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BEARING OF THE INDO-EUROPEAN COMPARATIVE GRAMMAR ON THE ARYAN PROBLEM

This paper deals with the problem of ancient migration of the Proto-Indo-European language community in various groups on the basis of the evidence of Indo-European comparative grammar.

Some ten or fifteen branches of Indo-European, like Indo-Iranian, Balto-Slavic, Italo-Celtic, Greek, Germanic, etc., have been clearly distinguished on the basis of comparative evidence. But this poses the question as to whether it is natural that the proto-language was abruptly changed into ten of fifteen branches or languages which lost their mutual understandability. It is more natural to suppose that a language, even rich with dialectal materials, changed into two or three branches or languages first of all, from the point of view of loss of mutual understandability. It can be assumed that each of these two or three branches was rich with dialects, mutually understandable.

While thinking of dividing the Proto-Indo-European language under two or three subdivisions, first of all the Satem and Centum classification comes to our mind. Some recent attempts seem to contradict or ignore the Satem – Centum classification of IE. Therefore the various possibilities and methods of classification of the IE language family may be considered here. The distribution of the IE language family is the same as the branching off of the IE speech community in different directions.

Schleicher, who is the father of comparative reconstruction, presents a classification much different from the Satem – Centum division. We shall see later on in this paper that this is to be rejected on the basis of the comparative evidence.

Schleicher classifies IE languages under the following three heads:

(1) The Asiatic or Aryan division, comprising the Indian, Iranian and Armenian;

(2) The South-West European division, comprising Greek, Albanian (with a note of probability), Italic and Celtic;

(3) The North European division, comprising Slavic, Lithuanian and Germanic [23, pt. 1, pp. 5-7].

Finally, however, after some further discussion, he classifies IE under two heads, i. e. Slavo-Teutonic and Aryo-Graeco-Italo-Celtic. Then again the second one is subdivided into Aryan, on the one hand, and the rest, on the other hand [23, p. 8]. Let us represent Schleicher's classification in a table form.
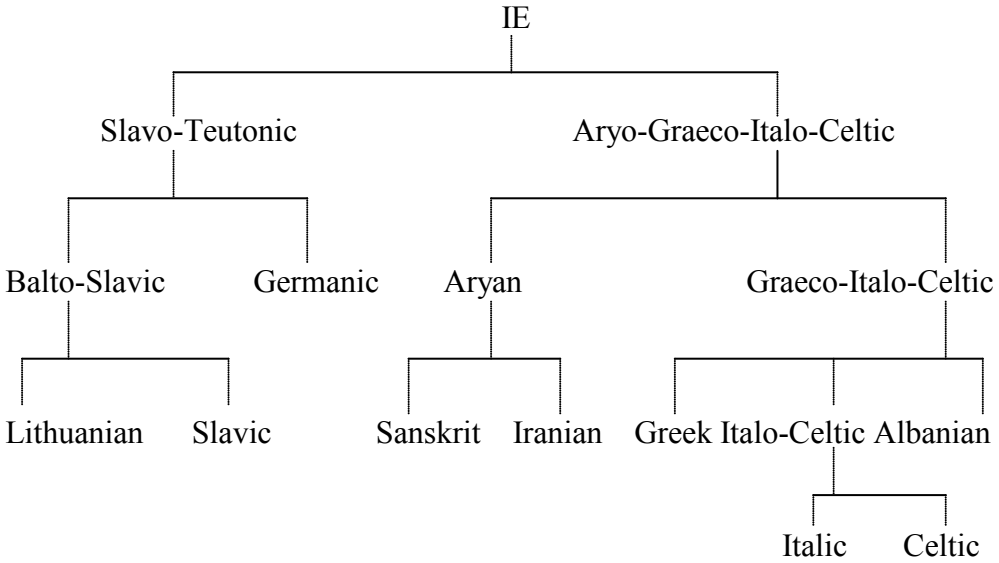
Although Schleicher's classification is apparently peculiar, the basis of affinity which has led Schleicher to this classification can be very easily detected. Slavic and Teutonic have some morphological common points like the IE Instrumental and Dative endings with *-mis/mos*, which are different from IE *-bhis/-bhos/bhyos* as found in Aryo-Graeco-Italo-Celtic; cf. Goth, *wulfam*, Old High German *wolfum*, OE *dagum*, Lith. *vilkams*, Old Church Slavonic *vlŭkomŭ*, Skr. *vr̥kebhiḥ*, Av. *vəhrkaēibiš*, Gr. *lukophí*, Old Irish *feraib*, Lat. *manubus,* Arm. *gailvkʻ.*

There may be few other points to justify Schleicher's classification. But it seems for Schleicher here the geographical factor was more important than the linguistic factors, since in his time the comparative method was still in its infancy. Schleicher had almost in a way admitted that his basis was geographical. To quote Schleicher: "Within this IE class of speech, however, certain languages geographically allied point themselves out as more closely related to one another. Thus, the IE speech falls into three groups or divisions" [23, p. 5]. In this introduction to his classification, it is clear that Schleicher must have tried to link up the languages first from the geographical position and then he has tried to link

them up from the linguistic point of view. To take geographical factors into account is also essential, but linguistic affinity is of primary importance, since migrations are possible in all sorts of manner, by which the original geographical picture is likely to be disturbed in the history of a language.

Schleicher's classification does not include Hittite and Tokharian. The reason is obvious. These languages were not known in his days. But his classification has two chief blunders: (1) Germanic cannot be put together with Balto-Slavic since the former is a Centum language and the latter is a Satem language; (2) Albanian, which is a Satem language, cannot be put together with Graeco-Italo-Celtic, which come under Centum. The blunders are to be treated as such on the basis of the Satem – Centum classification.

Now there may be the question why we should ignore certain other affinities for classification. Schleicher's classification has also some isomorphic basis, at least as shown above in the case of the endings *-mis/-mos* : *-bhis/-bhos*. At this level we face the question whether the morphological basis or the phonological basis is to be treated with primary importance for classification.

To review the classification of world languages, the world languages are classified morphologically and not phonologically. Even when the languages are classified genealogically, each family has its own morphological or structural peculiarities by which a language belonging to the family can be easily detected.

But while subclassifying languages within one language family, the linguists have attached more importance to the phonological peculiarities. This has been recently criticised by H. M. Hoenigswald in his paper *Criteria for the Subgrouping of Languages*: "The limitation in question consists in the fact that the classical comparative method which underlies our pair-wise reconstructions applies to sound change only, whereas linguistic innovations are of course by no means all phonological" [see 2, p. 6].

Despite the criticism of Hoenigswald, the phonological changes in a language are of primary importance for subgrouping. Although morphological changes in a particular group may be alike, this is not very dependable for subgrouping of languages coming from one proto-language. This point requires more elaboration and clarification, which may be made here by illustrations. One language may show two different case endings under the same case implication, sometimes with slight semantic variation. Both may be handed down to the languages of the next stage, where in course of time some languages may prefer one form and the others – the other form. Let us put the name X for the proto-language and A, B, C for the languages of the next stage. Out of the forms 1 and 2 of the X stage, A and C may prefer 2 and B may prefer 1. Though A, B and B, C may be closer to each other than A, C, still A and C may

look similar on the basis of the preference of the form 2. This type of phenomena is quite natural in the history and development of a language.

In the case of phonological changes, one sound of the proto-language is supposed to have one type of development in a language of the next stage. Therefore the phonological changes are more dependable for a study of the historical changes. In the case of phonological changes, the exceptions to a particular type of sound change also come under another system or law and so the whole thing is more systematic than the morphological changes.

Some concrete examples may be taken up now. In MIA the heterogeneous conjuncts of OIA are, as a rule, assimilated. Exceptions are there where heterogeneous conjuncts are simplified by anaptyxis. Now here one thing is common to both these changes: the heterogeneous conjuncts are no more retained in their original form. For this there is no question of option or preference. The heterogeneous conjuncts must be changed in MIA. Perhaps an effort to retain the conjunct (by Sanskritism?) resulted in anaptyxis. The effort to retain a conjunct might have been motivated by the fact that assimilation often resulted in ambiguity. Forms originally different could become homophonous. Since Skr. *tarka* 'argument' and *takra* 'curd' could both become *takka*, a form like *takka* may be traced to *tarka* or *takra*, depending on the context. A form like *indra*, by becoming *inda* by asimilation, looked as if the *r* is simply dropped. Hence an effort to retain the *r* results in a form like *indara* with anaptyxis. Thus the forms apparently aberrant are really systematic in the case of phonological changes. In the case of morphological changes also, there is sometimes a phonological cause. A form like MIA *dhammādo* or *dhammāo* is obviously a new formation for *dhammā* < Skr. *dharmāt*. After the final consonant was dropped as a rule, the form became *dhammā* (which is actually attested in Pāli) and it became identical with nominative plural and instrumental singular forms. A tendency for differentiation of the ablative resulted in further affixation of the ablative ending *-tas* to the original ablative form *dhammā*. The apparently anomalous form *dhammādo* for the expected form *dhammado* (<Skr. *dharmataḥ*) has the peculiar natural history stated above. A phonological change resulted in a new ablative ending, *-ātaḥ*, replacing Skr. *-āt* and *-taḥ*. Similarly, preference for the instrumental plural *-ebhiḥ* in MIA at the cost of *-aiḥ* is not merely a generalisation of one of the forms. It is because *-aiḥ* would become in MIA *-e* and then it would be homophonous with locative singular *-e.* This resulted in extending *-ebhis* to instrumental plural of *-a* stems in all cases and *-smin* from pronouns to the locative singular of *-a* stems for a double check.

This process of morphological change due to phonological changes is nicely illustrated in the following example from OIA. Indo-Iranian dative singular of *-a* stems ending in *-āi* was replaced by *-āya*; e.g. IIr. *asvai* by Skr.

aśvāya. This extension must have taken place in OIA to avoid confusion of the dative singular of masculine *-a* and feminine *-ā* stems which became alike in the IIr. stage, although they were different in the Indo-European stage; e.g. IE **ekwo + ai > *ekwōi* and **ekwā + ai ^> *ekwāi*. Both became IIr. *asvāi*. Skr. added '*a*' to set aside the masculine form. The feminine forms were distinguished by a double affixation, cf. Skr. *aśvāyai*. Thus, all sorts of morphological changes are guided by phonological changes.

A historical study of a language and a comparative study of related languages explicitly point out that morphology is to be taken into consideration merely to see the general structure of the languages or the language family. Morphology helps us rather in an approximate or gross classification. Sometimes morphology may also be found to play some role in subclassification. But phonology should be considered as the primary factor (basis) of subclassification. Phonological changes are more systematic, whereas morphological changes may be more complicated.

Out of all morphological elements, the pronouns are the least dependable for subclassification. If we examine the history of IE beginning from Proto-IE up to NIA, the history reveals that the pronouns are the most complicated elements. Out of the pronouns, it is the personal pronouns – in the stricter sense, the first and the second personal pronouns – that have the most complicated morphological status.

In Proto-Indo-European, the 1st personal pronoun nominative singular is problematic. On the basis of different historical languages different reconstructions are to be made. On the basis of Skr. *aham*, the Indo-European form should be *eĝhom*. *For* Greek *egṓ* (=Lat. *ego*), we need IE *eĝō*. For Greek *egṓn*, we need IE *eĝōm*. For Hittite *ug* (written *u-uk*, *u-ga*, *u-ug-ga*), which is also used as accusative, IE needs *eĝ* (Hitt. *u* in *ug* for *eg* after 2nd person *tug*). Should we reconstruct three IE forms or one? Was there only one form in Proto-IE or were there three forms going side by side? This is rather a complicated question. I believe all the forms to be current in the proto-language and accordingly I have presented a treatment in one of my works [17, p. 77]. I have not assigned any ground there. But here I would like to discuss my viewpoint a bit more elaborately as to why I have taken all the reconstructions to be valid as current forms in the proto-language. The personal pronoun is a highly essential part in a language and therefore is frequently used by all sorts of persons in a speech community. Although the personal pronouns are of constant use, variant forms can continue in a language as parallel forms and mutually intelligible forms. It is quite likely that in a subsequent stage of a language the various forms may be handed down with due phonetic changes. But in course of time there may be preference for a particular form at the cost of another. Several

factors may be responsible for the loss of a form. By phonetic decay a form may become too indistinct, or a form may become homophonous with another form with a very different meaning. Such forms are therefore lost. Sometimes new forms come up with a new semantic attitude and replace the old form. For example, the old form in the case of personal pronouns is used as non-honorific and a new form comes to be used as honorific. With time this new form takes the ordinary non-honorific meaning and a fresh form is used for honorific purposes.

An illustration may be made from Indo-Aryan. The nominative singular of the 2nd personal pronoun *tvam* was used originally in IE and IIr. irrespective of honorific and non-honorific. But in course of time in OIA this was replaced by the plural *yūyam* for honorific purposes; cf. similar replacement of 'thou' (IE *tu-*) by 'you' (IE *yū-*). OIA with time began to use another peculiar form, *bhavat-/bhavant-*, with a nominative singular masculine form *bhavān* as honorific, expressing the 2nd personal pronoun in meaning only, taking the verb in the 3rd person. This was originally a present participial form of √ *bhū-*, but distinguished from the form used as a present participle in gradation, in nominative singular only, i. e. *bhavan* meant 'being', present participle, but *bhavān* meant originally 'being', secondarily 'the gentleman present', cf. *atrabhavān* 'the gentleman present here', *tatrabhavān* 'the gentleman present there', subsequently it meant 'your highness or his highness (present here)' and 'your highness or his highness (present there)'. It should be noted that RV does not show any use of *bhavān* in the nominative singular. The use is also not attested in other Saṃhitās. Śatapatha Brāhmaṇa shows the use of *bhavān* with this meaning for the first time. Gradually, when *bhavān* was considered insufficient as honorific, its plural *bhavantaḥ* came to be used for the purpose. In this connection it may also be noted that *bhos* (alternatively *bho*, a generalisation of sandhi form), which is originally a prakritism of *bhavas*, vocative singular of *bhavat-* (beside the alternative and more current *bhavan*) like *bhagavas*, vocative singular of *bhagavat-*, became an ordinary vocative particle. As a result of this semantic change *bhavas* was replaced in OIA by *bhavan,* but it was borrowed from MIA into OIA when it had an altogether different shape (i.e. *bhos*) and is no more recognised as related to *bhavān.* It should also be noted that *bhos* is not attested in the Saṃhitās, but first of all appears in Śatapatha Brāhmaṇa as *bhavān.*

The peculiar tendency of personal pronouns to replace one morpheme by another can also be observed in a much later phase of IE, i.e. in the Modern IE languages. For example, the Skr. nominative singular of 1st personal pronoun *aham* is very rare in NIA (cf. Braj *hau*). Its place has been taken by 3rd person singular in several languages, e.g. Oriya *mũ, muĩ*, Beng. (dialectal) *muĩ*, Ass. *mai*, Hindi and Panj. *maĩ*, Maithili (obs.) *mẽ*, Bhoj. (obs.) *mẽ*, are all traceable

to OIA *mayena beside mayā (instrumental singular), whereas Beng. āmi, Oriya āmbha- (plural but also hon. sing.), Hindi ham (pl. and hon. sing.), Magahi, Maithili, Bhoj. ham (sing.) are to be derived from Skr. plural stem asma- > MIA amha (ham may be due to contamination of hau with amha).

The 3rd personal pronoun varies from language to language in the IE historical languages. Therefore there is every possibility that there was no 3rd personal pronoun in the proto-language and one or the other of the demonstrative pronouns was generalised in the individual branches as 3rd personal pronouns [17, p. 76]. So the 3rd personal pronoun also cannot be used for subclassification of the proto-language. Even when we examine one branch, it is often the case that the 3rd personal pronoun differs from language to language; cf. Goth. is < IE is, but OE hē <C ko-/ki-, both belonging to the Germanic branch; cf. also Hindi vah, but Oriya se, both NIA languages.

Thus it is clear that a morphological study of the pronouns cannot be taken into account for subclassification either.

It may be of some interest to point out here that one scholar considers that the functions of pronouns are very important for establishing distant linguistic affinity, i.e. to compare one language family with another language family and thereby go further back into the history of the language. I have read the summary of his paper [8, pp. 199-200], where he claims that he has worked out to some extent, on the basis of the pronouns, the affinity of IE, Semito-Hamitic, Uralo-Altaic, etc. to each other. Since so far I could not get his original article, I have no comments on his statements (on the basis of the summary alone). But it is quite probable that the evidence of pronouns may have a role in solving problems of distant linguistic affinity, since pronouns are the most ancient linguistic components of a language or a language family. For distant linguistic affinity the conclusions, if any, will stand to some extent on the ground of probability. Up till now no one has shown us anything concrete in this line except Möller [22]. But even when some work is done, it may be possible that Collinder's comparison of pronouns may be effective for such purposes. For subclassification or, to be more specific, for subclassification of IE languages, the pronouns have a negligible role.

The numerals, too, should not be taken into account for subclassification. Numerals always come into contact with people of different language families, and there is always a possibility of borrowed elements disturbing the local elements or the local system. The IE languages which have a decimal system show a vigesimal system in several areas due to the influence of other language families, e. g. counting in twenties in Eastern India (cf. Oriya koṛie, Beng. kuṛi, Assami kuri, etc.) may be due to Kol influence [7, pp. 794-795]. In Latin also the expressions for 19 and 18 are ūn-de-vīgintī, duo-dē-vīgintī, meaning literary

one less than twenty and two less than twenty, respectively. These also presuppose the influence of a language with a vigesimal system. The Indo-Aryan word *sahasra* has been replaced by Persian *hazār* in New Indo-Aryan. Another notable point is that phonology of numerals differs in most languages more than the phonology of other elements.

The verb is the most important morphological item of a language. A verb is normally an inherited item and not borrowed. A language is to be recognised from its verbs. Thus, a sentence in a language is to be recognised as a sentence of a particular language chiefly on the basis of the verb when all the other words except the verb may be loan words. The verb is a highly significant element in morphology and therefore it is supposed to have an important role in classification. To some extent, it is actually important even in sub-classification. But the verb, too, is not greatly dependable for minute sub-classifications because the verb is subject to optional use of double forms, which is a characteristic feature of morphology.

For example, the IE middle voice, now often termed medio-passive, has distinct endings. These endings, however, are retained clearly in IIr. and Greek. In other languages they are sometimes traceable, but often not so clear. These endings are gradually lost in the later phase of Indo-Aryan. The middle endings may be equally old or even older than the active endings, since their forms demand the strong grade as against the active endings, which show weak grade; cf. *-tai* : *-ti*, *-sai* : *-si*, *-ntai* : *-nti*, where the middle forms *-tai*, etc. are in the strong grade and *-ti*, etc. are the forms of the weak grade and therefore may be even later in origin than the middle endings *-tai*, etc.

Although the middle endings seem to be older from a structural point of view, the comparative evidence for them is quite poor and the languages showing these forms are also pretty old as far as the records are concerned. Therefore, on the basis of the evidence of middle endings, it is rather safer to assume that they were perhaps more current in an earlier phase of IE without any definite active – passive differentiation. Gradually, when the active developed, these endings were relegated to a secondary position and were confined to expressing the passive more than the active. The attested evidence in the historical languages shows the use of the middle voice in this later stage.

Without taking these facts into consideration, if one considers Sanskrit, Greek, etc. to form one subdivision on the basis of retention of the middle voice, then it will definitely be a misinterpretation of the facts. Thus, IE voice cannot help us with subclassification. In this way, if we examine other important items of the verb morphology, such as retention or loss of the augments, retention or non-retention of various present classes, etc., it will be observed that these cannot help us with subclassification.

Therefore, morphology can in no way help us with subclassification in a perfect way, as is shown above by analysis of different morphological elements.

The classification of Schleicher was thus duly rejected, chiefly because it did not have a sound phonological basis, although the classification may be sound from the morphological point of view.

In this connection, the recent classification of IE given by Georgiev may also be considered [see 2, p. 114: "North: Baltic-Slavic-Germanic, perhaps Tokharian; West: Italic-Celtic, Venetic, Illyrian; Central: Greek, Daco-Mysian (including Albanian), Indo-Iranian, Phrygian-Armenian, Thracian, Pelasgic; South: Hittite-Luwian, Etruscan"].

The classification of Georgiev looks brand-new when compared to the normal Satem – Centum classification. But this is almost a restatement of Schleicher's classification with nice incorporation of the languages discovered in post-Schleicher times. Schleicher's classification does not contain Tokharian, Hittite, etc. Georgiev's classification is quite comprehensive and it includes even minor IE languages. But does it solve the problem of classification? Actually it does not solve the problem. His classification also seems to be based more on morphological than on phonological ground. Otherwise, languages like Greek and Indo-Iranian should not have been classified under one subheading – Central. He places Albanian here, like Schleicher.

Several other scholars, without making any effort for subgrouping, simply present the different branches independently under IE and they also seem to disregard the Satem – Centum classification, although without making any specific reference to it. In this connection reference may be made to the table of classification of IE presented in a recent work by Benveniste [1, pp. 530-531]. Benveniste classifies IE as Slavic, Baltic, Germanic, Celtic, Italic, Albanian, Illyrian (including Venetic and Messapic), Greek, Thraco-Phrygian (including Macedonian), Armenian, Tokharian, Hr., Hittite (including other Anatolian languages and considering Lycian as a later form of Luwian, and Lydian – as a probable later form of Hittite). Benveniste's classification is safer than that of Georgiev, since it saves itself from committing blunders in classification. But this classification is rather a purely arbitrary presentation of the old material simply with the inclusion of the new languages, because the order in which the languages are presented (e. g. Slavic, Baltic, Germanic, Celtic, etc.) has no apparent justification. Are they arbitrarily chosen? Or is there any significance in the order? To me, the order seems to be arbitrary. Therefore, this classification, too, in spite of its comprehensive presentation avoids a proper classification because it is not natural for IE to be abruptly varying into so many branches without being first of all divided into two, three or four main branches. Al-

though the work of Benveniste is meant to shed some light on the history of the IE people, the table of classification of IE seems to ignore the natural process of history where a speech community naturally is first of all subdivided into a few groups, and then further subdivided. It is not possible that ten or fifteen branches of IE developed side by side in the initial stage as independent sub-groups, abruptly losing mutual understandability.

Thus, Benveniste's classification, although a welcome development based on linguistic grounds, is not perfect from the point of view of subgrouping, chiefly because there is no attempt in this classification to link up the different branches for obtaining some two or three main subdivisions.

Finally, for a proper subgrouping we have to go back to the Satem – Centum classification. But before coming to this, the Indo-Hittite theory should also be considered, because this presupposes some problems of classification for the Anatolian languages. I have elaborately shown elsewhere [19, pp. 126-134] that the Indo-Hittite theory is not based on sound evidence. Its classification, too, as we have shown above, is one-sided, taking practically one branch on one side and several branches on another side. This classification does not have a sound footing either. The laryngeal theory, which is considered to be a strong basis for the IH hypothesis, is in itself a sand castle.

Therefore, we have to revert to the Satem – Centum classification. This is a very old classification and now many scholars do not bother about this classification, taking it to be quite backdated and obsolete. Some approaches have been shown above where people, in spite of not accepting this, have not successfully presented a better classification because some of them have taken morphology as the basis of subgrouping and others have described their classification in such a way that it appears that ten or fifteen branches have come out of IE simultaneously, losing their understandability as dialects of the proto-language.

The main ground for ignoring the Satem – Centum classification may be that this is based on the difference of treatment of IE guttural series in these two branches, and after the discovery of Hittite some scholars hesitate to accept the three series. Besides, there are many minor problems with these three series, even if Hittite evidence is put aside. All these problems have been discussed in detail by me elsewhere. A brief exposition will be presented here, since it is of considerable importance for the Satem – Centum classification.

The three guttural series are reconstructed only on comparative evidence because no historical language has retained the IE three series in the original form. In all languages they have merged into two series. The Satem languages have absorbed the pure velars with the labio-velars, and the Centum languages

have merged the pure velars with the palatals. Some scholars think that the pure velars were not at all present in IE, and IE had only two series. According to Burrow [5, p. 75]: "The assumption of the third series has been a convenience for the theoreticians, but it is unlikely to correspond to historical fact". On the other hand, some consider that the proto-language had only one series of gutturals. This assumption is mainly based on the Hittite evidence. All these possibilities may be examined now.

One guttural series is not so new as it seems. Even in the 19th century Schleicher, the father of comparative reconstructions, reconstructed only one series on the basis of comparative evidence [23, p. 1]. In his reconstructions Schleicher uses *k* for IE *k*, *q*, *q^w*. Thus, Schleicher has *kas* for *q^w os*, *ka* for *q^w e*, *krutas* for *k̑lutos*, *dakan* for *dek̑m̥*, etc. [23, p. 77].

After comparative grammar advanced, the three guttural series were finally established as in Brugmann [4, see pp. 233, 244 and 245 for details].

Soon after the discovery of Hittite, Hittite gradually obtained an important place in IE comparative grammar. And several Western scholars attempted to prove that Hittite is the richest language from the viewpoint of archaism. Hittite records are no doubt very old, but not so much dependable as they are generally considered by the Hittite scholars.

As far as the guttural series is concerned, there is an approach by Hittitists that the proto-language had only one series, and it is perfectly shown in Hittite [28, p. 55]. Sturtevant starts his description by positing only one guttural series, but he could not rule out the special treatment of labio-velars in Hittite. That "there is no trace of the Indo-European distinction between velars and palatals", is true for all Centum languages. If "Hittite does distinguish between IE velars and labio-velars in some words", it is sufficient to put it under the heading Centum. But he avoids reconstruction of labio-velars in Indo-Hittite by deriving the form from a velar followed by a *w*. This special formula has no logic. In several Centum languages a labio-velar shows the same treatment as a velar/palatal followed by a *w*, e.g. Lat. *quus* (IE *q^w os*) : Lat. *equus* (<IE *ek̑wos*). The "excellent example" of Sturtevant, e. g. *kunantsi*, can easily be explained by anaptyxis. But the labio-velars are reconstructed instead of a conjunct of a velar + *w* in Proto-IE as a convenient formula merely to account for the fact that Satem languages show a simple consonant from it. It should be remembered that *q^w* or *k^w* is a simple consonant of *qw* – or *kw* is a conjunct. IE *q^w* or *k^w* is reconstructed in the protolanguage because the development of *k* out of it in so many Satem languages cannot be explained otherwise; IE *qw* > Satem *kw*, but IE *q^w* > Satem *k*. There should not be any reconstruction merely on the internal evidence of a language when comparative evidence goes against the same. There are aberrant cases in Hittite which can easily be explained just like

aberrant cases in other IE languages. Hittite *-ki/-ka* in the above examples can also be derived from IE *-ki/-ko* as these are particles [19, 39]. Hitt. *-ku* can easily be derived from IE *ku* or *q^{w}u*, since in most Centum languages the labialisation is lost before *u*; cf. Gr. *elakhus* (<IE *lng^{w}hus*) beside Gr. *elaphros*; cf. Lat *alicubi*, with *-cu-* for *-quu*.

Sturtevant has also tried to show that Hittite presents a confusion of palatals and labio-velars, to strengthen his hypothesis of one guttural series in Indo-Hittite. He cites one example: Hitt. *dekusami* (*te-ik-kw-us-sa-mi*) is equal to Skr. *diśāmi*, Gr. *deiknūmi*. But Hitt. *u* here is merely a case of anaptyxis, as explained by me elsewhere [17, p. 23]. And such stray forms should not be used to formulate new theories against highly established theories unless the form is of primary importance to change the whole system. Sturtevant's conclusion, "the easiest way reconciling these and other variants for the IE labio-velars is to suppose that in Proto-Indo-Hittite the phoneme *w/u* frequently followed a stop, *k*, *g*, or *gh*," [28, p. 55] is quite vague. It does not account for the loss of the *w* in Satem languages, because a conjunct of velar and *w* is retained in Satem, whereas the labio-velars become pure velars in Satem as already shown above.

Therefore, the attempt at a one-series system of gutturals is contrary to the comparative evidence of the Indo-European languages, including even Hittite. It is clear from the above analysis that Hittite also needs the reconstruction of labio-velars in the proto-speech and just like other Centum languages shows velars for Indo-European palatal series. So, the question of one guttural series in the proto-language is fully ruled out. And finally, the Satem – Centum classification stands firmly despite being considered antiquated by several scholars.

Others who prefer to have a two-series system of gutturals in IE admit the Satem – Centum classification. Some of them would exclude the labio-velars; the most important name to be mentioned here is Kuryłowicz [14, p. 100]. Long before Kuryłowicz, Brugmann also had to reconstruct two series excluding labio-velars [3, vol. 1, p. 305]. Brugmann's description reveals that in his treatment of two series, the unstamped labio-velar series was in a highly indistinct way in the scholar's mind. "In the group in which *k*, *g*, *gh* appear as explosives, *q*, *g*, *gh* frequently appear as *k* sound with following labialisation (*w*), as Latin *quis* = IE *quis*." Subsequently Brugmann reconstructed three series [4, pp. 157, 163 and 168 for, respectively, palatals, velars and labio-velars]. The problem met with by Brugmann without having the labio-velar series is also to be met with the same type of two-series system with palatals and velars by Kuryłowicz; viz., the reconstructions of labio-velars can only solve the equations like Latin *guus* = Skr. *kaḥ*. As shown above, this equation cannot be explained if we posit a velar followed by a *w*. There are others who, for having a two-

series system, would like to drop the palatal series, considering it to be an innovation in the Satem languages [16, pp. 91-95]. Meillet's exclusion of palatal series is really surprising, because the palatal series is merely a convenient formula to explain the equation between the sibilants in the Satem and the velars in the Centum languages. The name "palatal" may be incidental. It is perhaps borrowed from Greek grammars, where "palatal" has been used to indicate velar sounds. People often confuse the term "palatal" here with the term "palatal" in phonetics. Accordingly, people talk of the Satem sibilants as first palatalisation and consider Satem as an innovator [5, p. 72]. For the Satem sibilants, "assibilation" would be a better term than palatalisation because, since the sounds are already termed as palatals in the proto-language, palatalisation of palatals is unthinkable.

Lehmann has tried to demonstrate that the palatal series has come out of the velars when the velars were followed by *e*. He has cited the following examples [14, p. 101]:

IE *k̂e*- Lat. *cēnseō* 'rate': Skr. *śamsati* 'praises';
IE *k̂a*- no evidence;
IE *k̂o*- rare, OHG *bircha* : Skr. *bhūrja 'birch'* (for go-);
IE *qe*- rare, Gr. *keíyō* 'cut off' : Skr. *kr̥ntati* 'cuts';
IE *qa*- Gr. *karkínos* 'crab' : Skr. *karkaṭa*;
IE *qo*- Gr. *meîraks* 'girl' : Skr. *maryaka* 'young man';
IE *qʷe*- Gr. *téssares*, Goth, *fidwōr* : Skr. *catvāras* 'four';
IE *qʷa*- OCel. *haalr* 'whale': OPr. *kalis* 'sheatfish';
IE *qʷo*- Gr. *poinḗ*: Av. *kaēna* 'punishment'.

From these examples Lehmann concludes that IE velars became palatals before *e*. Lehmann finds no example of *k̂a*. There are several examples where IE *ka* is found, as in *dedorka*, cf. Skr. *dadarśa*, Gr. *dédorka*. IE *k̂o* is also found in several examples, which are much better examples than those cited by Lehmann, e.g. Skr. *yuvaśaḥ*, Lat. *juvencus*, Goth. *juggs*< IE *yuwn̥kos*; similarly, Skr. *śataśaḥ*, *loniaśaḥ*, etc. IE *qe* is rare, according to Lehmann. But several cases of *qe* can be cited from Skr. on the basis of Collitz's law, e.g. Skr. *cakāra*, OP *caχariyā*, etc.

In this way, Lehmann's thesis is not supported by evidence, or rather it is contrary to the evidence of historical languages.

Therefore, any attempt to consider Satem as innovator is based on a misunderstanding of the original approach to the guttural series. Finally, one has to revert to the three-series system of the gutturals. And Satem and Centum still stand parallel to each other, very firmly.

There are some exceptional stray forms in several historical languages. On the basis of these forms some scholars doubt the validity of the guttural series. These exceptional forms are characterised definitely, with due history, which, unfortunately, has been obscured in course of time. A few such forms may be examined here. Skr. shows two forms, *śrānta-* and *klānta-*, both meaning 'tired'. They are compared to Gr. *klamarós* [5, p. 75]. Skr. *śram*, 'toil' is quite a common root, but *klam* is very rare and appears for the first time in epic Sanskrit, and is chiefly attested in past participial form *klānta-*. *Klānta-* may be secondary form of *krānta-* < *kram* 'walk'. *Śrānta* and *klānta* with two different original meanings, 'toiled' and 'walked', finally came to mean 'tired', losing the original shift 'tired of toil' and 'tired of walking'. This is not the place to deal with all the exceptional forms. Some of them are analogical remodellings due to the influence of similar other forms, e.g. *sarga* and *yāga* for **sarja* and *yāja* (with IE *-ĝ*) due to the influence of forms like *yuga* beside *yuja*. Some forms may be due to the dissimilatory effect of the neighbouring sibilants, e.g. Lith. *klausaũ* < IE *kleu-*, cf. Skr. *śru-*; OChSl. *svekry*, cf. Skr. *śvaśrū*. Some may be prehistoric borrowings, e.g. Lith. *pekus*, cf. Skr. *paśu*. Some Hittite forms have peculiar exceptional shapes due to anaptyxis, e.g. Hitt. *kurur* 'hostile', cf. Skr. *krūra-*, Av. *χrūra-*, Gr. *kréas* (with velar *q* and with anaptyxis in Hitt. [19, p. 46]; and not with labio-velar *q^w* as required by Sturtevant's approach [28, p. 56]). Similarly, Hitt. *dekusami* has already been explained above as a case of anaptyxis and showing IE *k* and not *q^w*.

Treatment of guttural series is a very important criterion for distinguishing the two major branches of IE, viz., Satem and Centum. But there are other factors distinguishing these two branches. IE *s* has a special treatment in Satem languages after *r/r̥*. In these cases *s* became *š*. This may be illustrated with examples from various Satem languages, except Albanian. IE *rs* has become *rr* in Albanian. We may conjecture that IE *rs* > Satem *r̥š* > Alb. *rr*. But this cannot be established with full certainty. Therefore, examples from Albanian are not cited below. All the other Satem languages present evidence in favour of the change of IE *rs* to *r̥š* in Satem, as is clear from the following illustrations:

Skr. *varṣīyas*, OChSl. *vrĭchŭ*, Lith. *viršùs* < Satem *verš/vr̥š* < IE *wers/wrs*, cf. Lat. *verruca*.

Skr. *dharṣaṇa-/dhr̥ṣṭa-*, Av. *dərəšnaomi*, OP *adaršnaus* < Iir. *dharš/dhr̥š* < Satem *dharš/dhr̥š* < IE *dhers/dhrs*, cf. Gr. *tharsús*, Goth. *ga-daúrsan*.

Skr. *turṣ-/tr̥ṣ-*, Arm. *t'aršamin* (> later Arm. *t'aṙamim*)< Satem *taršr̥/tr̥š* < IE *ters/trs*, cf. Goth. *ga-pairsan*, Gr. *térsomai*.

Skr. *marṣ-/mr̥ṣ-*, Arm. *moṙanam* « earlier **moršanam*), Lith. *maršas* 'forgetting', *miršaũ* 'I forget' < Satem *merš/mr̥š*, cf. Tokh. A *märsneñc* 'they forget', Goth. *marzja* 'I hurt, vex', OHG *merr(i)u* 'I disturb, mislead'.

Skr. *ŗṣa-bhaḥ* 'bull', Av. *aršan/aršnō* (gen.), OP *aršam*, Arm. *aṙn* (<*earlier* **aršn*) (gen.) 'of man' < Satem *ŗšen/ŗšn-*, cf. Gr. *ársēn* 'masculine'.

Skr. *śīrṣan-*, Lith. *širšeñs*, OChSl. *srĭšenĭ* (<*srĭchenĭ*) < Satem *sŗšen-*, cf. Gr. *kórsē*, Lat. *crābrō*.

Skr. *carṣaṇi-* 'man', *kŗṣaka-* 'ploughman', *karṣati* 'ploughs', Av. *karšvarə* 'one region of the earth', Arm. *k'aršem* 'I drag' < Satem *kerš/korš/kŗš*, cf. Lat. *curro* 'I run'.

This Satem *š* after *r* became IIr. *š* > Skr. *ṣ*, Av. *š*, OP *š,* Lith. *š*, OChSl. *ch(š)*, Arm. *š* (later lost). In all the languages, except Lithuanian, this development of sibilant was quite distinct from Satem *š* (< IE *ḱ*). This Skr. *ṣ* (along with its voiced counterpart **ẓ*) was responsible for the origin of the cerebral sounds in Sanskrit. Skr. *ṣ* cerebralised *t, th* > *ṭ, ṭn*, and **ẓ* cerebralised *d, dh*>*ḍ, ḍh* [for details, see 19].

Thus, the Satem and Centum branches were phonologically distinguished from each other. These two are the major subdivisions of the Indo-European family. We can safely assume that the Indo-European speech community first of all was subdivided into two groups at the time of leaving their original home, wherever it was situated. Subsequently, the Satem group was further subdivided under four heads: Indo-Iranian, Balto-Slavic, Armenian and Albanian; and the Centum group was subdivided under five heads: Anatolian, Greek, Italo-Celtic, Tokharian, Germanic.

I have avoided Illyrian, Thracian and Phrygian in the classification deliberately because of the poverty of evidence in these languages. But as far as Albanian is concerned, there is no doubt that it is a Satem language, Albanian shows the developments of the palatal series comparable to Old Persian:

Alb. *them* 'I say' < IE *ḱensmi*, cf. OP *θāti* 'he says';

Skr. *śaṃsati*, Av. *sasmi,* OChSl. *sętŭ*, Lat. *cēnseō*, Tokh. A *kants*;

Alb. *dhamb* 'tooth' < IE *ĝombhos*, cf. Skr. *jambhaḥ* 'tooth';

OCS *ząbŭ* 'tooth', Gr. *gómphos* 'peg, nail', OE *comb* 'comb';

Alb. *vjedh* 'steal' < IE *weĝh*, cf. Skr. *vah-* 'carry', Av. *vaz-*;

Lat. *veho*, Gr. *ekhō*.

[The examples are quoted from: S. S. Misra. *Albanian. A Historical and Comparative Grammar* (unpublished)].

Before *r* and *l* Albanian shows a velar out of IE palatal series. These are exceptional treatments of sounds in conjuncts, comparable to similar exceptional treatment of IE *κ* being retained as velar *k* in Sanskrit before *s*. Exceptional treatment in different circumstances is found in each language. The general treatment of *ḱ,* etc. in Albanian clearly stamps it as Satem.

Therefore, there is no doubt about the Satem – Centum classification of Indo-European. Before the discovery of Tokharian and Hittite this was a more

convenient classification even geographically. Satem could be easily stamped as Eastern IE and Centum as Western IE. After the discovery of Tokharian and Hittite, the East-West division is debated. The geographical classifications sometimes, incidentally, are the same as the linguistic classification, but they cannot be universally true because the route of migration is quite complicated. It has no linguistic basis. Rather, it has a physical or economic basis. There may be other factors also for taking away two closely related languages quite apart. A typical example is Brahui, a Dravidian language living thousands of miles away from its sister Dravidian languages. Similarly, the speakers of IE languages also might have travelled in different directions. Sometimes one IE speech group might have quite naturally come in close contact with another group of the same family, but with distant linguistic affinity. The two groups might have borrowed from each other and thus the picture of migration must have become comparatively complicated in course of time.

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РЕЗЮМЕ

Рассмотрение проблемы миграции различных групп населения, входивших в состав протоиндоевропейского языкового сообщества, осуществляется автором на базе индоевропейской сравнительной грамматики. Изучение миграционных процессов в древности вполне естественно вести на основе адекватной классификации индоевропейских языков. Автор дает критическую оценку системы Шлейхера и отвергает ее ввиду того, что она построена на морфологической основе. По этой же причине автор отвергает и систему Хёнигсвальда. При выделении языковых подгрупп фонологические данные имеют явные преимущества над данными морфологии. Анализ таких аспектов индоевропейской морфологии, как изменение форм существительных и местоимений, а также морфологические особенности числительных и глаголов, показывает, что морфологические изменения в языке – ненадежное средство для выделения подгрупп, хотя их и можно использовать для различения языковых семей. Именно этим недостатком страдает классификация Георгиева, которая практически является лишь перестроенной по новой модели классификацией Шлейхера. В классификации Бенвениста слишком много групп. Он не учитывает того важного обстоятельства, что язык подразделяется сначала на два-три языка, причем каждый из этих языков может быть представлен несколькими взаимопонятными диалектами.

Критическое рассмотрение индо-хеттской теории, которая выдвигает ряд новых проблем в плане классификации языков, показывает, что и эта теория не внесла значительного вклада в уяснение принципов выделения языковых подгрупп.

В заключение автор восстанавливает в правах классификацию сатем – кентум. С этой целью восстанавливаются три серии гуттуральных звуков. В дополнение к характерному для индоевропейских языков переходу нёбных в шипящие и лабио-велярных в велярные выделяется еще одна характерная особенность системы сатем – переход индоевропейского rs в rš в языках группы сатем.