among earliest meanings in reference works (see, among others, Godefroy 1982). For example, in *Les Voyage de Charlemagne*, a text from the twelfth century, there are nineteen occurrences of *pur*, twelve of which express purpose, as in (20), while seven indicate reason, as in (21) (see Luraghi 2005 for references).

- (20) Old French

Sire,	eissistes	de	France	pur	nus	femmes	ocire?
Sire	you.left	from	France	for	us	women	kill

‘Sire, did you leave France in order to kill us women?’ (*Voyage de Charlemagne* 711)

- (21) *son mautalents li ad li resi tut perdurent pur l'*
 her misdeeds her has the king all forgiven for the
amur del sepulcr que il ad aurent
 love of.the sepulcher that he had worshipped
 'The king forgave all her misdeeds, out of love for the sepulcher
 that he had adored.' (*Voyage de Charlemagne* 869–70)

Furthermore, with verbs of motion, we have expressions such as *courir por*, *aller por* 'go, run (look) for', as in example (22) from the twelfth–thirteenth century.

- (22) Old French full stops?
Cort por son fils.
 he.runs for his son
 'He runs look for his son.' (*Troie* 15462).

In Old Italian, the cognate preposition *per* does not display an allative meaning in the earliest texts. A corpus analysis of Old Italian texts (Budassi 2014) reveals that the earliest occurrence of *per* with an allative meaning is from the thirteenth–fourteenth century.

- (23) Old Italian
Cesare mandò Currio per vivanda in Cicilia ... e
 Caesar sent Currio for food in Cilicia and
partio per Brandizio.
 left for Brundisium
 'Caesar sent Currio look for food in Cilicia, and left for Brundisium.'
 (*L'Intelligenza*)

While the first recorded occurrence of *partir pour* in French dates to 1763 (Wartburg 1958), the Franco-Italian literature attests to earlier usage of the expression. Marco Polo's 1298 book *Il Milione*, written originally in a mixture of *langue d'oïl* (Old French) and Tuscan, contains the occurrence in (24).

- (24) Old French/Tuscan
e se partent pour Arabi e por maintes autres
 and REFL they.leave for Arabia and for many other
pars
 sides
 'And they leave for Arabia and several other places.' (M. Polo, *Il Milione*, CLXXXIII, 5. Fr. 1116)

Cognate prepositions in the Romance languages attest to the same pattern of polysemy as Italian *per* and French *pour*, as do Germanic cognates of *for* (see Luraghi forthcoming-b). Careful analysis of early texts, along with knowledge of the Latin data, shows that the allative meaning developed at a later time than the purpose meaning and most

likely out of it, possibly through bridging contexts such as that in (22). Interestingly, this change has occurred in all Romance languages, but it is not clear whether we have to reckon with a single development, or whether the change occurred separately in each Romance language, as allative is not a common development of Vulgar Latin *pro*. Note further that the Modern Greek preposition *já* presently has a meaning very similar to the meaning of French *pour* and English *for*, and can indicate beneficiary, purpose, cause/reason and allative, but in Byzantine Greek allative was not among its meanings (see Luraghi forthcoming b), so the semantic development it has undergone is likely to be the same as that undergone by *pour* and *for*.

What can this story teach us? In fact, it is quite rich with implications. In the first place, it attests to a rare semantic extension from a more abstract (purpose) to a more concrete (allative) meaning, and shows that unidirectionality is not absolute. In the second place, the geographical distribution of this development might also point towards an areal phenomenon, as it affects a number of languages of Europe (see Luraghi forthcoming b). In order to assess the extent to which this unlikely change may be contact-induced, or may affect purpose markers independently of contact, more research on non-European languages is needed, which crucially must not be based on the bias that spatial relations necessarily have to precede more abstract ones. If one does not question this unwarranted assumption (and most likely many others), one ends up missing existing developments, which can tell us more about the way in which languages encode specific meanings and ultimately shed light on the possible construal of specific concepts.

4.4 Conclusion

Commenting on the position of linguists who argue against the unidirectionality hypothesis, Haspelmath (2004: 36) writes:

In the writings of some of these linguists, one senses a frustration with theoreticians who make broad sweeping claims but do not back them up with solid and careful historical linguistic work. Clearly, once one starts asking larger questions, there is the danger that one pays less attention to the data and more attention to the ideas, but there is also the opposite danger of missing the generalizations and the big picture because one sees too many details.

This is a common attitude among typologists, and rightly so: typologists work with large samples of languages and cannot possibly master them all. However, the fact that some linguistic phenomena are less frequent than others is in itself a matter that should be explained, rather than ignored. This is exactly where historical linguistics can be a resource for language

typology: often, we simply do not know enough on a certain issue in order to make generalizations, because we do not have in-depth descriptions of a large enough number of languages that carefully describe all of its attested facets. Rather than risk being distracted by too many details, it would be more profitable if typologists collaborated with historical linguists. This would require, in particular, a radical change in the attitude of many historical linguists towards language description. Indeed, many available and valuable descriptions of historical stages of languages and their developments are not meant for communication outside the restricted circle of specialists, and this has the obvious consequence that they are ignored by the vast majority of linguists. Thus, a mutual effort should be made in order for both communities to adapt their practices and enhance collaboration.

Another important issue that has emerged from the discussion in this paper is the great relevance of language contact both for language typology and for historical linguistics. On the one hand, language contact can explain the rise of typological rarities, unexpected directionality in typological change and otherwise hardly observed developments. On the other hand, typical features of linguistic areas can shed light on language relatedness, and on the likelihood of language reconstruction. It appears, then, not only that typologists and historical linguists could profit from mutual expertise through enhanced collaboration and communication, but also that awareness of findings from research on language variation is also imperative for scholars from both fields.

Notes

1. Following transliteration conventions for Hittite, superscript represent determiners, and capital letters represent Sumerian ideograms.

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