

ROMAN STOPA

THE GENETIC UNITY OF AFRICAN LANGUAGES

As we know, in many branches of science the progress is being done on the way of special or partial researches, which slowly only, after they have attained some satisfactory material and after they have reached the adequate precision, can afford the solid basis for a synthetic survey. Some similar course of procedure may be also observed in African studies. After a long period of collecting materials and detailed descriptions of African languages there appeared synthetic works that grasped the whole groups or language families; they began to compare the characteristic features of separate groups and, after some similar notions have been detected, they tried to explain their origin, i. e. to establish the mutual connexions of the respective languages. Thus, African linguistics fixed the four clearly determined linguistic groups. Here they are:

- I. The Hottentot-Bushman group (Khoi, Khoisan);
- II. The Sudan group;
- III. The Bantu;
- IV. The Hamito-Semitic group.

Some African scholars are of the opinion that a special group of Nilotic should be separated, most of them however, consider that in order to get some clearer view on the relations of African languages it would be better to treat some Nilotic languages with the Sudanese group and the rest of them with Hamito-Semitic.

Of course, such a sketch approach does not comprise all African languages, first of all it cannot contain the so-called „Splitter-sprachen“. Nevertheless to explain the structure of these languages (their number is about 14) is a matter of a secondary im-

portance, when we have to establish the relationship of about 700 languages of quite distinctly determined features.

We give here some of the most important peculiarities of the above mentioned groups.

The I. and II. ones can be treated jointly. Their main characteristics are:

1. Monosyllabic basis, i. e. most of the words of the basic vocabulary (some 700 to 750 roots) contain one syllable.
2. The use of intonation or pitch for distinguishing words (the so-called Semantic Tone).
3. Absence of grammatical gender and of all inflections (Hottentot is an exception to some degree).
4. Position of the Genitive; the possessor precedes the thing possessed.

The chief peculiarities of the III. group (Bantu) are:

1. Most roots of the so-called Ur-Bantu are bisyllabic.
2. There are only traces of Semantic Tone; stress is more important instead.
3. Absence of grammatical gender; classification of nouns and the alliterative concord; inflection chiefly by means of prefixes.
4. The position of the genitive differs from that usual in the Sudan and Hottentot-Bushman groups; the thing possessed always comes first in Bantu.

The characteristics of the IV. group (Hamito-Semitic) are:

1. Most roots are bi- and tri-syllabic (triliteral roots or „tri-radicalism“ in Semitic).
2. Traces of Semantic Tone (Hausa has been classified as chado-hamitic and it shows a well developed intonation in the grammatical as well as in semantic function); word-stress seems to be of more importance.
3. Grammatical gender and a fully developed system of inflections.
4. The position of the genitive is the same as in Bantu (the possessor follows the thing possessed), but the order of words in the sentence is somewhat different; the verb usually precedes the subject.

The first pioneer work in comparative linguistics of African languages was W. H. I. Bleek's *A Comparative Grammar of*

South African Languages, Cape Town, London 1862—1869. In whatever way we estimate the value of that comparative study to-day the fact, however, that he compared the linguistic data of clicking with those of nonclicking languages, viz. Bushman and Hottentot with Bantu, rather did some harm to this work (Johnston). At any rate it had not been adequately appreciated. This was due to two unfavourable circumstances; on the one hand there are considerable differences in the structure of these language groups (in any case greater than between Khoisan, i. e. Hottentot and Bushman, and Sudanic), on the other neither Bushman and Hottentot nor Bantu had been properly worked out at that time so as to allow some successful comparative study. Nevertheless, what is to be stressed here, these are not only his merits to have undertaken the ungrateful task of studying one of the smallest and the most primitive groups of people, but also to have influenced his family with enthusiasm for such a study. His sister. L. C. Lloyd and his daughter D. F. Bleek devoted their lives to collecting ethnological and linguistic materials dealing with this unfortunate vanishing tribe of Bushman.

The Sudan group was worked out by D. Westermann *Die Sudansprachen*, Hamburg 1911.

The linguist who is considered to be the father of comparative linguistics of African languages was C. Meinhof. In applying the methods of Indoeuropean he, at the beginning, restricted his comparative study to Bantu and fixed the features and the boundaries of this language group. His fundamental respective works are *Grundzüge einer vergleichenden Grammatik der Bantusprachen*, Berlin 1906 and *Grundriss einer Lautlehre der Bantusprachen*, Berlin 1910.

The same linguist tried to grasp the main features of Hamitic in the work *Die Sprachen der Hamiten*, Hamburg 1912. Finally we owe so far the best comparative work on Semitic to C. Brockelmann *Grundriss der vergleichenden Grammatik der semitischen Sprachen*, Berlin I. 1908, and II. 1913.

Now, as to the comparison of two groups of languages we have such a comparative work on the groups Khoisan and Bantu in the above mentioned work of W. H. I. Bleek *A Comparative Grammar of South African Languages*. My work *Bushman and Hottentot*

among the Isolating Languages of Africa, „Rocznik Orientalistyczny“, v. XVII. Kraków, 1953 treats jointly the groups Khoisan and Kwa, the subgroup of Sudan.

D. Westermann established undoubtedly the genetic relationship between West Sudanic languages and Bantu, s. *Die westlichen Sudansprachen und ihre Beziehungen zum Bantu*, Berlin 1927.

As to the affinity of Sudan with Hamitic we have the opinion of Leo Reinisch who maintained that in principle there is not any difference between Sudan and Hamitic.

In the above mentioned work on Hamitic Meinhof suggested some relationship between Sudan, Bantu and Hamitic when he said: „Ich bin sogar zu der Überzeugung gekommen, dass die Entstehung der Bantusprachen sich am einfachsten so erklärt, dass eine dem Ful ähnliche Sprache als Herrensprache unter Nigritiern auftrat und sich nigritisches Sprachgut assimilierte“.

Finally we owe to Marcel Cohen in his *Essai comparatif sur le vocabulaire et la phonétique du chamito-sémitique*, Paris 1947 the decisive evidence that Hamitic and Semitic are genetically akin, i. e. that they derive from a common linguistic stock.

We may still add here that Leo Reinisch tried to detect some common elements linking Nilotic languages with the Hamitic ones.

Now let us go over to the problem of the genetic union of all African linguistic groups. If I am not mistaken, the first one who investigated it was again Leo Reinisch in the work *Die genetische Einheit afrikanischer Sprachen und ihre Beziehungen zum Teda*. The best expert on Hamitic and a linguist who was well informed in other linguistic groups of Africa noticed, in course of his comparative researches on Sudan and Hamitic, so many striking resemblances that he advanced the thesis of the relationship of all African language groups. He tried to derive them from the Sudan language Teda, which met quite a strong resistance amongst almost all africanists who could not agree with the idea of Teda being the most primitive, something like a source for all the later development of African linguistic groups. They pointed out different advanced notions of Teda, e. g. grammatical gender which Teda shares, like Kanuri and the whole subgroup of Central Sudan, with Hamitic as an unsurmountable obstacle to such an assumption.

The second tentative research in this direction was done by Lilius Homburger in the work *Les noms égyptiens des parties du corps dans les langues négro-africaines*, Paris 1928. Her main work however, as to the problem of genetic unity of all African language groups, is *Les Langues négro-africaines*, Paris 1914 and its English translation *The Negro-African Languages*, London 1949. In the preface to the last named work she writes: „The object of the book is not to give scientific information to advanced African linguists but to allow all interested in languages to realize the peculiar features of the Negro-African group and to understand why, before 1913, the differences were considered to indicate distinct origins. When I had recognized their fundamental unity it was some years before the fact was generally acknowledged out of France“. Here we may add that we fully appreciate this part of her opinion of the mutual relations of African languages. We cannot however, agree, to the second part of it, i. e. to the assumption that it was Egyptian that formed the original source of the further development of all African language groups.

Let us speak the author herself in order to see what is wrong in her point of view. At the end of the above mentioned preface she says: „African language specialists do not generally share my conviction that Negro-African languages represent varied modifications of Egyptian dialects, adopted at different periods by various peoples in touch with Egyptian civilization“. Finally, in the Conclusion of Chapter XII. (where she tries to demonstrate the Egyptian origin of Negro-African languages) she says: „Some groups have been in contact with Egyptians speaking dialects of the Coptic period (the Ewe and the Mande), hence the reduced form of words and superior cultural development; other groups are descended from the kindred of those who spoke an adulterated Egyptian in Herodotus' time (Bantu, Fula, Nubians, etc.).

One must take into account the possibility that Copts fleeing from Egypt (to remain heathen or to keep their Christian faith) may have mixed with people speaking what had once been an older form of Egyptian“.

Before we undertake the detailed discussion of the material presented by the author in chapter XII. of her in many respects

valuable book we may point to four very important deficiencies of her method:

1. She does not take into account anthropological data that, to some degree, determine the linguistic evolution.

2. She seems to ignore or at least to have not appreciated enough the archeological facts that very often give us a key to the prehistory not only to the evolution of culture but also to that of language.

3. The author, one of the most eminent disciples of Meillet, too often considers the development of linguistic forms from the point of view of decomposing language elements and very seldom admits the explanation by composing them. In this respect she comes to the statement that Ewe and Mande possess „the reduced form of words and superior cultural development“ than Bantu or Ful, which is evidently wrong. Of course, there are in one part of words in Ewe some reduced forms (monosyllabic root-words, i. e. primarily monosyllabic and secondarily monosyllabic or reduced root-words amount to 44% of the basic vocabulary) but in another there rules the process of composing monosyllabic root-words (bisyllabic words 34%, trisyllabic, -17%, 4- and 5-syllabic 5%). The level of cultural development of all linguistic groups will be discussed later on.

4. L. Homburger should have given us some systematic picture of linguistic development in Africa. In order to do so, she should have arranged all African language groups in a sequence of development. In our work *Powstanie mowy ludzkiej w oświeceniu antropologii i językoznawstwa*. („The origin of human speech in the light of anthropology and comparative linguistics“) ¹ we tried to avail ourselves of a few direct and some more, indirect indicators of such a developmental sequence in the evolution of language.

It will be of use to quote a longer passage from Chapter III Vocabulary and Syntax (Radical types. Vocalism, Affixes. Adverbs. Syntax) in order to see what is wrong in her interpretation of linguistic facts. She writes: In the Semitic and Hamitic languages

¹ S. „Przegląd Antropologiczny“, vol. XXII, Wrocław 1956, pp. 333—470.

of North Africa words are formed from groups of two or three consonants; each group expresses a general idea; the vowels *a, i, u* and a few affixes are added, to form nouns and the verbal forms needed to express the particular idea which the speaker wishes to communicate.

For instance, *k t b* suggests the action of writing, *kataba* „he wrote“, *iktaba* „he has caused to be written“, *kitab* „a book“ = „something written“, *katib* „a writer“, are grammatical forms and the same are used with all verbs, cf. *katala* „he killed“; *katil* „a murder“.

Negro-African words are formed to-day on totally different principles.

Every idiom has a few abstract words; pronouns, adverbs, particles (preposition and conjunctions), and numbers; the greater part of the vocabulary is formed of concrete words: verbs, nouns, adjectives.

Great importance has been attached by some authors to the question whether the verbs or the nouns represent the primitive forms. However, as the modern Negro-African languages represent a language which was not primitive, but had abstract words, nominal and verbal forms, it is not necessary to discuss the question of primitive forms of speech here.

Here we may insert the remark that the question „whether the verbs or the nouns represent the primitive forms“ is not important, however not, because „the modern Negro-African represent a language which was not primitive, but had abstract words, nominal and verbal forms“. The question of the priority of the verb or of the noun should not be discussed because grammatical categories are the invention of grammarians; originally there were words in any primitive language that were neither this nor that or they were rather both of them, some verb-nouns; they functioned once as a noun and another time as a verb like exclamation „fire!“ what means „there is a fire“ or „it is burning“. In Bushman this primitive stage of language evolution has been preserved in many instances, e. g. *S*₁ /*na*: „head“ or „to see, find, perceive, get. *S*₁ /*i* „fire, heat, burn“, *S*₁ /*ĩ* „to feel pain“; *S*₁ /*i*: „to flow“, *N*₁ /*ĩ*, /*ĩv* „blood, *N*₁ /*i*: „axe“, *N*₂ /*i* „scar, cut“, *S*₅ /*ā* „to eat, food“. Or, a sentence like this (*S*₄): *ha kje kj'em* /*kei* /*ka*

„he here love breast-with“, i. e. „he loves the girl“ or „his love to the girl“, or *kəpə kje 'vāũ /kχ'a /hou* „jackal here hare kill dance“, i. e. „the jackal kills the hare with rejoicing“ or „here is the killing of the hare by the delighted jackal“.

And here again we are obliged to give a hint at our article *Kritische Bemerkungen zu Skalička's Aufsatz „Über die sog. Primitiv-sprachen“*, where we endeavoured to establish the features of primitiveness of language. Some of these features will certainly suit some Negro-African languages such as Ewe and Mande, others will not, what means that „primitive“ is not an absolute term and that some Negro-African languages are to be determined as primitive in comparison with the rest of them.

However, let us continue to quote L. Homburger. „The earlier type of Negro-African radicals on the other hand is of considerable interest and we will try to let the reader form an opinion“.

The type *c v c'* is the normal type of simple radicals in Nilotic, Bantu, Fan, Hausa, Bornu, and Senegal languages, viz. in the majority of Negro-African languages; these form a group we call the „A“ group“.

Here we may add the remark that the statement is not adequate to Bantu or Hausa because Bantu root-words are mainly bisyllabic, s. Meinhof, *Grundzüge...* and Hausa has about 55% bisyllabic, 24% trisyllabic, 13% monosyllabic and 8% quadrisyllabic words of the basic vocabulary. Besides, it evokes already some doubt, if the author assumes the closed syllable *C + V + C* as an older stage of the form of words and not *C + V + (V)*; the child starts with monosyllables of an open type, these being the simplest form of language activity, e. g. *ma* for *mama*, *choo* imitating a noisy movement; the same form is to be observed in most primary interjections, e. g. Eng. *ah* [a:] „pain“, *o*, *oh* [ou] „astonishment“, *phew* [fju:] „disregard“, *lo* [lou] „look“!, Fr. *ah* [a:] „pain“, *eh* [e:] „astonishment“, *bah* [ba:] „contradiction“, Ewe: *ā* „bodily pain“, *ā* „sorrow“, *ké* „surprise“, *kò* „reproach“, *hò* „derision“, Zulu: *wó*: of disappointment, *hha* [há:] of surprise, *he* [hê:] „derision“, *we*[wê:] „take care“!, Hausa: *a*: „surprise“, *cá* „rising up or starting out“, *fà*: „sudden blazing up“, *hā*: „falling down“, *lá*: „astonishment“, *tó*: *tó*: „agreement“.

„The type *c v* is general in Mande, Eburneo-Dahomey, Nige-

rian, Banda, and Mangbetu dialects; we will designate them as the „B“ group.

Certain languages, such as the Zande and many languages of the Central Cameroons, Lake Chad, etc. cannot be classed in either of the preceding groups, because they present examples of both types, e. g. Zande *la* „to sleep“, *laba* „to whet“.

In the „A“ group some languages use the radical without affixes, or at least the radical alone can have a clear meaning, others form an „A¹“ group: their nouns must have an affix of some kind and their verbs are only used without affixes in the imperative 2nd person sing., e. g.:

Group A: Nubian *nob* „to cook“, *nal* „tooth“, Wolof *say* „to sow“, *say* „a log“, A¹: Bantu *bon-a* „see“, *m-bon-i* „pupil of the eye“; Ful. *'ar-u* „come“, *o'ar-i* „he came“, *'ar-de*, „to come“.

Group B: Bambara *so* „horse“, *ba* „river“, Banda *su* „hair“, Fon *hō* „hut“, *za* „to sweep“.

Some Africanists declare that group B represents the archaic forms, and that group A lengthened the said archaic forms by addition of primarily concrete words reduced to abstract affixes.

An example cited in support of this theory is Fon *de* = Ewe *a-de* „tongue“ = Choli *lep*, Nandi *nge-lyep*, definitive *nge-lyep-to*, but Chuana *mo-leme*, pl. *mi-leme*, Ful. *dem-gal* the consonants *p* and *m* are said to have been added independently to a root *de*.

We have already had occasion to cite Dinka *lyep*, pl. *lip* „tongue“, but *lyeme* (from *lip ne*) „the tongue“, pl. *lip ke*, *lyem dia* „my tongue“ which shows how *m = p* (radical) + *ne* definite singular article or + *n* affix of a genitive form shows that a form followed by a nasal alone survived in some languages; as words designating parts of the body are often used with the possessive pronouns, the nasal in *lem*-may represent either the article or the genitive particle“.

In order to explain fully the example we have to see what was the basis of naming the tongue and that of the most primitive form of its name in Bushman, Fon, Ewe etc. Thus, the tongue is for the Bushmen something that is in (the mouth), that can be extracted and put in or enter (the mouth); it rises, moves or makes, it eats and speaks. Here are the respective names: *S₁ /eři*, */eřiři*, */keřiři* < */e* + */ki*; *S₁ /e*: „to enter, go into, be in, put in, set“,

/ki > di > ri „to make, do“. Another word for tongue is in S₁ /eni, /enni, /ẽ < /e + /ni „is in + speaks“, /ni means in S₁ > „to see, perceive“ and in the closely related S₄ /ni or /nu means „to speak“. If there is -m at the end of the word, then the second syllable of the word for the tongue derives from m „to eat (vegetable food)“.

The process of composing two verbal roots in order to express a new idea is very old in Bushman, it belongs to the 5 most original forms of connecting root-words, viz. 1. reduplication (/e/e 'to enter', /hu /hu „baboon“).

2. Double Verb, i. e. composing two verbs such as S₂ /ke „to seize“ + /nu „to marry“ = „to marry by force“.

3. Syntactic group of the possessor, i. e. composing two nouns, e. g. N₁ !kwa „leg“ + /ni „head“ = „knee“, lit. leg's head.

4. Syntactic group of the directed action, i. e. verb + pronoun (or noun), e. g. C₂ mi, or mí „to say, tell“ and C₂ mii < mi + i „to say“, lit. „to tell“ + „it“ or N. dī: „to make, do“ and dī:ri „to drive, push on“, lit. dī: „to make“ + ri < /i „there, in that direction“.

5. Syntactic group of the acting force, i. e. noun (or pronoun) + verb, e. g. N. nám-i or nám-s „tongue“; it derives from né: this + /ám „to come to a point, to taper“; -i or -s are in Hottentot and to some degree in Central Bushman (C₁, C₂, C₃) the suffixes of nouns Sg. denoting gender or rather some visual (functional) qualities of an object: -b(i) „big, tall, strong, male“, -s(i) „small, low, weak, female“, -i unimportant; the last suffix (-i) is in opposition to both others (-bi, -si) being considered as important.

Now let us return to the names of tongue in Bushman. In Northern Bushman we have *teri* and *teni* which is the continuation of S₁ /eři, /eni and in Central Bushman C₂ *dàma*, *dàmba*, *ta:m* and *dam*, C₁ *dham*. The forms of Central Bushman derive from C₂ /kã „to lay down, plant, set, come in“ or ≠kã: „to set, fall in, put in, go in, rub in“ and C₂ *ma* or *má* „to say“; lit. C₂ *dà* + *ma* means „is in (moves in) + says“, i. e. „it says moving in (the mouth)“; the form *dàmba* is *dama* + *ba* < *b(i)* + *a*, the Hottentot and Central Bushman suffix for strong, male objects; Meinhof calls the noun form with -*ba* „Emphatic Case“, which means that it is stressed and functions as Subject as well as Object of the sentence; fi-

nally the forms C₁ *dham* and C₂ *ta:m* are dialectical variants of *dama*.

There is to be added here one important remark that has been given and explained in extenso in our work, *The Evolution of Click Sounds in Some African Languages*, Kraków 1960, p. 12 and sqq. (*Nasals and their propulsive force*). The factor which intervened in transforming Click Blocks into Expiratory Consonants was some nasal sound (*v*) being very often produced quite unintentionally during the pronunciation of any click sound (Vedder's „the facultative Nasal“). In Hottentot and Central Bushman there is also another way of explaining the transformation of *v/kã* + *ma* > *dama*, viz. through the intermediary of the pronoun N. *nè* „this, here“ (cp. N₁ /né „there, that, this“ and N₁ /ni „that, this, so, here“); thus we would have the original form *ne/kãma* > *n/kama* > *ndama* > *dama*, *dham*, *ta:m*.

The second remark refers to the voicing of Bushman and Hottentot consonants. In our article *Pochodzenie opozycji spółgłosek niegłosowych i głosowych* (The origin of the consonantal opposition unvoiced : voiced“) we tried to prove that in the most primitive stages of the evolution of language there was not the opposition voiced : unvoiced. This opposition does not occur in Hottentot-Bushman and appears only on the second level of the development of language in Africa, viz. in the Sudan group, e. g. in Ewe. Therefore, the phonemic value does not inhere in the click block /k alone but in the cluster of three subsidiary click blocks /', /k and /g(/v),, e. g. N. /'ã'ã < /'am/'am „to water“: (C₂ /kã/kã < /kam/kam „to water“): N. *dău-dău* < *dam-dam* < *n/gam(n)/gam* „to water“. To the cluster /':k:/g(/v) there is to be referred the correspondence *t:dh:d* which appears in the three phonetic variants of C₁ and C₂, viz. *ta:m*, *dham* and *dam* „tongue“.

Now let us go over to Fon, Ewe, Choli etc. The form *de* „tongue“ in Fon (Dahomey) has the same semantic basis as the form /e or /ke in S₁ /e: meaning „to enter, be in, go into“ and /ke means „be in, at, on“: *de* in Fon means „to be in, be found, extract“, then the noun *de* is to be explained as „(it) is in (the mouth), can be put out“, where the subject is to be completed or some gesture points to it, if it is necessary to do so. Then the E. *a-de* (phonetically it should be written *a-de* or *a-ḍe* with the retroflex *d*)

„tongue“ means literally „it (this) -is in (the mouth)“, because such is the meaning of *a* (S_1 *a* „to be“ or „this, that, here, there“, N_2 *ga* „it“, *ha* „he, she“: E. *a*- prefix of some substantives, originally meaning „it, this“) and of S_1 /e: > E. *dé* „put in“. If we have in E. *a-dé* (not *a-dé*) „tongue“, this may be due to some confusion or contamination of *d* and *ḏ*, to which the words like *dé* and *ḏé*, the meaning of both being very near (E. *ḏé* „put down, enter, reach“: *dé* „put in, join, touch“) may have contributed. At any rate the regular correspondence of Bushman dental Click Blocks (/...) requires mostly dental consonants, and that of some part of palatal Click Block (!...) requires consonants pronounced with the raised tip of the tongue, e. g. retroflex in Ewe (or emphatic *t*, *ḏ*, *s*, *z* in Arabic).

This explanation will do, when we want to explain the derivation of African consonantal systems from Bushman clicks in general. In our study, however, we found that Southern Bushman is in many respects more primitive than Northern and Central, and that of the two last ones Northern is more primitive than Central, but on the other hand Central (and Hottentot) continues the vocabulary of Southern Bushman more than Northern does. Of course, all the three groups (of languages) are very closely akin, in phonetics, grammar and syntax, and the statement remains true in spite of the fact, that Central Bushman (and Hottentot) accepted some grammatical and syntactic elements from the Hamites.

However, in some instances, e. g. when the chances of a certain Sudan (Ewe) word being derived from Southern or Northern Bushman are almost equal, we have to distinguish between the importance of one of the three subgroups of Bushman.

1. Thus, the most important for the development of Sudan was the Northern subgroup of Bushman (amongst others the omission of the subject that we have seen above in Fon *de* „tongue“ occurs also frequently in Northern Bushman). Especially the West-Sudan languages are derived from Northern Bushman.

2. The rise and development of Bantu were influenced by all the three subgroups of Bushman in the following sequence of time: The origin of Bantu and its differentiation from Sudan are similar to the differentiation of the Northern Bushman subgroup

from the Southern one; in this way the stratum of Southern Bushman (Boskop) is the oldest and deepest one, then comes the Northern stratum, while the Central Bushman (and Hottentot) influenced Bantu mostly after it had been already formed as a distinct group of languages (Zulu).

3. Some part of Southern Bushman separated early enough from the common stock and gave rise to the Central subgroup of Bushman. This subgroup was the nucleus of Proto-Hamitic.

Therefore, when we are considering the etymology of the E. *a-dé*, we meet another explanation that perhaps will seem more probable than the former one: E. (γ)*a*- derives from N_2 *ga* „it“ and *ḏé* from N_1 *!ne* „to put, down, put into“ with unmarked tone, but in *!ne* > *ḏé* the tone of *!ne* could have been high and remained unmarked by the respective writer, because we have in N_1 the word *!ni(!na)* „to put in, put down, in, inside“ with high tone.

It is not necessary to cite the other examples as they have the suffixes *-ba* > *-b* > *-p* or *-ma* > *-me* > *-m* that have been already explained in C_2 *damba* and *dama*. Professor Homburger is right in assuming *-ḏ*- (intervocalic) becoming *l* and in putting Chuana *mo-leme* with Ful *ḏem-gal* (our informant for Ful Diallo Thierno coming from Futa Djalon pronounced *ḏengal*).

Thus, we see that in order to explain the appearance of the *-p* resp. *-m* at the end of the word in Dinka, it is not necessary to accept „*m* = *p*“ (radical) + *ne* definite singular article or, + *n* affix of a genitive. Besides, articles and suffixes of a genitive belong to the younger processes of language development than those pointed out by us in the above discussion and they were of not such a great reach as to explain all the above mentioned sound shiftings.

We have to quote one passage more and to explain the examples contained therein:

„Another fact which militates against the theory of independent lengthening of the root is that the second consonants are always of the same class in all languages. As we have seen *de* would have been lengthened by *m* or by *p*, viz. by labials. Other words that show up this law are: —

1. „to swallow“: Choli *meda*, East Bantu *mila*, West Bant. *mine*, Dyola (Senegal) *mer*, Chi *mene*, Fon, Ewe *mi*“ (always *d*, *l*, or *r* save when the initial *m* has assimilated *l* to *n*).

2. „to sweep“: Angass *pet* or *fet*, Kanuri *pera*, Bambara *fira*, Kunama *fir-ki* or *figge*, Didinga *wil*, Gbari *fi* (*t*, *r*, or *l*) (Bantu **pîg-eda*).

3. „to split“: Bantu *pača* or *pasa*, Kunama *faše*, Ful. *fettyu*, Mossi *pese*, Mom. *pa'* (*c*, *ty*, *s*).

4. „arm“, Bantu *-boko*, Nuer *wok*, pl. *wōg*, Gurma *bogu*, Bali *bo*, Bini *o-bo* (cf. Ful. *wok-ade* „to wave the arms“ (*k*, *g*)).

5. „to plait, to weave“: Bantu *tunga*, Fan *loñ*, Abo *i-won-o-g*, Fon *lō*, Sherbro *lo* (*n* or *n*).

Now let us explain the above examples according to our method:

1. The semantic basis of the words meaning „to swallow“ is „to eat + finish“ or „to eat + it (this)“; the words referred to eating are in S_1 *man* „to wet with the mouth“, C_2 *mana*, *man* „meat, body, game“; the words related with them in S_1 are S_1 *Opwai-jũ* „to snatch, take“ (originally „with the mouth“), S_1 *Opwai:tja* „to squeeze out (e. g. honey)“, S_1 *Omwaïn* „to kiss, fondle“, S_1 *Opwai*: „game, meat, flesh, body“; in N_1 we have *m*, *m̃*, *m̃*: „to eat (originally only vegetable food, e. g. melons), N_2 *mai-ja* „a certain plant of which the fruit is eaten“. For the second part „finish“ or „it (this)“ we have in S_4 *i* „to go, go away“, C_1 *i-a* „to tread on, trample“, S_1 *i* v. part. expressing emphasis, „to do“, S_1 *i*, *i* „there, that, pointing“, S_1 *i*: „it, them“, N_2 *da*: „to conquer“ (then also „to finish“), N_2 *da* „then, so“, N_2 *ta* „wild orange“, N_2 *tã* „dish, pot“, $N_{1,2}$ *hi* „it“.

Then Choli *me-da* < N_1 *m* + N_2 *da* „conquer, finish“ = „to swallow“, East Bantu *mi-la* < *ma* + *hi* „eat“ + „it“ *-la* < *da* „conquer, finish“; the process of *ma* + *hi* > *ma* + *i* > *mi* has been done parallelly or previously in Sudan which is tested by E. *mi* „to swallow“; Dyola (Senegal) *mer* derives from *meda* with intervocalic *-d-* > *-r-*, and then *-a* being vanished. In West Bantu *mi-ne* and Chi *me-ne* the syllable *-ne* derives from N_2 *ne*: „this“, N_2 *ne* „some“; thus *mine*, *mene* means literally „to eat-this“ = „to swallow“.

2. In finding out the semantic basis for „to sweep“ we first met the word S_1 */ummo* < */um* + *mo* „to sweep“; S_1 */um* „to wipe,

brush off, dry + mo C_2 (the vocabulary of which is taken mostly from S_1 , S_2) „to see“, N_2 *mui* < *mo-i* „sees-it“ = „the eye“; thus, the prototype of „sweeping“ is wiping the face, especially the eyes, resp. the mouth (N . *àm*, */kxam*, C_2 *k'am-fa*), „wiping“ is connected with „brushing off, drying“ the wet face, which leads us to the further analysis of S_1 */um* < */u* + *m*; C_2 */ũ* „hair, fur, feather“ is connected with S_1 */ku*, */ku-kən*, */ku-ki* „hair, feathers, skin (of insect), brush made of hair“, S_1 */khu* „hair, wool, feather, quill“. The wiping of the face was necessary, because of the perspiration hindering the sight, or an account of the saliva covering the mouth.

The last observation leads us to connect Ur-Bantu *pîa* „to spit“ with „wiping“ and „sweeping“ which is *pîa-ya* (*pya-ya*, *pya-nga*) „to sweep“ and stands very near the original Homburger's Bantu form *pîg-eda*. Ur-Bantu *pîa* + *ya* meant literally „spit“ + „(wipe) this way“, (here followed the gesture of wiping the mouth) or 'mouth + (wipe) this way'. The respective Bushman roots for *pya-nga* are S_5 *!kwe*: S_6 *≠kuē*, N_2 */k'we* „mouth (hole)“; the labialisation of *!kw-* resulted in palatalisation of Ur-Bantu *pya-*, the fact observed very often in Bantu phonetics, e. g. by Doke in Zulu; the Click Block *!kw* (*!khw*) has its normal substitute in Ur-Bantu *pî(py)*, which gives Cwana (Chuana) *feela*, borrowed by C_1 *fiela* „to sweep“. It is interesting to add here that *≠ku* (cp. S_2 *≠ku*: $S_{1,2}$ *tu*: „mouth“) stresses in Bushman the wetness of the mouth (as I have demonstrated in my work „Die Schnalze“, Kraków 1935), so it is quite natural that in N_2 *≠kú* means „to wipe (the mouth)“ — the alveolar click pointing very often to wet, moist, sticky and slippery objects.

The second part of Ur-Bantu *pîa-ya* or *pya-nga* was explained fully in our somewhat longer article appearing next year in the *Biuletyn Polskiego Towarzystwa Językoznawczego* under the title *Einige Überreste von ursprünglichen Gebärden in afrikanischen Sprachen*². In short, Ur-Bantu *nga* „to be alike, to be like“ continues the Bushman S_1 (*n*)*/ka* < (*n*)*/k'a* „to resemble, be

² We had written it in German as its text had to serve as the material for our „Gastvorträge“ in Vienna, where we had been kindly invited by Gertrud Thausing, professor at the Vienna University.

like“, cp. N₂ //kã, //kĩv < //ka + am „to sing, call“, lit. „to resemble (each other) in wetting, dissolving (opening) the mouth“; cp. S₁ //ka „to wet, be wet, dissolve“, S₆ //ka „to speak“, S₁ //kã < //ka + am „brother, elder brother, mate, because brothers“ faces (mouths) are alike.

Homburger's Ur.-Bantu *pige-da* is to be explained as N₂ ≠ku + hi > ≠kwi „wipe“ + „it“; this was enlarged by adding N₂ /gə'a „eye“, then ≠kwi /gə'a < ≠kwi /ge > ≠kwi ge > *pige* „to wipe the eye(s)“, and finally ≠kwi /ge + (n) //ka > *pige* + da „to wipe the eye“ + „to do so, do like this“ (gesture); the last suffix -da < (n) //ka is attested in N₂ da „then, so“ and in S₁ da: „to work for, act towards, give, make, happen, affect“. We may add here that in analysing the words and constructing the respective etymologies we almost always keep to the same subgroup of Bushman and only for the purposes of comparison take words from the other subgroups of languages.

3. In order to find the semantic basis for the idea 'to split' we present some Bushman words: S₁ //kx'au „to chop, split“, N₂ //kau „to chop, cut“, C₂ //kau, xau „to cut“, S₄ //kam „to cut“; the last word shows that all the other forms are derived from //kx'a + am (-u < -m), which is supported by S₁ //kwa: „to cut into slices, slice“ and by the word S₁ //khã:, //khã: „lion“ that probably is connected with S₁ //kx'ã: „to respect“, v. or n. and S₅ //kx'a, //kx'a: „to cry, bray, bleat, low, crow“, i. e. „to open (or split) the mouth“, lit. this means „to cut“ + „mouth“, i. e. „to cut making a hole like the mouth“, which is originally „splitting“. However, the same effect can be attained by breaking e. g. a bone; S₁ //kx'au means also „to split (bones)“, which is connected with S₄ //kx'au'u „to strike“ and S₁ //kx'abbu „to break“.

In order to see what word-compounds the word enters we give still N₁ //kũm „to cut, chop, split“ and N₃ //ká „shelter“, cp. S₁ //ka „stick, tree, camelthorn tree“, S₅ //kà : a „to cut, chop“, S₅ //kala „digging stick“; the respective word-compound is N₃ //kũm-//kã and means „to split down“, lit. „to split“ or „cut sticks for a shelter“. Another word-compound is N₁ !kũ !kharra „to split“, of which N₁ !kũ, !xũ means „to kill“, especially by breaking bones, cp. N₁ !kũ „bone, horn, antennae, horn“, S₁ !ku:, !kũ „to break (egg)“; N₂ !karra means „to cut in two“ and N₂ !khara „small

join, division“ (N₁ !ká, !kha: „meat, muscle“ + N₂ !k'ã „leaf of an onion“ as a prototype of „splitting“, „scattering“ or + S₁ !khã „bone of lower arm, radius“ that is also split“).

Thus, we have come to the various kinds of splitting, of which we have to form the semantic basis for Homburger's Bantu *pača* or *pasa* as well as for Bourquin's Ur.-Bantu *vanda* „to split“. If we put both Ur.-Bantu forms together and if we try to find the Bushman etymology for both of them, that is because we appreciate them both as suitable for the different parts of the Bantu territory resp. for the different languages therein. Moreover, we do not want to discuss the question, whether Kunama and Mossi belong to Bantu or rather to the Sudan group, whether Ful is Bantu or rather Semibantu with some admixture of Hamitic elements, because it does not touch our main problem.

For Bantu *pača* or *pasa*, i. e. for some part of Northern (or North-West) Bantu the Bushman words like S₁ !kwa: „to break“ + S₁ !kã „bone of arm or foreleg“ were the base for the idea of „splitting“, i. e. „breaking the bone of the lower arm (in two)“; !kwa- becoming *pa* is quite a normal phonetic process that can be observed in Bushman as well as in non-clicking languages, e. g. in Ewe. The second syllable was !kã > !ka > tya > éa, which is also a regular phenomenon in the transforming of clicks into expiratory consonants, however, we must assume that !k > ty was palatalized, because plain !k > t. The foundation for such an assumption can be found in Wuras (Vokabular der Korana-Sprache, Berlin 1920), who distinguished eight clicks in Korana, each click of Nama (/, //, ≠, !) having its counterpart in a palatalized variety (/, /', //, //', ≠, ≠', !, !'). This can be confirmed by the words like S₂ !kã „to go, trek“: S₂ kiaiv „to run“, S₄ kiãv „to walk about“, N_{1, 2, 3} !ka: „to run“; S₂ !ka: „to hurt“: S₂ kia:v „to be ill, ache, be sore“: S₂ tian „to feel, ache“: S_{2a} tjhaiv „to feel“, cp. N. !àn „to feel pain“, where the clicking forms of the word have not any sign of palatalisation (!kã, !ka:, !àn), but- the derived non-clicking forms show it quite clear (kian, tian). In D. F. Bleek's Comparative Vocabularies we find even N₁ tã and C₂ tã „to be ill“. It is also possible that the original form was !kani, because there are already clicking forms with i, e. g. S_{2a} !kai, !kei „to run“, S₁ !kai'n „to dart, run“; in such cases the Click Block !k is pa-

latalized by the influence of *i* and the above assumption is superfluous.

The second alternative for the Ur.-Bantu word meaning „to split“ is quite easy to be found, as we have it in the clicking and non-clicking form in the beautiful Dictionary of Zulu by Doke and Vilakazi, (Johannesburg 1958) that can be considered as the most magnificent monument for the two authors. There is the word *bándà* „to cleave (wood), split with axe“ connected with Ur.-Bantu *vanda*, and its clicking source is in the word *!kándà* „to cleave apart, separate, divide, split apart“. The last one consists of two components *!kan(a)* + *!ga*; the first of them is to be seen in *!káná-(thà)* „protrude the buttocks, throw out the chest“ (as if to show the furrow, the split in either of them), „display the tail“; the suffix *-tha* derives from the ideophone *thá* of spreading out, being (prob. also making?) flat, level, smooth; the second, viz. *!ga* exists in Zulu, e. g. in *umu !ga* „line, track“ (more commonly heard as *umun!ka*), in *!gǎ!gǎ* „to place in a scattered manner, scatter“, in the ideophone *!gǎ!gǎ* 1. of irregular, patchy word. 2. of impudence, forwardness, and in *íli-!gǎ!gǎ* „anything with spaces between its component parts“.

We have even in Z. the words, where the two parts seem to have been composed just in the above mentioned way, e. g. ideophone *!kán!gǎ* of being open, visible, exposed (it is quite intelligible that splitting makes visible the interior of a thing), then this ideophone used as a verb *!kán !gǎ* „to explain expound, narrate“, further the same ideophone, but as a noun put into the tone pattern that reminds our original one, viz. *íli-!kán!gǎ* „clear, clever speaker, expounder (as to the association „to split“ : „to expound“ we may quote the Polish slangy expression „to split the hair into four“, what means „to expound in a too detailed manner), *íli- !kán !gǎ* „path cutting (i. e. splitting) across the country or through a forest“, and finally *íná — !kán !gǎ* „elevation, exposed place, ridge between two valleys“, what is also „splitting the lowland“.

Thus, the semantic basis for „the idea of splitting“ in Zulu (and in Southern Bantu) is „to protrude (in order to show clearly) the twofold or split object and to spread, i. e. to draw aside the split parts of it“. The question arises if any similar words like

!kán(a) and *!gǎ* exist in Hottentot-Bushman. So, we have in *S₁ !kú, !kú:* „hole, cave, cleft“, in *N₂ !khu* „back dress“ (prob. a skin hanging from the waist behind), from which *C₂ !kwǎ* „behind“ and *N. !gǎ < !kú + am* „back“ (in N. all Click Blocks like *!kw* have been delabialized), the *S₁ !kú:*, *N. !gú:s* and means „man's apron (to cover the pudenda)“, with which there is connected *C₁ tuba < !ku:ba* with the suffix *-b(a)*, and not *-s* as in N. and means the same as in N. 'apron'. *S₂ !kwa* „a small kaross or apron worn on the back hanging from the belt“, then to the fact on splitting there point the words like *S₁ !kwa:* „branch (that which is broken off)“, *S₁ !kwabbakən* „tail, brush“, thus, *N. !gǎ* corresponds with *Z. !kán* and *N. !á:* „to spread“, *S₅ !ka:* „to stretch“ with *Z. !gǎ*.

It is still to be added here that Zulu has another word for „splitting“ in which „cutting“ appears to be the most important component of the respective semantic basis, viz. the word */kándà < /kam + !ga* „to cleave, chop up (wood for fuel)“, but it seems to be out of the way to analyse it; we only want to show how easy it will be now to understand its connection with the ideophone *Z. /ká* of clearness, good visibility, clarity of thought (cp. *C₁ /khao < /kham < /ka + am* „clear, dazzling, shining“ and *S₃ /kam < /ka* „to cut“ + *am* „mouth, hole“, *S₁ /kau < /kam* „to cut“, *S₄ /kam* „two“, i. e. the mouth is a hole split in two lips).

4. Bantu *boko* „arm“. In the book „A Bushman Dictionary“, the monumental work of Dorothea F. Bleek we find in Part II. English-Bushman the word *!kǎ //gǔ*, which should have given us some hint at the semantic basis of „arm“. The word could not be fully identified as it is not placed in Part I. Bushman-English. We found only the components, viz. *S₁ !kǎ* „bone of arm or foreleg“, *S₅ !ka-* „to stretch“ and *S₁ //kǔ(//gǔ)* „arm, wing, humerus“, then *!kǎ//gǔ* would mean „bone of arm = arm“. It is not satisfactory, and there is some distance in the phonetic form between *!kǎ//gǔ* and *boko*. At the base of *//gǔ* there are some words denoting the function of the arm, viz. *S₁ //kum:* „to shape, form“, *S₁ //gum* „to thrust“. Besides, the word *//kǔ* means „arm“ by itself not only in *S₁*, but also *S₆ //gǔ* „arm“, *S₂ //gǔ < //gǔ + a* „arm“, *N₁ //gum* „upper arm, humerus“, Therefore, we found the semantic basis of „stretching“ and „wearing“ „to be more probable as the main function of the arm in the advanced period of combining two

root-words to denote the part of the body. In N_2 !gō means „to stretch“ and its application as the most striking function of the arm (and wing) is supported by the words like N_2 !gò: „to look with the hand shading the eyes“, N_1 !gom „arm“, N_3 !gom „knee“, S_2 !go: „bark of the tree“ (all the three can be stretched out), N_2 !gò „shin“, S_2 !go „broad“, N_3 !go „to build“, S_2 !goa „to build“, N_2 !kōa, !kōa: „to yawn“, N_2 !koa „knee, joint“, S_2 !ko „to out-distance“. Beside N_2 !gō there is N_2 !ov „to stretch oneself“ and N_1 !gu „to spread, stretch“.

For the second syllable, viz. -ko we have the word N_2 //ko „to wear, put on a front dress, apron“, functioning also as the noun „front dress, apron“. In this way the arm is“ (something that) stretches putting on a front dress“. In Zulu we have *um-bōkò* 1. „elephant's trunk“, 2. „penis of horse“. 3. proboscis (of insect); connected with Ur.-B. *voko* „arm“. In „Comparative Vocabularies“ we have S_6 !goxo meaning „trunk“ (of the tree rather than that of the elephant). Considering all this we are inclined to push the meaning of the second syllable towards the more primitive function of the arm, i. e. not „putting on a front dress“ or „the front dress“ itself, but, „the bark of the tree“ which serves in some primitive tribes even now as a dress.

We are obliged to accept S_4 //kō „bark of tree“, S_1 //go „outer skin“ (cp. S_5 //gò:, //go „man's apron, loincloth“) as the basis for the Ur.-B. syllable -ko, though //kō is not attested in N_2 ; we are justified to assume that some similar word with the meaning „bark of tree“ exists in N_2 , although it has not been noticed by the observers. „A Bushman Dictionary“ is the full (or almost full)“ dictionary for S_1 (the dialect of /kam-ka-!ke), for the other dialects (or languages) of the Southern group, however, and for the dialects of the Northern and Central groups there exist only more or less exhaustive vocabulaires. Besides, there are some similar words in the Northern group that approach the above assumption, e. g. N_1 //o:, //ou < //om „branch“, N_1 //ē //ó „reed“, consisting of N_1 //e, //e: „grass, moss, ferns“, + //o „bark(?)“ (cp. S_4 //o „skin“, S_2 //kx'uv „bark of tree“); in N_2 /nó means „skin“, N_2 /nō: „bark of tree“ and this lets us suppose that the word like, N_2 //ko or //kx'o exists in N_2 t/xo < //kxo meaning „to skin“ (cp. also N_2 //nu:i „little skin bag“). Finally, the basic Bushman word for Hom-

burger's Bantu *boko* and for Meinhof's Ur.-B. *voko* seems to be Bushman !go//ko „it (contained in the respective gesture) stretches the skin of the body like the bark of tree“ = „arm“.

5. Bantu *tunga* „to plait, weave“. Bushman culture in general, does not know „weaving“, therefore we look for the semantic basis of it first in Hottentot, which, of course, has been in touch with Bantu culture, and only after having done it we shall look for some words in Bushman connected rather with plaiting (basketry is, in principle, known to Bushmen) than with the „weaving“ itself. This semantic basis inheres in the compound word N. ≠gà: — !nà — gu „to put in — inside — each other, plait one into another, weave“. The N. ≠gà: itself is derived from S_2 ≠kua „to plait“, that has been delabialized: ≠kua > ≠kwa > ≠ka: (≠gà:). On the other hand S_2 ≠kaa „to plait is connected with N. ≠gòmà „to twist, wind“, that consists of ≠gò: „to be pointed, slim“ + má < mǎ „to stand“ (mǎ-i „to set, put in, instal“); „twisting“ relies on the preparatory stage of putting two ends or two pointed parts of something so that they stand together. Some similar procedure is observed when sewing or stitching together. Two ends or edges of an apparel are put so that they are placed (stand) together, what means in N. ≠'òm < ≠'omà „to sew“; N. ≠orò < ≠ò + ro, -ro is the suff. for Diminutives; N. ≠orò „be narrow“ (N. ≠orò-b „awl“, S_1 ≠oro „bone, needle, awl“, N_2 ≠o „to die of hunger, become emaciated, thin“, N_2 ≠um „to sew“, S_1 ≠um: „to sew“. Now, after we have established the semantic relationship between „twisting (plaiting)“ and „sewing“ let us remember the formal, i. e. phonetic relationship of the three Click Blocks ≠': ≠k: ≠g. N. ≠'omà „had been originally the phonetic variant of N. ≠gòmà that, in course of time and use, became an independent word with independent meaning.

Thus, we have explained the first syllable of *tunga*, the second one is in the above mentioned root-word Ur.-B. -nga (s. W. Bourquin, Neue Ur.-Bantu Wortstämme, Berlin 1923, p. 122) „to be alike, be like“. Here it will be of use to repeat what we wrote in the article „Bushman as a language of primitive type“ Folia Orientalia, vol. IV. Kraków 1963. In this article we pointed to the fact that gestures — Bushman and Hottentot clicks can be considered to some degree as gestures of the tongue and mouth

accompanying some movements of the hand — or rather traces of gestures can be detected in other African languages too. Thus the Ur.-B. *-vga* < */k'a* has not only its continuator in Pe̋i *-k'a* but also its cognate in Hausa, where we have some set of verbs in *-k'a* similar to the Bantu verbs in *-vga*. In Hausa we have even the words *k'a* and *k'ak'a* „how, like, as“. All the Bantu verbs in *-vga* have in their meaning something that originally demanded a supplement in a gesture, *-vga* being the expression that had accompanied the gesture („so, in this way, doing something like this“).

Therefore, although we have in Zulu *thúnga* „to sew, stitch, together“ the continuation of the full Ur.-B. stem *-tunga*, it is not anything strange that Fan *loñ* and Fon *lõ* continue only the first part of it, viz. *tov* (*tuv*) < *≠gom* (*≠um*); it is because Fon (Sudan group) has monosyllabic basis of root-words and has inherited *≠um* (*≠gom*) > *tom* > *lõ* from some dialect of Northern Bushman (N₂?), while Fan (Bantu) showing, in principle, bisyllabic basis has lost the second syllable as a superfluous addition to the respective gesture, to which the influence of some neighbouring Sudan or Pygmy languages may have attributed.

Meinhof supposes that the basic meaning of Ur.-B. *tunga* was „to pierce“ and then „to sew, build“, however, the examples seem to confirm our reasoning, e. g. Swahili *tunga* „to set, put together“, Herero *tunga* „to build“ (building either of wood or of clay is also putting the material together), Duala *longa* „to weave, build“, Konde *thunga* „to thread, to string (e. g. pearls)“, Pe̋i *rok'a* „to sew“.

He gives another Ur.-B. stem meaning exclusively „to sew“, viz. *túma* (with the so-called heavy *u*, i. e. originally *twu* and exemplifies it with Pe̋i *ruma* „to hem“ and Swahili *fuma* „to sew“. Here he would be quite right in deriving the idea of „sewing“ from that of „piercing“, because Ur.-B. *tumo* means „spear“ and has its origin in S₆ *!kumma* „spear“, S₁ *!kum* „to plunge in, dip in“; by the way, we want to notice that Swahili *m-kuki* belongs to the words that derive directly, i. e. without any transformation of the click, just only omitting it, from Bushman root-words, viz. N₂ *!ku!ku*, N₁ *!kúku* denotes „spear“, *!khũ*., *!kxũ* or *!kuv* meaning in N₂ „to kill“ (in N₁ *!kũ* „to kill“).

This example shows also what simple means Bushman uses to differentiate words and how widespread some of them are, if we see *v* in N₃ meaning „this one, this is, here“ (in the above N₂ *!ku-v* „to kill“ it hints to the object and puts it before the eyes, viz. „to dip in, to kill this one“), in S₂ *n* „to be“, in S₁ *n*, *v* „I, me, my“, in another part of S₂ *n*, *v* „they“ etc. The same nasal consonantal element + some vowel forms demonstrative pronouns and formatives in Hottentot, Sudan, Bantu and Hamito-Semitic (s. Professor Homburger's comparisons).

After this, perhaps somewhat too long digression, we return to the exposing of our point of view in some more systematic way. There are facts that confirm Homburger's theory of decomposing words, but even in the synchronic investigation of modern highly developed languages these facts are by far less numerous than those that can be easily explained by composing words with words or words with affixes. Therefore we do not want to discuss the matter any more; rather let us quote the respective M. Cohen's passage from *Les langues du Monde*, p. 82:

„On a recherché des rapports de l'ensemble de la famille chamito-sémitique, maintenant généralement reconnue, ou de certaines de ses parties, avec d'autres familles ou avec des langues isolées.

Il n'y a pas à tenir compte de tentatives antérieures à l'établissement de la linguistique comparative ou d'ouvrages fantaisistes rapprochant de l'hébreu biblique des langues indo-européennes ou autres.

Pour les langues indo-européennes, caucasiennes et pour le basque, ainsi que pour les langues océaniques, se reporter aux Notes liminaires des chapitres intéressés.

La question la plus agitée est celle des rapports avec les langues de l'Afrique („blancs d'Afrique“ exclus). C. Meinhof avec une partie de son école réunit au „chamitique“ toutes les langues qui présentent une opposition masculin-féminin, ce qui l'a conduit jusqu'au hottentot (nama)³.

En laissant de côté ce critérium (et en même temps le nama), il reste que les comparaisons tentées peuvent s'appuyer sur divers

³ Voir C. Meinhof, notamment *Die Sprachen der Hamiten*, Hambourg 1912 et *Die Entstehung flektierender Sprachen*, Berlin 1936.

faits intéressants: en particulier quelques ressemblances de structure dans le verbe (opposition de l'accompli et de l'inaccompli; certains thèmes dérivés au moyen de répétitions et d'affixes); présence en certaines langues de consonnes buccales avec accompagnement d'occlusion glottale; rapprochements vraisemblables de vocabulaire. Mais les ressemblances de phonétique et de structure ne prouvent pas la parenté, tant qu'on ne peut pas montrer l'identité d'éléments morphologiques; pour le vocabulaire, on peut avoir à tenir compte d'emprunts massifs anciens (il faut naturellement mettre à part l'expansion du vocabulaire arabe).

Pour l'Est, on avait cherché précédemment à déceler une transition entre le couchitique et le nilotique⁴.

Depuis 1928, Lilius Homburger a conçu l'idée que toutes les langues négro-africaines sont de l'égyptien transformé; elle s'est efforcée notamment de rattacher diverses de ces langues séparément et précisément à différents états de l'égyptien⁵.

Le problème le plus pressant est celui du haoussa et des langues de son groupe que J. Lukas a dénommé „tchado-chamitique“. Le fait principal est que le haoussa a des pronoms courts employés devant le verbe qui sont en partie identiques à des préfixes ou suffixes personnels du chamito-sémitique (de plus on trouve le pronom de la 3^e personne attaché au verbe même lorsqu'il y a un sujet nominal). J. Lukas pense que c'est le couchitique qui a débordé vers l'Ouest⁶.

It is quite evident that a work like *Les langues du Monde* gives only the results of a research that do not evoke any doubt among the specialists. At any rate, it is noteworthy that the position of L. Homburger has become stronger after her work *Les*

⁴ Leo Reinisch, *Die sprachliche Stellung des Nuba*, Wien 1911.

⁵ L. Homburger, *Les noms égyptiens des parties du corps dans les langues négro-africaines* dans „Comptes rendus de l'Académie des Inscriptions“, 28 décembre 1928, de nombreux articles et communications dans BSL, dans les comptes rendus des Congrès des Linguistes et des Orientalistes, etc. En dernier lieu: *Études de linguistique négro-africaine*, n. 1. Chartres 1939, et *Les Langues négro-africaines*, Paris 1941.

⁶ W. Vyčichl, *Hausa und Ägyptisch*, dans „Mitteilungen des Seminars für Orientalische Sprachen“, XXVII, 3, Berlin 1934; J. Lukas, *Die Verbreitung der Hamiten in Afrika*, dans „Scientia“, février 1939, avec presque toute la bibliographie de la question.

langues négro-africaines had been translated into English as *The Negro-African Languages*, London, 1949.

Now, let us go over to present our own approach to the problem and its tentative solution. We shall begin while giving hints at some fundamental facts that will allow us to fix, 1) where the research should be directed, 2) what is the field inside of which we have to find the key to the problem and 3) what method is to be chosen to secure the most effective way of investigation.

These facts are:

1. Africa is the cradle of man, of culture and of language. This statement is beyond any doubt nowadays and should not be documented here. Besides, we treated it almost exhaustively in the article under some similar title and tried to give anthropological, archeological and linguistic evidence of it. The fact is of great importance when looking for the sources, for the mother tongue of all the four linguistic groups of Africa, because it compels us to put the postulate that this mother tongue should not be only relatively primitive; it should not consist only of the starting forms, out of which the structures of the single groups have been developed. Such a relatively primitive ensemble of starting forms was the IE. „Ursprache“, the inflected language that has never been spoken as a whole of the reconstructed grammatical forms. These forms had their origin in different places and different periods of time. Besides, our letters, the symbols comprising the sounds of these grammatical forms do not take into account a great deal of accidental features that were originally as important for the understanding of the spoken word as its vocal aspect, e. g. gesticulatory movements, the voice register, the kind and way of emitting the voice (the voice that is pressed, sharp, shrill, continuous, intermittent; glottalization, nasality etc.).

The mother tongue to be sought should be absolutely primitive, i. e. it must suit the notion of primitive man (*Homo primigenius*) that has been born just in Africa.

2. One of the most striking characteristics of African types of man, kinds of culture and structures of language is their continuity, which suggests the idea of the continuity of their development. In Africa we meet all the levels of anthropological evolution as well as those of cultural and linguistic development.

The respective types follow each other in an uninterrupted sequence in the way that is not to be found elsewhere. The attempt to reconstruct the language development and the rise of the above mentioned groups has to reflect utterly this continuity.

3. Although in the civilized world of nowadays we only very seldom meet some correlation between the anthropological and cultural type on one side and the structure of language on the other, it is, however, to be stressed here that in Africa such a correlation occurs more frequently than on the other continents. thus, e. g. with Hottentots some admixture of Hamitic blood and of pastoralism which is proper to Hamites is accompanied by the typically Hamitic feature of linguistic structure, namely the division of nouns into classes that remind grammatical gender, then the feature that is especially important for the Hamitic languages. By the way, it is to be added here that the distinguishing of sex with pastoral tribes is founded on economic conditions, because the value of a female individual in the herd is differently estimated than that of a male.

If we focus our attention on the above postulates, it will be quite easy to point to the Pygmies and Bushmen of nowadays and to the Boskop extinct anthropological type (whose traces, however, have been detected in the Bantu people), as to the continuators of the most primitive type of man (s. *Races* by Coon, Garn, Birdsell), of the most primitive culture (hunting and gathering), and of the most archaic, now accessible structure of language. In our article *Kritische Bemerkungen zu Skalička's Aufsatz „Über die sog. Primitivsprachen“* („Lingua Posnaniensis“, v. VII. Poznań 1958) we tried to establish the characteristics of the primitiveness of language.

We may give them here in short:

1. Phonetic system that is characterized by some blocklike sounds (great expressiveness, small economy of the articulatory effort); there is no opposition voiced: unvoiced; fricatives, affricates, and lateral sounds are in statu nascendi, they only begin to appear; pressed vowels (or vowels with pharyngeal roughening) occur.

2. Neither stress nor duration have phonemic value by themselves, i. e. they do not serve to distinguish separate words; this

is done, however, by different intonation, the so-called semantic tone; the syllable is mostly of the type C(onsonans) + V(ocalis).

3. Monosyllabism prevails.

4. Reduplication is used not only for grammatical purposes but also for the formation of words.

5. Words are separate roots without any affixes or formatives; lack of classification of nouns; lack of verbal aspects.

6. The function of the words has not been differentiated yet into grammatical categories.

7. The function of formatives or particles, or words expressing some relation is fulfilled by meaningful words.

8. The words (usually two, no more) composing a syntactic group are not tied to each other by any formal element (formative, morpheme), but only by position, tone and gesture; there is no passive voice.

9. The sentence that may be called asynthetic one consists generally of two syntactic groups; their mutual tie relies on position, tone and gesture.

10. Subordinate clauses do not exist yet.

11. Sentences are bound together in the paratactic way; mostly there are no conjunctions at all; their function is fulfilled by meaningful words.

12. There is an exceedingly small number of words that could be considered as abstract.

13. There is a small number of numerals, generally two; three means already the same as „many“.

14. A small dictionary, what is after all adequate to the small reach of wisdom of a hunter and gatherer.

So much as to the features of primitiveness of language. Almost all of them are to be found in Bushman. As the matter is of great importance for our further consideration we may call attention of the reader to our article *Bushman as a language of primitive type*, „Folia Orientalia“, vol. IV. Kraków 1963. The original language of the Pygmies was in principle „bushmanlike“, what we tried to demonstrate in the article *Problem języka pigmej-skiego* („The problem of the language of African Pygmies“). „Lud“, vol. XLII, Wrocław 1956.

Now let us see the opinions on Bushman of two well-trained scientists who as professors of the University of the Witwatersrand in Johannesburg had many occasions to study Bushman in the field and to observe the speakers in their daily life. Here is what C. M. Doke writes in his *An Outline of ≠Khomani Bushman Phonetics*, s. *Bushmen of the Southern Kalahari*, Johannesburg 1937, p. 61, p. 77, p. 87:

„The phonetics of this section of the Southern Bushmen closely resembles in general features that of the '!khũ, a tribe of Northern Bushmen, whom I studied 1925'. The basis of most words is monosyllabic, tone occurs but not stress, and the range of tones seems to be the same as with '!khũ. As with '!khũ, so with ≠khomani all syllables end with vowels or nasal consonants. The vast majority of words commence with a click, the quick succession of which in speech is an outstanding feature of all the Bushman languages. While ≠khomani is an isolating language it nevertheless employs certain formatives, such as prefixal *ka-*, suffixal *-si* and *-ce*, and sentence formatives such as *he*, *ca*, *ku* and the pronouns. It is important to notice that these, without exception, are devoid of clicks. Is it that they are a later development due to outside non-Bushman influence? There are many more of these in ≠khomani than in '!khũ.

The Sound Divisions of ≠khomani

≠khomani sounds are naturally divided into the two main divisions of vowels and consonants, but the latter are sub-divided into emitted consonants and click consonants. Emitted consonants are those in the production of which the whole movement of the speech organs emits or drives the air outwards. In the case of the click consonants the rarefaction produced causes at least a momentary inrush of air.

In each of these three divisions another important feature of Bushman phonetics is exemplified, *the indefiniteness and variability of the sounds*.

With the vowels it is most noticeable how wide the phoneme range is, for instance the phoneme represented by *a*, varies from *ə* to *ɪ* to *ɑ*, and similar variations occur with other vowel phonemes.

⁷ Cf. *An Outline of the Phonetics of the Language of the Chũ: Bushmen of North-west Kalahari*, Bantu Studies, Vol. II, pp. 129—165.

In the case of the emitted consonants, it will be seen that *b*, *p* and *v* are varieties, as are *k* and *c*. In the case of the clicks there is also confusing variety, voiced forms and ejective forms each at times being substituted for the plain velar releases.

General Observations on the ≠khomani Emitted Consonants:

To summarise, a glance at the consonant chart shews how retarded the consonant system is in ≠khomani, with a heavy percentage of phonemes palatal, velar and glottal. There is a complete absence of dentilabial emitted consonants, this lack being to a large extent made up by the use of the labial clicks, which are often pronounced dentilabially. The paucity of voiced fricatives, there being only *v* of the *b*-phoneme and *h*, an incidental non-significant form; and the complete lack of voiced affricates, are most noticeable. In fact real voiced emitted consonants seem to be confined,

- (a) to the nasals, of which there is a full range;
- (b) the flapped lateral;
- (c) the *b*-phoneme; and
- (d) the infrequent occurrence of *j* and *g*.

In considering these emitted consonants, it must always be remembered that it is the clicks which play so large a part in the vocabulary; it is not surprising therefore that the emitted consonants are not so full in example as with non-click languages.

Indefiniteness of the Clicks in ≠khomani.

As with the vowels and certain of the emitted consonants, there is, in ≠khomani, a certain amount of *latitude and changeability* even with the clicks. Some of this difference, however may be dialectal or individual. For instance for „riempie“ *Malxas* gave !*kan* while /ʔən gave ≠*kan*. Greater latitude is noticed in regard to the click accompaniments, for „cheetah“ I recorded !ʔaɸu and !kɣʔaɸu; for „see“ /*ve* and /*vɸi*; for „tsamma knife“ - ≠ʔaũ and ≠vaũ; while //ga-//va had a definite tendency towards voicing, e. g. -//gaa for -//kaa (night), ○goke for ○khoke (firewood), !goba for !koba (skin petticoat); /ʔən similarly substituted certain voiced forms, e. g. !gana for !kana.

After these highly valuable remarks on Bushman phonetics of the undoubtedly best investigator of the subject let us see what

L. F. Maingard writes about the grammar of Bushman in the article *The ≠Khomani Dialect of Bushman: Its Morphology and Other Characteristics*, see *Bushmen of the Southern Kalahari*, p. 258—260:

Conclusion

We may now ask what is the sum total of our linguistic analysis. We can sum up these results in a few brief paragraphs.

1. We must abandon the attempt to apply the very elaborate and comprehensive scheme of „parts of speech“ to the ≠*khomani* dialect. We must substitute to it a much more simplified system of classification of only two grammatical categories:

- (i) words denoting concrete notions of objects and persons (nouns and pronouns);
- (ii) words denoting concrete notions of actions or states (verbs).

All the more abstract conceptions of our European grammars, such as adjectives, adverbs, a highly developed numeral system, etc., find no place in our revised classification. The conception of tense does not exist and the ≠*khomani* speaker replaces the notion of action in relation to time by that of action in relation to space, which is infinitely more concrete and subjective.

His chief morphological mechanism is the „double verb“, again a very concrete method corresponding to his grammatical notions, and that leads us to the extreme simplicity of the ≠*khomani* sentence structure, where juxtaposition and not subordination is the principle. Above all, it is the overpowering conception of the concrete or, to put it negatively, the absence of the abstract, which dominates the whole system of ≠*khomani* morphology and, consequently, its syntax or order of words and sentences.

2. It is not in the field of morphology and syntax alone that concrete conceptions govern everything. We find the same state of things in the ≠*khomani* vocabulary. Thus we have a word for expressing the „state of being ill“ ○?w?i. but we cannot say in ≠*khomani*: „my illness has been the cause of my absence“. Translating these words, the speaker would say something like this: *vca* ○?w?ija *veev?v* //ko //ga, literally: „I + state of being ill; I not come“.

There is no lexical mechanism for forming compound words to express abstract conceptions, as we can in English, e. g. *friendship* from *friend* and *greatness* from *great*.

Further, the ≠*khomani* speaker avoids generalities. He has no word for the whole Bushman race, but designates each Bushman by the name of his tribe, e. g., ≠*khomani*, /?auni, /χam, etc. His dialect does not know a word for „animal“, but he has a rich and impressive catalogue for the numerous and different species of antelopes he shoots, !kai, „gemsbok“, etc.

3. In his general style, there are traces of his preference for the concrete. Such are his repetitions for the sake of emphasis: *na si /vau?a, v si /vau?a, v si /vau?a*, „I shall marry you, I shall marry you“ in Text II. Or again, his love of onomatopoeic effects which at the same time fit in with the general meaning of the story; e. g. *ha!gaʔaka, ha !gaʔaka, ha !gaʔaka //va*, „rest assured of it!“ conveying the determination of the wolf and at the same time using the clicks to imitate the sound of his pattering feet, or that other sentence in an unpublished tale: *na ca !kai, na ca !kai, na ca !kai*, „I run, I run, I run“, expressing the flight of the jackal and the noise made by his feet.

4. It is true that rudiments of inflexions or what appears to be inflexions exist. But most of these, as we have seen, can be explained as pronouns.

What do all these observations, based on the results of our investigations, lead us to? Language is a function of man living in society. It is the instrument he has at his disposal to communicate to his fellowmen the ideas he has in his mind. Can we expect that instrument to be anything else than one which is fitted to the quality of the mind which uses it? In other words, we are entitled to expect that language, not merely that of the speaking unit in a given society, but also of the sum total of all the speaking units composing it, will correspond to the general state of culture obtaining in that society or, alternatively, to the general state of mental development conditioned by the state of that culture.

The ≠*khomani* community has been for centuries living an isolated life, in small family groups, cut adrift, in inaccessible deserts like the Kalahari, from civilising influences. So much so, that they seem to have preserved their own social organisation,

remaining at the hunting and collecting stage of cultural development, without agriculture, without herds or flocks, without houses or other clothing than rough skins, in just the same state now as in the days when they were noticed by early observers. All these are rudimentary cultural processes which could not give rise to a high state of mental development, except in the few directions of their own social pursuits.

The ≠*khomani* speaker has, therefore, no occasion for abstract discussions. His elementary ideas move within the narrow field of his own simple needs. One of his social urges is to tell his fellows of the facts of his daily routine and the imparting of these breeds in him a vision of the concrete to which his language corresponds. His is the language of the primitive man of action, not of the dreamer or the philosopher. His neat, brief sentences, all verbs and nouns, express all he wants, his hunting, his love affairs, the building of a hut, the search for water. No more convincing proof of this could be given than is contained in the texts that follow, where all is direct and simple, where there is no style, no ornamentation, no refined rhetoric, but the endless repetition of the child, who is at pains to drive laboriously home to his hearers the few ideas he has of the things of this life which surround him“.

And now we shall see if the territorial reach, that Bushman languages covered originally justifies the assumption that they were the most primitive source, out of which the further three language groups of Africa arose. As one of the many proofs in this respect we shall repeat the opinion of G. Van Bulek, who worked out the languages Khoi for *Les langues du Monde*, op. cit. p. 905:

„... la race Khoi, qui n'est répandue aujourd'hui que dans le Sud de l'Afrique... peuplait autrefois les savanes de l'Afrique Orientale et Septentrionale et se rattache par ses origines premières aux Pygmées et Pygmoides de la forêt tropicale“. Their traces (e. g. cave drawings) are to be found in the whole area of Africa, as Baumann, Thurnwald, Westermann write in the *Volkerkunde von Afrika*, (Essen 1940).

And now, while we draw our attention to the above mentioned three postulates, let us place the four language groups in their

respective milieu of nature, anthropological type and culture, and then let us try to reconstruct their process of linguistic evolution.

I. Kh) The natural environment of the Khoi is now the salty steppe, the half-desert Kalahari and the desert Namib. In the *Volkerkunde von Afrika* this milieu is characterized as the Bushman culture province (Nr 1).

S) „West Atlantic culture province“ (*Volkerkunde von Afrika*, Nr 23) with the centre in Nigeria and Ivory Coast is the milieu of the West Sudan linguistic group. The natural environment is formed by tropical forest and moist steppe.

B) The most typical for Bantu is Nr 13. It is called in the *Volkerkunde* „The coastal eastern province“; nature: the coastal forest and moist steppe.

H) Finally, the typical milieu of the Hamites is Nr 17 of the *Volkerkunde* „The northeastern African herdsmen; nature: the salty steppe.

II. The racial (and ethnical) types of the representatives of the respective linguistic groups are to be summarized in the following way — here it is already noteworthy to observe some correlation of the milieu with the racial type, e. g. in the case of the slender built of the body with the Hamites (Wüstentypus — the type of the desert) that is adapted to the steady dissipation of heat, because a certain mass of the body does not retain so much heat with a great surface as the same mass with a small, spherical and thick-set body built.

Thus, we have with the Kh(oi):

Kh) The Khoisan race is characterized by the small stature, prognathism, small hands and feet, shrivelled little-haired skin, steatopygy of women; in short, infantilism of the body that is accompanied by the psychic straits of a child (Dart, Passarge).

(Sudan). The typical races of the bearers of West Sudan languages are negrid and palenegrid. Their characteristics are medium, sometimes pygmoid stature, medium-long till brachycephalic head, prognathism, thick lips, broad nose, thin legs and long forearms, finally somewhat more hirsute skin. These bodily features are accompanied by the psychic of the youth whose exuberance or vitality is shown a. o. in ... the boasting of physical fitness (example: on the occasion of the harvest festivities among

the tribes Bayot and Balante there are arranged wrestling fights, the participants of which are all the young bachelors of the village; he who wins remains bachelor, and the defeated is allowed to marry).

Already from this superficial review of the racial features as well as from the neighbourhood of the territories inhabited by the Pygmies (Cameroons, Gaboon, Kongo) we gain the impression, that the bulk of these peoples are Pygmoid tribes, who are the nearest relatives of the Pygmies and who, linguistically, stand very near the Pygmy-Boskop-Bushman group. This supposition will be confirmed when we come to review the linguistic features.

B(antu). The negrid race with some admixture of the oriental race (Arabs). Bantu Negroes are rather dolichocephalic, broad-faced, with smaller prognathism and less black skin than the Negroes of West Sudan. In their mental attitude some traits are observed that are very frequent among agricultural tribes, e. g. some submissiveness, cult of power, respectively of supernatural forces and magic connected with it; at the same time the traits are proper to the psychic of woman, which joins them to some degree with the matriarchate as a dominant feature of Bantu social structure. In the language itself we have some features that are conformable to the psychic of woman too. These are the highly developed classification of nouns (woman likes to arrange objects and to put them into the labelled boxes or drawers); the one-centred sentence, i. e. the sentence where the force (agens) or the place causing the change of the situation forms the centre of the information (Subject and its prefix).

H(amitic). With the Hamites the dominant racial type is the ethiopic race, sometimes mediterranean with the admixture of oriental race. Characteristic for the Hamites are their high stature, slender body built, medium head, narrow face, thin lips and broad breast. These bodily features are usually accompanied by the psychic of man which is to be seen in the attitude of a conqueror, in the cult of heroes, of men acute and shrewed. These traits of character have been created in the milieu of the steppe and by the economics of herdsmen-nomads; in the language they are reflected in the phonetic system (the ejective or emphatic sounds, and the frequent use of glottal stop before vowels, which

gives them, while speaking, the appearance of a ruler — Westermann's „Herrengepräge“), and in the grammatical gender. The herdsman pays a special attention to the sex of the pastured animals, as this decides on the increase of the herd and consequently on his wealth. The stressing of the importance of the verb, being the expression of movement and activity, belongs also here (Table I).

III. a) Let us go over to the characterizing of the material culture:

Kh) The material culture of the Khoi peoples is determined in the *Völkerkunde* as the „Eurafrican culture of steppe-hunters“, the main features of which are gathering and hunting.

S) With the peoples of West Sudan we meet the next stage of cultural development that relies mainly on hunting, fishing and the beginnings of hoe-cultivating. This is the so-called „Old-nigritic and Hylean“, i. e. Forest culture of West Africa.

B) Hoe-tilling is typical for Bantu, which in this culture province is one of the basic features of the „matrilinear Bantu culture“ and of the „old-nigritic culture“.

H) With the Hamites, as we have mentioned above, the chief type of economics is pastoralism and cattle-breeding that are the components of the so-called „East-Hamitic culture of cattlebreeders“.

III. b) As to the social culture the four linguistic groups present some quite clearly outlined developmental sequence.

Kh) The social rights of both sexes, are not differentiated yet with the Bushmen; there is something like an equilibrium of the social importance of both sexes which relies upon the equal value of the work of women (gathering) for the family's living and that of men (hunting).

S) With the speakers of Sudan languages the work of women (hoe-cultivating) begins to become more significant for maintenance of the family.

B) In Bantu this leads to the matriarchy.

H) With the Hamites the work of men decide on the living of the family, which has its expression in the patriarchal structure of the society.

It is to be added here that the above mentioned types of economics have a great influence on the political development

of the respective societies. Thus, the economics of hunters and gatherers does not favour the building of greater, compacter state organisms. The same is to be said about the economics of hoe-tillers, and only the economics of herdsmen creates the conditions for the rise of state on a greater territory.

III. c) Likewise in the spiritual culture we find some utter, uninterrupted course of evolution:

Kh) The belief in *mana* without ceremonial rites, priests and sacrifices; mythological explanation of the phenomena.

S) Preanimism, chthonic religion and individual totemism; preanimism in folklore.

B) Animism and magic, medicine men; animistic explanation of the phenomena.

H) Polytheism with rites, priests and sacrifices; cult of special trees, snakes; cult of heroes; some tendencies towards realistic explanation of the phenomena.

IV. Now, let us enter the area of language so that we may see, if its elements and the ways of joining them into the respective linguistic structures form some uniform course of evolution. At the same time we shall see which elements in the structure of linguistic forms proper to each group are the common inheritance, and which have been produced as something new, adequately to the change of conditions of life, to the — in each linguistic group — different milieu of nature and culture as well as to the different physical and psychic type of the speaker.

a) Phoneme and syllable. Kh) Click blocks and ejective phonemes are typical; they appear only at the beginning of the word, e. g. S₁ /kχ'a „hand“, N₁ kχ'a „ground“.

S) Typical are Disjunctive (labiovelar) phonemes; they are the direct continuators of the palatal labialized click blocks and appear also only at the beginning of the word, e. g. E. *kpé* < S₁ !kwe „stone, rock, sphere“, E. *gbà*, *gbà* < N₁ !kwà (S₁ !gwa:) „to break, strike“.

The Ur.-B.- *-vwe* < !*kwe* corresponds to E. *kpé* < !kwe, which gives in Zulu (*ili-*) *tshè* and in Hausa (Chadic subfamily of Hamitic) *dú:-tsè* „stone“; of course, the change of the high tone in Ewe for the low tone in Zulu and Hausa is due to the fixed tone patterns that the word entered here: *ili-* is the respective prefix and

dú:- < *duk*, *duka* „whole“, thus H. *dú:-tsè* means lit. „stone on the whole“ = „the mere stone“.

The above example E. *gbà* has also its continuators in Zulu and Hausa, namely, E. *gbàgbà* < !*kwà* !*gwà* gives in Z. (*ilú-vàvà*) „split, crack, cleft; flaw“ and in H. *fafa* [fà:fa:] 1. „to clear a large tract of uncultivated ground for farming“ = „to break clods of hard soil and stones“, 2. „to split open gourds“.

B) Injective phonemes are typical for Bantu; they appear only at the beginning of the word and continue mainly click blocks as 'b < !*kw*, 'd < !*kw* (/'), e. g. Z. 'ba-, Swahili *wa-*, E. *wó* „they“; these forms arose out of N₂ !*kwà* „man, men“, S₂ !*kwa* „person“ (cp. H. *Hausa-wa* „the Hausa“, Sw. *wa* — *tu*, E. *ame* — *wó* „people“).

Zezuru 'da'da „be impudent“ < Nama /'à /'à „to sharpen“, H. 'dá:'dà „sharpen, be impudent, treat violently“, F. 'da'da 'id'.

H) Ejective and emphatic phonemes are typical for Hamito-Semitic; as the last ones do not occur in H. we shall only mention that in the work „African and Indoeuropean“ we tried to give evidence of their clicking origin, e. g. Arabic *ṭanṭan-a* < !*kan* !*kan* < !*kami* !*kami* „to make a noise“ (cp. Latin *tintin-ant aures* „there is a ringing in the ears“, Eng. *to din*, Pol. *tętent* „the galloping of a horse“).

Ejective phonemes occur only at the beginning of the word, e. g. H. *k'ari* „sting of a bee, wasp, scorpion“ derives directly from C₂ //kχ'ar-ri-ba „scorpion“, cp. C₁ //kadi „to sting, bite“; (S₆ //kai corresponds to C₂ //kχ'arri < //k'adi < //kχ'a „to cry + di „to do, make“ = „to sting“, lit. „to make cry“); in E. the corresponding word is *a-kékle* < -*klékle* < *k'arik'ari* „a small scorpion whose bite is dangerous“; in B) we have -*k'ale* and *vk'aka* „crab“, Kafir *in-k'ala* „crab“; in Ful *k'agua* „crab“, and F. *k'araya:re*, pl. *k'araya:dje* denotes „a fish with a sting“; the word //kχ'arri, however, was probably transformed, earlier than H. *k'ari* „sting“ arose, into F. *ya:re*, pl. *dja:ε* (*djahe*); *dj*, *j* < 'dj < //kχ' (cp. Eng. *crab* < *k'ariba*, Greek *κράβος*).

The lack of opposition voiced: unvoiced belongs to the phonological features of Kh); this opposition appears only in S).

In Kh) we have 7 oppositions of place of articulation together with the plosive kind of articulation, e. g. in S₂ (≠*Khomani*)

○*k*: /*k*: // *k*: ≠ *k*: !*k*: *k*(*g*):', i. e. the labial click is opposed to the dental one, at the same time to the lateral, to the alveolar and to the palatal ones, finally to the velar and glottal expiratory plosive articulation.

In S) Ewe we have 6 such plosive oppositions of place, namely *p*(*kp*): *f*:*t*:*q*:*ty*:*k*, i. e. the labial (labiovelar): labiodental: alveolar: postalveolar (retroflex): palatal: velar; two of them (*t*, *k*) are not accompanied by a different kind of articulation.

In B) Z. the number of the opposed plosive (affricate) places of articulation is diminished to 5, then we have in Zulu: *p*:*f*:*t*:*tsh*:*k*, i. e. the labial place of plosive articulation: labiodental: alveolar: prepalatal: velar; here, however, already 3 of them (*p*:*t*:*k*) are not accompanied by a different kind of articulation.

In H) Hausa we have also only 5 plosive oppositions of the place of articulation, namely, *f*:*t*:*c*:*k*:', i. e. the labial (*f* is bilabial here) place of plosive articulation: alveolar: prepalatal: velar: glottal; here again 3 of them (*t*:*k*:') are not accompanied by some different (i. e. other than plosive) kind of articulation (*c* is affricate *tʃ*, and *f* fricative).

The gradual diminishing of the number of labial phonemes along with the increase of lateral and vibrant phonemes as well as with that of affricate and sibilant phonemes point also to the uniform chain of evolution (Table II).

Here is the list of them in a tabular form:

	≠Khomani	Ewe	Zulu	Hausa
Labials	!kχ'w, !kw, !khw !kw, !g, !kh, !wh, !h, !' 9	<i>f</i> (<i>p</i>), β, <i>kp</i> , <i>gb</i> , <i>b</i> , <i>f</i> , <i>v</i> 7	<i>p</i> ', 'b, <i>f</i> , <i>v</i> <i>b</i> , <i>ph</i> 6	<i>f</i> , 'b <i>b</i> 3
Laterals & Vibrants	The flapped lateral consonant ɸ 1	<i>l</i> <i>r</i> 2	<i>l</i> , <i>hl</i> , <i>dl</i> 3	<i>l</i> <i>r</i> , <i>r</i> [ʃ] 3
Affricates	<i>ts</i> ' <i>kχ</i> ' 2	<i>ts</i> , <i>dz</i> 2	<i>ts</i> [<i>ts</i> '], <i>tsh</i> [<i>ts</i> '] <i>j</i> [<i>dʒ</i>] 3	<i>ts</i> [<i>ts</i> '], <i>c</i> [<i>tʃ</i> '], <i>j</i> [<i>dʒ</i>] 3
Sibilants	<i>s</i> 1	<i>s</i> , <i>z</i> 2	<i>s</i> , <i>z</i> , <i>sh</i> [ʃ] 3	<i>s</i> , <i>z</i> , <i>sh</i> [ʃ] 3

It will be of use to show what ways the transformation of click blocks was going on in Zulu, because this language is in some respects just half-the-way between the clicking and non-clicking languages.

1. While the most archaic Bushman (S₁ and N₂) has 5 clicks and Hottentot 4, Zulu has three of them (/k, //k, !k) — of course, they are not here of primary character as in Bushman, but a secondary acquisition that has been introduced by the Bushwomen who had fallen into captivity of Zulu warriors.

2. Just as Bushman Zulu has semantic tone.

3. It has a great deal of ideophones, many of which especially those that are labelled as Hlonipha (the language of women) terms resemble Bushman or are of Bushman origin. According to the general opinion of the linguists ideophones (like onomatopoeias), being marginal forms of linguistic activity, should not enter the system of derivation and become fully equipped verbs or nouns. However, it ought to be stressed here that most of Zulu ideophones are in grammatical usage as well as verbs and nouns that are not derived from ideophones.

The above reasons (items 1) 2) 3) influence us to give here the Chart of Zulu Click Blocks with their direct clicklike (ejective and injective) and expiratory descendants. This seems to be the best approach of the clicking to the non-clicking phonetic systems, especially for those linguists who are not familiar with these exotic sounds.

b) Syllable (Table III).

Kh) The typical syllable for Kh) is the above !*kwa* that is opposed to the other syllables by its inherent tone, nasality and sometimes by the pressing (pharyngeal roughening) of the vowel, e. g. N₁ !gòà' or S₄ kə'ə'a „to be afraid“.

S) In the continuation of this !*goa* in E. vovó „fear“ we see the characteristics of the syllable in S); the syllable is provided with tone, nasality, but there is no epiglottal friction, i. e. no pressing of the vowel.

B) Generally the Bantu syllable has not a special tone (semantic tone), no nasality, but it may be stressed, e. g. Mpongwe *i-bobo* „fear“ (cp. the above !*go-a* „to be afraid“).

Chart of Zulu Click Blocks with Their Derivative Phonemes

	Dental	Palato-alveolar	Lateral
Radical (Plain)	$k : t'$ k	$!k : p'$ k	$//k : t'$ k'
Aspirated	$/kh : th$ kh	$!kh : ph$ kh	$//kh : hl$ kh $n//kh : nhl [ntf']$
Voiced	$/g : (z)$ g	$!g : 'b$ g	$//g : dl$ g $n//g : ndl (ndz)$
Nasal	$/v : d$ v	$!v : b$ v	$//v : l$ v
Voiceless Fricative	$/h (/kh) : s$ kh	$!h(!kh) : f$ $!k_g : f$	$//h : f$ h
Voiced	$/h (/g) : z$	$!h (g) : v$	$//h : (z)$ $hh [h]$

The respective examples will be given later on.

H) The Hamitic syllable is similar to the Bantu one, it differs, however, as to the number of components: In Kh), in S), and in B) syllables are mostly of the type C+V; here H) syllable begins to be a closed syllable of the type C+V+C, where the final vowel of a bisyllabic form has vanished, e. g. Somali *gor* „to carve, write“, cp. N₃ *//gala*, S₅ *kuala*, C₁ *kola* „to write“, N. *//karo* „to scratch“; Ur-Sudan *gá-* „to scrape“, Ur-B. *kola*, *kovha* „to carve“. In Kh) the few closed syllables can end in some nasal consonant -m, -v(n), in Hausa they end beside in -m, -n, also in -r, -s, -b and -f.

c) The characteristic feature of the word in Kh) and S) is the monosyllabism of root-words.

In B) the stems are mostly bisyllabic.

In H) there begin to appear beside bisyllabic (in Hau. about 55% of the basic vocabulary) also trisyllabic words (Hau. 24%).

The beginning of the word is in all groups one consonantal phoneme which is

in Kh) a click block (70%—80%), an ejective phoneme or an expiratory (usually guttural) phoneme.

In S) *kp*, *gb* are considered as one phoneme.

In B) the consonantal groups *mb-* *nd-*, *ng-* are treated as one phoneme and do not contradict the above rule referring to the beginning of the word.

This rule is observed in H) too. In Hau. *kw*, *k'w* or *gw* are one phoneme.

The above rule (1 consonantal phoneme at the beginning of the word) refers also to the middle of the word with the addition for H), where there are consonantal groups with the first element *m-*, *n-*, *r-*, *s-*, *b-*, *f-* plus any consonant as the second element.

The words in Kh) end mostly in vowels, and only very seldom in nasal consonants -m, -v(n).

In S) and B) only vowels are admissible at the end of the word. In H) beside vowels there appear at the end of the word sometimes -m, -n, -r, and -t.

Examples: S₆ *//kã* „horn“, N. *//nã* „to be grown up“, *//nã-b* „horn“; E. *dzo*, *dzõ* „horn“ G. *dzo* 'id.', *dzó* „to go away, escape; to vomit“; Pe̍i (Bantu) *na-k'a* „horn“; Hau. *k'a-fo* or *k'a-ho* „horn“, Ful *k'afo:ru* „the horn for sucking out the blood“. These examples show the gradual enlargening of the root-word with new elements by the way of prefixation in Pe̍i, and by that of suffixation in Hausa (Ful).

The second example shows the beginnings of classification of nouns in S):

In Kh) S₄ *≠ku:*, S₁ *tu:* „mouth, face, man“, pl. *tutu* „men“, E. *tsú* „strong“, *a-tsú* „man“, i. e. „this-strong“ or „(he) is-strong“, in Swahili (Bantu) *m-tu* „showing (with) the mouth“, i. e. „(the creature) showing (with) the mouth“, i. e. „the speaking creature“ (cp. S₁ *mu: |mu* „to show“); in Hau. *multum* „man“, *mù-túm-in* „this man“.

d. Syntactic group. In Kh) the syntactic group consists of two structural elements, e. g. *//án -≠ké* „hut — bottom“, i. e. „(on the) bottom (of the) hut“; the mutual tie of these two elements relies upon 1) the position of the genitive before the nominative, 2) some small alteration of the tone of the first element, 3) the gesture expressing the relation „on“; both words are meaningful words; there is lack of any formal tie in the shape of morphemes (Tables IV, V, VI).

In E. the same idea is expressed by means of 3 structural elements *xo té dzi*; the tie relies here like in Kh) upon 1) the same position (gen. before nom.), 2) some alteration of the inherent tone, however, instead of the gesture there appears the formal element *dzi*, which, as a matter of fact, is a meaningful noun and denotes 1) the upper part, sky, 2) surface, 3) up, 4) on, 5) to, towards. Here it functions as a preposition or as an advreb of place; we would be justified to call it half-morpheme, as it plays the role of a meaningful word as well as that of a morpheme.

In Swahili the syntactic group „on the floor of the hut“ — *chi-ni y-a nyumba* is expressed by 5 structural elements, two of which are meaningful words, viz. *chi-* „earth, bottom“ and *nyumba* „hut“, and three are morphemes, namely: 1) *-ni* „in, inside, on“, 2) *y- < i-*, which is the demonstrative pronoun of the respective class of nouns and points to *chini* as to the nominative that is joined to the genitive *nyumba* by means of the morpheme 3) *-a*; then it sounds literally: „earth (bottom) — on it — ...“ or „...on this — of hut“. There is here neither any gesture in the phonemic function (gesticulation can give here only some additional not basic or integral element as it is in Kh) and S), nor any intonation, the change of which characterized the word *//in* as the genitive; however, what is striking here in B), that is the change of place of genitive as to the nominative: Kh) and S) Gen. + Nom. > B) and H) Nom. + Gen., where the logical syntax of B) succeeded to the emotional syntax of Kh) and S).

In order to understand these denominations let us take another example, e. g. the house of the father, i. e. the relation of the thing to the possessor thereof; it is the emotion that makes us put the possessor (the human feature or the feature striking the man) first, while the logic requires just the opposite word order, because this is the logic that says, first must be a thing and then the possessor may be mentioned as an additional characteristic. The second question is how such a change of word order just in opposite direction could take place. Of course, the opposite word order (Nom. + Gen.) was preceded by the stage where both word orders (Gen. + Nom. and Nom. + Gen.) were admissible. In Hau. *sariki go:na* beside *go:na-r sariki* we have the traces of such

a stage, because the language of nowadays favours quite utterly the second expression (Nom. + Gen.).

Some similar process is found in the sequence: the prevailing of prefixation B) > the prevailing of suffixation H). There are languages where the same word can be determined by a prefix and a suffix at the same time.

In Hau. the syntactic group „on the floor of the hut“ is also expressed by 5 structural elements: (a) *bisa-n k'asa-n 'daki*; two of them *k'asa-* „the earth“ and *'daki* „hut“ are meaningful words, two are morphemes of demonstrative character *-n*, and one is halfmorpheme *bisa-* „surface“ or „on“; the literal translation reflects to some degree the semantic and relational function of the respective structure: „surface — this earth — this hut“ = (on) surface — belonging (to) earth — belonging (to) hut“. Although here the rule of suffixation, being joined to the beginnings of suffixation in Kh) and S), while in B) prefixation dominates, however, the logical syntactic rule, that places the nominative before the genitive is kept; the deictic element *-n*, that announces the possessor, i. e. the word with the function of genitive, is added to the possessed thing, i. e. to the nominative.

There belong still to the characteristics of syntactic group:

- α) the formation of plural,
- β) classification of nouns,
- γ) aspects of the verb, and
- δ) the passive voice.

For the sake of conciseness and clearness we shall give them in tabular form, adding the characteristics of the sentence.

Conclusions

Language is to be considered as a whole of symbols that grasps the more or less complicated reality in the way, which corresponds to two opposite trends, to the exactness or precision on one hand, and to the sparing of articulatory energy on the other hand.

	Khoi	S (Ewe)	B. (Sw. & Z.)	H. (Hausa)
Plural	By the way of red. S ₁ <i>tu</i> , pl. <i>tutu</i> „man“ and suff. S ₄ <i>//ha</i> , pl. <i>//ká</i> - <i>//n</i> „child“	By the way of suffixation <i>ame</i> „man“, <i>ame-wó</i> „men“	In the frame of classification of nouns: <i>m-tu</i> „man“, <i>wa-tu</i> „men“	By the way of red. and suffixation, <i>k'ofa</i> , pl. <i>k'ofofi</i> „door“
Classification of nouns	Does not exist; the beginnings: S ₄ <i>si</i> <i>/ku</i> „bird“, <i>si</i> „to be, this“ <i>/ku</i> „feather“	Pronominal <i>a-ǃu</i> „tooth“, <i>a</i> „this“, „he“, <i>ǃu</i> „to bite“	Qualificative <i>vi-ti</i> „stools“ Ur-B. <i>vi-a</i> „tool“, <i>m-ti</i> „tree“	Gram. gender <i>mace ts'ofuwa</i> „woman old“, <i>sariki ts'ofu</i> „king old“
Aspects of the verb	Do not exist; Double Verb. ≠ <i>Kh.</i> <i>/ke</i> + <i>/nau</i> catch + marry = „take a wife“	3 verbal aspects: <i>na</i> - Habitual, <i>le</i> - Ingressive, <i>ná</i> - Cohortative	8 aspects: 1) relat., 2) causat., 3) reflexive, 4) recipr., 5) neutropass. 6) invers., 7) iterat., 8) stative.	Much greater number of Verbal Aspects (about 15) — suffixation
Passive Voice	Does not exist. See R. Stopa, Passive Voice ...	Does not exist	Exists	Exists
Compound Sentence	Asynthetic. Lack of Subord. Clauses	Monosynthetic. Few types of Subord. Clauses	Bisynthetic. More Subord. Clauses	Bisynthetic. There are Condit. & Relat. Clauses

At this we must realize the fact, that in some determined anatomical and psychical conditions as well as in the given milieu of nature and culture the respective language is the most perfect product of this milieu and of that human background. If we remain far from any desire to evaluate the usefulness or intelligence of

separate racial types (racism), of cultures and languages, then we can tell, that the linguistic evolution proceeds from primitive and little-differentiated forms to the forms that are more and more complicated. At the beginnings these forms are blocklike, i. e. only roughly outlined, strongly expressive, and uneconomic (there is some great amount of energy in producing them).

1. Originally, i. e. in Kh) these are cries and ideophones, in S) and in the Bantu languages that are very near Bushman territory this is only a group of exclamatory and adverbial forms, while in H) there are only the traces of them (chiefly onomatopoeias). The linguistic thought, while it becomes more and more subtle, follows the way of generalizing the names of things and phenomena, putting them first into some special classes (where there is also the category of plurality of identical objects), then into the form of the grammatical gender and into the category of number.

First of all already in Kh) the differentiating of nouns from verbs is accomplished. At the same time some deictic elements (originally gestures of the tongue) receive some verbal character (to be here, there, and to be this or that). Some words denoting concrete objects become typical (classes), and these in (the course of the further development) get the character of abstract nouns.

2. Beside the same developmental course there are some linguistic facts that point to the above outlined process. These facts are:

1) Reduplication as a factor of word formation comprises in Kh) about 10% of the basic vocabulary (about 750 words dealing with the elementary objects and elementary functions of human organism), in E. 8%, in Sw. 3,7%, and in Hau. 3%.

2) The full dictionary of a Bushman language, e. g. of the */xam* amounts to 3.000 words, in Ewe to 18.000, in Zulu to 36.000 and in Hausa about 40.000.

3. The linguistic evolution that we have presented above confirms us fully in the statement that all the four linguistic groups of Africa form one genealogical course.

While we are submitting here the results of our investigations of many years, we are conscious of their deficiencies and mistakes. These are quite intelligible in a pioneer work, we are of the

opinion, however, that the critics of specialists will enable us to find them out, and the further studies will allow us to eliminate them and to complete the gaps.

EXPLANATION OF SYMBOLS AND ABBREVIATIONS

<i>i</i> as in French <i>si</i>	<i>kh</i> a sound <i>k</i> and aspiration <i>h</i>
<i>i:</i> " " <i>me</i>	<i>g</i> as in <i>gig</i>
<i>y</i> " " French <i>du</i>	<i>h</i> " " <i>hit</i>
<i>y:</i> " " German <i>süss</i>	<i>x</i> " " German <i>Hut</i>
<i>ə</i> " " the before a consonant	<i>χ</i> uvular fricative
<i>e</i> " " French <i>été</i>	<i>m</i> as in <i>mid</i>
<i>e:</i> " " German <i>See</i>	<i>n</i> velar <i>m</i>
<i>ε</i> " " French <i>è</i>	<i>n</i> as in <i>nip</i>
<i>ε:</i> " " " <i>ais</i> in <i>Calais</i>	<i>ɲ</i> (ñ) palatal nasal
<i>a</i> " " " <i>a</i> in <i>papa</i>	<i>v</i> as in <i>sing</i>
<i>a:</i> " " German <i>kamen</i>	<i>l</i> " " <i>lip</i>
<i>o</i> " " <i>o</i> in <i>Sonne</i>	<i>ɭ</i> a sound between <i>l</i> (<i>d</i>) and <i>r</i>
<i>o:</i> " " <i>haul</i>	<i>r</i> rolled <i>r</i>
<i>ɔ</i> " " <i>bun</i>	<i>ɾ</i> a sound between <i>n</i> and <i>r</i>
<i>o:</i> " " <i>November</i>	<i>w</i> as in <i>wit</i>
<i>o:</i> " " German <i>ohne</i>	<i>f</i> labiodental
<i>u</i> " " <i>put</i>	<i>f</i> bilabial fricative (unvoiced)
<i>u:</i> " " <i>pool</i>	<i>ɸ</i> the voiced bilabial fricative
<i>u</i> <i>u</i> with unrounded lips	<i>v</i> as in <i>vivid</i>
<i>p</i> as in <i>pip</i>	<i>s</i> " " <i>sit</i>
<i>p'</i> ejective <i>p</i>	<i>ʒ</i> lateral fricative sibilant
<i>b</i> as in <i>bib</i>	<i>z</i> as in <i>zeal</i>
<i>'b</i> injective <i>b</i>	<i>ʃ</i> " " <i>ship</i>
<i>t</i> as in <i>tit</i>	<i>ʒ</i> " " <i>vision</i>
<i>t'</i> ejective <i>t</i>	<i>ɖ</i> retroflex & emphatic <i>d</i>
<i>ts'</i> ejective <i>ts</i>	<i>'d</i> injective <i>d</i>
<i>tl</i> lateral <i>t</i> (<i>t̥</i>)	<i>t</i> retroflex & emphatic <i>t</i>
<i>d</i> as in <i>did</i> (alveolar <i>d</i>)	<i>'(?)</i> glottal stop
<i>c</i> palatal <i>k</i> (<i>k̟</i>)	<i>ħ</i> pharyngeal fricative (voiceless)
<i>k'</i> the ejective velar plosive	<i>ʕ</i> pharyngeal fricative (voiced)
<i>kx'</i> the same — affricate	
<i>ħ</i> laryngeal fricative (voiced)	
<i>s'</i> ejective sibilant fricative	
<i>j</i> as in <i>yet</i> ; <i>x</i> and <i>ɣ</i> are velar fricatives (voiceless & voiced)	
<i>kp</i> the labiovelar plosive made by opening simultaneously the velar and labial closure	
<i>gb</i> the same — with voicing	

- { behind a vowel points to „pressing“ it. (pharyngealization & epiglottal friction)
- ~ over a letter denotes nasal pronunciation
- . over a letter denotes a separate pronunciation
- high tone, 'low tone, ' mid tone
- ^ falling tone, v rising tone
- | the dental (or alveolar) fricative click, formed by pressing the front of the tongue against the teeth or alveoli and releasing it gently with a sucking sound.
- // the lateral fricative click, made by spreading the blade of the tongue across the palate and withdrawing it gently backwards and down with a sucking sound.
- /// the retroflex fricative click, made by curling up the tip of the tongue against the palate and withdrawing it sharply backwards with a croaking sound.
- ! the (pre)palatal plosive click, made by pressing the tip of the tongue against the front palate and snapping it off smartly, as if imitating the drawing of a cork.
- ≠ the alveolar plosive click, made as the palatal plosive click only with the front of the tongue far forward on the alveoli, almost on the teeth. This click is rarely used and is very difficult to make.
- ⊙ the lip click, made by pressing the lips together and releasing them as in a kiss. This click is also rarely used and is confined to the Southern Group of Bushman.

B. = Bushman	S _{1,2,3,4,5,6} = Southern tribes of Bushman	≠K. = ≠Khomani dialect of Bushman
H. = Hottentot	N. = Nama	Ha. = Hausa
E. = Ewe	N _{1,2,3} = Northern tribes of Bushman	T. = Twi (Tshi)
D. = Dahome	C _{1,2} = Central tribes of Bushman	Ap. = Apla
S. = Sudanic	K. = Korana, dialect of Hottentot	I. = Ibo
		/Au. = /Auni
		Sa. = Sandawe

Evolution of culture and												
Time and people's habitat	Climate	Languages	Man resp. People	General Denomination of Culture Stage	Economics	Phonetics						
						Kinds of sounds	Maximum of oclusions with one phoneme	Relative amount of artic. energy	Sequence of the rise of Liquidae-Vibrantes	Sequence of the rise of Sibilantes	Groups of phonemes	Amount of expiratory consonants
600 A. D. Asia Europe Asia Afr.	Subboreal	Arabic	Semites	Copper (in Asia)	Neolithic in Europe	1. ----- 2. ----- 3. ----- 4. a) Normal Exp. <i>b...</i> b) Emphatic: <i>t, d, s, z</i>	Raising of the back of the tongue (emphatic)	‡ 45%	<i>l, r</i>	<i>θ, ʃ</i> <i>s, z</i>	Various groups of 2 or 3 phonemes	29
A. D.	Atlantic	Latin	Indoeuropean	Iron	Agriculture and Pastoralism. Navigation Trade	1. ----- 2. Labiovelar: <i>ky, gu</i> 3. ----- 4. Expirat.: <i>p, b...</i>	t-1	‡ 35%	<i>l, r</i>	<i>s, z</i>	Groups of 2 or 3 phonemes	21
3000	Subboreal	Somali	Hamites	Chalcolithic	Pastoralism	1. ----- 2. Ejective: <i>p', t', k'</i> (Galla) 3. ----- 4. a) Expir.: <i>b... d...</i> b) Pharyngal: <i>ħ, ʕ</i> c) Velar: <i>k, q</i>	t'-2	t' 80%	<i>l, r</i>	<i>ʃ, s</i>	Groups of 2 phonemes	26
4000 Afr. Asia	Subboreal	Ful	Pre-Indoeurop. Pre-Semites Hamites	Late Neolithic (Near East)	Mesolithic in Europe Towns State Predynastic Egypt	1. ----- 2. Eject.: <i>k', s'</i> 3. Inject.: <i>'b, 'd, 'g, 'y</i> 4. Expir.: <i>p, b...</i>	s. Hausa	s. Hausa	<i>l, r</i>	<i>s, z</i>	<i>mb, nd</i> <i>ng, rk</i> <i>lt, pt,</i> <i>lf, br,</i> <i>ln, ld</i> <i>rs, sk</i>	24
5000 Asia Europe Asia Afr.	Warm	Hausa	Pre-Ful	Middle Neolithic (Near East)	Cattle Breeding Agriculture	1. ----- 2. Eject.: <i>k', ts'</i> 3. Inject.: <i>'b, 'd...</i> 4. Expir.: <i>b...</i>	'b-2 k'-2	'b 70% k' 80%	<i>l, r</i>	<i>s, z</i> <i>ʃ</i>	<i>mb</i> <i>nd, ng,</i> <i>nt,</i> <i>sk</i>	22
6000 Asia Europe Asia Afr.	Atlantic	Swahili	Pre-Dravidian Pre-Bantu	Early-Neolithic (South of the Caspian Sea)	Hoe-cultivation Houses	1. ----- 2. ----- 3. Inject.: <i>'b</i> 4. Expir.: <i>b, p...</i>	'b-2	'b 70%	<i>l, r</i> (In Lamba no <i>r</i> , in Herero no <i>l</i>)	<i>s, z</i> <i>ʃ</i>	<i>mb</i> <i>nd</i> <i>ng:</i> 1 phoneme	23
8000 Afr. Asia	Boreal Continental Colder	Ewe	Eurafrican Asiatic (American) Pre-Hamitic Pre-Nigritic	Late Mesolithic Tardenois -Azil	Basketery Huts Microlithic	1. No Clicks 2. Disjunctive: <i>kp...</i> 3. Injective: <i>'gb</i> (Ibo) 4. Expiratory: <i>k, p...</i>	kp-2	kp 80%	<i>l, r</i>	<i>s, z</i>	<i>kl...</i> <i>kr...</i> <i>sr...</i>	26
15 000... ...9000 Afr. Europe Afr. Asia	Alleröd Oscil. Older Dryas Time	Nama (Hottentot)	Proto-Hamitic	Early Mesolithic	Pastoralism Pottery	1. Click Blocks: ... (4 kinds of clicking) 2. No Ejectives 3. No Injectives 4. More Expir. Cons.: <i>n p (d)...</i>	k'-2	k' 80%	^r No <i>l</i>	<i>s</i>	None	11
25 000 Afr. Asia Afr. Europe Asia Europe Asia America	Postglacial Warmer	Bushman	Pre-Melanesian Pre-Australian Pre-Bushman	Upper Paleolithic Magdalenian Solutrean Capsian	Hunting Gathering Fishing Caves	1. Click Blocks: <i>/k'...</i> (5 kinds of clicking) 2. Ejective: <i>ts'. kx'</i> 3. Injective: <i>g'</i> 4. Expiratory: <i>k...</i>	<i>/k'-3</i>	<i>/k' 100%</i>	^{l'} a sound between <i>l, r, n</i>	<i>/h:s</i> phon. variant	None	11
50 000 Afr. Europe	Würm Last Glaciation	—	Eurafras- iatic	Early Upper Paleolithic Aurignac	Hunting Gathering	—	—	—	—	—	—	—
150 000 Afr. Asia Europe	Last Interglacial	—	—	Middle Paleolithic Moustier Levallois	—	—	—	—	—	—	—	—
600 000 Africa Asia Europe	Günz	—	—	Lower Paleolithic Acheul, Chelles, Pre-chelles	—	—	—	—	—	—	—	—
—	—	Chimpanzee	(Africa)	—	Gathering (Baboons—also Hunting)	1. Clicks: (3 kinds of clicking $\odot, , $) 2. Ejectives: <i>k', kx'</i> 3. Expir.: <i>m, h, g</i>	—	—	No Liquidae (Vibrantes)	No Sibilantes	None	<i>j, w,</i> <i>m,</i> <i>g, kw, x</i> 8

Syllable			Word structure								Word function								Characteristics of:
Tone patterns	Degrees of stress	Degrees of duration	Percentage of words containing syllables						% of reduplicated words	Word stock in thousands	Occurrence of parts of speech in %								1. Connecting words 2. Sentences 2. a) Subordinate Clauses 3. Compound Sentences
			1	2	3	4	5	6			Substantives	Verbs	Pronouns	Adjectives	Adverbs	Prepositions	Conjunctions	Interjections	
None	2	3	1	37	51	7	2	2	1	56	1. Inflection by means of vocalic patterns 2. Passive Voice 3. 10 Verbal Aspects. Tense 4. No Excl.: Incl. 5. 2 Genders with Nominal Forms 41 39 3,5 7 4 2 3 0,5								1. By position and morphemes 2. Bisynthetic pattern 2. a) Subordinate Clauses 3. Hypotactic (and paratactic)
None	2	3	2	22	44	21	10	1	0,5	54	1. Inflection B by means of suffixes (and vocalic patterns) 2. Passive voice 3. 2 Verbal Aspects. 5 Tenses 4. No Excl.: Incl. 5. 3 Genders with Nom. Forms 27 30 25 8 4 3,5 2 0,5								1. By inflection 2. Bisynthetic pattern 2. a) Subordinate Clauses 3. Hypotactic Subject-Object-Verb
Some traces (gram-matical tone 4 patterns)	2	3	43	46	9	1	1	—	1	?	1. Inflection A 2. The beginnings of Passive Voice 3. 6 Verbal Aspects 4. Excl.: Incl. 5. 2 Genders with Nominal Forms 28 27 16 8 11 2 7 1								1. By position and morphemes 2. Bisynthetic pattern 2. a) Subordinate Clauses 3. Hypotactic Subject-Object-Verb
Some traces	2	2	1	45	38	11	4	1	2	?	1. Preflexion II 2. Passive Voice 3. 5 Verbal Aspects 4. Traces of Excl.: Incl. 5. 35 Classes of Nominal Forms 28 29 34 3 2 2 1 1								1. By position and morphemes 2. Monosynth. and bisynth. pattern 2. a) Subordinate Clauses 3. Paratactic and hypotactic
Some traces	2	2	13	55	24	8	—	—	3	40 (35)	1. Preflexion I. 2. Passive Voice 3. Verbal Aspects 4. No Excl.: Incl. 5. 2 Genders with Substantives 51 28 5 4 5 3 3 1								1. By position and morphemes 2. Bisynthetic pattern 2. a) Subordinate Clauses 3. Paratactic and hypotactic
None	2	None	3	43	45	8	1	—	3,7	30	1. Agglutination 2. Passive Voice 3. 8 Verbal Aspects 4. No Excl.: Incl. 5. 8 Classes of Nouns 69 17 3 2 5 1 2 1								1. By position and morphemes 2. Monosynthetic pattern 2. a) Some more Subordinate Clauses 3. Paratactic and hypotactic
5	None	None	21	42	27	8	2	—	8	18	1. No Inflection 2. No Passive Voice 3. 2 Verbal Aspects 4. No Excl.: Incl. 5. 4 Classes of Nouns (a-, e-, o-, o-) 45 35 5 11 7 — — 1								1. By change of tone, position and special Subst. or Verbs 2. Asynthetic pattern 2. a) Few Subordinate Clauses 3. Paratactic (with Subst. as Conj.)
5	2	2	16	58	18	7	1	—	5	6	1. Some beginnings of inflexion 2. Passive Voice 3. 2 Verbal Aspects 4. Excl.: Incl. 5. 4 Classes of Nouns 35 42 17 — — 3 2 1								1. By position and special Subst. or Verbs 2. Synthetic pattern 2. a) Few Subordinate Clauses 3. Paratactic (with Conj.)
5	None	2	50	41	9	—	—	—	10	3	1. No inflexion 2. No Passive Voice 3. Double Verb. No Verbal Aspects 4. Pers. Pron. Excl.: Incl. 5. 2 Classes of Nouns (animate: inam.) 49 47 3 — — — — 1								1. By gestes, change of tone, position of the resp. words 2. Asynthetic pattern 2. a) No Subordinate Clauses 3. Paratactic (without Conjunctions)
—	—	—	—	—	—	—	—	—	—	—	—								No connected speech. Gestures accompanying cries and calls. (Clicking)
—	—	—	—	—	—	—	—	—	—	—	—								Pseudo-Words. Cries and Calls
—	—	—	—	—	—	—	—	—	—	—	—								One — syllable sentence. Repeating the same word
Many (reduced to 5)	—	—	90	7	3	—	—	—	—	100 0,042	—								—

The origin of the labial expiratory consonants

Bushman	Ewe	Zulu	Hausa
!kx ^w (!kw) — S ₁ !kwabba-kən 'to flutter' S ₁ !ku-kən 'to beat, shake'; !ku: 'to fall down' S ₁ !kwi:tan 'to fly singly'; N ₁ !kxwi 'feather' S ₁ !kwāi 'place of house or nest'	f(p) — pàpàpà 'fluttering, quivering' fú, G fú, pú, Gu xú 'to knock, beat, strike' Songhai firi 'to fly' a-fé, G a-xwé, a-pé 'home, dwelling, family'	p'(ph) — phàphá 'flap the wings; fly' phó ideo. 1. of striking a knock-out blow; 2. of dropping inert ili - phikò 'wing, flank (of army), small rain' -phi 'where, to what place, whence'	fàfàt 'fluttering' bùgà 'to beat' fífika 'to fly' bi-gé 'a place'
!hw ^k (!gw) — S ₂ !kwa, !kwā 'man, person' S ₂ kwa 'he, she, it' N ₂ !koro 'hole, grave'; C ₁ koro 'hole in tree' S ₂ kwa: 'to make', S ₂ !kwa 'to wait' S ₄ !gùru 'to thunder'	β(w) — wó 'they' (N ₁ !kwā 'man, men') βlo < βolo 'hollowed, concave' Gu wa 'to be'; WS. be 'to be' E. βlu < βulu 'to growl, low, thunder'	'b'ba 'they' (foko 'of caving in' bòtò 'of caving in, pressing in' Ba. kolo 'hollows, throat' 'ba to be; Ba za 'to be': Sw. wa 'to be' 'bù'bù 'of moaning, sighing, groaning'	ba- sg. for men, e. g. ba- haushe 'the Hausa' 'bula 'make hole'; gure, hure, huda 'hollow out' kwá, kúwà 'and, also, a cry, power, size, emph.' ruri (rùrù) 'roaring, cry, wail, shouting'
!khw ^k (!g) — S ₁ !hò, S ₂ -!koë (> !kui) 'dark' C ₂ !gum 'short'; C ₁ !guu 'near' S ₁ !kwe 'perforated stone on digging stick' S ₁ !ko!ko 'knocking'	kp — kpui 'grey, dark' kpúí, kpui 'short, near' kpé, O e-kpé 'stone, rock, bullet' kpokpokpo 'of knocking, stamping, splitting'	f — fí (Ba.-pí 'darkness, of screwing up the eyes, focusing the eyes' úbù-fáphì 'shortness, nearness' ili-tshè 'stone, rock'; Ba. li-zwe 'stone' fùkù 'of pulsation, movement up and down' Z. !gùkù 'of nudging, prodding, stumping along'	dù-hù 'darkness', dù-bù 'near' (du 'all') dù-kúf 'shortness in height (du 'all, whole') dù-tsè 'stone' (du, duka 'all, whole') bùgù 'beat and knock over'
!gw ^k — S ₁ !oha: 'to cross'; !gwe 'to pass across' N ₁ !kwà, S ₁ !kwa!kwa 'to break' C ₂ !kwā behind; N ₁ !gun 'to cover, put on' S ₁ !gwān: top; C ₂ !kwá 'to rise, come out of'	gb — gbo 'to cross', gbo(ta) 'to cut (the head)' gbà, gbā 'to break, grind'; gbá 'to cover' a-gba-ds 'hut, shelter' (a-ds 'protective roof' gbā, O gbā 'exceeding, distinguished, costly'	v — vò-bè 'of violent blow' ulu-vàvā 'split, crack; flaw' umu-vā (sg. only) 'back; home, shelter' -va 'yield abundantly, exceed, be kind'	gàbà 'across; in front'; gaba 'enmity' fàrá (Kats. hwahwa) 'clear a large tract of uncultivated ground for farming, split open a gourd' fàrá 'on the back' fàrá 'to begin, be the first to speak'
!w(!gw) — N. !na 'be bigger, stronger, overcome' S ₁ !kwi!kwi 'heap'; !k'wi, !kwi: 'belarge, massed' S ₁ !xwi 'ugly', N ₁ kwi 'to pain', S ₁ !kui-!kui 'pain' S ₁ !nwa 'foot, spoor', N !nà:b 'belly'	b — bà 'to cheat, overcome' E. bibìbì 'in a great mass, heap' Yoruba i-bi 'evil, hurt' bàbàbà 'extended flat, like a plain'	b(b) — bàbà 'catch, entrap, hold fast' ili-bìbì 'heap; very big broad person' úbù-bì 'evil, ugliness' bà 'of lying flat, of lying on the stomach'	bàbbā 'big, huge' tsìbì 'excl. at sight of big heap, heap, pile' cì-wó 'hurt, injury, feeling pain'
!h(!kh) — S ₁ !khāu 'take away'; C ₂ !xo 'to seize' S ₂ !kha 'water, rain'; S ₁ !khwa: 'water, rain', N ₁ !ga 'rain' Z !kánàdà 'separate, divide, split apart'	f — fā (O) 'take hold of, seize' à-fò 'drop (of rain)' fé, fó 'to pluck off, break, tear off' a -fā 'part, half'	ph — phángā 'rob, plunder, take by force' ulu-fàgà 'drizzling (of rain)' ili-phánde 'bundle of objects tied, b. of withies'	f — kāmā 'catch, seize', fam 'securely' yā-fà 'to sprinkle water' (fa 'rushing out of pent-up liquid') fámfándì 'the small sticks placed on the beams under clay'
!h(!v) — S ₄ mé:si 'baby'; S ₁ mé: 'cry of springbok kids' N ₂ !khí 'to carry on shoulder' N ₂ !ne 'to bite', !nāi 'be sharp' N. !khà: 'to sting, push' S ₁ !khwi 'to call' C ₃ pipi 'to cry', S ₁ !kxóé 'to complain' S ₁ !nūi 'to bark, bay', S ₁ u:a 'to bark'	v — ví, A vǎ, ví G evǎ, Gu ovǎ 'child' vé, vevé, Gu vé, Gvéve 'sharp, biting, bitter' a-vǎ, a-vì 'crying, shedding of tears' a-vú, avúú 'dog'	'b — úm-'bébè 'baby' 'bába 'be acrid, pungent, bitter, to sting' 'bíbi-theka 'shedding of tears, crying' Konde (aka)-'bwa '(small) dog'	jínjì-ri 'an infant' bállà 'inflict sting' bíbi-kò 'persistent following (as a child)' kwikwi-go (!khwin-!kwin S ₁) 'dog'

Structure of the basic linguistic forms in the 4 African language groups

			Peculiar sound (phoneme)	Syllable	Word
Hottentot-Bushman	Analytical	Example of the form Literal translation or denomination 1. Quality of elements 2. Quantity of elements	$/k' (:k: /')$; ($\tilde{a}$) Clickblock; (pressed toned nasal vowel) Click + ejective 3 closures (/ dental + k velar + ' glottal Simultaneous unseparable elements 2 degrees: k' existing apart: / non-exist. apart Front closure... glottal release Ejective closing of k'	$S_1 /k'a$ 'hand' (:/ka 'to kill' :/'a 'be killed') Oral open syllable with midtone Clicking phoneme + vowel phoneme 2 phonemes (C + V) $/k'$ (= 1 phoneme) + a 2 degr.: 1) vowel + 2) consonant Click ... vowel Tone-marked vowel	$S_4 \neq ku$; $S_1 tu$ S_1 /kum ; N. $\neq kú$ 'mouth', 'man', 'to break'; 'grind, crush' 1-syllable-word or 2-syll. word 1-syll. word (50%); 2-syll. word (40%) $tu + kən$ 'mouths, men' (suffixing) 2 degr.: 1) root + 2) suffix 1 cons. or 1 clickblock ... vowel or nasal Root (tu :- or $/kum$)
	Synthetical	3. Order of elements 4. Degrees of hierarchy of elements 5. Borders of the structure 6. Summit of the structure			
West Sudanic (Ewe)	Analytical	Example of the form Literal translation or denomination 1. Quality of elements 2. Quantity of elements	$kp < !kw$; ($\tilde{a}$) Labiovelar; (toned nasal vowel) Simultaneous velar & labial closures 2 closures (k velar + p labial) Simultaneous unseparable elements 2 degr.: k existing apart: p non-exist. Velar closure... labial release Expiratory closing of k	E. $gbà < !gwà$ 'break' (or $gbā$) Oral (or nasal) toned syllable (open) Disjunctive phoneme + vowel phoneme 2 phonemes (C + V or V alone) gb (= 1 phoneme) + a (or alone) 2 degr.: 1) vowel + 2) consonant Velar closure ... vowel (opening) Tone-marked vowel	E. $tsú$ ($atsú$); $a-tsúàtsú$ 'man'; 'strong, violent(ly)' 1-syllable word or 2-syll. word 1-syll. word (44%); 2-syll. word (34%) $tsú + wó$ 'man + they' (suffixing) 2 degr.: 1) root + 2) suffix 1 cons. ... vowel Root ($tsú$ -)
	Synthetical	3. Order of elements 4. Degrees of hierarchy of elements 5. Borders of the structure 6. Summit " " "			
Bantu (Swahili, Zulu)	Analytical	Example of the form Literal translation or denomination 1. Quality of elements 2. Quantity of elements	$'b < !gw$ ($d' < /'g$); (a) Injective; (oral vowel) Simultaneous labial & glottal closures 2 closures (' glottal + b labial) Simultaneous unseparable elements 2 degr.: b existing apart: ' non-exist. Glottal closure... labial release Injective closing of b	Z $-ba < !gwa$ 'they' Oral toned (Z.) or stressed (Sw.) syll. (open) Injective phoneme + vowel phoneme 2 phonemes (C + V) $'b$ (= 1 phoneme) + a (or a) 2 degr.: 1) vowel + 2) consonant Labial closure ... vowel (opening) Tone- or stress-marked vowel	Sw. $!mtu$; tu ; $twaa < tu-a-la$, 'man' 'we'; 'take, seize, conquer' 2-syllable word or 3-syll. word 2-syll. word (43%); 3-syll. word (45%) $wa-tu$ 'they-man' (prefixing) 2 degr.: 1) prefix + 2) root 1 consonant ... 1 vowel Noun-prefix ($!wa$ -)
	Synthetical	3. Order of elements 4. Degrees of hierarchy of elements 5. Borders of the structure 6. Summit " " "			
Tchado-Hamitic (Hausa)	Analytical	Example of the form Literal translation or denomination 1. Quality of elements 2. Quantity of elements	$k' < /k'$; ($\acute{a}$) Ejective; (toned oral vowel) Simultaneous velar, glottal closures 2 closures (k velar + ' glottal stop) Simultaneous, but separable elements 3 degr., all existing also apart: $' :k :k'$ Velar closure... glottal release Ejective closing of k	$-k'a < /ka$, ($-/k'a$) 'be like' (S_1); $k'ab$ - Oral toned or stressed syllable (closed) Ejective phon. + vowel phon. + expir. phon. 3 phonemes (C + V + C) k' (= phoneme) + $\acute{a}$ + b 3 degr.: 1) $-a$: 2) k' :- 3) $-b$ Velar closure ... labial (opening) Tone- or stress-marked vowel	Hau. $mù-tám-in$; $tù má$ 'man-this'; 'to jump, thrash, overcome' 2-syll. word or 3-syll. word 2-syll. word (55%); 3-syll. word (24%) $mu-tum-in$ 'he-thrash-this' 3 degr.: 1) root: 2) suffix: 3) prefix 1 consonant ... 1 consonant Root ($-tám$)
	Synthetical	3. Order of elements 4. Degrees of hierarchy of elements 5. Borders of the structure 6. Summit " " "			

Structure of the basic linguistic forms in the 4 African language groups

Syntactic group		Sentence
S₄ //An ≠ké 'hut'(s) floor (on)' 2 meaningful words 2 structural elements //An (Determinans) + ≠ké (Determinatum) 2 degrees: Differentiation with position - Linking by: position, tone, gesture - Summit unmarked (formally)	Naron: /ne //kun kwe-na 'this old men' = 'these old men' 3 meaningful words + 1 morpheme 4 structural elements /ne //kun (D-tia) + kwenā (D-um) There is no formal link between <i>kwenā</i> and its attributes Non-concordant syntactic group Summit in <i>kwenā</i>	Kor. <i>khoe-kyā na! gām</i> (or <i>!gām na</i>) <i>xām-kyā hais-!nā</i> man — they here kill(ing) animal — them wood — in Syntactic groups of S(ubject) + (P(redicate) + Object) + Sp(ace) 4 structural elements: S P O Sp <i>khoekyā</i> (S) + <i>!gām na</i> (P) + <i>xamkyā</i> (O) + <i>hais !na</i> (Sp) <i>khoekyā</i> (S) and <i>!gām na</i> (P) are linked by no formal element This kind of sentence may be called Asynthetic The syntactic group of Predicate is the centre, but there is no formal sign of it
E. <i>xo té dzi</i> 'hut floor on' 2 meaningful words + 1 half-morpheme 3 structural elements <i>xo</i> (D-ns) + <i>té</i> (D-um) + <i>dzi</i> (Relation) 2 degr.: 1) <i>xo, té</i>; 2) <i>dzi</i> - Linking by: position, tone, formal (<i>dzi</i>) - Summit in <i>té</i> (tonal alteration)	E. <i>vútsù-wó xó-xó sia-wó</i> 'man — they old this — they' 3 meaningful word + 2 morphemes 5 structural elements <i>vútsùwó</i> (D-um) + <i>xóxo siawó</i> (D-tia) <i>-wó</i> is the link, but <i>xóxo</i> has no link Partly concordant syntactic group Summit in <i>vútsùwó</i>	E. <i>vútsù-wó wó-wùna lāwó le avé me</i> man — they they — killing animals being wood — in(side) Syntactic groups of S + P + O + Sp 4 structural elements: S P O Sp <i>vútsùwó</i> (S) + <i>wówùna</i> (P) + <i>lāwó</i> (O) + <i>le avé me</i> (Sp) <i>vútsùwó</i> (S) and <i>wùna</i> (P) are linked by <i>-wó</i> (repetition) of the (S) This kind of sentence may be called Monosynthetic The syntactic group of P is the centre, being linked by a special formal element
Sw. <i>lchi-ni y-a nyumba</i> 'ground-on this-of hut' 2 meaningf. words + 3 morphemes 5 structural elements <i>chini</i> (D-um) + <i>ya</i> (Relat.) + <i>nyumba</i> (D-ns) 3 degr.: 1) <i>lchi, nyumba</i> 2) <i>ya</i> 3) <i>ni</i> - Linking by: position & formal elements - Summit in <i>lchi-</i> marked with stress	Sw. <i>lwa-tu wa-lkuu lha-wa</i> 'they-man they-big here-they' 3 meaningful words + 3 morphemes 6 structural elements <i>watu</i> (D-um) + <i>wakuu hawa</i> (D-tia) <i>wa</i> is linking the Subst. with its attributes Fully concordant syntactic group Summit in the Subst. <i>watu</i>	Sw. <i>wa-tu wa-na-zi-ua nyama mwitu-ni</i> they — man they — here — them — kill animals wood-in Syntactic group of S + P + O + Sp 4 structural elements <i>watu</i> (S) + <i>wanaziua</i> (P) + <i>nyama</i> (O) + <i>mwituni</i> (Sp) <i>watu</i> (S) and <i>na ... ua</i> (P) are linked together by <i>wa-</i>, and with (O) by <i>zi</i>. This kind of sentence may be called Bisynthetic. The syntactic group of P is the centre, being linked with S and with O.
Hau. (a) <i>bisa-n k'asa-n 'daki</i> On — this ground — this (of) hut 2 meaningf. w. + 1 half-morph. + 2 morph. 5 structural elements <i>bisan</i> (Relat.) + <i>k'...</i> (D-um) + <i>'daki</i> (D-ns) 3 degr.: 1) <i>k'asa-</i>, <i>'daki</i>; 2) <i>bisa-</i> 3) <i>-n, -n</i> - Linking by: position & formal elements - Summit in <i>k'a-</i> marked with tone & stress	Hau. <i>ts'ofaffi-n lmutane-n nan</i> old — they the men — they here 3 meaningful words + 3 morphemes 6 structural elements <i>ts'ofaffin</i> (D-ns) + <i>lmutanen</i> (D-um) + <i>nan</i> (D-ns) <i>ts'ofaffi</i> is plural and <i>-n</i> is the sign of Definiteness Concordant and definite syntactic group Summit in <i>'mutanen</i>	Hau. <i>mutane su-na yankan nama chikin itatuwa</i> men they-here killing animals inside wood Syntactic groups of S + P + O + Sp 4 structural elements <i>mutane</i> (S) + <i>sunā yankan</i> (P) + <i>nama</i> (O) + <i>chikin itatuwa</i> (Sp) <i>mutane</i> (S) and <i>-na yanka</i> (P) are linked by <i>su-</i>, and with (O) by <i>-n</i>. This kind of sentence is Bisynthetic (cp. the similar linking in Sw.) The syntactic group of P is the centre, being linked with S and with O.

Some pronouns and particles in African languages

Bushman	Ewe	Zulu	Hausa
N₃ !kūv a tʃu 'snail's shell' (a = 'is, here') S₁ i, i 'there, that (pointing)' S₁ a dem. 'this, that, here, there' N₃ a abbr. of ha 'he, his' S₁ a 'to be'; S₁ ja 'him, her, it, that' S₁ a:a rel. 'who, which, where, when' S₁ /ke:ʔi 'to be stiff'; S₂ ti: 'Wittgatboom' S₂ /khi: 'umbrella-top tree, Wittgatboom' S₁ /hi: 'make a thumping sound'	ya emphasizes the Pers. Pron. esp. that of 3. Pers. Sg., e. g. nye yá megbe 'it is I who refuses.' ya < i + a 'he + here' eyá, yé 'he, she, it'; a 'to be, here' eyá Gu 'perhaps, it is (so), probably' ya 'ready, all right' a-ti 'tree', lit. 'that which is stiff' (dze) ti '(to become) stiff'; ti 'noise'	Ba. a < ya Demonstrativum (article) e. g. Sw. mtu a-na mti 'man he-is (with) tree = 'he has ...' Sw. nguo ya mtoto 'dress of the child' ya < i + a 'it is (that of)' ya 'of perfection, completion' umu-thi 'tree, shrub, plant' -thi 'say, express, act, manifest'	ya: 'he' mutum ya-na da ita-ce = 'man, he-is with tree' gó:yó 'being carried on the back' a indefinite Pron. (ina za a? 'where is one to go?') N. ti, di 'to do' tik 'being naked except for a loincloth' tik 'the sound of the falling of an object'
S₁ e: rel. & demonstr. 'which, that, this', it refers to nouns in pl. and in sg. to those which take <i>he</i>, <i>hi</i>, instead of <i>ha</i> S₁ e 'to be'; C₁ e 'his, her', e ma 'his mother' N₁ ≠kó 'be high'; ≠ʔó 'to bend' N₂ ≠kō, ≠kū 'star'; ≠kc: 'elephant'	é 'he, she, it' -e 'him, her, it' kó, G e-kó, Gu o-kó 'elevation, hill' kó 'to be high, elevated'	Sw. na-ye 'here-he' = 'and he' Sw. yeye he she, it Sw. mtu a- na-y-e fika 'man he-here-(is) that-who comes' Z. thun !ka 'rise in a column (as dust, smoke)' (isi !ka 'substance')	é: 'yes' F. ye interrog. Pron. ki-ye le-ki 'which tree?' Hau. dogo < ≠ko ≠ko 'high, tall' Hau. tidi 'hill, any rising ground'
S₁ o < au 'place (about), to be' N₁ ≠ko: 'to come out, pull out' N₁ tsó 'to rise'; S₁ !koʔv 'ear'; C₂ tʃoli 'leaf' N. o ≠kà:ts gao, o-ta gye tita nĩ sisen 'Oh, when you refuse, then I shall work' N. mǝ-o 'see-there' N. nawó to find what has been lost N. nawi 'to get suddenly lost'	tó, G e-tó, Gu osó 'mountain, hill' tó 'to rise, appear' tó, G e-tó Gu otó 'ear, leaf' é-me-yi o 'he- (did) not-go to the place' ame-si vá etsó lá, mégale o 'he who came yesterday is no longer there'	Sw. relative Pronouns with-o, e. g. mti u-na-o anguka 'tree it-here- (is place where it) falls'; 3 kinds of Dem. Pronouns in Sw. 1. miti hi-i 'these trees' 2. miti hi-yo 'those trees' 3. miti i-le 'those trees yonder'	o 'exclamation of assent or affirmation' ò: hò: '(I) neither know nor care' ka-i 'to carry there (from here)' ka-o 'to fetch (from there here)'
	Examples of the pronominal	character of the pref. a- in Ewe	
S₁ !xwōnni 'to turn back, turn over...' S₁ !kun 'eat fat', N. ≠ú 'to eat', S₁ !koʔn 'eat raw' S₁ !xu: n 'to chew' S₁ !ki 'mouse', S₁ !ku 'mouse', !kaija 'steal' S₂ !kui 'white', C₂ !u 'white, pale' N₁ !gwa: 'chest', N₂ !gwa 'leaf' N₃ !kun 'snail' S₁ ?kwobbo 'make soft, roll upon'	bu 'to turn upside down'; a-bu 'precipice' du 'to bite'; a-du 'tooth' fi 'to steal'; a-fi mouse fu 'to be white' a-fu 'mist' gba 'flat, horizontal'; a-gba 'flat frame' bobo 'soft'; a-bobo 'snail'	Pedi lo-ma, Konde lu-ma 'to bite' Ba. yiva 'to steal' < !ki + !gwa Ba. (ye-)lu 'white', lu(ngu) 'white man' Ba. vata 'to be flat' Z. i-'batha 'a big and flat foot' Ba. -komba 'snail', Du. bobo 'be weak' Ba. vova, vomba 'to be soft'	-unjuma 'to fall headlong into water' 'burma, 'burma 'to fall in' F. kuna 'to chew' F. mbu-ziri 'mist', F. zir 'naked' (kyà)kwama 'flat footedness' F. bowal 'plain, flat surface' Hau. burkuce 'roll about'

The classificatory particles in African languages

H.-B.	W S.	Ba.	Hausa-Ful
S₄ ≠<i>ku</i>: 'mouth, man' S₁ <i>tu</i> 'mouth, hole, opening', S₃ <i>tu</i> 'id' S₁ <i>tu</i>, <i>tu</i> 'man, who' S₅, ₆ // <i>kwi</i> 'leopard' S₁ !<i>kui:h</i> 'leopard'	<i>u</i>- Sg. of living beings (men animals) Kwa <i>gbi</i> 'leopard' Bulom <i>u-gbo</i> 'leopard' (<i>i-gbe</i> 'id')	Ba. <i>lu</i>- Singles, one of many, 11. cl. Her. <i>or-utu</i> < <i>oru-utu</i> 'body' Ba. -<i>γui</i>, -<i>γwi</i> 'leopard' Her. <i>o-ngwe</i>, Du. <i>ndjo</i> 'leopard'	F. -(<i>n</i>)<i>du</i>, -<i>ru</i>, Singles F. <i>ba-ndu</i> 'body' <i>dondo:ru</i> 'leopard' F. <i>tjir-gu</i> 'leopard', <i>tjirol</i> 'to spit through teeth'
S₃ <i>le</i> 'there', S₁ <i>di</i> 'to do, act, work, become, happen' S₁ !<i>ku:i</i> 'to burn', !<i>kwa</i> !<i>kwára</i> 'stone... shining white' S₁ /<i>ki</i>: 'to kill, hurt', N₃ <i>ki</i> 'to cut, tattoo' S₁ /<i>ku</i>: /<i>ku</i> 'bow down (with pain), be ill'	<i>li</i>- Sg. of things, Bulom <i>li</i>, <i>ri</i> 'to be' Bulom <i>li-pal</i> 'sun', WS. <i>pat</i> sun Bulom <i>li-kin</i> knife; WS. <i>ki</i> 'to hurt' Likpe: <i>le</i>, <i>le</i>, <i>di</i> Sg. of things, <i>di-bi</i> 'fruit'	Ba. <i>li</i>- Singles, one of two, 5. cl. Sango <i>li-djuva</i> 'sun' Zulu <i>i- thunzi</i> 'shade, shadow' Pedi <i>le-iso</i> (Ba. <i>li-γiko</i>) 'eye'	F. <i>re- ri</i>, -(<i>n</i>)<i>di</i>, Singles F. 'dou-<i>di</i> < 'dom-<i>di</i> 'shadow' F. <i>hits:-re</i>, pl. <i>gi:te</i> 'eye'
S₂ <i>ki</i> 'it' C₃ <i>ku</i> 'there, this way' S₂ <i>ki</i>, <i>ki</i> 'here, this, that' N₂ /<i>ki</i> 'foot' usually <i>ká'i</i>, <i>ká'e</i> S₃ /<i>ki</i> there, 'here, down, where'	<i>ki</i>- Sg. of plants, tools, parts of hum. body Likpe: <i>ka-</i>, <i>ke-</i>, <i>ko-</i>, <i>ku-</i> 'idem' Likpe: <i>ke-sú</i> 'urine', <i>kɔ-tš</i> 'blood'	Ba. <i>ki</i>- Sg of tools, habits, customs, 7. cl. Sw. <i>ki-tanda</i> 'bed' (Ba. <i>tanda</i> 'extend') Kuanyama <i>oši-xu</i> 'urine' (Ba. -<i>ku</i>)	F. -<i>ki</i> Sg. of trees & objects of wood F. 'dana-<i>ki</i> 'bed' F. <i>dondor-ki</i> 'stretchers'
S₁ <i>a</i> 'this, that, here, there' S₁ <i>ā</i>:, <i>ā</i> 'some', often referring back to a rel. S₁ <i>a</i> 'to be'	<i>a</i>-, <i>o</i>- Pl. of things and of persons Likpe: <i>a-ními</i> 'fingers' Likpe: <i>a-yó</i> 'shadows' Grebo: <i>gi</i> 'leopard', <i>gi-a</i> 'leopards'	Sw. Pers. Pron. <i>wa</i> 'they, them' Sw. Pers. Pron. <i>wa</i> 'you' (Obj. Case) Sw. <i>ya</i> < <i>i</i> + <i>a</i> Pron. Pl. of the V. Class	-<i>a</i> Pl. in Hamitic, e. g. Shilh, Somali Shilh: <i>i-muš-a</i> 'cats' (Sg. <i>a-mus</i>) Shilh: <i>i-nyūs-a</i> 'stings' (Sg. <i>a-nyus</i>) Somali: <i>in-aret-a</i> 'weapons' (Sg. <i>en-aret</i>)
S₂ <i>i</i> 'they' S₂ <i>i</i> 'to be' S₁ <i>i</i> verb. part. expressing emphasis S₁ <i>i</i>, <i>i</i>: 'to do so, do thus, truly, yes'	<i>i</i>- Pl. of things Grebo: <i>dibw-i</i> < <i>dibo-i</i> 'island' Grebo: <i>kwi</i> < <i>ku-i</i> 'ghost, spirit'	Sw. -<i>i</i> in <i>sisi</i> 'we', <i>ninyi</i> 'you' Sw. <i>i</i> Pron. Pl. of the II. Class Sw. -<i>i</i> in <i>z-i</i>, <i>v-i</i> Pron. Pl. III. IV. Cl.	<i>i</i>- Pl. in Hamitic (e. g. Shilh Somali) Shilh: <i>a-muš</i>, pl. <i>i-muš-a</i> 'cat' Shilh: <i>a-nyus</i>, pl. <i>i-nyūs-a</i> 'sting' Somali: <i>en-dap</i>, pl. <i>in-dap-i</i> 'palm of the hand'
S₁ <i>man</i>: 'to wet with the mouth 'lips' N₃ <i>mama</i> 'to carry in the kaross (baby)' N₁ <i>ma</i> 'to carry on the back, put in the kaross' C₃ <i>mati</i> 'to flow', C₂ <i>ti</i> 'to do'	<i>ma</i>- Pl. of things & of liquids Twi <i>o-bá</i>, pl. <i>m-bá</i> 'offspring, child' Kpelle -<i>ma</i> 'place', <i>keleto</i> 'finish' <i>kelema</i> 'end' E. <i>mā</i> G 'to flow away, to ebb'	Ba. <i>ma</i>- Dual & Collective (liquids) Herero: <i>oma-veré</i> 'breasts' Duala: <i>uma</i> place (Ba. <i>hu-mu</i> 'here') Sw. <i>ma-ji</i> water (F. <i>ma:-dji</i> 'rivers')	F. -<i>am</i> Liquids Hau. <i>mama</i> 'woman's breast' F. <i>ma</i>- 'place, Hau. <i>ma</i> 'place, to' F. <i>ndi-am</i> 'water', <i>ma:o</i> 'waters'
S₄ <i>ba</i> 'they, all, S₁ <i>ba</i> 'to collect' S₂ !<i>kwa</i>, !<i>kwa</i>: 'man, person' S₂ <i>kwa</i> 'he she, it', N₁ !<i>kwā</i> 'man, men' (male) C₃ <i>ba</i> 'there, then'	<i>ba</i>- Pl. of living beings Grebo: <i>ba-</i>, <i>be-</i>, <i>be-</i>, <i>bi-</i> designate plural of men, animals & things, e. g. <i>ba-ka</i> the chiefs, <i>be-bé</i> 'the oil-palms' E. <i>wó</i> 'they', <i>ame-wó</i> 'men, people'	Ba. <i>va</i>- Plural of persons Sw. <i>wa-Swahili</i> 'the Swahili' Sw. <i>wa-tu</i> 'men' (Ba. <i>ba-ntu</i>) Zulu: <i>a'ba-ntu</i> 'men, people'	Hau. -<i>wa</i> Pl. for names of nationality Hau. <i>Hausa-wa</i> 'the Hausa' (F. -<i>ba</i>, <i>ngelo-ba</i> 'camel') F. -'be, Ful-'be, 'the Ful'

The origin of the Bantu classificatory particles (Meinhof, Lautlehre der Bantusprachen)

Hottentot — Bushman	West Sudanic	Bantu	Hamitic
S ₁ <i>mu:mu</i> 'to show, make sec'; C ₃ <i>mo</i> 'he' S ₄ ≠ <i>ku:</i> , S ₁ <i>tu:</i> 'mouth, hole, opening'; C ₁ ≠ <i>kawu</i> 'forehead'	Akpafu <i>má</i> 'that', E. <i>má</i> 'that, yonder' WS — <i>tú-</i> , <i>-túá</i> , 'forehead, front'	Cl. 1. <i>umu-</i> Sg. 'of men (as independent)' Sw. <i>m-tu</i> 'man'	F. <i>mo</i> 'who, which', <i>mo-na:we</i> 'ill person' Hau. <i>mu</i> 'we' Hau. <i>ma-gini</i> 'the man who builds'
S ₁ <i>mu:mu:</i> 'halo, ghost, spectre' C ₃ <i>mumu</i> 'very' C ₃ <i>mu:a</i> 'tu cut off'; C ₃ <i>mu:á</i> , <i>mu:áko</i> 'stick, pestle'; S ₁ <i>!khi</i> 'umbrella-top-tree'	WS <i>mu</i> , <i>mumu</i> 'deaf, mute' WS <i>-tí-</i> , <i>-tú-</i> 'tree', E. <i>a-tí</i> 'tree'	Cl. 3. <i>umu-</i> Sg. 'of spirits, men (as de- pendent), parts of body, trees' Du. <i>mu-di</i> 'soul'; Sw. <i>m-ti</i> 'tree'	F. <i>mumi</i> 'to be dumb' Hau. <i>mùmmánda</i> 'ugly, very evil'
C ₂ <i>mi</i> , <i>mí</i> 'to say, tell'; C ₃ <i>mise</i> 'to rub, twirl' C ₃ <i>mi</i> 'they'; N ₃ <i>/ní</i> , <i>ní</i> 'fat' C ₂ <i>//nwi</i> 'id'	WS <i>-mi</i> 'fat, oil' Yor. <i>ε-mi</i> 'the shea tree, its fruit, butter'	Cl. 4. <i>imi-</i> Pl. for the Class 3 (<i>umu-</i>) Sw. <i>mi-ti</i> 'trees'	Hau. <i>mai</i> 'oil, fat'
C ₃ <i>-pi</i> , <i>-bi</i> , <i>-vi</i> masc. pl. ending of nouns, also used as pron. 'they'; S ₁ <i>!ku</i> 'pot', (<i>!ku-i</i> > <i>!kwi</i> > <i>pi</i>)	Likpe <i>ba-</i> , <i>be-</i> , <i>be-</i> , <i>bi-</i> Pl. for men, animals, things Akpafu <i>i-bi</i> 'drum (pot?)'	Cl. 8. <i>ivi-</i> Pl. for the Class 7 (<i>iki-</i>) Ba. <i>-via</i> 'utensil', Zu. <i>isi-tša</i> 'vessel of any kind'	
N ₁ ≠ <i>ni</i> <i>!koma</i> , C ₂ <i>/ni</i> <i>/kwana</i> , 'wild animal', N ₂ <i>!ne</i> <i>!koma</i> 'animal'; N ₁ <i>!ne</i> 'to bite' N ₃ <i>n</i> , <i>n</i> , dem. 'this one, this, is, here' N ₂ <i>//ni</i> , <i>//nín</i> 'eland', also applied to 'cattle'	WS <i>-ní</i> , <i>-nín-</i> 'tooth'; <i>-ni-</i> , <i>-nik-</i> 'cattle' WS <i>-ni</i> this; <i>ní</i> 'to be somebody, something'	Cl. 9. <i>ini-</i> Sg. of animals, (loan words) Ba <i>-yino</i> 'tooth'; Sw. <i>jino</i> , pl. <i>meno</i> 'tooth'	F. <i>n-dau</i> , pl. <i>dau:-dji</i> 'ostrich'
S ₃ <i>le</i> dem. 'there', S ₃ <i>la</i> 'there, those, that' S ₁ <i>-de</i> , <i>-di</i> designate plural of nouns	(WS <i>-lí</i> 'millet'); WS <i>lí</i> 'to be' (E. <i>lí</i> , <i>lú</i> 'millet') E <i>di</i> 'to be, function'	Cl. 10. <i>ilí(-ni)</i> Pl. for the Cl. 9 (<i>ini-</i>) Sw. (<i>m-bingu</i> 'sky') <i>u-bingu</i> '(one) cloud'	F. <i>-di(-i, -dji)</i> Pl., e. g. <i>gelo:-di</i> 'camels'
C ₂ <i>-tu</i> 'head'; S ₁ <i>tu:</i> 'to breathe, go out (fire)' C ₂ <i>tu</i> 'to rain, fall, pour', n. 'rain'	WS <i>tù-</i> 'to heap up, to accumulate' Efik <i>o-tu</i> 'things heaped together'	Cl. 12. <i>utu-</i> Pl. for Diminutives (<i>aka-</i>) Mbundu: <i>tu-bia</i> 'fire'; Ba. <i>tunda</i> 'be heaped'	
N ₂ <i>ka</i> 'he, she, it'; S ₁ <i>ka</i> 'child' N. <i>/ga:</i> 'small'	Akpafu <i>ka-</i> Class of Diminutives <i>o-rére</i> 'man', <i>ka-réré-i</i> 'boy'; E. <i>ka</i> 'to scatter'	Cl. 13. <i>aka-</i> Sg. of Diminutives Her. <i>oka-ndu</i> 'small man'	Hau. <i>k'ank'ane</i> 'small, little' F. <i>-ka</i> Class of nouns; <i>sa-ka</i> 'nest of weaver (bird)'
S ₁ <i>!nám</i> <i>!nám</i> 'a moth' N ₂ <i>!gum</i> , 'to roar, bellow, call' N ₂ <i>!gum</i> 'to blow, smoke'; S ₁ <i>t/ú</i> , <i>t/ü</i> , <i>džü</i> 'to blow'	WS. (<i>m</i>)- <i>bu-</i> 'mosquito' Likpe: <i>bu-</i> Infinitives; <i>bu-di</i> 'to eat'	Cl. 14. <i>uvu-</i> Abstract nouns Ba. <i>-vu</i> 'mosquito'; Ba. <i>vuvu</i> 'groaning'	F. <i>bu:bu</i> , pl. <i>bu: bi</i> 'fly' Shilh <i>bu-</i> possessor; <i>bu-tegene</i> 'possessor of the... wood, woodpig'
S ₂ <i>ku</i> 'to be', S ₁ <i>ku</i> 'all'; S ₁ <i>ku:</i> 'to place, set, keep' S ₁ <i>ku:i</i> , <i>kui</i> , <i>ku</i> 'to do, make' used before adjectives or v. expressing state'	Avatime <i>ku-</i> Infinitives Avatime <i>ku-baba</i> 'to come, coming'	Cl. 15. <i>uku-</i> Infinitives Sw. <i>ku-wa</i> 'to be'	F. <i>-ugo</i> Infinitives; <i>war-ugo</i> 'to come'
N ₂ <i>kú</i> , <i>ku</i> 'footprints, road'; S ₂ <i>ku</i> 'to be' S ₁ <i>ku</i> 'and' joining verbs, 'place?'; C ₃ <i>ba</i> 'there, then'; S ₁ <i>!kwa:</i> > <i>ba</i> 'leg, root'	WS <i>ba</i> 'to be' (in a place); <i>-bia-</i> 'place' E. <i>-ba</i> 'to, towards, region'	Cl. 17, 18 <i>pa-</i> , <i>ku-</i> — Locative prefixes Sw. <i>pa-le</i> 'there nearby'; <i>ku-le</i> 'there'	F. <i>ko</i> < <i>ku</i> + <i>a</i> 'his'; <i>ko-'du'di</i> 'much, a lot of'
C ₁ <i>pi</i> 'milk', <i>píi</i> , <i>bíi</i> 'id'; S ₂ <i>○pwinikin-gən</i> 'small' C ₃ <i>pipi</i> 'to cry' < S ₁ <i>!kwi:</i> , <i>!khwi</i> 'to call'	WS <i>-bi-</i> child ('to give birth') E. <i>vi</i> 'child, young, small'	Cl. 19. <i>ipí-</i> Diminutive prefix (Sg.) Nyuema <i>fi-ulu</i> , pl. <i>tu-fulu</i> 'bird'	F. <i>pam</i> , 'small'; <i>petel</i> 'small, child'
S ₁ <i>//kx'auwa</i> 'bitter'; <i>//kxoakən</i> 'to curse' S ₁ <i>//kx'au:</i> , <i>//kx'au:</i> <i>//kx'au:</i> 'to curse'	WS <i>gu</i> 'he'; <i>gu-</i> 'to kill, die' E, <i>dzudzu</i> 'insult' (< <i>/khu</i> <i>/khu</i> 'to make tremble')	Cl. 20. <i>uyu-</i> Invective prefix Kinga: <i>ugu-jala</i> 'the great hunger'	
S ₁ <i>ki</i> 'to grow, <i>ki:ki</i> to grow, S ₂ <i>ki</i> here N, <i>gei</i> 'big — this' S ₄ <i>/isi</i> 'bigger'; S ₂ <i>ki</i> 'it, here, this, that'	WS <i>-gi</i> 'this' (< S ₆ <i>ki</i> 'this'); <i>gi</i> 'to be (place)' Mende <i>dji</i> 'this'; E. <i>tsi</i> 'to grow'	Cl. 21. <i>igi</i> — Augmentative prefix Sw. <i>ji-bwa</i> big dog; <i>m-bwa</i> 'dog'	Hau. <i>jiji-k'ek'e</i> 'huge person', <i>k'ek'e</i> 'a mean niggardly p.' Hau. <i>jiji</i> 'conceitedly', Gr. <i>γῡγας</i>

The development of the syllable /gi > zi in Bushman, Ewe, Zulu and Hausa

H.-B.	Ewe	Zulu	Hausa (Ful)
N ₁ /gi/, /gi/ 'to rise, come out, swell' (S ₁ /ki: to pinch, get, take, have...)	zi 'to bubble forth, to sputter out' zi 'to raise, lift'; zi, zi 'small' a-zi, G a-zi, A azi 'egg, roe' dzi, G dyi 'trickle, leak; swell'	zimbu of lifting up, raising (as a heavy weight), of shooting up, springing up (of plants), of uprooting	zir 'emphasizes redness, naked, narrow' F. zir 'naked'
S ₁ /gi:/, /gi:ja/ 'to be strong' N ₁ /gē/ 'tall, big, long' S ₂ /khi: umbrella-top tree, „Wittgatboom“	a-zi, G a-zi-ti 'a shadow-tree with enormous crown, broad leaves and big round fruit'	zidla 'be proud, conceited' zilikihi 'tall, heavily built person' -zimbū 'combined strength, power'	zilla 'ill treatment, humiliation' zētē 'being long and pointed' k'ek'e 'a mean, niggardly p. also sharp and cute' zēk'ēk'ē 'being too long for requirements'
C ₂ /gi/ 'to call, name'; C /ki/ 'to play music' S ₂ /ge/ 'to say', N ₂ /gé/ 'to swear at' N ₂ /gú/ 'name'; S ₃ /ki/ there, here, down' (S ₁ /kī/ 'name', form of /kē/ (S ₁) 'name')	dzi (ha), O dyi(ha) 'to sing (a song)'	zi-ka 'disappear, sing softly'	
C ₂ /gi/ 'to carry on shoulder, as game'	zi I 'heaviness, weight' zi I 'bundle, burden, charge' dzi O zi 'to lace, tie up'	/ká/ 'of clearness, good visibility, clarity of thought' zi/ka of falling heavily zimā 'heavy, weighty' -zi (ulu-zi, sg. only, Ur-B.-li 'root, fibre') 'fibre used for thread, cordage, etc.'	zillē 'slip out of one's hand, escape' zimmā 'size' = zumma, 'quantity, number' F zinzin 'to lift a. t. in order to try its weight' So. sid 'carry'
N ₁ /gi/, /gi/ v. 'to cut between eyebrows' n. (tribal mark) 'cut between eyebrows, ceremonial dance, when cut is made' C ₂ /gai/ 'to dance'; (N ₃ /ki/ 'to cut, tattoo')	zi, G ezi, Gu o-zi 'crowd, tumult, uproar' zi Gu 'to stamp, strike' si 'to stop, remain, to sit' a-si 'market'	-zi (umuzi), Ur-B. muyi). 'kraal, village, family, members of family,	Hausan-ci 'the Hausa customs, language'
C ₂ /gi/ 'blue wildebeest, gnu', N ₁ /ki/ 'wildebeest' S ₆ /gi: 'steenbok', s. /gai/ 'steenbok' (S ₅) N ₁ /gi/ 'aardwolf', Proteles cristatus, N ₂ /gi/ 'aardvark', antbear, Orycteropus afer	zi, G e-zi 'grassantelope, adenota kob'	zi/ka, umzi /ka H. 'bushbuck for' umgankla zi- sub. coned. cls. 4, 5 6 pl.; e. g. izi-nkomo 'the cattle' -zi (izi-zi, sg. only) 'confiscated property, booty, spoil'	F. -'di plural for the -ba class (big animals), e. g. koba, pl. ko:bi < kob-'di 'antelope'; mau-ba. pl. mau-'di 'elephant'
C ₁ /gai-e/ 'to aim at with a bow' N ₁ /gā/ 'magic bow, made of grass and horn' C ₂ /gā/ /ga/ 'grass, S ₅ /gana/ 'leaf'	dzidzé. O dyidye 'to measure, aim' e-zi G. 'magic, to make oneself unseen' ozi Gu darkness	ziba of falling darkness zibá (Ur-B. liza) 'stop up' 1. 'pretend, feign, pretend not to' 2. 'deceive, mislead'	So. zina adultery So. sir 'cheat', So. sig 'miss (closely)' zilli 'the neck of a bottle-gourd made into a receptacle for a hunter's charms' zigiribtú 'kind of canter' giribtu 'trim the edge of paper, cloth etc.'

Table IX

The development of the syllable /ki> si in Bushman, Ewe, Zulu and Hausa

Bushman	Ewe	Zulu	Hausa
N ₁ !khwí, S ₄ ≠kwi 'tail' S ₁ /hiv 'come out, take out, away'	a-sí, Gu o-sí 'tail' sí 'to press, squeeze out'	isisila 'tail' (of bird or fish) ama-simba pl. 'excreta' (Ur.-B. kimba)	
S ₁ /ki 'to get, take, have, possess, make do, cause to do' often used as v. part. before or after main v. signifying continuous action or. double v. e. g. /ki kwakkən 'to suckle'; /xe:/ki 'threaten'	sī Gu possessive particle sī 'to stay', remain, sit'	ilisi 1. lump of hard, curdled milk 2. thick milk, sour milk 3. milky sap (as exuded from certain trees and vegetables)	si-firi 'hire' sifidu 'a small mat for sitting on'
S ₁ /kí:, /khi 'to separate, divide' (pinch?)	a-sí 'hand, finger, leaf' (pinch?)	si-kà (Ur.-B. -keka) 'cut, cut across, divide'	siddàbàrù 'sleight of hand' sissiká 'to thresh' sincè 'release, untie, loosen' sillè 'remove (the skin)' silà 'means, an intermediary'
S ₁ /kí:, /khi: 'to kill, hurt' cf. /gi 'to cut, tattoo' (S ₁ /ki 'fire')	si 'to cut off' si 'to press, squeeze out'	si /ki ideo. of crushing flat, of rubbing with hard pressing movement ubu-si 'small honey-ball, honey nzi [ndzi] of heavy pressure	sí emphasizes the sound of slithering along the ground sit 'very' ci 'conquer, win, gather, eat'
S ₁ /kī 'to make a thumping sound' S ₄ /hi 'to be afraid' (S ₃ /ki 'here, there, down, where?') S ₁ /kī name	sí 'to be afraid' si 'to frighten away, to chase' si 'this'; si 'so, so as' si O 'to say' = tsi	si-kaza 'feint at, threaten with a weapon' um-sindo 'noise, din, uproar, quarrel' usibani 'so-and-so'	simù 'being silent through fear' siffa 'likeness, sketch, model' So. si 'that way', Lat. sic 'so'
C ₁ /ki, /kia 'to see' S ₃ /ki 'here, there, down, where?'	si 'to notice, to observe'	singa 'look searchingly at, concentrate upon, search intently, peer about'	
N ₂ /kí 'foot', usually kx'i, kx'e (C ₂ /i 'mouth') S ₁ /i 'to flow', N ₁ t/i 'to water' S ₂ /ki 'to play music'	si (te) G 'to stand (up)', te G = 'erect, upright' si O 'to extinguish' = tsi e-si, G, o-si Gu 'water' = tsi Z. ama-nzi 'water' sí 'to play'	si-mama stand firmly (Ur.-B. tīma; s' (suggesting 3—8) ideo. 1. of hissing water, 2. of large numbers (as of animals moving about): amanzi 'water' si- enum. concd. cl. 4 sg. e. g. 'beast' isi-lo si-mbe 'another wild beast'	sīlīlī 'to humiliate'
S ₁ /ki 'fire', /i 'fire' S ₂ /kwi: 'smoke' N ₁ /hi: 'dagga, wild hemp', e. g. /hi: !xo: 'dagga pipe' (!xo: 'pipe')		isisi 1. 'thick mass of smoke, vapour, smell'	sīlālē 'cook food by steaming' si-yaye 'the peeled stalks of Indian hemp'