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Proceedings at Boston, May 29th, 1878.

The Society came together at the usual time and place, the chair being occupied by the President.

After the reading of minutes of the last meeting, reports of the officers were called for.

The summary of the Treasurer's report is as follows :

RECEIPTS.				
Balance on hand, May 30th, 1877,	-	-	-	\$1,562.30
Annual assessments paid in,	-	-	\$40.00	
Sale of the Journal,	-	-	13.50	
Interest on deposit in Savings Bank,	-	-	81.93	
Total receipts of the year,	-	-	-	135.43
				\$1,697.73
EXPENDITURES.				
Printing and engraving for Journal,	-	-	\$ 65.27	
Book-binding,	-	-	104.15	
Current expenses of Library and Correspondence,	-	-	26.12	
Total expenditures,	-	-	-	195.54
Balance on hand, May 29th, 1878,	-	-	-	1,502.19
				\$1,697.73

The Librarian reported the receipt during the year of a hundred volumes and parts of volumes, twenty-three pamphlets, and two manuscripts. The number of titles of printed works is now 3319 ; of manuscripts, 138.

The Committee of Publication reported that the second half of the tenth volume of the Journal, long detained in the press, was now rapidly approaching completion, and would be ready for distribution in a few weeks. To it would be appended the full list of additions to the library, and the list of present members.

The Directors gave notice that the next meeting would be held in New Haven, and on the 23d of October next, unless, for sufficient reason, the time should be changed by the appointed Committee of Arrangements (composed of the President, Recording Secretary, and Treasurer).

They further recommend the election as Honorary Members of

Prof. Theodor Benfey, of Göttingen ;
 Mr. Arthur C. Burnell, of Madras ;
 Prof. Berthold Delbrück, of Jena ;
 Prof. Theodor Nöldeke, of Strassburg ;
 Prof. William Wright, of Cambridge.

Ballot being had, the gentlemen were declared unanimously elected.

On the nomination of a committee appointed for the purpose, the following persons were elected officers for the ensuing year.

<i>President</i>	—Prof. E. E. SALISBURY, LL.D.,	of New Haven.
<i>Vice-Presidents</i>	{ Rev. N. G. CLARK, D.D.,	“ Boston.
	{ Hon. PETER PARKER, M.D.,	“ Washington.
	{ Rev. T. D. WOOLSEY, LL.D.,	“ New Haven.
<i>Recording Secretary</i>	—Prof. EZRA ABBOT, LL.D.,	“ Cambridge.
<i>Cor. Secretary</i>	—Prof. W. D. WHITNEY, Ph.D.,	“ New Haven.
<i>Secr. Class. Sect.</i>	—Prof. W. W. GOODWIN, Ph.D.,	“ Cambridge.
<i>Treas. and Librarian</i>	—Mr. ADDISON VAN NAME,	“ New Haven.
<i>Directors</i>	{ Mr. J. W. BARROW,	“ New York.
	{ Mr. A. I. COTHEAL,	“ New York.
	{ Prof. W. H. GREEN, D.D.,	“ Princeton.
	{ Prof. A. P. PEABODY, D.D.,	“ Cambridge.
	{ Prof. CHARLES SHORT, LL.D.,	“ New York.
	{ Prof. J. H. THAYER, D.D.,	“ Andover.
	{ Rev. W. H. WARD, D.D.,	“ New York.

The Corresponding Secretary read the names of the members known to have deceased during the last year: namely, of the Corporate Members,

Prof. Wm. R. Dimmock, of Quincy, Mass. ;
 Prof. J. B. Feuling, of Chicago, Ill. ;
 Dr. Charles Pickering, of Boston ;

of the Corresponding Members,

Rev. William Tracy, of South India ;
 Rev. H. A. Wilder, of South Africa ;

and of the Honorary Member,

Prof. Hermann Grassmann, of Stettin.

He added to the announcement some account of the character and services of each. He sketched especially the remarkable career of Grassmann, who had first distinguished himself as a mathematical philosopher among the foremost in Europe in that department, had begun in middle life his valuable contributions to philological science, and had finally laid students of India under deep and lasting obligation by his admirable Vocabulary-Index to the Rig-Veda and his complete metrical version of the same Veda—a work of a high order of merit. His devotion to these labors had doubtless shortened his life ; for though he was full of years (nearly seventy), a period of useful activity might still have been expected from him.

Messrs. Tracy and Wilder were missionaries of long standing under the American Board, Mr. Tracy considerably the older ; both had left an honorable record in their mission-work ; and both would be remembered by the Society as having contributed to the interest of its meetings while in this country on vacation visits.

Dr. Pickering had inherited an interest in the Society from his uncle, its first President, and had been one of its Directors, and almost invariably present at its Boston meetings, during nearly

the whole of its history. His special scientific studies in the distribution of animals and plants had led him over to anthropology and ethnology, his contributions to which branches of knowledge had won wide recognition.

Prof. Dimmock had greatly distinguished himself as a teacher, endearing himself to a large circle of pupils and friends by his accomplishments as a scholar and his character as a man, and his premature loss in the prime of life was profoundly felt through the whole community.

Prof. Feuling also had won an honorable name through the West, and through the country, as a scholar and teacher of more than usual ability and success.

At the invitation of the Secretary, Dr. Anderson spoke further briefly of Messrs. Tracy and Wilder; and Prof. Goodwin set forth more fully the merits of Prof. Dimmock, to whom Mr. H. F. Jenks also paid the affectionate tribute of a pupil.

The Corresponding Secretary read a letter from Prof. F. P. Brewer, of Grinnell, Iowa, suggesting certain emendations in the readings of the Noumenios inscription communicated by Prof. Hall at the meeting of the Society a year ago, and published in the Proceedings of that meeting, and notes upon the inscription.

Prof. Brewer proposes *διατέλεσε* (for *διατελει δε*) in line 3; *εδοξεν* (for *εωθιξεν*) in line 6; *τοῦ Ποσειδῶνος τοῦ Λαρνακίου* in line 7; and *ἀνελεῖν* (?) (for *απειλε*, which is only Ionic) in line 9; and he would translate: 'Whereas Noumenios, son of Noumenios, being a benefactor of the city, continued to take the whole care of the high-priest and of the priests in both word and deed, it seemed good to Praxidemos the high-priest and to the priests of Poseidon of Larnax to grant to Noumenios and his descendants that they may take the first choice of the reserved pieces for all time of whatever they may sacrifice. With good luck!' The phrase *ὦν ἂν θύωσιν* in line 8, he says, "seems to refer to the *γερών* of line 9. The *γέρα*, I suppose, are the choice bits of the animals sacrificed, which were the perquisites, according to established rule, of certain persons attached to the temple. The first choice of these forever was relinquished to the family of Noumenios, in the sacrifices they might have occasion to offer at that temple. . . .

"The name of the high-priest, Praxidemos, occurs in another inscription formerly found in this village—a bilingual inscription, of which the Greek part was published as follows by Prof. Sakellarios, Athens, 1855:

Ἀθηνᾶ Σωτεῖρα Νίκη καὶ βασιλεὺς Πτολεμαῖος. Πραξίδημος Σέσματος τῶν βωμῶν ἀνέθηκεν. Ἀγαθῆ τύχη.

"It is possible that the Praxidemos mentioned in the two inscriptions is the same."

Prof. Hall explained that some of the suggested emendations were of obvious plausibility; they had been in his own mind, but rejected as unsupported by the monument itself; they also appeared in part in the version given by di Cesnola's assistant scholars in his "Cyprus," emended from an original copy coincident with his (Prof. Hall's) own. So, for example, the II of the inscription has a very long horizontal bar, and it and the N cannot possibly be mistaken for one another. The exchange of Δ and N is more possible.

The Society now proceeded to listen to communications.

1. On the Cypriote Inscriptions of the new Cesnola Collection, by Prof. Isaac H. Hall, of Philadelphia, Pa.

This paper was accompanied with squeezes and drawings of the new inscriptions, so far as unpacked, with translations where possible. Most of these inscriptions are short, but all are valuable, nearly every one contributing its share in advancing the knowledge of the Cypriote writing. Several variant characters

are explained, with some new grammatical forms, such as μ for $\acute{\epsilon}\mu$. Two of the inscriptions were especially interesting as having helped to identify the temple of Apollo Hylates at Curium. Several more occur on tall jars of red polished ware, hitherto thought by the best authorities to be exclusively Egyptian. Of all these matters the details are necessary for a proper comprehension of the subject, which cannot be well shown without plates. The squeezes and drawings showed also the inadequacy of the figures hitherto published in Europe of a few of the new inscriptions, especially of the gold armlets of king Ethevander, found at Curium.

Those inscriptions of the old collection which could not be found at the time of the former paper on the subject, presented in 1874, have since been recovered. They were presented also with this paper, with squeezes and drawings. Here also appeared the great faultiness of European publications of some of them. For instance, No. 256 in the old collection reads as follows:

(1) *e. te. i. i. lll a. ne. te. ke.*

(2) *ta. we. i. ko. na. ta. te? ne? a. po.*, the seventh and eighth characters in the second line being a little doubtful. In Greek, probably,

(1) *ἔτει lll ἀνεθήκε*

(2) *τα(ν) φεικονα τα(ν)?* ————— *Ἄπο[λων]* The blank I do not yet venture to fill, on account of the doubtful characters.

By comparing this plain reading with the two different ones in Schmidt's *Sammlung* and *Inscription von Idalion*, it will be seen how defective material Schmidt must have had to work with. The stone is broken off at one end, and with it the name of the person who offered the statuette to Apollo.

No. 270 of the old collection is on a piece of a large vase, found with the stone bearing a figure of a serpent with an inscription nearly obliterated. In Roman it reads:

ti. mo. to. re. te. se. to. ma. ki. ri. o. se.

This difficult inscription is interesting on account of its evident connection with others, more or less difficult. I am unable to say whether any attempt has been made to publish it. Schmidt appears to have it in view in his 3*b*, Plate XII of the *Sammlung*, which he confounds with his 3*a* on the same plate. The latter is quite a different inscription, however, and was never known, even by Gen. di Cesnola, until I found it in the collection.

It is not possible, however, always to tell to what inscriptions Schmidt refers, so far astray are some of his copies. In his No. 7, Plate XIX (not numbered in the Cesnola Collection), at least seven characters are wrong.

No. 248 according to the old numbering is another that is difficult to identify in Schmidt. It may be 1*a* and 1*b* of Plate XVIII of his *Sammlung*. It is fragmentary, but the following is legible:

mi. ta. si. ta. mo. se. e. mi. | se. ———.

Before the division mark there is doubtless a proper name before $\acute{\epsilon}\mu$.

Squeezes were also exhibited of the "Naked Archer" inscription in the British Museum, of the bi-lingual and other inscriptions discovered by D. Pierides of Cyprus, of the Pyla inscription, and others, which showed the great inaccuracy and deficiency of all the published representations in attempted facsimile.

2. History and Life Illustrated by the Inscriptions from Eastern Palestine, by Rev. Selah Merrill, of Andover, Mass.

The discovery of the Moabite stone has within recent years awakened a special interest in the subject of inscriptions in the country east of the Jordan. Those already brought to light exist in the Moabitic, Hebrew, Nabathean, Palmyrene, Cufic, Greek, and Latin languages, with perhaps two additional ones, if we are allowed to include in this group the so-called Hamath inscriptions, and those from the Safa-region, or the district south-east of Damascus and east of the Druze or Hauran Mountains. These inscriptions cover a wide period, or from 900 B. C. to about the time of the Moslem conquest in A. D. 635, and are of very great value for historical and linguistic purposes. The most recent and valuable publications containing these inscriptions are those of Wetzstein, a small volume published in 1864 containing about 200 inscriptions with notes—of Waddington, whose work, published in 1870, is by far the most complete now existing upon the subject—and of De Vogüé, whose first volume, published in 1868, is devoted chiefly to the

Palmyrene inscriptions, with a few Nabathean inscriptions from the Hauran, and whose second volume, published in 1877, contains the so-called "Sabeen inscriptions" from Safa.

In this paper attention was directed mainly to the contents of the Greek and Latin inscriptions from Eastern Palestine, of which something upwards of 2000 have been collected. Mr. Merrill presented to the Society seventy odd inscriptions which he had collected in the country east of the Jordan, all of which, with one or two exceptions, were new. They touch upon a great variety of topics, and are of the utmost importance in illustrating the religion, language, occupations, business affairs, and social and private life of the people who once made these East-Jordan deserts a land of enterprise and prosperity. Such facts ought to stimulate investigation in this department, which is certainly one of unusual interest in connection with researches in Bible lands. Among the particular subjects which were treated at length in this paper were military affairs, the legions, stations of the troops, officers, recruiting, etc.; the building of castles, forts, temples, tombs, churches, reservoirs, theatres, and still other public and private buildings of various kinds; the denominations and coining of money; the methods of raising money for public purposes by taxing, general contribution, or private subscription; the interest of the people in the water supply for their cities and towns; hints with regard to the ancient cave-dwellers in those regions; details as to the mythology which prevailed there, and the subsequent wide-spread Christian influence; evidence of extensive vine-culture; interesting facts with regard to architecture, trades, occupations, and professions, among which were hotel keepers, engravers, and interpreters; in the very late periods the worship of saints and angels; evidence bearing upon the question of the culture of the inhabitants and the languages which they spoke; and a list was also given of the Roman Emperors, together with the Jewish, Arabian, and Palmyrene rulers that are mentioned in the inscriptions.

The work of copying inscriptions is difficult, and deserves to be called a special art. Permission has first to be gained, and next, the inscriptions themselves have to be found. Frequently it is not possible to take a paper impression, although this is desirable where it can be done. The inscription should be visited more than once, and the previous work scrutinized at each subsequent visit. Advantage also must be taken of the light. There are besides several devices which help to insure accurate copies, but the work requires constant and special care. Owing to various causes, new inscriptions are constantly being brought to light, and it is a matter of increasing surprise that, after the multiplied forms in which ruin and desolation have visited that once beautiful region, so many ancient and valuable monuments should be preserved.

3. On the Verbal Roots of the Sanskrit Language and of the Sanskrit Grammarians, by Mr. A. H. Edgren, of New Haven.

The object of Dr. Edgren's paper was to distinguish the authenticated roots and root-forms in Sanskrit from the unauthenticated, to make a general classification of the former, and to attempt a determination of the character and value of the latter.

The author referred first to the familiar fact that a majority of the roots given by the Hindu grammarians had never been met with in use, and to the suggestions made in explanation of it. The importance of the matter to Indo-European etymology makes desirable a more systematic inquiry.

Of the more than two thousand roots catalogued by the grammarians, 974 have been authenticated by being found in use in the literature; and there are besides over 30 Vedic roots which the catalogues do not contain. A considerable number of the former, however, are only duplicates, of slightly different form: if these are subtracted, the number is reduced to 879. Taking from this number, again, evident denominatives, there are left 832; and by further deduction of essentially duplicate and derivative forms, we arrive at the number of 788 radicals, which are either entirely distinct roots, or secondary formations by accretion, or vowel-change and transposition, outside the ordinary grammatical processes—and even this number may be further considerably reduced, if we are strict in detecting and casting out such secondary formations.

Of the 832 which remain after taking away graphical variations and denominatives only, 549 occur in both the Rig-Veda and the later literature; 62 are found in the Rig-Veda alone (11 having later derivatives); of the remaining 221, about 30 have derivatives in that Veda, and a considerable part of the rest occur in the other Vedas or in the Bráhmaṇas—not a few, only there. Of course, the absence of any root in a single work is no proof of its absence from the language of the period. Yet there are sufficient reasons for believing that a considerable part of the roots here in question are of later origin.

An important characteristic of the authenticated roots is their productiveness, by combination with prepositional prefixes and by formation of derivatives; very few of them remain barren and isolated in the dictionary.

Of the other great class of radical forms, the unauthenticated, there are 1119. Allowing, as before, for slight variations of form in roots of identical meaning, the number will be reduced to rather less than 1000. It is to be noted, however, that meanings wholly diverse and incompatible are freely attributed to these roots, just as to the authenticated roots similar unauthenticated senses are assigned. Of these meanings, as virtually increasing the number of roots, no account is here made. The character of the class was discussed under the following heads: 1. The disproportion between the two classes. While Westergaard and other early scholars might hope that the unauthenticated roots would yet be found in parts of the literature then unexplored, all hope of such a result is now long past. 2. The different relation which the classes sustain to the material of the vocabulary. Only a small proportion of the unauthenticated (less than 150) even seem to have any connection with derivative nominal bases. 3. The different relation between authenticated radicals of kindred form and meaning on the one hand, and unauthenticated ones of the same kind on the other; and the artificial aspect of the latter. Nearly four-fifths of the second class can be arranged in groups, numbering from two to twenty and more, of identical meaning and of analogous but obviously not historically related form. For example: *kev, khev, gev, glev, pev, plev, nev, mlev, cev*; *meb, peb*; *mep, lep*, are all defined by *sevane*, 'serve, honor'; and there are groups of identical final with almost every consonant in the alphabet as initial. Under this head were considered at some length the causes which may be conjectured to have led to the fabrication of such groups. 4. The discrepancy between the number of the two classes represented in cognate languages. Fick finds evidence for regarding about 450 of the authenticated radicals as belonging to the Indo-European period; of the others, only 80, and many of these on very unsatisfactory grounds.

While the general conclusion from the facts and arguments presented is that the vast majority of the unauthenticated roots are pure figments of the grammarians, the probability still remains that a certain percentage of them are real, and either stowed away in some unexplored part of the literature or, for one or another reason, never recorded there.

The paper closed with an alphabetical list of the authenticated roots, stating under each whether it occurs in the Rig-Veda alone, in the later literature alone, or in both, also whether it is combined with prepositions, and whether derivatives are made from it. To this list was added an index of the same roots arranged alphabetically according to their finals.

4. On some of the Religious Notions of the Gâthás, by Mr. J. Luquiens, of Boston.

Dr. Luquiens began with describing the peculiarities, external and internal, which distinguish the Gâthás from the rest of the Avesta, marking them as far more ancient and original; and he sketched the character of the Zoroastrian religion as represented in them. The tradition is especially untrustworthy in their interpretation, but they are still full of difficulties also for European scholars. An illustration of this is furnished by the discordant versions of the *Ahuna-Vairya* prayer, the paternoster of the Zoroastrians. It reads:

*yathá ahú vairiyó athá ratus ashátcit hacá
vanhéus dazdá mananho skyaothmanám anhéus mazdá
kshathremcá ahurái á yim dregubiyó dadat váctárem.*

Justi renders: 'As he is the lord by his own (unrestricted) will, so he is the master out of purity. The gifts of Vohu-mano are for the good works (accomplished) in the world for Mazdâ and to Ahura belongs the reign, which he gives to the poor for a protection.' This has no acceptableness of meaning to recommend it, and its treatment of *vairyô*, *ashât*, and *yim* are especially to be questioned.

Roth is especially independent of the native interpreters, relying more on etymology, and amending the text freely, from metrical and other considerations. In treating the passage, he leaves out *ashât cit hacâ* as a superfluous insertion, and with a little transposition and other alteration changes the verse from a regular *ahunavaiti* stanza to another metre, of four lines, and reads: 'As there is a better world, there is also a ruler thereof, the lawgiver of righteous ways of life: In this world also Ahura Mazdâ has the sovereignty, and has placed in it a shepherd for the poor.' Besides other objections of detail, the main thought is too unlike the usual manner of the Gâthâs to be adopted on the authority of a reconstructed text. Dr. Haug, finally, who after his stay in India changed his method of interpretation, and became a favorer of the native tradition, translates as follows: 'As an invisible ruler is to be selected, so is also a visible spiritual ruler, for the sake of purity: Namely, the giver of the good spirit, of life's works for Mazdâ; The reign belongs to the living ruler, whom he (Mazdâ) has given to the poor.' The peculiar point here is the rendering of *ahû* by 'invisible ruler,' and its contrast with *ratu*, founded on the modern Parsi usage; though the Gâthâs know no patron saints, no *Izeds*. The word has such a sense only in the later texts, in combination with *ratu*—a combination of a kind not infrequent in that period. Neither tradition nor etymology suffice to settle such questions, but only a study of the word in its whole office and use in the religious system, by the method sketched in its main outlines by Spiegel.

The word *vairyô* cannot well be rendered otherwise than as Haug renders it, '[is] to be selected'; and it is the needed predicate of the first sentence. Choice, selection, is a prominent and interesting idea in the Zoroastrian faith. This was shown and illustrated at some length: for example, Ahura-Mazdâ and Ahriman are represented as having 'selected' respectively righteousness and evil deeds; the division of the righteous and wicked depends on their will.

In *asha* is represented the embodiment of the moral and religious order of the Mazdayaçnian world, the antithesis to the powers of darkness.

Khshathrem has often a religious import associated with it, as the 'realm' of Ahura-Mazda etc.; it and *cti*, 'nation,' are used with *vairyô*.

The meaning 'life' is not to be approved for *anhûs*; it means rather the established order of the world, the sphere of order and religion, the reign of Asha; and *anhûs dregvanô* is its opposite, the hostile reign, the domains of the *druj*. In the plural it assumes a more personal value, as the dwellers or participants of the reign. It is divided into a corporal or human sphere (*anhûs actvo*, etc.) and a spiritual or invisible one (*anhûs manaiho*). By the latter is hardly to be understood a future world; this makes but a doubtful and shadowy appearance in the Gâthâs, in the form either of a heaven or of a hell.

The phrase *ashât hacâ*, if these conclusions are correct, seems an essential complement to both *ahû* and *ratus*, its ablative value being nearly equivalent to a genitive one.

The rest of the formula would make little difficulty, but for *ca*, which is treated as of small account by most of the renderings, but which, though sometimes wanting where it might be expected, is perhaps never introduced without reason. This leads us to conjecture a parallelism between the two phrases with *mazdâi* and *ahurâi*, which is obtainable by amending *anhûs* to the nominative *anhûs*—a change further supported by the kinship of *anhûs* and *khshathrem* in the religious ideas of the Gâthâs, by the excessive agglomeration otherwise of genitives in the second line, and by the isolation of *mazdâi* at the end of the line, if *anhûs* is to be taken with what precedes. The reading *anhûs*, then, may be suggested for trial, and the prayer thus rendered: 'As we must side with the reign of righteousness, so let us side with the ruler thereof—namely, the giver (prompter) of the works of the holy spirit; for the reign and the power too belong to him, to Ahura-Mazdâ, whom it makes a guardian for the poor.'

which have been by recent additions expanded into fuller verb-systems. In the classical Sanskrit, the base of the present-system is formed in a variety of ways, all practically equivalent with one another and with the simple root, and each verb forms in general only one present; in the Veda, the occurrence is very frequent of two or more present-systems of the same verb; and a careful examination will perhaps show in Vedic usage signs of that difference of meaning by which it is generally believed that they must in all cases have been distinguished from one another. If the secondary conjugations be regarded as properly belonging in the same category by their origin, their retention or acquisition of a separate significance of their own beside that of the primary present will have given them in the apprehension of the language-users a degree of independence which led to their being filled out in some degree with the other usual parts of the verbal structure.

The passive conjugation is most clearly and undeniably of this character, and Delbrück (*Alhind. Verbum*) has not hesitated to treat it as a present-system only, standing in the same relation to the *ya*-class (4th), as the *á*-class (6th) to the *a*-class (1st). All that belongs to it further is a peculiar 3d. sing. aorist; for the special forms of the other tense-systems allowed by the grammarians are wholly unknown to the earlier language, and hardly if at all, to be found in the later.

The other conjugations have been extended, more or less, by the addition of perfect, aorist, and future tense-systems, and of verbal nouns and participles.

As for the perfect, the Rig-Veda (alone) has two cases of a real intensive perfect, which it is not difficult to regard as purely sporadic analogical formations. Elsewhere, the secondary perfect is made by prefixing the accusative of a derivative verbal noun in *á* to the perfect tense of an auxiliary—usually, the verb *kar*, 'do.' But this is almost wholly unknown in the Vedic language: the four Vedas furnish only a single example belonging to a secondary conjugation (viz. *gamayám cakára*, A.V.); and, beside it, one from a primary conjugation (viz. *vidd'm cakára*, TS.). For where the formation begins to appear, it is made as often to eke out the primary conjugation as the secondary; and the derivative in *ám* is found even from reduplicated present bases, as *juhavám, bibhayám*.

The causative is the only secondary conjugation to which belongs an aorist of any account; and the causative aorist has nothing to do originally with the other causative forms; it is not of the same blood with the rest, but only married into their family. The causative conjugation itself is neither from the beginning nor exclusively causative; it is, as all the best opinion holds now, a denominative formation, which wins in part a causative value, in much the same way as some of the Latin and Germanic derivative verbs; and a certain kinship of meaning leads to the gradual assignment of the reduplicated aorist as adjunct to the formation; their union is only in process, not yet accomplished, in the early Vedic language.

Aorists of the other secondary conjugations are almost wholly wanting both in the Vedas and in the Bráhmaṇas. The only exceptions noticed have been an example or two of the *ish*-formation from denominative bases.

The creation of futures, in *ishyámi* etc. begins a little earlier, and in the causative, to which the adjunction of the reduplicated aorist gave soonest something of the aspect and value of a whole conjugation. The Rig-Veda has two examples of causative future forms; the Atharvan, two more; the two branches of the Yajus (in personal forms), four more; and they begin to grow somewhat more common in the Bráhmaṇas. Futures of intensive and desiderative conjugation begin to appear in the Bráhmaṇa period, and continue always to be excessively rare.

An examination of the verbal nouns and adjectives—in *tum, tvá, tavya, ta*, etc.—would not yield a different result: they begin to appear in late Vedic time, and become gradually more frequent. Of the infinitive in *dhyái*, to be sure, even the Rig-Veda contains a number coming from "causative" bases; but, considering such cases as *pibadhyaí* and *vávrhadhyaí*, this signifies nothing.

Of what may be called tertiary conjugations—passives, desideratives, etc., from causative and other secondary bases—the Vedas contain nothing; and, except the causative-passive, they are only sporadic even in the Bráhmaṇas.

Intensive and desiderative forms are so rare throughout the later literature that it is very difficult to lay down any laws as to their occurrence. There is hardly

any other part of Sanskrit grammar, therefore, which stands in more pressing need of being put upon the basis of the actual facts of the language, instead of the rules, always destitute of perspective, of the Hindu grammarians.

7. An Enumeration of certain Verb-forms from the Çatapatha Brâhmana, by Prof. John Avery, of Brunswick, Me.

Having lately had occasion, Prof. Avery said, to look through the text of the Çatapatha Brâhmana in order to excerpt certain verb-forms, he desired to present a brief summary of the results, as compared with those from other texts previously examined.

Of subjunctive forms, there are over 550 in this Brâhmana, against 100 in the Aitareya, and over 1400 in the Rig-Veda. But those of the third class (coincident with augmentless preterits), which in RV. were nearly half of the whole number, have become very rare (only 3 per cent. against 10 in AB.): and those of the first class (with mode vowel and primary endings) have risen from less than a quarter in RV. to half and more in AB. and ÇB. The use of the preterits in indicative sense without an augment is almost extinct; there are but two or three instances of it.

The imperative ending *tât* is rarer than in AB.

The occurrences of aorist-forms number 416 (against 175 in AB. and 2,609 in RV.). They are almost equally divided between the simple and sibilant aorists, while the former predominate in AB. (56 per cent.) and still more in RV. (71 per cent.). The root-aorist (as *agâm*) has nearly half the whole number, and the *s*-aorist (as *adrâksham*) more than a quarter.

The sibilant future and its preterit, the "conditional," are very common; the former has 425 occurrences (AB. 92; RV. 15), and the latter 53 (AB. 3; RV. 1). An anomalous form is *apnavishyâmahe*. The future participle is much used along with *as* or *bhû* in a verbal sense.

Desideratives and denominatives are nearly as numerous as in the Rig-Veda; but of intensives only 30 were noted.

Infinitives, with the endings *am*, *tum*, *tave*, *tavai*, and *tos*, occur 116 times.

In conclusion, Prof. Avery stated it as his impression derived from the comparative statistics of the verb-forms in the Aitareya and Çatapatha Brâhmanas, that the current opinion of the greater antiquity of the former is well-founded.

8. On Demonstrative Roots and Case-Formation, by Prof. M. W. Easton, of Knoxville, Tenn.; read by the Corresponding Secretary.

This discussion was suggested by Prof. Sayce's work on Comparative Philology, and was in good part an argument against the views put forth by that author upon the points in question. After a general characterization of the work, and an explanation of the peculiar point of view of the author, as a Semitic scholar, it proceeded to state the latter's hypothesis. He holds that inflection could never have been reached through such preparatory stages as the isolating and inflective, and that Indo-European language must have presented flexions from the first. He regards the pronominal elements as far too colorless to have led to a system of case-inflections, and would trace these rather to meaningless elements previously existing in the spoken language, which were appropriated, when occasion arose, to designating more clearly the relations of case. He thinks a certain child's habit of turning such words as *dog* and *come* into *dogo* and *como* perhaps a "reversion to that primitive tendency of men to round off their words with merely euphonic suffixes which appears so plainly in the case-endings of the Semitic tongues." Dr. Easton maintains, as against these doctrines, that the genesis of inflective forms from agglutinative has been established by sufficient evidence; that the assumption of a native disposition to inflected speech, antedating the manifestation of inflection in the language, is to the last degree obscure; and that to regard random and meaningless sounds as less colorless material for case-endings than demonstrative roots is wanting in plausibility. He then goes on to show what is involved in the reduction of the roots to their case-forming use—while also allowing that some variety of means may have been adopted, and

describing the office of reduplication. The primitive demonstratives were not vague and indeterminate. The assumption of a great number of demonstratives is not necessary: it is usual in all growth that economy appears in the material employed—as the hair, nails, horns, and cornea are transformations of the same epithelial cell. Time, and the long-continued successive addition of slight modifications, were the sufficient agents. The present function of a part is by no means necessarily the function of that part at its first appearance. In circumstances where little is to be said, and relating to a limited circle of interests, almost any description of verbal machinery will suffice. Mutual accord and sympathy is always an essential element in communication. Gestures lent their aid. The remotest speech may have been not unlike a series of interjections, coupled with explanatory signs. In such conditions, no indefiniteness of parts could prevent the whole from being distinct. Language, to add to its resources, simply adopts what happens to be the nearest material; the process is never one that can be logically accurate, since the use of an older word in a new meaning is of course always attended by a certain degree of distortion of its proper use, and frequently by a violent figurative transfer.

The pronominal hypothesis best explains the further advance of Indo-European language to inflection. That is the best material for such a purpose which can be most easily transformed, phonetically and in meaning; and the demonstratives possess eminently this character. Auxiliary words of more substance would have been much slower to cast off an agglutinative value.

After the reading of this communication, the Society passed a vote of thanks to the Academy for the use of its room, and adjourned, to meet again in New Haven on the 23d of October, 1878.