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By SIR GERARD CLAUSON

I HAVE TWO REASONS for writing this paper. The first is that, while I have occasionally heard the word Nostratic, I have never had a clear idea what it meant, and I suspect that most readers of this *Journal* are in a similar position. The second is that I have recently received from a colleague in Moscow a book just published there entitled "An attempt to compare the Nostratic languages" (*Opyt sravneniya nostraticheskikh yazykov*) which defines the term, gives a history of the origin and development of the Nostratic theory, and marshals a great deal of evidence in support of it. The author, V. M. Illich-Svitych, died in 1964, and the first part of his book, which was perhaps never finished, has now been published, with an introduction, notes, and some supplementary matter, by his friend and colleague, V. A. Dybo. This was Illich-Svitych's only major work, but the bibliography (p. 74; this and similar references are to pages in the book) lists also six articles by him in various learned journals. The first feeling of any reader of the book must be utter astonishment at the amount of sheer hard detailed work which he packed into a short life of no more than 32 years.

The term Nostratic is defined by the words in brackets following the title of the book, "Semito-Hamitic, Kartvelian, Indo-European, Uralian, Dravidian, Altaic".

At a time when there are grave doubts whether the Semitic and Hamitic languages are genetically related, when almost no scholar can still be found who believes that the Uralian and Altaic languages are so related, when the best qualified specialists deny that the Dravidian languages are related to any other language except perhaps Elamite, and when objections which look like being fatal are being made to the theory that the Altaic languages (Turkish, Mongolian, Tungus, and more recently Korean) are genetically related to one another, an attempt to prove that there is a great Nostratic family of languages which includes all these families and also Indo-European and Kartvelian (Georgian etc.) inevitably reminds an old Civil Servant of Lord Curzon's famous telegram from the Paris Peace Conference in 1919. He had gone there to negotiate the peace treaties, and, *inter alia*, a boundary between Austria-Hungary and Germany on the one hand and the successor states than were included in his original instructions. He replied "I came here to make a boundary, you must not expect me to hit over the pavilion".

The term Nostratic was invented in 1903 (p. 1, n.) by the Scandinavian philologist H. Pedersen (see Bibliography, p. 91) to designate certain languages of the Old World, which he defined as "Indo-European, Ural-Altaic, Semito-Hamitic and possibly others", but the theory, or at any rate parts of it, were a good deal older than that.

Although the classical languages, Greek, Latin, Hebrew, and Arabic, had long been studied by European scholars, it was not until the 18th century that systematic efforts were first made to collect material relating to a good many other languages of northern Europe and various parts of Asia, and it was not until the beginning of the 19th century that comparative philology emerged as a science the function of which was to discover whether certain languages were genetically related to one another and so formed families which might be assumed to be descended from a common ancestor. Apart from the Semitic family,

which was dealt with by scholars who were principally interested in biblical studies and played no important part in the general development of comparative philology, the first families which were proved to exist were Uralian and Indo-European (p. 38).

The first tentative efforts to prove that there was an Altaic family, comprising Turkish, Mongolian, and Tungus, were made in 1847 and the theory was vigorously developed from then onwards and later expanded to include Korean.

The first attempt to prove that the Indo-European and Uralian families were related were made in the 1870's and Otto Donner in the 1870's and 80's suggested that there were lexical similarities between Finno-Ugrian and both Indo-European and Altaic. The Ural-Altaic theory was developed a good deal further in the late 19th and early 20th centuries. The search for Indo-European and Semitic interconnexions began at about the same time (the Semito-Hamitic theory had not yet emerged). Attempts, most of them patently unsuccessful, to link Kartvelian with Indo-European, Uralian, and/or Semitic were made from the middle of the 19th century onwards. The first attempt to bring Dravidian into the picture was made as early as 1875. The fully-fledged Nostratic theory seems to have emerged in the works of Trombetti from 1908 onwards (p. 39).

It is noteworthy that when all these theories of cross-relationships between different language families were being evolved, as much significance was attached to similarities of morphology, accidence, and syntax as to similarities of vocabulary, but, as pointed out on p. 40, it was not until the end of the 19th century, and in the case of some families even later, that scientific methods were worked out for comparing the vocabularies of languages belonging to the same family with one another with the purpose of reconstructing the phonetic structure and a skeleton vocabulary of the putative nuclear or ancestral language from which all the known languages in the family were descended.

Appraisal. There are several possible ways of appraising the validity of a theory that language families are genetically related to one another. Those which seem to me to be most cogent can be defined briefly as: (1) geographical plausibility; (2) plausibility of scope; and (3) phonetic and semantic plausibility. I will discuss each of these separately.

1. Geographical plausibility. Comparative philologists live in a world of their own, a world of words, and have only a limited regard for considerations of time, space, and race. They agree, of course, that if a number of languages are found to be genetically related to one another, and if the languages of such a family, for example the Indo-European (IE), are found to fall into groups with a common parent, whether that common parent has survived (like Latin, the common parent of the Romance languages) or has not (like the common parent of the Indo-Iranian languages), these common parents must be older than the languages descended from them, and the nuclear or ancestral language of the whole family must be older still. Indeed in the case of the IE family, in which substantial differences had already emerged between languages known to have been a great deal older. This takes us back to a period in the history of the world which is the concern of archaeologists. The function of archaeologists is to study the skeletal and other material remains produced by excavation and so to establish the existence of "cultures". They then place the cultures in

particular areas in a chronological order, and, if sufficient skeletal material has survived, attempt to determine whether the physical characteristics of the persons associated with these successive cultures have continued to be consistent or whether changes have occurred. Finally with the assistance of various techniques, in particular those most recently developed, dendrochronology and Carbon 14 dating, they attempt to put dates on the successive cultures. Archaeologists are notoriously, and very reasonably, reluctant, except in the case of fairly recent cultures, to hazard a guess about the languages spoken by the peoples associated with particular cultures, but they have now worked out long series of cultures in chronological order at any rate in those areas in which the Uralian and Semitic languages are believed to have first been spoken. There seems to be very little doubt that the earliest cultures and the physical types of the peoples associated with them are entirely different in the two areas. The same is no doubt true of the cultures and people of the Hamitic and Altaic areas, and possibly others. In these circumstances the Nostratic theory cannot be regarded as geographically plausible.

2. Plausibility of scope. By plausibility of scope I mean (a) that the reconstructed words in the Nostratic (Nostr.) vocabulary are, semantically, the kind of words which might be expected to exist in the vocabulary of so primitive a language, and to have been so durable that they have survived in a recognizable form over a very long period of time, and (b) that the balance between the various parts of the vocabulary is what might be expected in such a language.

It is, I think, generally agreed that if the vocabularies of a number of languages which are known to be related to one another are compared diachronically, those words which prove to be most durable will be the words for certain basic concepts which have been defined as "the language of common life, the nucleus of vocabulary which the child first learns and the speaker of the language uses every day". Whatever the validity of glottochronology, and I think that nearly all scholars, including myself, deny it, it did at any rate produce two or three very carefully thought out lists of such basic concepts. The latest, definitive, list contains 200 items. Such a list, slightly altered to match Altaic conditions, will be found in my paper, "A lexicostatistical appraisal of the Altaic theory" (CAJ, XIII, 1, 1969); I had myself adapted it from the standard list published in H. H. Hymes, "Glottochronology so far" (Current Anthropology, Jan. 1960, where there are references to the primary authorities).

I do not, of course, suggest that the validity of any reconstructed vocabulary of a primitive language must be judged solely on the basis of the number of words in the 200-word list which appear in it, much less that any word in the reconstructed vocabulary which does not occur in that list must automatically be suspect. That would obviously be preposterous if the reconstructed vocabulary contains several hundred words and so is two or three times as long as the list. But the list does at any rate give some indication of the balance to be expected between various kinds of words in such a vocabulary.

The present volume contains 245 Nostr. words and roots (the latter obviously a concept borrowed from IE) which the author believed to be the origins of words which survived, and may still survive, in forms clearly derived from the Nostr. form in two or more of the six families. The list starts with words beginning with b- and ends with words beginning with

K-. The author believed that no Nostr. words began with a smooth vocalic ingress, but that there were two sounds, possibly glottal stops of different intensity (in the phonetic table they correspond to Arabic hamza and 'ain), which are listed in that order between H and j (English y).¹ This is of course only part, perhaps about half, of the whole list which the author completed, or would have completed but for his untimely death. The editor's preface describes this as the first part of the book, but does not say what is still to come. It is, however, long enough to be taken as a fair sample of the whole.

A close examination of the list raises several doubts regarding the plausibility of its scope.

As regards point (a) above there are several words in the list which do not look the kind of words likely to have found a place in a primitive vocabulary or to have survived so long. Examples are 26 "to inflate", said to survive in Kart. and IE, in the latter including words meaning "to become pregnant" and "penis"; 46 "to tickle", said to survive in Ural. and Drav. (in which most of the words quoted mean "armpit") and possibly IE and Tungus; 167 "clothes-moth", said to survive in Ural. and Alt., and 157 "soft excrescence", said to survive with meanings as various as "lip, horse's muzzle", in Ham., "swelling, lump, fungus (especially tree-fungus)" in IE, and "fungus" in Ural.

No. 162, translated "female relative by marriage" (husband's sister, brother's wife, etc.), and 174 "male relation by marriage" (husband's or wife's brother etc.) are said to survive in recognizable forms, 162 in all families, but only doubtfully in Kart., 164 in Ural., Alt., and doubtfully Kart. These terms imply marriage institutions and social relationships more advanced than are likely to have existed when Nostr. would have been spoken. It is perhaps significant that there are no words in the list for husband, wife, brother, or sister.

There is no word for "tree" in the list (there may of course be one in the unpublished part) but there are two names of specific trees, 117 "ash" said to have survived in IE and Ural. and 170 "birch" said to have survived in Ural. and Tungus. Both trees grow only in fairly closely definable geographical areas, which implies that Nostr. must have been spoken in such an area. On the other hand 90 "antelope", said to survive in Ham., Drav., and Mong., is the name of an animal which is not found in such areas. The meanings in Mong. are said to be "roebuck, stag, wild goat, elk". There is another word for "stag", 135, said to survive in IE, Drav., Alt., and possibly Kart., but there are substantial differences between the phonetic forms of the words in these families.

As against five words for colours in the 200-word list, there are only two in the Nostr. list, 213 "black", which is in both lists, and 18 "grey, or grey-brown", which is not. The latter is said to survive in IE, Alt., and possibly Kart., but the Alt. entries are based on a misunderstanding regarding Turkish phonetics which will be explained below. "Grey" is not a word which is very likely to have existed in a very primitive language; the Turk. word is generally used for the colour of a horse's coat, and it is unlikely that the horse was domesticated at the time when such a primitive language was spoken. There is no word for "horse" in the Nostr. vocabulary.

Coming now to the question of balance between various parts of the vocabulary, point (b) above, the following table breaks down the 200-word list and the Nostr. vocabulary into

¹ To avoid confusion I have throughout adopted the author's transliteration alphabet. It is not one to which we are accustomed, but will, I think, be easily understood.

groups of words. The first column is a list of the groups chosen, the second the number of words in each group in the 200-word list, the third the proportion of the whole represented by each major group, the fourth and fifth similar information regarding the Nostr. vocabulary, and the sixth the number of words in each group which are common to both lists. As will be shown below, there are a good many cases in which two or more Nostr. words have the same meaning; in such cases only one is included in the figure in column 6.

1	2		3 %	4		5 %	6	
Nouns:			/0					
Human beings	8			7			3	
Animals	7			11			3	
Parts of human and								
animal bodies	35			20			14	
Vegetable kingdom	8			7			1	
Inorganic matter	10			9			6	
Natural phenomena	8			6			4	
Celestial objects	4			0			0	
Miscellaneous	9	89	44·5	16	76	32	1	32
Verbs		45	22.5		117	46		21
Adjectives		41	20.5		28	12		12
Pronouns		10	5.0		4	2		3
Adverbs etc		10	5.0		3	1		2
Numerals		5	2.5		Õ	Ō		Ō
Prefixes/suffixes		Ō	Ō		17	7		Ó
Total:		200	100		245	100		70

The total of nouns, verbs, and adjectives in the Nostr. vocabulary taken together can be taken as accurate, but the division between the three is a little uncertain since some Nostr. verbs are said to survive as nouns or adjectives and vice versa. The most significant points of this analysis seem to be that, at any rate in this part of the Nostr. vocabulary, there are no words for celestial objects (sun, moon, star, sky) or numerals, which are usually regarded as of great diagnostic significance, a rather high proportion of miscellaneous nouns, only one common to both lists, a much higher proportion of verbs and correspondingly lower proportions of nouns and adjectives, and a number of prefixes and affixes which are, in the nature of things, absent from the 200-word list. The last point will be dealt with below.

The most disconcerting fact which emerges from a close examination of the list is that there are so many cases in which two, three, or more Nostr. words are said to be completely or almost completely synonymous with one another. There are two words, 79 and 108, for "male" (and 191 for "man, youth"); two, 67 and 155, for "fish"; two, 86 and 200, for "heart", the latter also translated "breast", which is also the translation of 138; two, 139 and 144, for "water"; and two words, 169 for "leather, tree bark", and 217 for "tree bark, crust" from which words meaning "leather, skin or hide, bread crust" etc. are said to be descended.

Synonyms are even commoner among the verbs; of the 117 verbs only 42 are given meanings which are not given to any others. There are two words each with the following meanings: "look (at)", 3 and 43; "eat", 57 and 136; "scrape or scratch", 218 and 231; "flay or peel", 156 and 171; "live", 101 and 131; "know", 42 and 163; 130 is translated "come"

and 161 "go, wander", but some words said to be descended from the latter mean "come". There are three verbs each with the following meanings: "swallow", 4, 91, 242; "fall", 186, 225, 235 (and also 107 "fall down, collapse"); "shout", 43, 38, 199 (38 is also translated "say", which is the meaning of 146). There are two words for "bend", Transitive, 25 and 92, one for "bend", Intransitive, 97, and one for "to bend at the joints; a joint", 175, but the words descended from it are said to mean: IE "knee", and once "elbow"; Ural. "elbow"; Drav. "hump" and "bend", Intransitive. (No. 31 is translated "knee" with Sem.-Ham. and ? Kart. references.) There are four words for "cover", 26, 36, 63 and 212; and two for "rise", 116 and 210, one for "rise, grow", 19, and one for "grow", of a plant, 16.

Other groups are larger and with very complicated interconnexions; there are four words for "cut", 33, 53, 55 and 196, one for "chop, hew, hit", 41, one for "hit, forge", 52, one for "hew, dig", 193, one for "dig", 209, and one for "dig, drill, pierce", 21. There are five words for "tie, bind (together)", one also meaning "fasten" and one "gird"; the latter is practically synonymous with one meaning "tie round"; there is one translated "tie, plait" and one "plait".

The largest group contains 18 verbs, nouns, and adjectives all relating to various aspects of light and heat: "shine; sparkle; twinkle"; four words meaning "sunlight, daylight, dawn, morning light" or a combination of them; "summer heat"; "burn", Transitive and Intransitive; "boil, boil over", Intransitive.

It is surely incredible that a primitive language like Nostr. should have had such a superabundant supply of synonyms.

Perhaps the least convincing part of the list is the 17 parts of words, prefixes, infixes, suffixes, some in more than one position. It includes three diminutive suffixes, three case and number suffixes, three tense and mood suffixes, and some miscellanea. Two specimens can be taken as fairly typical. No. 27 - ba/-ab is said to be a suffix attached to names of animals in IE and Sem.-Ham. It is called in aid to justify the inclusion of Arabic *kalb* among the descendants of 238 *KüjnA* "dog, wolf". No. 122 "*a*-/-*a*" is said to survive in Sem. as the prefix of Comparative Adjectives like '*akbar* "greater'' (this word is not actually quoted, but the form, though not properly understood, is implied) and the suffix of Feminine adjectives like *sawdā*' from *aswad* "black" (I doubt whether the Arabists would agree that there was any connexion between the two), in Ham. as the suffix of abstract nouns, and in Kart. as the prefix of deverbal nouns.

It is, of course, generally agreed that differences of morphology, accidence, and syntax do not prove that languages are not genetically related, and I think that almost all scholars would now agree that similarities in these fields are no proof of a genetic relationship.

To sum up, a detailed appraisal of the scope of the Nostr. vocabulary as contained in this book cannot, for the reasons stated above, be regarded as plausible.

3. Phonetic and semantic plausibility. In his introduction (p. 1) the author stated that he had compiled his list of Nostr. words and roots (the latter clearly an IE concept) on the basis of a comparison of the ancestral languages (*prayazyki*) of the six families. Internal evidence, including a short verse in Proto-IE immediately following the title page, suggests that he was primarily an Indo-Europeanist, and what he had to say about Proto-IE must be taken as authoritative. It is, however, relevant to remark that it is easier to reconstruct the phonetic

form of a word in such a language than to determine its exact meaning. I shall have something to say below about the supposed Altaic ancestral language, but I am not qualified to express an opinion on the possibility of reconstructing the other four. In default of a clearly defined meaning of a word in the ancestral language, it will surely be agreed that the only sensible course is to assume that it was the same as that of the earliest known meaning of the word supposed to be descended from it, and that the form of such a word is the best guide to the form of the word in the ancestral language. I have, however, noticed several instances of a later form and meaning of a Turkish word in some medieval or modern language being chosen because it fitted neatly into a group, into which the word in its original form and meaning would not have fitted.

The author also said that he had been careful not to take as evidence of a relationship words borrowed by one language from another. The principle is entirely sound, but it is in fact impossible without a profound knowledge of at least one, if not both, of the languages concerned to be sure which are loanwords, and if they are loanwords which language borrowed them. The list of abbreviations of languages and dialects (pp. 139 ff.) contains over 400 entries; presumably some words are quoted from all of them. It would be beyond the powers of any individual scholar to have the necessary intimate knowledge of more than a few of them. Indeed I have noted several instances of loanwords not being identified and of the loanword being ascribed to the wrong language. There is a good example under 62 dalq/u/ "wave". This is said to be the origin of Mong. *dalai* "sea", and it is said that this was the origin of Turk. *taluy* and that Professor Doerfer was wrong in saying that it was *dalai* that was the loanword. But Doerfer was quite right, and furthermore *taluy*, as Hirth demonstrated over 70 years ago, was itself a loanword from a Chinese phrase *ta-luy*.

The author also said that he had been careful not to take as evidential similarities of form and meaning which were due to mere coincidence. There are obviously some cases in which different scholars will take different views on the question whether similarities between two words are significant or coincidental. In the case just mentioned the fact that both words began with *dal*- and had something to do with water cannot possibly be anything except a coincidence.

It is, therefore, clear that over the greater part of the field the author had to rely on authorities on the languages concerned without being able from his personal knowledge to judge whether they were reliable or not. So far as Turk., on which I venture to think that I can speak with some authority, is concerned, it is a regrettable fact that some of the authorities on which he relied were not at all reliable.

Thirty or forty years ago the Altaic theory crystallized along the following lines:

- (1) Turk., Mong., Tungus (and later Korean) were all descended from the same ancestral, Altaic, language.
- (2) Although the earliest Turk. texts are 500 years older than the earliest Mong. and Tungus texts, Mong. and Tungus were phonetically and morphologically "older" languages than Turk. and therefore nearer to Altaic. (Hardly any scholars believe that Korean belongs to the family.)
- (3) The main evidence for (2) was:

- (a) that some Turk. words are crases of older Mong. words, for example "salt", Mong. dabusun, Turk. tūz; "dust", Mong. toγosun, Turk. tōz;
- (b) that there had been an Altaic initial *p-, which survived in some Tungus languages as p-, f-, or h- and in 13th-14th century Mong. as h-, but later disappeared in that language, except in one or two dialects, and had disappeared in Turk. before the 8th century.
- (4) As a corollary,
 - (a) the fact that there were no z nor primary š in Mong. (š- in ši- is a secondary form of s), and that some words common to the two languages were spelt with š and z in Turk., but l' and r' in Mong., proved that in Altaic there were no š or z but two forms of l, l and l', and of r, r and r';
 - (b) the fact that some words (nouns and verbs) common to the two languages were monosyllables with final consonants in Turk. and disyllables with a short final vowel in Mong. proved that there were no such monosyllables in Altaic or, probably, Proto-Turk.

On (1) I have already remarked that in recent years objections which look like being fatal have been made to the Altaic theory.

On (2) there is no real evidence—see below—that Turk. is phonetically or morphologically either older or younger than Mong. Except perhaps on the single point in 3(b), for which there are other explanations, the Tungus languages are in a much more advanced state of phonetic decay than either of the other two.

The argument in 3(a) was disposed of in very short order; -sun is a common suffix of uncertain significance at the end of native Mong. words like *dabu-sun* and of Turk. loanwords, like *balya-sun*, Turk. *balyq*, "town", and *toyo-sun*, Turk. $t\bar{o}\gamma$, "dust", not quite synonymous with $t\bar{o}z$.

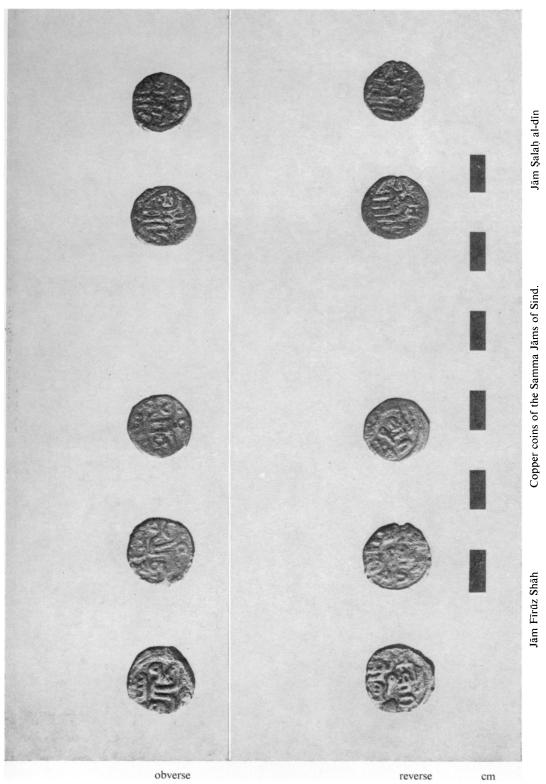
As regards 3(b), the geographical location and mutual relationship of the Tungus dialects concerned suggest that the evolution is more likely to have been h > f > p than vice versa. The initial *h*- in early Mong. is very unstable, the same word being written both with and without it; it is just as likely to be prothetic as original. There is some evidence that there was an initial *p*- in a few words in early Turk., but it merged with *b*-, just as initial *d*- merged with *t*-, in all but a few languages. There is no evidence that there was ever an initial *h*- in early Turk., and indeed good evidence that there was not.

The corollaries in (4) are both dependent for their validity on the thesis that Mong. is morphologically older than Turk. As already stated there is no evidence that it is older, or for that matter younger, but it is fairly easy to see how it got the reputation for being older. For a very long time, probably over 2,000 years, there have been, and still are, two branches of Turk., a large branch called Standard Turk. and a small one called L/R Turk. The hypothesis, unproved but probable, is that in the last centuries B.C. one Turkish tribe or group was cut off in the extreme east of the steppes by the Hsiung-nu and remained isolated in this way for several centuries. There is no reason to suppose that the phonetic structure of early Standard Turk. was not perfectly normal and very much the same as that of most modern Standard languages; there have been one or two minor changes but there is no reason to doubt that the structure included \vec{s} and z. The language of the isolated tribe during its period of seclusion underwent several phonetic changes, of which the most important were that δ came to be pronounced as l and z as r. The earliest L/R language of which there are traces in Chinese histories, but not actual texts, was that of the Tavyač (in Chinese transcription T'o pa) who ruled northern China from A.D. 386 to 535 as the Northern or Yüan Wei dynasty. It was during this period, or a little earlier while they were becoming increasingly important, that the Kitan, the earliest ancestors of the Mongols known to history, emerged from the Siberian or Manchurian forests and made contact with the outer world. Not very much so far is known of their language, but one word taulay "hare", borrowed from tavylyan < tavysyan is known and was inherited by Mongolian. It is almost certain that the oldest layer of Turk, loanwords in Mong, was borrowed from this L/R language. It also appears that a group of Tavyač found their way to southern Russia, possibly among the hordes of Attila, and there are traces of their L/R language in the Byzantine chronicles. The (Turkish) Proto-Bulgar and some rather later Volga Bulgar inscriptions are in later forms of the same language; its ultimate descendant is Chuvash (a name which seems to be Tavyač, with the normal sound changes which have occurred in that language). The earliest traces of Standard Turkish are in Chinese histories of, say, the 6th and 7th centuries, and the earliest actual texts date from the second to fourth decades of the 8th century. Thus although the Standard language was undoubtedly the original Turk. the evidence for the existence of L/R Turk. is rather older.

The history of the relationship between Turk. and Mong. is very complicated and has been worked out only comparatively recently. Briefly Mong. borrowed words from at least three varieties of Turk. between the 4th or 5th and the 13th centuries, the first an L/R language, the others varieties of Standard. From that time onwards, after the Mongols became a world power, the movement was almost entirely the other way, Mong. words finding their way into nearly all Turk. languages.

Although ignorance of these facts has led the author into various errors, like that relating to *dalai* referred to above, its main impact has been to lead him to connect Turk. words containing \check{s} or z with Nostr. words containing l or r. Examples are: 1 *baHli* "wound" said to be the origin of Turk. *bāš*, same meaning; 18 *bor'a* "grey" said to be the origin of $b\bar{o}z$, same meaning; 123 'al'a "food", said to be the origin of $a\check{s}$ "food"; 137 'al'- "to cross (a mountain)", said to be the origin of $a\check{s}$ -, same meaning. Incidentally the Turk. word under this heading is almost the only word in a long list of words said to be descended from the Nostr. word which has this precise meaning. The words quoted from other families have meanings as various as "to rise" (for which there are said to be other words in Nostr., see section (2) above), "mountain, summit, further on, the other side, distant, foreign, beyond, last year, upon", etc.

So far as corollary 4(b) is concerned the position is that the early Turks seem to have liked monosyllables; there are a great many monosyllabic nouns and verbs in the language. The early Mongols liked longer words; there are practically no monosyllables in the language except a few ending in open vowels. (The position has now changed and a good many words have been clipped in modern languages.) Thus when a Turk. monosyllable was borrowed a short vowel was added to it; $b\bar{o}r$ (the L/R form of $b\bar{o}z$ "grey") became boro, and so on. There is no reason whatever for assuming that in Proto-Turk. all these



monosyllables were disyllables with a final short vowel. The author sometimes made this assumption, but this is not important.

To summarize this part of the discussion, it must be said that there are a great many phonetic implausibilities in the book; some, for example those mentioned in discussing 27 ba-/-ab and 62 dalq/u/, have been discussed in some detail, a brief article like this is not an appropriate place for discussing them at length.

There are perhaps even more semantic implausibilities, in the sense that the connexion between the supposed meaning of the Nostr. word and the meanings of words supposed to be descended from it is almost incredibly tenuous. Examples have already been mentioned, for example "sea" as the meaning of a descendant of a word meaning "wave", "hump" as the meaning of a descendant from a verb meaning "to bend at the joints", and "upon, last year", both meanings of descendants of a verb meaning "to cross a mountain". Examples could be multiplied, but one case should perhaps be mentioned specially as a combination of a tenuous connexion and at least one mistranslation. No. 131 'elA "to live" is said to survive in all families, though only doubtfully in Kart. Among the descendants in Sem. are two Arabic words 'al "family" (root 'wl) and 'ahl "people" (root 'hl); I doubt whether the Arabists would agree that there is any connexion between the two roots. The Drav. descendants are said to mean "house, place, wife, relative". The Alt. descendant is said to be Turk. el, which is also a loanword in Mong. It is said to exist in various ancient, medieval, and modern languages with the meanings "people, subjects, country, village, community, peace, peaceful". The word has had a very long and complicated semantic history, and at one time or another has had most or all of these meanings. But its original meaning, the only one which should be taken into account for comparative purposes, was "an organized government, a political unit governed by an independent ruler".

Quite apart from the fact that, at any rate so far as Turk. is concerned, the author was grossly misled on some points by the authorities on which he relied, the impression is unavoidable that his enthusiasm for his subject clouded his judgement and that he was too much inclined to see phonetic and semantic connexions where a reasonable, hard-headed scepticism would have persuaded him that it would be wiser to hold back.

Conclusion. Thus, after appraising the Nostratic theory in the three ways stated above, one is inevitably driven to the conclusion that it cannot be valid. An enthusiastic supporter of the theory might argue that the geographical objections to it are based on too short a view, and that a longer time-scale could envisage a time when the ancestors of the Berbers of north Africa and the Evenki of northern Siberia lived cheek by jowl at some point between the two (near the tower of Babel?) and spoke a common language. I doubt if the archaeologists would agree, but in any event such a time must have been far back in the Old Stone Age, and the further back the date is pushed the less and less plausible does it become that that common language could have had a vocabulary even remotely resembling the one analysed above. It is always disagreeable to criticize the work of a scholar who has spent years of intensive labour to produce it, and doubly disagreeable when he is no longer here to defend himself. Illich-Svitych's enormous industry and enthusiasm must command the deepest respect. It is a tragedy that they were devoted to proving the truth of something that cannot possibly be true.