

ROMAN STOPA

BUSHMAN AS A LANGUAGE OF PRIMITIVE TYPE

Owing to the kind invitation of the Austrian linguists, professors Knobloch and Kronasser, I held some lectures in Vienna and Innsbruck in May 1962, amongst others the lecture „Über die Ursprachen der Menschheit“ („On the Languages of Paleolithic Man“). To this lecture I was invited to Innsbruck for the second time after I had held two lectures there, viz. „Afrikanisch und Indogermanisch“ („African and Indoeuropean“) at the University and „Frühe Stufen der menschlichen Sprachentwicklung“ („Early Steps in the Linguistic Evolution of Man“) in the Radio Tirol in October 1961.

Originally the title of the lecture for the year 1962 should have been „Über die Khoisansprachen“ (On the Languages of the Khoisan Peoples, i. e. the Hottentot and Bushman), but after some hesitation professor Knobloch suggested changing it into the above mentioned title, i. e. „Über die Ursprachen der Menschheit“. Evidently his idea was to stress the exceedingly primitive character of Bushman as that of the most primitive stages of language in general.

The lecture evoked such a vivid and deep interest — it was followed by numerous questions and a long discussion — that I decided to treat the matter in an article where my friendly hearers from the University and the Volkshochschule in Innsbruck could find the thesis fully explained and documented in a possibly exhaustive way.

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Glottogonic studies in general, and especially etymological studies on languages without any literature, without any longer literary tradition are usually condemned among the highly spe-

cialized linguists of nowadays. They consider such studies, if these transgress some generally accepted frames, as fanciful speculations wanting any evidence, any concrete material, if not a common sense at all. However, we confess sharing the opinion of those, perhaps less numerous, nevertheless equally eminent scholars as Plato, Leibniz, Wackernagel, Rozwadowski, Rèvèsz, Kainz and others who felt justified to penetrate into the deepest layers of human psychic, culture and language. And we dare say one can find the respective material for retracing the earliest history of human language, namely in two ways:

1. The indirect one means:

A) taking advantage of the results of research in disciplines bordering with linguistics, such as: a) anthropology, b) psychology of evolution, c) archeology;

B) investigating the expressive behaviour in man and animal, such as: a) gesticulation, b) „speech“ of animals, c) development of speech in child, d) defected speech.

2. The direct one is to investigate:

A) primitive languages:

B) the oldest layers of the material of modern languages; they appear in „marginal“ sounds (inspiratory, clicks, ejective), in extranormal grammar (meaningless intercalations, reduplications, paratactic), in „survival“ utterances (primary interjections, onomatopoeias, ideophones, „obscene“).

The method to be applied here is the traditional historical and comparative method of linguistics. The term „historical“ is not to be omitted, for we are of the opinion that the glottogonic facts taken from modern languages as well as those taken from the primitive ones should be considered, analysed and arranged historically, i. e. as belonging to different levels, as having their rise, blossom and decline (becoming obsolete or marginal) in different stages of linguistic evolution.

In arranging them we should always consult the two above mentioned domains of science as criteria of general trends of evolution and as source of rules structurelizing the products of linguistic activity:

1. The first one (i. e. anthropology, psychology and archeology) shows us when, where, and sometimes even why the respective objects and phenomena had to be named.

A) a) Here we see that the most primitive races of mankind were rather small (See: Coon, Birdsell & Garn, *Races*) and were developing their physical and psychical features as a response to those peculiarities of the environment which seemed to be vitally important to the species Homo;

b) That the most primitive attitude towards the phenomena in man or outside him was that of a child. Thus, the feelings of an extreme joy and pain, protest and fear must have belonged to the oldest ones and, owing to their intensive character, always required some voiced and tonal unloading of the emotional wave, the cumulus of which threatened the organism with some break of its vital forces. At the same time we come to the conclusion that only on account of having been blunted, on account of having lost much of their original vehemence those oldest kinds of feelings and their expressions began to underlie some control of the person experiencing them and, having become the expressive patterns of the respective situations, they started to function as communicative signs of speech.

c) Finally the archeology showing the gradual levels of man's culture gives us some insight, how poor man's primary vocabulary must have been, being that of hunter and collector, without any transforming or storing his natural food.

Anthropology and archeology, both of them inform us that the emotional wave losing its intensity and coming under the control of human conscience, took place in the Upper Paleolithic (Roginsky — see Bunak, *Proischoždieniye rieči po dannym antropologii*). Some time, before this fact could be established, another valuable hint was given to the investigator dealing with glottogonic problems. The long strife as to the cradle of mankind has been finished by Broom, Dart and others, who found it in South Africa, being the native country of Australopithecinae, resp. in East Africa (Proconsul).

B) a), b) The second domain of science which proved to be very useful in explaining and arranging the glottogonic facts is the study of human behaviour. It shows us, how gesticulation

arose as a part of human behaviour, what movements are to be considered as its predecessors in animals and which part of it took the so-called voiced chewing and voiced swallowing, and consequently the clicking and ejective sounds (see the respective works by Fröschels and Trojan).

c) Then the studying of infant speech points to the various phenomena of phonetic and grammatical order that should be taken into account when we want to investigate the early steps of mankind in forming speech, in building up the highly complicated mechanism of language.

Thus we find inspiratory and injective, clicking and ejective (disjunctive) sounds as early as in the first year (especially often used between the fifth and ninth months of life), when speaking means babbling rather or playing, resp. exercising the tongue in the same way as playing and enjoying movements of hands and feet. The sounds of this period are to be characterized as amorph, asemantic and uneconomic, for they have not any fixed physiological shape, no connexion with the experienced feelings or the outward situation of the child, and are produced mainly by some energetic muscular effort (which gives joy and self-confidence to the child).

Later on about 10 to 14 months there appear in child the first words spoken intentionally and already adjusted to the sounds of the speaking environment. It is the period of the simplest expiratory sound system, of semantic tone, of one-syllable word and one-word sentence.

Let us summarize the features of this period, because they will help us to appreciate duly Bushman and to put its linguistic units, such as sounds, phonemes, syllables, words and sentences in the respective place of the evolutionary scale.

In the sound system there appear already the simplest and the most easily recognizable expiratory phonemes, i. e. phonemes that have a very simple physiological build and a very distinctive shape, so that it can be opposed directly to any other at that time:

Such are the vowels with the extreme positions *i*, *a*, *u*, then the *m* and *n* (with its phonetic variant *ɱ*), the semivowels *y*, *w* and the unvoiced plosives, used quite indiscriminately for both

voiceless and unvoiced, plosive and affricate; there are no fricatives, no laterals and vibrants, no groups of phonemes.

The syllable that very often functions as a word is of the simplest structure C + V, i. e. one consonant and one vowel; this is sometimes, and for a small period of time, provided with semantic tone. The vowel may be nasalized with no semantic value, only as a phonetic variant of the respective oral variety. Neither differences of stress nor those of duration are applied phonemically, i. e. for distinguishing separate words.

As to the form, words are in the main monosyllabic, reduplication being at first the only wordbuilding factor. As to their function in a sentence, the same word may be used as a noun, verb, adjective or even as a pronoun. As to their meaning no abstract words exist in the early vocabulary of a child; concrete contents only can be understood and communicated by a child beginning to talk.

One can say that the higher, more complicated linguistic units, such as word groups and sentences do not exist at first.

Then in the following stages of language development of a child, the situation that was formerly marked with one word begins to be analysed, dismembered; thus, word group, then a sentence comes into existence; of course, language applies here the already existing material of words, resp. word groups that in the meantime underwent some evolution as to their function and meaning. Thus, we see that through investigating the development of speech in children we get some general rules, some general views on language evolution in man.

The same is to be said about the study of defected speech. When we observe, for instance, that with some patients the undeveloped chin is accompanied by some difficulties in producing sibilant sounds, then we are justified assuming some correlation, some connexion between the lacking of chin — which generally occurs in some prognathous racial types — and the lack respectively misproduction of sibilant sounds (lispings).

I took advantage of some similar observation when I was writing the article „The origin of the opposition voiceless: voiced“. Even considering the matter a priori one cannot suppose, that such a subtle feature with almost imperceptible differences of intensity and duration, with not easily felt and recognizable

degrees of opening the glottis, existed already at the beginnings of speech. The child beginning to speak does not observe and does not apply it at all. In primitive languages, e. g. in Bushman, and even in Hottentot we find *k* and *g*, /*k* and /*g* used almost promiscue without any difference in the meaning of the respective words. When I was writing Bushman and Hottentot texts I realized that writting *k* or *g* follows either: 1) different dialects, or 2) different persons speaking the same dialect, or 3) different attitudes, status of body and mind with the same speaker, or 4) different language habits with European writers of the same dialect. Then I concluded: The opposition voiceless: voiced does not exist either in Bushman or in Hottentot; *k* and *g*, /*k* and /*g* (and even /) have to be considered as phonetic variants. The above mentioned reasoning a priori, applied to any primitive language, can be supported by the observation from the field of Speech Correction. Gutzmann in his *Sprachheilkunde* (1924, p. 562) mentions the respective observations of Czermak in these terms: „... Dasselbe (d. h. eine schwächere Expiration bei den stimmhaften Konsonanten als bei den tonlosen) gibt auch Czermak von der durch ihn untersuchten Patientin an, dass sie nämlich die Mediae von den Tenues dadurch unterschied, dass sie die Trennung oder Herstellung des Verschlusses für die Tenues plötzlicher und kräftiger vornahm, für die Mediae dagegen langsam und gewissermassen durch Abwicklung der Berührungsflächen einleitete, wobei allerdings ein meist kaum noch hörbarer Laut entstand. Er fügt dann hinzu dass es der Patientin etwas besser gelang, einen Unterschied hervorzubringen, wenn die Aufhebung des Verschlusses bei den Mediae von der atmosphärischen Luft von aussen nach innen infolge Verdünnung der von der Verschlussstelle eingelassenen Luft also implosiv bewerkstelligt wurde (Cf. Injective), während die Tenues durch die Kompression dieser Luft in der gewöhnlichen Weise explosiv erzeugt wurden (Cf. Ejective)“.

However, when we explain some linguistic phenomenon by taking materials from some heterogenic source (i. e. from another branch of science), precaution is to be held to the highest degree. Of the fact, e. g. that tracheotomized persons use ejective sounds, one cannot conclude anything for the evolution of speech sounds.

The fact remains irrelevant for the study of linguistics, because the conditions for occurrence of these sounds are quite abnormal, or even quite artificial ones.

Therefore we use heterogenic observations, e. g. the facts from the study of expressive behaviour, only after having realized the different conditions of expressive behaviour. Thus, when we compare the development of speech in children we must take into account that the child receives and does not create culture, that it receives and does not create language; that the „speech“ in animals is devoid of symbolic function (Darstellungsfunktion etc.). In this way we see that the most solid ground for the solving of glottogonic problems is the language itself.

2. It is only the matter of taking advantage of linguistic facts and phenomena that do not appear in the normal linguistic activity, but that emerge or are caught by the investigator in some special conditions. Such an investigator should have an adequate schooling, because he must dig or hunt for these facts in the same way as the student of paleobotany digs out some petrified plants, the witnesses of the olden flora, as the anthropologist unearths the skeletons of the died out races of mankind, or as the archeologist brings out the implements that are the only traces of those died out races. In the extremely complicated structure of human speech, similarly as in the human psychic, there are layers of younger and older creations, let us say, even quite primitive means of expression. To those marginal or „survival“ creations there belong some primitive phenomena, such as reduplication, onomatopoeia, primary interjections, the words denoting the shameful parts of body and their functions (obscena), and in the sphere of phonetics there are clics and ejective sounds.

Just in this respect Bushman and Hottentot constitute „unicum“ amongst all the languages of the world. Only in these languages clicks and ejective sounds build some indispensable, indeed some basic element of the sound system. Some time ago linguists were disputing as to the question, what the reason was of such a phenomenon that about 75% of Bushman, in the main monosyllabic (50%) and bisyllabic (40%), words contain clicks and ejective sounds at the beginning of the word. One of the most famous linguists about the beginning of the XX. century Trom-

betti, the author of the *Elementi di glottologia* tried to demonstrate that clics are derived from expiratory sounds. Many africanists and general linguists followed his opinion, and only Van Ginneken in one of the chronicles of the well-known periodical „Anthropos“ put forth the supposition that here we have to do with some olden, very primitive means of expression that in the remotest times of man's evolution entered a system and became linguistic signs. In the case of Bushmen, clicks had been kept for many thousand years on account of their unfavourable, let us say, exceptional conditions of life. Bushmen lived always in some isolation; as inferior in culture and bodily fitness they were ever pushed to some inhospitable areas, where they could retain their original ways of life and speech, and now, when the matter is how to reconstruct the original speech of mankind, their languages can offer us an excellent link, a relevant bridge between the „speech“ of animals and that of man.

In one of his last publications, in the *Contributions à la grammaire comparée des langues du Caucase*, Van Ginneken says that it was I who took over his idea, who demonstrated in an unquestionable way that clicks constituted the original material of which the consonantal sound system arose. The only reproach that was directed against me by the remarkable priest-linguist alluded to my „darwinistique“ views.

Now let us see, to which degree we can speak about Bushman languages as about those of Paleolithic Man. Incidentally, it is to be mentioned that partly Hottentot belongs here too, as well as the old, now forgotten languages of the Pygmies and probably the languages of the already extinct Boskop, the ancestors of the Bantu peoples of nowadays. In order to inform the persons who are especially interested in the Pygmies I may add that in the article *The problem of Pygmy language* I tried to prove that the original Pygmy languages were of Bushmanoid character, respectively, related to Bushman.

When we want to answer the question, if Bushman languages approximatively reflect the features of the early human speech, of the speech at the very source of man's linguistic creations, we have to define first what language is, and to say it more precisely, what language was just at the cradle of human speech. Now,

language, in its most original shape, was a system of expressive (eloquent) signs that constituted to a high degree one part of human general behaviour. And again, as this behaviour constitutes some „response“ of man's physiological structure to the stimuli coming from inside as well as from outside his organism, therefore the type of language, the shape of this system of signs will be connected, or even will be determined by man's organic background and natural environment (milieu), from which the stimuli are coming.

There are five factors of this background and environment:

A) The organic background is represented: 1) by man's Physique, i. e. by the average anthropological type of the social group, in this case, of the tribe or people, to which the speaker belongs, and 2) by the social Psychic, one part of which is the so-called national character.

B) The environment, the milieu of any situation in which speech occurs, is composed basically of three factors.

These are: 1) Nature, i. e. the natural surroundings where the speaker lives; 2) Culture, i. e. the material, social and spiritual forms of life of tribe, finally. 3) History, i. e. the events that influenced the evolutionary stream of language in a given tribe.

In the case of Bushmen, the whole of these factors may be illustrated by the following tabular form, which concerns the so-called Bushman culture province:

Nature	Physique	Soc. Psychic	Culture	History
salty steppe; halfdesert	Khoisan race; physical infantilism (Dart).	Psychical infantilism; „the child of the moment“ (Passarge)	Eurafrican culture of steppe-hunters; hunters and gatherers.	In olden times dwarfish peoples, i. e. Bushman, Pygmies and Boskop inhabited, resp. wandered almost over the whole continent of Africa.

Their wanderings following the game and giving way to the peoples of high stature left traces of some substratum influence

on the other linguistic groups of Africa. The fact that owing to their relatively early isolation in the so-called areas of retreat (e. g. deserts, lakes, tropical forests) they preserved to a high degree the extremely primitive features of their race, culture and language has been pointed out by several eminent writers on the subject.

1. Thus, the anthropologists Coon, Garn and Birdsell, the authors of the work *Races* express the opinion that dwarfish peoples who are living now in the tropical zone from Cameroon to the Philippines belong to the oldest races of mankind; they are to be considered as a very old racial survival of the *Homo fossilis*.

2) It is not necessary to prove that the culture of hunters and gatherers constitutes the oldest type of human culture altogether. To be sure, we meet with this kind of economy already in the world of animals. The archaism of this type of husbandry with the Bushmen was attested by archeological findings.

a) The material culture of Bushmen is usually determined as that of the Upper Paleolithic.

b) In the social structure there are no marks pointing to a predominance of one sex over the other. Of course, the equal value of the work of both partners for the livelihood of the family (man supplies meat, and woman provides family with vegetable food) decides upon the social balance with an almost equal importance of both sexes. Social groups are rather small (50 to 100 individuals). Hunting or gathering cannot be organized — allowing for the respective conditions of nature and life — equally well in some more numerous groups of individuals. The power of the chief is very weak.

c) In the spiritual domain of culture there is a strikingly low level of religious beliefs and customs: manism and preanimism, lack of persons and institutions devoted to religious purposes, lack of offerings and ritual etc.

Finally the language itself shows features that cannot be characterized otherwise than as extremely primitive:

1) Grammatical rules such as could determine the function of separate members of any linguistic creation are wanting. There is a lack of the higher organized linguistic units such as a sentence

with subordinate clauses or a declaration. To say the truth, the hierarchic scale of linguistic units with full meaning begins and ends with the word that is sometimes simultaneously the sentence. Syntactic group is still *in statu nascendi*.

2) The same is to be said about the differences in the functioning of words. Thus, the difference between Verb and Noun does not exist, e. g. the word /na can denote 'head', 'see' and 'this here'.

3) Every word possesses the full of contents; words which denote some quality connected with the object or phenomenon, or which point to some relation between two members of the group, are missing. Their function, i. e. the function of conjunctions and prepositions is fulfilled by gesticulation, change of tone or the position of one word full of contents in proportion to the other, Adjective or adverb is also a word full of contents, i. e. the word of a verb-noun character that according to our interpretation could function as verbum, nomen, adiectivum or adverbium.

4) Concrete terms are not only predominant, but almost the only ones in the vocabulary of Bushman. This can be proved by the quite insignificant number of numerals, that denote basically rather objects with which singularity, duality or plurality is a striking feature.

Thus, in Northern Bushman language 'one' means 'this — here' — /neé < /ne !kwé < /ne !kwai 'this leg', from which the Ewe *e — dé* 'he — one, this — one' is derived. 'Two' means literally 'both legs', then !ku: (S₁), which after all means also 'to jump' (and indeed, when jumping one carries up both legs simultaneously).

Three means much, many', and such a multitude that strikes the eyes may be seen in many legs of a scorpion. Hence for 'three', many' and 'scorpion' is the same word in Southern Bushman: S₅ //kai, S₆ //gāi 'three'; S₃ //kāi, S_{4, 5} //kari, C₁ kari-si 'much', S₃ //χain, S₄ //k'ari, S_{5, 6} //k'ari (!χai) 'many'; S₆ //kai:, C₁ //kadi, C₂ //k'ari-ba 'scorpion'.

Besides, the weak ability to abstract appears in the lack of words denoting, e. g. fruit. There are words pointing to different kinds of fruit, e. g. /ga:ra (S₁) 'berry, fruit of Kareeboom', but a word meaning 'a fruit in general' does not exist. The same is to be said about 'eating': S₁ //kà:ú 'to eat raw meat', /úv 'to eat

marrow', !kũv 'to eat fat'; N₁ m 'to eat vegetable food', but a word, that would mean 'to eat (in general)' without respecting what is eaten, is only in the statu nascendi, and just some phonetic variants of the word //kà:ú, such as hã or ã begin to denote 'eating in general'.

5. On the other hand linguistic means that have been mentioned above among the clumsy and uneconomic creations of infant speech are applied abundantly, e. g. a) reduplication to express multitude or intensity, b) onomatopoeia, c) semantic tone, d) gestulation.

a) Thus, /hu/hu (S₁) means indeed 'baboon' as well as 'many baboons'. However, for the majority of nouns plural is built by the way of reduplication, i. e. in an almost simplest way, e. g. S₁ /k'a, pl. /k'a/k'a 'hand'; tu, pl. tutu 'mouth'; N !ná: 'be bigger, higher' or 'stronger', 'to overcome', from which the Causativum is !ná!ná 'to make stronger, to strengthen'.

N₁ /kẽ 'make noise', C₁ /ken/ken, N₃ tsintsin-zə 'to shake'; cp. the Polish *dzyń dzyń*.

b) S₃ !kan < !kam 'to stamp one's foot, to break', S₁ !kami-!kami 'make noise'; cp. Arabic *ṭanṭana*, Lat. *tintin-are* 'to ring (the bell)', Engl. 'to din'.

α) N. !gũ 'to go', Konde *tu tu* 'the imitating of the gait of an elephant' (cp. Polish *tup tup* 'stamping'); N. !gurù < gù!gù, Pygmy (Ndzem) *ngum ngum*, Swahili *nguru-ma* (e. g. *kuna nguruma*) 'to thunder'; Swahili *dundu* 'a big pumpkin, calabash', *dunda* 'to beat a drum on one side' (*ngoma ya kudunda*); Bantu *tutu-ma* [*tutu-ma*] 'to thunder'; cp. Russian *gŭrŭ-mi* > *gremi-t* 'to thunder', Polish *dudu* in *dud-nié* 'make noise'.

β) N_{1,2} !kú: 'bone', N₂ !kuru 'cut off meat', S₁ !ku!ku 'to shake', N₁ !kupku 'to barter'.

c) The use of tone points to different emotional attitudes evoked by different objects or phenomena. Examples from !Kũ (N₂):

α) High — 1) joy, e. g. /'á: 'to like, to love', /'ã: 'to give', ///khá 'meat', kú: 'milk', n/hí: (*si*, *tsi*) 'to laugh', /'húm 'nice, good, beautiful', 'm: 'to eat', /'n: 'to sit down', g'é: 'to sing'.

2) strong, hard, hot objects, e. g. /kχái (/ái) 'foot', ≠kí 'to scrape off', kχá: 'earth, ground', kúru 'to make, to do', !kú:

'bone', ts'áu 'tooth', gwé: 'knucklebone', g'ú 'bake, sun, hot', /gám 'sun, day, hot', !gú 'belly'.

3) egocentric attitude, protest and the related feelings on one side, on the other side the intensity and vivid interest in perceiving things or phenomena very near, so near, that they seem to violate the sphere of life of the perceiver, e. g. *mí* 'I, my', ts'í: 'mouth', /né: 'head' ts'ú 'hut', /gí: 'rise', /gú: 'night', wó: 'exclamatory, calling somebody', zhú: 'to call', !gú: 'name', hn: 'bad smell', /'á: 'dirty', /'ú: 'to drop', kχ'wá, 'to foam (anger), to look for', /'ú: 'tired', /kχ'ái: 'ill', /kχ'áu: 'ugly', ///kái 'die, dead', ≠'háu 'to trap game', !nó: 'fast, quick', o///gə'i 'to frighten away';

β) rising — 1) alarm, calling, e. g. *okχ'wí*: 'to say, word', ///kχã: 'knife', ≠kòru: 'to climb', khì:má 'knobkerrie', !ñ 'be tired', ùú 'no!', ///gũ: 'to bark';

2) amazement, indicating, e. g. ///nwí 'to bake, roast', v ≠hwí: 'dog', gù:m: < gú: 'take' + m: 'eat', i. e. 'to eat', ///nái 'people';

3) onomatopoeias of a special type, e. g. !gãv: 'tree, stick';

γ) low — 1) pain, anger, striking from behind, e. g. ≠nám: 'to strike', ≠v'wá: 'to throw', à: 'you, your' kàn: 'to tremble, quiver', //kà:m 'to cut wood, to strike with a hand', ≠kàm 'to break out', hà: 'he, she, his, her';

2) fear, night, e. g. ≠ùn 'stars', /'hã: 'cap of leather, to cover the head', v///kà: 'rain', /và: 'sky, clouds';

3) big, far, opening, appeasement, e. g. ///v'à 'big, tall', /và: 'sky, clouds', ≠v'háu 'to travel', mà'à 'to carry a child on the back', /vù: 'a wooden dish for eating', !gurù 'to thunder';

δ) falling — 1) request, e. g. kχ'á:rù: 'to seek, to experience lack of', *gumu gùmà* 'to whisper', ≠v (≠v'v) 'say, word' m 'to eat', /ñ, pl. /nsn 'berry', !ñ: 'belly, interior', khù: 'to ache';

2) something finished, e. g. /'á:/à: 'to sharpen', ≠kó ≠kò: 'a pointed knife', !nái: 'sharp' ≠gàò: 'to pulverize', ///kã: 'to escape', ko'à (*kohá*) 'to fear';

3) striking, big noise (onomatopoeias), e. g. !núm: 'stone, mountain', n ≠'háu: 'to flow quickly (water), fountain, spring';

ε) middle¹ — 1) threatening, stopping, saluting, e. g. gù: 'to take, seize, do', /goni 'to follow the spoor', /gam: 'to suek out',

¹ Here unmarked.

/gau 'strong', xanà 'to scratch', xami 'to pulverize, to grind', /ho: 'to visit', /v: 'to take', !w'm 'to suck out', !na: 'to scratch', ≠vwi 'to scrape the skin', kwe 'to go away', !khū: 'to kill', khwi 'to cause pain', nt'fa: 'to steal', kχ'ai: 'friend, to know each other', /'a: 'to ache', 'overeat oneself', kχ'wi 'to feel aversion';

2) astonishment, pointing to, e. g. /kha 'to kindle', ///ka'u 'to flow', ///kaā 'riverbed', khu 'to jump', ts'i: (t'ɪ) 'wet', 'v'ə: 'pregnant', /nwi: 'you', xoni: 'to strike fast, to crush', ho: 'to get, find', /gum 'wet', /na /na: 'now (here)';

3) onomatopoeias, e. g. ///gū 'water, to drink', /v'ha: 'to throw', /'hai 'to draw', !nu:m 'stone', /wī: 'to breathe'.

d) The vivid gesticulation when speaking is one of the most essential features that strikes every European who observes Bushmen in their daily life.

α) Thus, for instance, in the syntactic word group //an ≠ kē 'on the floor of the hut', the spatial relation 'on' remains unexpressed with any formal elements; it is only the gesture that depicts it in some rough, general way.

β) In the formative element -kən, characterizing the so-called Casus emphaticus there have been preserved traces of some prevalent application of gestures in the previous stages of linguistic evolution. Let us take as an example the word !kwa (S₁) meaning 'leg': its emphatic form (Casus emphaticus) sounds !kwakən and means 'a true leg, the very leg, a leg indeed', but the Bushman speaking of it will point to it, if not with his hand, so at least with his eyes, because -kən is related to the word denoting 'to be like', e. g. S₁ /ke /ke:, /ko:a, k'wan, S₂ ki:en, N₃ kwē, kwā, N₂ /ke /ke. In this way, the literal translation of !kwa-kən should be 'a leg like (this)', formerly, of course, accompanied by a gesture pointing to the leg of the speaker. Then, according to the rules of comparative phonetics of Bushman the word !kwaba 'to flutter' is derived from !kwa 'leg', !gwà 'fist, hand', because 'fluttering' means originally 'moving legs and hands' — wings are in this case assimilated to hands, resp. to the opened fists. The emphatic form of !kwaba 'to flutter' is !kwabakn 'to flutter indeed' or using the above explanation of -kən, -kn, it should be translated with 'to flutter like this'; although the respective gesture is only seldom (e. g. when relating fables to children) produced now, the expres-

sion !kwabakn points to its use quite unambiguously. In the Pre-Bantu, as Meinhof had fixed it, 'to flutter' means papa [p'ap'a] which is quite regular continuation of the Bushman !kwaba, because the Bantu continuator of the Click Block !kw < !k'w is p, respectively p' (ejective p).

It is interesting to notice here, that traces of such expressions that were accompanied by gestures can be detected in other African languages too. Thus, in Pre-Bantu we have the stem -nga meaning 'thus, like, as' and a set of verbs in -nga; in Pedi the respective form is -k'a, and in Hausa we have a set of verbs with the suffix -k'a which seems to correspond with the above mentioned Ba. -nga. In Hausa we have even the word k'ak'a 'how', 'like, as', which seems to be the continuator of the Bushman /ke /ke < /k'a /k'a.

I was led to such an interpretation when looking for some etymology for the Pre-Bantu stem pinga 'to weave'. I found it in N₁ !gwi:a 'to turn (the head)' + /k'a 'doing something like this' — here some demonstration with fingers followed in order to show how weaving was going on. The following examples point to the same result: N. ≠gà + !nà + gu 'put + in + one into the other', i. e. 'to weave', Hau. sa: + k'a 'put or set (in) + this way'; in the Ful sa + nja 'to weave' — nja is quite a regular continuator of the Bu. /k'a and corresponds with the Hau. -k'a that has been preceded with some nasal like in Ba. v + k'a > -nga; Pedi fe -k'a, Kafir phinga 'to weave'. Beside sanja Ful possesses another word that seems to be connected with the Bu. !gwi + /k'a, where another equally regular development of the syllable — /ka (without any trace of the nasal sound) occurred, i. e. /k' > t > t, (l); so, we have fetō-de (pl. -'de) 'braid, twist', Somali fal-ki 'to weave' (fal 'to do, to spell'); Egyptian Arabic fat-la 'thread', pl. fital; Egyptian Ar. haka 'to weave' and Arabic haka 'to imitate, to relate' are connected rather with the above mentioned variety that produced Hau. sa-k'a, because according to the comparative phonetics of Bushman s and h (h) are derived from the same Bushman source /h, (!h).

6) Ejective and click sounds. Finally one of the strongest arguments in favour of the ancientness of Bushman is the archaic consonantal system relying mainly on click blocks and ejective

sounds; it is applied in this way that almost every use of the respective kind of click block can be explained by the conditions of its use, by the meaning which it conveys. Here indeed we see that, when the matter is of expiratory sounds, obsolete connexion between sound and meaning. Some words about Ejective sounds:

A) The act of swallowing is the source of the Muscle Air-Pressed Consonants, which are divided into two subgroups, viz. the Ejectives and Injectives. The first ones are derived from the first phase of the act of swallowing; they are characterized by the glottal stop, the raising of the larynx as a whole and compression of the non-respiratory air in a closed sector of the respiratory canal (between the glottis and some closure in the oral cavity, resp. the closed lips). The propulsion to produce the Compressed Sounds (Ejective) consists in the muscles of speech organs as well as in the pressure of the air that cooperates in opening the respective front closure. The sounds are of a definite consonantal character and had originally rather a phenomenal (not emotional) semantic value.

We meet them 1) in the cries of monkeys (Jespersen, Doke); 2) in defected speech, e. g. in the beginnings of vocal speech with the deaf-mutes; 3) with the tracheotomized persons; 4) in the babbling stage of infant speech (especially between the 5th and 10th months of life). 5) Boys use the ejective sound *kʰ* when chasing cats away; Doke noticed the same sound in the extra-normal phonetics of Zulus and Lambas, especially when they were imitating the cries of monkeys.

In Bushman the ejective variety of a phoneme generally points to some strain, some greater effort of man's attitude to objects or phenomena. Thus, in /*k*/ a 'hand' the ejective *kʰ* reflects the strain of the muscles when stretching hand, in /*k'a*/ > /*ka*/ (/ke/), /ke/ > /ke/ 'be like' ejective *kʰ* points to the effort in imitating things or phenomena depicted by the speaker.

B) Clicks are also used in almost the same circumstances as ejective sounds. Beside these instances we meet them: 1) in the primary interjections of non-clicking languages, 2) in primary interjections of clicking languages, and 3) in the normal speech of clicking languages in almost all the kinds of words.

As to their meaning they are to be considered as some special linguistic gestures of the tongue and lips. They constitute a part

of human behaviour, being the expressive response to some exterior or interior stimuli.

a) Smacking with the lips is quite a natural reaction of human organism that tries to keep the nice, agreeable stimulus of taste as long as possible. In this way the fact is quite intelligible that the labial click symbolized only tasteful, nice and beautiful objects. Thus, when in the vocabulary of the Southern Bushman dialect /*Auni*, containing some 708 words, there are 12 words with the labial click, all of them denote agreeable things and phenomena. Let us quote them:

1) *Obwa:a* 'tree, stick'; in the steppe, tree means an agreeable shadow, a vision of a fire-place, then of something to eat etc.; 2) *Omē*, (*≠khe*) 'duiker', a beautiful, nice antelope with tasteful meat; 3) *Opā:* 'son', pl. *Opā:a*; 4) *Opwa:* 'child', pl. *Opwa /na* 'child's eyes' = 'children'; /*na*, /*n*, *sn* means 'head, eyes, to see, this' — an eye occurs usually in plural, and as the attention of the speaker is first of all directed to the eyes of the person(s), then it is not anything strange in the fact, that *n* or *s* so easily became the formative of plural in many African, and even in Indoeuropean languages, e. g. -*nti* 3rd Pers. Pl., -*s* Plural of nouns). 5) *Opwai* 'young'; 6) *Opwa:-xe* 'daughter'; 7) *Opwe*, *Opwi* 'meat'; 8) *Opwoi* 'to sleep'; 9) *Opwōv* 'son'; 10) *Opwōnke* 'screen of bushes, hut'; 11) *Opwōsa* 'golden jackal'; 12) *Opχwe* daughter'.

b) The respective clicks express the various attitudes to the stimuli of taste in this way that the physiological structure of the click is in accord with the distribution of tasting cells of the tongue which are susceptible of the special kind of taste. Then:

1) N. /*kuru* < /*ku* /*ku* 'sour'; the attitude of the organism to sour things is expressed with the dental click because in producing this click especially the borders of the fore part of the tongue are active, and just in this part of the tongue most cells are placed that are susceptible of the sour stimuli.

2) N. *≠kon* 'sweet' — here the expression of the attitude to sweet things is the alveolar click, because when producing it one puts the tip of the tongue to the alveoli, and just on the tip of the tongue most cells are placed that are susceptible of sweet stimuli.

3) /*k'au* 'bitter' — the lateral click is produced by putting the back part of the tongue to the molars, while just on the back

part of the tongue there are placed the cells that are susceptible of bitterness. At the same time the use of the ejective *k'* may be explained as indicating the effort of organism to throw out, to get rid of the disagreeable stimulus.

4) N. *!gavu* 'be tasteless, insipid' — the palatal click that is produced by putting the tip of the tongue against the hard palate just behind the alveoli has nothing to do with denoting tastes; at any rate, its use can afford some negative argument to support the above explanation.

c) Clicks as linguistic gestures reproduce in many instances the gestures of the hand, e. g. */ná* 'this' — the hand is stretched with the finger pointing to the respective object, and so is the tongue when producing the dental click. We can observe such gestures of the tongue following those of the hand, when we look at children making the first steps in writing. The tongue moves to the right just as the hand moves writing and, when a new line begins to be written from the left, the tongue starts its movement from the left too.

d) Clicks point to the various positions of human body:

1) N. *khái* < *!khái* (cp. *S₁ !khe:*) 'stand up'; in producing palatal (Doke calls it prepalatal) click the tip of the tongue moves up touching the hard palate: the same position is taken by the hand imitating the rising or standing. Besides, the same click points to the same position of standing, when the following words are provided with it:

S₁ !kũ 'stand up', N. *!gũ*, *N₁ !kũ!*, *ku*, '*N₂ !kú* 'to go';
N₁ !ka:, *S₁ !ka-tən*, *S₄ !kun*, *C₁ !kũ*, N. *!harè* 'to run';
N₂ !kabi, N. *!gávi*, *N₃ !navə*, *C₂ !kabe* 'to ride';
S₆ !kami, *C₂ !kai*, N. *!hài* 'to hunt';
S₁ !gave-tən 'to throw', *!kai-tən* 'throw up', *N₂ !nuä* 'to throw' etc.

2) N. *≠nú* 'to sit'; here the alveolar click reproduces the respective gesture of the hand: the hand stretches forward horizontally with the palm turned up; some similar movement executes the tongue, at which even the level of the movement is adequate, because sitting is the middle level between standing and lying, and so is the level of the tongue in producing the alveolar click, viz. between that of the palatal and the lateral clicks.

3) N. *!!òm* 'to sleep', *!!goë* 'to lie' — the lateral click reproduces here the gesture of the hand, being put at the head, bent on one side as for sleep.

e) In the same way, i. e. by imitating or participating in the respective gesture of the hand —

1) the movement forward and upwards will be reproduced by the palatal click (the tongue moves forward and upwards), e. g. N. *!khà:* 'to sting, to push directly forward'.

2) the movement to the side or from the side will be reproduced by the lateral click, drawing the back part of the tongue from the molars on the right or left side of the jaw (resp. on both sides simultaneously, e. g. N. *!!gái* 'to push to the side'.

f) Clicks point also in some special way to the various parts of human body.

Thus, producing the dental click enables us to show the tongue, then the word denoting tongue is provided with this click, e. g.

S₅ /na:nì, *S₄ /āri:*, *N₂ tēti* < */nani*, *teri* < */ari* 'tongue'.

In course of the producing of lateral click the teeth become visible, in this way the lateral click indicates them, e. g. *S₁ !!kēi*, N. *!!gūb* 'tooth'. The dental click points to the nose (originally it was perhaps the interdental one) + of course, the nasal resonance *n*, then *S₄ /nu:* 'nose'.

The ear has not any uniform semantic basis. This may have been in Southern Bushman the perceiving of acoustic stimuli leading to onomatopoeias (ideophona), e. g. *S₁ !nuntu* < *!num* + *tu* 'stone (shell) + mouth (hole)'; in Nama it is called *≠gái-s*, with the same word as 'leaf'.

To denote 'the hand' in Southern Bshman */k'a*, the dental click is used reproducing the respective gesture of the stretched hand. However, the word *!gwà* < *!gu* + *à* (*S₁*) 'fist, to beat with fist, to seize' presents some similar onomatopoeia as the above *!kwa* < *!ku* + *a* 'leg'. The difference relies upon the low tone and a greater degree of voicing with *!gwà*, which is quite obvious when one considers that stamping (*S₁ !'um*, *S₅ !'um*, *S₃ !kan*, N. *!hũ* 'to stamp') produces rather some unvoiced noise with higher harmonics, while striking with a fist, e. g. an egg of an ostrich results in a rather voiced noise with lower harmonics (cp. *S₆ !gwōi* 'egg'); cp. the above examples *!kú* 'bone', *!kú !kú* 'spear' in comparison

with *!gurù* < *!gù !gù* 'to thunder'. The somewhat greater degree of voicing in N. *!gǔv* 'go' seems to be derived from the stronger nasalisation, which found its expression in writing -*v* after the nasalized vowel *u*. After all, as it has been said above, there is no phonematic voicing in Nama.

g) Clicks point also to the various degrees of the mass concentration in objects, because sticky or liquid objects, when compared with dry or solid ones, cause, not only different attitudes to them but also, when they are touched, manipulated or experienced by man, affect differently the senses, especially the sense of hearing. Examples from Nama:

1) sticky, adhesive and slippery objects are characterized with the alveolar click (cp. above, what has been said about 'sweet'), e. g. *≠á:*, *≠ára* 'to spit', *≠á:b* 'saliva', *≠goà-b* 'clay', *≠ná* 'to pour', *≠náo* 'to stick', *≠naò-b* 'wax', *≠nára* 'flat, slippery';

2) liquids (when in great quantity) are characterized with the lateral click, e. g. *||gá(mi)* 'water', *||gána* 'to water' *||gará* 'to sift', *||gárus* 'water-bag', *||garúb* 'cistern', *||á:* 'to wash', *||áma* 'wet', *||ám* 'clap hands';

3) dripping liquids and long, thin objects are characterized with the dental click, e. g. */kám* 'urinare', */kàva* 'to leak', */kavíb* 'hard sort of grass', */gáb* 'grass', */avi* 'to rain', */áo* 'to milk', */gavi* 'to bespatter', */gavi* 'be high, tall';

4) hard, dry, round, protruding objects are characterized with the palatal click, e. g. *!ám* 'be hard', *!gári* 'be hard, tough', *!hòvo* 'to roll', *!huvú* 'be round', *!gúvu* 'be round', *!gáreb* 'the alone standing rock', *!nàmi* 'the side, brink, verge', *!huríb* 'the backbone'.

The lateral click denotes objects occurring in pairs, being on the side of a body, e. g. *||nāb* 'horn', *||gavòb* 'wing' *||kxáib* 'breast', *||kxib* 'shoulder', *||kxǎib* 'shoulderblade', *||ǒq̣b* 'arm'.

Finally I should like to give two examples more from the domain of eating showing differences according to the above explanations:

1) N. *!nǎi* 'to bite' — of course, biting, in this case, is something like, „a loud chewing“ (as would say professor Trojan, the remarkable laryngologist and phonetician in Vienna) — then the use of the palatal click is quite intelligible (crunching).

2) N. */ǎ* 'to bite' — as executed by small animals that did not get teeth yet, thus, mumble rather than bite; it is reproduced by the dental click, respectively the interdental one, which again substitutes an interalveolar one.

CONCLUSIONS

In the light of the above observations four conclusions are to be drawn:

1) Bushman constitutes the most primitive now accessible type of man, culture and language;

2) Speaking roughly, Bushman approaches us to the type of human speech at the close of Upper Paleolithic;

3) Etymological studies on Bushman allow in many instances to penetrate into the original connexion between sound and meaning;

4) Etymological studies on any linguistic group of Africa have to count with the clicking substratum or a clicking genealogic source. This substratum seems to allow us to prove the genetic unity of all linguistic groups of Africa.