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## ARTICLE VI.

## RELATIONS OF THE ARYAN AND SEMITIC LANGUAGES.

BY REV. JAMES F. MCCURDY, PH.D., PRINCETON, N. J.

## V. — COMPARISON OF ROOTS.

HAVING in the last Article taken up the most important questions relating to the formation of the predicative roots, considered as primary and secondary, in the two systems of speech, and having presented a scheme of the typical forms under which these roots are expressed, it remains for us to determine how we may reconcile the seemingly discordant principles according to which they are formed. The main difficulty presented arises from this fact, that while in the Aryan system the vowel is a significant part of the root, in the Semitic, on the other hand, — at least in the inflectional period of that idiom, — the vowel is not essential to the expression of the radical idea. The difficulty is great, but perhaps not insurmountable. The following considerations are offered as tending to show that a reconciliation is possible :

(1) The Semitic principle of root structure bears evidence of a secondary and, so to speak, artificial origin. In the language as it is presented to us, the vowel is not co-ordinate with, but subordinate to, the consonant. Now, we do not claim that the vowel once held an equally important place with the consonant. If language is a growth, and not an institution, the two elements cannot have been originally co-ordinate, even in those systems of speech where we find them currently of equal value. The consonants, as the harder and more stable elements of speech, must have secured their independent recognition and employment before the vowels, in all early forms of human language. But it may be said that the Semitic is an exception to other systems in

this, that the vowels never secured complete autonomy for themselves. This is true; but it is not true that they always filled that subordinate function which we see assigned to them in the full-blown inflectional period. It has been shown already that vowels even formed a constituent part of distinct, independent roots; we have not only an internal vowel expansion, but also a development of secondary roots by the use of any one of the three original vowels *a*, *i*, *u*, each of which has maintained a distinct and clearly recognizable influence until the latest Semitic times. We have even found that some roots consisted of a consonant and a vowel; and if it cannot be clearly shown in each instance what that vowel was, it still remains true that, though it is there subordinate to the consonant, its subordination is of an essentially different kind from that which is seen in the function of vowels in the "strong" stems of the inflectional period; it is, in fact, due merely to that indefiniteness which we have shown to be necessary to the vowel in all primordial speech. It would, of course, be absurd to maintain that in the earliest Semitic the vowel was of equal importance with the consonant for the expression of radical ideas. But it would be just as absurd to hold that it counted for nothing. If there is anything which can be maintained with certainty as a necessary feature of primitive language in general, and of the constitution of its roots, it is this, — that in both the vowel played an independent part. On the other hand, the only sure induction from the phenomena of root development, as we have studied the subject, is, that the vowel was subordinate and fluctuating.<sup>1</sup>

(2) The Proto-Aryan roots also give evidence of a previous

<sup>1</sup> Here, as well as in related discussions, it makes no difference what theory is held as to the nature of "roots," whether we regard them as having once been actual words, or as being mere abstractions — forms theoretically assumed as the basis of actual words. Unless the distinction between primary and secondary roots, to whose elucidation the last chapter was devoted, is an utter delusion, we shall have, upon either theory, to go back of the current trilaterals, if we wish to determine these ultimate forms to which the name of "root" is applied; and in the last analysis the indefiniteness as well as the originality of the vowel in such forms, will be equally apparent under either view.

stage in their history when the vowel did not possess the certain and stable character manifest in their current forms. At least, it is allowable to infer as much as this from the fact that so many forms are found expressing the same or kindred ideas which agree in their consonants and differ in their vowels. Thus we have *bhag*, to eat; *bhug*, to enjoy; *mand* and *mund*, to decorate; *mad*, to be excited; *mud*, to be gay, joyful; *skad* and *skid*, to split; *as* and *is*, to throw; *di* and *du* > *div*, to shine; *pa* and *pi*, to drink; *bhad* and *bhid*, to pierce, cleave; *si*, to bind, and *su*, to sew; *ska* and *sku*, to cover; and a multitude of other divergent associated forms.<sup>1</sup> These cannot very well be regarded as primary and secondary roots respectively, because there is no development of meaning and no addition or degeneration of form.<sup>2</sup>

At this point the two great systems of speech seem to meet. We find Semitic roots in which the vowel is indeterminate, and yet an independent constituent; and we find Aryan roots with fixed consonants, but varying vowels. Both phenomena are just what would be expected in the necessary development of early language; and the subsequent divergence of the two idioms in root formation can also be explained. In both systems definiteness of expression was aimed at equally and necessarily. In the Aryan system this was secured by giving greater precision to the vowel elements in each utterance, till at last they were made co-ordinate with the consonants in every respect. In Semitic, on the other hand, the original vagueness of the vowel remained, and definiteness as well as variety of expression was sought through the multiplication of consonants, either with or without the use of determinative letters. Hence we are prepared to find that while the bulk of the current Aryan roots have two consonants, and are monosyllabic, the bulk of the Semitic have three, and were perhaps originally dissyllabic.

<sup>1</sup> Such forms may be collected and collated from Pott's *Wurzel-Lexicon*, or more readily from Fick's *Vergl. Wörterbuch d. indogerm. Sprachen*, Vol. i.

<sup>2</sup> This extensive group must be distinguished from that small class of forms with vowel variations which we cited in the last Article as consisting of secondary roots.

Hence also it happened that in Semitic the vowel elements had less precision and importance in each utterance, till at last they lost their independence entirely, and became subordinate to the consonants in every respect.<sup>1</sup>

From this it follows that whatever roots in the two idioms are to be adduced for comparison must be represented by their consonants alone. This, of course, need not be any bar to an association of such roots, if they are eligible in other respects. For even within the Aryan range alone a consonantal formula might often be chosen as comprehending the same idea under various vowel variations. Thus, in accordance with examples of roots just cited, *MD* might convey the general notion of highly wrought feeling, and *S* (*S* + an indeterminate vowel) might stand for the idea of fastening together; just as in the Semitic sphere  $\text{רמ}$  means to be high, and  $\text{גמ}$  means to go.

We thus see how the Proto-Aryan and Proto-Semitic roots may be brought together, so far as the forms are concerned. It remains for us to determine what kinds of roots are to be compared as regards their signification.

(1) First, it is evident that we must exclude those roots which are clearly onomatopoeic. In many languages throughout the world we find the same or like forms occasionally used to express the same ideas, when the sound seems to be a sort of echo of the sense, as when words seem to be

<sup>1</sup> J. Grill, in an elaborate Essay in the *Zeitschrift d. deutschen morgenl. Gesellschaft*, Vol. xxvii. pp. 425-460, attempts to show that the roots of the two systems may be unified in structure by reducing them to a hypothetical stage of development in which the vowel *a* alone was heard in them all (p. 449). Under those circumstances he thinks the vowels would not count for anything as determining the specific expression of the root-idea, since they would be the same in all the forms. The validity of this conclusion depends upon the correctness of the assumption of such a form of speech, an "Alpha-Sprache" as he terms it. But there is no strong evidence of it. The preponderance of the vowel *a* in Aryan roots may be accounted for on the principle that it is the most common of sounds in general, not necessarily the only primary vowel. The reader is referred also to the criticisms upon the similar, but not so far-reaching, theory of Fick, made in our last Article. On the other hand, we have abundant evidence of the original vagueness and variations of the vowel-sounds in the roots of both systems.

simply imitative of the movements of the objects of nature, or of the utterances of men or lower animals. Some writers have made undue use of this fact, and applied it to the explanation of many cases in which onomatopoeia has had no part. It offers an easy solution of innumerable difficulties, and can often be plausibly appealed to when no etymon is at hand to which a given form may be referred. Thus the comparer of obscure roots runs a double risk. On the one hand, he is liable to cite forms as being of kindred derivation whose likeness is due to their origin in the imitative tendencies of early speakers; and, on the other hand, he is in danger of being accused of citing cases which are all "more or less onomatopoeic," and therefore not necessarily of common origin. Now, while it is true that such a charge has often been made unjustly against etymologists, it is not to be denied that it has always been made with some justice against those who have attempted to compare Aryan and Semitic roots. It will be our aim to avoid occasion for such an accusation, except as it may come from those who see in onomatopoeia the universal solvent of etymological difficulties, and would therefore give no credit to any comparison whatever made within our present sphere.

(2) It is also evident that we ought to include only those forms which express common and elementary notions. This must be insisted upon rigorously; and the principle is adopted not only for our guidance, but also as our defence against the opponents of all attempts at comparison in this obscure region.

It is clear, in the first place, that if the two families were originally one they must have separated at a time when only the most rudimentary arts of life were practised, and the most primitive conceptions of the world without and within the mind were attained. Hence a combination of forms conveying conceptions peculiar to a more advanced state of thought must be regarded with suspicion. Coincidences between forms expressing such notions are, indeed, not common; but they have been used too freely by comparers, and discredit has thus been cast upon such investigations in general.

It is manifest, in the second place, that if a large number of notions clearly elementary are found to be expressed in the two idioms by like sounds, in whose production onomatopoeia has had no share, the evidence in favor of previous unity is very strong. We have not only the fact of a coincidence of such words as we should expect to find agreeing, but also the consideration that the occurrence of such coincidences ought, if we judge from the analogy of languages in general, to argue the existence at one time of many more similar phenomena which are now lost to view. For if we regard any great family of tongues,—the Aryan, for example,—it is surprising, as well as instructive for our present purpose, to note how many of the most elementary notions are expressed differently in the different dialects, and how many expressions once common to the whole family have been dropped in one or several of them in the course of ages. We must not, and ought not, from the very nature of the question, to look for many agreements; and if, after all, the number is found to be considerable, the evidence in favor of an original unity, which rises with cumulative force with every additional case, becomes well-nigh irresistible.

These, then, are the conditions under which forms may be cited for comparison. If it is urged that it is not always easy to determine what notions are primary or elementary, and what are secondary, the answer is that we are not left to *a priori* judgments alone in the matter; for the science of etymology has pushed its researches into various languages so far and so successfully that we can appeal to the analogy of similar developments outside our proper sphere; and this is the surest resource for those who seek to have light thrown upon the workings of the human mind as they are revealed in language.

#### WORDS IN COMMON RELATING TO FIRE.

If the Aryans and Semites came from a common stock we should expect to find some trace of their early civilization in their common possession of one or more words for burning.

Fire was one of the earliest discoveries of mankind, and plays an important part in the legendary and mythical systems of most primitive communities. The fact is that we find no less than four words belonging to both systems, comprising most of the Proto-Aryan terms relating to that subject, and a large part of the Proto-Semitic.

1. Proto-Aryan *ḱav* (*ku*); Proto-Semitic כָּ, to burn.

The Proto-Aryan character of the root is proved by the following forms: Gr. *καίω* for *κα F-lw*, to burn; Skr. *çona* (for primary *kau-na*) flaming red, and as a noun, fire (see the Petersburg Dict., and cf. Curtius, 5 ed., p. 145; Fick i. p. 61). That it was developed from an earlier *ku* appears further from the occurrence of secondary roots, meaning to shine, most of which are found only in Sanskrit; one, however, *kvid* (whence Eng. *white*) being Proto-Aryan. For the Proto-Semitic root we may compare Heb. כָּרַךְ, Assyr. *kavu*,<sup>1</sup> Arab. كَوَى, Syr.

كَوَى, to burn. The root כָּ here inherent was probably developed from an earlier כָּ like the Proto-Aryan, though this is not essential to the validity of the comparison.

2. Proto-Aryan *kad* (*kand*); Proto-Semitic קָ, to burn.

This is one of the most wide-spread of Proto-Aryan roots. In Sanskrit it appears in some of its senses with a prothetic *s* (cf. *tan* and *stan*, to sound), in the sense of glowing, for according to the Petersburg Dict. the root *śand*, to shine, is from *çcand*. But *kand-u*, a fire-pan, shows no trace of it. Nor do any of the hometymous forms outside the Sanskrit, unless the Gr. *ξανθός*, yellow, is connected with the root. Gr. *κάνδ-απος*, a coal, Lat. *cand-ere*, *cand-idus*, *in-cend-o*, Anglo-Saxon *hāt* = Eng. *hot*, are a few out of the many examples that might be adduced. Remotely related seems to be the Skr. *çudh* (for *kudh*), to purify, which is probably a by-form of *kadh* found in Gr. *καθ-αρός*, pure and Lat. *cas-tus* for *cad-tus*. The assumption that the form with *s* is primary (Fick,

<sup>1</sup> In these special comparisons when the Assyrian roots are represented by the Kal infinitive, *u* must be understood to be the formative suffix. Sometimes they will be indicated by the consonants alone.

i. p. 241 ; Curtius, p. 522) is due to an over-deference to the Sanskrit. The primary form is *kad* ; the principle of nasalization resulting in *kand*, and the use of a prothetic *s* in cases similar to the present, were discussed in our last Article. The Proto-Semitic קד is illustrated by the Heb. קָדַד, Arab. قَدَدَ, Syr. قَدَدَ, to burn, in which ק is a predeterminative. Also by the Heb. קָדַד, to kindle fire, Arab. قَدَحَ, and Syr. قَبَبَ, of similar meaning, in which the ק is a post-determinative.

3. Proto-Aryan *kar* (*kal*), to heat, to cook ; Proto-Semitic קָר, to roast, to fry.

*kar* (*kal*) is represented by Skr. *çrâ*, to boil, cook, from *çar* (= *kar*) as *mnâ* from *man* ; Lat. *cal-éo*, *cal-or*, *cre-mare*, and several other Aryan forms — קָר appears with a post-determinative vowel in Heb. קָרַק, Arab. قَرَقَ and قَرَى, and Ethiop. ቀለዐ, to fry ; Chald. קָרַק, to roast, to burn, Assyri. *kal-u*, to burn. This is perhaps the most striking combination of all the group ; for we see here that a term used by both families in the sense of burning was also specialized in both so as to apply to the preparation of food by fire.

4. Proto-Aryan *us*, to burn ; Proto-Semitic שָׂר, fire (probably = the burning thing).

Skr. *ush*, to burn, scorch ; Gr. *aũ-ŵ* for *aũŵ-ŵ*, to kindle, *eũ-ŵ* for *eũŵ-ŵ*, to singe ; Lat. *ur-o* for *us-o*, to burn ; Old Norse *us-li*, fire ; A. S. *ys-el*, O. H. Germ. *us-el*, ashes.—Cf. Heb. שָׂר, Chald. שָׂר, Syr. [شَر], Eth. ለሰተ, Assyri. *'is-u*, fire. There is also an Aryan by-form *vas*, to enlighten, which is commonly thought to be the earlier root. Whether the Semitic words have arisen from שָׂר, through the dropping of the original *v* or *w*,<sup>1</sup> or whether they themselves represent the earlier form, must remain undecided. This combination is highly probable, though not so certain as the other three.

In accounting for the common possession of these similar

<sup>1</sup> Cf. Assyri. *'istu* (שָׂר), from, out of, with the hometymous Eth. ለሰተ.

Fick (ii. p. 27) combines the Teutonic word for ashes, *as-gan*, with the Lat. *ar-éo* for *as-éo* and *ard-éo* for *ard-éo*, pointing to a root *as*, to be hot.

forms, it is apparent that onomatopoeia must be excluded, as well as the theory of a chance coincidence. The only refuge left to doubters is the assumption that one language borrowed the sounds from the other. But why there should have been any borrowing at all of such primitive essential matters, or why it should have been done on so large a scale, is not easy to imagine.

#### WORDS FOR SHINING.

5. Proto-Aryan *bhar* (*bhal*); Proto-Semitic בָּרַח (בָּר), to shine.

The Proto-Aryan form points, according to what was said on comparative phonology, to an earlier *bar*. It is represented in Skr. *bhál-a* star and brightness, *bhál-u* sun (also in *bhalla*, etc. a bear, from its sleekness?) Gr. *φάλαγγος*, shining; *φάλαγγος*, white; Lith. *bál-ti*, to be white, with other Slavonic words cited by Fick (i. p. 152). Curtius (p. 297) suggests that there may have been no root *bhal* (*bhar*) at all, but that *la* may have a nominal suffix attached to the common root *bha*, to shine. The Slavonic forms seem to exclude this, and also the circumstance that there are two roots *bharg* and *bhark*, of similar meaning, which can only be regarded as secondaries from an intermediate *bhar*. — In Semitic we cite the Heb. בָּרַח as in בְּרִיחַ, brilliant; Assy. *buharu* and *báru*, splendor; Arab. بَهَّرَ, to shine; Syr. ܒܫܗܠ, in Shaphel, to glorify, like conj. III. of بَهَّرَ. In these ܐ is an indeterminate; cf. Eth. ለርሀ, to shine forth, and Arab. بَرِّهَانٌ, a clear proof.

6. The Proto-Aryan *bha*, to shine, above referred to, we might plausibly compare with a hypothetical Proto-Semitic ܒܗ shown in בָּרַח, בָּרַח, בָּרַח, to be white, glistening, variously represented in Heb., Syr., and Arabic. This would require us to assume that a strong breathing was developed independently in Semitic. The combination is very instructive in the light of others of the same group that are more harmonious.

7. Proto-Aryan *bharḷ* (*bhrak*), to shine, gleam; Proto-Semitic *בִּירַק*, to shine, lighten.

Cf. Skr. *bhráḷ* (abundantly attested by the grammarians, though not proved in the classical writings; see the Petersburg Dict.), for *bhrák*, to shine; Gr. *φορκός*, white, shining (Hesychius); Goth. *bairh-to*, bright, cf. Eng. *bright*, with other Teutonic as well as Slavonic forms, cited by Fick, i. p. 152.—For Semitic correspondences, cf. Arab. *بَرَقَ*, Syr. *ܒܪܩܐ*, Eth. *በረቆ*, to shine, and to lighten; Heb. *בִּירַק*, to lighten, and *בָּרָק*, lightning, Assy. *בִּירַק*, whence *birk-u* lightning.<sup>1</sup>

8. Proto-Aryan *bharg*, to shine; Proto-Semitic *בָּנַג*, to shine.

Cf. Skr. *bhráj*, Zend *baráz*, to shine; Gr. *φλέγω*, to shine, burn; Lat. *flag-ro*, to burn; A. S. *blic-an*, to shine (cf. Eng. *bleach*, and Germ. *bleich*).—In Semitic we have the Heb. *בָּנַג* (in Hiph.), to be bright, cheerful, Arab. *بَلَجَ*, to shine forth,

be clear. This Proto-Semitic root has no associations with any forms with medial *ḷ*, and in consideration of the essential character of the *l* sound, we may without presumption assign it to the root *בִּיר* exemplified in the foregoing cases.

Accepting number 6. as a highly probable combination, we have in Proto-Aryan *bhá* > *bhar* > *bhark* and *bharg*. The last three forms are the principal ones developed from *bhá*, and with them we find in Semitic exact correspondences in form and sense, which seem to preclude the possibility of merely accidental resemblance.

<sup>1</sup> See this with other forms in Assyrian established by Lenormant, *Étude sur quelques parties des syllabaires cunéiformes*, p. 231. Most of the Semitic words mean both to be bright and to lighten, and though the latter predominates, the former is the primary sense. The resemblance of *בִּירַק* to many words meaning to cleave, split, might suggest that the word for lightning arose from this notion, and that the sense of shining was secondary. But the natural order of the ideas, as well as the analogy of other languages, shows that the name for lightning was drawn from the idea of its brightness. So with our word itself, with the German *Blitz*, the French *éclair*, the Latin *fulgur*, and even *juimen*.

9. Proto-Aryan *bhas*; Proto-Semitic  $\text{בָּהַ, בָּהַ}$ , to shine.

The Proto-Aryan character of *bhas* is pretty safely established by Fick, i. p. 153. Cf. Skr. *bhás*, to shine, *bhás*, *bhás-u*, splendor. Zeud *bānh*, light (*nh* for a primary *s*; see Schleicher, Compendium d. vergl. Gramm. 4. ed. p. 190), with Slavo-Teutonic *bas-a*, bare, manifest = Eng. *bare*.—In Semitic we have the form  $\text{בָּהַ}$  clearly presented in Arab.

$\text{وَبَصَ}$ , to shine, probably appearing also in Heb. pr. noun  $\text{בָּבַס}$ ; cf.  $\text{בָּס}$ , to be white, shining,  $\text{بَاص}$  and  $\text{بَاص}$ , Heb.  $\text{בָּהַ} > \text{בִּיבָה}$  *egg*,<sup>1</sup> with hometymous noun-stems in Aramaic and Arabic. The root  $\text{בָּהַ}$  seems to convey the same idea, for we find  $\text{וּבַש}$  along with  $\text{וּבַס}$  with a like meaning; cf.  $\text{בְּשִׁיש}$  and  $\text{בְּשֵׁר}$ , to be joyful. The last named root suggests the

Proto-Semitic name for flesh, which we may represent by Heb.  $\text{בָּשָׂר}$ . It was probably so called from its bright color. Perhaps  $\text{בָּשַׁל}$ , a Semitic word for cooking, came from the same source, as Lat. *frig-o*, Gr. *φρύγω*, to roast, are connected with the root *bharg* (No. 8).

10. Proto-Aryan *ark* (*rak*); Proto-Semitic  $\text{רָק}$ , to shine.

The root *ark* is proved from the Skr. *arc'*, to shine forth, *arc'-is*, splendor, and especially *ark-as*, the sun, as compared with Gr. *ἡλέκ-τωρ*, the sun, or sun-god. See Curtius, 5 ed., p. 137. Fick, i. p. 22, cites a number of Keltic words pointing to the root *lak* < *rak* as the Gr. *ἡλέκ-τωρ* as well as *ἡλεκ-τρον*, amber, point to a root *alk* < *ark*. With *rak* we may connect as a by-form the common Proto-Aryan root *rak* (*luk*), to shine, and with *ark* the root *arg* of the same meaning, whence Skr., Zend, Gr., Lat., and Oscan words for silver. *ark*: *arg* = *rak*: *rag*, to color, a wide-spread Proto-Aryan root. The root *rag*, to shine forth, is a further devel-

<sup>1</sup> Mühlhan and Volck in their edition (the eighth) of Gesenius Handwörterbuch (Leipzig, 1878), make the notion of whiteness, shining, to be secondary, and derived from the words for egg in the different dialects. But our citation of verb-stems shows this to be impossible. Cf. the derivation of *albumen*.

opment, whence the Skr. *rág*, to shine, and the Proto-Aryan word for king.—The existence of the corresponding Semitic root רַק is not so evident at first, but is easily established. It appears most usually represented with a predeterminative ך as in יִרַק, whose sense of shining is attested by its derivatives in all the dialects. The predominant meaning is to be yellow, whence a name for gold: Eth. 𐩇𐩣𐩆, Arab. رَوَّق, coined money; cf. Heb. יִרַק־קַ, as applied to gold, Ps. lxxviii. 14, Assy. *rakrakku*, yellow,<sup>1</sup> also *arku* and *araku*, yellow, green; Heb. יִרַק, green; יִרַק, Syr. حَرْمًا, green herbs. Cf. also Heb. יִרַק־יָ, paleness, yellowness, which like Arab. يِرْقَانٌ, also أَرَقٌ, denotes a disease in men, and a blight in grain, producing a yellow complexion. These several meanings can only be explained from the comprehensive sense of shining inherent in the root.<sup>2</sup> But we have the root in a simpler form, which puts this meaning beyond doubt. From some of the Assyrian and Arabic forms above cited, it appears that the ך is not primary. Now we cite further, Arab. رَأَى, med. Waw, to be bright, clear (used of wine and the eyes); رَأَى, med. Ye, to shine brightly (used of the *mirage*); رَزَقَ, to shimmer. Still further, the Arab. أَلَقَ, to shine, and أَلَقَةٌ, splendor, show that here as well as in Greek and Keltic the primary *r* was sometimes replaced by an *l*; and a comparison of all the Semitic words shows clearly that the primary form was רַק, which is thus assimilated perfectly to the Proto-Aryan *ark* or *rak*.

<sup>1</sup> See Friedr. Delitzsch, *Assyr. Studien*. i. p. 105.

<sup>2</sup> The most instructive analogy that we know of is the Proto-Aryan root *ghar*. Meaning primarily to shine or glow, a large number of its derivatives show the signification of being yellow or golden, and green. So the Skr. *harita*, green and yellow, *hiraṇya*, gold, Gr. χρῆσός, gold, for χρῆσ-ός, and Goth. *gulth*, Eng. *gold*. Derivatives are even found in Zend and Slavonic (see Fick, i p. 81), having the sense of green shoots of plants, as with רַק.

## WORDS FOR CUTTING AND SEPARATING.

11. Proto-Aryan *bhar*; Proto-Semitic בר, to cut, to pierce.

The value of these roots in the present discussion is their agreement not simply in the general sense, but in two allied meanings. For *bhar*, cf. Zend *bar*, to cut, to bore; Gr. *φάρος*, a plough, *φάρ-αγξ*, a cleft, ravine, *φάρ-υγξ*, opening, gullet; Lat. *for-are*, Eng. *bore*.—בר is illustrated by the Heb.

כָּרַח, to cut; Arab. *بَرَى*, *بَرَا*, to hew, hew out; Assy. *בריה*,<sup>1</sup>

to cut into, grave; also by *ברא*, to cut out, form, create, represented in most of the dialects. It shows also in forms with consonantal postdeterminatives, as *בריו*, to pierce, the root of the Proto-Semitic *ברזל*, iron. *ברו*, to pass through, seems to have had the same origin, if we may judge from the Assy.

*buruhi*, spear.<sup>2</sup> Arab. *بَرَّت*, to cut, appears in *بَرَّت*, cutting,

*بَرَّت*, an axe; cf. Eth. *ብርት*, bronze, from the same root, as *ብርז*, iron, < *ברז*. Naturally the simple form בר has mainly

the general primary sense of separating, but in Ethiopic we have *በረረ*, meaning to pass through, perforate. The idea

of boring, however, is most distinctively conveyed by the form with indeterminative *באר*, (as in the Arab. *بَارَّ*, to pierce), whence the word for a well in Heb., Syr., Arab., and

Assyrian. Again the Arab. *بَارَّ*, to explore, investigate = Heb. *ביר* (Eccl. ix. 1), points clearly to the same origin with

a figurative application. With a stronger indeterminative, *בטר* means to cut off, consume (with various associated senses in most of the dialects); and with a predeterminative, *חבר* means to divide up, in Hebrew and Arabic.

12. Proto-Aryan *bhad* (*bhid*); Proto-Semitic בר, to divide, split open.

Cf. Skr. *bhid*, to split; Lat. *find-o*, *fid-i*; Goth. *beit-an*, A. S. *bit-an* = Eng. *bite*. The Lat. *fod-io*, to dig; cf. Gr.

<sup>1</sup> A very probable root; see Friedr. Delitzsch, *Assyrische Studien*, i. p. 9.

<sup>2</sup> See Schrader, *Keilinschriften u. d. Alte Testament*, p. 106.

*βόθ-πος*, a pit, seems to point to an old by-form *bhad*.—The root בר has a considerable development. In Heb. בָּר means to divide, and keep apart = Arab. بَدَّ, the same root having derivatives in Aramaic also; with ל as a post-determinative, בָּרַל means to divide, and with פ the primary meaning of splitting comes out in בָּרַקַּף, to cleave. With פ as an indeterminate, we have בָּרַפ, to separate from, represented by noun or verb stems, in Heb., Arab., and Ethiopic. The physical notion of cutting asunder is better preserved in the kindred root בָּרַח, which has a wide representation throughout the Semitic system.

13. Proto-Aryan *pat*; Proto-Semitic פָּח, פָּח, to separate, open.

These roots apparently stand remotely connected with No. 12. We find *pat* represented by the common consent of leading etymologists (see Fick, i. p. 185; Curtius, 5 ed., p. 211; Pott, W. Wb., iv. p. 154), in the Gr. *πέρ-νυμι*, *περ-άνυμι*, to spread out, open out, and *πέρ-αλος*, spread out; Lat. *pat-eo*, to open, and *pat-ulus* = *πέρ-αλος*; A. S. *fath-m*, the out-spread arms = Eng. *fathom*. We should also add, with Fick, the Zend *path-ana*, wide.—The Semitic פָּח has the fundamental notion of separating. So the Heb. פָּח, with the corresponding Arabic and Ethiopic, means to break off; hence various noun-stems in these dialects, meaning a fragment or morsel, or, as we say, a *bit* (see No. 12). But the simplest modifications of the root have precisely the sense that predominates in Proto-Aryan. Thus the Heb. פָּחַ, as illustrated by the Arab. فَاتَّ and its own derivative פָּחַ, means to spread out, while פָּחַ, in Heb., Aram., and Assy., signifies to spread out and open. In Heb. and Syr., Arab. and Eth., פָּחַ means also to open, while in Heb. פָּחַ means to open; and פָּחַ, to interpret, has developed its meaning obviously from the same primary notion. Cf. פָּחַ, to cleave, open, in Heb., Assy., and Arab., from a kindred root, פָּחַ.

<sup>1</sup> The name יָפֶת, Japhet, of the ancestor of the Aryan race, from פָּחַ, is an historical, if not a linguistic, connecting link between the two families.

14. Proto-Aryan *parḱ*; Proto-Semitic פָּרַח and פָּרַח, to cleave.

The root *parḱ* does not appear in any Aryan verb-stem, but we assume it to be represented in the Skr. *paraç-u* (cf. *paraç-u*, *paraç-vadhā*, *paraç-vadhā*), an axe or hatchet, and the corresponding Gr. *πέλεκυς* > *πέλεκ-ίζω*, to hew off. Curtius, (5 ed., p. 164), refers these forms to a root *πλακ*, to beat, from which *πλωγ* in *πλήσσω* and Lat. *plang-o* arise through softening. That this is wrong seems to us clear, because (1) the Sanskrit forms show clearly that the original root was not *prak* but *parḱ*, and (2) all the Greek and Sanskrit words contain only the idea of hewing or cleaving, and not of beating (wood-cutting is the most common notion in both languages). The root is *parḱ*, and it can be explained only in the sense of cutting or cleaving.—In Semitic the root פָּרַח is much more widely extended. In Heb., and Aram., and Ethiopic, its general secondary sense is that of separating and loosening; but the primary physical notion of cleaving is apparent also in Heb. as well as in Arabic. The kindred פָּרַח has the prevailing signification of breaking up, but in Assyrian it takes the place also of פָּרַח, meaning to separate, as well as to break in pieces. In all these dialects the root is represented largely in noun, as well as in verb stems. A very remarkable coincidence with the Proto-Aryan word is found in the Syr. *ܦܪܚܐ*, Assyrian *ṣilakki*, hatchet.<sup>1</sup> The root פָּרַח, found besides in Arabic, and perhaps in Ethiopic, in the same sense, stands for the primary פָּרַח, as the root פָּרַח, having the same general meaning of cleaving, is from פָּרַח, both of these latter being widely represented throughout the Semitic family with various determinatives. It is not claimed here that the Syrian and Assyrian word for hatchet is the same as the Proto-Aryan above cited. But both are apparently from the same root, and they show that this root in Aryo-Semitic expressed the special sense of cleaving or hewing wood.

15. Proto-Aryan *kar*; Proto-Semitic כָּר, כָּר, to cut, divide.

<sup>1</sup> See Friedr. Delitzsch, *Assyr. Studien*, i. p. 132 f.

The root *kar* is discussed fully by Pott, *Wurzelwörterbuch*, ii. p. 149 ff. It is also dealt with by Fick, i. p. 238 f., and Curtius, p. 147 f. The form *skar* appears in some of the dialects, but *kar* predominates, and is rightly taken by Pott as the proper root. It is found not only in Skr. *kar* (*kṛi-nāmi* and *kṛi-nomi*), to wound, but also in *kar*, *kar-omi*, to make, (cf. Eng. *shape* and *shave*, Heb. בָּרָא, to hew out, and create). It also appears in Zend *kar*, to cut, and *kar-eta*, a knife, in Gr. *κείρω* for *κερ-ίω*, to shear, as well as in several noun-stems. The Latin has *cer-no*, to divide, as well as *cur-tus*, short (= cut off), and in the secondary sense, *cre-o*, *caer-imonia*. The Goth. *hair-us*, sword, and the A. S. *hri-dder*, sieve, Eng. *riddle*, also belong here, the occurrence of which in the Teutonic family shows that the *skar* represented in Eng. *shear*, *scar*, and *score*, is a secondary root.—The existence of the בָּרָא in this sense is proved from the Heb. קָרָא, Arab. كَرَا, Eth. ስረዖ, Chald. קָרָא, to pierce, to dig. The root *kar* had probably the same sense in Heb., and Arab. קָרָא again appears with a like meaning in Heb. קָוַר, to dig out; Arab. قَارَى, to cut out; also with various determinatives in special modifications of the general notion of cutting.

16. Proto-Aryan *kart*; Proto-Semitic קָרַם, to cut off.

The root *kar* (No. 15), is developed into *kart* by the determinative *t* (cf. Pott, *Wurzelwörterbuch*, iv. p. 115). It is found in Skr. *kart*, *kṛint-ati*, to cut, split; Lith. *kert-ù*, to hew, *kirti-ikas*, a hewer, and various other Slavonic words cited by Fick (i. p. 46). The Latin *culler*, knife, is adjudged to belong here by Pott (ii. p. 152) being for *cult-ter*; cf. Skr. *kart-tri*, shears, and *kart-ari*, hunting-knife.—The occurrence of the root in Proto-Semitic seems clear. The Heb. בָּרָא, to cut off, has no direct representative in the other dialects; but كَرَقَ, short, كَرْتُومَ, a rock, كَرْتِيمَ, an axe, show that it once existed in Arabic; and قَرَطَ, to cut up, with the Amharic ቆረጠ, of the same meaning, are matched by the Syr. مَرَب.

All of these cannot have been developed independently of one another, and have therefore come from one primary form answering to the Proto-Aryan *kart*.

17. Proto-Aryan *karp* (*kalp*); Proto-Semitic קרפ (קרפ), to cut off.

The root *karp* (of which *skarp* is a further development), has a manifold representation in the Aryan tongues. It is an expansion of the root *kar* (No. 15, cf. Pott, *Wurzelwörterbuch* ii. p. 155, *Etym. Forschungen*, ii. p. 274 f.), with the determinative *p*, as *kart* (No. 16) is the same root developed by *t*. It is found in Skr. *kalp*, to cut up (only quotable in Prakrit, but proved to be primitive from the derivatives), *kṛp-āna*, a sword, *kalp-aka*, a barber, *kṛp-āni*, shears; cf. Lith. *kerpu*, *kirp-ti*, to cut off, clip, with other Slavonic words cited by Pott. Probably Latin *carpo*, to pluck off, belongs here; cf. *dis-cerpo*. And, as Pott suggests, the Teutonic word *half* (A. S. *healf*, O. H. German *halb*), probably meant originally an equal division, and is thus naturally to be connected with this root.—On the Semitic side of the equation we find Arab. قَلَفَ, Eth. ቆለፍ, also Syr. كلف, Chald. קלפ, to tear off, peck off; cf. Arab. قَرَفَ, and Eth. ቆረፍ, of the same meaning. We might be tempted to bring in here קלפ, which is the root of the Heb. קלפים, axes of a certain sort (Ps. lxxiv. 6), a word to which there are similar terms in Syriac and Chaldee, but as these forms may be onomatopoeitic they must be excluded.

18. Proto-Aryan *kars*; Proto-Semitic קרפ, שרפ, to cleave, tear asunder, drag off.

The root *kars* has mostly the sense of dragging away, a meaning which it is not difficult to connect with that of separating. So the Skr. *karsh*, *karsh-ati*, means to drag, but also to tear,<sup>1</sup> and *karsh*, *kṛish-ati*, means to plough, that is, to tear or divide the land, to make, not to draw,<sup>2</sup> furrows. Hence,

<sup>1</sup> Cf. the German *Zerren*, to drag, also to tear, the latter being the primary sense = Engl. *tear*. How this can indicate violent motion is shown by our colloquialism "he tore along."

<sup>2</sup> Ploughing, in this expression, is usually explained (see Petersburg and

the derivative *karsh-ā* means a furrow, but also an incision in general. The sense of dragging is therefore secondary, though as the root evidently implied originally a violent separating, that meaning arose very early, and is exhibited in those European forms which seem to represent the Skr. *karsh*. The root probably appears in the Gr. *κορ-έω*, to sweep out or away, if this is for *κορ-έω*, as the Lat. *verr-o* for *vers-o*, and this for *vers-o* would seem to imply. This combination which seems bold, has the high authority of Corssen in its favor. It certainly is the best that has yet been attempted. The root may be regarded almost certainly as Proto-Aryan, especially as all its meanings in Sanskrit appear also in Zend with corresponding forms. Perhaps a trace of the original sense of cutting off remains in Gr. *κορ-όω*, to cut the hair, and *κόρσ-η*, the temples (as being shorn; but cf. Pott, W. Wb. ii. p. 157).—Of the corresponding Semitic roots the radical idea is also that of violent separation. So in Heb. קָרַח, to cut off, also tear away (Job xxxiii. 6). Cf. Arab. قَرَصَ, to cut off, break off; قُرُصٌ, a morsel = Chald. קָרַח, Syr. قَرَصَا; Eth. ቀረሶ, to cut into, engrave; also Arab. قَرَصَ, to cut off, gnaw off; Eth. ቀረፀ, to cut off, tear off, shear. In these roots the fundamental notion of the Proto-Aryan *kars* is fully represented. Its secondary sense of dragging comes out in the Arab. قَرَشَ, which, like the Heb. קָרַח, means first to cut off, but also, and more characteristically, to draw to one's self, to acquire. We also venture to add here the root קָרַח, to cut, cleave, open, represented in Heb., Arab., Aram., and Assyrian; and especially the root קָרַח, which, having the general sense of cutting open, furnished also the Proto-Semitic word for ploughing, Heb. קָרַח (cf. Arab. حَرَكَ, Syr. حَرَك), Eth. ለረሰ. Cf. Assy. *hirs-u*, a ploughed furrow (Lenormant, Benfey's Dictionaries) as the drawing of furrows. But the notion of drawing does not naturally yield that of ploughing, which is expressed by words for cutting or separating in all the cases that we can recall in both Aryan and Semitic.

op. cit. pp. 155, 202). This brings the Semitic word completely into accord with the Aryan *kars* in all its meanings. In this instance we do not hesitate to regard the roots as by-forms, the *p* being weakened into *r*, a change of frequent occurrence. That these letters are here of the same origin is as good as proved by the following correspondences, running through all the forms we have cited:  $\text{ררר} = \text{רר}$  (ררר) =  $\text{רר}$  (ררר);  $\text{רר} = \text{רר}$  (ררר);  $\text{רר}, \text{רר} = \text{רר}, \text{רר}$ . The agreement in meaning between each of these pairs is complete.

19. Proto-Aryan *sak*; Proto-Semitic  $\text{ש}, \text{ס}$ , to cut.

The root *sak* appears in Lat. *sec-o*, to cut; *sec-uris*, an axe; in *sec-tor* and *seg-mentum* as well as in *sic-a*, a dagger, and *sec-ula*, a sickle; also in various Slavonic words cited by Fick (i. p. 790), and Pott (iii. p. 322). It is also the basis of many Teutonic words; among them, that from which the Eng. *see*<sup>1</sup> (A. S. *se-on*, for *seh-wan*) is formed. With this the Teutonic word for a *saw* (*saga*) is allied, but not homonymous. The root is not found in Sanskrit or Zend, but, as Fick says, it is the basis of the Proto-Aryan *ska* (> Skr. *kṣān*, to wound, and Gr. *κτείνω, κτάμεναι*), and there is no doubt that it belonged to the primitive stock.— $\text{ש}$  is represented by Heb.  $\text{שׁ}$ , thorns, and  $\text{ס}$ , a sharp weapon; cf. Arab.  $\text{شوك}$ , Eth.  $\text{ሰላ}$ , a thorn,  $\text{ሰላ}$ , armed with sharp weapons; also  $\text{ሰላ}$ , to be in doubt (i.e. divided in mind), and  $\text{ሰላ}$ , weapons.  $\text{ס}$  appears in Arab.  $\text{شق}$ , to cleave, with many derivatives; cf. Syr.  $\text{ܫܩܩ}$ , to cleave, >  $\text{ܫܩܩܐ}$ , a fissure. Both  $\text{ש}$  and  $\text{ס}$  are also found as secondary roots with various determinatives.

20. Proto-Aryan *tak*; Proto-Semitic  $\text{ת}, \text{ט}$ , to cut, divide.

The root *tak* has the sense of forming, producing (as in Gr. *τ/κτω, ἔ-τεκ-ον*, to beget), along with other meanings easily connected with it (see Fick, i. p. 86; Pott, W. Wb., ii. 2. 401 ff.;

<sup>1</sup> For the development of meaning, cf. the Lat. *cerno* and Germ. *unterscheiden*, meaning first to separate; Heb.  $\text{צר}$ , and Arab.  $\text{بصر}$ , to see, primarily to cut.

Curtius, p. 219 f.). What the primary meaning was, may perhaps be inferred from the secondary *taks*, which in Sanskrit means to hew out, to prepare, to make, and gives the noun *taksh-an*, a carpenter, a wood-cutter, *taksh-ana*, an axe. The Zend also has *tash*, to cut (from *taks* = O. Pers. *takshsh*, to build), and *tash-a*, an axe. From the same root comes Gr. *τέκτων*, a carpenter, for *τέκτων*. Finding that *taks* has properly the sense of cutting, we may turn back to the root *tak*, and we find that the Lat. *tignum*, a beam, a log, is not from *taks*, but from *tak*, and it means evidently what is shaped by hewing. Further, the analogy of similar expressions elsewhere is in favor of this hypothesis. So especially with כָּרַח (No. 11), which means (1) to hew out, (2) to form, or create, (3) to beget (cf. the Aram., word for son, כָּרַח, found also in Assyrian).—The meaning of the Semitic קָרַח, appears from Arab. قَرَحَ, to cut, to cut off, in Heb., figuratively, to injure.

Cf. Syr. قَرَحَ, to cut into, to injure. Again, the Heb. קָרַח, means to divide, as appears from קָרַח, the middle, i.e. the dividing point.

We have thus taken up nine pairs of roots belonging to the two families, having in common the primary sense of cutting or dividing, agreeing moreover perfectly in their primary forms. The most remarkable set of correspondences must be admitted to be found in the forms *kar*, *kart*, *karp*, *kars*, with their Semitic equivalents. The root *kar*, to cut, has no other secondary forms than these; they are all matched in Proto-Semitic. It is to be noted that some of these pairs of roots agree not only in their general sense, but also most strikingly in their special application.

#### WORDS FOR RUBBING AND BRUISING.

21. Proto-Aryan *mar*; Proto-Semitic מָרַח, to rub, to bruise.

For the fullest discussions of the root *mar*, see M. Müller, *Science of Language* (Am. ed.), ii. p. 333 ff.; Pott, *W. Wb.* ii. 1. p. 522 ff. The radical notion is the one just given, as appears from a comparison of the multitudinous forms in

which it is represented. In the European languages it comes out as *mal*, to grind, but in the Skr. *mar*, *māri-nāmi*, and Gr. *μάρι-ναμαι*, it means to fight, i.e. to act the "bruiser." How its use is shown by determinative forms we shall see hereafter. Whether *mar*, to die, is the same root, its sense being due to the intermediary notion of being worn down, we must leave an open question. In any case that meaning is secondary and unessential.—The Semitic *מר* means also to rub. The literal sense appears in Arab. *مَرَر*, to rub (the udder in milking, cf. No. 23); in the Heb. *מָרַח* and *מָרַח* a figurative meaning is manifest: to be refractory, i.e. to rub against. The primary notion is more fully revealed in the forms with a guttural determinative: Heb. *מָרַח*, to rub, to bruise (cf. *מָרַח*, Lev. xxi. 20), Arab. *مَرَّح*, to rub or anoint with oil.

22. Proto-Aryan *mark*; Proto-Semitic *מרק*, to rub, stroke.

Cf. Skr. *marṣ*, to stroke, touch, lay hold of; Lat. *mulc-eo*, to stroke; and perhaps Gr. *μάρπω-τω*, to sieze upon, for *μάρπω-τω* (so Roth in Kuhn's *Zeitschrift*, xix. p. 222; cf. Curtius, p. 463).—*מרק* is represented in the Heb. *מָרַק*, to polish, or "rub up" metals, also to rub off, clean off; Syr. *مَرَّق*, Chald. *מָרַק*. In Arabic the *r* becomes *l* as in Latin; so *مَلَق*, to rub out, to wash off.

23. Proto-Aryan *marg* (*malg*); Proto-Semitic *מרג*, *מלג*, to rub, to press, to milk.

The root *marg* is very widely represented. Skr. *marj* means to rub, to make smooth or clean. Zend *marez* has the same force, but *maregh*, means to rove about (cf. Engl. "knock around"). Gr. *ᾠ-μόργω-ννυμι*, signifies to wipe off; *ᾠ-μοργ-ός*, pressing out; *μάργω-ος*, roving about, wandering. In the European languages the root also means to milk, the *r* being replaced by *l*; so Gr. *α-μέλγω*, Lat. *mulg-eo*, Eng. *milk*, and in all the other dialects.—All of these meanings are illustrated in the Semitic *מרג*. The Heb. *מָרַג* means to rub hard, to press, as appears from *מָרַג*, a threshing-sledge (mod. Arab. *mauraj*; cf. Lat. *tribulum* < *tero*). From the sense of press-

ing comes that of urging (cf. the usage of the Lat. *urgeo*), or driving, in Chald. ܘܪܓܐ. The Eth. ܘܪܓ, transfers the primary sense to that of rubbing on mortar or plastering (from the use of the trowel); while the Arabic, as in No. 22, and in the European *malk*, changes the *r* to *l*, and مَلَحَ, means to milk. It is not here maintained that the agreement in the *l* sounds, or in the special sense of milking, is a proof that this very form in this very sense was common to the two families. This would be absurd. It only shows, in a way that is now becoming familiar to us, that the use of the fundamental root *marg* ܡܪܓ, before the Aryo-Semitic schism, was such as to lend itself readily to this special application long ages afterwards.

24. Proto-Aryan *mard*; Proto-Semitic ܡܪܕ, to bruise, press; to rub, to soften.

For the development of meaning in the root *mard*, see especially M. Müller, *Science of Language*, ii. p. 846 f.<sup>1</sup> The Skr. *mard*, *mrd-nā-ti*; *mrad*, *mrad-ate*, mean to press, also to rub to pieces. Hence the adj. *mrd-u*, soft, i.e. impressible, with which cf. the Lat. *moll-is*, for *mold-vis*, and the Eccl. Slav., *mrad-u*, tender. The Gr. ἀμαλδύνω, means to soften, or weaken; while our Engl. *melt* appears in Goth. *malt-an*, A. S. *melt-an*. Again, the Skr. *mrd*, means earth or soil, as being pulverized — a word which reappears in Engl. *mold*. Finally, the Lat. *mord-eo*, to bite, combines in its signification the two ideas of pressing and rubbing or gnawing which are contained in the primitive root.—These various meanings emerge also in the Semitic ܡܪܕ. The Heb. ܡܪܕ, has the figurative sense of being refractory, rebellious, which we met with in No. 21. So the Syr. ܡܪܕ means to resist or struggle against. The Eth. ܡܪܕ gives the idea of assailing, attacking (cf. again *mar*, No. 21). In the Arabic, however, we find a more complete agreement with the Aryan signifi-

<sup>1</sup> The reader should be cautioned, however, against following Prof. Müller's ingenious observations beyond the forms that represent *mard* with phonological exactness.

cations. Besides having the sense of the Hebrew just given, **مَرَد**, means to soften (as bread or dates in water), to press with the teeth (used of children at the breast), while **مَلَد** means to soften in general, wherefore we have **مَلَدٌ**, soft, **مَلَدٌ**, softness, tenderness, with various allied derivatives, thus completing the analogy with the Aryan forms. With *mrđ* and *mold* may be compared the Eth. **ጠረጠ**, dust, earth, which, however we may try to account for its exact form,<sup>1</sup> is certainly developed from the root **ጠ**, with a form almost identical with the Proto-Aryan word.

25. Proto-Aryan *marš*; Proto-Semitic **ḤṢ**, **ḤṢ**, to oppress, vex, obstruct.

The Skr. *marsh* means (1) to forget, (2) to endure patiently. The Lith. *mirsz-tu* means to forget. If we seek the missing link between these apparently unconnected ideas, it is found in the Goth. *marz-ian*, to hinder, vex. Forgetting is thus a mental obstruction.<sup>2</sup> The other Skr. sense, of enduring, is probably developed from an earlier application of the verb as neuter or passive: (1) to be vexed or oppressed; (2) to suffer; (3) to suffer patiently. The inflective form favors this view: *marsh*, *mṛsh-yati* (4. class; see Whitney's Skr. Grammar, §§ 761, 762). Cf. the Latin *patior* (Fick, ii. p. 141), (1) to be vexed, (2) to suffer, (3) to suffer patiently — also a deponent verb, and of the same conjugational class as the Skr. word.—The Semitic root has not the special secondary sense of forgetting, but otherwise the parallel may be made complete. The primary notion of pressing, oppressing, is found in Heb. **מָרַשׁ** (as in 1 Kings ii. 8), Arab **مَرَّصَ**, **مَرَّشَ**, **مَرَّسَ**, all of which have the sense of pressing or

<sup>1</sup> See Dillmann, Aeth. Gramm. p. 185; Lexicon Aeth. col. 167.

<sup>2</sup> A similar explanation is suggested by Pott (W. Wb. ii. 2, p. 447) for the Skr. sense of forgetting. If the word "*vyd-marsh-a*, a rubbing out, erasure," cited by him were genuine, a solution just as good would be at hand. But it is not found in the Petersburg Dict. If an actual word, it is probably from the root *març* (No. 22), as a corrupted form.

squeezing, and Assyr.  $\text{ܡܪܫܘ}$ ,<sup>1</sup> to use force, *marṣu*, harsh, violent. The idea of being oppressed is brought out in Assyr. *marṣ-u*, sickness,<sup>2</sup> Arab.  $\text{مَرَضٌ}$ , to be weak, sick, conj. v. to show languor, while  $\text{مَرَضٌ}$ ,<sup>3</sup> a disease of the mind, includes such mental ailments as languor and hesitation (see Freytag, iv. p. 169), thus furnishing a sort of analogy with the mental application of the Skr. *marsh*. Finally, the sense of obstructing appears in the very common Assyrian word *marṣ-u*, obstructive, impassable.

Thus in the two families we have a group of five pairs of roots of identical meanings and special applications comprised in *mar* ( $\text{ܡܪ}$ ) and its secondaries. Nearly all the actual, as well as possible, manifestations of that root in the two systems will be found to be established in the foregoing presentation.

26: ? Proto-Aryan *dak*, to bite, to tear; Proto-Semitic  $\text{ܡܪ}$ , to break up small.

We place the interrogation point before this combination, which we suggest as possible rather than certain. There is no difficulty about reconciling the meanings; but there is uncertainty about the origin of the forms. As to the Aryan root *dak*, cf. Gr.  $\delta\acute{\alpha}\kappa\text{-}\nu\omega$ , Skr. *dañç*, *daç*, to bite, Goth. *tah-ya*, to tear. Fick (i. p. 101; iv. p. 53), declares it to be an admitted fact that it is developed from the root *da* to divide up; and certainly if we compare the Proto-Aryan *dant*, tooth, in which the *k* is not represented, the theory seems probable enough. This sense of dividing up small is just the one proper to the Semitic root; for the verb stem itself in all the dialects means to break up small, and also to be small, and all the derivatives have merely the sense of being small or minute, or, as in Syr., Assyr., and Ethiopic, the additional figurative sense of being young. However, the root  $\text{ܡܪ}$  may be onomatopoeic in the common acceptance of the term, with the primary force of crushing or bruising; and as there

<sup>1</sup> See Lenormant, *Étude*, etc., already cited, p. 78.

<sup>2</sup> For kindred Assyrian words, see Lenormant, *op. cit.*, p. 83 ff.

is no evidence that the Aryan *dak* is of like origin, the resemblance in meaning may be a mere coincidence. On the other hand, if the Aryan *dak* is not developed from *da*, but is a primary root, as some maintain it to be, it might originally have conveyed the same sense as the Semitic term, and the notion of biting would then be developed precisely as the Latin *mord-eo* gets its meaning from the root *mard*, to crush, to bruise (No. 24). In this case, since we are not sure of the onomatopoetic origin of  $\text{p}^{\text{r}}$ , ultimate identity of the roots would not be necessarily excluded.

(To be continued.)