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PREFIXES, ROOT-DETERMINATIVES AND THE PROBLEM OF BICONSONANTAL ROOTS IN SEMITIC

The existence of triconsonantal roots with the synonymous or even identical meaning and with the same two consonants has been observed by the grammarians and lexicographers in Semitic languages already in the Middle Ages. Such groups as *d-k-k̄*, *d-w-k* and *d-k-j* [1] have been considered with good reason as the remnants of the original biconsonantal roots. The biconsonantal nouns and pronouns constituted another indication that the widespread triconsonantal root is a secondary phenomenon in many cases. After more than a century of sometimes very far-reaching generalizations and aprioric statements by both the followers and the opponents of the biliteral theory it is rather generally accepted that in the prehistorical stage (i.e. in the prehistorical period which can be still grasped by the external or internal reconstruction) there was no such overwhelming preponderance of the triconsonantal roots over the biconsonantal ones. The basic theories explaining the development of some triconsonantal verbal roots from the biconsonantal ones were elaborated already in the 19th century by scholars such as de Lagarde, Stade, Müller, Fleischer, Mez and later in the 20th century Nöldeke [2] and they surrived till the present moment as it

[1] This example was quoted by Gesenius in his Ausführliches grammatisch-kritisches Lehrgebäude der hebräischen Sprache in 1817.

[2] For the history of the studies on biconsonantal roots (however with no valuation and critical judgement in some cases) see G. Bot-

is summarized in *An Introduction to the Comparative Grammar of the Semitic Languages* by S. Moscati, A. Spitaler, E. Ullendorf and W. von Soden[3]. The essence of these theories consists of the following: 1° some triconsonantal roots developed from the biconsonantal ones through the adoption of a determinant, 2° the so called „weak" verbs (most probably not all of them) were originally biconsonantal and they extended to the triconsonantal form through the process of analogy.

I should like to concentrate at first on the former point. The well known and frequently quoted example of Hebrew *p-r-d*, *p-r-m*, *p-r-s*, *p-r-ṣ*, *p-r-q*, *p-r-r*, *p-r-š* etc.[3] (all these verbs have in common the radicals *p-r* and hypothetically the basic notion „to divide") will be used once again. I must confess to some scepticism about the value of this example and of many similar ones. The first two consonants are identical but is it possible to consider the existence of a common semantic element postulated by some linguists as a proof of the genetic affinity of these roots? The problem is whether such a general „similarity" of the meaning (the authors of the *Introduction* have chosen the meanings „to separate", „to tear", „to split", „to break down", „to pull apart" respectively in a sometimes not quite accurate way) can be used as criterion and whether we can divide a morpheme into a morpheme and a phoneme? Of course any reconstruction of this kind may be only tentative but what is the basis of such a hypothesis? The „similarity" of the meaning in the example mentioned above may be either acknowledged or refuted on the basis of some very subjective opinion. With equal reason it would be possible to argue that one can, provided that there is no objective limit to abstraction and generalization, find a common semantic element in any pair of verbs in any language. Of course there are examples like Arabic *natara*, *nataša* and *nataqa* „to pull out"; *habata*, *habaja* and *habada* „to beat, to strike"; *mazaʿa* and

terweck, *Der Triliterismus im Semitischen*, Bonn 1952, and the review by J. Heller, *Neuere Literatur zur Biliterismus-Frage*, Ar. Or., 27, 1959, p. 678—82.

[3] S. Moscati, A. Spitaler, E. Ullendorf, W. von Soden, *An Introduction to the Comparative Grammar of the Semitic Languages*, Wiesbaden 1964, p. 75.

mazaqa „to tear"; *wahā(i)* and *wahana* „to be weak", *saḥaqa* and *saḥana* „to crush, to tear to pieces, to pound" etc. etc. that clearly show semantic affinity or even identity of meaning (in the present stage!) of some verbs differing only in one consonant[4]. It must be, however, underlined, that if there is no clear relation or identity of the meaning of such roots, the reconstruction of an original biconsonantal root is not very probable since we may find ourselves committing the error of vicious circle. Then our reasoning may run like this: we acknowledge the existence of a biconsonantal root because of the assumed semantic relation of two triliteral verbs but this semantic relation is also hypothetical and to be proved. There is even much more danger when some linguists try to reconstruct the biconsonantal roots comparing two verbs with „similar" meaning and with phonetically „similar" two or even all three consonants i.e. when they assume the radicals may have undergone certain (what exactly and in what positions?) phonetic changes. The unproved and unclear „similarity" of meaning permits them to by-pass the discordance with phonetic (even if not exceptionless) laws in order to postulate in every single case a subjective „phonetic similarity" or ad hoc invented phonetic laws and this in turn permits them to forget the intricate problem of how to prove the genetic affinity of the meaning. The criterion of „phonetic similarity", i.e. the proximity of the places of articulation, the similar or the same manner of articulation, and the impressionistic acoustic „resemblance" has been devaluated too many times.

The fact that no semantic value, i.e. no lexical nor grammatical meaning can be attached to the remaining consonant (which accordingly with many followers of the root-determinatives

[4] „Reimwortbildung" may be considered as a source of origin of some of these roots. Cf. C. Brockelmann, *Semitische Reimwortbildungen*, ZS, B, 1927, p. 6—38. *Arabic-French-English Dictionary* by R. Blachère, M. Chouèmi and C. Denizeau, Paris 1964 quotes such roots and gives cross-references. Cf. also M. Cohen. *Essai Comparatif sur le vocabulaire et la phonétique du chamito-sémitique*, Paris 1947, p. 59, 60, 66—67. Some authors suggested also that prepositions could be „incorporated" but no convincing examples could be found.

theory may be the first, the second or the third radical) poses even more difficulties. As long as we can attribute no meaning to the remaining radical we cannot consider the other two consonants as a morpheme. It may be useful to quote an example from the basic handbook by H. A. Gleason who proposes to compare *bug*, *bee*, *beetle* and *butterfly*. „It seems ridiculous, Gleason says, to suggest that since these all include /*b*/ and all mean some kind of insect, /*b*/ must be a morpheme. But this is only because, as native speakers, we know that /*eg*/, /*eiy*/, /*iytil*/, and /*eterflay*/ do not exist as morphemes that can be associated with these words“ [5]. This is obviously a different case as with *cranberry* in which no meaning can be attributed to /*cran*/ since it does not recur in other cases but we still have to consider it as a morpheme because *berry* is one (e.g. blueberry, strawberry etc.) and /*cran*/ occurs in the same position as blue, straw etc. Moreover cranberry is a special kind of fruit [6]. In the case of the hypothetical root-determinatives in Semitic the meaning of the both segments is not established their morphological function being unknown. Hence the possibility of reconstructing the original biconsonantal roots is put into question.

From the phonological or better say phonemic point of view the acoustic „similarity“ depends on the phonemic system of the language of which a person postulating such a relation is a speaker: for a German speaking person for example, /*s*/, /*ṣ*/ and /*ṭ*/ may sound „similar“ but they are absolutely different since they constitute three phonemes e.g. in Arabic. In some Semitic dialects the opposition emphatic versus non-emphatic ceased to exist but obviously it does not justify a neglect of this opposition when it still works. As long as there is no possibility of discovering a condition (phonemic of morphological) for a possible differentiation of a hypothetical biconsonantal roots and for root-determinatives, we can postulate no alternations and make no reconstructions. The fact that, for example, liquids or nasals may interchange in some languages under given conditions and of course in a given stage, is not enough to take the existence of „nasal, liquid etc. affixes“ for granted. The vivisection of a root into a hypothetical morpheme and a phoneme is at least very dubious. In general it can be said that the theory of root-determinative: is very controversial. For Indo-European [7] let us quote A. Meillet's opinion about root-determinatives: „Ces élargissements sont une cause d'imprécision en matière d'etymologie, car il est également impossible soit de les négliger soit d'en faire une théorie complète“ [8].

[5] H. A. Gleason, *An Introduction to Descriptive Linguistics*, New York 1965, p. 56.

[6] L. Bloomfield, *Language*, New York 1933, p. 156; Z. S. Harris, *Methods in Structural Linguistics*, Chicago 1951, p. 177, and cf. N. Chomsky, *Syntactic Structures*, The Hague 1957, p. 100.

Finally let us draw attention to the fact the Semitic root (or rather its consonantal „skeleton“) is rather a „short“ morpheme, i.e. the number of all possible combinations of three consonantal phonemes (with the total of 29 consonants proposed for the prehistorical stage of Semitic) is limited and not very large at all since there are well known phonotactic principles of „incompatibility“ of a number of consonantal phonemes in well defined positions [9]. Hence a big number of minimal pairs, i.e. of morphemes differing formally only in one phoneme, is possible. Among such pairs and groups of pairs there may be accidentally verbs with „similar“ or even identical meaning but not related genetically. This may serve as another warning against hasty reconstructions.

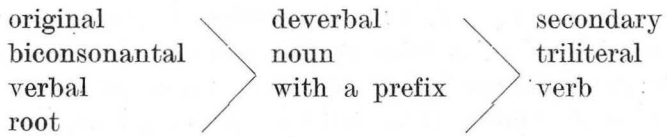
The problem of root-determinatives must be treated separately with the seemingly similar problem of the original biconsonantal roots extended by prefixation. If there are at least two triconsonantal roots having the same or connected meaning and the same two radicals the first radical being *'-*, *h-*, *š-*, *t-*, *m-*, *n-*, then we may posit the reconstruction of a biconsonantal root with a considerable probability. Such examples as Hebrew *hālak* „to go“, Arabic *'alaka* „to send“ and *salaka* „to go, to travel along the

[7] This does not mean, of course, that I postulate Indo-European and Semitic relationship.

[8] A. Meillet, *Introduction à l'étude comparative des langues Indo-européennes*, Paris 1953, p. 179. Cf. also p. 177.

[9] J. Macdonald, *New Thoughts on a Biliteral Origin for the Semitic Verb*, „The Annual of Leeds University Oriental Society“, 5, 1963—65, p. 63—85, tries to explain the relevance of the principles of the phonological patterning of the root morphemes for his study of root-determinatives but these do not seem to play any part on the morphonemic level.

road" may be analyzed as containing an original biconsonantal root extended by a prefix which has become lexicalized. This was already realized by many scholars. Even if grammatical function of these prefixes can no more be detected (this is exactly what lexicalisation consists in), still the probability is very high. One could argue that we should also consider the root-determinatives as lexicalized affixes but it is almost certain that this would be never proved and thus such a hypothesis is of very limited value for scientific reserch. In the case of prefixes the derivation developed thus:



with a possibility of a direct reattachement of the secondary triliteral to the original biconsontal root [10].

Of course not all the roots with the first radical /*h*/, /*š*/, /*t*/ etc. would be considered as such secondary formations. There were most probably original triconsonantal roots with these radicals. We can posit a reconstruction of a biliteral root only if a least two roots with identical 2nd and 3rd radical are preserved (for the connection between their meanings compare my previous statements) or if there is a root with a lexicalized prefix alongside with a semantically related „weak" verb. As far as the latter is concerned, it is more safe to assume that some of the „weak" verbs were originally triconsonantal but in well defined positions they had biconsonantal allomorphs. These primary triconsonantal „weak" verbs constituted the model for some part of biconsonantal roots which became, in the process of analogy, partly triconsonantal.

As I have already said, the relations between a number of roots with *'-*, *h-*, *š-*, *t-*, *m-*, *n-* [10a] and the weak verbs have been observed since a very long time. A number of examples has been accumulated but they were usually dispersed in many books and articles.

[10] J. Kuryłowicz, *L'apophonie en sémitique*, Wrocław—Warszawa—Kraków 1961, p. 175.

[10a] W. von Soden treats *n-* as an „augment".

The only monographic treatment by Hurwitz [11] was not very satisfactory — out of his 172 etymologies only one third can be accepted, the rest being rather improbable, or, in the case of determinatives, at least dubious. Unfortunately, however, Hurwitz's thesis has remained unknown to most subsequent investigators. G. Botterweck's thesis „der Triliterismus im Semitischen" with the subtitle „erläutert an den Wurzeln gl, kl, ql" is concentrated on a certain group of the roots which are in his opinion cognate but the etymologies proposed there cannot be accepted in too many cases. There are also articles by Moscati, von Soden, Soggin, Kienast, Hrbek and some other scholars but there was no repertory of the discovered material. In view of this fact I have undertaken the task of compiling a new monography on the subject and I have collected nearly 300 biconsonantal roots represented in c. 700 triconsonantal ones. As far as the other languages of Hamito-Semitic family are concerned, I could use, in the absence of appropriate lexicographical and etymological studies, only the existing comparisons of Hamito-Semitic vocabulary and some studies on Egyptian biconsonantal roots. Most of the prefixes mentioned above are generally Hamito-Semitic (they exist in Egyptian Berber, Cushitic and Chadic languages) [12] and we may safely assume that more examples can be found in these languages. I hope to have an opportunity to publish my results in the future. Evidently this will not be a final study of the problem and a lot of new material will have to be added. It is to be hoped that the electronic machines will be used for lexicographical purposes on a larger scale (the programmed dictionary of North-West Semitic languages for computer use is being prepared in Prague) and this will greatly accelerate and improve this kind of research.

[11] S. T. H. Hurwitz, *Root-Determinatives in Semitic Speech*, New York 1913. Cf. also L. H. Gray Notes étymologiques sur les „verbes faibles" en hebren biblique, Ar. Or., 5, 1933, p. 124—130.

[12] Cf. I. M. Diakonoff, *Semito-Hamitic Languages*, Moscow 1965, p. 33—35, 38; A. N. Tucker, M. A. Bryan, *The Non-Bantu Languages of North-Eastern Africa — Linguistics Analyses*, London 1966, p. 504—505.