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## ARTICLE III.

A REVIEW OF SOME POINTS IN BOPP'S COMPARATIVE GRAMMAR.<sup>1</sup>

BY LEONARD TAFEL, PH. D., PHILADELPHIA, AND PROFESSOR RUDOLPH  
L. TAFEL, ST. LOUIS.<sup>2</sup>

ON reviewing the labors of the modern scholars in the province of language, we find that in Germany especially they have cultivated this field in almost all possible directions, and although they frequently seem to arrive at contradictory results, these results, nevertheless, are necessarily supplementary to each other, and advance the cause of philology as a whole. While the adherents of the old school confine their studies to the classical languages, and devote themselves more to the cultivation of syntax, the modern school, or that of comparative philology, after starting many and sometimes absurd hypotheses, have at length arrived at a profound knowledge of the laws of analogy, which none of its followers could violate with impunity in his investigations. Indeed, the growth of the various grammatical formations in the languages belonging to the Indo-European stock has been so clearly traced out by this school, and is so well supported by facts, that it may be safely asserted that future investigations must rest upon them as their foundation. These investigations of comparative philology, moreover, throw light on many hitherto dark portions of history, proving from the common stock of words and the cognate development of the forms of their languages

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<sup>1</sup> *Comparative Grammar of the Sanscrit, Zend, Armenian, Greek, Latin, Lithuanian, Old Slavonian, Gothic, and German Languages.* By Franz Bopp. Second Edition. Reviewed throughout. Berlin: 1857-60.

<sup>2</sup> Our thanks are due to our learned friend, Professor Chas. Short, of Philadelphia, for his valuable assistance in the preparation of this Article.

that many detached nations of the present day belong to the same race, and were originally united. Indeed, comparative philology even points out the length of the period when they were thus united, and the time when they separated, and it furnishes information as to the state of the mental culture of these aboriginal people and their mode of living, and thus supplies the place of direct historical documents.

To Mr. Bopp is due the praise of having acted as a pioneer in this new field of human science, but around him have gathered other congenial minds, and under his leadership they have fought bravely against all kinds of opposition in order to plant securely the standard of their new science. Mr. Bopp has been enabled to lay before the learned public a new edition of his Comparative Grammar, which, according to his own statement, has been entirely remodelled. A few weak positions have been abandoned, because they were untenable, and others taken in their place which are in advance of the former. This new edition may be regarded as a very complete repertory of all investigations made by Mr. Bopp and others since the publication of his first edition. The learned author has subjected all theories put forth by others to a close scrutiny, and has either adopted or refuted them. Most of the positions taken by this great scholar are now established beyond any doubt, but he himself will acknowledge that there are some points still open to discussion, and a few of these we propose to reconsider.

Mr. Bopp's laws of sounds, as they are developed in the second edition, will probably not be disputed by any one. On page 9 he opposes those Sanscrit Grammarians, who, according to a later pronunciation in India, admit the transition of an original *a* as in *sofa*, into *e* as in *bed*, and into *o* as in *not*, as has been done in the earliest stages of the Greek language, and also in the Zend. But the fact that the short vowels *ē* and *ō* did not exist in the Old Sanscrit, any more than in the oldest Germanic dialect of which we have knowledge, is proved by Mr. Bopp by the consideration "that, suppose even these sounds to have existed while

the Sanscrit was a living language, they could only have been developed from a short *a* after Sanscrit writing had become fixed; because in its alphabet, where the minutest shades of sound are noticed, the distinction between *ā*, *ē*, and *ō*, would certainly not have been neglected" (I. 9). The fact that the sound of *e* was developed from *a* at a later period, is also proved by the Semitic languages, and especially by the Arabic, in which, at the present day, the sound of *a* has been retained by the Bedouins, *the Sons of the Desert*, with whom the vowels were less subject to change; while in the settled communities it has passed over into other sounds. The same thing we find in the Ethiopic, where the original Semitic *a* has frequently passed into the weaker sound of *ē*, and the vowel *i* has always been changed into *ē*.

As regards the weight of the three fundamental vowels, *a*, *u*, *i*, Mr. Bopp, to the best of our knowledge, was the first to point out the difference in gravity between these vowels, a subject which has also been discussed by us in our criticism on Mr. Corsen's work on Latin Pronunciation.<sup>1</sup> Mr. Bopp starts with those Sanscrit verbs in which a long *a* is changed into *i* in places where other verbs undergo other changes, and where, for instance, *yoonāmi*, *jungo*, *yooneemas*, *jungimus*, and also *ēmi*, instead of the older *aimi*, *είμι*, *I go*, Plural, *ἴμεν*, may be compared. In the Gothic tongue, which in Mr. Bopp's grammar is the representative of the Germanic languages, this weakening of *a* into *i*, which is done to lighten the vowel, is most clearly seen in the verbs of Grimm's tenth, eleventh, and twelfth conjugations, where in the singular of the preterite, on account of its monosyllabic nature, a radical *a* has been preserved, while in the present tense, and all other forms dependent upon it, on account of the greater number of syllables, it has been weakened into *i*. Thus, *at*, *I ate*, bears the same relation to *īta*, *I eat*, as the Latin *cano* to *cecini*,

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<sup>1</sup> *Latin Pronunciation and the Latin Alphabet*, by DR. L. TAFEL and PROF. R. L. TAFEL. Mason & Brothers: New York. 1860.

*capio* to *accipio*. The Sanscrit, he continues, proves in all those verbs where a comparison can be instituted, that in the above-named Gothic conjugations, in the singular of the preterite tense, the genuine radical vowel has been preserved; and among these verbs he mentions, *at, I ate* (also in the third person), *sat, I sat*; *vas, I remained, I was*; *vack, I pursued*; *ga-vag, I moved*; *frah, I asked*; *gvam, I came*; *bar, I bare, bore*; *ga-tar, I tare, tore, I destroyed*; *band, I bound*; saying, in conclusion, that "henceforth, in historical grammar, the letter *a* of the above-named preterites, and of all other similar forms, can no longer be regarded as a permutation of the vowel *i* of the present tense, for the sake of expressing the past, however, it may appear so far from a survey of the Germanic languages only, inasmuch as the reduplication, the proper means for expressing this relation of time, has either entirely vanished in these preterites, or else can no longer be distinguished, on account of contraction, as in *étum, we ate, sétum, we sat.*"

We are pleased to see that Mr. Bopp, in taking this ground, has advanced considerably beyond the positions he took in the first edition, § 1—7, where he treats of the same subject. He now admits that the root of the preterite is more primitive, and that the present (as well as the imperative mood, as we shall presently see) has been shortened from it, and we are convinced that Mr. Bopp will finally admit that not only the primitive form, but also the primitive signification, of the verb was that of the preterite or aorist.

It may, indeed, appear preposterous to enter into any discussions about the forms of language, when man first expressed his thoughts by words. But both the arguments of reason, and the vestiges of the earlier stages of the development of various languages, enable us to draw conclusions, chiefly negative, but partly positive, as to some sounds which could not have been used in those aboriginal times, and also as to some grammatical forms which could not have been primitive; while, on the other hand, aided

by the history of language, we are enabled to specify those forms which are most ancient, or at least are comparatively most ancient.

As regards the origin of language, unless we suppose that language sprang forth from the head of the primitive man, ready furnished, as Minerva from the head of Jupiter, we must assume that language, like all other attainments of man, was made gradually; and if we admit that the first man, in speaking, as well as in thinking, was instructed by Deity himself,<sup>1</sup> we must further grant that the Divine Being in this, as in all other cases, has followed his own pre-established order, to which he subjected himself in the process of his incarnation, the order, namely, of educational progress. If this be so, then the first man, when intending to express by words his feelings, intentions, and thoughts, was assisted or instructed by the Divine Being; but this assistance or instruction was conformed to man's first mental wants which were obviously very few and simple, and such, we hence infer, were the primitive forms of language.<sup>2</sup> The original forms were successively developed and modified, until, at last, they attained to that fulness of growth and perfection which appeared necessary to the various tribes, races, or nations. We shall confine our remarks to the Arian or Indo-European family of languages, with occasional references to the Semitic tongues, which offer some striking analogies in what appear to us their primitive formations. After these languages had, as it were, reached their highest point of bodily growth, their mental growth began to prevail; and the more their intellectual strength increased, the less it was necessary to retain all those external minutiae of grammatical forms which were developed in the earlier stages of the language, since those using it understood others, and were likely to be understood by

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<sup>1</sup> It is proved by incontrovertible evidence that new-born babes, when left to themselves, or exposed among beasts, do not learn to think or speak; and when left among beasts utter only sounds in imitation of those of beasts.

<sup>2</sup> The demonstrative pronoun *אֵלֶּה*, for instance, in the older Hebrew, meant both *he* and *she*, and *אֵלֶּיךָ*, a youth of both sexes, a boy or a girl.

others, even when, in expressing their thoughts, they dispensed with these external grammatical inflections. There is, however, no necessary reason why all members of the same family of languages should have branched out to the same extent, and have produced the same amount of grammatical forms. Just as in nature all trees of the same genus or species have not the same growth, nor do all the members of the same family of men attain the same stature or the same bodily or mental perfection. Thus, of all the Arian tongues, the Greek and Latin only have generated a pluperfect (as the Syriac also among the Semitic idioms), the Latin only a future perfect in the active, and the Greek in the passive voice; so, likewise, there was a diversity in the number of cases, in the use of the dual and plural, etc. If this be so, we are not authorized to maintain, as is frequently done by Mr. Bopp and his school, that all these languages, in the ante-historical times, were provided with the same number of forms, but subsequently dropped them.

Nevertheless, there are in the words and the forms of words many indications that the Arian, as well as the Semitic nations, originally constituted one people, and, in the ante-historical ages, spent a part of their youth together; after which they separated, and each developed itself in its own way, until at last they attained the maximum of their growth. Of this primitive language some idioms have preserved one, and others another, heirloom, as it were; but they all agree in this, that they retain more or less of the vestiges of that simple tense (the preterite or aorist), the priority of which it is a dictate of reason to acknowledge. For the first thing in order which a man would naturally express by speech was a phenomenon, or an act or fact completed. That form by which this realization was expressed, and which seems to have been originally monosyllabic, as in German, we call the *Aorist*, or, as is done in the Semitic tongues (the Chaldee, Syriac, Samaritan, Hebrew, Ethiopic, Arabic), the *Perfect tense*, in contradistinction from the Imperfect tense, that is, the *tense and mood of non-reality or*

*uncompletedness.* This form, naturally demanded by reason as the original one, we find in the German, and, as we have seen above, in the Sanscrit; it is likewise found (even without the suffix of the pronoun, as in the German in the strong form) in the Semitic idioms, this being the most simple; and we meet with it also, in the Slavonic, Lithuanian, and Greek, where the pronoun, in its oldest form, is appended to the root.

As regards Mr. Bopp's assertion that the proper means of expressing the past tense, the reduplication, had disappeared from the language, or had become disguised, we cannot agree with him. The reduplicated form could not have been the original one; because the simple form must first have existed before it could be reduplicated, and the first simple form, as we have seen above, expressed something which had taken place, and thus, at least by implication, had reference to the past. We hold that the reduplication is a subsequent formation, which was introduced, after the aorist form, by its being employed also for the imperative mood, had appeared to be more vague; and, moreover, reduplication does not seem to have ever been generally adopted.

On page 144, Mr. Bopp assumes two contradictory processes in language, to explain the same thing. In a footnote he observes that, according to Dobrowsky (pp. 39-41), the transition of gutturals to sibilants, through the retro-acting influence of a following soft vowel, is very evident in the Slavonic languages. But, in the aorist-ending  $\chi u$  and  $\chi o m u$ , of the first person singular and plural, in  $d a \chi u$  and  $d a \chi o m u$ , he derives the guttural from an original sibilant, and starts the hypothesis, that the aspirate  $\chi$ , in the Slavonic languages, is of a comparatively later origin, and only took its rise after the Lettic languages had separated from the strictly Slavonic tongues. He says, also, that in the Lithuanian language we find  $k$  in the place of an original sibilant, as (p. 143), Lith. *jukka*, *black soup*, Slav. *ju $\chi$ a*, compared with Sanscrit, *y $\acute{u}$ s'a-s* (masc.), *y $\acute{u}$ s'ám* (neut.), Lat. *j $\acute{u}$ s*, *juris*, from *j $\acute{u}$ sis*; and in the Lithuanian imperative mood, ending in *ki*, and *ki-te*, in which, he says, he recognizes the aorist

of the potential mood (Gr. *Optative*); on this account he holds the letter *k* in Lith. *dūki-te* to be identical with the Slavonic  $\chi$  in *daχu*, *I gave*, *daχomu*, *we gave*, and with the Sanscrit *s* in *dā-si-dvām*, *you might give*. He, moreover, mentions incidentally, that formerly the preterite ending in  $\chi u$  (which is proved to have been originally  $\chi am$ ) was supposed to be related to the ending *-ka* of the Greek perfect, and refers to Grimm's Grammar I. p. 1059, and to Dobrowsky's Grammar, I. 2, § 19, and 7, § 90. The latter scholar regards the letter  $\chi$  as a part of the personal ending, and we think his view is right, and shall endeavor to prove it elsewhere. If Mr. Bopp considers the letter *k* in *dūki-te*, to be identical with the Slavonic  $\chi$  in *daχu*, he ought still more to have regarded it as identical with the Greek  $\kappa$  in the aorists  $\epsilon\delta\omega\kappa a$ ,  $\epsilon\delta\eta\kappa a$ ,  $\eta\kappa a$ , which we shall discuss below, than the  $\kappa$  of the Greek perfect tense. We need not decide which of these three letters,  $\kappa \gamma \chi$  is the oldest; but if Mr. Bopp (§ 23) maintains that the letter *h* in *aχam*, is to be pronounced like a soft  $\chi$ ; if, moreover,  $\tilde{u}$  in  $\chi u$  stands for *um* or *om*, and this again stands in the place of *am*, as in the Lithuanian present, we should have to regard *da-χu* or *da[a]χu* (instead of *daχam* in the Slavonic aorist) as one of the oldest formations in the Arian languages; and, so long as Mr. Bopp does not prove to us from an ante-Lettic or ante-Slavonic monument, that is, from a monument dating from the time when these two languages were not yet separated, that their common aorist sounded exclusively *sam* or *as-am*, and not  $\chi am$ , so long we shall consider ourselves authorized to maintain, that the Slavonic form is the more archaic, or the older, and that the Lithuanian *sam* or *sau* was either weakened from  $\chi am$  or  $\chi au$ , or, as is more commonly supposed, was a composition of the verbal root with the substantive verb *asam*. And, as regards the fact that in the Sanscrit language, which possesses the oldest written documents in the world, the verbs are only found with the ending *sam*, it does not hence follow that its forms also are always the oldest; nor are they generally regarded as such by the learned.

We suppose, that many scholars are not altogether satis-

fied that our leaders in philology regard it as a settled matter, that the personal pronoun of the first person singular in the nominative case is of a different root from that of the oblique cases. Mr. Bopp says (§ 326): "All languages here treated agree in this remarkable particular, that the nominative singular of the first person is of a different root from that of the oblique cases." The nominative in question sounds thus in these different languages: Sanscr. *aḥam*, *I*; Zend. *ašem*; Gr. *ἐγώ*; Lat. *ego*; Goth. *ik*; Lith. *as'* (*ash*); Old Slav. *ašu*; Armen. *es*. The original form *akam*, the existence of which we shall prove, which is preserved in the Sanscr. *aḥam* (*aḥam*), and, as we have shown above, in the Old Slavonic suffixes, had the letter *k* or  $\chi$  assibilated even in the Vedo-Sanscrit plural *asamê*, *asmê*, in the place of *aḥmê*, (which latter form still survives in the Slavonic); in the Zend. *ašem*; in the Old Slavonic pronoun *ašu* for *ašum*, *ašom*, *ašam*, from *aḥam*; in the Lithuanian *as'* (*ash*) and the Armenian *es*, where the vowel-sound of the second syllable was moreover dropped; while the strong guttural remained in the Gothic *ik*; Ang. Sax. *ik*, Dutch *ic*, but was weakened into the middle in the Icelandic *eg*; Swed. *jag*, pronounced *yag*, and, also, *yah*, Dan. *jeg*, pronounced *yeg*, also *yeh*, with *eh* as *ey* in *they*; in the Latin and Greek it was also weakened into the middle, but, while they lost the final *m* or *n*, they still preserved the preceding vowel; in the German, however, the strong guttural became aspirated into  $\chi$ , and in some of its dialects  $\chi$  was reduced to *h*.

Mr. Bopp's supposition, that in the Sanscrit the second syllable of the first person does not constitute an essential part of the pronoun, because there are some other pronouns terminating in this same syllable, we think ought not to be admitted. For, *first*, these endings are not found in a single one of these pronouns in any other language, and thus they are either simply accidental, or else they were formed by an imitation of the pronoun of the first person. *Secondly*, the fact that the ending *am* is not merely an idle appendage, but an essential ingredient of this pronoun, is clearly proved by this consideration, that this last syllable

of the pronoun has been preserved in all the primitive formations of the verb, in the oldest languages of the Arian stock. If, now, this syllable forms an integral part of the root, that is, if it was regarded as belonging to the original root, and was used as a suffix in the formation of the first person of the verb, this very root, which became subsequently somewhat changed wherever it was not used as a suffix, appears in its most original form in the Greek  $\epsilon\mu\text{-}\acute{o}\upsilon$ ,  $\epsilon\mu\text{-}\acute{o}\lambda\acute{o}$ ,  $\epsilon\mu\text{-}\acute{\epsilon}$ , in the adjective  $\epsilon\mu\text{-}\acute{o}\varsigma$ , for which we even find, in the dialects, the more original form  $\acute{\alpha}\mu\text{-}\acute{o}\varsigma$ , and even  $\acute{\alpha}\mu\text{-}\acute{\epsilon}$ , instead of  $\epsilon\mu\text{-}\acute{\epsilon}$ . Compare Buttman, *Ausführliche Grammatik*, § 72, pp. 291—293.

By deriving the Vedic nominative plural *asmé* from *asamé* = *asamoi* or *asamai*, we no longer need the hypothetic form *sma*, which was called into requisition by Mr. Bopp as a *Deus ex machina*; but we agree with him in this, that in the Greek plural  $\acute{\alpha}\mu\mu\epsilon\varsigma$ , the letter  $\sigma$ , by assimilation, passed over into  $\mu$ , as in  $\epsilon\mu\mu$  from  $\epsilon\sigma\mu\acute{\iota}$ ; we also believe that in the Armenian form *smes* (for *sames*), there is still a trace left of the original *s*. 'Αμές (Acc.  $\acute{\alpha}\mu\acute{\epsilon}$ ), on the other hand, which Mr. Buttman, in the above paragraph, teaches to have been another form for  $\eta\mu\acute{\epsilon}\iota\varsigma$ , we would trace back immediately to *aḥam*, where, after the initial *a* had been cast off, the letter *s*, a sign of the plural, was added by means of the connective *e*. *H* with the hard breathing in  $\eta\mu\acute{\epsilon}\iota\varsigma$ , which, according to the best of our knowledge, neither Mr. Bopp nor Mr. Buttman has attempted to explain, is best accounted for in this manner, viz. the initial *a* was placed after the breathing letter, and  $\acute{\alpha}\acute{\alpha}$ , after coalescing into  $\acute{\alpha}$ , was weakened into  $\eta$ . When this pronoun was subsequently used as a suffix, the letter *h*, as frequently happens, was lost, but, as we shall see, it was retained in the first aorist passive, where it aspirated the preceding demonstrative  $\tau$ .

As regards the origin of the Sanscrit (and, consequently, of the Greek) augment as described by Mr. Bopp (I. 415 ff. § 557), we confess that we did not expect to find this explanation retained in the second edition; since it appears

to us too artificial, too far-fetched, and too illogical. Mr. Bopp maintains that the augment in the Sanscrit (and thus also in the Greek) arose from the *alpha privativum*. To this we object for the following grounds. *First*, we see no reason whatever why the *alpha privativum* should not have been retained, but changed into ε, of which change of this prefix we do not find a single instance in Greek. *Secondly*, if, according to Mr. Bopp, the object of the *alpha privativum* was to deny that the predicating verb is found in the present tense, Mr. Vorländer in his *Grundlinien einer organischen Wissenschaft der Seele*, is perfectly right in objecting to this assumption of Mr. Bopp by saying that *a simple negation of the present does not yet imply the past*. Mr. Bopp in this, as in his whole doctrine of the verb, starts with the wrong idea that the present tense is the original form, and that the other tenses are derived from it. The simple *a priori* consideration that a tense which expresses an incomplete action, or an action in the process of being performed, and which in the Old Slavonic is absolutely employed to express the future, could not have been the original tense, ought to be sufficient to prove the fallacy of this assumption. *Thirdly*, the usually lengthened form of the present tense indicates *a posteriori*, that this form had a later and more gradual origin, while the form of the so-called second aorist, or of the strong preterites which have been discussed above, which form is the same as the simple one of the imperfect tense, e. g. in ἔλεγον, ἔφην (Buttmann, *Ausführliche Grammatik*, § 109, *Anmerk.* 3), as every one may see from his own reading, bears all the traces of originality, inasmuch as in its formation, as we shall soon show, the pronouns are immediately appended to the simple root. If, now, this tense, expressing the past, was the older form, and if the idea of the past was inherent in it from the first, it is utterly impossible for the augment to express the negation of the present tense, which tense arose much later; but the origin of the augment belongs to a later period in language, and, although Mr. Buttmann did not keep pace with the modern school of linguistics, yet, by his more refined sense for lan-

guage, he was led to see the real state of things, and he described the augment as a wearing off of the [more] original reduplication. His own words are :

“ From this circumstance alone, that both augments [the augment proper and the reduplication] belong exclusively to the preterites, we may presume that they are of the same origin. Without entering into any psychological disquisitions on the subject, we can well conceive how the old language would make use of the reduplication in order to express something past. Since the greater part of the changes, brought about in language in a mechanical way, consist in blunting and wearing off a form, and since, especially, we meet in other instances with a wearing off of the first letters in Greek words (see § 26, *Anmerk.* II., *δοχος* for *μόσχος*; *δοτταβος*, *ήγγανον*, for *κότταβος*, *τήγγανον*; *ήμί*, *ήν*, *ή*, for *φημί*, *φήν*, *φή*; *αίψηρός*, *λαιψηρός*; *είβω*, *λείβω*; *αία*, for *γαία*; *ία* for *μία*, etc.), it is perfectly analagous to assume that the reduplicated syllable containing an ε was reduced to a mere ε, and that the desire of drawing distinctions, availing itself of this feature, employed it particularly in the narrative style. This assumption, moreover, is fully proved (1) by the existing reduplication of the verb in some cases passing over into a mere ε, and (2) by the second aorist instead of having its regular augment being still found in the Epic with the reduplication of the perfect, as in *πέπληγον*, *λελαβέσθαι*, etc.”

We are not at all satisfied with the manner in which Mr. Bopp (§ 568, II. 445, ff.) endeavors to explain the archaic forms *έδωκα*, *έδηκα*, *ήκα*. After he seems to have come very near the truth, by bringing these forms into connection with the Old Slovenic *daχu* and the other analogous formations in this ancient idiom, and with the Lithuanian imperative mood in *dūk*, *give*, *dūkite*, *give ye*, he suddenly turns off again, and says :

“ We can do no better than to regard *έδωκα* as a degenerate form of *έδωσα*; whether the letter *s* at *one leap* [*sic!*] became *κ*, or *κ* associated itself with the sibilant of the substantive Verb, as in the imperfect form *έσκον*, *έσκε*, in the

Old Lat. future *escit*, and in the imperfect tenses and aorists, ending in *-εσκον*, *-εσκομην*, *-ασκον*, *-ασκομην*, as *διωεύεσκε*, *καλέεσκον*, *καλέεσκειτο*, *ἔλασκε*, *δασάσκειτο*, where we cannot help noticing the addition of the substantive verb, which, moreover, has been doubled in *σα-σκον*, *σα-σκομην*. In *ἔδωκα*, *ἔδθηκα*, *ἤκα*, however, provided they sounded originally *ἔδωσκα* etc., the euphonic addition to *σ* simply remained, and thus an original *ἔδωσα* first became *ἔδωσκα*, and finally, *ἔδωκα*. Perhaps the letter *κ* was originally placed before *σ* in *ἔδωσα*, as in *ξύν* from *σύν* = Sanscr. *sam*, so that *ἔδωκα* would have to be regarded as a reduced form of *ἔδωξα*; even as the form *cum* must have preceded the Latin *cum*, in case this is related to *ξύν*, *σύν*, *sam*."

§ 569. "The Lithuanian, also, presents a form related to the Greek and Sanscrit [and Old Slavonic?] aorist, in which as it seems to me, *κ* takes the place of an original *s*; I mean the imperative mood, in which I recognize that Sanscrit mood, which agrees with the Greek optative of the aorist, and by which *k* in *δῦκ*, *give*, *δύκτε*, *give ye* = Sanscr. *dasidvam*, *you may give*, (Precat. mid.), becomes related to the *κ* in the Greek *ἔδωκα* (§ 92, p. 144.)"

In our remarks above we have declared ourselves against this generation of *k* from *s*, which Mr. Bopp endeavors to vindicate in the above extract. His explanation appears very arbitrary, and, at the very outset, conflicts with a circumstance which seems to have been disregarded by all who have embraced Mr. Bopp's view without further examination. The point is this, that these three aorists are invariably found with the augment, which, as is well known, is usually not placed with the suffix *σκ*. This suffix, although dating back to an early period, arose, nevertheless, on Pelasgic ground, after the members of the Arian stock had separated; for it only exists in the Greek and Latin Languages. Besides the older form *ἔδωκα*, we, in fact, also find *δόσκον*, but without any augment or reduplication whatever, according to the general rule; even the poets, according to Buttmann (§ 94. *Anmerk.* 2), employed the augment offered them by analogy, only in a very few cases, and only *where it*

seemed imperatively demanded by the metre. According to our opinion, these three verbal forms, together with the Lithuanian imperative mood, are rather remnants of the comparatively oldest formation of the verbs,<sup>1</sup> with the more recent addition of the augment. \**Ἔδωκα, ἔθηκα* and *ἦκα* are evidently instead of *ἔδωκαμ, ἔθηκαμ* and *ἦκαμ*, in which the letter *μ*, as in all other aorists, first became nasalized, that is, was pronounced more or less indistinctly, until, finally, it was entirely suppressed, both in speaking and writing. The forms *δῶκα, θῆκα, ἦκα* are instead of *δῶκαμ, θῆκαμ, ἦκαμ*, and these, again, are contracted from *δό-ακαμ, θέ-ακαμ, ἔ-ακαμ*, so that we obtain from them the suffix *ακαμ*, which corresponds exactly to the Sanscrit *aḥam*, i. e., *αχαμ* (with a weak *χ*), and to the Old Slovenic<sup>2</sup> *αχαμ*. We believe that this particular formation, in the primitive times, as in the Old Slovenic, was confined to the first person singular and plural, and that, at a later period only, after the independent pronoun of the first person, where it was not suffixed, had gradually become changed, and a knowledge of its signification, where the pronoun was suffixed, had thus become lost. The letters *κ* and *α* of the first person, as in the Lithuanian and the Greek, were also extended to the other persons, and the final consonant only was used to indicate the other persons. The same thing, also, we notice in the Sanscrit, in regard to the vowel *a* before the final consonant; thus, we find *ā's-am, ā's'-is, ā's'-it*, and likewise, *ā's-am, ā's'-as, ā's'-at*, etc. The fact, that the guttural of the pronoun, where it was not suffixed afterwards, with some of the members of the Arian family became a sibilant, and that the vowel *a* of the last syllable was obscured and became *o* (*u*) or *e*, as in the Zend. *azēm*, Old Sloven. *ašu[m]*, Gr. *αγάμ, αγάμ, ἀγάμ, ἀγόν, ἐγόν, εγον*, Lat. *egom, ego*, does not preclude the possibility that the various members of this family had originally common forms for the several pronouns, of

<sup>1</sup> To which, perhaps, is to be added *ἔθηθ-οκα* besides *ἔθηθός*.

<sup>2</sup> Mr. Bopp calls this language the *Old Slavonic*, but Mr. Miklosich (preface, p. vii.) calls it the *Old Slovenic*, because it is merely a part of the Old Slavonic, (compare *Vergleichende Laut lehre der slavischen Sprachen*, von Fr. Miklosich).

which forms that of the first person was particularly retained, as a suffix to the oldest form of the verb, that is the aorist. It cannot be decided with certainty, whether the original guttural of the first person was a smooth, middle, or aspirate, since we find all three represented; but by reasons of analogy we assume that the hardest sound is the oldest, which is also proved by the Gothic, the oldest Germanic idiom of which any traces have been left us. The suffix *akam*, as we have shown above, was originally used entire, but in this primitive state we find it only in the Greek, in the three above-named forms of the aorist, and in the Old Slavonic, in that particular tense which, for other reasons, we have designated as the primitive one. The original form *aχam*, in this primitive tense, gradually assumed several forms, all of which, however, may be traced back again to this same original form: thus, from *aχam* we get *aχom*, *aχum*, *aχum̄*, *aχu*, *oχu*, *êχu*, *iχu*, as in Old Slovenic *daχu*, *I gave*, from *da-aχu* or *d'-aχu*; *sus-aχu*, *I sucked*, *ber-uñ*, *I gather*, Aor. (*ber-aχu*) *braχu*; *deruñ*, *I split*, Aor. (*der-aχuñ*) *draχuñ*, *s'enuñ*, *I drive* Aor. *gnaχu*, *I drove*. In the aorist of those verbs which correspond to the 10th Sanscrit conjugation, the pronoun is suffixed to the original root, as is done in those verbs where *n*, *t*, or *d*, is inserted, e. g. in *rüd-as-un*, *I lament*, Aor. *rud-aχu* for *rudaxum*; *güb-n-uñ*, *I perish*, Aor. *güb-oχu* (*oχum*). The same is the case in other verbs, where other letters have been inserted before the pronoun, as in *gorjun* *I burn*, Aor. *gor-êχu*; *orjuñ*, *I plough*, Aor. *or-aχu* [*oraxum*], Lat. *ara-o*, Gr. *ἀρώ*]; *plujuñ*, *I make to flow*, Aor. *plio-aχu*; *dejuñ*, *I do*, Aor. *dejaχu*. When the pronoun is preceded by a nasal sound, its initial *a* is dropped, as in *vinun*, *I wind*, Aor. *vinuñχu*; but in the iterative form *vinjaχu* there is no nasal sound; *penjuñ*, *I span*, Aor. *peñχu*, *I spanned*. In one Slavonic dialect, the Lusatian, the final *m* or *n*, together with the preceding vowel, is entirely dropped, and the aorist ends with the guttural of the pronoun, or the guttural passes over into a sibilant, or is dropped altogether, as *daχ*, *I gave*, *staχ*, *I stood*; *beχ*, *bjex*, *I was*; *noseχ*, *I bore*, iterative form *noshax*; *vovam*, *I cry*, *vovaχ*, *I cried*; *piχ*, *I drank*. from *piju*,

*I drink.* In the plural, however, the original *m* is restored, as *δαχ, δαχμε; σταχ, σταχμε; βεχ, βεχμε; τρυ, Lat. tero, τρjεχ, τρjεχμε, trivimus.*

As in the Semitic<sup>1</sup> languages, so also in the Indo-European, the suffixing of the dissyllabic pronoun became inconvenient, and they had, therefore, recourse to various means in order to facilitate this process. Thus, *aham* seems to have been changed into *haam, hām, hēm, ήμ, (ήν)*; by dropping the guttural *h*, was obtained *aam, ām, ημ, ην*; by shortening *ām*, the syllables *ām, om*; and the final *m*, in the Greek language, was first nasalized, and imperfectly pronounced, and, at last, totally dropped. In the first stage of contraction or shortening, we find *hām, hēm, ήμ*, where the final *m* afterwards was preserved only in cases where it was supported by a following vowel. This form of the pronoun, when suffixed to the demonstrative *τ* of the Greek verbal adjective, aspirated the dental smooth, and this the preceding guttural or labial smooths and middles, while it assimilated the preceding dental, as in *τυπ-, τυπ-τ-ος, έτυπ-τ-άμ, or ήμ, έτυφθημ, έτυφθάμ, έτυφθημες* or *εν, έτύφθαμες*; hence the infinitive mood *τυφθήμ-εν, τυφθή-ημ-εν-αι*. Afterwards, however, the letter *μ*, when final, according to the laws of Greek phonology, was changed into *ν*; hence we have the future *τυφθή[ν-ε]σομαι*. A second stage of the weakening of the pronominal suffix consisted in the dropping of the aspirate, so that the long syllable *ām* or *ēm, āμ* or *ημ* was appended immediately to the original unincreased verbal root, which, in this case, taken in its intransitive meaning, assumed the function of the passive voice, as *χαρ- (χαίρ), έχάρην, I was in a state of χαρ-ά, joy, rejoicing, έ-γήρ-αμ, έχήρ-αν; στελλ-, έστάλ-ην, σταλη[ν-ε]σομαι, σταλήσομαι; ρν-(ρε), έρρύην, I flowed, I was in a state of flowing; πληγ-, — έπλήγην*. In a third stage of contraction or weakening, which was entered upon at an early period, the syllable *ām* was shortened in various

<sup>1</sup> E. g. in *כִּי-קָטַל, e-k'tol, I will kill*, *כ* is shortened of *אני, ani, I*; in *כִּי-נִקְטַל, ni-k'tol, we shall kill*, *נ* stands for *תִּקְטַל*; in *כִּי-קָטַלְתָּ, katul-ta, thou hast killed*, masc., *ta, thou*, is contracted from *at-ta*; in *כִּי-קָטַלְתְּ, thou hast killed*, fem. *t', thou*, fem., is instead of *at-at*.

ways. While the letter  $\mu$  in this tense, in the Lithuanian language, passes over into the vowel  $u$ , which is related to the labial letters through  $v$ , but in the plural reappears; in the Greek it is at first nasalized, afterwards pronounced indistinctly, and at last entirely dropped. This particular form of the aorist we still find in  $\epsilon\lambda\tau\alpha$  for  $\epsilon\lambda\tau\alpha\mu$ ,  $\eta\upsilon\gamma\epsilon\kappa\alpha$  for  $\eta\upsilon\gamma\epsilon\kappa\alpha\mu$  (from which are derived  $\epsilon\iota\pi\acute{\alpha}\mu\eta\nu$ ,  $\eta\upsilon\gamma\epsilon\kappa\acute{\alpha}\mu\eta\nu$ ), and perhaps in  $\epsilon\pi\epsilon\sigma\alpha$  for  $\epsilon\pi\epsilon\tau\alpha$ . In the popular language this particular form of the aorist (which we prefer to call the strong aorist, because it is certainly not formed by a composition with the substantive verb) seems to have generally prevailed, and from this it seems afterwards to have intruded into the written language, as  $\epsilon\acute{\iota}\delta\alpha$ ,  $\epsilon\acute{\iota}\lambda\alpha$ ,  $\epsilon\lambda\alpha\beta\alpha$ , (conf. Buttmann, *Ausführl. Grammat.* §. 114, p. 278, 279). Instead of being dropped, the letter  $\mu$ , however, usually changing into  $\nu$ , and  $av$  is contracted with the preceding vowel into one syllable with a long vowel, which, in some verbs, is shortened again in the plural; unless we prefer to regard the  $\nu$ , the last letter of the syllable, as the suffix, representing the personal pronoun as, ( $\delta\iota\delta\rho\alpha\sigma\kappa$ ,  $\delta\rho\alpha$ ),  $\epsilon\delta\rho\alpha\nu$ ,  $\epsilon\delta\rho\acute{\alpha}\nu$ ;  $\epsilon\delta\omicron\alpha\mu$ ,  $\epsilon\delta\omicron\alpha\nu$ ,  $\epsilon\delta\omega\nu$ ;  $\epsilon\delta\epsilon\alpha\mu$ ,  $\epsilon\delta\epsilon\alpha\nu$ ,  $\epsilon\delta\eta\nu$ ;  $\epsilon\alpha\mu$ ,  $\epsilon\eta\nu$ ,  $\eta\nu$ ;  $\epsilon\sigma\tau\alpha\nu$ ,  $\epsilon\sigma\tau\eta\nu$ ;  $\epsilon\delta\nu\alpha\mu$ ,  $\epsilon\delta\nu\alpha\nu$ ,  $\epsilon\delta\nu$ ;  $\epsilon\phi\nu\alpha\mu$ ,  $\epsilon\phi\nu\alpha\nu$   $\epsilon\phi\acute{\upsilon}\nu$  (compare  $\iota\chi\theta\acute{\upsilon}\sigma$ ,  $\iota\chi\theta\acute{\upsilon}\varsigma$ ,  $\delta\epsilon\iota\kappa\nu\acute{\alpha}\sigma\iota$ ,  $\delta\epsilon\iota\kappa\nu\acute{\upsilon}\sigma\iota$ ). Most frequently, however, in the written language of the Greek, the suffix  $\alpha\mu$ ,  $av$ , was weakened into  $ov$ . In the Old Slavonic, as it seems, it was first nasalized into  $om$  or  $um$ , afterwards into  $on$  or  $un$ , where the final  $n$  was first pronounced indistinctly, and at last entirely suppressed; in the plural, however, both in the Lithuanian and the Old Slavonic, it was universally pronounced with a preceding full  $o$ , and only the  $s$  of the plural, which has survived only in the Sanscrit, the Greek dialects, and the Latin, was worn off; as Lith.  $gawa\acute{u}$  *I got*, dual  $gaw\acute{o}wa$ , *we two got*, plur.  $gow\acute{o}me$ , *we got*; Old Slav.  $dvig\acute{u}[m]$ , *I moved*, dual  $dvigov\acute{e}$ , *we two moved*, plur.  $dvig-omu[s]$ , *we moved*.

In regarding the ending  $am$  ( $an$ ,  $on = av$ ,  $ov$ ) as a constituent part of the suffixed pronoun of the first person, we only follow the example of the Indian grammarians themselves, who lived some thousands of years nearer to the

origin of these verbal formations than Mr. Bopp and ourselves, and who may be imagined to have still had a sort of consciousness of the mode in which the forms in their language were generated, which consciousness has been lost by us. In fact, Mr. Bopp himself (§ 500) declares, that he must attribute a pronominal origin to what are usually termed "the copulative vowels *ε* and *ο*" in verbs, such as *φερ-ο-μεν* (which we rather divide thus, *φερ-ομ-εν, φερ-ε-τε*); but we cannot agree with him in his further deductions, and rather side with the Indian grammarians, who regard the vowel *a* in the ending *am* (*om, on*) as a part of the pronoun. Even Mr. Bopp himself, in a note to § 437, p. 268, remarks: "Although we have divided above *άβιαρ-α-μ*, just as we did *έφερ-ο-ν*, yet, we must observe, that, according to the Indian grammarians, the full ending of the first person singular of the secondary forms [we rather call them primary, because they were first in use] is not *m*, but *am*. The ending *am*, indeed, is also found in verbs where the letter *a* cannot be regarded as the characteristic vowel of the class to which the verb belongs; as from *ι*, *to go*, we do not form *άι-μ*, *I went*, but *άγ'-αμ*, and the Sanscrit *άστρηναμ-am*, plur. *άστρηναμα*, is found together with the Greek *έστορνυν, έστορνυμεν*. But, inasmuch as the second person singular is expressed in the Sanscrit by the letter *s* only, and the third by *t*, and as, for instance, the Sanscrit *άστρ-νό-s, άστρ-νό-t* corresponds to the Greek *έστορνυ[ς], έστορνυ[τ]*, we may conclude from this, as well as from the fact that in the Greek, also, the first person is simply expressed by *ν*, that the letter *a* in *άστρηναμ* is an inorganic admixture from the first principal conjugation, even as in Greek *έστορνυον* would correspond to *έστορνυ-ν*." Instead of having recourse in Sanscrit to an inorganic formation, we prefer to look upon this formation as organic, by showing that *έστορνυν* is, indeed, a contraction of *αμ, αν*, and that *ο* in *ον* has been weakened from this, and that the contraction of *να* into *ν* is not of such rare occurrence in Greek; as we have seen above, as *οσφύας, οσφύς; άπολλάσσι, άπολλύσι; όφρῦς* from *όφρύας, the eyebrows*.

From these considerations, we think, it is made clear that Mr. Bopp is wrong in regarding the suffix *am* as a blunted secondary formation of *ami*,  $\alpha\mu$ ; for it is much rather a primary formation, existing before the present tense, which tense, from reasons of common sense only, must be regarded as of a later origin, since it does not express a completed fact, but one which is in the process of completion, and inasmuch, as, in the Slavonic language, it is absolutely used in the place of the future. — Conf. Prof. Bopp's *Verbalism*, III. p. 98.

On page 259, § 431, Mr. Bopp, says: "The double form of the personal endings is shown in the Latin also by the circumstance that wherever there was originally the fuller ending *mi*, this was entirely dropped, with the single exception of *sum* and *inquam*; while the original final *m* has been preserved throughout; thus, we find *amo*, *amabo*, but *amabam*, *eram*, *sim*, *amem*, as in the Sanscrit *á-b'avam* and *á'sam*, *I was*, *syám*, *I may be*, *kámáyéyam*, *I may love*." We must emphatically declare ourselves against this statement of Mr. Bopp, which, starting with him, has been adopted by all grammarians, that, namely, in Latin, with the single exception of *sum* and *inquam*, the suffix of the first person has been dropped. We are, on the contrary, of the opinion, 1, that the ending *mi* which Mr. Bopp most probably regards as a shortened form of *ma*, and which latter form we moreover hold to be a metathesis of *am*, *om*, *em*, *im*, never existed in this language, and, as a general thing, was developed only in the Sanscrit and the Zend, after they had separated from the other members of the Arian family; 2, that not the entire suffix, but only the final *m* of the suffix *om*, had become lost, after it had first become nasalized, and had gradually been pronounced more and more indistinctly. This suffix was originally *am*, as in *inquam* (*inquam*), and it lost the letter *m* about the same time, as the unsuffixed pronoun *ego*, which originally sounded *aham*,  $\alpha\chi\alpha m$ , *akam*, *agam*, *egam*, *egom*. If Mr. Bopp's supposition were right, and if the letter *o* of the first person were nothing else than a copulative letter, it would seem inexpli-

cable to us how this copulative letter should have remained stereotyped, as it were, in the first person singular and plural, in four members of the Indo-European family, the Latin, Greek, Lithuanian and Slavonic, and should therein manifest a marked difference from the other persons of the verb. The history of the formations of the verb proves clearly that this letter *o* is the last remnant of the pronominal suffix of the first person. The plural alone of the Greek λέγ-ομεν, λέγ-ομες, (leg-omen, leg-omes), the Latin *volumus* for *volomos*, *quaesumus* for *quaesomos*, &c., and the Slavonic and Lithuanian forms *nesochu*, plur. *nesochomu[s]*, *we bore*; *raud-aju*, plur. *raud-ajome[s]*, shows that this letter has been weakened from the nasalized *om*, *on*, *um*, *un*, and that the letter *m* was originally pronounced full, — and we need no other evidence. It is not our intention to call the Messrs. Ritschl and Fleckeisen to account for rejecting the forms *dicom*, *faciom*, *incipissom*, *subigitom*, *videom*, which occur in some of the manuscripts of Plautus, because, as they say, none of the old grammarians seem acquainted with any such forms in the singular. At all events these forms are not mere errors in writing, since we cannot conceive how the copyist, by a mere mistake, should have, in more places than one, written down these endings, unless he had still some sort of indistinct recollection of them, or was made familiar with them by written traditions and documents which are now lost to us. It by no means appears strange, that, while the letter *m* disappeared in the present tense, it should still have continued in *eram*, *amabam*, *monebam*, *legebam*, *nequibam*, *ibam*; for, inasmuch as the letter *a*, in these endings, was not weakened into *o*, its connection with the personal pronoun *ego*, in its later form, was completely lost sight of by the people: while, in the present tense, where this connection still remained visible, the form of the suffix was accommodated to that of *ego* in its more modern garb. The Lithuanian, however, proves that *u* or *o*, *um* or *om*, were originally *am*; for, while, in the singular, *a* was obscured into *u*, and the letter *m* dropped, in the plural the vowel *a* is still preserved, and the letter *m* retained, because

followed by a vowel; as, sing. *wežù*, plur. *wežame*, *we carry*. The same thing we find in the Gothic present tense, where the letter *m* has been preserved in the first person plural, because a whole syllable had been dropped after it, while, in the singular, this same letter *m* of the suffix *am*, was first nasalized, and afterwards given up entirely; just as in the Greek, where the letter  $\mu$  was dropped in the singular of the active voice, as in *ἔτυψα*, while it was retained in the plural and in the middle, or else was partly changed into  $\nu$ ; as in *ἔτύψαμεν*, *ἔτυψάμαμ*, *ἔτυψάμαν*, *ἔτυψάμην*; *ἔφθάρ-αμ*, *ἔφθάρ-αν*, or  $a = \eta$ , *ἔφθάρ-ην*. A similar change of the letter *a* of the suffix *am*, which sounded like *a* in *far*, into the long English *a* in *fate*, we notice in the Armenian and Albanian; and the addition of the suffix *am* or *em* to the vowel of the root, with which it coalesced into one long vowel, we find to some extent in the Gothic and Old-Saxon among the Germanic tongues, and likewise in the Persian, Armenian, and Albanian.

Mr. Bopp says (§ 434, p. 261): "At all events the ending *μαι* of the middle and passive voices, which [in Greek] is common to all classes of verbs, shows that they all had originally the ending  $\mu$  in the active voice. As regards the general preservation of the character of the first person in all forms of the middle and passive voices, the Greek has an immense advantage over its Asiatic sisters, which in the singular of the middle, both in the primary and the secondary forms have lost the *m*. In the same manner, therefore, in which from the Sanscrit *b'ár-ámi*, we, as it were, restore the Greek *φέρω*, so also from the Greek *φέρομαι*, we trace back the blunted Sanscrit form *b'árê* to its original form *b'ár-a-mê* or *b'ár-a-mê*." Even if we grant that the two members of the Arian family, the Sanscrit and the Zend, had this complete ending in the middle voice, after the ending of the first person singular in the active voice, but that, in the course of time *am* had become *mi*, we need not, on this account, assume the same of the Greek. On the contrary, in the Greek, as well as in the Lithuanian and the Slavonic, the suffix was shortened into *mi* only in a small number of

verbs. The ending *μαι*, in Greek, may be explained in two ways; either the letter *m* of the first person in the active voice, by imitation of the second and third persons *σαι* and *ται*, which were themselves expanded from *σι* and *τι*, was formed into *μαι*; or else, since the passive voice is by no means one of the oldest formations, the passive ending of the first person singular of all verbs, by imitation of the ending of the first and second persons, was formed from the shortened suffix *μι*, which had already been introduced in a small number of verbs. In the Sanscrit and Zend this shortened form did not become general until after their separation from the rest of the members of the Arian family, and in the Greek, Lithuanian, and Slavonic, it was confined to a small number of verbs, while in the Latin, Gothic, High German, Old Saxon, Persian, Albanian, and Armenian, not a single trace of this secondary form of the active voice, and still less of that of the passive voice, can be found. It can be proved, however, that all these languages in the beginning in the first person of the present tense had the ending *am*, *um*, *em*, (*im*); and their present tenses, therefore, appear formed of a portion of that suffix, which we claim to have been common to all.

We agree perfectly with Mr. Bopp in § 477, pp. 324, 325, where he explains the Latin *r* of the passive voice by the reflexive *s*; for this *r* is certainly identical with *s*, and also, in the remaining idioms of the Arian family it serves to express the passive voice. In the neighboring Semitic family, even in the Hebrew (*Niphal* conj. Chaldee, Syriac, Arabic, Ethiopic, the reflexive relation is the bridge by which we pass over into the passive voice).<sup>1</sup> We have to repeat, however, our objections to Mr. Bopp's explanation of the second per-

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<sup>1</sup> In case it is true, and we are very much inclined to believe it, that the Indo-European languages, together with the Semitic, originally formed one primitive language, the fact that all the Semitic, and a part of the Indo-European languages, use the same letters, in *all* persons, to represent the reflexive relation, would go very far towards proving the priority of this mode of expressing the reflexive relation to that mode by which the reflexive form is strengthened, in the several persons, by the distinctive words for each person; for this latter form evidently belongs to a later stage of development.

son plural, which we have raised in our work already referred to.<sup>1</sup> In order to leave the mind of the reader unbiassed, we extract from Mr. Bopp's work the article in question :

“ It is easy to see that the second person plural bears no relation whatever to the remaining persons of the passive voice ; but it is entirely owing to the circumstance that the former cultivators of grammar did not trouble themselves at all about the *rationale* of linguistic phenomena, and, that the relationship which exists between the Latin and Greek languages was not studied in a truly scientific and systematic manner, that the form *amamini* so long occupied its place among the paradigms, without anybody's asking whence it came and how it originated ? I think I was the first to raise this question in my *Conjugation system* (Frankfort a. M., 1816, p. 105, ff), and I repeat here confidently the explanation which I there made, that *amamini* is a participle of the passive voice in the masculine nominative plural ; thus, that *amamini* stands for *amamini estis*, as in the Greek *τετυμμένοι εἰσίν*. The Latin suffix is *minu-s*, which corresponds to the Greek *μένος* and the Sanscrit *māna-s*. But inasmuch as these participles, as such, passed entirely out of use in the Latin, and only remained in the second person plural, in a state of petrification, as it were, they assumed in common language the character of a personal form, and as their nature of a noun was no longer recognized, the distinction of the genders, also, was no longer observed in them, and the addition of *estis* was discontinued. It may be proper to allude here to a similar process in Sanscrit. In this language, *dātā* (from the root *dātār-*), for instance, properly signifying *daturus*, is used in the sense of *daturus est*, without taking into consideration the genders ; it is thus likewise used for *datura* and *daturum est*, although this form, which is also equivalent to the Latin *nomen agentis* in *tor*, is provided with the feminine ending in *trī* (Lat. *trī-c-* § 119), and a *female who gives* is in Sanscrit just as little called *dātā* as

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<sup>1</sup> “ Latin Pronunciation and the Latin Alphabet.”

*dator* in Latin. In the plural, moreover, *dātāras*, when used as a noun, signifies *givers*, but when used as a verb, *they will give*, in all genders; the same is the case with the plural form *dātārāu*. The Sanscrit use of this form is still more remarkable than the Latin, because, in the former language *dātā*, *dātārāu*, *dātāras* are still used as substantives. It is, then, entirely owing to the circumstance of the language, in its existing state, being no longer able to dispose of these forms in the sense of future participles, that in *dātā*, *dātārāu*, *dātāras*, where they signify *dabit*, *dabunt*, the consciousness of their adjective nature and their power of expressing the different genders was lost, and that the character of common verbal persons was assumed by them."

In order to be impartial, we must, moreover, state what Mr. Bopp adduces in favor of the existence of these participles in Latin. On pp. 326, 327 he continues: "But to return to *amamini*, the reviewer of my *Conjugation system* in the *Jenaer Litteraturzeitung* (G. F. Grotefend, if I am not mistaken) supports this explanation by the forms *alumnus*, *Vertumnus*, which evidently belong to this particular formation of the participle, but in which the letter *i* has been lost. This letter was preserved in *terminus*, which Mr. Lisch very properly, as it seems to me, explains, *that which has been crossed*, from the Sanscrit *tar*. *Fe-mina*, *she who bears*, consequently in the middle voice [conf. *οἱ γεινόμενοι*, *parents*, in Herodotus], which is likewise adduced by Mr. Lisch, I had previously regarded as a kindred formation; its root is *fē*, from which are also derived *fetus*, *fetura*, *fecundus*. In addition to these, *gemini* (those who have been born at the same time, from the root *gen*), which is in the place of *genmini*, *genimini*, may be taken into consideration [we object to this; for by this explanation there would be wanting in this word two essential points which are inherent in the idea "*twins*," viz. that of duality, and that of being born at the same time]."

This theory of Mr. Bopp, endorsed by learned men, such as Grotefend, was received in the grammars without scarcely meeting with any resistance whatever. But as regards Mr.

Bopp's assertion that the proceeding in the Sanscrit language is much more remarkable, than that advocated by himself, we, and very probably many of our readers, cannot agree with him ; for in the Sanscrit, we only need to supply *est* and *sunt*, but in the Latin, according to Mr. Bopp's idea, *estis*, *sitis* (*eratis*, *essetis*), *este*, or *estote* and, moreover, five participles for various tenses and moods in which no participle has ever existed in any language ; thus *leg-iminu-s*, *leg-imini estis* ; *leg-aminu-s*, *leg-amini sitis* ; *leg-ebaminu-s*, *leg-ebamini estis* ; *leg-ereminu-s* *leg-eremini sitis* ; *leg-iminu-s legimini este*, *estote*, which is a linguistic absurdity.

As, for the reasons here given, we cannot embrace Mr. Bopp's theory, we must endeavor to supply a better one, and for this purpose, as is done by Mr. Bopp himself, we undertake to ascend into the ante-historical ages, and to vindicate, if possible, to this form also a reflexive character. As we look upon the imperative mood as the oldest form next to the aorist, and are confirmed in this belief by the consideration that the form most immediately required by language, after it had given birth to the aorist, which expressed a fact, act, or phenomenon completed, was that by which the repetition of such an act or fact was demanded, so also in the present case we start with the imperative mood. The oldest form of this mood in the passive voice was *iminator*, which originally consisted of *imin* and *os* or *or*. It is true that the genuineness of this ending has been disputed lately ; but we have seen in the case of the ending *om* of the first person singular, how very ready even our best scholars are to throw anything away, on the plea of its being a slip of the pen, that does not agree with their own ideas. It is a well-known principle in hermeneutics, in case we have to choose between two readings, to select the more difficult or rarer as the genuine one ; for the copyist may, indeed, be supposed to have changed a more difficult or rarer reading into an easier one, but not *vice versa*. The original *os* or *or*, like *s* in general, was gradually pronounced more and more indistinctly, until at last it vanished altogether, when the consciousness of its origin and its meaning

had become lost among the people; indeed, on account of its ending in *o*, it was then even wrongly employed in the singular, while in the plural it was changed into *i*. According to our view the ending *iminos* or *imino* is the original complete form, composed of *imin* and *os*. *Imin* is the Sanscrit accusative *yusman*; the letter *s*, in this word was early assimilated in the Greek to the following  $\mu$ , and the consonantal *y* either passed over into the aspirate, or it vanished altogether  $\dot{\upsilon}\mu\mu\epsilon\varsigma$ , acc.  $\dot{\upsilon}\mu\mu\alpha\varsigma$  for  $\dot{\upsilon}\mu\mu\alpha\nu[\varsigma]$ ; in Latin, where this pronoun was used as a suffix, *y* disappeared entirely and the letter  $\mu$  was not doubled, of which we find analogous cases in other old Latin words; *a*, in the syllable *an*, was changed into *i*, because it was not sustained by the accent, and it gave up the letter *n* to the following syllable *os*, commencing with a vowel; *u*, in the penult was weakened in the Greek into *v*, and in the Latin into *i*; the connecting vowel *o* is the same as *u* in *legit-u-r*, and *e* in the Umbrian, but *s* or *r* is the genuine reflexive sign. This letter, however, either disappeared in the way above-mentioned, and *o* was weakened into *i*, or it went through the same changes as the genitive singular and the nominative plural of the *o* declension; that is, it first became *oi*, afterwards *oe*, and finally, *i*, (compare our work on Latin pronunciation, p. 115). The ending *imino* corresponds exactly to the Greek  $\dot{\upsilon}\mu\alpha\varsigma\ \alpha\upsilon\tau\omicron\upsilon\varsigma$ , and it is the only relic of the strengthened reflexive form in the Latin.

Mr. Bopp says, (§ 515): "If the question is raised, whether the Sanscrit from ancient times has made use of its three past tenses without any syntactical distinction whatever, and whether it uselessly expended its creative powers in their production; or whether, in the course of time, the more refined distinctions of their significations were lost sight of in popular usage, it seems to me, it ought to be decided in favor of the latter; for even, as the forms in language were gradually worn away and blunted, so also their significations were subject to a wearing away and blunting."

In this remark there are two points in which we are at issue with Mr. Bopp. *First*, he seems to suppose that the different forms for the expression of the past tense arose

simultaneously; *secondly*, that these three forms originally represented various modifications or shades of the past tense, which, in the course of time, were lost by a sort of process of degeneracy or wearing away, and that this is proved by the indiscriminate use made of these forms in the Sanscrit writings which we now possess. We are, on the contrary, of the opinion that these three forms arose at different times, and that each new form, at its rise, did not completely crowd out the former one, as may be seen in the case of the so-called first and second aorists in Greek. In this language, moreover, the strong or old aorist still partly coincided in its form, or at least in its use, with the imperfect tense; for we find the imperfect tense *ἔλεγον* of *λέγω*, *ἔφην* of *φημί*, and also *ἔβόα*, *ἀνεβόα* of *βοάω*, *ἀναβοάω* and *ἦεν* of *εἶμι* more frequently used in the sense of the aorist, than of the imperfect tense. The so-called second perfect was certainly nothing else originally than another form of the strong or old aorist, and at one time was employed in the place of the aorist, and at another or later time in that of the perfect tense. According to our opinion, the act of fixing the different shades in the meaning of the past tenses supposes a state of mental majority, which can only exist in the manhood, and not in the childhood, of a nation; but it is not by any means necessary that each people should have reached the culminating point of mental cultivation in every direction. So the Latin remained behind the Greek in the development of the verb, inasmuch as it has *no* separate forms for the aorist and the perfect tense, and although it has one more case in the declension of the nouns than the latter, it still expresses *coming from* and *being in* a place by the same form; as *venit Carthagine*; *vixit Carthagine*. It is, therefore, not at all improbable that the Sanscrit should have remained behind both these languages, and should never have arrived at the same degree of logical precision; especially since it is an established fact that it has never succeeded in developing the pluperfect tense.

Mr. Bopp says further, (§ 516, p. 389): "It may be said that language, in the aorist, rids itself of the *guna* and

other characteristics of class for this reason only, because, in its anxiety to report facts, it has no time to pronounce them; as in the Sanscrit, in the second person of the imperative mood, on account of the hurry in which a command is given, the lighter verbal form is employed, and we thus find in the second person *vid-d't*, *know thou*, *yoongd't*, *unite thou*, while in the third person we have *vét-tu*, *let him know*, *yoondktu*, *let him unite*. This species of aorist, which has just been mentioned, is, however, comparatively rare both in Sanscrit and in Greek, and the giving up of the characteristics of class in both languages is not confined to the aorist; besides, more letters are usually found in the aorist than in the imperfect tense; compare, for instance, *ádics'am* = *ἔδειξα* with the imperfect tense, *ádis'am*, which is exactly like the above-mentioned aorist. The sibilant of the first aorist, also, cannot be regarded, in my view, as that particular element of sound to which this tense owes its peculiar signification, since this letter occurs likewise in several other forms, the meaning of which is in no wise connected with that of the aorist." As regards the first statement of Mr. Bopp, to which he himself does not seem to attach much weight, he cannot expect us to agree with him, since there is certainly no necessity at all why people, in their anxiety to report a fact, should not have had the time, or should not have taken the time, to pronounce a long vowel or a diphthong instead of a short vowel. With respect to the length or shortness of the original roots this is a subject which, at the present day, can no longer be decided with any certainty. However, this much it seems to us may be established beyond any doubt: that the roots were originally monosyllabic; therefore, any form which consists of more than one syllable may be at once put down as a later formation. Thus, on comparing *ádadam* or *ἔδιδων* with *ádám* or *ἔδων*, the latter would naturally have to be regarded as the older form; so that there is no reason why we should suppose with Mr. Bopp (p. 389), that, in the formation of the second aorist, the *guna* and other characteristics of class were dropped, if they had not even

existed at that time. As regards the fact that in Sanscrit *ā́aram*, and in Greek *ἔλεγον*, together with *ádadam* and *ἐγύγ-νωσκον* and *ἐλάμβανον* are designated as imperfect tenses, this only proves the arbitrary mode of proceeding of the grammarians, since it is very plain that the two former words belong to an earlier stage of development of the language, while the longer forms were produced subsequently. In those cases where the monosyllabic root had a long vowel or a diphthong, we find it quite natural that the long vowel of the original root, when another syllable was prefixed to it (for instance, when the first two letters of the root were reduplicated), should have been weakened and shortened, since in this case it was deprived of the accent. This weakening, however, did not always take place, but sometimes the accent was simply shifted to the prefix, as may be seen from the following examples, where we regard the so-called second perfects as originally identical with the strong (second) aorist: as, *λήθε* (the original form then), *λέληθε*, *λέλαθε*, *ἔλαθε*, *λάθε*. On the other hand the following forms were used simultaneously: *ἤραρον*, *ἄραρα*, *ἄρηρα*, *φεύγε*, *πέφευγε*, *πέφυγε*, *ἔφυγε*, which forms were subsequently employed to express various shades of the past.<sup>1</sup> Compare also the Doric *λαῖκ-εω*, Ionic *ληκ-έω*, the Attic sibilated *λάσκω*, *λέλακα* for *λέλακαμ*, aorist *ἔλακον*. The long syllable occurs even in the aorist, e. g. in *πέπληγον* (*ἔπληγον*, *πλήγουν*). A similar weakening of the vowels, as is well known, has taken place in the Latin, where *a* passed over into *e* and *i*, e. g. *cap-*, *cap-it*, *con'cip-it*, *con'cep-tum*, which subsequently became *con-cep'tum*, *fall-it*, *fe'fell-it*; the cause of this weakening was that the accent was first placed on the prefix, and afterwards settled down upon the root.

1 Mr. Bopp first advanced in his *Conjugation system* the

<sup>1</sup> In the forms *ἔδηδ-οκα* and *ἀγή-οχα* for *ἀγήη-οχα*, which are found together with *ἔδηδός* and *ἤγαγον*, we recognize remnants of the same original suffix, which we have found in *ἔδωκα* (*ἔδέ-ακα*), *ἔδηκα* (*ἔδέ-ακα*), *ἤκα* (*ἔ-ακα*), viz. *άκα*, *άκαμ*; in the above words this suffix passed over into *οκαμ*, as in the Old Slavonic, instead of the later form *έγομ*, *έγον*, *έγώ*, *ο* must be regarded as the first weakening of *a*, and *e* as the second.

idea, which he repeats in the present work, § 526—528, pp. 404—406, and which seems to us perfectly correct, that the Latin, in addition to the root *as* (*es*), which was employed also by other members of the Arian family in the formation of their tenses, also made use of the Sanscrit verb *bhu*, *φν*, *fu*, wherein it was followed by the Irish dialect of the Gaelic idiom; as, *mealfa-m*, *meal-fâ-* (which we would rather divide thus: *meal-f-am*, for *meal-fi-am*), or *mealfa-maid*, or *mealfa-maoid*, *we shall deceive*, *meal-faidhe*, *you will deceive*, *meal-faid*, *they will deceive*, *meal-fai-r*, *thou wilt deceive*, *meal-fai-dh*, *he will deceive*. The circumstance that the Latin *bam* expresses the past, but the Irish *fam* the future, Mr. Bopp continues, ought not to prevent our regarding these two forms as identical in their origin. We are troubled much less by this circumstance than Mr. Bopp himself, since we regard not merely the letter *m*, but also *am* as the suffix of the first person *singular* and plural. The proper form of the Irish suffix ought to be *fiam* or *biam*, since in its isolated position *biad/me* signifies *I shall be* (literally *it will be me*), *biadmaoid*, *we shall be*, where the character of the third person singular has amalgamated with the root. The exponent of the future relation in these forms, Mr. Bopp goes on to say, is the vowel *i*, with which may be compared the Latin *i* in *amabis*, *amabit*, and also in *eris*, *erit*, etc. We object to this view, for we think that the future relation is expressed by the root *bhu*, *φν*, *fu* itself, which not only signifies the state of *having become*, *πεφικέναι*, or of *being*, but also the *act of becoming*, *φίω*, *φύω*. This idea of *becoming* is contained both in the imperfect tense and in the future; for the very name of the imperfect tense implies that it describes an imperfect action, or one which is in progress, or is becoming, that is, one which is not yet completed when another action takes place. The idea of the past, however, which is not contained in that of becoming, was furnished to the imperfect tense by the predicate of the primary clause, and in case the imperfect tense was employed in the primary clause itself, this idea could be supplied to it from the context, as is done with the present itself in a clause

introduced by the conjunction *dum*, when concomitant to the predicate in a past tense. The application of the word *becoming* in the formation of these two tenses is very appropriate, as all existence is a continual becoming, or a continual repetition of the same act. In the Latin, also, we find the ending *esco*, which signifies to become, employed in the formation of the future; as *superescit* for *supererit*, in Ennius. According to our view, *ero* did not originally have an exclusive signification of the future, as little as the Greek *ἔσομαι*, *ἔδομαι*, *πίομαι*, but it is an original form of the present tense, *esom*, *som*, *sum*, where the letter *m* was at first pronounced indistinctly, and at last was dropped entirely, while *s*, between two vowels, became *r*. The fact that the future, which originally was expressed by the present tense, gave rise to the idea of *becoming*, or *coming into a state of existence*, is proved by the later German, where the future *ich werde gehen* means literally *I am becoming to go*, or, *I am coming into a state of going*. This idea of becoming, in German, was even transferred to the present and imperfect tenses of the passive voice, where *ich werde*, or *ich wurde gelehrt* signifies *I am becoming*, or *I was becoming taught*; *ich bin*, *ich war gelehrt worden*, *I have become*, *I had become taught*.

Mr. Bopp (§ 527) justly regards as strange the long *e* in *ebam* of the third and fourth conjugations, *leg-ēbam* and *i-ēbam*, and together with Ag. Benary he explained it formerly (in the *Berliner Jahrbucher* for 1838, p. 13) as an amalgamation of the class-vowel with the augment. Without entirely abandoning his former view, he seems now more inclined to the opinion that the only purpose for which the class-vowel was lengthened in these forms was to enable it to bear the burden of the suffixed substantive verb, and thus to give more strength to the theme of the principal verb.

We do not think that the assumption of an augment in order to explain the long *ē* of the imperfect tense can at all be justified, since there is not a single instance on record where the reduplication in Latin was weakened into an augment; we very readily admit, however, that the imper-

fect and future tenses of the third and fourth conjugations, in their formation, may have conformed in an inorganic manner with these tenses in the second conjugation. In the third conjugation this is chiefly limited to the imperfect tense, but in the fourth conjugation we often meet with the ending *bo*, instead of *am*; as *scibo*, *aperibor*, instead of *sciam*, *aperiar*. The vowel *i*, in the fourth conjugation, was originally long; for, like *a*, in the first conjugation (and sometimes even *e* in the second), it arose from the diphthong *ay*, which signifies *a making*. This suffix *ay* was not only contracted into a long *a* (*a* in *father*) in the first conjugation, and into a long *e* (*ey* in *they*) in the second conjugation, but, through the mediation of the diphthong *ěi* (*ei* in *height*), into which *ai* or *ay* had been obscured, it likewise passed over into a long *i* (*i* in *machine*). This long *i*, when followed by a vowel, became short, as in *audio*, but when followed by a consonant, it preserved its long character, as in *scibo*, where the ending *bo* was appended immediately to the stem or suffix *i*, and also in a few imperfect tenses, as in *vestibam*, *largibar*, for *vestiebam*, *largiebar*, unless we prefer to regard *scibo* as a contraction of *sciēbo*, and *vestibam* of *vestiēbam*; in the majority of cases, however, in the formation of the imperfect tense of the fourth conjugation the analogy of the third conjugation was followed where the vowel *e* in *ebam* had been lengthened in an inorganic manner, by analogy with the imperfect tense of the second conjugation.

For those who are not satisfied with this explanation, we have still a third one to offer of our own. The long *ē* before *bam* is neither an augment which coalesced with the final vowel of the stem into a long *ē*, nor is it an inorganic imitation of the second conjugation, but it arose from the diphthong *ěi*, the vowel *i* of which had been developed from *s* before the labial *b* (as before the labial *m* in *eiμl*); so that the diphthong *ěi* takes the place of the substantive verb *es*, *to be*, or *being*. *Amabam*, consequently, arose in the following manner: *am-ay-es-bam*, *amā-esbam*, *amā-esbam*, *amā-eibam*, *amā-ēbam*, *amābam*, and, when translated literally, it signifies: *bam*, *I was becoming*; *es*, *one being*; *ay*,

making, *am*, love: *mone-esbam*, *mone-eibam*, *mone-ēbam*, *monēbam*, *I was becoming one being reminding*; *leg-esbam*, *leg-eibam*, *leg-ēbam*, *I was becoming one who was reading*; *audi-ēbam*, *I was becoming one who was hearing*; *ama-esbo*, *ama-eibo*, *ama-ēbo*, *amābo*, *I am becoming one being loving*. The letter *s* in other places also passed over into *i* (cf. our work on *Latin Pronunciation*, p. 80), as in the Greek, before the labial  $\mu$ , *ειμί*, *ειμέν* for *ἐσμί*, *ἐσμέν*. The combination of two auxiliaries, as in *es-bam*, we also find in the third person plural of the perfect tenses ending in *si*, as *clau[d]-s-erunt*, where *s* is universally admitted to be the substantive verb, and *erunt* for *esunt* is a surviving form of the original present tense; and, in case Mr. Bopp is right, which we do not think, *fuvi* instead of *fufu-oi*, *fufui*, *fuvi*, *fui*, is a compound of itself as a verb, and itself as a suffix. No doubt the suffix of the perfect subjunctive is also a double composition of the substantive verb, *scrip-s-erim* for *scrip-s-esim*, or *scrip-si-rim* or *sim*, just as *ausim* is instead of *auds-sim*. We do not hesitate to regard the future *bo* as having descended from *bom*, *bam*, and thus consider it as originally identical with the suffix of the imperfect tense. It is our opinion that the formation of the imperfect tense is older than that of the future, since the function of the future tense was originally also performed by the present tense, and on account of the close connection between these two tenses, the ending *am* of the future tense was changed into *om*, *o*, as in the present tense, both of which followed in this particular the later form *egom*, *ego*.

Mr. Bopp (§§556—558, pp. 435—437), tracing the perfect ending *vi* (*ui*) to the substantive verb *fuo*, can indeed support his theory by the formation of the imperfect and future tenses, which is admitted by us; still, by so doing he merely establishes the possibility of such a formation, but nothing more. Several objections have been raised against this theory. First of all it has been justly observed by the opponents of this view that, whether we derive the suffix *v* or *u* from the letters *f* or *u* of the root *fuo*,  $\phi\acute{\upsilon}\omega$ , this verb cannot be pretended to express an accomplished fact or

state; moreover, in the above two tenses, though they are compounded of the Sanscrit *bhu* or Latin *fuo*, this verb rather expresses *becoming* than *being*. The oldest form of this perfect tense, also, is not *fui*, but *fui*, and thus it appears provided with the very same suffix which Mr. Bopp endeavors to explain by means of itself. We are, therefore, compelled by these considerations to endeavor to find another explanation of this form.

In eight members of the Arian family there are more or less traces of a form of the perfect tense, which, with the help of Mr. Bopp, we shall endeavor to examine more closely. In the Sanscrit there is still preserved in the participle of the reduplicated perfect tense a certain suffix which expresses a being endowed or furnished with something. This suffix appears in three degrees as regards strength, *vans*, *vat*, *us'* (= *oosh*), and of *us'* or *oosh*, which is the weakest of all, is formed the feminine *us'ti* (= *ooshee*). The shortest form *oosh*, according to Mr. Bopp (§ 788) is found in a single instance in the Gothic tongue, in *bêrusjôs*, *the parents*; in all other instances this form of the participle has been lost in this language (we should like to compare with this form the expression *οἱ γεωάμενοι* in Herodotus, instead of *οἱ γεωεῖς*). In the Old Prussian, also, some forms are found which appear connected with this original perfect form (cf. Bopp, § 787); as *murrawuns*, *having murmured*, *klantiwuns*, *having cursed*. The vowel *u* in *wuns*, just as in the ordinary form *uns*, and also the vowels *o* and *a* in *ons* and *ans*, which latter vowel, when after a consonant, is equivalent to *e* in the Lithuanian *ens*, have become, according to Mr. Bopp, weakened of *a*, which was originally *â*. This participle is generally used in the Old Prussian as a circumlocution of the perfect indicative; as, *asmai murrawuns bhe klantiwuns*, *ye have murmured and cursed*. The future, also, which is wanting in the Old Prussian, is always expressed by the auxiliary *to become*, and the participle of the perfect tense; as, *madliti, tyt wirstai ious immusis* (where the vowel *u* of the plural form *usis* is organic, and identical with the Sanscrit *u* of that stem which is used in the weakest cases, and also

in the feminine *us*, it is also identical with the letter *u* in the corresponding Lithuanian forms), *laukiti tyt wirstai ious aupallusis*, *pray, then you will take* (literally, *then you become having taken*), *seek, then you will find* (strictly, *having found*). The weakest form of the Sanscrit suffix of the participle likewise appears in the Lithuanian in the oblique cases of the masculine, yet with the inorganic addition of *ia*. The nominative case, *sūkēns*, as regards its termination, is based upon the strong Sanscrit theme *vāns*; the letter *s* in *sūkēns* remains in the nominative and vocative cases, while in the Sanscrit, in both these cases, the sign of the nominative case, as well as the final consonant, is dropped, for it does not tolerate two consonants at the end of a word; as *rurud-vānī* for *rurudvāns*, in the vocative case *rūrūdvanī*. In the Zend, according to Mr. Bopp, § 787, the letter *s* of the nominative case is changed into *o*, as *dad'vāo*, *having created*, *vid-vāo*, *knowing* (εἰδός). In the weakened cases, as well as before the feminine character *ī*, like the Sanscrit suffix it is contracted into *us'*.

With the form *uḡt*, of which, in the Sanscrit, are formed the middle cases of the perfect participle, as has been correctly stated by Mr. Bopp, § 789, the Greek *or* is connected, in which the primitive accentuation has been preserved, but the digamma given up, which, as a general thing, is rejected in the middle of words, especially in the suffix *evr*, which corresponds to the Sanscrit *vant* of the strong cases. As, therefore, ἀμπελόεντ compares with the Sanscrit forms, such as *d'ana-vant*, *endowed with riches*, so also τετυφ(F)or compares with *tetupvat* (we would rather say *τετυπ For*), with which latter form, moreover, agrees the neuter form *τετυφός* in the nominative, accusative, and vocative cases. The feminine form in *vīa*, which is a mutilated form of *voīa* (οοία, οο[y]a), corresponds with the Sanscrit *tutupu's'ī*. We here add that in the Sanscrit the simple (strong) aorists, or imperfect tenses in the participle, were represented by the reduplicating aorist or the perfect tense, while in the Greek they went further, and employed the suffix *vāns* in two forms, — *vā'ns* (*vā's*), and *vā'n*, in both of which the suffixed

syllable received the accent, and the form *vāns* was afterwards employed to express the strict idea of the perfect tense, and the other form *vān* to express the aorist. This last form was applied both in the case of the reduplicating and the non-reduplicating aorists. Between these two forms of *vāns*, employed in the Greek, there is still another difference. Although the stronger form *vān's* (*vā's* = *ωs*) is made use of in the nominative singular of the masculine gender in those forms of the aorist which were afterwards used in the sense of the perfect tense, yet in all the oblique cases, and also in the nominative singular of the neuter gender, the weaker form *vāt* (*σ*) is employed with the accent upon the suffix, while in the strong or second aorists the stronger form *vant* (*vont*) is preferred throughout in all cases of the masculine and neuter gender, with the accent also upon the suffix. These two forms, however, again agree in this, that both, in the feminine gender, give a preference to a shorter form, as in *πεποιθ[ F ]ός*, *πεποιθ[ Fυ ][ σ ]ία*, *πεποιθ[ F ]ός*, and *πεπιθ[ F ]ών* [Sanskrit *vān*], *πεπιθ[ F ]ούσα* [Sanskrit fem. *ḍsi* or *ooseḷ*], *πεπιθ[ F ]όν* [Sanskrit *vān*], *λαβ[ F ]ών*, *λαβ[ F ]ούσα*, *λαβ[ F ]όν*. The same derivation is very justly attributed by Mr. Bopp to the ending of the participle in the Slavonic perfect, where, indeed, according to him, the tense corresponding to the Sanscrit and Greek perfect tenses (and to the Germanic preterite), has been lost in the indicative mood, as has been the case in the Lettic languages, but where, even as in the Lettic idioms, the form of the participle has been preserved, which had been generated from the perfect tense, before these languages had separated from the other members of the Arian stock. The root of this suffix in the nominative and vocative cases of the three numbers of the masculine and neuter genders, and also in the accusative case of the dual, is *vās'* or *us'*, the letter *s'* of which, according to a law in this language, is suppressed in those cases of the singular number which do not receive any additions (compare Bopp, § 790, p. 156, and Prof. M. Rapp's *Verbalorganism* on the Old Slavonic, Bk. III., p. 99, ff). The original *vav* of this ending, in the Slavonic as

well as in other members of the Arian family (see Bopp, § 822), passed also partly over into the liquid *l*; for, in addition to this original participle of the active voice, there exists another participle in the Slavonic language, *lu, la, lo*, which, with the auxiliaries, forms compound preterite tenses, and which, in the later northern tongues, replaces the entire preterite. But we cannot agree with Messrs. Bopp and Rapp,<sup>1</sup> who derive this *l* from an original *d* or *t*, instead of from the letter *v*, which lies much nearer; and we wonder that Mr. Bopp, who very properly derives the Latin suffix *lent* in words such as *corpulento, opulent-, vinolento, somnolento, violento, temulento*, instead of *corpuvento, opuvent-, temuvento*, from the Sanscrit *vant, vas, vat*, does not recognize it in this shortened form of the Slavonic perfect tense, where *l* in the place of *v* is evidently a later change of letters, which also occurs in the Georgian language, and where the accent is on the suffix, just as in the Sanscrit and the Greek. As regards the *v*, or digamma, it has disappeared from the Greek written language like the consonantal *y*, and is found only in inscriptions and the writings of grammarians, yet in a great number of verbal forms, where it has not passed over into any other sound, its former existence may be inferred with sufficient certainty, so that there no longer remains any doubt as to the function of *v* in the formation of the perfect tense. We refer the reader to the examples furnished by Dr. Buttmann (§ 97, Obs. 10, and in other places), as, *βεβαρηώς, κεκαφηώς, κεκμηώς, κεχαρηώς, πεπτηώς, τετιηώς, τετληώς, πεφύασι, πεφυύια, γεγάασι, γεγάατε, δεδάασι, μεμάασι*, etc., instead of *βεβαρηFώς, κεκαφηFώς, πεφύFασι, γεγάFατε, γεγάFασι, μεμάFασι*. The *v*, or digamma, however, has not only been dropped, as in these and many other instances, but also makes its appearance again in the form of a hard breathing, as in *ἑσπέρα*, Lat. *vesper*, and therefore aspirates the preceding labials and gutturals, as *τέτυπά* (*τέτυπάμ* for *τέτυπFαμ*), *τέτυφα, πεπραγ-ά* [*πεπραγάμ*], *πέπραχα*. In other members of the Arian family also, it may be seen

<sup>1</sup> Professor Moriz Rapp's "Verbal-Organismus der Indo-Europaischen Sprachen." Stuttgart: 1859.

that this *h* developed from *v* may be hardened into *k* or *c*, as in Latin, *niv-*, *niv-s*, *nic-s*, *nix*; *viv-*, *viv-si*, *vic-si*, *vixi*; *conniv-*, *conniv-si*, *connic-si*, *connixi*; *nav-*, Ags. *naca*, *nacho*; Sanscr. *dévára*, Ags. *tacor*, Old High Germ. *zeihur*, which makes *zeihura* equivalent to *dévára*. The *v* of the Gothic root *quiva*, nominative *quiv-s*, Sanscr. *giva-s* (living) corresponds to the Anglo-Saxon, directly descending from the Gothic, *quick* for *quikk*, and to the High German *quek*. At all events, the fact that in the Greek language *v* through *h* passes over into *k*, and thus that *k* may replace an original *v*, will not be denied by the learned scholar; and from the above examples, which we have extracted from a list of Mr. Bopp's (§ 19), it may be clearly seen that this letter *k* cannot be regarded as inorganic. In this manner of forming the perfect tense the Greek coincides with the more archaic Latin, and the suffix of the perfect tense, which it has in common with other members of the Arian family, appears in this language not only in the ending *lent*, which was treated of above, and where the letter *v* is replaced by *l* (*opulent* for *opuvent*, etc.), but it is also mediately or immediately added to roots in the formation of adjectives, as *vac-*, *vac-i*[*i* = *ay*]-*vo-*, *vos*, *vus*, *vac-vus*, *vacuus*; *noc-i-vus* [*i* = *ei* = *ay*], *noc-vus*, *nocuus*; *conspic-vus*, *conspiciuus*; *perpet-vus*, *perpetuus*; *contin-vus*, *continuus*, etc.; also *cap-to-*, *cap-tus*, *capti-vus*, like the Sanscrit *uk-ta-van*, in the indicative, subjunctive, and infinitive moods of the perfect and in the future perfect; or it is added to verbal roots in the formation of tenses, — that is, preterite, perfect, and pluperfect tenses (as in the Slavonic and Sanscrit), where it is either followed by the mere pronoun or by the substantive verb,<sup>1</sup> and where

<sup>1</sup> It is true that the Oscan forms *pruffed*, *aamana-ffed*, *aikda-ffed* (see Mommsen *Unteritalische Dialecte*, p. 234), and the Umbrian *pihafi*, *pihafei*, Lat. *piavit*; *ambresurent*, Lat. *ambiverint* (see Th. Aufrecht and A. Kirchhoff *Umbrische Denkmäler*, Vol. i. p. 144), are adduced in favor of the derivation of this suffix from *φύω*, *fuō*. But so far from admitting the validity of these proofs, on the strength of the facts advanced above, and seconded by Mr. Mommsen himself, we utterly reject the derivation of *amavi* from *amafui*, *monui* from *monefui*, *audivi* from *audifui*, and hold that the Oscan and Umbrian *f* and *ff*, in the above words, have been hardened from *v*, as has been done in other places, and especially in

the letter *a* (*va, vat*) coalesces with the personal pronoun *im*, which is shortened from *am, vai* from *vaim*, first passed over into *ei*, and finally into a long *i* (Engl. *i* in *machine*), and the final *m* at first began to be sounded very weak, and at last was dropped altogether. Finally, this theory is proved by the formation of the Vedic aorists in *im*, which have not yet been reduplicated, as *badh-im, I killed, kramim, I mounted*, instead of the later *ab'adisham, akramisham*.

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#### ARTICLE IV.

#### JONATHAN EDWARDS, HIS CHARACTER, TEACHING, AND INFLUENCE.<sup>1</sup>

BY JOSEPH P. THOMPSON, D.D., NEW YORK.

WHEN Jonathan Edwards, at the age of fifty-four, was chosen to the Presidency of Nassau Hall, at Princeton, New Jersey, he alleged as difficulties in the way of accepting "that important and arduous office," — first, "his own defects, unfitting him for such an undertaking," and secondly, that "course of employ in his study, which had long engaged and swallowed up his mind, and been the chief entertain-

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an adverb formed by means of this very suffix, *statif* for *stative*. If we even grant an original *f* in the Oscan and Umbrian, yet we are not authorized thereby to transfer this at once to the Latin, since each of these idioms, in many respects, has taken its own course. We are much rather inclined to think that the forms *benarent, venterint, facerint, fecerint, procanarint, procinuerint*, present an abridged form of the suffixes *v* or *va, ve*; for if these forms are not for *benarent, venterint, facerint, procanarint* or *-ent*, there would not be a single trace of the perfect tense in these forms of the future perfect.

<sup>1</sup> The following article was originally prepared as one in a series of lectures before the Young Men's Christian Union, of Boston, upon "the influence of representative religious men on the moral and religious life of their own denominations and that of Christendom." It was subsequently delivered before the students of Andover and Yale Theological Seminaries. This statement will explain the rhetorical cast of the article, and the occasional use of the first person, which could not be avoided without changing its whole structure.