

THE ORIGIN AND INITIAL DEVELOPMENT OF HUMAN LANGUAGE

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1. *From communication through signs to speech to language*

It is generally agreed that early humans as well as other animals communicated millions of years ago. Communication among humans may have been carried out initially through gestures, then through speech consisting of oral utterances, which led eventually to word-like sequences. But as Corballis states in his exemplary book «the invention of autonomous speech may have been as recent as 50,000 years ago» (2002, p. 218). Various reasons have been given for its invention. Among these is the assumption of «a genetic change that promoted the fully modern brain in Africa around 50,000 years ago» (Klein 2002, pp. 24-25). One result was «the development of fully modern language» (p. 146). While admitting that the change cannot be proved, Klein finds it the most plausible explanation, and in his conclusion states that «the last key neural change promoted the modern capacity for rapidly spoken phonemic language» (2002, p. 271). Liberman in several publications assumes a number of bases for that development, as in his book on its origins: «convergence of factors: automatization, cognitive ability, encoding», with the addition that «the particular form that human language has taken appears to be the result of the evolution of the human supralaryngeal vocal apparatus» (1975, p. 181).

Whatever the reasons for the capacity, it provided a great advantage to *Homo sapiens* by permitting freedom of the hands during communication. The dual advantages of ready communication and freedom from interference with manual activities may have contributed to the capabilities that led

to the expansion and migrations of *Homo sapiens* from Africa, which is assumed from this time. These developments have been thoroughly treated by Corballis and the extensive list of scholars in his references (2002, pp. 221-246). Accepting them, I am here concerned with the type of language spoken between 50,000 and 20,000 years ago, that is, the period during which utterances came to be developed from segments of speech to language comparable to that in use among many speakers today.

2. *Earlier stages of language families that can be reconstructed*

We take the twenty thousand years ago as the time when human language can be reconstructed by available methods. It is often suggested that the comparative method permits reconstruction for six thousand years, and by some linguists for more than that. Since the Anatolian and Greek dialects of the Indo-European family have written records from the second millennium before our era, and Vedic Sanskrit has comparable materials through oral tradition we can reconstruct Proto-Indo-European to at least 5000 B.C. With the method of internal reconstruction and the use of residues we can reconstruct Pre-Indo-European to at least 8000 B.C. (Lehmann 2002). While the evidence for reconstruction of earlier languages through use of these methods, such as Proto-Nostratic and Proto-Eurasiatic, have not yet been supported by evidence comparable to that for reconstruction of Pre-Indo-European, we assume that in time the comparative method, the method of internal reconstruction and the use of residues will lead to their reconstruction much as it has for Proto- and Pre-Indo-European. Dogopolsky has provided a basic presentation (1998).

Adrados has treated the earlier stages of Indo-European in detail, as in his essay on the structure of pre-flexional Indo-European (1972) and in his comprehensive publications with colleagues (1996, with copious references). A brief illustration of the early lexical items and their extension in the course of time may be given with forms of the root **wer-* 'to turn, bend'. The simple root is found in Lithuanian *vér-ti* 'to thread'. But many more forms are found with extensions, as may be exemplified by the following forms that are made up of bases with endings: bases with *-p-*, Lithuanian *weřp-ti*; with *-b-*, Gothic *wairpan* 'to throw'; with *-t-*, Gothic *wairþan* 'to become'; with *-d-*, Gothic *wraton* 'to wander'; with *-g-*, Latin *vergere* 'to bow'; with *-gh-* Lith. *veřžti* 'to hem in'. These may have been

formed in Pre-Indo-European or earlier. Such bases may in turn be further modified, such as the following with *-ey-*: *-ey-p-*, as in *wre-ey-p-*, Old High German *rīben* 'to turn'; *-ey-t-*, as in Old English *wriðan* 'to wind'; *-ey-k-*, as in Old English *wriġian* 'to stretch'; *ey-g-*, as in Gothic *wraiks* 'crooked'. As a further type of extension an *-n-* infix may have been added, as in Lithuanian *riñkti* 'to pick up' (cf. Pokorny 1959, pp. 1152-1162). These provide evidence for a further period of derivation, so that we may place them in Proto-Indo-European. The elements without extensions may be reconstructed as early as the twelfth millennium B.C. Extensions were added in succeeding millennia, first simple consonants, then syllabic suffixes, with these later extended by simple consonants or an *n*-infix. In time inflectional endings were also added.

Pokorny lists twelve other roots of the same form, some of which may actually have been equivalent to **wer-* 'to turn, bend', though modified with extensions that led to a somewhat different meaning, such as **wer-* 'bind, array, hang up', as in Albanian *vjer* 'to hang up', **wer-* 'close, cover, protect', as in Sanskrit *vṛñóti* 'to surround', **wer-* 'to tear up' as in Sanskrit *vṛhāti* 'to tear out'. From analysis of the roots in Pokorny 1959 we may assume that the language around 20,000 B.C. consisted of several hundred verbal roots, some used also as nouns, and a similar number of nominal roots, accompanied by a smaller set of particles. The root structure of Proto-Uralic, presumably in the fifth millennium B.C., was syllabic, most of the pattern CVC(C)V, and that of Proto-Altaiic was comparable (cf. Dezsö 1998-1999, pp. 4-7).

Similar analyses might be made of the written records in Semitic and Egyptian, which are even earlier than those of the Indo-European languages. While their proto-languages are acknowledged not to be as well determined as is the early stage of Indo-European, they form the basis of Afro-Asiatic. It, Indo-European, and the reconstructed forms of Altaic, Dravidian, Kartvelian and Uralic form the basis for Nostratic (Illich-Svitych 1971-84). A compact account of it is readily available (Dolgopolsky 1999). A comparable reconstruction, Eurasiatic, is based on a somewhat different group of reconstructed languages: Indo-European, Uralic-Yukaghir, Altaic, Korean-Japanese-Ainu, Gilyak, Chukotian and Eskimo-Aleut; it treats Afro-Asiatic as a sister language (Greenberg 2000). The lexical elements reconstructed by Dolgopolsky for Nostratic are chiefly bisyllabic (1998, pp. 20-95).

While the elements of the proto-languages that have been reconstructed are almost entirely lexical and phonological, they illustrate that when specialists in each family achieve reconstructions comparable to those of Indo-European, the language determined on the basis of them can scarcely be later than 20,000 years ago. We may assume that the elements of its lexicon were either monosyllabic or bisyllabic. We reconstruct its syntax as that of a Class language.

In treating the languages at this time and their developments from 50,000 to 20,000 years ago, it is important to keep in mind the relationship between a language and the culture of its speakers. I assume that every human language is adequate for the speakers of its culture, that is, there are no «primitive» languages that are inadequate for communication among the members of a given culture. As any examination of texts in English from the eighth century indicates, the language at that time did not include capabilities for expressing the data of the current biological and physical sciences, not to mention modern industries. Moreover, it did not include possible grammatical devices, such as evidentiality, which is found in many languages spoken in the jungles of South America. Its uses are extensively discussed and exemplified by Aikhenvald in her grammar of Tariana (2003). The surroundings in which Old English was spoken did not foster the source of information to be grammatically coded for its origin. Expressions like *Mary told me that* were adequate to provide evidence for their reliability. Similar statements about Old English might be made concerning other devices found in languages of other cultures, such as the labeling of nouns and verbs in classes in the production of sentences, as in the Bantu languages. Old English reflects the culture of an incipient state with a relatively large lexicon for warfare and religion.

In accordance with these views we assume that the languages spoken between 50,000 and 20,000 corresponded to the culture of hunter-gatherers. The lexicons consisted chiefly of words for the animals, plants, outdoor activities in accordance with the way of life in whatever area they were located. Julius Caesar describes briefly the life of the Germans in the century before our era in Book 5 of his *Gallic War*. There was no organized state; families or somewhat larger groups lived in independent housing; their way of life was simple with men devoted to hunting as well as warfare, and women to gathering. We may assume that their lexicon like that of other hunter-gathering groups was small, an assumption supported by the massive importation of words from Latin and Greek from the beginnings of our era.

Besides determining their lexicons at any period, we classify languages by types on the basis of their grammatical and semantic structures. Such classification has been highly useful, both for understanding the interrelationships among languages as well as their historical development.

3. *Types of languages*

Language typology is illuminating, both for understanding the structure of a given language and for interpreting its development. The content-based typology developed by Soviet linguists is especially useful; it takes into account semantic as well as syntactic-morphological features. A readily available presentation was provided by Klimov in addition to his more detailed treatments (1972). According to contentive typology there are four types of languages: Class, Active/Animate, Ergative, Nominative/Accusative. I here use the simple designations Active and Accusative.

The characteristic grammatical feature of Class and Active languages is agreement; accordingly they are referred to as Agreement Languages. In accordance with it nouns and verbs are selected to produce sentences in accordance with semantic or content comparability; in the process they may be accompanied by morphological markers. Because they are less well-known than the Government Languages they will be described briefly below.

The characteristic grammatical feature of Ergative and Accusative languages is government; accordingly they are referred to as Government Languages. Transitivity is the major characteristic in the production of sentences. In accordance with it verbs and adpositions govern nouns, signaling the basic relationships in sentences. The forms of subjects vary in the two sub-types; subjects of intransitive verbs in ergative languages have the same form as objects of transitive verbs. Other features of these two types do not concern us here.

4. *Active languages*

Active languages have two major classes of nouns and of verbs: active/animate and stative/inanimate; a third sub-class of verbs concerns involuntary actions or states, such as the Latin verbs *libet* 'it is pleasant' and *nin-*

guit 'it is snowing'. Sentences are made up either of active subjects and verbs, or of inactive subjects and verbs; they typically have SOV order. They may have two objects, a nearer and a farther; the nearer object indicates the direction of an action, the farther its circumstances, e.g. *Mary by car to town is going*. Verbs have aspect, not tense. They also may have centrifugal or centripetal force, a feature known as version (Lehmann 2000). A somewhat comparable use in English may be illustrated by sentences having forms of *drive* with or without objects, as in *She drove the car, She drove*. But in Active languages a trigger like the object *the car* is not required to indicate centrifugal force. Nominal elements are distinguished for inalienable and alienable possession, e.g. *her hand, her car*. Adjectival relationships are expressed chiefly by forms of stative verbs. Inflection is not extensive, especially in the stative category of nouns and verbs. Relationships in the sentence may be indicated by means of the third class of elements, particles. Two examples from Kamaiurá may serve to illustrate the type; in the analysis REL is an abbreviation for relational prefix and NF for nominal function; the prefix *o-* changes to *w-* before unstressed vowels. The particles indicate agreement between the nominal and the verbal element; there is no transitivity. The translations are those given by the author of the article (Seki 1990, pág. 379).

(1)	<i>o-yar-a</i>	<i>o-moŋatu</i>	<i>w-etymakaŋ-a</i>	<i>we'yj</i>
	3.REL-canoe-NF	3-repair	3.REL-leg-NF	3-scratch
	He repaired his canoe.		He scratches his leg.	

5. Class languages

A variety of classification systems are found, such as classifiers for nouns, numeral classifiers as in Japanese and Chinese, possessive classifiers, predicate classifiers (cf. Aikhenvald 2000). I here deal with noun classes in the so-called Class languages.

Class languages, such as the Bantu, have many different sets of nouns. In contrast with the animate and inanimate classes of Active languages there may be distinct classes for humans and other animates, for plants, for inanimates, among other such sets, as illustrated below. The classifiers have grammatical and discourse functions (Aikhenvald 2000; Senft 1996, pp. 1-23). They vary in number among languages. Senft determined 87 for Kilivila (1996, p. 32). Here I am concerned with their function to indicate related elements in sentences.

Twenty-three such classes have been reconstructed for Proto-Bantu (Demuth 2000, p. 275); when two numerals are given below they indicate that a distinction is made between singular and plural.

Noun class	Meanings
1 / 2	humans, other animates
1a / 2a	kinship terms, proper names
3 / 4	trees; plants, non-paired body parts, other inanimates
5 / 6	fruits, paired body parts, natural phenomena
6	liquid masses
7 / 8	manner
9 / 10	animals, inanimates
11	long thin objects, abstract nouns
12 / 13	diminutives
14	abstract nouns, mass nouns
15	infinitive
16/17/18	locatives (near, remote, inside)
19	diminutive
20/22	augmentive (Diminutive)
21/23	augmentive pejorative

In sentences the prefix of the head noun determines that of its modifiers, pronouns and the verb, as in the following Sesotho sentence where *bá* indicates an animate noun while *di/tsé* indicate an inanimate object. The prefix *bá* also indicates a relationship between a set of boys and finding; similarly the two further particles connect the last two words (Demuth 2000, p. 273).

- (2) Ba-shányana bá-ne bá-fúmáné di-perekisi tsé-monáte
 boy those find peaches good
 Those boys found some tasty peaches.

The number of classes has been reduced in many Bantu languages of today, increased in others, such as Baniwa with 42 and a similarly large number in Tariana (Aikhenvald 2000, pp. 232-238). Comparative studies to provide information on the losses in many languages remain to be carried out. Among examples, Sesotho has only the classes from 1 to 10, 14 and 15 (Demuth 2000, p. 274). Demuth also cites the results of a study by Suzman of 2-year-old Zulu-speaking children; «the high frequency classes are 1a (humans and relatives), 5 (the Zulu 'default' class), and 9 (things)». De-

muth concludes that «we find some motivation for the existence of ‘human’ as opposed to ‘non-human’ classes» (2000, pp. 286-287).

The reduction, which is found also in other Bantu languages, is in accordance with the assumption of content-based typology that Class languages may develop to Active languages with the twofold distinction of animate : inanimate (cf. Klimov 1972). Active languages in turn may change to Ergative or Accusative languages. Among examples is Proto-Indo-European, which has many characteristics of Active languages that indicate the active structure of Pre-Indo-European. Some of these characteristics have survived into attested Indo-European dialects, such as the classification of Hittite nouns into common (active) and neuter (inactive). Others are discussed in Lehmann 2002.

6. *Relationships between language types and the culture of their speakers*

As stated above, there are parallels between the type of language and the culture of its speakers. Hoijer has published impressive articles in support of the relationship, as in his article on the «cultural implications of some Navaho linguistic categories» (1951; republished in Hymes 1964, pp. 142-153). In it he treats «three broad speech patterns [that] emphasize movement and specify the nature, direction, and status of movement [to] almost every aspect of Navaho culture»... These he relates to the fact that «even today the Navaho are fundamentally a wandering, nomadic folk». Further, that «myths and legends reflect this emphasis most markedly, for both gods and culture heroes move restlessly from one holy place to the next» (Hymes 1964, p. 146). As an even more specific example of the relationship Hoijer pointed out that

in Apachean the dual is far more frequently used than the plural... This linguistic device is paralleled by the widespread custom, especially among the Indians of the Southwest, of conceiving of supernatural personalities as twins or otherwise paired individuals. Among the Navaho, almost every supernatural being and culture has a sibling or twin, and even such inanimate but sacred objects of ritual as the corn, the winds, thunder and lightning, and the firmament are rarely mentioned except in pairs (1948, p. 337; Hymes 1964, p. 456).

As a more general relationship I view the development of the Accusative type, most with SVO order, in all the major languages of the world. I

assume they have developed in this way because it provides a single, straightforward pattern for the basic clause. Unlike Ergative languages the subject in Accusative languages has the same form, regardless whether the verb is transitive or intransitive. All the major languages, with the exception of Japanese, have been adopted by large numbers of native speakers of other languages, as English was by speakers of Celtic languages, thereupon Scandinavian languages, and speakers of French. Besides observing the straightforward order in sentences of Subject : Verb : Object, many of the major languages also mark each of these central elements distinctively, as by morphological means. Apparently the speakers who adopted one of the major languages of civilization found identification of subjects, verbs and objects by position advantageous, so that in time SVO order predominated.

Similarly, the languages of earlier periods that were spoken by small and often isolated groups of speakers developed in accordance with their cultural activities. Westphal's introduction to Synman's grammar of the !Xū (Bushman) language may provide some insight into uses of language before the days of literacy (1970, pp. iii-iv). The language is Active. Observers have had great difficulty in determining its phonemic structure, for

no two Bushmen could easily be found who would pronounce the same word in the same way... It was only in the winter months... when water was scarce and pools began to dry [that] groups of 50-100 Bushmen could be found together and it was during this time and this time only that there was any chance of a standardization of speech taking place. For the rest of the year any such standardization could take place only within the smallest family groups consisting of father, mother and two or three children (1970, p. iii).

Social conditions in earlier periods differ from area to area and from time to time, but the situation of distinct families in distinct households corresponds strikingly to Julius Caesar's description of the life of the Germans in the century before our era.

In accounting for the use of Class languages or of Active languages like !Xū we may assume the advantage of marking comparable items for speakers who may have only occasional contact with one another. As another example of a device found in a limited number of languages, I have noted above that evidentiality may well have been grammaticized in languages spoken in jungles, where providing explicitly the basis of information is crucial, whether by visual observation, by hearing, or by reports of others.

In somewhat the same way the marking of a term in a distinctive class would aid readier interpretation among speakers with somewhat different phonological systems.

Whether we relate the four types of languages to the culture of their speakers, it is clear from the history of languages that Class languages developed to Active languages. It is also clear from the history of languages like the Indo-European that Active languages developed to Ergative or Accusative languages, not the reverse development.

In accordance with these observations I propose in this article that the earliest form of languages 50,000 to 20,000 years ago included elements that correspond to the markers of classes in Class languages. Full demonstration would require examination of all Class languages, an undertaking that can be fulfilled only in the future. Here evidence is given from Bantu with relatively few classes as well as from Kilivila with numerous classes.

7. *The languages spoken before 20,000 years ago were comparable to class languages*

In accordance with the development of language types it is clear that the languages spoken before 20,000 were comparable to Class languages. That is to say, utterances consisted of elements produced in sequence that referred to items in general groupings comparable to the later classes. I assume that the classificatory particles found in many languages are reflexes of these. I further assume that we may derive information about the earlier languages by examining those that include a large number of classificatory particles, especially Class languages. Among these is Kilivila, in which consultants produced seventy-two items, most of which are bisyllabic (Senft 1996, pp. 74-80).

It is worth note in view of Dolgopolsky's statement that «scores of Nostriatic words for cutting» can be reconstructed to observe that among the seventy-two Kilivila classifiers three refer to «cutting»: *bubu* 'cut across', *giwi* 'cut' and *bubwa* 'cut off' as well as two for «compartment»: *kabisi* and *liku*, and also others for *pila* 'part', *buda* 'group', *luba* and *mmwa* 'bundle', *kapwa* 'parcel', *kabulu* 'sector', *yulai* 'bundle of four things'. Some further such items refer to such distinct elements as *deli* 'cluster', *guba* 'bundle/taro', *gula* 'heap', *gum* 'bit', *kabolu* 'point', *kasa* 'row', *notu* 'kneaded, dot', *munu* 'corner/garden', *sipu* 'sheaf', *suya* and *wela* 'batch/fish', *O* 'bas-

ketful of yams'. That is to say, a third of the Kilivila particles refer to classes in contrast with those referring to items like *bwa* 'tree', *duya* 'door', *gudi* 'child', *kada* 'road'. It seems clear that the notion of cutting that was prominent in Class languages was similarly of importance in Nostratic and presumably in the earlier languages as well.

Among the classifiers for items the two most frequent in responses elicited by Senft were *kwe* 'thing' and *ke* 'wood'; the next three were *kada* 'road', followed by *na2* 'animals' and *pila* 'part' (Senft 1996, p. 77). The verb-like particles were less frequent, such as *notu* 'kneaded' with fewer than half as many as *kada*, followed by *bubu* 'cut across' with fewer still. We then assume sentences made up of noun-like elements, for which I here use Kilivila classifiers, such as:

- (3) udi to «the *child* is male/a *boy*»
 kwaila kumla «the *clay pot* is in the *earth oven*»

Similarly, we may propose comparable Nostratic sentences, using items reconstructed by Dolgopolsky (1998): (! here indicates an epiglottal voiced approximant; V indicates an unspecified vowel)

- (4) !ogul !iri «the *child* is a *boy*»
 gahV pata «the *reeds* are in the *basket*»

Utterances in the languages before 20,000 B.C. may have been comparable to these. Words could be arranged with one or more others. The relationships among them would have been determined by their semantic context.

8. Evidence from pidgins

Pidgins may provide insights into the early development of language. The following is an example of «very early Hawaiian Pidgin English as produced by speakers born in Japan» (Bickerton 1981, p. 9):

- (5) sore-kara kech shite kara pul ap
 When he had caught it, he pulled it up

Sore-kara is a common Japanese expression meaning 'thereupon' consisting of two elements meaning 'that' and 'from'. The content words *kech*,