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## ON THE ORIGIN OF PERSON MARKING IN INDO-EUROPEAN VERBAL SYSTEM

### I

Languages which have a system for person marking in the verb generally use for this purpose pronominal forms, more or less agglutinated and more or less identifiable by the speakers themselves<sup>1</sup>. There are no known exceptions to this behaviour. There are in fact linguists who, after analysing the data from the most widely differing languages, go so far as to consider that the pronominal origin of person marking in the verb is a universal feature of human language<sup>2</sup>.

However, the Indo-European system of person marking still remains almost completely opaque and its connections with pronouns seem at first sight scarce and debatable.

The purpose of this paper is to uncover some connections which are not immediately apparent. Before proceeding I should point out that I consider the standard reconstruction of the system for person marking in the Indo-European verb to be basically sound. But, in my opinion, these marks of person must have been as opaque to Indo-European speakers as they are to us, in so far as their connection with personal pronouns is concerned.

### II

Bopp was right to turn to pronouns for the origin of verb endings. But whereas his theory was generically correct, his specific explanations for the origin of each ending were not so successful<sup>3</sup>.

According to the founder of Indo-European Linguistics, the first person, singular, plural and dual, would come from the stem of the first person pronouns *\*me*: "Au singulier comme au pluriel, la première personne est primitivement caractérisée par un *m*. Au duel, dans la forme transitive de l'actif, ce *m* a été amollien en *v*". "Je regarde *mi* comme un affaiblissement de la syllabe *ma*, qui est le thème, en sanscrit et en zend, des cas obliques du pronom de la première personne... Dans les formes secondaires, par un nouvel affaiblissement, *mi* est devenu *m*".

<sup>1</sup> Moravcsik E. 1974.

<sup>2</sup> Givón T. 1976.

<sup>3</sup> Bopp F. 1885. Vol. 2. P. 10, 20, 31, 48, 49.

The various forms of 2nd person marking for the three numbers would come again, according to Bopp—from the 2nd person pronoun, which he imagined to be *tva*: “Le thème pronominal sanscrit *tva*, en se combinant avec les thèmes verbaux, s’est scindé en différentes formes. Ou bien le *t* est resté invariable, ou il est devenu, par la substitution de l’aspirée à la tenue, un *th* ou un *dh*, ou il s’est altéré en *s*... Tantot le *v* s’est maintenu, tantot il a été supprimé. Quant à la voyelle *a*, ou enfin elle a disparu tout à fait... Le *v* du thème *tva* ne s’y est complètement conservé nulle part; mais je crois en reconnaître une trace dans l’aspiration du *th*”.

Finally, the 3rd person ending would appear to have its origin in the demonstrative pronoun *\*to*: “C’est du thème pronominal *ta* que vient la désinence de la troisième personne. Dans les formes primaires, l’*a* s’est affaibli en *i*, et dans les formes secondaires, il est tombé tout à fait, comme à la première et à la deuxième personne”.

There were numerous 19th century linguists who accepted Bopp’s approach at least partially. And as late as the beginning of the 20th century very similar ideas were put forward by Fay, whose main innovation was to propose the demonstrative *\*so* as origin of the 2nd person ending<sup>4</sup>.

In general, however, these ideas were abandoned owing to the phonetic arbitrariness that surrounded Bopp’s doctrine and the difficulty of providing precise equivalences between the endings and personal pronouns. These factors went hand in hand with the neogrammarians’ distaste for research into the origin of grammatical categories, which was generically disqualified under the term “glotogony”.

The one point which did appear to have a solid foundation (the identification of the 1st person pronoun with the ending *-m*) was also eventually discarded or at least regarded with scepticism on the basis of the argument that such an identification was not possible, since *-m* was also to be found in 1st person plural: “Allerdings kann man das *-m* der 1sg, mit den Pronominalstamme *me*... identifizieren, aber *m* tritt auch im Plural auf (...) und da versagt diesen Erklärung”<sup>5</sup>.

### III

Before attempting to identify verbal endings with possible pronominal elements, I shall go briefly into the (pre)history of the reconstructed inflexional system.

As is well known, *-m-*, *-s-*, *-t-*, *-me-*, *-te-*, *-nt-* form the “regular” system of person marking. But these are not by any means the only possibilities. Indeed, almost all

<sup>4</sup> Fay E. W. 1913.

<sup>5</sup> Hirt H. 1912. Paragraph 408.2. cf. 1928. P. 146, 150.

the persons have alternative marking procedures. Some of the most significant, for my purpose here, are the following:

**1st Singular.** In the perfect stem we find an ending *\*-H*, which is usually identified with the Hittite *-hi* conjugation, although there are some who interpret these forms as having a *θ* ending and consider *-H* to be part of the stem<sup>6</sup>. This same *-H* ending is to be found in the middle voice of the regular system, in Hittite *-ha* as in the rest of Indo-European.

**2nd Singular.** We find *-t-* in the perfect stem<sup>7</sup>: Gr. *-tha*, O.I. *-tha*, Lat. *-(s)ti*. Hit. (*-hi* conjugation) *-ti*, *-ta* (= */t/*). In the middle voice *-t-* is also to be found in the secondary ending of O.I., *-thās* and in Hittite *-ta-*. Finally, in Hittite *-t-* is also found for 2nd in the *-mi* conjugation (regular system) where it competes with the “regular” *-s-* form both in present (*-t-*, *-zi*) and in past (*-ta* = */t/*).

With the exception of Hittite, in which *-t-* is widespread in both 2nd and 3rd person singular<sup>8</sup> in the rest of the Indo-European languages the presence of *\*-t-* in certain categories of 2nd person does constitute an irregularity contrasting with the “regular” *\*-s-* form. And in fact, a glance at any branch of the Indo-European family shows us that *\*-s-* tends to replace *\*-t-* in 2nd person. Thus, in Greek the “regular” perfect already has *-as*, while *-tha* has reached what Bartoli called the “fase sparita”<sup>9</sup>. In Vulgar Spanish *amaste* (cf. Latin *amavisti*) becomes *amastes* which carries the regular 2nd person mark *-s*.

In cases where *\*-t-* remains as mark of the 2nd person, it does so counter to the regularizing tendencies. For this reason, the law of grammatical irregularities<sup>10</sup> suggests that *\*-t-* (an archaism) is older than *\*-s-* (an innovation) as a 2nd person mark.

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<sup>6</sup> Among those in favour of the desintential interpretation of *-H* are Kern-Schwartz. 1946; Kurylowicz. 1932; 1956. P. 41–44; 1964. P. 56–89. Lehmann W. P. 1974. P. 141; Stang. 1932. P. 29–30; Schmidt K. H. 1963. P. 14–20, etc. Adrados F. R. for his part thinks that *-H* has a root origin and that subsequently it became a thematic element.

<sup>7</sup> The 2nd person singular ending was traditionally considered to have been *-th-* and therefore not identifiable with the root of the 2nd person personal pronoun nor with the 3rd person ending (*-t-*). However, today it is widely accepted that Indo-European did not have a series of aspirated voiceless consonants, but rather that these are the dialectal result of former simple voiceless consonants in certain contexts. On this subject cf. Villar F., 1971 (with bibliography). As it appears that the phonologization of *th* occurred dialectally, we must take it that in the common language the 2nd person ending was *-t-*. I shall therefore use this symbol for it throughout this paper.

<sup>8</sup> Sturtevant E. H. 1964. P. 139–145.

<sup>9</sup> Bartoli M. 1925.

<sup>10</sup> Meillet A. 1931; 1966. P. 31.

**3rd Singular.** Together with the regular system *-t-* ending, we find  $\emptyset$  in the perfect stem: O.I. *-a*, Gr. *-e*, Hit. (*-hi* conjugation) *-i*. In the middle voice there is  $\emptyset$  in Vedic *-e* (besides the regular form *-te*) and in Hittite *-a* (besides the regular form *-ta*).

Similarly to what happens in 2nd person between *-\*s* and *-\*t-*, in 3rd the conflict appears between *-\*t-* (“regular” form) and  $\emptyset$ . The tendency to introduce *-\*t-* in 3rd may be seen: 1) in the Latin perfect (*amauit*), 2) in the conflict in Hittite between forms with  $\emptyset$  and with *-\*t-* (cf. 3rd singular of middle voice *-a* and *-ta*), and 3) in classical Sanskrit, where the Vedic middle forms of 3rd singular in *-e* have already disappeared (Vedic *jose*, *tose*, *mahe*, *sáye*, *séve*, *stave*), giving way before regular forms in *-te* (*tosate*, *sévate*, etc.). The forms with zero ending are, to the extent to which they have continued to exist, archaisms which have resisted the regularizing tendencies for a longer or shorter period.

**1st Plural.** Beside the regular form *-\*me*, universal with the exception of Hittite, the form *-\*we* is found in Hittite, in complementary distribution with *-\*me* in accordance with a phonetic conditioning<sup>11</sup>.

Sturtevant has already shown<sup>12</sup> that in the 1st person plural forms *-\*me/-we* constitute a doublet with a phonetic origin which was subsequently used by non-Anatolian Indo-European to distinguish plural/dual. The original form would be *\*we*, which is preserved in Hittite in all contexts except after *-u-*, where it changes to *-me-*.

The only objection which has been raised to Sturtevant’s proposal was formulated by Petersen<sup>13</sup>: owing to the “primitive” character of the dual (more than the plural, which would involve a higher degree of abstraction), the distribution *-me- = plural/-we = dual* of the rest of Indo-European must be the original one and Hittite must have confused the two categories.

Sturtevant’s reply<sup>14</sup> to this objection was not very convincing: Indo-European, like Greek—he stated—, may have lacked a dual form in 1st person, even though there was one in the rest of the paradigm. This implied accepting the line of argument in Petersen’s objection. In fact, the “primitive” nature of the dual, and consequently the probability of it dating further back than the plural, has been a widely held conviction of Indo-European scholars. But the behaviour of real languages refutes any such assumption most categorically and reveals it as a prejudice whose origin is easily understandable in times when the knowledge of the general behaviour of the world’s languages was still very deficient.

<sup>11</sup> Sturtevant E. H. 1964. P. 140.

<sup>12</sup> Sturtevant E. H. 1964. P. 140.

<sup>13</sup> Petersen W. 1932. P. 197.

<sup>14</sup> Sturtevant E. H. 1964. P. 140. N. 72.

Greenberg<sup>15</sup> has shown that in real languages there is no dual unless there is simultaneously a plural, and that on the other hand the reverse is common, independently of what may have been the cultural development of the society which speaks each language. This behaviour is summarized by Greenberg in his "universal" 34: "No language has a trial number unless it has a dual. No language has a dual unless it has a plural".

This universal tendency, empirically established, has an implicit diachronic side to it: in general, the dual only develops when there is previously a plural. Consequently, Sturtevant's theory that the Indo-European 1st person dual developed from what was originally a phonetic division in the old plural form from *-\*we-* to *-\*me-* / *-\*we* is free of the only objection which has been raised against it.

**2nd Plural.** For 2nd plural we can find scarcely any alternatives to the regular system *-\*te-*. There is  $\emptyset$  (*dada, cakra*) in the Indian perfect stem. But as this is such a dialectally restricted case it would not be fair to draw general conclusions from it.

**3rd Plural.** Besides the "regular" form *-\*nt-* there is abundant evidence of *-\*r-*, particularly in Latin (perfect). Old Indian (perfect, aorist in *-\*s-*, optative) and Hittite (active past).

As has been widely accepted, it seems obvious that *-\*r-* cannot be considered originally a true person mark. Indeed, the fact is that it is used as a mark of the passive voice or for present within the passive, or as an impersonal form. Its subsequent assignation to 3rd person plural from its impersonal use is easily understandable<sup>16</sup>. The 3rd pl. forms without *-nt-*, with only *-r*, therefore reflect a former 3rd pl. form without a person mark. And, on the other hand, the regular ending *-nt-* tends to replace or recharacterize it (cf. Latin *amauerunt*), so that we may conclude that this is a more recent form, although still very old as it is present in all Indo-European.

#### IV

The preceding arguments will allow us to attempt the reconstruction of a system of person marking prior to the "regular" system, which, in turn, would proceed from it:

**1st singular:** *-m-* and *-H-*

**2nd singular:** *-t-*

**3rd singular:**  $\emptyset$

**1st plural:** *-we-*

**2nd plural:** *-te-*

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<sup>15</sup> Greenberg J. 1963.

<sup>16</sup> The idea of the primitive impersonal nature of *-r* has been widely accepted; cf., for example Meillet A. 1966. P. 235.

### 3rd plural: -*ø*-

This older system is already less opaque with regard to the identification of its different components with personal pronouns:

1) For the 1st person the traditional identification of *-\*m-* with the personal pronoun stem *\*me* appears obvious. However, *-\*m-* poses the problem that it is the stem of the personal pronoun for all the cases except the nominative, which is *\*eg-*. Clearly, the form which could be expected to mark the subject of a verb is the nominative. If we apply once again the criterion of anomalies, *-\*H-* would be an older form than *-\*m-*, as *-\*m-* is the regular form. And there are instances of substitution of *-\*H* for *-\*m-*, as in Greek middle voice.

Within the limits of Indo-European linguistics there are no grounds for maintaining that *\*eg* has any genetic relationship whatsoever with the *-\*H-* of the 1st person singular ending. Yet surprisingly enough nostratists reconstruct *\*Ha*, *\*H* as a 1st singular personal pronoun which in Indo-European (and not in other branches of Nostratic) would have been lengthened with a guttural (*\*Hag*)<sup>17</sup>. I am well aware that this is highly speculative and therefore do not attribute to it any more value than that of a striking coincidence, which calls for more thought.

2) In 2nd singular, *-\*t-* is identifiable with the root of the 2nd person pronoun *\*tu*, *\*te*. I shall return to this point later to discuss some of its phonetic implications.

3) In 1st plural *-\*we-* is identifiable with the 1st plural personal pronoun *\*wei*, which presents, when compared to the 1st dual *\*we*, a difference which is no doubt secondary: the dual thus reveals itself as a branching off from the plural in both instances, pronoun and verb.

Indeed, the characterization of the plural by means of the addition of an *-\*i* is a trait common among pronouns: *\*toi*, *\*k<sup>w</sup>oi*, etc.<sup>18</sup> The old 1st plural form *\*we* must have received this *-\*i* mark at a later date than that of its agglutination as 1st plural ending, thus resulting in a doublet *\*we* / *\*wei* later morphologized as dual / plural.

At later stages there were new episodes in the characterization of personal pronouns, now involving the general plural morpheme *-\*s*: Hit. *wes*, Goth. *weis* (with *-\*s*), as opposed to O.I. *vay-am*, O.S. *wi* (without *-\*s*), and parallel to these, O.I. *yu-y-am* (without *-\*s*) as opposed to Av. *yus*, Goth. *jus*, Lith. *jus* (with *-\*s*).

These characterizations with *-\*s* also affected verbal forms, giving rise to doublets *-\*me* / *mes*, *-\*we* / *wes*, *-\*te* / *-tes*, which were eventually used to fulfil diverse

<sup>17</sup> Bomhard A. R. 1984. P. 252. Besides being speculative, this approach is problematic for those laryngalists who accept the influence of laryngals on the timbre of adjacent vowels. That is to say, for all except those who agree on the existence of only one laryngal. In fact, the 1st person ending has a vowel with timbre /a/, while in the 1st person pronoun we find /e/.

<sup>18</sup> Villar F. 1975.

morphological functions: *-va* / *-vas* = past / present in Old Indian; *-te* / *-tis* = imperative / indicative in Latin. Or else, one of the allomorphic forms was eliminated in favour of the other: Dor. Gr. *-mes*, Lat. *-mus*, etc.<sup>19</sup>

4) In 2nd plural, as I have already mentioned, only *-\*te-* appears. It is impossible to know whether previously there may have existed an agglutinated form of the 2nd plural personal pronoun, *\*yu*, since no historical trace remains. But the forms with *-\*te-* may be explained by recourse to the following analogical mechanism.

In order to understand this whole process and, especially, the analogy relating to the 2nd plural, we should bear in mind that the development of a mark of agreement in the verb has as its starting point the juxtaposition of the unmarked verb form (or a form with a different, earlier mark) and the corresponding personal pronoun. Initially, both are independent units, which can be perfectly well identified and differentiated one from the other by the speakers of the language in question<sup>20</sup>.

At this point there begins a process of fusion of both elements until they become an unanalyzable unit in which the phonetic alterations end up making it impossible for the speakers to identify these elements with their personal pronouns which, in their free form, may have undergone a different development and may perhaps have been lengthened, suffixed, characterized in different ways or even replaced.

When the speakers are no longer conscious of the similarity between the personal pronouns and the person marks in the verb, these marks will be in a position to undergo all kinds of analogical levelling in a manner unrelated to the contemporary free forms of the personal pronouns. In this way a system such as:

1st sing. = *-\*m-* / 1st pl. *-\*me-*, *-\*we-*

2nd sing. = *-\*t-* / 2nd pl. *-?*

will tend to create a form of 2nd pl. *-\*te-* by analogy.

5) In connection with the 3rd forms and the possibility that both in singular and in plural they were originally unmarked, we should note that this agrees with what we know about the processes for the creation of person marking in the verb<sup>21</sup>.

Benveniste showed that 3rd is the negative term in a system of persons and therefore that which is most likely to appear unmarked.

Diachronically there are also factors which favour the unmarked nature of the third person. On the one hand, the fact that it is the form used with the impersonal: that is to say, without explicit mention of the subject, which would result in an unmarked form after the agglutinative process. On the other hand, the non imperso-

<sup>19</sup> Villar F. 1974.

<sup>20</sup> Givón T. 1976.

<sup>21</sup> Benveniste E. 1945–1946.

nal uses of the 3rd do not always result in marked forms after the agglutinative process either. Indeed, the subject of a verb in 3rd person is often a noun, which is different in each predication and therefore does not tend to agglutinate with the verb.

The predications which usually give rise to the creation of marked 3rd forms are those whose subject is replaced by an anaphoric pronoun, both in ordinary constructions and in topical constructions<sup>22</sup>. This is the reason why, when a marked 3rd is created through an agglutinative process, the starting point is usually deictic or anaphoric grouping.

## V

It is not easy to perceive in any detail the process which led from the system *m|t|∅|me|te|∅* to the regular system *m|s|t|me|te|nt*. The most important fact consisted in the introduction of positive marks for 3rd singular and plural. The reason for this introduction can be guessed: once the speakers were no longer aware of the identity of personal pronouns and person marks in the verb, they were left with a paradigm in which the verb agreed with the subject in number and person. But in 3rd person, while marks were lacking, this concord was imperfect, since it did not allow singular / plural to be distinguished. Of course, a language can do without this distinction, as occurs in modern Lithuanian. But it may also tend to complete its inflectional paradigm.

The adoption of a mark for 3rd plural probably dates back to an earlier date. This at least is what theory would expect. If the primary necessity was to distinguish singular/plural, it is foreseeable that plural would acquire a formal mark, as it is the marked category. And this is what the comparative data in fact confirms: *-r* and/or *-nt-* are clearly established as 3rd plural in all the Indo-European languages, including the Anatolian branch. The distribution *s/t* in terms of 2nd/3rd, on the other hand, is far from being firmly established in the Indo-European family as a whole, and even less in the Anatolian branch, according to the data brought forward above.

I have already made some mention of the possible origin of *-r*. With regard to *-nt* I shall merely note that it is not an agglutinated pronominal element, but a suffix used secondarily in this function, once the essential parts of the system had already developed and most probably at a time when the speakers had lost their awareness of the connection between person marks and personal pronouns.

The introduction into the system of the regular 3rd singular ending *-t-* should be viewed as related to the irruption of *-s-* into 2nd. No doubt these two processes

<sup>22</sup> Givón T. 1976.



are interconnected. But it is difficult to establish the precise terms of this interconnection.

There is one fact which seems clear: at a certain point in time *-t-* fluctuated between 2nd and 3rd; and 2nd, in turn, fluctuated between being marked by *-t-* or by *-s-*, while 3rd fluctuated between *-ø* and *-t-*.

In Hittite this conflict presents specific features that perhaps preserve original situations in the process of the introduction of *-t-* in 3rd. If we have established that *-ø-* is older than *-t-* in 3rd, and that in 2nd *-t-* is older than *-s-*, then it seems likely that the factor which caused the renovation of the marks in 2nd and 3rd singular was the introduction of *-t-* in 3rd. What the origin of this *-t-* may have been is not clear. It may have indeed been the anaphoric *\*to*, as Fay claimed. In its agglutinated form (*-t-*) coincides with the agglutinated form of 2nd (also *-t-*) and that may have been the factor which set off the renovation of the 2nd ending in *-s-*, whose exact origin still remains opaque.

What is certain is that at a certain moment a new morpheme of 2nd singular (*-s-*) began to compete with the old one (*-t-*) and tended to replace it. Wherever this happens, *-t-* appears in 3rd. That is to say, those paradigms which preserve *-t-* in 2nd also preserve *-ø* in 3rd (perfect, *-hi* conjugation and Hittite middle voice). In contrast, in those paradigms in which *-s-* enters 2nd, *-t-* appears in 3rd (regular system). Hittite represents a moment in which the conflict between *-s-* and *-t-* has not been solved.

There remains, as I have already mentioned, a question to which I can suggest no answer: the origin of the renovated *-s-*. If we were to take only its form into account, we might think of the anaphoric *\*so* or equally well of the reflexive stem *\*s(w)e*. But neither an anaphoric nor a reflexive are categories suitable for the generation of a 2nd person mark.

This fact rather seems to prompt one to look for its origin in a non-agglutinative, perhaps an analogical kind of process.

The likelihood that *-\*s-* was introduced into 2nd at a late date would seem to be confirmed not only by its absence in those paradigms most suspect of being archaisms (on account of their irregularity), but also by the fact that it had not been fully integrated into the regular system in historical times for the expression of tense and voice. Thus, in O.I. the middle voice has *-se/thās*: and in Greek *-s* does not show the regular present/past distinction, but an undifferentiated form for both tenses: *títhes* / *étithes*.

Furthermore, the chronological distance between the agglutinative process and ourselves is such that we lack sufficient knowledge of the phonetic and morphological details which would be necessary for us to be able to put forward a reasonably well founded hypothesis in this respect.

## VI

To conclude, I shall make a few complementary remarks concerning the more easily identifiable agglutinative elements.

It is obvious that in singular the old pronoun forms have undergone a greater phonetic reduction and deterioration than in plural. Thus, 1st *-m-* has preserved only the consonant, while it has lost the vowel. In plural, on the contrary, *-we-* has maintained its original form, with the vowel intact. It cannot be mere chance that the forms of active singular have root accentuation while those of plural have the accent on the ending: *-me-/-we* should have become *-m-/-wé-*.

If this is correct, we could have in root accentuation the explanation for the 2nd *-t-*, without the *-u* characteristic of the pronoun *\*tu*. In all likelihood, *-tu* must have been reduced at this very early date to *-t*<sup>23</sup>.

Finally, we must take into account the fact that in the most recent Indo-European the form of the 1st sing. pronoun for the nominative is, as I have already mentioned, *\*eg*. Leaving aside the 1st pronoun in Nostratic to which I referred above, what is certain is that there is nothing to ensure us that the distribution of roots *\*eg* = nominative / *\*me* = other functions, characteristic of recent Indo-European, was the same many centuries before, when the agglutinative process began. The only thing we can state is that *-\*m-* is the mark of 1st sing. and that this same consonant is an essential part of the root of the 1st personal pronoun. And, if we bear in mind the general tendency for person marks in the verb to proceed from the agglutination of personal pronouns, it is difficult to imagine that this can have been the result of chance<sup>24</sup>.

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<sup>23</sup> For the relationship between *\*tu* and *\*t(w)e*, see Villar F. 1983. P. 184—185 and 1988, P. 3, 4.

<sup>24</sup> Translated into English by Joanna Weatherby.

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