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EDITED BY

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New Haven.

Professor in Yale University,
New Haven.

TWENTY-THIRD VOLUME.
FIRST HALF.

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CONTENTS

OF

TWENTY-THIRD VOLUME,
FIRST HALF.

<table>
<thead>
<tr>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>THE PAHLAVI TEXT OF YASNA IX. 49-103, EDITED WITH THE COLLATION OF ALL THE MSS., ALSO DECIPHERED.—BY REV. LAWRENCE MILLS, D.D., PROFESSOR IN THE UNIVERSITY OF OXFORD</td>
</tr>
<tr>
<td>THE TEXT OF AN ARCHAIC TABLET IN THE E. A. HOFFMAN COLLECTION.—BY ELLEN SETON STRONG, OF NEW YORK</td>
</tr>
<tr>
<td>INTERPRETATION OF THE ARCHAIC TABLET OF THE E. A. HOFFMAN COLLECTION.—BY GEORGE A. BARTON, PROFESSOR IN BRYN MAWR COLLEGE, BRYN MAWR, PA.</td>
</tr>
<tr>
<td>CREATOR GODS.—BY CRAWFORD H. TOY, PROFESSOR IN HARVARD UNIVERSITY, CAMBRIDGE, MASS.</td>
</tr>
<tr>
<td>REMARKS ON THE HEBREW TEXT OF BEN-SIRA.—BY CRAWFORD H. TOY, PROFESSOR IN HARVARD UNIVERSITY, CAMBRIDGE, MASS.</td>
</tr>
<tr>
<td>THE COLLECTION OF ORIENTAL ANTIQUITIES AT THE UNITED STATES NATIONAL MUSEUM.—BY DR. I. M. CASANOWICZ, U. S. NATIONAL MUSEUM, WASHINGTON, D. C.</td>
</tr>
<tr>
<td>THE NAME OF THE FERRYMAN IN THE DELUGE TABLETS.—BY MR. S. H. LANGDON, COLUMBIA UNIVERSITY, NEW YORK CITY</td>
</tr>
<tr>
<td>SPECIMENS OF THE POPULAR LITERATURE OF MODERN ABYSSINIA.—BY DR. ENNO LITTMANN, PRINCETON UNIVERSITY, PRINCETON, N. J.</td>
</tr>
<tr>
<td>NOTES ON THE OLD PERSIAN INSCRIPTIONS OF BEHISTUN.—BY LOUIS H. GRAY, PRINCETON UNIVERSITY, PRINCETON, N. J.</td>
</tr>
<tr>
<td>THE ÇIRĀḌĀ-TILAKA TANTRA.—BY DR. ARTHUR H. EWING, ALLAHABAD, INDIA</td>
</tr>
<tr>
<td>NOTE ON BṛHAČCHANDAS, AV. III. 12. 3.—BY DR. ARTHUR W. RYDER, HARVARD UNIVERSITY, CAMBRIDGE, MASS.</td>
</tr>
<tr>
<td>KRŚṇANĀṬHA’S COMMENTARY ON THE BENGAL RECEPTION OF THE ÇĀKUNTALA.—BY DR. ARTHUR W. RYDER, HARVARD UNIVERSITY, CAMBRIDGE, MASS.</td>
</tr>
</tbody>
</table>
JUPITER DOLICHENUS.—By Rev. CHARLES S. SANDERS, Ainṭab, Turkey. 84
BIBLIOGRAPHY OF KĀLĪDĀSA'S MALAVIKĀGNIMITRA AND VIKRAMOR-VACI.—By MONTGOMERY SCHUYLER, JR., United States Embassy, St. Petersburg, Russia. .......................... 93
A MANUSCRIPT OF GUL ₢ NAURIJ, A SEVENTEENTH CENTURY PERSIAN ROMANCE, IN THE LIBRARY OF COLUMBIA UNIVERSITY.—By Dr. ABRAHAM YOHANNAN, Columbia University, New York City. 102
REMARKS ON THE FORM OF NUMBERS, THE METHOD OF USING THEM, AND THE NUMERICAL CATEGORIES FOUND IN THE MAHĀBHĀRATA.—By E. WASHBURN HOPKINS, Professor in Yale University, New Haven, Conn. .......................... 109
A PHOENICIAN ROYAL INSCRIPTION.—By CHARLES C. TORREY, Professor in Yale University, New Haven, Conn. .......................... 156
The Pahlavi Text of Yasna ix. 49–103, edited with the collation of all the MSS., also deciphered.—By Rev. Lawrence Mills, D.D., Professor in the University of Oxford.

For an account of the MSS. used see the number of the Journal of the R. Asiatic Society for July, 1900, pp. 511–516. I should add here that my collation of M., though very carefully made in 1891, has been subjected to much abrasion through use, while the notes are here added as a merely supernumerary item; they were not originally intended for citation, and should not be considered exhaustive. The attention of searchers is especially called to the fact that the Pahl. trlr. occasionally err radically, as well as often, in the matter of form. As may be seen from my translation of Y. ix. in S.B.E., xxxi., one especial motive in undertaking this laborious and harassing work has been the desire to destroy the false impression that the authority of the traditional documents is absolute. An exaggerated reliance upon them is nearly as dangerous as the neglect of them. As one fairly said of my former well meant studies on the Gāthas (together with a close reproduction of the original in the light of the critical school), I endeavour to present also the ‘Werth und Unwerth der Tradition’; and it is to the last degree necessary that we should neither exaggerate the one nor the other. In the interest of statistics I should say that I have omitted to record

1 With the exception of one which is a replica. See the introductory remarks cited above.
all the occurrences of final -ő; time, not to say patience, having called me. I should add that I regard this with regret, as this seeming so trivial mark would be interesting, if we could prove that it represented a letter -ő, or what not. So far, I may say that I fear it is a mere mechanical division mark, occurring without any regular law whatever. It is almost a pity that we could not entirely neglect it. But it is better to retain it for the present; some reason may yet be given for it. It is sometimes used before a termination like the avagraha. I had intended to cite the variations as being those from the reading of our Oxford Codex, called D.J. by me in the Gāthas first even so far back as 1881, but later called J2; it seemed to me, however, to be rather an ungracious act to avoid placing the edition of our venerable first editor in that position. This is also more convenient for readers, as the printed edition is more accessible than the photographed one; and also reduces the amount of annotation. [This collated edition is an attempt to meet the most crying need in connection with the subject. I have used the old transliteration of the glossaries for practical reasons.]

The Attributes of Haoma.

Y. ix. 49.¹ shapîr hōm t hūdehāk² [aīgh pavan frārūnōih³ yehabūnd⁴ yekvimūnīh] i rāstō⁵ dehāk⁶ [aīgh⁴ mindavam¹ avō⁷ valman⁸ yehabūnīh⁹ i ghal¹ avāyadō² yehabūnantanō¹⁰]

(50) vēh³ -dehâk¹¹ [aīgh mindavam i shapîr bara yehabūnīh] i bēshāzinīdār¹² [aīgh mindavam I¹² avō¹ bēshāzinīh¹³].

¹ D.J. ins. va.
² D. hūdehāk, so also Parsi-Pers. MS. hū-dehāk (so); K.*, M. -dehak; Ner. sudānam; D.J. dehak.
³ So D.J.
⁴ So D.; D.J., etc. dādō, so also the Parsi-Pers. MS.
⁵ So D.J.; D., and the Parsi-Pers. MS.
⁶ D. om aīgh.
⁷ So D.J., D. mindavam; so the Parsi-Pers. MS. with traditional 'mandūm,' 'mindavam,' K.* (Sp.) čhīz (or 'čhīsh for čhīz' (N. B.)).
⁸ D.J. has ānō (or means 'hū', with dehāk following instead of dehū(?)) D. may be ānō; K.* (Sp.) valman yehabūnīh Pers. avō- translating 'ān ū dehī.'
⁹ So D.J., D.(?) and Pers. MS.; K.* valman.
¹⁰ So D.J., D.
¹¹ So D.(?); D.J. dehak.
¹³ D. may ins. I or I.
(51) hû-kerpô hûmanîh [aîghat kerpô nêvak] hû-kâmako hûmanîh [aîghatô avâyastô 1® frûrûnô].
(52) pîrûzkar i zarîd-o-gûnô' i narmtûk [aîgh tûk 1® i lak narm].
(53) amatatô rf vashtamûnd pahlûmîh avô rûbân' yehabûnih an-
bârîktûmî hûmanîh, [aîgh anbûr i rûbânô pavan lak shapîr shây-
aîdô' karîlûnî mûman garûmûnîkîhîh pavan lak yehevûnî.]

Applies.

(54) bârâ' 1¹ lak zarînô' 1" mûdishnô' 1¹ yemalûnî " [mindavam I' 1² am I' 1" pavan farâhûn yemalûn aîgham ranîkîh ' 1" yehevûnî.]
(55) bârû amavandîh va bârî 1¹ pîrûzkarîh afâm 2² yehevûnâdô.
(56) bârû drûstîh va bârû bûshûzînîh.

1 So D.J., D.; K.² (Sp.) may have meant 'haê.'
2 So D.J.
3 D.J. ins. I.
4 So M.: D.J. zarînô va gûnô I (sic), but the sign for va is probably an oversight. D. has va zarînô.
5 D.J. seems vad (sic); Pers. MS. trls. 'tûk.'
6 So D.J.
7 So D.
8 D.J., D. om. haê, or what it may be. Was it 'gûs'?; better call it a repeated 'thou art.' So D.J., D.; K.² (Sp.) bêd.
9 One would think that the form in D.J. should be deciphered as kûshâyadô reproducing an original 'kh;' or else it would seem to be âshâyadô (sic); otherwise I should say that it must be irrational.
10 So D.J., D.; K.² (Sp.) bêd.
11 So D.J., D., and see below for bârâ; K.² (Sp.) pavan(?).
12 D.J., D. exaggerate the signs, or ins. va(?).
13 D. marks the 'd.'
14 This mistake evidently arose from the accidental separation of yemalûn and 'am' for yemalûnam=mrûve, see the am after mindavam; it would have been much better before it or both. Ner. was also misled: so the Parsi-Pers. MS. also; all divide and mistake the first sing. pres. for the second sing. imper., plus am = 'to me.'
15 D.J., D. have mindavam I am.
16 D.J. om I; D. has I.
17 So D.J., D.
18 D. -nêd.
19 D. ins. va bârâ; D.J., D. om. va or -ô.
20 D.J. (and perhaps D.) afâm; K.² (Sp.) am.
21 So D.J., D.
22 So D.
J. Mille,

[1902.

(57) barâ frâdahishnih' va intermediary way of speech.
(58) barâ aôjô I harvispô tanô barâ farzanakih i' harvispô

1 So K., (Sp.), M.; D.J., D. seem frâdahanih (or frâdâniñh) (sic?); I had

2 D. ins. va, or has irrational marks.

3 So I decipher, bringing to light the error (as I hold it to be) of the

4 D.J., D. ins. I.

5 D.J. obscured by decay.

6 So D.: others mun.

7 So D. seems I.

8 Mf. afash.

9 So D.J., M.; D. hamâk.

10 D. defaced.

11 D.J. defaced by decay.

12 D.J. ins. chigûn, but seems to have cancelled it.

13 So D.

14 D. ins. va.

15 So D. tarvinend (?), D.J. etc. tarvênd.

16 There is, of course, the question whether we ought not to read these
verbs tarvinêñ, and vanêñ as first singular conj. imper., in view of
the originals (see Ner., who was not misled): but sâtûnd seems to call
for a decipherment which recognizes the error; otherwise all the forms
should be reproduced as first personals.

17 D.J. bleached out.

18 So K., (Sp.): D.J., D. tarvênd? or tarvêñi.

19 So D.J., D. ô.

20 D.J. om. -ô (sic); D. om zakô (some may well desire the statistics
as to this still curious -ô; but patience has sometimes failed me).

21 So D.J., D. -ô.

22 D. ins. va.

23 D.J., D. seem redundant.

24 So D.J., K., (Sp.) marjûmân.

25 So D.J. only.
(61) yātākānō va parīkān† va² sāstārān† va kikān† (kayakān, so better) va karpān¹ hōmānd kīk (?) kayak) va² karpō¹ [zak mūn pavan mindāvam i¹ yazādānō kur² va kōr²].

(62) marich i dō-zang va² aharmōkōch i dō-zang va¹ gūrgich i chahār-zang.

(63) hēnōch² i farākhū-ānīk² [aighshānō² maradō kaved ait mūn aĉūnō yemalelānēd aĉ² hōmānd ānīkshānō farākhū¹¹] mūn² pavan² friftārīh patēnd.

Prayer for Boons.

(64) denman mūn lak frātūm yān hōm i² Zāidēm² (or ‘zaid-yām’ ‘(?) i dūrāōsh zak i pahlām ahvānō i aharūbānō i rūshanō i hamāl²’²-hvārīh.

(65) denman min lak daudāgār yān¹⁴ hōm i² Zāidēm (or ‘-yam?’) i¹ dūrāōsh dūrūstō² rūbisēhīn i tanō.

(66) denman min lak² saudāgār yān²² hōm i² Zāidēm (or ‘-yam?’) i² dūrāōsh dīr zivishēhīn i² jānō²².

---

¹ So D. ³ So D.J.
² So D.J., D. ins.v.a.
⁴ D.J., D. ins. l.
⁵ So D.J., D. and parsi pers. MS.; others reverse the order, but see Ner.
⁶ So D.J.
⁷ D. has four strokes.
⁸ See the Zend text; D.J., D. have a superfluous stroke. D.J. may well be häenōch (sic, see the Zend).
⁹ So D.J.; D. seems farākhūd-ānīk(?): K.³ (Sp.) farākhūnīk ? (sic), M. I think has Sp. +-änīk.
¹⁰ D.J., om.aē. so D.J.; M. has it in a different form.
¹¹ So D.J., D. ānīkshān; K.³ (Sp.) pēshānīk. D.J. has the preceding hōmānd in the margin, but added by the original copyist with the same ink.
¹² D.J. worm-eaten. Notice the freedom of error of patēnd, also followed by Ner. though using a different form; see the Zend.
¹³ D.J. ins. l. and has Zāidēm (or -yam) blotted out purposely (?) .
¹⁴ So I think we should decipher in view of the original and the corresponding word in the inscriptions; but the Parsi-Pers. the proper translation as ‘khāham.’
¹⁵ So D.J., M.; D. hamāk; K.³ (Sp.) hamā(?).
¹⁶ So D.J., D., M.
¹⁷ D.J., M. ins. l.
¹⁸ D. joins i to the preceding word, possibly meaning to express a conditional.
¹⁹ D.J. worm-eaten (final -ō, so D.).
²⁰ So D.J., D.
²¹ D.S. ins. l.
²² D. again joins to the preceding word.
²³ D. varies zây- with (?) zā(y)-?; D. om. I.
²⁴ D.J. marks, however, as if it were gānō.
(67) denman min lak tasūm yānī hōm zaidem (or ‘-yam?’) 1° dūraosh chigūnā min khvāstār va‘ amāvand va‘ padīkhvō frāz‘ sātūnānī 2° pavan damik madam bēsh turvinānī 2° va drūjō vāncenī 2° (or read vāncenī, see below).

(68) denman min lak panjūm yānō hōm i° zaidem (or ‘-yam’) 1° dūraosh‘ 2° chigūn pīrūzhkar vānīdār pavan kūshishnō frāzō sātūnānī 2° pavan damik madam 2° bēsh turvinānī 2° va drūjō vāncenī. 2°

(69) denman min lak shashūm yān hōm zaidem (or ‘-yam’) 1° dūraosh aigh levīnō min dūz‘ 2° va levīnō min gadak 2° va levīnō min gūrg khadītūnānī 2° [mādīshn‘ 2° chārakō]. 2°

1 So D.J., M.
2 D. again joins. Ner. is better here, apparently referring the word to Indian īṣīrā, etc.
3 D.J., D. ins. va.
4 So D.J., D.
5 So D.J. (corrected from -und at first hand); but it marks ‘d’ instead of ‘f’; this, however, is almost universal with D.J. and the Parsi-Pers.: not so Ner., though, as often, he has sing. for plur.
6 D.J., D. again mark ‘-ēnd; not so Ner.’s original, or if marked ‘d’ instead of f in -ānī, then it by no means misled him.
7 D.J., M., D. mark -ānd; not so Ner. 8 D.J. ins. I.
9 D. again curiously joins to the preceding word; does he really mean zaidem-i (or -yam-i; this must be considered.
10 D.J. has curiously dīraosha for dūraosha; and in one Zend MSS. K. 4 the sign for long i and that for long f are indistinguishable; in fact it is very frequently thus in D.J.?
11 So D.J.; M. D. seems sātūnd; and D.J. marks ‘d’; not so Ner.’s reading.
12 D.J., D. om f.
13 But D.J., D., as all other MSS., mar the word with a mark over ‘f,’ indicating the false final ‘d’; Ner. was not deceived by these mistaken signs (or were they added since his day?).
14 D. vānēnd; all MSS. again falsely mark a final ‘d’; but see the original; Ner. does not, however, err.
15 D. joins (?) again to the preceding word.
16 So D. dūz; others zōhā; Parsi-Pers. translating dūzd of course.
17 So D.; see the original, also Ner.’s ‘nṛṇāṅsebhyāḥ’ and the text of the Parsi-Pers. MS. ‘gadah.’
18 So D.J., M.; K. 4 (Sp.) khadītūnēn.
19 So D. and also the Parsi-Pers. MS. translating ‘hunar’; others (?) ‘mānīshn (n),’ which seems senseless. At Y. x. 60 the form seems ‘mānīshnō.’ I think the mistake ‘mānīshnā’ arose from some Persian text with imperfect diacritical signs, or simply from writing too long a stroke the letter ‘d’ in ‘mād,’ Ner. omits the word here; but see him on Y. x. 60 with vīdyām as usual (twice); so the Parsi-Pers. MS. there, translating ‘hunar’ and reading ‘mānīshn,’ and not ‘mānīshn?’ (sic).
20 So D.J., D.
(70) al aigh levīnō khadītuṇādō' levīnō min laiman min har-
vispōgūn' levīnō khaḍītuṇamī [li va hāvishtānō ī li].

The Gifts of Haoma.

(71) hōm valmanashān mūn arvandē hōmandē ashānō zak ī
farhākhtē va' tvākhshāk vabdūnyen [sūsyā' afshānō zavar' va' aōjō
khelkūncēdī' [aratshțärānō].

(72) hōm ī’āzātānō ichē barā yehabunōdē zak ī’ē rūshanō
benman' va’ zak ī aharūbō farzandē.

(73) hōm valmanashān mūn kātik' pavan naskē frāzō' āmūkh-
tishnīnīh yetībund [pavan aĉrpatistānō kǎrjānō] ashānō' aţūni-
kīh va' farzānakīh khelkūncēdō.]

1 So D.J.
2 D.J. harvispō. D.J. has the first min written over as doubtful;
the correction itself seems later written over.
3 Ner. has castrimantah and acvān kṣhatriyāpām.
4 D. ‘hōmōnd.’
5 So D.J., and it has a cancelled ‘pavan.’
6 So D. and the indication of the Parsi-Pers. MS. which is, however,
strictly in itself considered, erroneous with frāhtā. K.6 (Sp.), etc.
have a marring stroke.
7 So D.J. ins. va. 8 So D.J., K.6 (Sp.); D. and the Parsi-Pers. MS. aspō.
9 So D.J. 10 So D. and Parsi-Pers. zavar; D.J., Sp. zavār.
11 Parsi-Pers., D.J., M? ins. va. or ā.
12 So D.J.; Ner. om. here; but ins. ‘varshati’ below. 13 D. ins. I.
14 D. seems āzerkūntānich; so Mf.? the Parsi-Pers., but the latter
translates as negative a-zāyandāgān (so ?); D.J. etc. āzāqānō.
15 D.J. ins. va.
16 D.J. has va zak ārōdishnō, or ārūshānō(?); but I should think this
‘ā’ was a clerical mistake for the usual ī, and made through haste;
but see K.4 (Sp.) with which M. probably agrees, as in my careful
collation of 1891, I marked no variation; om ī.
17 So D. rūshan (see Ner.); others ārōdishn (sic).
18 Or bārmān. 19 D.J., D. va.
20 M. differs from Spiegel having ‘fardand’ (but intending to report
the same meaning).
21 D.J. has k-t-k-ik with the second ‘k,’ or - ?, struck out(?); not so the
Parsi-Pers. Ner. translates grhaṣṭhāh reading ‘kādak’ or ‘kādak,’
as I suppose; the Parşı-Pers. does not translate: see my S.B.E. xxxi.
at the place. ‘Kātik as the katayō at the Pahlavi stage certainly favours
a Zend form in the sense ‘house-abiding,’ ‘sitting at home;’ and I would
now regard my former rendering as the alternative.
22 So D.J.; M(?). differs from Spiegel; see Ner.’s ‘naska-.’
23 So D.J., though the ī stands apart; it cannot well be ‘va.’
24 So D.J. 25 So D.J.
(74) hōm valmanshān mūn kānikō' hōmand va yetibūnd dēr' agrīpt' [āigh là sārtūnd yekavīmūnd] ashān zak i' āshkārāk' zak i' rūdo' khelkūncīl' [āigh shānō' shūī barā pēdākīncīl afshānō tīzō' zerkhūncīlō' va' i zak i' hūkhīradō' [hōmand amat avō' gabrā barā pēdākīncīl pavan jīnāk dēn kār yekavīmūnīd].

A Punishment.

(75) hōm valmanshān mūn keresāïk' read keresā(n)īk (omitted nasalization; see keresānim).

1 So. D.J., M.
2 D.J., D. om i.
3 D.J. curiously mistakes for ärpat which has the same characters, and it adds 'istānō'; not so the Parsi-Pers. MS., nor Ner.
4 D. om i.
5 So D.J., D.
6 So D.
7 So D.J.
8 So M.
9 So D. D.J. is blurred purposely; Ner. strangely enough renders yācayītarān; did he have a blurred MS., and was it D.J.? see his yāca-
yāmi at 65, etc. = zaidēm (so).
10 D.J., D. ins. va.
11 D.J., D. ins. i.
12 So D.J., D.; D.J. ins. here division mark of the subsection (sic).
13 So D.J. avō (to the verb 'avō pēdā'-?) or ānō= valman; D. om.; some might prefer pēdākīncīl . . . yekavīmūnīd.
14 I do not well see how we can avoid using the vowel and consonant signs of the original in a case like this: at least it is convenient so to use them: cp. keresāspū. The Parsi-Pers. MS. has k-r-s-ā-k-i translating k-r-s-ā-k-i; so also D. k-r-i-s-ā-k-i-k; D. J. seems keresāhīkō (sic?) or k-r-s-ā-sh-l-kō, possibly k-r-s-ā-īkō, the ā being doubled by mistake. Read M. keresākī. it has characters for k-r-s-ā-k-i, so K. (Sp.) with slightly lengthened 'k'; see the original. The translators at first evidently attempted to transliterate: and their failure may well be due to the omission of a nasal sign in the original word. This nasal, let it be remembered, would be well represented in the Pahlavi merely by a perpendicular stroke. Or else, as so often, the sign of the nasalization has been lost. 'Keresā(n)īk would represent the original word, while the 'k' (or 'k') is the frequent terminal letter generally possessing adjective, or merely nominal force, and intended only to carry on the i of the im. Ner. reports the deeply interesting impression which prevailed among the Parsi-experts of his day that keresā(n)īk and its var-
iants referred to the 'ecclesia;' that is to say, to the 'Christians;' see his tārckākātīnīh: 'cp. tarsā= 'christian:' D.J. ins. va or -ō.
hômand' ashânô barâ min khûdâyih nishânêdô mûn rôstô (or 'ródîdô') hômand' pavan khûdâyih-kâmakih' [aigh pavan khûdâyih-lâtâ yâtûnd yekavîmûnd]

(76) aigh' mûn gûyênd aigh là lanman râî akhar arsavanakô' pavan avar-hôshmurishnih pavan kâmêkô dênu matâ sâtûnd [lanman âêtûnd vabdûnûnd' min kardô i lanman yehevûnêdô' amat' la sâtûnd'].

(77) zak î harvisp-gûn' giûrîh vûnêdô barû harvisp-gûnô' giûrîh makhîtûnêdô' [pêsh' pas'].

Hail to Haoma.

(78) nêvâkô'" lak [aigh tanô î lak nêvak' ma'dô' yekavîmûnêd] mûn pavan zak î nafsmî' aôjô-kâmêk' khûdâî hûmani' hôm.

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1 D. hômûnd as of ten. D.J. has ashânô, or ins. va.
2 D. has curiously 'gabrâ' for 'barû'; so the pers. MS. also, translating 'mard'; Ner. has nothing analogous.
3 Parsi-Pers. transliterates nishînêd and translates nishênd. (barû) min . . . nishânêdô may mean 'restrain from,' 'cause to abate.'
4 So K.5 (Sp.); D.J., D. pavan khûdâî (not impossible); see Ner.
5 So D. ins. algh here.
6 D.J. seems 'arsavanak, or asrûôk; why not read so far as possible in analogy with the Zend?
7 So I would read D.; others vabdûnûm-i; but D. as it stands is of course 'vabdûnûnd'; see the variant vabdûnûm-i, K.5 (Sp.). Ner. does not render. M.? has vabdûnêm; Mf.? vabdûnûnd-i? (so it seems); Pers. MS. translates 'kunand.' Why not vakhdûnûnd?
8 So D.J.; K.5 (Sp.) bêd.
9 D.J. ins.; so also the Farsi-Pers. MS.; K.5 (Sp.) has amat . . . -ûnd (so, in fragments); but M. has no space.
10 So D.J.; M. seems -gun, but not -gün; D.J. om foregoing î.
11 D. ins. va or -ô; the 'n' of D.J. is somewhat separated from the ó; which fact bears upon the further question whether he means 'va' in certain places or 'ô.'
12 So D.J.., D. pêsh pas; K.5 (Sp.) levînô akhar.
13 So D.J.
14 D.J., so D. om. î.
15 D.J. om kâmêk here; see the Zend text.
16 N.B. aôjô-kâmêk not in M. but in K5 (Sp.); [and yet M. is reported as a copy of K.5, the Pahl. trl. not having been examined. It is a modified copy (sic)].
17 D.J. ins. va or -ô.
18 D. hômôni; D.J. hômani (so).
[aighat aōjō pavan zak kār1 zakatō2 avāyaḍō3·4 at tūbānō3 dāshtanō].

(79) nēvak lak mūn dēn khavitūnīh4 kābed gōbishnō i rāstō [ī frārūnō maman1 aītō rāstō lā (sic? ; read rāʾ) frārūnō* (kā na vaca arshukhdhā)].

(80) nēvak lak mūn là11 frāz12 min11 hampūraskīh12 zak ī āres- shūkhtō14 gōbishnō va14 hampūrask-haī16 [āigh mindavam là yemelēnūnī18 i aūharmazd dēn hampūraskīh là17 guftō].

(81) frāz lak zak ī1 aūharmazd būrdō paravand ašiyānō(ā)g-hanō19 (not ‘ašiyātēgishnō19 (so ?))20 star pēsidō ī minavādān20

1 D.J. irreg. character for ‘ā’ one stroke too much : it may be accidental.
2 So D.J.
3 D.J. may mean (?) zītō ; this zītō (?) would be written much like zakat as sometimes written.
4 D. ins. va or -ō. 5 D. tubān : D.J., D. om. Sp.’s l.
8 Ner.’s yena saves the sentence from the senseless là : so the MSS. should be read rāʾ, or otherwise relieved and discounted (the Parsi-Pers. MS. also has ‘ ëlā ’ = ‘nah.’). D. may insert ī before là.
9 M. -ōk ; others frārūnō.
10 D.J. areshrukhda ; Zend characters within the brackets.
11 D.J. om. min here, ins. after frāz.
12 I think frāz was erroneously motivated by ‘pairī ;’ yet Ner. seems to have understood frāz min as equalling rūe.
13 D.J., D., M. (N.B.) have ham(pūraskīh), and so the Pers. MS. translates at least. Spiegel alone has pūraskīh ; but see Ner. ; this trifle shows that M. is not a rigidly exact transcript of K.5 according to Spiegel. D.J.’s is not clear, but over-written ; looks like -ih.
14 But for the original Zend text I should emend to arah- ; the word seems to be a hybrid ; D.J. adds ġās. or -lāh.
15 ġhā as pl. (? ) and as adverbial seem each to be suspicious. On the other hand, to see a fully conscious 2d sg. purṣytāiīh (so, or yāf ?) is doubtful as immediately following the hampūraskīh. The most prudent view is to see a Pāzand haē. Thou wouldst be of a truthful speech and questioning ; D.J. om. the va before it.
16 So M., -ih ; others -ih. 17 D. erroneously rāʾ.
18 So D. ins. (?) ; evidently an attempt at a transliteration ; the ‘o’ of ašiyānō- is in Persian form somewhat similar to Persian ō, or ū, otherwise read -yākgānōī (sic). Ner. reads the same text, attempting only a transliteration alvianghanatām (S. reading alvi-), though he translates ašiyāstō in 82 as āveštāh ; the reading is needed ; see the Zend text. The Parsi-Pers. translates (?) , or imitates āvānhanā ; while at 82 it refrains from the translation of the related word.
19 So D.J.
takhshid̄ō¹ shapir² dēnō ḫa(m)ṣad̄yahastānō³ [afash āiviya(ng)han-ōlih (sic)] hanā āīgh chīgūnō kūstik levatman gabrā khadū-kardākō dēnōch levatman hōm aētānō khadū-kardāk afash khadū-kardākōh aītō¹ hanā' aīgh vād hōm lā vashtamūnūd̄ō pavan dēnō aṣṭābānō lā yehevūnd̄ō hōm⁴ vashtamūnūd kār dēn (ā)yazishn¹¹].

(82) pavan zāk hōmāniyā¹³ aiviya-stō¹³ pavan bālistō madam t¹ girūnō [airat tamman rōstō¹⁴ yekavīmūnīh afatō¹⁴ dēmn khadū-kardākīh aētānō¹⁵] vād avō zāk i dirāz madam sātūnishnīh [vād tanō i pasīnō yekavīmūnīh] pavan mānsar¹⁶ [āighat dēn yazishnō¹⁶ kār ghal fārmāyūnd¹⁷].

¹ Others might prefer ‘takhshid̄ō’ or ‘tukhsid̄ō’; D.J. has a superfluous sign which is, I think, accidental.
² So D.J., D.; others vēh.
³ So D.J. seems. I have little doubt but that mā (sic) is for ‘mazd,’ as the same ‘ma’ is in aiharma(ng).
⁴ So D.; the Parsi-Pers. MS. transliterates biyākgâni (so here), meaning and explaining ēvānghan (thus approximately), while just above it seems to have aśīyākgān translated again by ēvānghan. D.J. has superfluous signs for the first ‘t.’ ‘aivy-’ (?)
⁵ So D. D.J. has a superfluous and accidental mark between ‘k’ and ‘ar’ in kardāk.
⁶ D. ins. aētānō; or is it a later interpolation?
⁷ D. aētō.
⁸ D. hanā; others aē.
⁹ D., Mf. om. mū in the middle of the word.
¹⁰ D.J. has a word struck out (not Spiegel’s form); ins. vashtamūnūd̄ō; D. has an abortive word as above for vashtamūnūd̄ō, or it may mean hōm shedūntō kār dēn āyazishn; but there are no signs of shedūntō or yētānūd̄ō in Ner.: D.J. hōm vashtamūnūd kār dēn yazishn.
¹¹ D. seems āyazihnō, D.J. yazishnō; but space seems left.
¹² D. hōmāniy; M. may be hōmāniy; so D.J.
¹³ aśīyāksto (sic), again, or is the ‘k’ Persian Ṿ (similar sign), see on 81? Strange to say, D.J. has the same thing, and the Parsi-Pers. MS. as well. Is it the suffix -k which, like the -ā, has found its way into the interior of the word as a sign of the division of syllables? cp. the ava-graha. As -k appears in vohū -k even at the end of a word, it may here appear at the end of a syllable? or again, can it point to a suspected form of yūj, ‘to yoke on?’ or is it the sign merely of an echo of the ‘āg’ in 81?
¹⁴ D. ins. i.
¹⁵ Or rōdīqo (?)
¹⁶ So D.J. afatō.
¹⁷ D.J., D. have aētūn; so Parsi-Pers. MS.; Sp. ait.
¹⁸ Or mānthār (?)
¹⁹ Mf. again āyazishn.
²⁰ So D.J.; M. seems farāyēnd (?), i.e. om. ‘m,’ (?) accidental; Ner. gives no sign of this; and the Parsi-Pers. has farāyēnd (so).
(83) hōm mūn mānpatʰ hōmanih⁴ mūn vispatʰ hōmanih vā⁴ mūn zandpatō⁵ hōmanih va dahyūpatʰ hōmanih⁴ [aīghat mināvadīhā hamāk⁷ pāтиh] va afzūnīkīh vā ākāspatō⁵ hōmanih⁴ [aīghatō⁶ barā tūbānō⁷ yehabūntanō⁷].

Deprecations.

(84) amāvandīh i⁸ lak va¹⁴ pīrūzkarīh avō denman i⁸⁴ li tanō i¹⁴ madam pāvan afrīn⁴¹ va¹¹ padīkhvīhīch i¹⁵ pūrūhazishni⁶ [khvāstak i¹⁶ mūn nēvakīh i¹⁰ kābed azash].

(85) barā mīn zak i lanman³¹ bēshīdūrīnō bēsh va³² barā minishnō³⁰ barāīch yeḍrūnānīd⁴¹ i¹⁵ girān⁵² mān⁶⁴ [khūdāyīh].

1 So. D.J., D.; K.⁴ (Sp.) mānpatān, so also the Parsi-Pers. here.
2 D. hōmōnīh.
3 So D.J.; K.⁴ (Sp.) patānō; M. might be vishpatān (so).
4 D.J. ins. va.
5 So D.J. zandpat but mechanically divided ‘zand pat’ (sic.); others zandpatān; not so Ner.’s orig.
6 D. might be dāhyūpat (℅); M. dahyūpatān (sic).
7 So D., M.: D.J. hamāf‘ (but I much question whether the stroke for ‘political’ in hamāf may not, as a similar one elsewhere, represent a ‘k’); Sp. hamāf(℅).
8 D.J. ins. va.
9 D.J., D. ākās-patō hōmanih; others -patō haē or halh (sic?) (℅); (or is it possibly ṭākās-patō-īhā, K.⁵ (Sp.)? Ner. does not corroborate the plurals, nor does the Parsi-Pers. MS.
10 So D.J.
11 D.J. has curiously two dots over and a little before the character for ‘t’ in tūbānā.
12 D. yehābūnd; others yehābūntanō. ¹³ D.J. ins. f.
14 D.J. ins. va. ¹⁵ D.J. om. f. ¹⁶ D.J. ins. f. ¹⁷ So D.J., D.
18 So D.J. alone (?) ; the translation of the Pers. does not show -ih.
19 D.J. ins. f. ⁹⁰ D.J., D. ins. f.
20 D.J. om. the zak f. This lanman corrects D.J.’s nōi (sic), and notice well that the ancient copyist has just written Zend nōi with the last stroke of his pen; yet here is the correcting ‘lanman.’ D.J. meant nō (=from us) + iŋ (?)
21 M. (℅) ins. va.
22 So D.J. minishnō barā ich, and D.J. om. f after Sp.’s minishnō ich.
23 So D.J.; K.⁴ (Sp.) dērūnyēn.
24 Mf. seems to insert (?) a needed ī; it may, however, belong below; but we should not hesitate to supply one in such a case.
25 D., M. girān; K.⁵ (Sp.) garēn-. Have we here a transliteration, or have we here a translation, as Ner. will have it? Perhaps ‘Bear away the thought which is the abode of severe affliction (the Kingdom).’ This should imply an interesting blunder arising undoubtedly from the
(86) mün dön denman mihanō (or ‘mānō’) mün dön denman vīs va’ mün den denman zand va’ mün dön denman matā kīnīk hōmanād‘ anshūtā‘ I vināskār.

(87) vakhdūnīh zag‘ i valman‘ ragelman‘ zavar.’

(88) barā zag ‘ānō’ hūsh vardīnō.’

(89) ‘tebrūnak’ (or ‘tebrūnō’) zag i valman minishnō vabdūnō’ [akārash barā vabdūnānd].

usual mechanical cause. An approximate transliteration of the Zend garemaftem would be garān(mān), so about. The nasalization (n) arises from the division; perhaps it is the usual ‘ō’ and not ‘n’ (same character); for the termination of the word had evidently become separated from its base, occasioning the separate translation which Ner. gives with vāsaya’tām, see mān. The Parsi-Pers. MS., however, merely repeats garānman (so) in its translation line. Perhaps both the Pahl. trlr. and Ner. felt the figurative force of ‘garm,’ though they mistook the termination. The thorough discussion of such errors on the part of one or more of the translators at one place casts light upon their correctness in another; and also warns us against that indiscriminate dependence upon the translators which has been so fatal in some cases.

1 D. (?) ins. va.  2 D.J. ins. va.  3 Mf. hōmōnād.

4 So K. (Sp.), and others; D.J. anshutāānō; but see the Zend, Ner.’s reading and the Parsi-Pers. trlr. adāmī.

5 So D.J., D. (D. marking ‘d’); K. (Sp.) seems difficult; Ner. is plain with ghrānā; but the Parsi mistakes with ‘kuni,’ so for vabdūnīh, transliterating vādūnī.

6 D. om. zag I; D.J. has zag cancelled; D. ins. I after valman. D.J. has a zag written over ragelman, the ink looks darker, but the handwriting is the same.

7 D.: so the Pers. MS. translates at least zavār; others zavār (so).

8 D.J. om. I.

9 So D.J. barā zag ‘anō (avō?) hūsh vardīnēd in margin, but original; K. (Sp.) valman.

10 So D.J., D.; K. (Sp.) difficult Parsi-Pers. MS. vardīn translated gārdīn; Ner. parivartaya ‘turn around’ not more correct, but interesting. The translators hit upon vart (vṛt) rather than var (vṛ) in consequence of the ‘dh’ in verenūdhi (sic).

11 D.J. or M. om. va, or first stroke.

12 M.’ reads tebrūn; so the Parsi-Pers. has long ú, but curiously a tablūn (sic, hardly ‘atlabūn’ (so) as it seems), possibly the ‘u’ of tebrūnak (so) should be left short in view of the termination. D.J. by a slip of the pen has t-b-n(-u2)-r-k for t-b-r-n(-u3)-k; he can hardly mean tabr-lak ‘destroy thou.’ There is no reason why Spiegel’s reproduction of K. ‘tablak’ (so) should not be possible; yet as we have the verb-form ‘tebrūnāstanō, ‘tebrūn,’ is natural, ‘-ak’ being as usual the adj. (noun) termination often loosely applied.

13 So Mf. seems.
(90) al pavan kolā II (dō) zbār frāz ḵatūḵo’ hōmanādō’ al pavan kolā II (dō) gavač madam tūbānīk hōmanādō’ [aṅgash pavan yadman vinās kurānō al tūbān yehevūnād].

(91) al damīk khadītūnād’ pavan kolā II (dō) ash’ al gōspend khadītūnād’ pavan kolā II (dō) ashash.

(92) mūndkīnīk hōmanād’ avō zak i lañman mīnīshnō [aṅīgh vad mānō’ mīndavam i’ frārūnō mūnīdanō’ al tūbānō yehevūnādō’ mūn kīnīk hōmanād’] avō zak i’ lañman kerpō, [aṅīgh levatman kerpō’ i’ lañman kīnō yakhšenunād.]’

Anathemas.

(93) bārā azō’ i zardō i’ sahmūn’ i’ vish barā āyaftō [mūn ash vish avō tanō barā āyaftō’ yekāvīmūnīd’].’

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1 D. ins. -ō, or va.
2 D.J. adds -ō; D. reads yehevūnēd (ʔ), or -nād (ʔ); D.J. has a cancelled pav-.
3 D. tūbān (ʔ).
4 yehevūnēd (ʔ) or -nād (ʔ).
5 D. khadītūnēd (ʔ)
6 D.J., D. om. va.
7 So D.J.; others ash.
8 D. hōman (ʔ); D.J. hōmanād.
9 So D.J. mānō; D. mān.
10 D.J., D. ins. ī.
11 So D.J., D.
12 So D.J., D. hōman (ʔ); and D.J., D. ins. va, or -ō.
13 D. -nēd.
14 D.J. ins. ī.
15 So D.; D.J. has kerpō with the -ih apart; so three words before possibly, though the sign is confused, looking more like an -ō or a careless ī.
16 So D.
17 D. -nēd(ʔ).
18 So D.J., D.
19 D.J. om. ī.
20 So D.J. and Pers. MS.; K. (Sp.) etc. D.J. has the usual sign for ‘k’ which may, however, well render ‘g’; the Parsi-Pers. MS. seems sahmūn, hardly ‘simākūn’; so D. distinctly simākūn.
21 M. seems to introduce a ‘k’ or ‘g’, though the character is more probably meant for the ‘v’ of ‘vish’; but if so it is in the Persian form and also misplaced; otherwise I cannot explain it, as ‘v’ would be expressed twice. The Parsi-Pers. is not very clear, but shows signs of long ī; its translation is, however, plain as zahir (so for zahar ?).
22 So Mf.
23 So D.J.
(94) amat kerpō 1 yezrūnānd 2 avō valman i 3 aharūbō i hóm i zarinō va' ash' pēdākīnīh 4 zanishnō [aigash chūrkō 5 barū yemale-
lūnō].

(95) barū gadakō 1 1 javīdō varzīdar [mūn javīdār varzōdō 6 aīgh 7 zak i 8 ghal 9 avāyadō 10 varzīdānō] 11 khrūkō-bavihūnō 12 [aīgh, rēsh 13 vabdūnyūn 14] azārdār barū 15 yemalelūn.

1 So DJ.
2 So D.J., Mf.; others -nād: so D.J. I should say that the word was a variant for yezderūnānd ‘may they drag.’ Unless a meaning closely allied to Ner.’s vināçayati is given to this word, it is, of course, an error which mars the section. The ‘dragging of the corpse’ may be the idea; cp. Vendīdād.
3 So D. 4 So D.J., D.
5 Obliterated in D.J.
6 M. may be pēdōk-? or ‘pēdō-’ not so the Parsi-Pers. MS.
7 D.J. om. i; not so M.
8 aīgh = ‘than,’ or ‘more than,’ or different from.’ Here we have another exceedingly important case to prove how the last Pahlavi copyists unconsciously preserved Zend texts different from those which they had just mechanically transcribed in the MSS. which contain both Zend and Pahlavi. The last copyist here wrote a vívirevzvātō, either by oversight, originating the blunder (see some other MSS.), or following some predecessor; but his Pahlavi translation text (also mechanically copied) restores the correct reading with -varz- to vívere-; the translation being impossible for vívered-; we might even correct to vívirevzvātō, (so?) on the strength of this varzīdar. I do not think that the ‘d’ is organic.
9 So D. 10 So D.J.; M. ins. va or -ō.
11 D.J. om. i.
12 Corrected. D. and the Parsi-Pers. khrūk (for khrūk)-bavihūnō. D. divides khrūk(-ā); but that is immaterial. The text is partially transliterated, and the sibilant treated as a form of ish, so with sevīštō; (see note on Y. ix. 30, July number of the Journal of the R. Asiatic Soc., 1900;) ‘khrūk’ (so) would be quite legitimate as expressing the root of khrvīshvātō, we might even read khruvak, so, in fact, better.

The ‘k’ is again the frequent loosely applied letter. D. and the Parsi-Pers. MS. show the closest attempt, and as such give us the important reading bavihūn-‘ish,’ i.e. khūr(-k)-bavihūn. Although the latter word is mistaken, it gives us the fair rendering, ‘desiring blood,’ or ‘prone to cruelty.’ D.’s text is difficult of explanation in view of ‘ish’ in the Zend text and bavihūn in D. The nearest seems basīm: khrūk-basīm ‘having pleasure in cruelty,’ but the letters represent ‘basīnō’; it must be a mere blunder for bavihūn (we are reminded of bīsārāyā?)

13 D. exaggerates the sign for ‘ē’ till it looks like that for ‘k’ or ‘g,’ or Persian ‘u,’ ‘v.’
14 D.J. ins. va or -ō (so).
15 D. ins. barā; D.J. ins. va.
(96) mūn kerpō yezrūnād avō valman aharūbō hōm I' zarīnō' ash pēdākinih zanishnō [aighash chārak barā' yemalelūn].

(97) barā anshūtā i' darvand i' sāstār' mūn madam andālishnō (andālishnō (?), read andākishnō for andākishnō) dādī yevakimūncīl [mūn aighshnō padas andālishn (sic ?) andāshn (?)] read andāzishn (or 'andāzēd' (?)) or both andāzishn andāzēd].

(98) amat kerpō yezrūnād avō valman I' aharūbō' hōm I' hōm I aharūbō hōm I' zarīnō vāsh' pēdākinih zanīh [aighash chārak barā' yemalelūnō].

(99) barā aharūbūkō' * 17 i anaharūbō i ahvān merenchinūdār' ačrūrūkō' va dašūhār mūn minishnō va' gūbilishnō yehabūnēdō''

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3 D.J., D. and Pers. MS. ins. barā. 4 D. ins. I.
5 D.J., D. and Pers. MS. om. avō, or the -ānō of a false pl ; D.J. (or M.) seems sāstār I (?): D.J. has ī before sāstār.
6 These signs must be meant for an 'andāzishn' to correspond to the 'andāzishn' of 'andākhtan.' It seems hardly fair to read the signs andishan (sic) as they stand, though the meaning 'a casting' seems certain; cp. also new Persian andāhtan and andāza = 'throwing.' Or is the 'ā' of andishan (sic) as in the case of 'aūharmazd' and of the sign in 'yazadan,' here also = 'az' in aūharmazd 'az + d' ; giving us 'andāzishn' for andāzishn? The Parsi-Pers. has andashn (for andāshn ; see below). The Parsi-Pers. has (see below "9") 'andahishn andahēd (sic)' (so Mf.) with no translation: D. marks the 'd.'
7 One might think of an ašishn as a solution for the word, but the first occurrence must mean 'hurling,' and be related to the Pers. 'andākhtan.'
8 So D.J. and the Parsi-Pers. 'dād;' others yehabūnēd.
9 D. ins. I; D.J. decayed. 10 D.J. has -ō.
11 D. andishn (?), or 'andishnō', sic for andishn (andāzishn). D.J. has the characters andahēd (sic); but means, I think, andāzēd for andāzēd.
12 D. ins. i; D.J. decayed. 13 D.J., M. ins. an additional hōm here.
14 D. ins. hōm i here; the Parsi-Pers. om.: D.J. is decayed here.
14 D.J., D. and Parsi-Pers. ins. va: va-shāh, written vāsh in D.J.
14 So M. (N.B.); D.J. and others zanishnō; so Spiegel (not as M.).
15 D. has -ānō, which, however, needs notice only for the statistician, or special questioner as to the curious character which is reproduced as -ō.
16 So D.J., D. -kō.
17 D.J., D. ins. I, and M. seems irregular, differing again from Spiegel; seems -ānō i aharūbō.
18 D.J., D. have no vacant space here; nor has M.
19 So D.J., D. D.J., D. ins. va: not so the Pers. MS.
20 D. om. -ō (sic), but D.J. ins. va.
va là pavan kûnishnô barû ayûfût' [aîghash kardôkô là yehévûnêdô mâneç va youthmaleûnêdô aîgh vabdûnam va là vabdûnûnûn].

(100) mûn kerpô yezrûnâd avô valman î' aharûbô hûmâ zarînô vâsh' pêdâkinih zanîh' [aîghashî hûrakô barû yemaleûnûnî].

(101) barû jeh I' î' yûtûkô' va' mûdakô' kardîr.'

[aîgh mindavam' tapâh] vabdûnûnûn madam panâhîh' bûrdr [aîgh panâhîh vinâs-kûranûh vabdûnûnûn] mûn valman' rî' mânišnô frûzô' fravinêdô' chîgûn abr mûn vûto-shûûgûn' 17 so; or read shûtûk-gûn).

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1 D. J. ayûfûd (7); so the Parsi-Pers. (7).
2 D. seems kirfakô (so), and also the Pers. MS.; but Ner. gives no sign: D. ins. î before là.
3 D. J.
4 D.? ins. va. 
5 Mf. (?)
6 D. J., vabdûnam; so M. and D. (7) and the Parsi-Pers.; om. Sp. mûn.
7 So K.î (Sp.) in the erroneous mûn.
8 D.? ins. î, and D. J. ins. î after aharûbô. 
9 D. J. om. î after hûm; M.? ins.
10 D. ash., om. v-.
11 So M. (N. B.) zanîh; not zanjish: D. J. and others zanjishnô.
12 D. J., D. aîghash; K.î (Sp.) om. ash.
13 So D. J.
14 So D. J., D. seem: K.î (Sp.) would seem jehô (7). î, but D. J. ins. a 'va,' Sp.'s apparent -ô may be va. We may suspect D. J. to be jeh-I; is it jehî?
15 D. J. om. î, but may have 'va:' but D. seems 'jeh-I.'
16 So D. J., D.
17 D. J., D. 'va' for 'î.'
18 So D. J., D. according to the gloss, which, however, may have been later and erroneous; see Ner.'s mandavam, the gloss being brought into harmony by the negative. Following this, we should understand the form to be a correct Pahlavi reproduction for the root-form of the Zend word 'maodhanô.' In that case we might introduce a 'là' on the authority of Ner.'s 'na'; but it is the more rational to accept the Pahlavi word in an evil sense just here, like its original: see the second gl. The Pers. MS. translates kharab-kardar; and the Pahlavi Pazand Gl. understands the same.
19 D. J. seems mindavamich or -af (7); was it an awkward mindavam-I, so D. J. might seem to some to be tapâh -I.
20 D. om. î.
21 So D.; D. J., K.î (Sp.) anô or avô, om. râl.
22 So M. and D. J., D; D. J. also ins. va(7). Spiegel's form pûhal seems improbable in view of the original text; see also Ner. who gives no sign in that direction: the Parsi-Pers. has frûz pravinêd (text).
23 One might restore this shattered word on the model of Y. xix. 8, and the original Zend, as shûtûk-gûn; Ner.'s 'sâritañh' shows that a Pahlavi form of the Zend word must be meant. Strictly the word at VOL. XXIII.
(102) mūn amatō' kerpo yazrūnādō avō' valman aharūbō hōm i zarīnō' ash' pēdākīnīh zanishnō' [aīgh ash' chārak' barā yemalelūn].

(103) amat min' valmanshān kerpo barā' yezrūnād' avō' valman i' aharūbō hōm i zarīnō' ash' pēdākīnīh zanishnō, [aīgh chārakō' barā yemalelūn'.]

Y. xix. 8 is 'sūtak,' so the Pers. MS., but the Pahl. letter for s sometimes replaces one for sh. D.J. has what might be deciphered 'va shūōk-gūn' (or -kīnō (? sic), see shūtem; but with a consonant labial we should read va shavōk-gūn; D. has va savōdō- (sic) vid ? or suūdō), the 'd' marked for savōkō; Mf. seems suūkō- (sic) or savōkō- (sic). The Farsi-Pers. has vātō sūf. Aside from the original, one might read the MS. shuft. It translates bād sūf. All obviously aim to imitate the

shuṭem of the original.

1 So D.J., D., and Farsi-Pers. MS.
2 D. om. avō; not so the Farsi-Pers. MS.
3 D.J. ins. va (or -o (?)); D. om.
4 So D.: D.J. seems to ins. va before pēḏ-
5 So D.J.
6 D. om. 'min valmanshān'; Ner. has asya.
7 D. ins. barā after kerpo; Pers. MS. has zak in its Pahl. text; om. the rest.
8 Mf.? has avō; D. om. 1; see the other places.
9 D. ins. 1.
10 D. om. v- of vāsh, or 'vash.'
11 So D.
12 D.J. does not report this needless 108.
The Text of an Archaic Tablet in the E. A. Hoffman Collection.—By Ellen Seton Osgden, of New York.

In the spring of 1901, while a student in Semitics at Bryn Mawr College, my attention was called by a footnote in Dr. Radau's book, to a very archaic Babylonian tablet in the E. A. Hoffman collection in the General Theological Seminary, New York City. By the kind permission of the Dean, the Very Rev. E. A. Hoffman, a copy was made; and as subsequent study

\[1\] Rev. Hugo Radau: *Early Babylonian History*, p. 12, note 1, and Appendix, p. 321.
of the inscription has shown it to be of exceptional antiquity and interest, the accompanying text is offered as a small contribution to the material for this period.

The tablet, which, with five others, was purchased in 1898 by Dean Hoffman, in Paris, and which forms part of a larger collection obtained in 1896, is of smooth black stone, $3\frac{5}{8}$ by $3\frac{1}{2}$ in. in size, with convex sides, sloping from $1\frac{3}{8}$ in. at the center to $3$ on the flat edges. The signs are clearly and strongly cut and the tablet itself in a perfect state of preservation. In the lower right hand case the bases of the signs are carried down over the edges, as though there were not room above.
Interpretation of the Archaic Tablet of the E. A. Hoffman Collection.—By George A. Barton, Professor in Bryn Mawr College, Bryn Mawr, Penna.

My attention was first called to this tablet near the close of the year 1900. While making a study of the archaic inscriptions which had been published, I noticed the statement concerning this tablet in Radau’s Early Babylonian History. It was evident that Radau had not read the tablet. Later, one of my pupils, Miss Ellen Seton Ogden, through the courtesy of the authorities of the Seminary, secured a copy, and we made considerable progress in its interpretation. In September of the present year I was permitted to collate the tablet again. This enabled me to obtain a clearer impression of some of its most peculiar signs, and to establish the fact that at the bottom of Col. II, a circle like the figure 10 had been cut by mistake and erased.

Further study of the tablet has made it evident that it is almost identical with a tablet in Paris which is yet unpublished, but which Thureau-Dangin mentions in the preface to the Supplément of his Recherches sur l’origine de l’écriture cunéiforme, designating it as γ, and many of the signs of which he cites in the table which follows. When these signs and their location on tablet γ are examined, they correspond to the signs of our tablet, column for column and line for line. When this Supplément was published, in 1899, Thureau-Dangin had not identified all these signs.

In interpreting the tablet I have worked from the starting point furnished by the numbers. It is evident that the first of these gives the area of a field, and probable that those which follow give the dimensions of its various sides. This supposition has proved correct. The tablet so far yielded up its meaning that I gave a tentative transliteration and translation of it in my Sketch of Semitic Origins.1 The tablet itself is of such

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1 Radau’s Early Babylonian History, p. 12 n. and p. 321.
2 F. 213 n. 5.
I.  

2.  

II.  

1.  

2.  

III.  

1.  

2.  

3.  

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*Erased by the scribe. + For the later"
interest to Babylonian palaeography as well as to history that I venture to publish my version of it in connection with Miss Ogden's text, and to call attention to some of its most important palaeographical contributions to our knowledge. Unfortunately, the sign which designates the locality from which it comes I am unable to identify. The writing shows the document to be older than the Blau monuments, but later than the archaic inscriptions published last year by Father Scheil in his Textes Êlamites-sémitiques and the Recueil de travaux.* Transcribed into the later Assyrian character it appears as on the opposite page.

It reads thus:

I. 1. IIHM GANA DUK'-KA' DINGIR ?' KI' LAG
   2. SAL-LAL'-TUR'
II. 1. IIHMVICL URI'-NI-A SIG LIK'-A
   2. IIHMVICL GAL PI XER-A DA'-KU GUR DIM-MENA BABBAR NIN-A TAB BAR" (UMUN)
III. 1. IIHMVIC E BABBAR LU'G AB TAB BAR
    2. IIHMVICL IG1 KUR IR'' DU" BAD LIK-A
    3. GIR'' ŠAG''

I. e., I. 1. "'3005 Bur of a field of clay, to the god ? presented
2. Sallaltur. II. 1. 36050 cubits on its Akkadawad side, the lower (side), from the beginning; 2. 36050 cubits running along the breadth of the ziggurat of Shamash, the lady who pours forth brightness; III. 1. 36000 cubits (to) the temple of Shamash, the messenger of Ab, who pours forth brightness, (i. e. Sin); 2. 36050 cubits before the mountain unto the abode of Ishtar (?), to the beginning; for making brick. 3. May he give strength, may he bless."

NOTES.

1 This sign, written ꝏ, was identified by Thureau-Dangin, Supplément, No. 679. It is clearly a simple picture of an antique clay pot, originally in an upright position (𓊕), similar to that which is pictured twice in the archaic inscription published by Father Scheil in his Textes Êlamites-sémitiques, p. 130, and in the Recueil de travaux.

* One of them was repeated in the Journal of the American Oriental Society, xxii, 126 ff.
Ball, PSBA., vol. xiii, p. 374, had conjectured from the form which
this sign assumes in the inscriptions of Gudea, that it was composed of
two elements, a vessel, and water. That view is now no longer defensible.

The sign in later Babylonian always stands for "pot" (see Brünnow's
List, No. 5893), but pots were made of clay in the early times. Indeed,
clay must have been employed for that long before it was employed
for tablet writing, and in that early period it would be natural in writing
to use the sign to designate a clay bed, or field of clay. The con-
text indicates that that is the case in this tablet.

1 This sign, Thureau-Dangin, Supplément, No. 517, compares to

Miss Ogden first suggested the identification with \( \overline{a} \), which I
believe to be correct. \( \overline{a} \) is afterward written \( \overline{m} \), (Thureau-Dangin's
Textes chaldéens inédits, No. 3, II, 6), and \( \overline{m} \), (Manishtu-irba.
Steile, Face A, xiii, 2), and \( \overline{m} \), (Gudea, B. i. 8). From this latter
form it is easy to see how the neo-Babylonian and Assyrian forms
are derived. QA usually is the ideogram for a measure, which was
the fractional part of a GUR or talent. Our tablet shows that the
sign was originally the picture of a small vessel, which was, no doubt,
used as a measure, and which was formed with a rounding bottom so
as to be easily held in or on the palm of the hand, thus \( \overline{m} \). The sign
seems to be here a phonetic complement. It is of interest to note how
eye the early use of phonetic complements began. One occurs on the Blau
monument B. l. 2 (cf. JAOS. vol. xxii, p. 123).

2 On this sign I am as yet able to obtain no light.

3 The form of this sign is as archaic as any form of it yet discovered,
even the form in which it appears on the tablet of Father Scheil
referred to in n. 1. It indicates that this text is younger than that.

4 Cf. Dangin's Récherches Sup., No. 419. Delitzsch correctly explains
its origin, Urspurgen der Keilschriftzeichen, 168 ff.

5 The identification of this sign is somewhat uncertain. Its form,
\( \overline{a} \), resembles somewhat \( \overline{a} \), the form in which Gudea, (col.
A, xviii, 20), writes \( \overline{m} \). I have with some hesitation identified it
with that sign, which has in Sumerian the value LAL, and the mean-
ings, "honey" and "good." With this same sign I have also identified
\( \overline{a} \), which occurs on Blau monument A. Rev., 1, 2 (cf. JAOS.,
vol. xxii, pp. 119, 120, and 122, n. 28). Was not the form of it in our
present text a rude picture of a bee entering a hive, and the form on the
Blau monument a variant, in which the hive is omitted, but the sting
added?

6 This sign, Thureau-Dangin correctly identified in R. Sup.,
44. Delitzsch's view of the origin is confirmed. It is the picture of a
court plus the motive for great.

7 This sign, Thureau-Dangin does not identify (cf. his Sup-
plément, No. 239). He wavers between two or three possibilities. I
tentatively identify it with 𒈹 𒆠 of Gudea (Dangin’s *Récéreches*, No. 117), and with the sign 𒇤, which occurs in de Sarzec-Heuzey’s *Découvertes*, pl. 144, in two or three different connections. 𒈹 has the meaning “Akkad,” which suits the connection in the tablet before us, and “Uršu,” a kind of plant, which satisfies the meaning in the various connections in which the sign occurs in the *Découvertes*. I would suggest that the sign in the form on this tablet is intended for a picture of the leaf of some plant, that it originally represented the plant, and that it was applied to Akkad because that plant grew there in abundance.

9 This sign is thus identified by Thureau-Dangin (*Sup.*, No. 438). I interpret it by Brünnow, *List*, No. 11250.

10 This sign, 𒂠, was identified by Thureau-Dangin (*Sup.*, 539*ef*). It is evidently the picture of a hand with the thumb turned in. Hilprecht (*OBI.*, pt. ii, p. 40) and Delitzsch (*Ursprung der Keilschriftzeichen*) regard the sign as the picture of an arm. That was evidently a later form of the sign, or possibly a variant of the one before us. That it was simply the picture of a hand in early times the sign before us proves. Here it is the right hand. In some cases it may have been the left hand (𒂠), in which cases it would approximate closely in form to the picture of a wing (𒅔) in Blau monument B. This confirms my identification of that sign as a variant of the sign for hand (*JAOS.*, xxii, 124, n. 11).

11 This sign, 𒂠, occurs also on Blau monument B. I was able, from its connection in the tablet now under discussion, to identify it, when at work on the Blau text, with 𒃐 + 𒆠 (cf. *JAOS.*, vol. xxii, p. 124, n. 8), the latter occurring in Lugalzaggisi as 𒂠, (cf. *OBI.*, 87, 1, 13). Our sign gives the latter in a more curved and archaic form. The first element is the sign for “two,” and represented the concept “doubling” or “increasing,” “making abundant” (cf. Delitzsch, *Ursprung der Keilschriftzeichen*, p. 47, n.). The second element represented the concept “side,” or “that which is seen” (Delitzsch, op. cit., p. 141), and naturally came to express in connection with a heavenly body, “disc,” and then “brilliance.” In our text this sign is used to describe first the sun, and then the moon. There can, I think, be no doubt but that the identification is right.

12 The group of signs which begins at this point is most puzzling, and my rendering is tentatively put forward with much hesitation. I have puzzled much over what constitutes the first sign. Is the line at this point a case-divider, or is it, like the basal line of 𒃑 in col. I, a portion of a sign which might be easily mistaken for a case-divider? After much hesitation this seems to me the more probable view. In that case the first sign is 𒂠. But what can this mean? May
it not be a variant form of 𒐀, which a lexicographical tablet published in the *Cuneiform Texts from Babylonian Tablets in the British Museum*, pt. v (No. 81–7–27, 49), defines as 𒐁? I tentatively so take it. 𒐁 stands for “eye,” “face,” etc., and seems in our tablet to have the meaning of “before.”

𒐁 is written in *Découvertes*, pl. 13, in the form 𒐁, and has usually been regarded as the picture of an eye. So Oppert, *Expedition en Mésopotamie*, ii, 64, Delitzsch, *op. cit.*, 111, and Ball, *PSBA.*, xiii, 96. Probably the sign did originate in attempts to picture the eye, but as in some cases (cf. *JAOS.*, xxii, 125, “addition to n. 31”), it was represented in the earliest writing by various pictographs. 𒐁 pictures the eye in one way, 𒐀 in another. Perhaps the latter was conceived as representing the way in which a ray of light strikes the eye. Our sign, 𒐀, may have been intended to represent the arch of the eye and the line of the nose, and was probably not intended in the first instance to represent the eye, but the face, and so would naturally mean “before.” As the picture for eye was afterward used in the same meaning, it would be natural for it to supersede the other.

This sign, 𒐁, I take to be an older form of 𒐁 (cf. Thureau-Dangin’s *Récherches*, No. 326), which appears in later Babylonian and Assyrian as 𒐁. So 260 ff. calls it a *gunu* of 𒐁 (old Babylonian 𒐁), and Delitzsch (*op. cit.*, 63) is probably right in accepting this as the explanation of the origin of 𒐁. He is also right (*ibid.*, p. 69) in the view that 𒐁 is a picture of a peg or post. A log or tree was represented by 𒐁 (later 𒐁), and the log sharpened so as to stick in the ground represented the idea of “building,” “making,” or “doing,” and the *gunu* of it, the idea of doing these things with energy or despatch. From this the sign came to represent rapid motion toward a thing, and then as a post-position to have the meaning “unto,” the meaning which it has in our inscription. Kent has suggested (*AJSL.*, vol. xiii, 299 ff.) that the *gunu* signs were originally the picture of a hand. It is a suggestion which has much in its favor, but the form in which the sign occurs in our tablet gives the suggestion of the hand by five dots, which represent the five fingers.

This sign, 𒐀, is written 𒐀 on tablet γ (cf. Thureau-Dangin’s *Supplément*, No. 381). The French savant has not identified it. I take it to be an older form of 𒐁, later 𒐁 (cf. Thureau-Dangin’s *Récherches*, No. 233). It signified “mound,” “abode,” etc. Delitzsch (*Ursprung der Keilschriftzeichen*, 90 ff., and 156) explains the origin of this sign from the form which is used by Gudea(?), deriving it from 𒐁, “court,” plus the *gunu* signs. Perhaps Babylonian scribes understood it in this manner, but it seems clear to me that in the sign before us we have the diagram of a mound, dotted with dwellings.
This sign, , I take to be an older form of , later (cf. Thureau-Dangin's *Récurrences*, No. 129), meaning "bricks," or "to make bricks." These signs were once, as is well recognized, written perpendicularly. This very tablet was, perhaps, held in reading so that this sign would appear . It was, I think, intended to represent the arch of a brick kiln with the smoke from the kiln rising above. In the later form the smoke is omitted and part of another arch added.

This sign is very puzzling. Its form, , was apparently a picture of the neck and head of an ass, probably the original of the later , which still later became . Delitzsch has called attention (op. cit., 146-149) to the fact that in the period between Lugalzaggisi and Gudea there is quite a series of signs which are almost identical in form. Thus, in addition to the sign already given, we have equivalent to , "foot" (cf. Dangin, *Récurrences*, No. 224), and in Manishtu-irba and Alu-usharshid , equal to (cf. Scheil's *Textes élamites-sémmites*, pl. I. col. I. 3. 8, and OBI., Nos. 5 and 6), "kiš." Now Delitzsch finds the key to this group of signs in , a hypothetical ground-form of "kiš," which does indeed approach the form , which the sign assumes as late as Gudea. Delitzsch explains this as the "Urmotive" which designated "mass," plus the gusu signs. This gives him the meaning kiššatu, "host," from which he thinks the sign came to signify "strength." He further thinks was simply a variant of , and was applied to the feet because of their strength. Similarly he derives from plus , staff, assuming, apparently, that every ass had to be kicked and beaten. Now the scribes of a later time may have reasoned thus, and Delitzsch is possibly right in his explanation of , but as for the rest his explanation is too abstract to correspond to primitive ideas. , the ancestor of the sign , was, I believe, rightly explained by Houghton as long ago as 1878 (TSBA., vol. vi, 470 ff.) as originally a picture of the human foot with a sandal bound around the ankle. The sandal distinguished it from = , which signified "stand," "go," etc. This sign might in time come to represent "strength" and the verb "to be strong." The sign is, I believe, a lineal descendant of the sign on the Hoffman tablet, which was originally the picture of the head and neck.
of an ass. That, too, would naturally be used to represent the idea, "to be strong." Later, when the picture-writing had given way to linear writing, the forms of these three signs so nearly approximated one another that their functions were somewhat confused; hence the sign for "foot" displaced the sign for "ass" as a means of expressing the idea of strength. On the confusion of one of these signs with still another during this period, cf. Thureau-Dangin, Supplément, pp. 11-15. This discussion will explain my reasons for the interpretation of the sign. The reason for translating this last case as a prayer is that the inscription of Lugalzaggisi (OBI, No. 87), inscription B. of Gudea, and those of many later kings have similar conclusions.

17 This last sign, originally written in an upright position, , is evidently the picture of the top of a palm tree. The sign for palm tree in the time of Lugalzaggisi was . Delitzsch explains this latter form as composed of three elements, = Sig, "favor;" , "open," "distribute," and , "people;" the whole meaning, "the tree which gives blessings to people" (cf. op. cit., 144 ff.). Ball, on the other hand, regards the sign as the branch of a date palm to which a cone, such as are so often pictured on the monuments in the hands of winged beings, is being applied (cf. PSBA., xvi, 198). I was inclined, until within the last few weeks, to think Delitzsch right (cf. my Semitic Origins, 161), but his view seems to me now too abstract, and Ball's seems preferable. It is clear, however, that, as noted in at least three other cases, there was a struggle between two different forms in the early writing, one of which finally displaced the other. The earlier form was the picture of a palm tree, such as we have on the Hoffman tablet; the later represented the act of artificial fertilization of the palm. As I have shown in the Semitic Origins that the artificial fertilization of the date palm was of Semitic origin, it follows that the picture of the palm which we have here is probably of Sumerian origin, while the variant form, which represented the fertilization, and which finally displaced the other, is of Semitic origin. I therefore identify the sign with , and interpret it as No. 7290 of Brunnnow's List.

In conclusion it should be remarked that the study of such inscriptions as this and the Blau monuments makes it evident that the nearer we push back to the beginnings of Babylonian writing the greater is the variety of sign-forms upon which we come. As long as the sign was a picture of an object the picture might be varied at the fancy of the scribe. When the pictures became conventionalized, there was a period of struggle between the various forms of the signs which resulted in the survival of the fittest.
Creator gods.—By Crawford H. Toy, Professor in Harvard University, Cambridge, Mass.

According to Mr. Andrew Lang, the original high gods of all savage peoples are beings who had no beginning and do not die; fathers of their people, patrons and guardians of morality for the tribe and for the individual. If, he says, in later times they show a lower character, it is because they have degenerated; the original pure instinct of the savage has become tainted by the growth of animistic culture, and it has required ages for men to get back to the plane of their primal innocence and ethical clear-sightedness. As such lower grades show themselves in all half civilized nations, his theory involves the supposition of a universal process of religious degeneration, and he does not shrink from the logical conclusion. All the gods of the great nations, he maintains, have traversed this cycle of transformations, first a degradation and then an elevation. As an interesting instance of the process he cites Jehovah, the god of the Hebrews. In the earliest Hebrew records Jchovah is an immoral anthropomorphic person, but undoubtedly, says Mr. Lang, he was at an earlier stage moral; he had fallen from his high estate of the olden time when he was morally the equal of the Bushman Cagn and the Australian Daramulun and Baiame. No Hebrew or other Semitic ground for this statement is adduced or claimed by Mr. Lang, but in his mind it is demonstrated by the consideration that, if it were otherwise, the Hebrew theistic system would be inferior to that of all other primitive peoples. That is, he rests his construction of religious history on what he holds to be an established fact, namely, that all original creator gods are eternal and moral. The subsequent degeneration of these gods he ascribes to the influence of the animistic belief, a later growth, which, while it has given us as a precious possession the doctrine of the soul, led the popular fancy at first into all manner of degrading customs of worship and repulsive stories of gods. The alleged facts of savage belief on which this superstructure is based have been criticized by several recent writers.¹

¹ Notably by Mr. Sidney Hartland, in Folklore, 1898.
and their details need not be repeated here. I wish to call attention to one or two errors into which, as it seems to me, Mr. Lang has fallen in the interpretation of his evidence.

One preliminary remark may be made. It has been said by eminent authorities that early religion has no connection with morals. This statement may mean that early morals are very low, or that early gods take no account of the conduct of men; the former of these propositions is to be taken with a "distinguuo," the latter is contrary to much that we know of early peoples. As to the first, it is generally held (and it is admitted by Mr. Lang) that the moral character of a god is that of his worshipers, so that from the ethical attributes of a deity we may infer the ethical ideas of the community at the time when these attributes are ascribed to the deity; if he be thought of as a person, he must have some sort of moral character, and this must be included in the religion of the time. As to the second proposition, it is difficult, from paucity of data, to bring convincing evidence on one side or the other. Even the remarkably full and clear description of the Central Australians given by Messrs. Spencer and Gillen leaves much unexplained. These tribes do not appear to connect conduct with any superhuman being; but, on the one hand, they seem to have no religious worship of any kind, and indeed no gods; and, on the other hand, they have a definite system of moral conduct, so that, if they have gods, we cannot say that these do not take account of moral conduct. The question is well illustrated by the Old Testament records: if we looked only at the denunciations of the people by the prophets, we might conclude that the Israelitish religion of the time was quite divorced from morality, that the Yahweh of the popular faith cared for nothing but his perquisites of sacrifice; yet we can hardly suppose this possible of a community that produced the prophets and the legal codes. We find generally in savage peoples that the marriage laws (which are usually strict) are under the protection of the gods. As far as the evidence goes, it cannot be said that the gods ever stand aloof from morality as it is understood in their communities. The question of the sort of morality in vogue in any given place and time is one of prime importance.

Of the two sorts of service offered to the gods, the ritual and the moral, the former is apt to be more in evidence: the latter may easily be overlooked by the observer.
Mr. Lang has collected a large mass of material going to show that many early creator gods are morally pure and high. He has omitted certain other material that looks in a different direction, but there is an element of truth in what he says: we do find good ethical ideas and customs in low tribes. What he fails to give due weight to is that this ethical element, embodied in the person of the god, represents nothing more than the simple kindly instincts and social necessities of all communities. Man is born with certain impulses of sympathy, which he shares to some extent with the lower animals. These impulses, when not counterbalanced by the selfish instinct, lead him to treat his fellow-man or fellow-animal with kindness. The well-known story of Mungo Park is a good illustration of natural sympathy. Savage man is free from some of the complications of civilized life—from the selfish impulses arising from the accumulation of personal property and from the innumerable obligations springing from multiplied relations with fellow-men. This simplicity of savage life gives it such an air of innocence that some philosophers have held that civilization means declension in virtue. That is an unwarranted fancy, but doubtless the simple virtues exist among savages. Further, as soon as society is organized, some rules respecting regard for life and property must be established. It is not strange that Mr. Lang's savages should have laws against murder, theft and infringement of marriage rights, and that the gods should be the guardians of the laws. And this is all that is involved in his contention regarding early moral creators. They embody the current morality, and that represents the natural impulses of human beings. It may be added that the 'eternal' character that he ascribes to early gods is of an equally simple nature. On this point the statements of savage theology are often vague: the creator may have had a beginning or he may not. Where he is conceived of as without beginning, this is due to the necessity of having some fixed point of starting. It is the negation of beginning and not the affirmation of eternity. It is impossible to go back and back

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1 This remains true after the abstraction of probable or possible influence from contact with whites.
2 See, for example, the precepts of the Kurnai god, given by Howitt, in Journ. Anthr. Inst., 1885, p. 313.
for ever—one must pause somewhere. How a given tribe came to fix on a certain person as the originator of the world, we cannot say; any such determination has been preceded by a long period of which no records exist, and the conception of the creator is doubtless a relatively late achievement.

The view that the animistic cult has induced degeneration appears to rest on a confusion of ideas. Since the morality of the religion of any period is the morality of the community of the period, decadence in theistic conceptions must mean decadence of society; but the theory of a universal social degeneration will hardly find favor even with Mr. Lang. Though it is far from being proved that mythology is a product of animistic belief, it is true that the morality assumed in early myths (and in later ones as well) is often inferior to that ascribed to the great gods. Theology and mythology represent, to a certain extent, two distinct lines of thought, two currents, as Mr. Lang well puts it, flowing together through religion. Theology deals with the conduct of life, mythology with the construction of the world and of society. For this reason the latter permits the play of popular fancy to an extent not generally possible in the former. Mythology is not religion but science—a distinction that Mr. Lang fails to make. When men approach the gods in worship, they think of them as the guardians of the existing social laws; when they undertake to account for the origin of things, they are unrestrained by moral law, and may give loose rein to the baser side of human nature. It is the difference between dealing with the present, for which men feel responsible, and dealing with the past, for which they do not feel responsible. One example is found among the Central Australians, whose stories of the ancestors (creators and social constructors) set at naught all the ethical customs that the people now observe with the utmost strictness. An example of a slightly different character is furnished by the extermination law of Deuteronomy (ch. 13), and Joshua (chs. 6–11), which has in mind a former vanished situation, and would probably have been impossible for the end of the seventh

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1 This doubtless is the signification of the Central Australian Ungambikula, “out of nothing” (Spencer and Gillen, Central Australia, p. 888), not, however, exactly “self-existing,” as Mr. Lang renders it (Making of Religion, p. xxii).
century B.C. in the kingdom of Judah. What the Israelites in the time of the conquest actually did to the Canaanites was far more humane than the policy ascribed by the later writers to Yahweh; but we should not call this a proof of ethical degeneration.

There is, however, another consideration, which has been well stated by Mr. Lang himself. Myths often contain expressions of early usages and ideas that are condemned by a later age. Cannibal gods, for example, had their origin in a cannibal society, and polyandrous goddesses in a polyandrous society. Stories of this sort continue for a long time to stand side by side with elevated conceptions of the character of the gods; the examples are too well known to need citation. Here, again, we have not degeneration, but rather the opposite. It is the antagonism between the more advanced and the more backward circles of the community; an antagonism that exists, so far as we know, everywhere and at all times. Some portion of the morally low mythical material reflects the usages of a former time. We cannot say which of the two lines of thought, the religious and the mythical, was the earlier. Probably they began at the same time; the wish to account for the world was probably coeval with the impulse to enter into relations with the superhuman powers. The fact suggests another point that Mr. Lang appears not to have had in mind. He has observed that in some cases, among savage tribes, morally low stories occur in conjunction with morally high conceptions of deities, and in these cases his explanation is degeneration. But the same fact appears in Homer, and the explanation is probably the same in the two cases. In Homer we easily recognize a fairly high moral conception with a background of low myths, and we assume that the Homeric period was preceded by a long period of barbarism. We have probably to assume a similar condition in the savage history known to us. But Mr. Lang appears to take it for granted that Daramulun, Baiame, and the rest are primitive, and he cannot account for their moral eleva-

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1 In the first edition of his Myth, Ritual and Religion.
2 See Barton, Semitic Origins, ch. 2.
3 There are facts that appear to militate against this view. The question is too large to be discussed here.
tion except by the supposition of a primitive ethical intuition in the human soul. Now, from the point of view of theism, human nature is a divine revelation, and human thought a divine intuition, and so far he is right; but he apparently wishes to see in high savage morality a full-grown intuition independent of the ordinary processes of human growth. His hypothesis involves the supposition of a full-grown social order, since the ethical laws to which he refers relate mainly to the constitution of society. He forgets that a hundred millenniums of human experience lie behind the gods of the lowest tribes we know. In this space of time there is room for any development that we can conceive, and there is a possible explanation of the ethical differences between mythology and religion.

In another point Mr. Lang's conception of religious history seems to be not well thought out. In the first place, he is under a misconception in supposing that he stands alone in the view that a god is not necessarily a development out of a ghost or a beast, but may have been originally thought of as a man-like being; others have held this view. Thus he spends much time in assailing a position that is by no means the reigning one, and he seems to suppose that in refuting it he is overthrowing the argument for a gradual development of the idea of a god. He makes the mistake of parceling off the genealogies of superhuman beings too sharply. All spirits, according to him, come from ghosts, and all high gods from man's primitive intuition of an exalted person who is creator and father. But, with our ignorance of early human history, it is impossible to rest in this smooth and simple division. If we had records of savage history for some thousands or myriads of years, we might venture to frame a definite theory of theogony; as a matter of fact, our knowledge of this history extends over only two hundred or three hundred years at most, and even in this short space it is most meagre. Moreover, such knowledge as we have of the history of human ideas and customs leads us to suppose that every idea or custom is complex, and has reached its existing form by the convergence of many lines of thought and experiment. It is not possible to say whether man began by deifying beasts or inanimate objects or human beings or ghosts or by

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1 Among them Mr. Hartland.
imagining great superhuman man-like beings as the authors of all things. There are facts that may be adduced in favor of all these hypotheses. Who can tell by what devious routes early man reached well-defined conceptions of the unseen Powers? We have to content ourselves with chronicling the earliest facts we can find, and awaiting the discovery of new facts that may throw light on the problem.

Mr. Lang attaches great importance to the fact that in many cases the "high gods" of savages are not approached with sacrifices and offerings, and, as he thinks, were never so worshiped. Such propitiation was reserved, he holds, for the undignified greedy spirits of ancestors and similar inferior supernatural beings. It is possible that certain gods have never been mollified by gifts or importuned for blessings; but in the nature of the case it is impossible for us to determine whether or not this is true. The memory of savages reaches back to no remote period, and what the original custom was they cannot tell. Possibly many ancient gods shared the fortunes of the Zulu Unkulunkulu,1 who lived so long ago that the recollection of him had become dim, and the people's interest turned to their ancestral ghosts. With such changes in popular cults we may compare the Babylonian and Greek succession of divine dynasties, in which the somewhat vague figures of Heaven and Earth yield to nearer and more human deities. And in fact the savage Supreme Beings, described by Mr. Lang, commonly dwell in Heaven, and are more or less removed from the passions and the affairs of men. On the other hand, such creators or constructors as (according to Spencer and Gillen) the Central Australians recognized were decidedly human in their purposes, plans and modes of action, and neither to them nor to the spirits of the dead were gifts offered. These people seem to have no social relations proper with superhuman or extrahuman beings; they believe that their world was made or shaped by such beings, but, for themselves, they are satisfied to live their lives with such social regulations as have been devised by them in the course of ages. They are very nearly in the position of certain circles of our own time, who hold that the world was made, but see no advantage in entering into relations with the maker.

1 As described in Callaway's Amazulu.
In this case, as in many others, modern thought, by philosophi-
cal reflection, has reached a conclusion not substantially differ-
ent from that held vaguely by savages. We are unable to say
whether or not the present creed of these Australians has always
been held by them. If they once paid worship to the creator-
ancestors, then some process has gone on in their history of
which we know nothing. If they have never paid worship,
they may represent an early sub-religious stage, possibly exist-
ing at some time everywhere, in which no social bonds united
man to the extrahuman powers whose existence he vaguely
recognized. Out of such unworshiped powers may have come,
in the course of time, the distincter moral figures to whom no
worship was offered. It is not improbable that there were dif-
ferent lines of development among different savage tribes, just
as there have been among civilized peoples. We cannot explain
how it was that the Indians and the Iranians, starting (as appar-
ently they did) from the same body of beliefs, followed diverse
paths, or how it was that both of these groups differed religi-
ously so greatly from the Chinese. There appear to be initial
and fundamental differences between the various savage systems
of thought, and these, as well as their resemblances (in totemism,
taboo, etc.), must be studied.

In regard to the relation, as to their origins, between spirits
and man-like gods, one obvious point is not always had in mind.
There may be such gods that never were spirits, but the rise of
a god from a spirit is by no means inconceivable. Mr. Lang
and others sometimes speak of spirits as if they were regarded
by savages as immaterial. We know, however, that they are
supposed to have bodies, real, though of a peculiar character,
not subject to the ordinary laws of human bodies: they move
rapidly through air or water or solid earth, may assume differ-
ent shapes or become invisible, yet eat, drink and sleep as
human beings do. Now Ea, Indra, Zeus and Yahweh have just
such bodies, and, so far as corporeal form is concerned, might
once have been spirits. Nor is there any difficulty in supposing
that out of a mass of spirits one might in time be clothed with
moral qualities and supreme dominion; and it is not necessary

1 Professor Hopkins calls my attention to the fact that the Lord-
Spirit of Yoga philosophy is at first just such a being—a separate spirit,
morally superior to other independent spirits.
to hold that moral gods arose always out of the same primeval form. There are facts that seem to be more easily explained by the supposition of a difference of origin between gods and spirits. In the old Hebrew system the angels (ancient gods) are kept distinct from the spirits; and the Chinese, Hindu, Greek and Hawaiian ancestral spirits form a class by themselves apart from the gods. On the other hand, the two classes, gods and spirits, are often identical in functions and powers: the god of plague is not to be distinguished in this regard from the spirit of disease; the Hebrew spirits sit in the divine council just as the angels do. Doubtless these civilized mythologies belong to a relatively late period, and presuppose a long preceding history; but there seems to be no good reason why the same fundamental ideas should not be found in widely separated ages of religious growth.

Sacrifice and animism are not certainly or necessarily coeval, and they do not imply religious declension. The beginnings of the sacrificial custom are not known to us, and we must beware of constructing the religious history of man from the few and uncertain reports we have received of savage beliefs. These beliefs have not yet been properly examined. When we have good opportunity to test the accounts of travelers we frequently find occasion to doubt their correctness. We criticise them from our several points of view; Mr. Tylor objects to one thing, Mr. Lang to another. Much contempt has been expressed for the reports made by travelers to the effect that certain tribes had no religious beliefs or usages; now, it seems, it may be necessary to guard against crediting savages with too much religion. But, whatever may turn out to be the truth on this point, we have to recognize the fact that sacrifice is connected with that sense of intimate relations between gods and men that has been the starting-point of the higher religions. Sacrifice has its mercenary non-moral side, and doubtless represents a religious conception inferior in certain regards to simple reverence for a just and loving deity. But it has its roots in human nature, and is an advance on a system in which the gods have nothing to do with human life.
Remarks on the Hebrew Text of Ben-Sira.—By Crawford H. Toy, Professor in Harvard University, Cambridge, Mass.

About two thirds of the Hebrew text of Ben-Sira have now been discovered (most of chapters 3–16, 30–32, 33–51, and parts of other chapters)—enough to justify a provisional opinion as to its character. The heated discussions of the last five years appear to have ceased, and a consensus of judgment is gradually being reached. The view is gaining ground that the fragments discovered represent a genuine Hebrew text, but a very corrupt one—a text that has passed through many hands, has suffered a variety of fortunes, and only to a limited extent furthers the reconstruction of the original book. 1 The hypothesis that the Hebrew text, as a whole, is a retranslation from the Syriac or from the Greek or from both these, can hardly be maintained. The opposite view is supported by the following facts: (1) In a number of cases the Hebrew is obviously independent of the Versions, 2 and sometimes enables us to explain the erroneous readings of the latter. 3 (2) While there is often agreement between the Hebrew and one or both of the Versions, the agreement is so irregularly distributed (the Hebrew inclining now to the Greek, now to the Syriac, in the same paragraph and even in the same couplet), that to suppose the scribe to be a translator would be to credit him with a highly improbable catholicity or capriciousness, or with a still more improbable spirit of critical research. (3) In the majority of passages the style has the qualities of the old aphoristic literature—the condensation and the curtness (sometimes approaching obscurity) of Proverbs and

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1 This view is held by Neubauer, Cowley, Schenker, Taylor, Driver, G. Margoliouth, Smend, Bacher, König, I. Lévi, Nöldeke, Schlatter, Rysel, Houtama, Ahram, E. N. Adler, Tyler, and others. On the opposite side are D. S. Margoliouth, and perhaps Bickell, Gaster and others.

2 See, for example, 8. 6, 7, 11, 14, 15, 16, 9. 4, 11, 15, 10. 5, 7, 10, 17, 18, 21, 11, 28.

3 As in 16. 32 f., 19. 1, 20. 6, 36, 28.
Koheleth—a literary form that a late translator would not be likely to attempt or to attain. (4) The vocabulary is so similar to that of the latest Old Testament writings that, after excluding a few Syriisms and Arabisms and some obvious imitations of Old Testament passages, we cannot regard it as belonging to the period during which translations would probably have been made; for such a period would almost certainly have betrayed itself by its diction.

In connection with the Aramaisms and Arabisms that occur in the Hebrew fragments the question arises: How far are these to be referred to the original Hebrew text, or to the earliest form of Hebrew text that can be fixed, or to the diction of later scribes?

First, as to the Aramaisms. The composition of the Hebrew Ben-Sira may be placed at about 190 B.C., at which time the current spoken Hebrew was probably largely contaminated with Aramaic words and expressions. The facts that Assyrian and Jewish officers of the time of Hezekiah were acquainted with Aramaic (2 Kgs. 18. 26), that Aramaic was the official language in the western provinces of the Persian empire, that Aramaeans were found in large numbers in the West, that portions of the books of Ezra and Daniel are written in Aramaic—all these show that this language had penetrated deep into the common speech of the Jewish territory. The Chronicler, writing in the third century, employs a number of Aramaisms, and many more occur in Koheleth, a book that may belong to the same period as Ben-Sira, or may be a century or more later. A comparison between these two shows some interesting resemblances and differences: they are alike in their free secular tone and spirit, both standing to a certain extent outside of the theocratic circle of interests; they differ in the fact that Koheleth shows no interest in the sacred books, while Ben-Sira’s piety leads him to preserve the traditional expressions and grammatical constructions of classical Hebrew; thus, he freely employs וַאֲשֶׁר with the Imperfect, while Koheleth has largely adopted וַאֲשֶׁר with the Perfect. It cannot be supposed that Chronicles, Koheleth and other late Biblical books exhaust the borrowed Aramaic vocabulary of the time; Ben-Sira may have used many words not found therein.

When we come down to the second century of our era, the point to which we can probably trace the existing text of Ben-
Sira (as will be shown below), the case is still stronger. Aramaic was then the vernacular of the Jews, Ben-Sira's book was not guarded by canonical sacredness and an authoritative text, and scribes might naturally introduce Aramaic words and expressions. In the succeeding centuries, down to the probable date of the MSS. of our Ben-Sira fragments (the tenth or the eleventh century) Aramaic influence continued. The linguistic relations, it is true, were modified: after the Moslem conquest, in the middle of the seventh century, the Jews, especially in Babylonia, began to adopt Arabic as their language of intercourse; but they continued to write in Aramaic or in Hebrew with a mixture of Aramaic (and Arabic), and the employment of Syriac terms by copyists would be natural.

It thus appears that at no period in the history of the Hebrew text of Ben-Sira would it be strange to find that it contained Aramaic words. These might be of the Western dialect or of the Eastern; but it is not always easy to draw the line between the two in Jewish writings, for the reason that in these writings both dialects were affected by Hebrew. Such a form as נָחֵב (BS. 37. 19), if it be an Imperfect, is certainly Eastern; but it is difficult to make such a distinction in the vocabulary.

The number of Aramaic words not found in Old Testament or in late Hebrew writings is not great. In addition to the one mentioned above (נָחֵב) the following appear to be Syriasms. In 3. 13, יַעֲשֶׂה is employed in the sense "forgive," in imitation of Syr. יָעֲשֶׂה; 8. 11, יָהִי, "depart," if it be the right reading, is not Hebrew; but the word is, perhaps, miswriting of יָעִשְׂה, and the text appears to be in disorder; 6. 7, 13. 11b, מַעֲשֶׂה, for which Saadia has מַעֲשָׂה מֵמאָה וַמֵאָה and מַעֲשָׂה מֵמאָה מֵמֵאָה; 12. 13, 39. 30, יָהִי מַעֲשָׂה or מַעֲשָׁה מַעֲשָׁה מַעֲשָׁה; 30. 30c, קַשָּׁה "eunuch" is translation of Syr. מַעֲשָׁה; 8. 1, מַעֲשָׁה "hard, cruel;" 9. 18, מַעֲשָׁה מַעֲשָׁה מַעֲשָׁה מַעֲשָׁה; 31. 7, מַעֲשָׁה "stumble," cf. 41. 2c; 38. 25d, "discourses." הָיוֹת (42. 12)

1 It is impossible to understand מַעֲשָׁה here otherwise than in the sense of "eunuch," and this sense is not Hebrew; the Hebrew word for "eunuch" is מִרְם. Arabic أمين الصندوق is "treasurer," and an אָמִין might be a treasurer, or might be a "trusted" person in any position; but this fact does not warrant us in regarding "eunuch" as a Hebrew signification of מַעֲשָׁה.
“among” (=בֵּין) is doubtful; it occurs in Pr. 8. 2, and may perhaps be regarded as a neohebraism.

Very few Arabisms occur in the fragments. If the reading of 12. 3 (רַבָּתָא אֲלֵהוּ רִשְׁתּוֹ) be correct, צָרְקָה הַל הַעֲשָׂרָה must be taken as identical with Arabic منحن —the word is not elsewhere found in Hebrew or Aramaic. The Versions, however, do not so understand it: Greek has ἀναλεῖπτειν, "persistent," apparently reading some form of ἈΝΩ; Syriac has ῬΩΝ, apparently reading Piel or Hifil of ῬΩΝ. Smend, followed by Ryssel, emends to מִלְיוּנִי, translating: "there is no advantage for him who leaves wicked men in quiet." The objection to this reading is that it fails to bring out the point demanded by the connection, namely, the diverse results of giving to the righteous and to the ungodly; thus, in v. 7: "give to the good and withhold from the bad." Failing of a better explanation, we shall have to suppose that a root מִלְיוּנִי "give" did exist in Hebrew, or that the form here used is an Arabism that came in to the Hebrew vocabulary not from late scribes (since Septuagint and Syriac had nearly these consonants), but at an early period.

The stem קָלָל undoubtedly occurs (38. 1 and elsewhere) in the sense "create," a meaning found elsewhere only in Arabic. It is possible, therefore, that in Ben-Sira it is an Arabism, the insertion of an Arabic-speaking scribe; a fact that would not be at all strange, since Arabic became the language of the Jews in the Moslem realm probably before the tenth century. Several scholars (Nöldeke and others) hold, however, that the sense "create" may be good Hebrew. The stem has acquired sets of opposed meanings, on the one hand, "create," on the other hand, "perish," and both may be derived from an original sense "divide, measure, arrange." It is conceivable that the meaning "create" existed in Hebrew, and only by accident does not occur in the Hebrew texts. Yet this cannot be said to be likely, and there is no difficulty in accepting the word as an Arabism.

The participle בֵּית כּוֹהֵן "shining" (50. 7) appears to be an Arabism. One may doubt the origin of כּוֹהֵן "have regard for, honor" (38. 1), a meaning that may come naturally from the common Old Testament sense "pasture, feed, take care of." The special sense "honor" may have come in under Arabic influence.
It is to be noted that, while there are almost certainly cases of translation from a Syriac text (notably in the acrostic, 51. 12–30), not all seeming cases of translation are to be so explained. As an illustration we may take 46. 20, in which the first couplet (speaking of Samuel) reads: “and even after his death he allowed himself to be consulted, and declared to the king his ways.” Here the word “ways” does not agree with the Old Testament narration and is obviously inappropriate; the Greek, the Syriac and the Latin have “his end,” which is what the connection demands; the Hebrew וְלִדָּה is a synonym of וְלִדָּה, and this is a corruption of וְלִדָּה. As the Syriac has וְלִדָּה, it is natural to suppose (as Lévi does) that the Hebrew is a translation of the incorrect Syriac form. But a Hebrew scribe with the Syriac before him would probably have written the familiar Hebrew word וְלִדָּה and not וְלִדָּה. The latter is more simply explained as a variation, by a Hebrew scribe, of Hebrew וְלִדָּה, which would be accounted for as a corruption of the original Hebrew וְלִדָּה.

The question arises, how far we can now establish the original Hebrew text of Ben-Sira. The answer must be, that it is not possible to fix the original as a whole. There are many passages in which there need not be doubt as to the form, and there are many in which both form and meaning are questionable. The most that can now be attempted is to establish a probable text of about the third century of our era. In general, our Hebrew fragments agree with the quotations in Saadia, and therefore may be taken to represent the current text of the tenth century. The Greek, Latin, and Syriac Versions furnish a somewhat corrupted text of the third, fourth, and fifth centuries, and the Talmud quotations appear to be in general accord with the unglossed Greek (Gn.). In the Hebrew and the Versions we have probably two generally independent lines of tradition; the one coming down chiefly or wholly through Palestinian and Babylonian Jews, the other coming chiefly through Alexandrian Jews and Christians. The former retained the original Hebrew, and there is no evidence that a Jewish Aramaic translation of it was made. The existence of the Hebrew was known to Jerome, but, instead of going to the original, he adopted the Old Latin Version without revision;—a regrettable procedure, as a translation by Jerome would have gone far to fix the text of the
fourth century for us. As it is, the Old Latin offers a highly
glossed text of about the third century, and this may be controlled
in part by the Syriac and the unglossed Greek. Such comparison
being made, we have in the Versions a text standing at the dis-
tance of about four centuries from the original translation into
Greek, and bearing the marks of scribal carelessness and revis-
ion. The Syriac translator undoubtedly exercises his editorial
functions often freely, and it is not improbable that Ben-Sira’s
grandson took liberties with the text in the interests of Greek
clearness and smoothness. The Hebrew, on its side, had suf-
f ered similar fortunes. In the third century it had been nearly
five hundred years in the hands of scribes, and it would have
been a miracle if it had escaped without additions, omissions, and
corruptions. Our fragments are burdened with another long
period (about four hundred years) of transmission; yet, after
eliminating obvious blunders of writing and arrangement, we
may conclude that their text is not very different from that
known to the Talmudic writers, after this latter, in its turn, has
been freed from excrescences. The result is that we reach two
main text-records in the third century, one Hebrew and one
Greek. When these are compared, it appears that their agree-
ments and disagreements are so involved that it is impossible to
distinguish families of manuscripts in a strict sense. We are
rather led to the conclusion that the constant activity of scribes
throughout the Christian and Jewish worlds had produced a
considerable variety of readings, and that these are distributed
among the different groups according to laws with which we are
not acquainted. For convenience’s sake we distinguish two
Greek types, one Syriac, and two or three Hebrew, but an
archetypal text accounting for all these we are not yet able to
construct.
The Collection of Oriental Antiquities at the United States

The beginnings of the Section of Oriental Antiquities at the National Museum were described by Dr. Cyrus Adler in this Journal, vol. xiii, pp. ceci ff. Since then it has slowly but steadily grown, and though it is still in the "day of small things," it comprises sufficient material to be representative in its several divisions.

The section is now officially divided into the "Division of Historic Archaeology" and the "Division of Historic Religions," both forming a part of the "Department of Anthropology."

The Division of Historic Archaeology occupies the two alcoves west of the Rotunda. The visitor's eye is attracted to them by the colossal composite figures of the human-headed winged lion and bull which guard the entrance to these compartments as they once guarded the entrance to the palaces of the Assyrian kings. Inside are installed the collections of Biblical, Assyro-Babylonian, Egyptian and Hittite antiquities. The collection of Biblical antiquities includes casts of the monuments found on Palestinian soil, and some specimens of the geology and flora of Palestine; a collection of the musical instruments mentioned in the Bible; a series of the coins of Bible lands; a collection of the precious stones mentioned in the Bible; and objects belonging to modern life in the Orient, which serve to explain and illustrate many allusions in the Bible, such as a goatskin water-bag, millstones, kohl, etc. The Bible itself is represented by a collection of facsimiles of manuscripts, and old and rare editions of the original texts, as well as by copies of the most important ancient and modern translations.

Of the Assyro-Babylonian objects may be mentioned, besides the composite figures referred to above, the black obelisk of Shalmaneser II, the stele of Sargon II, found in Cyprus, the two Gudea figures from Telloh, Deluge tablets, a model of a Temple-Tower of Babel, made at the Museum after the descrip-
tions of the Temple-Tower of Borsippa, and a series of bas-reliefs. The most important recent accession from Mesopotamia consists in a collection of Judaeo-Babylonian magic bowls, inscribed in Hebrew and Syriac respectively, and sixty seals which range in date from about 3,500 down to the Persian period. The National Museum now owns nearly a hundred Oriental seals and upward of three hundred flat casts of seals.

Among the Egyptian antiquities, those connected with the funeral rites obviously form the principal part. There is a stately mummy well preserved in its original case. There are six finely wrought coffins, presented by the Egyptian government; besides funerary boxes, jars, scarabaei, ushabti figurines; a series of squeezes from the tomb of Taia; facsimiles of Ani's and Anhai's papyri of the "Book of the Dead," etc. But also other objects, bearing on the religion, culture and history of the land of the Pharaohs, are not lacking. There are specimens of the geology and flora of Egypt, casts of the statues of some of the chief divinities and of the great historic rulers, such as Chefren, the builder of the second largest pyramid, Amenophis II, Seti and his great son Rameses II, Tirhakah, and others; also the facsimiles of the Rosetta Stone and the Canopus Decree.

The monuments found in Asia Minor and North Syria and in part attributed to the Hittites, include, besides various divinities, composite figures, hunting scenes, etc., the colossal statue of Hadad and the torso of the statue of Panammu II, both of which bear "old-Aramaean" inscriptions.

The Division of Historic Archaeology includes, besides two Persepolitan casts, a rare piece of mosaic, measuring about eight by six feet and representing a lion attacking a wild ass. This piece was taken from the floor of a temple of Astarte in Carthage. Then the serpentine column of Delphi, a cast of the bronze original now at Constantinople, which was dedicated by the confederate Greek cities to Apollo at Delphi after their victory over the Persian at Plataea (476 B.C.), and is thus a relic commemorating the first struggle of the Greeks for liberty and independence.

Leaving the Division of Historic Archaeology and returning to the Rotunda, two colossal images of Viṣṇu and Buddha, which, for lack of other accommodations, are placed at the foot
of the staircase, beacon the visitor to the Division of Historic Religions in the southwest gallery. Here the collections of ceremonial objects of six religions have thus far found a home, in fourteen large cases, besides a number of small Kensington cases. The cases are built in compartments, or according to the alcove system, so that each individual religious collection may be viewed and studied separately, without intrusion from another one.

The first two compartments are occupied by the collection of modern Jewish ceremonial objects. The collection is perhaps unrivaled in completeness and in artistic and historical value. It comprises curtains of the Holy Ark; Torah scrolls with silver bells, breastplates and pointers; Megilloth in revolving cases of wood and silver of rare workmanship; manuscripts of prayer books; lamps, phylacteries, prayer-shawls, and other objects used in the service of the Synagogue. Then the objects used on feast days, such as the shofar, lulab and etrog, etc., and especially a complete set for the semi-ritual Passover meal (seder). One case is given to objects used on special occasions, such as utensils of circumcision, marriage contracts, wedding rings, a slaughtering knife, etc. Another case contains a series of embroideries and tapestries depicting Bible narratives, as the sacrifice of Isaac, the worshiping of the golden calf, the fight of David and Goliath, etc.

Judaism's daughter-religion, Mohammedanism, comes next, showing a model of a mosque, manuscripts of the Koran upon their inlaid stands, mosque lamps, flags and tablets, some of the equipment of pilgrims to Mecca, and the costumes and utensils of several of the Dervish orders.

Graeco-Roman religious sentiments are illustrated by a set of statues and busts of the dei maiores, as well as minores, and bas-reliefs which depict mythological scenes, as the battle of the gods with the Titans, etc. A collection of sepulchral and votive tablets allows a glimpse into the popular religious views and practices.

Leaving this classic ground, the visitor is transferred in spirit to East Asia. There he first meets Brahmanism, which sways the millions of India. The collection comprises a set of marble images of the so-called trimûrti gods and their suites, of the avatars of Viṣṇu and some of the minor divinities. Special
notice deserve two finely carved stone steles, representing Visṇu and his retinue. Temple utensils, as lamps, vases, cruses, illustrate some of the Brahmanic religious customs. Caste-marks give opportunity for the explanation of the caste system, which plays such an important part in the religious, political and social life of India. The contemplative and ascetic element of Hinduism is illustrated by a series of models of Yogins and ascetics in various attitudes.

Buddhism, the offspring of Brahmanism, is represented by a rich collection, filling two alcoves. There is any number of representations of Buddha, in bronze, stone, clam shells, and carved and lacquered wood, some of which have much art value. No less varied are the forms and attitudes. The Čūkya sage can be seen in the Burmese, Sinhalese, Japanese and Tibetan conceptions of him; sitting in meditation, preaching, blessing, and even reclining. The hierarchy is represented by several images of arhats and monks. The elaborate ritual of Buddhism is illustrated by a large collection of musical instruments, cruses, candlesticks, rosaries, prayer-wheels, dorjes (vajras), etc.; while among the representations of Buddhist sacred edifices may be especially mentioned a magnificent model of the Wat Chang at Bangkok, Siam. One case is given up to the syncretistic and popular accretions to Buddhism in China and Japan. The sacred literature of Buddhism is represented by the Siamese edition of the Tripitāka, presented by the King of Siam.

Shintoism, the primitive national religion of Japan, which even now contests Buddhist supremacy in that country, is represented by a collection of shrines and their contents, as the go-hei, mirror, etc., and some votive tablets.

A Korean sorcerer’s outfit and a collection of amulets complete the exhibit of religious ceremonial objects in its present status.

The National Museum also possesses a collection of objects belonging to Christian ceremonials, including some valuable icons, priests’ vestments, crosiers, altar coverings, chalices and other church paraphernalia, of the Eastern branch of the Church as well as of the Western. It is expected that in the near future a special alcove will be set aside for the exhibition of this collection.
The Name of the Ferryman in the Deluge Tablets.—By Mr. S. H. Langdon, Columbia University, New York City.

The name of the ferryman in the Deluge Tablets has had a varied history. It was first read by George Smith, Ur-Hamsi, giving syllabic value to the first sign and ideographic value to the second. In the translation of Smith’s book into German, by Hermann Delitzsch, the same reading was followed. Sayce, in 1880, read Nes-ûa, on the basis of a bilingual tablet which he says Pinches had discovered and which explained the sign 𒄿, ur, as meaning Nesu, a young lion. Sayce was also the first to give the reading Ša for ﬀ, which he says is never written ﬀ with five heads, as George Smith reads (passim). No one besides Mr. Pinches has given any evidence of the reading Nesu for 𒄿. Sayce himself did not see the tablet; it is not mentioned in Brünnow’s Syllabar, nor by any other scholar. Sayce’s reading has been followed by no other editor.

Jensen, without comment, read Arad-ša in his Cosmologie, 1890. Jeremias in the same year, a little later, followed Jensen; and again two years later, in Roscher’s Mythological Dictionary, he read also Arad-ša.

Prof. Jastrow followed in 1898, reading Ardi-ša. The reading ardu for 𒄿 has no warrant other than its being a synonym of amelu. The reading amelu for 𒄿 is certain. The only reading, therefore, warranted by known information is Amel-ša.

The name of the boatman occurs six times in tablet X., written always 𒄿 𒍜 (ur followed by the sign with four heads). In tablet XI. the name occurs ten times, but the readings here do not agree. Column vi. lines 1 and 32 read ﬀ, five heads; line 14 of column vi, ﬀ, three heads [Haupt’s Texts]. The name of the boatman of the ark in the time of the Deluge is commonly read Puzur-Bél or Puzur Shadû-Rabû, “the one hidden from Bél;” written ﬀ-𒄿-𒍜-𒍜-𒍜-𒍜-𒍜-𒍜-𒍜-𒍜-𒍜. 

Now I mean to defend the following theses:
1. The original name of the boatman of the ark was Amêl-Bêl.

2. This was changed to Puzur-Bêl, for theological reasons, by the priests.

3. The name was changed to Amêl-êa by the same influence. It has been assumed on the basis of R. 44, 48c that the sign "é" with five heads, can be read êa; but this is based only on the reading Amêl-êa for 𒈦 𒈬; that is, only in connection with this name. Now the readings êa for "é" and Bêl for "é" are already clearly established. If, then, the popular name of the boatman in the original legend, Amêl-Bêl, with five heads, was changed to Amêl-êa by the dropping of one head, it would not be unnatural for the reading Amêl-êa to be given to the old way of writing, viz. 𒈦 𒈬, by the scholars who composed the syllabars. This would account for the mistaken reading in R. 44, 48c, quoted by Brunnnow. The old reading Amêl-Bêl again occurs twice in Prof. Haupt's texts, which would prove either one of two things: (1) a cropping out of the traditional folk-name of the boatman, or (2) the giving of the name Amêl-êa to the old reading without changing the reading itself.

In tablet XI. the story is told of how Bêl and other gods of the pantheon planned to destroy all men. Êa foils the plot by causing a boathouse to be built, and saves at least three persons, Šit-Napishtim and his wife, and Amêl-êa the boatman. The story has been worked over by the priests. The accurate measurements of the ark, the rules for uttering incantations over the sick hero Gilgamish, the attributing of the deliverance of men to êa, the father of Marduk, patron deity of Babylon, all point to priestly influence working upon an original folk-legend of the destruction of the world by water. Šit-Napishtim's father is also called Kidin-Marduk in tablet IX. line 6.

In the plan of êa, Bêl is deceived. The ark escapes his attention, it is literally "hidden from him" together with the voyagers, and thus êa preserves men. By a slight change of the last sign, the part Bêl of the boatman's name is changed to êa. If then, as I have supposed, the name was originally written 𒈪 𒈬, either of two things may have occurred: (1) Either the priests played upon the sign 𒈪 (as they had already upon the sign "é") by using it as the last part of the epithet Puzur,
thus calling the boatman ‘the one who was hidden from Bél’; or
(2) Pu-Zu is to be read as an ideograph meaning, perhaps “pro-
tection,” and the translation of the lines would be, “To manage
the ship I gave the boat together with its goods into the care
of Amēl-Bēl the skipper.” Col. ii. lines 38-39:

a-na pi-ḫi-i ša ēlīppi ana [Pu-Zu] Amēl-Bēl (amēl) ma-lahu.
ēkalu at-ta-di-ni a-di bu-šē-č-šu.

This hypothesis accounts for the confusion of readings in
tablet XI., and tends to confirm the argument already set forth
by Professor Jastrow for the arrangement of the story both in
toto and in detail, by priests who desired to carry out certain
ideas in the Epic of the Zodiac.

The history of the word then would be:

1. Popular name in the old legend, Amēl-Bēl ša ša ša ša ša.
2. Perhaps changed later under priestly influence to Puzur-
Bēl (written also with the epithet “shadu rabu” for Bēl).
3. Changed permanently to Amēl-Ša ša ša ša ša ša.

Weight is also given to the theory that ur was the original
first part of the name, and was used purposely as the last part
of Puzur; inasmuch as the form ša ša is rarely written in the
construct with double ur, and in the other case where puzru is
used in a proper name (Puzur-Ashur), the construct state is
written with the usual form Pu-zur.
Specimens of the Popular Literature of Modern Abyssinia.
—By Dr. Enno Littmann, Princeton University, Princeton, N. J.

Among the popular works written in the modern Semitic languages of Abyssinia, there are many which are of interest to us, while some are even of considerable importance. I give here extracts from a few compositions of this nature, written in dialects of Northern Abyssinia.

The first of these is a small book in the Tigrai language, entitled, “Story of the Journey of an Ethiopian from Ethiopia to Italy,” which was printed in the year 1895 in Rome. It is a very simple and natural tale of an African who never had left his country before. Its scientific value is mainly philological, but it interests us also from a human standpoint. In order to give an idea of the style in which the author, Fesha Giorgis, writes, I translate the passage where he describes his departure (p. 6, l. 10–24); adding, however, that in a few places the translation is not absolutely certain:

“Then I took leave of my friends and acquaintances. Some of them tried to keep me back(?), and some of them said unto me: ‘You have been persuaded.’ But I, having now decided to go, replied nothing to the talk of the people. And in the evening I started, according to the order of the major, to go to the steamer. And some of my friends accompanied me and came to the seashore, and there we took leave of one another. But when the separation took place, my nature trembled, and two of my friends began to weep together. When that happened we embraced each other again and I stepped into the boat. Until I reached the steamer, they stood on the seashore, to see me off. But I then, while turning my face towards them, until I came to the vessel, was not embarrassed. And when I had come on board the vessel, I waved to them with a white handkerchief. And they went away sad.”

Going on, he describes his experiences in the Red Sea, the Suez Canal, the Mediterranean, where he has a very queer and disagreeable feeling, called with us sea-sickness; and finally in Naples and Italy.
Of quite a different character are two collections of texts in the Tigré language, which are of great interest both for the history of the Semitic languages and for the history of Semitic thought and civilization. In the first place, a collection of tribal legends (Stammessagen) of the Tigré people was published by Dr. Conti Rossini, in the Journal of the Italian Asiatic Society, 1901, under the title, "Tradizioni storiche dei Mensa." The reading of these texts reminds us strikingly of the tribal legends of the Israelitic clans in Canaan. Each tribe derives itself through a long line of ancestors from a hero eponymos, who in a manner is a personification of the tribe. This is shown also in an interesting way by a fact of grammar, as follows: two prominent tribes of the Tigré are Mensâ' and Máryâ, but their tribe heroes are Mense'ây and Máyrây; that is to say, the adjective form expressing derivation or appurtenance is employed, just as though we had יִוָּן or יִוָּן as names of persons, instead of יִוָּן and יִוָּן, in the Old Testament. The single heroes are then as usual brought into relation to each other as brothers, cousins, father and son, and so forth. We see thus before our eyes, and in a mainly Semitic people, a process in development which in a similar way took place many centuries ago in the Hebrew nation. Of course traditions more or less like these are spread over almost all the earth, and on the other hand it is a little dangerous to compare times so remote from one another. But the Semitic character is so tenacious, and the elements of Semitic civilization, such as found for instance with the Bedouins, change so little in the course of time, that we are led to comparison wherever we find similar traces.

As a specimen of the Tigré traditions I give here the story of Mense'ây and Máyrây, the ancestors, or better, the representatives, of the Mensâ' and Máryâ:

"Mense'ây and Máyrây, without dividing the estate of their father, left [their brothers] Tôrây and Hazôtây and went to Haigat. And after that, they went out from Haigat to spy out the land, saying: 'Which will be the best for us?,' [and they went] to Erôtâ. And after they had gone to Erôtâ, Máyrây said unto Mense'ây: 'In this Erôtâ let us dwell, it is good.' And after that said Mense'ây: 'How can we dwell in this drought in preference to the two rainy seasons and the two harvests and the
two birth-times of the kine, [which are in Haigat]?’ So he went down [thither] with his brother. And after that the mule of Mäyräy strayed, after they had gone down to Haigat. And Mäyräy and Mense'äy sought for the mule both of them together. And when they went after her, she was waiting for them in Erötä. Mäyräy said unto his brother: ‘Thus hath the mule brought us again to our goal; let us dwell [here].’ And as he did not yield to him, they parted. Mäyräy settled in Erötä and Mense'äy returned to Haigat. And each of them in his place begat children and grew rich. And when Mense'äy longed for his brother, he went to see Mäyräy; and Mäyräy likewise longing for his brother, went to see Mense'äy; and they met in Kadnat. And in the dark, each believing the other an enemy, they struck each other [with their lances]. But crying: ‘This is my man, I am Mense'äy!’ and: ‘This is my man, I am Mäyräy!’ they recognized each other, and embracing they expired together. And they were buried in Kadnat.” The end of this story is based on the same element as the widespread legend of the two fighting brothers,¹ very closely related to that of the battle between father and son (Rustem and Zohrab, Hildebrand and Hadubrand).²

The second of the Tigré collections is found in a manuscript sent to me this winter from Abyssinia containing 214 songs in the Tigré language. It is the first collection of any size of Semitic popular poetry, excepting those in the Arabic language. Like the “dirān benī Hulhail,” we might call this a dirān welāl Tigré. The poems furnish very valuable material for linguistic, metrical and ethnological studies. The first texts in Tigré—the translation of the Gospel of St. Mark and of some Psalms, the Tradizioni published by Conti Rossini, and also these poems—are all of them the fruit of the industrious zeal of the Swedish missionaries.

Mr. Sundström, one of these energetic and indefatigable men, sent me also an introduction in Tigré and Swedish to the first

² Cf. the exhaustive treatment of these questions by Dr. Busse, Sagen-geschichtliches zum Hildebrandslied, in Beiträge zur Geschichte der deutschen Sprache und Literatur, xxvi., Halle, 1900.
'poem, and copious notes in Swedish on the poem itself. Of introduction and poem I present here an English translation:

After the death of a certain chieftain, named David, a quarrel arose about the leadership; for the surviving son (Maḥammad) was said to be a weakling, whom they did not desire for a chieftain. It is a custom for the chieftain to have a special strong-sounding drum, at the sound of which all the male population of the village must gather at the council place, if any important matter is to be transacted. Without this drum no one can rule. Therefore the rival party succeeds, after some intrigues, in getting the chieftain's drum; and, while the legitimate successor is sleeping, installs its man as chieftain, and the drum sounds. The son of David wakes up, seizes the formidable sword Qaṭṭān, jumps over the enclosure of his house, and stands suddenly on the council place. He cleaves the poor drummer with the flashing Qaṭṭān, and then turns around to the bard, who is just singing the praise of the newly installed chief. Death before his eyes, the bard now sings, to save his life, the following song:

1. Not shall be despised in songs this Maḥammad, the son of Ḡadāl.
2. His mother is not a slave, nor is his father a serf.
3. His mother is the legitimate wife and a princess; his father is king and ruler.
4. He is the offspring of Fekāk, the offspring of Nāwed; he takes tribute from the free as well as from the tributary.
5. He is the offspring of Claudius, the offspring of Theodoros; he keeps back warriors, horse and foot.
6. He is the offspring of ‘Eḡēl, the offspring of Ekked; the offspring of the strong owner of Qaṭṭān, [the precious sword].
7. He is the offspring of Gāweg, the offspring of Fekāk; the offspring of the strong chief, whom all obey.
8. He is a dark shouldered lion's whelp, no lynx nor hyāna.
9. He is [like] an irritable camel, that does not allow his nose to be pierced.
10. He is [like] a strong high-humped camel, that snorts wildly.
11. [Strong] like Mafarrah's boat and like the firm house of Gahtän's son.
12. He is [like] the moon in the firmament; and [if he were] flour on the millstone,
13. Who could make it to bread and eat it? It were a deadly poison.

After the manuscript of the preceding had been sent in to the editors, I received a more complete version of this same poem, with more notes and a Tigré-Swedish vocabulary by M. Sundström. An edition of this very valuable piece of work with a translation of the whole into German will soon be published.
Notes on the Old Persian Inscriptions of Behistun.—By
Louis H. Gray, Princeton University, Princeton, N. J.

Bh. i. 65, viñabidiś 'omnia.'

One of the most difficult cruces in the Old Persian inscriptions
is the passage Bh. i. 64–66, adham niyaθarayam kārahyā abī-
cařiś gaiθāmēdā māniyamēdā viθiθiθā tyādiś Gaumāta hya
muθaθ adina. Two years ago, in AJPh., xxi. 16–18, I sug-
gested as a translation of these words: 'I restored to the people
the servants(?), and the live-stock(?), and the real estate,
and the private property(?), of which Gaumāta the Magian
had deprived them.' While the article mentioned was in press, a
paper by Justi treating of the same passage appeared in
ZDMG., liii. 89–92. He rendered the crux by 'das Besitz-
tum, die Dienerschaft, Hof und Haus nahm er ihnen.' He
adopted the reading (h)abācariś instead of abīcariś, with which
I have been unable to agree, despite Rawlinson, JRAS, O.S.,
xii., p. ii., and he compared māniyam with the Cretan gloss of
Hesychios, μνημῆς σουκλῆς, instead of YAv. ymāna, GAv. ñmāna
(cf. AJPh., xxi. 17). Justi's conclusions were criticized by
Foy, ZDMG., liv. 341–355 (cf. also KZ., xxxvii. 551–553),
who returned to the reading abīcariś, which he, however, like
Spiegel,¹ connected with New Persian ęriθom 'to pasture' and
translated 'Weideiland,' while he rendered māniyam by
'Gebäude.' After a renewed study of the passage and careful
reading of the contributions of Justi and Foy, I find myself still
adhering to my old view concerning abīcariś gaiθāmēdā māni-
yamēdā. With regard to the fourth word, read viθiθiθā by
Weissbach and Bang, I have changed my explanation mate-
rially. My old rendering 'private property(?),' AJPh., xxi.
17–18, where former interpretations are collected, is criticized by
Foy, ZDMG., liv. 374, but his own discussion of the word, 349–
355, seems to me altogether untenable. From the v'θiθaiθeθča
which Foy adopts instead of v'iθiθaiθeθča, he evolves v'(i)θiθaiθ-
ča or v'(i)θiθaiθeθča, i. e., v'(i)θiθiθaiθeθča or v'(i)θa-

¹ Bartholomae, Altiran. Wtb., 1889, favors the same etymology.
bišwaš-ča, ‘Geschlechtsfolge (dass sind: “die Gefolgsleute der adligen Häuser”).’ With a conjecture at once so bold and so unnecessary I cannot agree.

I believe that the true reading and root-meaning of \( v'i(i)θ'ib'e-\)
\( iθ'e'\) is that which is adopted by Bartholomae, *Grundr. der iran. Philol.*, i. 220, *vidoibîš*ā. This view I have already put forth in *JAOS*, xxi. 181-182, when discussing the phrase *hadā vidoibîš bagaibîš*, which I believe to mean ‘with all the gods.’ Foy, 350, raises an objection to the form adopted by Bartholomae and myself, but his remarks seem open to criticism. ‘Vor allem spricht dagegen,’ he writes, ‘dass *v'ida-, v'asa-, v'ispa-* “all” stets plene geschrieben ist und nur *v'(i)θ* “Haus, Heimat, Geschlecht” in der Behistainschrift stets defektiv. Da nun sonst keine andern Wörter ausser Namen defektiv geschrieben werden, so muss im Anfang von *v'θ'ib'e'k* das Wort *v'(i)θ* “Haus, Heimat, Geschlecht” stecken.’ Why the orthography of the proper name *Vidâšya*, to which Foy evidently alludes, cannot be called into service here, I do not see. The Behistun inscriptions shows the scriptio defectiva *v'(i)šâspa* in all instances of the word (cf. Rawlinson, *JRA*, O. S., x., pp. xl., lxx.). Contrariwise, in all other inscriptions (excepting the late text Art. Pers. a 19), namely, Dar. Pers. a 4, Dar. Pers. e 4, Dar. Elv. 19, NR. a 12, Sz. b 6, Art. Sus. a 3, we have the scriptio plena *vidoibîspa* throughout. In exactly the same way the Behistun text has the scriptio defectiva *v'(i)θ'ib'ie'*, i. e., *vidoibîš*, while Dar. Pers. d 14, the only text other than the Behistun inscriptions where the word occurs unmitigated, shows the scriptio plena *v'θ'ib'ie'*, i. e., *vidoibîš*. I have, therefore, no hesitation in adopting Bartholomae’s reading *vidoibîš* on the analogy furnished by the double orthography of the name of Hystaspes.

I now turn to the meaning and construction of the word. The rendering is fixed, I think, by the phrase *hadā vidoibîš bagaibîš* ‘with all the gods,’ Dar. Pers. d 14, 22, 24. It is plain, furthermore, from previous discussions of the passage, that *vidoibîš*ā is parallel in construction with *abišart* gaišâmēnā

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1 Tiele, *Geschiedenis van den Godsdiest in de Oudheid*, Amsterdam, 1901, p. 361, maintained the old view still, as he wrote: ‘*hadā bagaibîš vidoibîš*’ bedeutet zeker ‘met de goden van den stam,’ of misschien ‘van het (konings-) huis.”
māniyamā. Bartholomae's earlier view, Ar. Forsch., ii. 104, that the word is an instrumental plural used as an accusative, is the one which I hold now as I held it in my former paper (cf. also my explanation of the instrumental plural rauâbiš as a nominative in xic. rauâbiš bākatā āha '14 days were in course' and similar phrases, AJPh., xxi. 10). My 'kühne und bequeme Annahme,' as Foy, 374, calls it, that the instrumental plural may be used as an accusative and nominative, is not without arguments in its favor. It seems to me almost impossible to deny that the Iranian possesses many other instances of this very usage. Collections of material on this subject may be found in Hübschmann, Casuslehre, 265–66, Spiegel, Vgl. Gr., 428–429, Jackson, Ar. Gramm., § 944 (unpublished, read in proof-sheets). That these forms, e. g., Av. stocâniš, dāmâna saerēštaiš, dāmâna anyâtiš, dāmâna râsiñiš, sataiš, caēstâniš, are real instrumentals¹ and not, as Johannes Schmidt, Pluralbild., 259–275, argued, forms with a nominative-accusative neuter plural suffix -tiš seems clear for several reasons. First, not only neuters but masculines are found in this construction, e. g., rauâsraîš, azdibâš, adztiš. Second, Schmidt himself, 272–273, admits that such a formation in -tiš is unknown outside the Iranian. Third, the instrumental plural used as nominative-accusative agrees with the use of the instrumental singular as nominative (cf. Caland, KZ, xxxi. 259–261, Geldner, ibid., 319–323, Bartholomae, Sprachgesch., ii. 124–125, Grundr. der Iran. Philol., i. 134, Jackson, Ar. Gramm., § 945 [unpublished]). Fourth, the syntactic usage may, I believe, be explained more easily than Delbrück, Vgl. Synt., i. 232–233, seems to think.

For the use of the instrumental singular as nominative, Bartholomae, Sprachgesch., ii. 124–125, has, in my opinion, found the correct explanation. Other Indo-Germanic dialects offer parallels for the employment of the instrumental as accusative. The germ of the usage in Iranian is to be found in such phrases as Vd. 6. 49, kva marâm iristaunun azdibâš barâna ahura mazda kva nidâthâma 'where bear we the bones of dead men, O Ahura Mazda, where deposit them?', Vd. 4. 5, teiî sâtiîš haša-ciînianu

¹ The instrumental plural seems to be used at least once in the Gāthās as a nominative, Ys. 28. 2. āyâptâ aśāt haša yâlî repânto daidît xânârē, 'boons in accordance with righteousness which are to place the rejoicing ones in glory.' The passage is not, however, altogether certain.
narəm nabənазdiiшtanəm para-baraiti 'he brings three hundred like penalties to the nearest kin.' From phrases like these comes the later complete equivalence of instrumental and accusative, e. g., Ys. 55. 1, ναμ ναμθα ανα

The Slavic and Germanic dialects offer close parallels to this usage. Slavic especially employs the instrumental of means with verbs of motion used intransitively which take the accusative when they are transitive. Thus we have Old Church Slav. види науачь вере кемниєвь 'omnis populus jecit lapidibus' beside врізи камені на ніг 'τον λίθον έτ' αντι βαλετων.' The usage is less common in Germanic, although instances are not lacking in Gothic, Old Norse, and Anglo-Saxon, e. g., Goth. inna ut us βαμμα νεινα γαρδα, 'εξίλαλον αυτόν εξω τον αμπελώνος,' Mark 12. 8 beside inna γαρδανα in ut us βαμμα νεινα γαρδα, Luke 20. 15. Examples of the use of the instrumental beside the accusative are found also in Greek and in Sanskrit. For further literature and examples I may refer to Delbrück, Vgl. Synt., i. 257–260, Audouin, Déclinaison dans les langues indo-européennes, 19, 85–86, 179, 273–274, 371, Miklosich, Vgl. Gramm., iv. 695–700. It seems to me, therefore, that we are fairly entitled to assume that the functions of the instrumental of means approximated those of the accusative of the direct object in connection with certain verbs in Iranian as well as in Sanskrit, Greek, Germanic, and Slavic, and that by analogical extension the instrumental was frequently substituted for the accusative both in Old Persian and in Avestan. The syntactic usage which I here presuppose does not, therefore, rest merely on its likeness to that of the Avesta, where corrupt transmission of text may frequently be a source of seeming abnormality in syntax, but on the broader basis of comparison with other dialect-groups of Indo-Germanic. I also regard відбуи, for reasons stated above, as meaning

1 I purposely omit instances of the accusative after ви as being too frequent to require notice.
‘all,’ and I accordingly now render Bh. i. 64–66, ‘I restored to the people the servants (?) and the live-stock (?) and the real estate and all things (?) of which Gaumāta the Magian had deprived them.’

Old Persian tuvan kā : Doric κά.

The phrase tuvan kā is found five times in Old Persian, Bh. iv. 37, 41, 67, 70, 87. Its Babylonian equivalent is mannu atta ‘quisque tu,’ Bh. 105, while the New Susian has ""ni ""akka ‘tu qui,’ Bh. iii. 63–64, 66, 83, 84, 94. The old explanation of kā as a vocative singular masculine (e. g., Spiegel, Keilinschr., 213) can hardly be maintained, and Kern’s view in Caland, Syntax der Pron., 47, that kā . . . hya is the Old Persian equivalent of Sanskrit yah kujāit, seems equally untenable. Bartholomae, Literaturtl. f. or Phil., i. 17, Grundr. der iran. Philol., i. 235, is on the right track when he regards kā as a particle. On the other hand, it does not seem to me that κα is equivalent in meaning to ἐκ or is even a mere interjection as he has suggested. The Old Persian word is rather to be compared with what I regard as its exact correspondent in Greek, Doric κα, Indo-Germanic *yā (cf. Brugmann, Gri. Gr., 1, 543–544). A few examples will be sufficient to show that κα has, sometimes at least, a generalizing force. Theok. xi. 49, τίς κα τῶν θέλασσαν ἥκιν κα κύμαθ τὰ οὐσία; xviii. 57–58, νεῦμα κάμμες ἐς ὄρθρον, ἤτε ἑ τῶν πράτος ἀνάδος ἐς εἶναι καλαθήσας θαυμάχων εὐρικα δειράν or Arist. Ach. 799, δ. τί δεσθήσα μάλιστα; Μ. πάνθ' ἀ κα δέδως. I therefore think that such a phrase as tuvan kā xāgyathiya hya aromam ahya, Bh. iv. 37, should be translated, ‘thon whatsoever shall be king hereafter.’

Bh. iv. 44: RV. ii. 17. 7.

Weissbach-Bang’s reading Anuram[zīga] tuigya in Bh. iv. 44 is very doubtful. Rawlinson’s copy (cf. also JR.18., O. S., x. p. lix.) has merely Anuram[dhi] and a blank space. On this

1 Old Persian rīša is to be compared with Old Church Slav. vist. Lithuanian visas, Indo-Germanic *yικ-ο-, while I still hold to my former explanation of Old Persian visa beside vispa, Indo-Germanic *yik-ya-as due to ap’s(e) (A.Jh., xxii. 7, see now Salemman, Grundr. der iran. Philol., i. 283). With the view of Foy, KZ., xxxvii. 538, that visa is from Indo-Germanic *yis-ko-, I am quite unable to agree.
he remarks, xii., p. vi., 'The word between Avaramazdā and yathā is certainly either maiyaya or taiyaya, the initial character being the only one subject to doubt.' Spiegel reads accordingly Avaramaz[da] taiyaya. Fr. Müller, on the other hand, WZKM., i. 59–62, preferred Avaramaz[da] maiyaya. Neither the New Susian nor the Babylonian texts help us here. The Babylonian issū (Bh. 98) would seem to point to upastā or upastām in the Old Persian version, but according to Rawlinson's copy there is no room for such an insertion. On the other hand, the New Susian text (Bh. iii. 68) does not here contain piktu, the equivalent of upastā. Perhaps the Uramaša-ra of the Susian tablet would lead us to infer some such form as the Avaramazdiya adopted by Weissbach-Bang (cf. also Weissbach, Achä-
menideninschr. zweit. Art. 53–54, Oppert, Le peuple . . . des Mèdes, 56–57, and against this Foy, ZDMG., lii. 565, whose suggestions, however, both here and in KZ., xxxvii. 539, I am quite unable to accept). In my own judgment it is possible to retain unaltered the reading of Rawlinson, especially since the Babylonian and New Susian versions do not exactly coincide in the passage under discussion.¹ My own suggested reading of the text is avaramaz[dəm, iyaiyə], i.e., avaramaz[dəm iyaiy]. This preserves exactly Rawlinson's final results, it may be explained grammatically, and it seems to keep the general sense demanded both by the context and, apparently, by the Babylonian and New Susian versions. In my view iyaiy is the first singular middle of i 'to go,' where the termination is the same as in the imperfect (cf. for the present GAv. dadē 'I place,' YAv. daieš, Skt. dadhe, and for the imperfect Old Persian araheiy 'I carried,' Av. baire 'I bore,' Skt. arāhe 'I carried'). The passage avaramazdām iyaiy yadbā ima hāviyāy naiy duruxtum then signifies, 'I betake myself to Ormazd as this is true, not false,' or, more freely, 'I call Ormazd to witness that this is true, not false.'² If the reading and interpretation here suggested be possible, there is an interesting parallel in RV. ii. 17.

¹ Several other instances of slight divergence in the different versions of the Achaemenian inscriptions are too well known to require recapitulation here (cf. Weissbach, Grundr. der iran. Philol., ii. 73–74).
² My previous rendering, JAOS. xxii. 172, should be changed accordingly. I still think it just possible, however, that yadbā here introduces a clause of indirect discourse.
7a which should be cited in this connection. The Vedic passage in question contains the sole instance thus far noted of the first singular middle of i in Sanskrit. The line is as follows:

\[
\text{āmājār iuxā pitrāḥ sāvā satī samāṇdel ā sādhams tvām iye bhāgam} \text{ 'as a girl maturing at home dwelling with her parents, from the joint abode I betake myself to thee for weal.'}
\]

The words tvām iye bhāgam, which are important for the suggested reading of the Old Persian passage, are thus glossed by Sāyaṇā:

\[
\text{stotāham bhāgam bhajaniyam dhanaṁ tvām iye . . . tvām yāve.}
\]

I see no very great semantic difficulties in a development of meaning from 'I go, betake myself, to Ormazd' to a practical equivalent of 'I call Ormazd to witness, so help me Ormazd.' Certainly all epigraphical and grammatical requirements seem to me to be met by such a suggestion.

**Bh. iv. 46, avād.**

The general sense of Bh. iv. 46 is clear both from the Old Persian and New Susian versions, the Babylonian being lost here. The third word of the line in the Iranian text is, however, mutilated and doubtful. Rawlinson in his copy reads this word and the one before it anro[mazādh. tyar]miya (cf. also JR.18, O.Ñ, x., p. xviii., lix.–lix., 247), but in his revisional note (xii., p. vi.) he says that the last four characters are certainly anva'iy'. Weissbach and Bang read api]miy, thus substituting i for Rawlinson’s n. But this can scarcely be the intensive api (cf. their translation by 'auch'), for that word occurs in the inscriptions only as an enclitic in the single phrase dūraiy api or dūraiy apiy. I would suggest the reading anā, which thus gives anva'niy. This anā is the ablative singular neuter for *avāti governed by aniyetey, which should take the ablative in Old Persian as it does in Avestan and Sanskrit (cf. Jackson, Ar. Gramm., § 965, n. 1 [unpublished, read in proof-sheets], Speijer, Sansk. Syntax., 78–79, Delbrück, Verg. Syntax., i. 216). The meaning of anviy is fixed by the New Susian rendering

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1 On the loss of final t in Old Persian see Bartholomae, Grundr. der iran. Philol., i. 189, Foy, KZ., xxxvii. 500–501. In passing I may note regarding Foy’s criticism of my view of tyānā, Bh. i. 28, as expressed in AJPh., xxii. 12–13, that datā is evidently plural, not singular (cf. the Babylonian rendering dēnātu, Bh. 9). We should therefore expect tyānā instead of tyānā if his view were correct.
ünem (Bh. iii. 70) and the enclitic pronoun thus stands in its proper position after avāt. The passage Bh. iv. 46–47, vaśna aurdūz[a]hā av[a]nāti aniyašiši esiyastiya kartam aea avahyāy[a]dipiy[a] naīy nipṣātām is then to be rendered, in my judgment, ‘by the grace of Ormazd much more than this was done by me. This is not written on this tablet.’

Old Persian duvitātaranam: Old Church Slavic davč, Greek διψ.

The word duvitātaranam occurs twice, Bh. i. 10, a 17, in the Old Persian inscriptions in passages where no help is given by the Babylonian or New Susian versions. The latter text has indeed (Bh. i. 7) šanak-mar corresponding to duvitātaranam, but as the New Susian word also is a šn. λεψ., it is useless for interpretation (cf. however, Foy, ZDMG., lxi. 590). Early conjectures on the meaning of the Iranian term are collected by Spiegel, Keilinschr., 83–84. The second component is obviously to be compared, so far as etymology goes, with Sanskrit tarāma ‘crossing’ (so already Benfey, Keilinschr., 8). The word seems to mean ‘for a long time, from days of old’ (cf. Justi, Grundr. der iran. Philol., ii. 417 and his references there; see also Rawlinson, J.R.A.S., O.S., x. 197, Benfey, Keilinschr., 8). Bartholomae, Grundr. der iran. Philol., i. 151, returns to the older rendering, best defended by Oppert, Le peuple . . . des Mèdes, 113, 163, and adopted by Weissbach and Bang, ‘in doppelter Reihe.’ The historical difficulties in explaining the passage if duvitātaranam has this meaning, are too considerable so be lightly overlooked. I incline, therefore, to the rendering ‘from time of old,’ especially as I think this can be justified etymologically. The latest discussion of duvitātaranam is by Foy, KZ., xxxvii. 546, who still adheres to his comparison with Latin diurnus. Such an equation seems to me impossible. Whether Latin diūn ‘by day, long’ stands for *diing-i or for *diic (cf. Brugmann, Grundr., i. 910, Stolz, Lat. Gramm., 131, Sommer, Lat. Laut- und Formenl., 160), it seems clear, at any rate, that just as diu-rnas is after the analogy of nocturnus conceived as *nocturnus (Stolz, 77), so diurnus is analogous to the same nocturnus divided *noc-turnus.1 With diurnus, then, duvitātaranam has nothing to do.

1 For further hints on the influence of nox on dies in Latin, see Sommer, 429, Schrader, Realelexikon, 845–846.
The first component of the Old Persian word is to be compared with Greek δρ-θε, δρπόν, δην, Doric δο(φ)άν (Alkman, frag. 135, ed. Bergk), 'El. δήν, O. Ch. Sl. davē 'formerly,' darinīh 'old,' Armenian terem 'I continue,' Latin dū-ris, dū-dum, Sanskrit dū-va (see Fick, Vygl. Wb., i. 624, ii. 383, Hirt, Abhaut, 104, Hübschmann, Armen. Gramm., i. 497, Prellwitz, Etm. Wb., 74, Brugmann, Gr. Gr. 251). The same phonetic change is found in this equation as in the comparison of Old Persian davtītārum ‘second,’ with Sanskrit dvṛtyu, Greek δῆς, Old Latin duīs (Pauli excerpta ex Festo, ed. Th. de Ponor, 47). I consequently feel little hesitation in rendering davtītārum ‘throughout a long period.’ I think, furthermore, like Foy, that we are entitled to compare the Old Persian word with the Vedic dvṛtā. Geldner, Vcl. Stud., iii. 1, has very recently expressed himself as unfavorable to this view, apparently on semasiological grounds. Yet it would seem that the underlying force of dvṛtā as he has outlined the usage of the term, 1-10, may well have been ‘long, continuous, firm,’ whence were derived the meanings he assigns the word on a basis of Vedic philology and the native commentators. Until a better etymology shall have been suggested for dvṛtā, I should certainly prefer to compare it with Old Persian davtītārum, and both these words with Old Bulgarian davē, Greek δην, and their cognates.

1 For δην cf. β 36, oîν oἵν iερ δην σερο. The phrases Armenian i terev ‘forever’ and Old Bulgarian ižu davina ‘from olden time’ may also be noted in this connection. Cf. further Kern, ZDMG., xxiii. 222-226, Osthoff, Etym. Parerga, i. 114-115.
The Çāradā-tilaka Tantra.—By Dr. Arthur H. Ewing, Allahabad, India.

Dr. Rājendra Lāla Mitra once expressed the opinion that the Tantras constitute the life and soul of the modern system of Hinduism. While Tantra literature has made its way all over India from Tibet to Madras, it is chiefly to Bengal that it owes its origin. The writer just quoted, in his “Notices of Sanskrit MSS.,” vol. iii. p. xiv, points out that the Tantras have always held the field against the Vedas in the province of Bengal. Bengali Pundits have no Vedie MSS.; this he believes to be due to the fact that “Bengal has never been the seat of a Vedic School, and consequently it has never been taught there, nor MSS. prepared and preserved.” These and other facts regarding the importance of the Tantras, especially in Bengal, are to be found in a recent pamphlet by Dr. K. S. Macdonald, of Calcutta, entitled, “Whether Tantra or Veda in Bengal?” The same writer has also published information regarding Tantric literature in N.W.P. and Oudh, in Mysore and South India, and other pamphlets are in the course of preparation regarding the said literature in other provinces.

The close relation of this branch of Sanskrit literature to the every-day religion of millions of Hindus, furnishes an adequate reason for careful inquiry into the contents of the various Tantric productions. Such inquiry is now being carried on under the leadership of Dr. Macdonald, at whose request work on the Çāradā-tilaka was undertaken.

The Çāradā-tilaka appears as No. 160 in Aufrecht’s “Catalogue of Sanskrit MSS. in the Bodleian Library.” He there gives a brief outline of the contents and adds, “Çāradā-tilaka (Yāmala alone being excepted) holds the first place among the mystic books; and, unless I am mistaken, surpasses the rest in point of antiquity.”

The Title.

The meaning which the word ‘Çāradā’ is here intended to convey is not certain, but it is probably used as a name of

1 Compare what is said in Indo-Aryans, vol. i. p. 404.
Saraswati, who stands first in the list of deities worshipped in connection with various Mantras in the body of the book, i. e., from chapter vi. to chapter xxiii. The word Çāradā is not found in the 108 Upanishads which are tabulated in Jacob's Concordance nor in the Amarakośa. It is, however, found as a name of Saraswati in Trikāṇḍaṅgēśa i. 1, 27. ‘Çāradā’ is also the name of a kind of Sanskrit character, e. g., the Kashmirian Atharva Veda is written in the Çāradā character. Here again the reference, as Weber has said, *IX,* xiv., p. 405, is doubtless to Saraswati, who is the tutelary goddess of speech and learning.

The Author.

At the close of the work, in chapter xxv., the author is stated to be Lakṣman, the son of Lakṣmi, who received it from Çrī Kṛṣṇa, who received it from Vāruṇendra, who received it from Mahābala.

General Character of the Tantra and Points Worthy of Mention.

1. The Çāradā-tilaka is practically free from reference to the licentious practices which, marking the so-called “left-handed” Çāktas, have done so much to bring them into disrepute. The only exception is in the general references to the power of certain Mantras to bring women under control and to compel them to come where they may be wanted, e. g. ix. 100; x. 25, 70, 95, 96, 111, 145.

2. The Sāmkhya-Yoga terminology prevails in the book; the last chapter is devoted to Yoga by definition, xxv. 1.

3. The larger part of the book is devoted to the making and handling of Mantras and Yantras. It follows from this that the work is full of sorcery practices, being therein the lineal descendant of the Atharva Veda. Sorcery appears in its beneficent and terrible aspects. On the one hand, the Mantra, by proper practices, can obtain almost anything that the heart may wish; on the other hand, he can kill or enable a man to kill his enemy. This is the chief blot upon this Tantra.

The technical word for this sort of thing is given in xxii. 1, viz. *caturvarmaṅgana,* or killing of enemies.

The Atidurga-Mantra of chapter xxii. has this as its definite purpose. Other Mantras also are used in the same way. The following are some concrete practices referred to:
(1) The Vāyu Yantra, buried by the door of an enemy's house at night, will bring about his death unless he makes haste to leave it, vii. 54, 56. Compare for a similar use and effect of other Yantras, xi. 63 and xxiv. 29 ff. What a magnificent situation this creates for a sort of reign of terror!

(2) An image, i.e., effigy of an enemy, is made of a certain kind of wood, and it is then cut to pieces, the enemy thus becoming "a guest of death" (Kālātithi), xi. 100, 108. See also xxi. 95 ff. The defeat and death of enemies are again and again attributed to the Mantra in xi. 62–128.

(3) A young deer is taken as a symbol of an enemy and then killed and flung away, xvi. 24. Cf. xvi. 90.

(4) A goat is taken as a symbol of an enemy and the goat is killed, xx. 129.

(5) Messengers are sent to take the life of enemies, xxiii. 94, 95.

(6) Agni is besought to kill a man, xxii. 142; indeed, chapter xxii. is so full of this sort of thing as to make quotation impracticable.

4. Aufrecht's opinion that Čāradā-tilaka surpasses the other Tantras in antiquity seems doubtful from the statement which the book gives of itself. In i. 4 its purpose is said to be to give the essence, sūra, of all the Tantras and the method of Yantras and Mantras. Such a claim could hardly be made unless other Tantras were in existence. In fact the book seems to be a compilation. Chapters vi.–xxiii. make up the body of the book and bear a common character. The early chapters establish the theory of Mantra formation and describe what is preparatory or collateral. In the same way the two closing chapters are additions regarding Yantras and Yoga. On the other hand, it may still be that of the Tantras now in existence the Čāradā is one of the oldest. Anything like accuracy here will depend upon further investigation.

Certain of the works classed as Upaniṣads clearly belong to the same stratum of literature as the Tantras, at least if Čāradā-tilaka be taken as a fair representative of the latter class. The Rāmapūrvatāpanīya and the Nṛsinhāpūrvatāpaniṇīya Upaniṣads contain the same sort of material as the Čāradā does and both are equally far removed from the early Upaniṣads. Again, the use of the word Čakti in Ātharvačiras, Kālāgnirudra, Ilaṇḍa and Nyāsa Upaniṣads serves to locate them approximately in the same sphere of literary production.
5. An important feature of this Tantra is its references to the goddess Kuṇḍali.

The Tantras, as is well understood, set forth the religion of the Ĉaktas, i. e. of those who believe in and worship the supreme female energy, i. e. Čakti. In this Tantra, Kuṇḍali is the personal name chosen to describe this supreme Čakti, active both in man and in the universe.

The following are the chief references to her nature, her place and her activities:

(1) On the one hand, she is identified with Čabdabraḥman, i. 14, 55; she is called Paraçakti, i. 53; and Paradevatā, i. 56; xxv. 34; and Ādhāra-ĉakti, iv. 57; she is praised in many stanzas of chapter xxv. and given the attributes of all the gods and goddesses, xxv. 64 ff.; she is identified with Om, thus: Om equals Piṇḍa, Kuṇḍali equals Piṇḍa, therefore the two are equal, and this is equivalent to identifying her with Brahmā, xxv. 65.

On the other hand, her form is given as the form of a serpent, i. 54. Note that in Amarakoṭa kuṇḍalin is one of the synonyms for serpent.

(2) She dwells in the middle of the body (deha-adhyāya) of all living (breathing) creatures, i. 14.

Again she is manifested in the trunk of the body (ādhāra) as Paraçakti, i. 53. References to her coming forth from the ādhāra are found in xxii. 3, 49, 50. Again as Paradevatā she is said to dwell in the midst of a knot in the ādhāra, from whence the veins go out, xxvi. 34. Further in xxv. 67 she is said to move in the midst of the Suṣumṇā vein.

(3) She creates the world. This is put in the following ways:—

First she is said to be multiplied (vyuṅitā) in the bodies of all creatures, i. 56. Further, it is said that she, having awakened to the fact that she is endowed with the essence of all things, creates the Mantra-endowed world, i. 57. The details of the above declarations are then given. She manifests herself in all singles, all doubles, all triples and so on up to twelves, then in twenty-fours, then in thirty-twos, then in thirty-sixes, then in forty-twos and then in fifties. The various phenomena of the visible world are gathered under these groups, i. 58–109.

Again she is said to aid in the destruction of an enemy, xxii. 3. Further, she is said to go out by the Brahmārandra, xxii. 50.

Further, the origin of all letters is attributed to her. The
series is as follows:—\textit{\c{C}akti}, \textit{dhvani}, \textit{n\u{d}a}, fire, half-moon, \textit{bindu}, \textit{par\u{a}}, \textit{pa\u{s}yant\i}, \textit{madhyam\u{a}}, and \textit{v\ddot{a}ikhari}, i. 110–116.

As to the origin of the name, this Tantra furnishes by inference a very interesting suggestion. In the construction of the \textit{ma\u{n}d\u{a}pa} or temporary temple, given in chapter three, instructions are laid down that in each of the eight quarters, N., N.E., E., S.E., S., S.W., W., N.W., the earth should be scooped out in the shape of a \textit{ku\u{n}\ddot{a}}, e. i. a shallow earthenware vessel, iii. 48. Then in the center of each \textit{ku\u{n}\ddot{a}} the earth should be formed so as to represent the female organ (iii. 75), while in the center of this again a \textit{pi\u{n}da}, or lump of rice or flour, should be placed to symbolize the male organ (iii. 78).

Now in iii. 90 the \textit{ku\u{n}\ddot{a}}-form is said to be the highest form of Prak\r{\u{r}}ti. May it not be confidently concluded that Ku\u{n}\ddot{a}l\ddot{a} is simply another name for Prak\r{\u{r}}ti? and that the name is taken from the \textit{ku\u{n}\ddot{a}} formed in the sacrifice? The \textit{ku\u{n}\ddot{a}} contains symbols of procreating power and becomes therefore a fitting type of world-creation and so gives the name to the Para\c{C}akti.

In describing the place of Ku\u{n}\ddot{a}l\ddot{a} above, her place in the \textit{\ddot{a}dh\u{a}ra} or \textit{m\u{u}l\ddot{a}dh\u{a}ra} was referred to. A question of some importance comes up here: Does \textit{m\u{u}l\ddot{a}dh\u{a}ra} in this Tantra refer to the mystical circle (\textit{ma\u{n}d\u{a}la}) just above the genitals to which it is referred in Pa\u{n}catantra, or to the navel, which seems to be the meaning in the very Tantra-like \textit{Up\u{n}\ddot{a}sad}, R\textit{\ddot{a}}map\u{r}vat\ddot{a}pani\u{a}? While some of the above references are uncertain, they are, on the whole, best understood of the navel, especially the reference to a “knot” in the \textit{\ddot{a}dh\u{a}ra}, from whence the veins go out, xxvi. 34. To be sure, there is no necessary contradiction here, as the mystical circle above the genitals may easily include the “knot” of the navel. Another Tantra at hand corroborates the view that \textit{m\u{u}l\ddot{a}dh\u{a}ra} in Tantric usage means navel. R\textit{\u{n}}ma Prasad, M.A., has translated for the Theosophists a Tantra which he calls The Science of Breath. He in his glossary naively says that the work is a single chapter of a lost book, entitled \textit{\c{C}iv\u{g}ama}. The so-called chapter is really a translation of the work Svarodaya (see PW.). In section 32 Ku\u{n}\ddot{a}l\ddot{a} is said to dwell in the navel like a sleeping serpent. The translator’s note regarding Ku\u{n}\ddot{a}l\ddot{a} is interesting, “Ku\u{n}\ddot{a}l\ddot{a} is that power which draws in gross matter from the mother-organism through the umbilical cord, and distributes it to the different places where the seminal Pr\u{n}a gives it form. When
the child separates from the mother the power goes asleep. She is no more wanted now. Upon the supplies of the Kuṇḍalī depend the dimensions of the body of the child. It is said that it is possible to awake the goddess even in the developed organism by certain Yoga practices.” Nature’s Finer Forces, p. 194.

The Philosophy of Mantra Formation according to Čāradā-tilaka.

The starting-point is the Sat-cit-ānanda attribute-possessing (saṃyuta) Parameśvara. From Parameśvara gākti is produced—svarāsūrabhūh saukāt (i. e. saṃyuta) parameśvarād āśic chaktiḥ, i. 6. From gākti comes nādu, i. e. the nasal sound represented by a semicircle and here put apparently for unmanifested sound. From nādu comes bindu, i. e. the dot representing anusvāra, i. 7. This bindu possesses the qualities of the highest gākti (paraśaktinayah) and is itself made up of three parts, viz., bindu, nādu, and bijam. From the division of this highest bindu, manifested sound (rava) is produced. Sound which is thus created takes shape in letters and words. Letters and words form Mantras; hence Mantras incarnate, as it were, the power of Čakti, which is the power of Parameśvara. The Mantras as infolding the power of Parameśvara become the media of world-creation. Kuṇḍalī, who is the supreme Čakti, is said to create the Mantra-endowed world. The five elements are said to have the five root-sounds as their cause, i. e. the elements are five because the letters are divided into fives—not the opposite, as one might more easily have imagined, ii. 10. The details of the explanation are so abundant as to be almost confusing. However, the above theory seems to be the idea at the basis of the details. It is easy to see the reason for such a theory. The Mantrin was determined to have his Mantras highly regarded and so he creates a theory according to which no power will be too great to attribute to them. Not that the idea originated with the Tantrics. Speech is a goddess of the Rig Veda and the power of brahman or the “holy word” was recognized from earliest times. The Tantras are in this matter but a degenerate offspring of an honored parentage. The Brāhmaṇa with his brahman is the grandfather of the Mantrin with his Mantra. The one is sacerdotalism with a strong inclination to sorcery; the other is sacerdotalism immersed in an ocean of sorcery.
Other matters worthy of mention are:

(a) the Nāḍis or veins. These are said to be ten, the principal being Īḍā, Piṇḍalā and Susūṃṇā, which are referred respectively to the left side and nostril, the right side and nostril, and the middle. The seven others are: 1. Gandhārī, to the left eye. 2. Hastijihvā, to the right eye. 3. Pāṭā, to the right ear. 4. Alambuṣa, to the mouth. 5. Yājvasvini, to the left ear. 6. Čaṇkhū, to the anus. 7. Kuhā, to the genitals.

Ten winds or fires are also given as present in the body, but it does not seem possible to locate them in the nāḍīs. They are prāṇa, apāṇa, vyāna, udāna, samāna, nāga (connected with vomiting or belching), kārma (winking), dhanañjaya (enlargement), krkara (sneezing), devadatta (yawning), i. 40–44.

As to Susūṃṇā several points are given. (a) It is the prāṇa which goes up from the navel in five sections (pr., ap., vy., ud., sam.) and therewith prevades the body, i. 43. (b) By way of the Susūṃṇā the ātman is united with the Paramātman, iv. 24. (c) By the way of Susūṃṇā, tejas comes from its own place (swadhāna), i. e. the heart, iv. 88; cf. Praṇa Up. iii. 9. (d) Susūṃṇā is in the backbone, xxv. 29.

(b) Moving life is of three origins: (a) from sweat, (b) from egg, and (c) from the embryo-sack, i. 29 ff. and 38.

(c) The seven dhātus or constituents of the body are skin, blood, flesh, fat, bone, marrow, and seed, i. 34. In vi. 7 and xxiii. 84 the last named is omitted.

(d) The body is said to be ninety-six fingers long, xxv. 27. The prāṇa is said to abide twelve fingers from the navel; cf. the reference in Amṛtabindu Up. 32 to measurements by thumb-breadths, and my discussion thereof in “The Hindu Conception of the Functions of Breath,” J.A. ON, xxii. 264.

(e) The Suśkūras in the history of the individual are as follows: Garbhādāna, paṇisavana, sāmanomayana, jātakarman, nāmekaraṇa, upaṇiskramaṇa, upaṇaprāṇa, cāuda, upaṇāyana, mahānānya-mahāvratu, i. e. brahmacārīna, upaṇiṣadu, godānddvāhakāu, and mṛti (v. 60 ff.).

OUTLINE OF CONTENTS.

Chapter I. The chief purpose of the first chapter is to set forth the theoretic basis of the science of Mantra formation and use. The argument has been briefly stated above. The
Sāṅkhya terminology is used. Such terms as tanmātras, tat-tvas, mahātatvam, manas, buddhi, rit, ahānakara, mahat, ary-aktam, jñānendriyas, etc., are used.

Chapter II. The subject of this chapter is stated to be to describe the utterance (ryakti) of sounds in the mouths of men. In other words, it is a natural progress upon chapter first. Sounds are said to be driven along through Sāuanā by the wind or breath, their starting point having been the personified Çakti who, as Kuṇḍali, dwells in the body (1).

Many gods and goddesses are named and are all called svra-çaktis, thus emphasizing the theory that sounds are creative forces (29–55). In an earlier verse (8) the vowels are called giravaktimanys, i.e., possessed of the power of Çiva.

From verse 56 the description of Mantras begins. They are divided (a) as to gender; (b) as to character into good and bad (krūra and sāmyug); and (c) into ready for use—siddha—and those yet to be perfected—sādhya (56–62 and 130–131). The chief causes of Mantras being defective are (1) the too frequent occurrence of certain letters, and (2) the putting of said letters into the wrong place (111). A long list of defective Mantras precedes the above statement (63–110). Note that the restrictions are such that Mantra-making is not a matter to be lightly undertaken. They seem to have been made with a view to keeping the production entirely in the hands of a “Mantra Company, Limited.”

The Śiṅskāras for Mantra-formation are next given, and this is followed by a statement of the proper astrological conditions, and that again by a description of a magical diagram; cf. Nṛsiñha. U.p., v. 2 (112–135).

The chapter ends with a description of the proper place, the food and the character of the Mantrin and also of the character of the disciple (138–154).

Chapter III. The subjects of this chapter are:

1. The preparation of the āśuva, i.e., the ground where a sacrifice is to be performed (1–18).

2. Full details of the erection over the āśuva of a mañḍhyā or temporary temple on the occasion of a religious festival: of the vessels used in the ceremony and the various grains put in them; and of the giving of food to the gods and demons (19–47).

3. The forming of kuṇḍīras in the various squares of the āśuva and a description of occult effects of the various shaped kuṇḍīras (48–86).
4. The formation of mandalas or charmed circles of conjurors (105 ff.).

5. The description of pithas or pedestals upon which the gods are put (119 ff.).

Chapter IV. The aim of this chapter is to explain the consecration ceremonies or dikṣās which must be performed preparatory to undertaking the specific acts of worship. First comes an account of what the Deçaka must do from the time of his bath to his entering into the place of sacrifice, yajñamaṇḍapa (1–27). Then follows the ceremony of alternately reciting the Mantra of the occasion and touching parts of the body (28–66). After this comes the ceremony of prānapratīthā, i. e., the putting of life into the idols and the objects used in the sacrifice (77–92). The chapter ends with a description of foot-rinsing, mouth-washing, and guest-reception ceremonies (93–96).

Chapter V. The subject of this chapter is the sacrificial fire. The production thereof is first taken up. Eighteen Svāṅskāras, i. e., sanctifying ceremonies, are mentioned in the beginning of the chapter and others later (1–6 and 43 ff.). The seven tongues of Agni are mentioned and these again divided into three sevens (20–28).

At the close of the chapter, fire is likened to a living creature with a head and other parts. The various colors of the flames have a specific sacrificial value; the sounds of the flames are also given (150 ff.).

Chapters VI–XXIII. With the close of the fifth chapter the introductory matter comes to an end and the author addresses himself to the description of various Mantras, as to their formation, use, and the results obtainable by them. The method of the Anukramaṇīs is followed and the Rāṣṭi, the meter, and the divinity are given.

Chapter VI. The main Mantra here is called Varṇatana, and the deity thereof is Saraswatī. It is made up of fifty letters and twenty-four lipis. The word lipī seems to refer to the sections of the Mantra; the body is to be touched in twenty-four places and the deity thus placed in it. The eight mothers, i. e., personified energies of the principal deities, are named and described (17 ff.). Five Mantras are manipulated (51–74). Abhishekas, i. e., batnings of the idols, and mudrās, i. e., intertwinnings of the fingers with supposed magical efficacy, are named and their effects given (75–111).
Chapter VII. The first half of this chapter is devoted to Yantras, i.e., amulets upon which Mantras are written. The chief one is called "Bhūtalipi," a diagram of it is given (1–19). Long lists of gaktis containing 16, 23, and 64 names respectively, are given from verses 20–50.

Ākāṇa, vāyu, agni, varṇa, and pṛthivi Yantras are described (51–61).

From verse 62 the formation of Mantras begins again. The main Mantra is called Vāgīvārī and the deity of it is Vākya. This is probably a return in reality to the Sarasvatī of chapter VI, who is the goddess of speech. In the latter part of the chapter there are frequent references to obtaining skill in speech. The chapter closes with a list of things forbidden to a Mantrim.

Chapter VIII. Formation, use and value of Lākṣmi-Mantras. At verse 37 a new Mantra is mentioned called the Āṅga-Mantra. From 141–3 the formation of a Yantra is described. This is followed by another Mantra of 27 letters (144–146). The chapter closes with a list of things forbidden and allowed to the Mantrim (149–167).

Chapter IX. The goddess of the Mantras of this chapter is Bhuvanevārī. Various Mantras are formed and gods and goddesses worshipped in the different quarters (1–33). The gaktis of Bhuvanevārī are then given and this is followed by the formation of three Yantras (34–94). The chapter ends with a statement of the wonderful powers of the Mantra (95–108).

Chapter X. The name of both the Mantra and the goddess of this chapter is Tvaritā, a title of Durgā. Both Mantras and Yantras are formed (1–42). The ten gaktis of Kāmadeva are mentioned in verse 69. Here also wonderful powers are attributed to the Mantra.

Chapter XI. The Mantra of this is called the Durgā-Mantra. The value of this Mantra as a means of destroying enemies is frequently referred to. Abhīcāra, one of the technical words used in connection with the terrible aspects of sorcery, is found in verses 81 and 124.

Chapter XII. The deity of this chapter as well as the main Mantra is named Tripurā-Bhūravī. This goddess is very highly praised. In one passage she is identified with Viṣṇu, Čiva, Brahma, and their wives (84–85).

Yantras are formed (25 ff.) and gaktis named (35–36).
Chapter XIII. The Mantras of Gaṇapatī, i.e., Gaṇeṣa, are handled in this chapter. The position in which he sits with his wife is described in 73, 84, 91 (untranslatable). Stars are said to be made by water thrown from Gaṇeṣa’s trunk, and he is said to play with the sun and moon as with balls (142 and 145). As to the rest, the “practices” of the chapter are as in other chapters.

Chapter XIV. The Mantras of the heavenly bodies are here given.


Chapter XV. The great Mantra of Viṣṇu is the subject of this chapter. In verses 13–20 the sun and Viṣṇu are correlated by their names. The Mantras of certain of Viṣṇu’s incarnations are given: (1) Rāma Candra (85–109); (2) Varāha (110–139); (3) Prthivī (140–154).

Chapter XVI. The Mantras of this chapter are linked up with Nṛsiṁha. These Mantras are remarkably effective in destroying enemies (90).

Chapter XVII. Here we have the Mantras of Puruṣottama, i.e., Jagannāth, i.e., Viṣṇu-Avatār. The chief Mantra is made up of 200 letters. Eight shorter Mantras are named in 44–51 and a Kṛṣṇa-Mantra in 87. A long list of ākāti is given and a lot of Yantras are formed (124–155). Various acts of twelve Avatārs of Viṣṇu are referred to (a) fish, (b) tortoise, (c) boar, (d) man-lion, (e) Vāmana, i.e., Trivikrama, (f) Paraṣu Rāma, (g) Rāma Candra, (h) Baladeva, (i) Buddha, (j) Kalki, (k) Kṛṣṇa, i.e., Purāṇa Puruṣa, and (l) Viṣṇu himself (156–169).

Chapter XVIII. The main Mantra is named Maheṣa with Ḫa as a deity. In 42–44 there is a Bhairava-Mantra; in 45 a Durgā-Mantra; in 48–49 a Gaṇeṣa-Mantra, and in 52 a Čiva-Mantra.

Chapter XIX. The Mantra here is named Mantraratna and the deity is Ćambhu. In 57 the Cintāmani-Mantra is given; in 114–121 the Kharagrīvan(sic)-Mantra of 170 letters. Ākāti are named in 124–125.

Chapter XX. The Aghorā-Mantra stands at the head of this chapter. Further, the large and small Mantras of Kṣetrapāla
are given in 35 and 47. Three kinds of meditation (*dhyāna*) are named, i. e., sāttvika, rājasya and tāmasa (55–56).

Chapter XXI. The Mantras of Gāyatrī are the subject of this chapter. Gāyatrī is said to be the manifestation of the Saccidānanda Brahman (1). Many names of Agni are given (51–52). A list of psychical and other essences and activities is found in 67–71. Nāṅṣatrās and Rācis are dealt with (78 ff. and 84 ff.). There is a good deal of foe-destruction provided for in the chapter.

Chapter XXII. The main Mantra of this chapter has two names (1) Uddināstra(sic)-kṛtyāstra. The second word describes the reverse use of the Mantra, i. e., pratiṣṭoma. (2) Atidurga. The purpose of this Mantra is defined in the first verse as *catru-vimardana*, i. e., enemy-destruction (1), and the whole chapter proves its power for this purpose. The Lavaṇa-Mantra begins at 59. The various *mandalas*, i. e., mystical circles of the body, are referred to (8–13). Many Mantras are handled in the chapter. A goat, a snake and a cat figure in the ceremonial (56, 73, 77).

Chapter XXIII. The chief Mantra of this chapter is called Trāyambara and refers to Mahādeva, i. e., the three-eyed one. Its purpose is just the opposite of the Atidurga-Mantra. Its purpose is expressed by the word "*mṛtyunājya*,” i. e., death-conquering. The Mantra of Varuṇa is given at 52 ff. In 93–96 we have the Prāṇapraṇītha-Mantra, and in 117–122 a description of *mudrās*.

Chapter XXIV. This chapter explains the various kinds of Yantras hidden in the Tantras. From 94 on Kuṇḍalī is praised. It is as though the author returned to the subject of the first chapter.

Chapter XXV. The closing chapter deals with Yoga. In verse 1, the author says that the wise (*vīvāradāh*) call the unity of the Jīva and the Ātman, Yoga. Eight kinds of Yoga are named and described (5 ff.). The chapter contains many references to the body with its veins and parts. Kuṇḍalī comes in for mention several times (34, 35, 62, 65–67). Nāḍa is said to be produced by closing all apertures of the body (46). The seven *vibhavas*, or secondary forms of Om, are given as mahā-tattva, āhāṃkāra, śabda, sparśa, rūpa, rasa, and gamha (58).

Various deities are praised, viz.: Parbatī (60), Nārāyaṇa (61–2), Mahādeva (64), and Kuṇḍalī (65 ff.).

This अत् लेग्मेन् has not been satisfactorily explained. Sāyana’s gloss reads as follows: prabhūtyāchādanā mahādbhiṣ chandobhir vedāir upetā vā. This cannot be accepted in its entirety, though it seems to me to contain a faint glimmering of the truth. The PW. renders ‘mit hohem Dach versehen,’ assuming that -chandas has here the same meaning as chadis, chadman. The occidental translators’ follow this suggestion, though most of them express misgivings.

This rendering, though ingenious, is hardly to be accepted so long as no external evidence can be produced to show that chandas ever has the meaning ‘roof.’ Weber (IN. xvii. 236) has already pointed out that the root chad nowhere appears in nasalized form. All of Whitney’s and Shankar Pandit’s MSS. read -chandāḥ; and the assumption of a meaning elsewhere unknown is rendered unnecessary by the fact that the ordinary meaning of chandus gives a satisfactory sense. The literal meaning of brháechandas would seem to be ‘whose meter is the bhuti.’

We have three parallels in AV. vi. 48. Indeed, the expression contained in the first words of our verse is strikingly similar to that of the three verses of that hymn. Compare

AV. iii. 12. 3. dhurany āsi iva brháechandāḥ with
AV. vi. 48. 1. cyenō’śi gāyatrācchandāḥ . . . .
2. ṇbhūr āsi jāyavchandāḥ . . . . . .
3. ṛṣā’śi triṣṭāchandāḥ . . . . . . . . .

The verse iii. 12. 3, with the resolution dhurany āsi, counts 36 syllables; it is then mechanically a bhuti, and is so reckoned by the Anukramaṇi. The intrinsic fitness of the connection

1 Ludwig, Rigveda, iii. 489; Zimmer, AIL, p. 150; Weber, IS. xvii. 236; Grill, Hundert Lieder2, p. 59; Griffith, Hymns of the Atharva-Veda, i. 97; Bloomfield, SBE. xiii, pp. 140, 845; Whitney, p. 105.

2 These verses occur in other Vedic texts; see Bloomfield, Festgruss an Roth, p. 150; or Whitney, p. 316.
between the building house and the 'great' meter is apparent.\(^1\) Especially significant, in connection with the second half of our verse, is the relation that exists between the \(bh\text{h}ati\) and domestic cattle: TMB. vii. 4. 4, \(pur\text{v}ra \text{vai } bh\text{h}ati\); \(\text{CB. xii. 7. 2,}^{11}\) \(b\text{hrat\text{h}ah} \text{pur\text{v}rah}\); cf. further CGS. iii. 3. 1, in the house-building ceremony: \(v\text{rut\text{m}tr\text{c} prati t\text{igh\text{h}a} \text{v\text{m}rok\text{e}ye} \text{pur\text{v}raci} bh\text{h}ati \text{stabh\text{y}e}\ 'ti sth\text{\u0930\u0902r\text{\u0922\u091c}\text{\u0902} \text{abh\text{\u092c\u0940\u0916\u0930\u0902}gh\text{\u092c\u0942\u0916\u0902}}\text{; and iii. 4. 7, in the sacrifice to V\text{\u0902\u090f\u092c\u0902\u0935\u0916\u0942\u092c\u0902}\text{ V\text{\u0902\u090f\u092c\u0902\u0935\u0916\u0942\u092c\u0902}}\text{; } bh\text{h}uto [\text{\u0924\u0940\u092c\u0902\u092f\u0940\u0902\u090f\u0935\u091f\u0942\u092c\u0902}] \text{apar\text{\u0902\u091c\u0940\u0916\u0902}ye [\text{\u0915\u0940\u092c\u0902\u092f\u0940\u0902\u090f\u0935\u091f\u0942\u092c\u0902}].}

\(^1\) For the symbolism of the \(bh\text{h}ati\), see Weber, \text{IS. viii. passim} (for details, see Index).

\(^2\) These and other references are given by Weber, l. c. p. 44.
Krṣṇanātha’s Commentary on the Bengal Recension of the Čakuntalā. By Dr. Arthur W. Ryder, Harvard University, Cambridge, Mass.

An excellent and little known commentary on the Bengal recension of Kālidāsa’s Abhijñānaśākuntala is the Praveṣīkā of Krṣṇanātha Nyāyaśācārya (second edition, Calcutta, 1888, 323+14 pp.). To this work my attention was called in the fall of 1900 by Professor Geldner of the University of Berlin. This commentary is recent; the colophon tells us that the work was finished on the ninth day in the bright half of Āṣvina, 1798 (autumn of 1867 A.D.), while the author was living at Pārvasthali, a village on the Bhūgirathī, near Navadvīpa (=Nadiya, at the confluence of the Jellinghy).

The work is prefaced by eight stanzas, the first of which contains an introductory prayer to Īśvara, full of plays on words. In these introductory stanzas, the writer’s elder brother Īśivanāthaṭaṇḍuṇā receives a handsome tribute for his character and erudition. He was learned in the dharmāṇastra’s, in grammar, astronomy, and music, and employed his leisure time with kāṇyas, alavākāras, and dramas. This Īśivanāthaṭaṇḍuṇā wrote a commentary on the Ratnāvali. The father of Krṣṇanātha was Keśavacandra, of the family of Arjunamiya, resident in Videha. Further information concerning Krṣṇanātha’s life may be gathered from his work as follows. In commenting on the use of mahābrāhmaṇa, as applied by the king to the Vidūṣaka near the end of the second act (Pischel 45. 2), he shows himself familiar with the idiom of Benares by saying (76. 18): “In Benares and elsewhere the term mahābrāhmaṇa is applied to Brahmans who steal the best ārāddha (agraśrāddhadharaka-vipreṇa).” He is apparently the author of the commentary on the Vātadūta, mentioned at 117. 12. The expression at 47. 20 also seems to show that he wrote other works.

Apart from the very numerous citations of Amara, Krṣṇanātha gives about three hundred and sixty quotations from

1 A MS. of this work is mentioned in Oppert, Lists of Sanskrit Manuscripts in Private Libraries of Southern India, Vol. II, No. 8882.
nearly thirty lexicographers. His most frequently quoted lexicographical authorities are the Amarakoça, the Medinikoça (114 quotations), the Viśvaprakāṣa (91 quotations), the Trikāṇḍaçeṣa, and the Čabdābdhi. The less frequently cited authorities are Hemaendra, the Vaijayanti, the Čabdaratnāvali, Jaṭādhara, Dhanañījaya, the Čabdārṇava, Bhāguri, the Hārāvali, the Ratnakoça, the Rājanirghanaṭa, Rudra, Çāvyata, Hālāyudha, Dharāṇi, the Bhūripayoga, Ajayapāla, a Dvīrapakoça, Rabhasapāla, and Vyādi. He furthermore cites (30. 12) "certain commentators" on Amana and (140. 21) Subhūti.

In addition to numerous quotations from Pāṇini and the literature ancillary to his work, there are found 28 quotations from the Kavikpalpadruma and two from the Dhātudipikā.

To the following legal authorities reference is made: Manu (22 times), Yajñivālāya, Daṅka, Devala, Viṣṇu, Ikārta, Narada, Yama, the Agastyaśanāhita, Kātyāyana, Gāntama, Parāṣara, Paṇḍīnasi, Bhāspati, the Ratnamalā and Čaṅkha-likhita; also Kāmaṇḍakī.

Kṛṣṇāṇātha’s rhetorical authorities are the Sāhityadarpana, the Kāvyādarṇa, the Kavyaprakāṣa, the Candraloka, the Ujjvalanilamanī and Bhojarāja. Bharata’s work on the drama is quoted eight times.

The Śatīnikādāmodara is quoted for a musical definition; for metrical matters, Piṅgala, and Hālāyudha’s comment on Piṅgala are quoted.

Astronomy is represented by the Siddhantaciromanī, Jyotistattva, and Sārayasiddhānta.

The medical authorities to which Kṛṣṇāṇātha makes reference are Sūrata, the Bhāvaprakāṣa and Caraka. Vātsyāyana is referred to for erotic material.

For angury and chironomy the Śāmadraka, Vasantarāja and the Adhūnataśāstra are cited.

Finally, a quotation is given from the Vaiṣṇavaparipāṣa. Of several quotations I have not discovered the source.

Various literary works are furthermore cited under contribution for illustrative material. Thus among the Purāṇas: the Viśvaśrīya, the Maṇḍya, Gānedra, Palmara, Kāma, Vāmana, Narasihma, Brahmastā, and Viṣṇupurāṇas. The Mahābhārata is quoted eight times, including a reference to the Bhājavadgītā, and the Rāmāyaṇa once. Other dramas are very sparingly
made use of; reference is made once to the Urvācī and once to the Uttarārāmacarita. Occasional citations are found further from the Kādambari, the Raghuvanaça, the Kirātārjunīya, the Vāsavadatta, and the Ciṣupālavadha.

Krṣṇanātha seldom cites other commentators on the Čakuntalā and never by name,—though he once (146. 24) makes reference to an opinion expressed by Mallinātha in his commentary on the Kirātārjunīya. In the seventh of his introductory stanzas, he informs us, however, that he sometimes differs from previous commentators.

A few of Krṣṇanātha’s interpretations may be adduced by way of illustration.

In the fourth act (Pischel 79. 6–7) Priyaṁvadā says: “Hurry, Anusūyā, hurry! The hermits who are going to Hastināpura are making their voices heard.” Krṣṇanātha (136. 20) mentions the opinion of a somebody who declares this to be a false reading, because Hastināpura did not at that time exist. Our commentator ingenuously refutes this opinion as follows: Hastināpura, he says, was Duśmanta’s capital in that version of the Čakuntalā story which is found in the first book of the Mahābhārata, and this is proved by the following quotation (MBh. i. 74. 13—3000): “‘Good’ said they, and all the mighty men, setting before them Čakuntalā with her son, set out for Gajasāhuvaya,” where they were to meet Duśmanta. But, continues Krṣṇanātha, Gajasāhuvaya is Hastināpura. This he endeavors to prove by means of two further quotations from the first book of the Mahābhārata and the statement of the Trikān-daçeṣa: “Nāgāhva, Hastināpura, Gajāhva, and Hāstina are synonyms.” Having thus established the positive side of his argument, namely, that we cannot go behind the authority which we may by a little combination deduce from the Mahābhārata, he returns to the objection, formulated in a quotation from the Viṣṇupurāṇa. This text declares (iv. 19. 10) that “it was Hastin who founded Hastināpura” and Hastin (iv. 19. 2 ff.) was the great-great-great-grandson of the adopted son of Duśmanta’s son Bharata. But this, says Krṣṇanātha, simply means that he beautified the city, as did Kuça upon Rāma’s decease in the case of the city of Ayodhyā. To be sure the Mahābhārata says: “Of her (Suvāraṇā) was born to him (Suhotrā) Hastin who established this Hastinapura” (MBh. i. 95. 34=3787).
Yet in this case ‘established’ means no more than ‘protected from destruction.’ In the same way are to be understood the words of the Raghuvâna, which declares that Çatrughma was the founder of Mathurā (Ragh. xv. 28), though this city is nevertheless described as the capital of King Suśeṣa, who made one of the gathering at the time of King Aja’s wedding (Ragh. vi. 48).

Very ingenious is Kṛṣṇanātha’s explanation of the uncommon word āparatādvītha, which occurs three times in the play (stanzas 148 = Pischel 112. 2; beginning of Act vi. = Pischel 118. 10; near the end of Act vii. = Pischel 167. 2). The word is ordinarily regarded as the name of a place (PW. s.v.; Apte s.v.); but Kṛṣṇanātha defines as follows. First occurrence: ‘whose appearance (tīrtha = dāraya) is like that of Apsaras’ (tīrtham ... dāraya, Çabdābdhi, i.e. virtually ‘appearing like an Apsaras.’) Or the meaning is: ‘whose place of origin (yoni) is the Apsaras,’ i.e. ‘Apsaras-born’ (tīrthaṁ yonīṁ, Halāyudha)’ (K. 207. 12–14). Second occurrence (K’s text has samuditam for Pischel’s samudityaṁ): ‘the actions (K. supplies karanaṁ) mentioned (samuditam = ukham) by the Apsaras-born (āparatādvīthā = āparatāvanti = tīrthaṁ yonīṁ, Halāyudha)’ (K. 217. 12–13). Third occurrence: ‘āparatādvīta-vatasaṁyajit = atartha-āparatādvīthā (abstract with kṛt-suffix used concretely), i.e. ‘from one Apsaras-born descended to earth’ (tīrthaṁ yonīṁ, Halāyudha)” (K. 317. 11–13).

As an instance of Kṛṣṇanātha’s skill in detectingçēsma may be taken his comments on stanza 177 (K. 264. 10–161). In this verse he finds four words which contain an intentional ambiguity in that they refer both to the royal house (or the king) and to the Sarasvati:

-śānti 1. family 2. stream
pāwira 1. pertaining to Pāru 2. exceedingly (bhūyaṁ)
pravarañjya 1. without offspring 2. deserted
udṛṣṭe 1. ignoble 2. untraversable (agamya)

Further examples are to be found at 23. 7–17 explaining the speech of Çakunṭalā, Pischel. ib. 15–41 and at 35. 24–36. 12 (explaining the speech of the king, Pischel. ib. 12–13).

A matter apt to escape the notice of the Occidental reader may be added. In commenting on stanza 28, Kṛṣṇanātha calls
attention (293. 9) to the color of the lotus, which is here compared with Sarvadamana’s hand. He then adds (293. 11) a quotation from the Sāmudraka: “Pink palms are a sign of royalty (yasya pāṇitulāṃ raktān tasya rājaśāh vinirdiṣṭa).”

Quotations might be multiplied. Yet these citations will perhaps suffice to show the erudition and judgment of Kṛṣṇa-nātha. His commentary is a contribution to the better understanding of the play.

1 This point is often made in the Mahābhārata. Compare i. 122. 29, where, when the king makes the aṭṭāla, his pink fingers (raktāṭāla), look like a lotus-cup.—Ed.
Jupiter Dolichenus.—By Rev. Charles S. Sanders, Aintab, Turkey.

For a thorough understanding of Jupiter Dolichenus and his worship, two things would be necessary. The first of these is a satisfactory knowledge of the old Baal cults or worship of Syria, for without doubt the cult of Jupiter Dolichenus in its original form was simply the worship of the local Baal. How much is really known concerning the old Baal worship in North Syria is a matter that admits of question. One valuable source of information is the coins of the region, of which more later.

Again, on the Roman side, the cults of the purely Roman worship of Jupiter—Jupiter Stator, Jupiter Depulsor, etc.—would need to be better understood. The relation of these to the national worship has not yet been adequately investigated; see, for example, the article “Jupiter” in the Encyclopaedia Britannica (vol. xiii., p. 780). If this relation could be made clear to us, we should very likely see how easy it was for the Romans to adopt the Dolichenus cult, its worshippers among the Romans conceiving of it as merely a new manifestation of their national worship.

Dolichenus seems to have come into the Roman world as one of the Oriental gods, so popular in Rome in the second century. The Antonines being very friendly toward the Oriental cults, witness Antoninus Pius even building a temple to Jupiter Heliopolitanus; they came in with a rush. Mithra, the most popular of all, has little bearing on our subject, though Dolichenus is elucidated passim in Dr. Cumont’s great work on Mithra. The Egyptian cults have also no interest for us in this connection. Two cults, however, seem to have much in common with the worship of Jupiter Dolichenus, namely, that of Atargatis (Perkelet, the “Dea Syria” of Hierapolis, well known through Lucian’s In Dea Syria, and that of Jupiter Heliopolitanus. There are other cults, as Jupiter Iliacus, Jupiter Olbia, etc.}

[Tetzes et Monuments, 1890, p. 198; Monstres de Mithra, Brussels, 1890.]
etc., but scarcely anything is known of them. On the ground of contiguity, we should expect the inscriptions of the god Aziz of Edessa, found in Dacia, to throw some light on the subject; but that which is gained from them points more probably to affinities with the Mithra cult. See Cumont’s Textes et Monuments, i. 250, note 2; 260, note 2.

Three inscriptions of Dacia and the unequivocal testimony of Stephanus of Byzantium locate the original seat of Dolichenus’ worship at Doliche (Δολιχή) in Commagene. While there are many places bearing this name, the above reference (“aeternus Commagenorum deus”) settles the question. Stephanus, in speaking of Doliche in Commagene, mentions the worship there of Jupiter Dolichenus. The place is rather near the southern boundary of Commagene. Its coins begin only with Marcus and Verus. Ptolemaeus is the first geographer to mention it. Yet the Macedonian name makes us at least wonder whether it was not one of the places where Alexander the Great’s veterans settled. It is very near the junction of four Roman roads; one leading to Samosata, one to Edessa via Zeugma, one to Germanicia (the modern Marash), and one to Cyrrhus and Antioch. It is not far (some thirty-six miles) from Cyrrhus, a center of Roman soldiers, a fact which probably accounts for the transformation of the local Astarte into “Minerva Cyrrhestica.” This proximity of a great Roman fort may also account for the distinctively military character of Jupiter Dolichenus in his European transformation.

In church history Doliche is noteworthy as being the place where Eusebius of Samosata was murdered just after the termination of the Arian controversy. At present it is merely a prosperous Turkish village. A mound near by yields pillars, capitals, etc., to every digger, and probably this hill was the site of Dolichenus’ original temple. The place is notable for the large number of sepulchres found there. The only (?) inscription, however, thus far discovered among them is a bit of Syriac. The present village is notable for an unusually handsome mosque, erected probably before the Turkish period. There is a much higher hill about two miles away, which is known as Dulûk Bâbâ. It contains a Moslem ziyâret, and probably marks an ancient holy place. It is possible that the original seat of the Dolichenus worship was here, but more probably it was the hill mentioned above, very near the present Doliche.
According to Hettner (De Jove Dolichenus, Bonn, 1877), we have a bit of local idiom in the very name "Dolichenus." Stephanus says that the god was called "Zeus Dolichaios," but that "the local usage is Dolichenus." Dolichaios is not once used in the inscriptions, the form being Dolichenus or a misspelling of the same, or else what seems to be an echo of one of the Syriac forms of the name, which is variously written Doluk, Dołik, etc.

When we come to the conventional representations of the god, two distinct questions arise: (1) How was he represented at home? (2) What was his appearance in his European transformation?

(1) The "Dea Syria" is abundantly pictured on coins; Jupiter Heliopolitanus appears on coins and also on bits of statuary, though the latter are generally broken, as in the case of the specimens in the museum of the Syrian Protestant College in Beyrout. Coins of Dolichenus are rare. The writer has been allowed to see some in the possession of Mr. E. Michel of Alexandretta. We seem to have here the original Syrian form. The god is standing on an animal which is rather small in proportion, and both are facing the right. The military accoutrements so prominent in the European transformation are wanting. On one coin the god—still standing on an animal—is represented as under a canopy or roof on pillars. The question at once arises, whether the tetraestyle of CIL., vi. 414, is not identical with such canopies as these, which are often met with on coins of North Syria, certain coins of Zeugma, for example, and others probably belonging to deities whose names have passed into oblivion.

Little bronzes with a human being standing on an animal more or less fantastic are quite common. Probably they are also representations of Syrian gods. They are very common around Zeitân and Geok-sun, in Western Commagene. This branch of the subject is as yet practically uninvestigated.

(2) In his European transformation there seem to be only two features of Dolichenus, on the monuments where he is pictured, which are Oriental; namely, the uplifted position of the arms, and the fact that the god stands on an ox which faces the right. He has the pilenus on his head, the lorica on his body, is often provided with greaves, and wears the soccus. Sometimes
there is the military cloak. In the right hand is the bipennis and a thunder-bolt in the left. Often a winged victory is about to crown him, and an eagle is sometimes near. In a very few cases the Sun and Moon figure, as in the representation of Mithra. Sometimes the god is represented unmounted, and certainly once just like the Roman Jupiter. This taking on of pure Roman forms happens also sometimes in the Egyptian cults.

It is a striking feature of the old Syrian gods that they have their partners, though the partners are subordinated. Thus, the Dea Syria has her male complement (see Hettner), and similarly Jupiter Dolichenus has his female associate. She is on an ibex, a wild goat or some such animal, which faces the left, and thus Dolichenus and his complement face each other on monuments where they both exist. Her name in the inscriptions is Juno; but as Jupiter Dolichenus is the local Baal of Southern Commagene, so, probably, in the original worship, his complement Juno bore one of the several names under which Astarte appears.

To one interested in Commagene, there arises at once the question why this distinctively Commagenean god had his original seat in so obscure a place. The discoveries of Humann and Puchstein,¹ which show so strong a development of the Mithra cult in Nimrud Dāgh, suggest one answer. As the inscription there shows that the reigning dynasty at Samosata were followers of Mithra,² we should hardly expect, very near by, a god who could be called "aeternus Commagenorum deus." Again, while some of the old sites have kept their identity through the centuries, one has only to travel through Commagene, Cyrrhestica, and Osroene, now, to find many old temple sites marked as once important centers of worship by the number and size of the weather-beaten pillars which are still standing, though no record of their glory remains. Doliche may in the pre-Roman time have had an importance in the religious world of Southern Commagene of which we now know very little.

Hettner does not enter at all into the manner in which Dolichenus was worshipped. Of this very little is known. That there used to be dolichenus, just as there were mithrae in the cult of Mithra, is fully ascertained, such having been actually

¹ Reisen in Kleinasien und Nord-Syrien, Berlin, 1890.
² See Cumont, Textes et Monuments, ii. 187 f.
found. The coins would seem to show that the tetraestyle was a feature of the worship of the old Syrian gods. Such a tetraestyle with Jupiter Dolichenus under the open roof is figured on one of the coins mentioned above. Would it be too bold a conjecture to assert that such a tetraestyle did not represent the original seat of worship, but that it was a feature of the country then, as the ziyâret is now, and that very likely many modern ziyârets represent such ancient high places?

Sacerdos is used so often as to show plainly that the priestly idea and function were very fully developed. Candidatus is a word occurring in a way that makes us wonder whether it does not mark a special class, being employed, that is, in something like its primary meaning (white-clothed), and not in the usual, secondary sense of the word. See especially the Roman inscription CIL vi. 406 (also p. 834, note to 406), pro salute sacerdotiun et candidatorum et colitorum. In the same inscription, lecticari dei. Trielium, CIL iii. 4789(b), and cenatiorum, quoted by Cumont, rather go to show something like a sacrament, or at least a sacrificial meal. There was much in the cult of Mithra; and in the upper part of Commagene, among some of the Kuzul-bash Koords, there is probably something of the same thing today. Though kept secret as much as possible, it is known that such rites exist.

Aside from the hints contained in these and like words, we have no knowledge of the details of the worship, beyond what may be inferred from the little we know about the cults of Mithra and Atargatis. Vows were evidently quite a feature of the worship—hence many of the inscriptions. Ex jussu ipsius, ex jussu numinis would go to show a degree of personal relation, or at least the possibility of receiving impressions from the god regarding his will.

As no inscriptions have been found in the East (so far as I am aware) relating to Dolichenus, we are obliged to speak of this god hereafter with exclusive reference to his Western transformation. These Eastern cults do not seem to have taken root at all in Greece; it is the Roman world which follows them. Hettner gives the following as the distribution of the three cults, in the Western world:

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1 See Cumont. Textes et Monuments, i. 333.
2 Textes et Monuments, i. 339, note 8.
Jupiter Dolichenus.

<table>
<thead>
<tr>
<th>Country</th>
<th>Dacia</th>
<th>Mesia</th>
<th>Pannonia</th>
<th>Noricum</th>
<th>Raetia</th>
<th>Germania</th>
<th>Gallia</th>
<th>Britannia</th>
<th>Africa</th>
<th>Palatina (not Rome)</th>
<th>Italy (not Rome)</th>
<th>Rome</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dea Syria</td>
<td>2(?)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td>1</td>
<td>3(?)</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Heliopolitanus</td>
<td>2</td>
<td>1(?)</td>
<td>4(?)</td>
<td></td>
<td>1</td>
<td></td>
<td>1(?)</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Dolichenus</td>
<td>11</td>
<td>13</td>
<td>3</td>
<td>1</td>
<td>14</td>
<td>1</td>
<td>8</td>
<td>3</td>
<td>1</td>
<td>0(?)</td>
<td>20</td>
<td>84</td>
<td></td>
</tr>
<tr>
<td><strong>Total by countries</strong></td>
<td><strong>15</strong></td>
<td><strong>18</strong></td>
<td><strong>3</strong></td>
<td><strong>15</strong></td>
<td><strong>2</strong></td>
<td><strong>18</strong></td>
<td><strong>5</strong></td>
<td><strong>1</strong></td>
<td><strong>14</strong></td>
<td><strong>27</strong></td>
<td><strong>115</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It must be borne in mind that the above list includes not only inscriptions but *tituli* as well; often, for example, only a statue or part of a bas-relief, which, however, has features which make it without doubt the *titulus* of such and such a god.

In two Dacian inscriptions Heliopolitanus and Dolichenus are joined together. This is good evidence of the close resemblance which was recognized as existing between the two cults. As in North Syria the two deities were different local manifestations of the same god, essentially, so in Europe their votaries looked upon them as holding much the same relation. Leave the sex out of account, and the same would probably be true of Dea Syria also.

It remains to answer briefly three questions pertaining to the Dolichenus cult in Europe: (1) How did it get there? (2) Where did it take root, and to what degree? (3) The dates *a quo* and *ad quem*.

(1) *How did it get to Europe?* The first answer that comes to mind is, that of course the legions in the East brought it back with them (compare Tacitus, the legion from the East "saluting the rising sun"), they had become votaries of Mithra. But this is probably a wrong inference. We must especially bear in mind that, so far as we can tell from comparison of the representations on coins and on bas-reliefs found in Europe, it was not a purely Oriental cult, but a *transformed* Oriental cult, that was so popular in the Roman empire.

One fact which especially attract our attention is the frequent recurrence of the name *Marinus*, and the way in which it is connected with *sacerdos*, in the inscriptions. It seems proba-
ble that "Marinus" was a name specially connected with the cult; perhaps it was the name of a priestly family, or rank.  

In the early centuries there seems to have been a very large number of traders from the East throughout the Roman empire. The inscriptions prove their existence as far as Lyons, at least, and probably they travelled over the known world as diligently as do to-day the Armenians, and still more, the Syrians of the Beyrout region. We must also remember the vast number of slaves from the East, so plentiful especially in Rome. As Christianity often worked up from slaves to their masters, why may not the worship of Dolichenus have done the same?

Outside of Italy, these cults seem to have taken firmest root in Dacia. When this province was drained of men after Trajan's subjugation of the country, Eutropius tells us that the emperor ordered that large drafts be made on all parts of the empire to re-people the country. The inscriptions of Aziz of Edessa in Dacia show us that a large draft was taken from Osroene, just across the Euphrates from Commagene. Why should not the presence of the Dolichenus cult in Dacia lead us to believe that such a transplanting took place, at that time, from Commagene also? That even associations and guilds of Syrians existed there, and in numbers too, is shown by the inscriptions.

Juvenal's "Jam pridem Syrus in Tiberim defluxit Orontes" shows us what an influence the oriental part of the Roman population had at that time, if not on the government, at least on the life of the people. What with merchants, soothsayers, dancing-girls, soldiers, and slaves, the different lines of influence from the East were continually tightening their grasp on the West.

The objection may be made that, if the influences of these cults had been so powerful, later Roman literature would reflect them more. The Mithra cult may be quoted in answer. The enormous number of its monuments shows how it flourished,—even some of the emperors patronized it,—and yet what can we learn of it from Latin authors? It is very evident, at all events, that the priests of Dolichenus were everywhere zealous in propagating their religion, and that their efforts were successful. Hettner thinks that the influence of the soldiery in spread-

1 See, however, Ed. Meyer, in Roscher's Lexicon der Mythologie, s. v. "Dolichenus," who suggests that this is a Latinized form of the Syriac marna "(our) lord."
ing the cult has been overestimated. We know, however, that the XVI. legion "Flavia firma" served in Commagene. Officers were changed from legion to legion, and thus may have influenced other legions when serving later in Europe. There were, moreover, at least six cohorts from Commagene, and that these cohorts were very busy in propagating their ancestral worship is extremely probable.

(2) Where did the worship take root, and to what degree? So far as extant inscriptions give us an answer, the cult of Dolichenus seems to have taken root quite deeply in Dacia, Pannonia, Germania, Britannia, Italy and Rome. In Dacia, two or three cohorts from Commagene served a long time. In Pannonia, priests and merchants seem to have been very active, and we find one inscription, "Syrus ex regione Dolica." As to England, we know (i.e., can certainly infer) that Dea Syria, Heliodolopolitanus and Dolichenus were all taken there by Cohort I. of the "Ham-mii." This name has with great probability been referred to the Syrian city Ḥamā (Hamath). If this explanation is correct, the fact shows how true it is that these worshippers regarded a number of distinct Syrian cults as essentially the same; for Ḥamā is far beyond the territory of Dolichenus, and there is no evidence tending to show that the Dolichenus worship had in its own land anything like the wide-reaching influence of Dea Syria, as attested by Lucian of Samosata.

As to the degree to which these cults affected the territories involved, we can only guess. The influence must, however, have been very considerable in Dacia and Pannonia, and in England in the small territory north of Hadrian's wall, where all the English inscriptions but one are found.

(3) The date. The earliest inscription known, which is dated, is one in England; namely the inscription CIL. vii. 506, belonging to the time of Antoninus Pius, 139-161 A.D. The temple of Dolichenus on the Aventine was probably built (aedificatus) or recognized as a temple in the time of the Antonines. That such a temple was founded (conditus) before the time of Claudius is very probable. Hettner, using arguments put forth by Jordan in treating of the temple of the Dea Syria at Rome, concludes that the worship of Dolichenus must have become

1 In Hermes, 1872, p. 320.
naturalized, so as no longer to appear foreign to the Romans, at
the time when Claudius brought the Aventine within the limits
of the pomerium, as foreign gods were forbidden within the
pomerium.

We cannot suppose that the cult of Dolichenus went from
Commagene to England at a bound. It is found there, how-
ever, in the time of Antoninus Pius. In this connection CIL.
vii. 316 is interesting, "[templum] vetustate co(nlapsum)." The
inscription is not earlier than the close of the second century,
but how much older was the temple? It seems impossible to
account for the facts known except on the supposition that in
the first century, and possibly even earlier, the cult first began
to work westward; compare the earlier appearance of Dea Syria
in Italy. Later the cult seems to have become merged in that
of Mithra. CIL. vi. 412 and 413 show the beginning of this
process, in the dedication to the Sun and Dolichenus together.
Yet the very late date of some of the inscriptions makes it
probable that it continued to maintain its separate existence in
some localities, at least, until the time when Christianity rele-
gated so many of these cults to oblivion.
Bibliography of Kālidāsa’s Mālavikāgnimitra and Vikramorvaśī.—By Montgomery Schuyler, Jr., United States Embassy, St. Petersburg, Russia.

In the last volume of the Journal of the American Oriental Society (xxii, 1901, pp. 237–248) I published a bibliography of “The Editions and Translations of Čakuntalā.” The present paper is designed to complete the bibliography of the dramatic works of Kālidāsa by collecting a list of the editions and translations of the other two plays of the Hindu Shakespeare. Of these, the Vikramorvaśī is universally acknowledged to be the composition of Kālidāsa; but about the authorship of the Mālavikāgnimitra there has been considerable discussion. The chief grounds upon which are based the arguments against the authorship of Kālidāsa are the great inferiority of this drama in poetic merit, and its clumsiness in construction, when compared with the Čakuntalā and the Vikramorvaśī. It is not possible or desirable to go into the discussion here, but it will be sufficient to say that the consensus of opinion at the present time is in favor of admitting the Mālavikāgnimitra as the composition of Kālidāsa, and accordingly it will be included in the present study.¹

MĀLAVIKĀGNIMITRA.

TRANSLATIONS.

A. English.

   First edition. Calcutta, 1875, 8vo, pp. x+83.

¹ Here, as in the “Editions and Translations of Čakuntalā,” the translations are arranged according to the language in which they are written, and under each heading chronological sequence is followed. In transcribing titles I have usually retained the spelling of the original. Works of general criticism of Kālidāsa which deal only incidentally with the plays are not noted here. Nor have manuscripts been included, although I hope to catalogue them in my forthcoming Bibliography of the Sanskrit Drama (Columbia University Press).
2. Mālavikāgnimitra, a Sanskrit drama, translated into English prose by G. R. Nandargikar.
Poona, 1879, 8vo, pp. 53.
[See also under Text Editions, Nos. 12, 13, 14.]

B. French.


Paris, 1889, 8vo, pp. xii+110.
(Extr. des Mém. de la Soc. des Sciences de Lille.)

C. German.

Berlin, 1856, 16mo, pp. xlviii+107.

Leipzig, 1881, 32mo, pp. 74.

D. Dutch.

Haarlem, 1882, 8vo, pp. 132.

E. Swedish.

Malmö, 1877, 8vo.

F. Danish.

Kjøbenhavn, 1874, 8vo.
G. Italian.

   Napoli, 1897, 12mo, pp. xi+126.

H. Bohemian.

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**COLLECTED WORKS.**


A Manuscript of *Gul u Naurûz*, a Seventeenth Century Persian Romance, in the Library of Columbia University.—By Dr. Abraham Yohannan, Columbia University, New York City.

Among the manuscripts in the library of Columbia University there is a small octavo volume of a seventeenth century Persian romantic poem, to which it is appropriate to call further attention. It is a manuscript presented to the library by Mr. S. P. Avery. The book is entitled *Gul u Naurûz* (گل و نوروز), or Rose and New Year's Day; and it contains an attractive specimen of the romantic epopee of Persia, which may be of some interest to students of medieval literature as well as to Orientalists, because of the parallels which it affords to compositions in the West.

From the introductory lines of the romance we learn that the writer of this poetical work was a Turk, and in the colophon we are told his name, Mîrzâ Daulat Rizâ Bôg Ënûkî (میرزا دولت ریزہ بھنیکی), and that he wrote the poem in the years A.H. 1033–1036 (A.D. 1621–1624). According to his own statement, he wrote it originally in Turkish, and afterward translated it into Persian. It is a result of this process, evidently, that a few Turkish words are to be found in the book. Thus, the words *šâi* (شی), 'thing,' and *aurat* (عورت), 'woman, wife,' which are Arabic-Turkish, have occasionally been employed, instead of the regular Persian terms, which are *čez* (چيز) for the former and *zan* (زان) for the latter.

A similar work which our writer may have taken as a model is the *Naurûz u Gul*, composed by Khwâjû Kirmânî (خواجه کرمانی) in A.H. 742 (A.D. 1341–1342); cf. Ethâl, in *Grundrisse der Iranischen Philologie*, ii. 249. According to Erdman, *ZDMG.* , ii. 212, the manuscript of this poem in the University Library of Kâsan was copied by Hâjî Sinânî (حاجی سنائی) at Samarkand in A.H. 1038 (A.D. 1629), and was dedicated to the vizir
Tâjuddîn Ahmad ‘Irâqî (تاج الدين احمد عراقي), and comprised 5230 half-verses or 2615 full verses. Another copy of Khwâjû Kirmâni’s work is found in the British Museum; it was probably made by one Tûrânshâh (تورانشاه), according to Rieu, Catalogue of Persian Manuscripts, ii. 867 and 622. The title of the book is there given as Gul à Naurûz, precisely as in our manuscript, whereas Hâji Sinâni, according to Erdman, calls it Naurûz à Gul, the order of the names being reversed. There is still another book of the same nature by Maulânâ Jalâl uddîn Ahmad of Shirâz (جلال الدين احمد شيرازی), commonly called Jalâl Tâbib (جلال طبيب), composed in A.H. 734 (A.D. 1334), and dedicated to the Prince Giyâth uddîn Kaikhusru; cf. Rieu, Catalogue of Persian MSS., ii. 867; Ethê, loc. cit. supra; Daulatshâh (ed. Browne, p. 298); Pizzi, Storia della Poesia Persiana, ii. 210.

With the exception of the title, Gul à Naurûz, almost all the names of the persons and places connected with this present romance are different from those mentioned in the manuscript of Khwâjû Kirmâni, as briefly described by Erdman and Ethê. Khwâjû Kirmâni, for example, says that Naurûz was the son of Shâh Fîrûz (شاه فرخز), of Khorûsân, and Gul was the daughter of the Byzantine emperor (قیصر روم). The present manuscript, on the other hand, says that Naurûz was the son of Shâh Ferekh (شاه فرخ) of Nau Shâd (نوع شاد), and that the father of Gul was Mushkîn Shâh (مشکین شاه) of Ferkhâr (فرخنار). A great number of similar divergences in names and incidents might be noted, as far as can be gathered from so scanty a description.

With reference to the Gul à Naurûz of Jalâl Tâbib, I cannot judge, as no detailed information is accessible to me beyond the brief statements of Rieu, Ethê, and Pizzi; but the introductory verses of all three manuscripts vary. The opening lines of Khwâjû Kirmâni’s poem, according to Rieu (Catalogue, ii. 622), run:

بنام نقشند خلوت حال  عذار افرز مع رویان افلال
The manuscript of Jalāl Tabīb begins thus, according to Rieu (Catalogue, ii. 867):

ثنائی در خرائی حضرت پناک
نیایید در وجود از ذره حاک

The beginning of the Columbia manuscript, on the other hand, is different from both the others, and runs as follows:

خداوندا دلم را تازه گردن
رضایا را بسند آواز گردن

So much may be said by the way of general introduction. We may now turn directly to the work itself.

The manuscript as it lies before us makes a volume of 66 folios, each measuring $12\frac{1}{2} \times 8\frac{1}{2}$ centimeters, size of the written portion, $21 \times 11$ centimeters size of the whole page. It is bound in maroon leather, and the tops and edges of the pages are appropriately gilded. The first page is illuminated and the remaining ones are sprinkled with gold and framed with gilded marginal lines.

The writing is in a good clear ta'liq hand, two columns of 12 lines to the page.

Among the peculiarities of the writing may be noticed the occasional use of for ج. In cases where the long straight line is used for the letters س and ش, the former is sometimes distinguished by three dots below the line (۷).

Turning to the meter of the poem, it may be added that the work is in the mathnavi (منّنوي) form, and consists of 1560 rhyming couplets. It is divided into 126 sections, which are indicated by rubric headings in the manuscript.

The first six sections (§§ 1–6) of the poem are devoted to an invocation of God for divine grace and inspiration for the task, and there are the usual ascriptions of praise to the deity and to his prophet Mohammed, whose ascent into heaven is briefly described according to the Koran. The seventh section (§ 7) is a eulogy of the great Moghul ruler Shāh Jahāngīr (شاه جهانگیر), to whom it should be said that the writer dedicated his poem. The eighth section (§ 8) is a reflection on the existing lack of faith in the world. In the ninth section (§ 9) the author recounts the inspiration he has received in a dream to
write the book. With the tenth section (§ 10) the poet is at
last ready to begin the romantic story, the narration of which
occupies the remaining 116 sections. The main parts of it may
be briefly epitomized in the following paraphrase.

In the country of Nau Shād (ناو شاد) in Persia (?) there was
a great and famous king named Ferrukh (فرخ), whose happy
reign was marred by the sad fact that he had no son to succeed
to the crown. After many years of expectation and earnest
prayer, a son was at last born to him on the first day of the new
year. It was for this auspicious reason that the child was given
the significant name of New Year's day, or Naurūz. The birth
and childhood of the boy are depicted in a section (§ 11) of 20
lines. While still in his boyhood the future hero became well
versed in every branch of science and learning; and in time,
when his strength waxed, he grew also to be a mighty hunter,
an accomplishment which was as much admired among the
ancient Persians (cf. Herodotus, i. 136, and Xenophon's Cyrop-
edia) as it was in the days of Nimrod or Behram Gur.

The poem then proceeds to descend upon the charm and
attractiveness of the youth's personality, and recounts how on
one occasion, Narcissus-like, he was struck by the marvelous
beauty of his own face, which he saw reflected in a cup of wine.
When the power of the wine of which he had partaken overcame
his senses, Naurūz fell asleep, and in his dream beheld a vision
of a lovely maiden, a girl of surpassing beauty, the fair Rose.
He became intoxicated with the charm of the lovely vision, and,
like Shelley's Alastor in search of the Arab maid, our gallant
Naurūz betook himself to the desert, trying to realize in waking
the truth of his rapturous dream.

In his wanderings he encounters a caravan and falls in with
a member of the company who bears the name of Nightingale,
Bulbul, and the latter extends to him the hand of sympathy in
the longings of his heart. Bulbul tells him that the image he
beheld in his vision was none other than Gul, the beautiful
daughter of Mushkin Shāh of Ferkhār, which was the native land
of Bulbul himself (§§ 12–19). Upon hearing this, the joyous
Naurūz despatches Bulbul at once to Ferkhār, to seek for Gul
and to convey to her the message of his love (§ 20).

The faithful Bulbul succeeds in obtaining the Shāh's consent
for his daughter to be betrothed to Naurūz; but the suit of the
lover is opposed by a cruel woman, Sūsan (سرسن) by name, the governess of Gul. After being rebuked by Gul and liberally bribed by Bulbul, Sūsan is won over, and not only makes an apology to Gul but even acts as a go-between (§§ 21–29).

But the tardy foot of time moves more slowly than ever for the impatient Naurūz, whose anxiety allows him no repose and impels him to wait no longer for the lingering Bulbul to return. He wanders again into the desert. Upon seeing his son's distress, Shāh Ferrukh decides to send Naurūz with a large army and vast treasures directly to Ferkhār.

On the way, Behman (بهمس), the chief officer accompanying Naurūz (he is spoken of as an Abyssinian (حیش), unless habīb is simply 'servant' here), opposes the young lover's plan of going to Ferkhār, saying to Naurūz that it would be a great humiliation in case Gul should refuse his suit (§§ 30–39). Failing to induce the ardent Naurūz to return, Behman takes a large portion of the treasures and of the army, and goes back to the capital by night. Naurūz, however, arrives safely at Ferkhār and is welcomed by Shāh Mushkin, the father of Gul. His suit is presented in person, and every preparation is made for the young prince to receive the hand of the maiden (§§ 40–58). But an obstacle unexpectedly arises; a rival appears on the scene. The Khāqān (خاقان) of China sends a more imposing embassy for the purpose of securing the hand of the lovely Gul for his own son. His suit is crowned with the Shāh’s favor; he wins the day, and carries off the unhappy Gul on the road to China (§§ 59–73). But Naurūz follows the party on the journey eastward (§ 74). One stormy night he tries to carry off Gul to his own country (§ 75); but the pair is overtaken in the mountains, and brought back as captives by a slave of the Khāqān, who is named Yeldā (یلدنا) (§§ 76, 77). Nothing daunted, however, the lovers make a second attempt to escape, and this time they succeed. Gul, according to the custom of the country, is sent to the temple to learn the method of worship. Naurūz also finds his way thither, but both of them being conscience-stricken at the practice of idolatry, determine upon flight. The Khāqān and the whole of Čīn and Mācīn (چین) (چین) are greatly excited; men are sent in every direction in pursuit, but without success. Gul and Naurūz with great
difficulty escape an assemblage of *daeva*, whom they meet in the desert. Soon after this they arrive at the palace of the Sheikh of Najd (شاه جند), who attempts by means of a witch's charms to win the heart of Gul. When she and Naurūz perceive this they leave Najd (§§ 78–82). They manage to reach Bahr Qulzum (بحر قلمزم), ancient Clyisma, and, after the familiar manner of both Eastern and Western medieval romance, embark in a boat, which soon suffers shipwreck in the gulf of Oman. All this, as my friend Professor Jackson reminds me, sounds much like incidents in the old English romances or the Gesta Romanorum. Though separated, the lovers, of course, are not suffered to perish. Gul, floating on the sea, is found by a diver (غراص) in the pearl fishery of the king or prince of Aden, which is one year's journey from China. The diver brings her to the shore to take her to the king. On the way they encounter several fierce lions, which she kills on the spot. The report of her prowess soon spreads abroad. The king of Aden has her summoned into his presence, and charmed by her beauty as well as by her heroism receives her with great honor (§§ 83–98).

The fortunes or misfortunes of Naurūz are equally romantic. He floats on a piece of timber to the Arabian shore, and enters a fisherman's hut close by the sea. The fisherman, being too poor to supply his needs, informs the Vizir, who also dwells near. The Vizir, after entertaining Naurūz for a while, takes him to the king of Yemen, who honors him with high office and rank (§§ 99–107).

But an old-time feud existed between the king of Yemen, to whom Naurūz had gone, and the king of Aden, in whose army Gul was commissioned. So chance brings it about that war is declared between these hostile rulers. The story of the conflict follows. After several engagements, circumstances dramatically bring Naurūz and Gul face to face in battle. Each recognizes the other, and the result may be imagined. The war is stopped at once and lasting friendship is established between the two kings (§§ 108–118). Gul and Naurūz, by the permission of their kings, make a pilgrimage to Mekka and Medina.

Meanwhile the kings Ferrukh and Mushkin Shāh, from the time they hear of the flight of their children from China, are in
a state of great uneasiness, and wander about the world in search of them. Finally they also conclude to make a pilgrimage to the sacred land, to pray there for the restoration of their dear ones. At Mekka the parents and the children meet unexpectedly and have a happy reunion. The party returns home in peace, and Naurûz succeeds his father at the latter's death (§§ 119–126).

Such, in brief, is the romance of Gul and Naurûz. The whole story, as it seems to me we are justified in believing, contains certain mystic elements. The names of Gul, Naurûz, Sûsan, Bulbul, etc., may be not without symbolic significance. The Persian New Year occurs in the Spring, and the love of the springtime for the nightingale is as old as Persian lyric poetry. The lily belongs rightly amid the same mystic company of flowers; and numerous other symbolic phrases like the 'fervent heat of Naurûz,' 'love opening the breast of the rose,' or 'the sunny days of the spring time causing the bud to blossom,' recall the allegorical energy of the Iranian mystic poets.

In conclusion I may say that I hope to gather some more details regarding this interesting work in connection with the other Persian poems that bear the same title.
Remarks on the Form of Numbers, the Method of Using them, and the Numerical Categories found in the Mahābhārata.—By E. Washburn Hopkins, Professor in Yale University, New Haven, Conn.

These Remarks on Numbers are incidental notes which I made a short time ago, while collecting from the great Hindu epic some material intended for another purpose. They were presented in outline as one paper at the meeting of the Society in April of this year, but as they are rather too long to be printed all at one time in the Journal, I purpose to bring them out in sections in successive half-volumes. The general plan of arrangement is as follows:

The form of epic numbers.
How numbers are handled in arithmetical processes.
How space (dimension, etc.) is measured (norms and syntax).
Time-words and methods of measuring time (months, asterisms, etc.); syntax of time expressions; time-phrases; age; epic dates (excursus).

The epic world according to the categories of the poets (physical, ethical, etc.).

Various problems, historical as well as philological, serve to relieve the dryness of the subject, but these will be touched only by the way, as my chief object is to get data together, though I have not avoided mention of obvious differences in matters pertaining to the growth of the epic. The present paper includes the first three divisions. The next will treat of time-words (to epic dates), with subsequent divisions according to circumstances.

Before taking up seriatim peculiar forms of numbers, I would call attention to certain fanciful number-words which belong to the later epic. The most striking of these is daśārdha, not merely as "five," daśārdhasaukiḥvyāḥ (śarāḥ), i. 188. 30; daśārdhahavirātmakāḥ, xii. 47. 42,1 but as "fist" (the half-ten fingers):

1 Compare the abstract, daśārdhatā = paścatva, xii. 187. 27, dissolution into five elements (ib. 291. 10, daśārdhapraśabhaka).
xii. 114. 20, krūdha daśārdhena hi tāṇyed vā.

Analogous is pañcaśākhya, "having five branches," the hand:

xi. 17. 30, svaśirāḥ pañcaśākhābhīyāṁ abhiḥkatya,

which illustrates Nala v. 5. In the Rāmāyaṇa, vi. 59. 55, this word is still an adjective to bāhu. Compare RV. x. 137. 7, daśākābhīyāṁ (hastābhīyāṁ).

I have elsewhere suggested that the word for four appears to be a combination of "three and." That the digits, as well as the higher numbers, were indicated by addition is shown by many examples of "and" combinations to express them, for example, in i. 234. 15, six is expressed by "five and one," pañca rāśi 'kaśi ca. Double-six (saśka for six) reflects a common doublet, the year consisting of two six-month "courses" of the sun, dviśaśkapadaśām, xi. 5. 15. Such "double" terms are not rare: "double-five-headed," dvipaścaphaśaṃ kecit, v. 103. 7; dvipaścaratruṣ, iii. 230. 37; dviśadaks, "with twelve eyes," xiii. 86. 19; while for twenty-one, "thrice seven" is normal, trisaptam, sic, triśaṃpaṭakṛtvah.

I have no record of alternate adjective numerals, such as devitra or tricatura among epic material; but unexpressed alternates are found: "five or six mouthfuls," pañca saṣ; "for seven or eight days," saptaśaṃ divasāṁ, v. 160. 40; "even (opposed to fifty) five or six or seven," api vā pañca saṣ sapta, vi. 3. 83, also xii. 102. 21; "of ten or twelve" (years), daśadvādaṇā, iii. 188. 60. Compare deṣeku-, "of two or of one," Manu, x. 7. For triad, triyayam and trayam (in i. 2. 329, etc., satatrayam) are used indifferently; in xiii. 111. 18-19, side by side:

dharmo eva 'rtha ca kāma ca tritayaṁ jivite phalam
etat trayam avārtayam.

This is the usual triad to be desiderated, but it is often alluded to as a triad without definition, as in ix. 64. 21, tritayaṁ sevitaṁ sarvam. It is possible that it means trinity in xiii. 147. 53, where Çiva says of Viṣṇu:

tatra ca tritayaṁ dṛṣṭam bhaviṣyati na saṁśayaḥ
samastā hi vayāṁ devāṁ tasya debe caśānaḥ,

though even here it may, as usual, be equivalent to the tricarga called trityya above (rather than the three times, as suggested in PW.). Tretā for triad is rather affected in the later epic
and (without the implied complement) stands alone for a Yuga and for the group of three fires (ref. PW.); *trika* is used sparingly, *pañcāntrika*, having a triad of five, fifteen; *tritva* is a late solecism (ref. below). A group of four is *catusṭīyam* or *catuskam*; a group of five, *pañcaśīkam*, etc.

Metaphorical number-names I have illustrated by a passage cited in my *Great Epic* p. 206, where *ṣaṇāgni* is $5 \times 7$. The passage, however, is late and unique in the epic.

I turn now to the regular numbers.

The epic is not so careless of art as to change the grammatical form of all the numbers, but it contains several abnormal numerals. I shall speak of the form of the numbers three, four, seven, eight, nine, ten, adding something on derivatives of the word for one, and the use of the higher numbers.

**Tri.** In the *Sanatsujāta Parvan*, which is a late imitation of ancient matter, occurs this verse:

\[v. 43.15, \text{tathā uṣṇāsāni duṣa tri, rājan.}\]

In *גל. 19* are mentioned seven cases of cruelty, which apparently led Telang, *SBE.*, viii. p. 168, to translate the words above "and likewise the seven cruelties." But the seven of *גל. 19* are expressly differentiated from six that precede, *ete pare ṣaṇṭa*, "seven other cases," and it is these six and seven together which make up the thirteen, *duṣa tri*, mentioned in the introductory fifteenth *clōka*. Consequently, Nīlakaṇṭha is right in saying that *duṣa tri* is for *trayodaśa*, or, in other words, *tri* here stands for *trīṇi*.

In the last number of this *Journal*, xxii. p. 345 ff., I pointed out an epic case of a dropped ending, *duṣa-duṇāṣabhir vā ‘pi*, where the *vā* shows clearly that *duṣa* stands for *duṇāṣabhir*, which has lost its ending because it is supplied by the next word.1 A still more extraordinary case of dislocated ending is found in that book which historical critique has pronounced later than the early epic:

\[iv. 62.14, \text{acaruddho ‘carat Pārtho varṣāni tri daṇāni ca,}\]

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1 The meter here shows that the corrupt form is intentional. The case differs, therefore, from that of the *C.B. yajus*, *Mitrāya Varuṇāya ca*, which all MSS. of JB., Professor Oertel informs me, have as *Mitrā-varuṇāya ca*, since the latter form spoils the meter.
where tri dāgaṇī stands for thirteen. Here we cannot read tri-
dāgaṇī, for two reasons. First, this word means thirty and not
thirteen, and thirteen is the required meaning. Second, even if
we took tridaṇāni as an adjective meaning thirteen, there would
still remain the ca, which only a very strained interpretation
could dispose of otherwise than as Nilakantha has said (trīṇi ca
daṇa ca). There remains only the explanation that in tridaṇāni
the poet has transposed the endings for metrical purposes and
not only written tri for trīṇi but dāṇi for daṇa, helped
thereby undoubtedly by the preceding caṇāni. Such a mon-
strosity is one that need not surprise us among the many evi-
dences of looseness found in the Vraṭa, which, as a whole, lies
nearest to the pseudo-epic in its disregard of Sanskrit grammar
as in other particulars. So in Vraṭa we find the slovenly con-
struction of iv. 39. 10, jītā vṛgyaṃ neyati ca 'dya gāvaḥ,
"conquer us and carry off the cows," a verse admitted by Nil-
akantha (compare 47. 34), and quite comparable with the loose-
ness of form found in Čānti.

The PW. has already noticed, i. 113. 21, vihṛtya tridaṇa
nīvāḥ, for triṇat; tridaṇān, iii. 123. 1 (Āśvinān); and trida-
ṇāḥ, 3×10 (=33) gods, passim.

Catur. Professor Holtzmann, in his Anhang to Whitney’s
Grammar, § 482, mentions caturo as nominative in xii. 24. 27
and catur as accusative, vedān, in iii. 45. 8. Both forms are
found elsewhere as well. In vii. 149. 22, gāyanti caturo vedāḥ;
Also in viii. 34. 70, tathā ca vedāḥ caturo havagrāyaḥ. All these
passages are late laudations or describe metaphorical "cars" of
religion, the four Vedas being made the steeds. Unique is viii.
20. 49, sa tu dvipah paścābhī uttameṣubhiḥ kṛtaḥ saḍānca;
caturo nápyaḥ tríbih ("the elephant with five arrows made six-
fold [cut into six pieces] and the king with three [arrows made]
four"), kṛto dāyaṇaḥ kuṣadana yadhyatā yathā harissad dāya-
dāivatam tathā ("was made ten-fold [cut into ten pieces] by
the skillful warrior, like an oblation offered to ten divinities").

Here caturo is plainly caturāṇiṣaḥ in sense, but as to the
form, it is difficult to say whether by analogy with late com-
ounds in caturo it is nominative singular, or by analogy with
"make one four" accusative plural, or by analogy with the
cases above, nominative plural. I think it belongs to the last
group, “made-six-fold, made four.” The awkward sentence means as a whole that the six parts of the elephant and the four parts of the king were like an oblation cut into ten parts.  

Saptan. By analogy with the cases already mentioned it may be suspected that saptu stands for saptam in xii. 343. 106, where Kandaññrika is said to have arrived at Yoga-perfection because of his excellence, nukhyatvād, “reflecting often on the sorrow caused by birth and death, saptajñatva.” The commentator says “the sorrow of seven births,” saptajñanīkam, which would imply “in seven births,” and not the compound “among those having seven births,” which is the natural interpretation. As to the meaning, it is probably the indefinite sense of “many,” which in most examples is hard to verify (i.e. to show that ‘seven’ is used without any reference to a fixed number). For in “seven paces,” “seven flames,” “seven seers” and “seven rivers,” seven, for all we know, may have been intended literally. There are two cases, however, where saptan clearly means “many” simply; once where, instead of elephants tridhā praśravantah (an oft-repeated phrase), we find saptadā; for the parallel surcataḥ is used in the same way:

i. 151. 4, tridprāsratamadāḥ,
vi. 64. 58, tridhā vajan prāsravanto madam bahu,
vi. 26. 6, kṣurantaḥ survato madam,
vi. 95. 33, saptadā sravatā madam, parvatenā yathā toyāṁ
śrayamānena surcataḥ.

The second case is where bhuvanāni vīrṇā interchanges with bhuvanāni saptu, or, in the gender of the later epic, bhuvanāḥ saptu (see hereafter).

Aśṭā. The final vowel is short or long according to metrical convenience, long when the length is indifferent:

iii. 102. 3, aṣṭāḥ satam aṣṭāva ca maś ca 'nye,
aṣṭāṅ required by the meter;

vii. 146. 134, aksāuhinīr aṣṭa hatten,
aṣṭa required by the meter;

The havis called daṇḍāivatam, represented here by daṇḍača (the man and elephant together) “in ten parts,” is called daṇḍačo homah in xviii. 6. 105.

Vol. XXIII. 8
xiii. 111. 69, bhūtrā mīno 'ṣṭa varṣāṇi, also required.
v. 86. 9, dāra 'ṣṭa ca, and vii. 82. 8. and 16, 'ṣṭam aṣṭa ca,
cases of diambus, brevis required;
ix. 46. 74, maḥiṣaṁ ca 'ṣṭabhiḥ padmāḥ,
short vowel required;
viii. 22. 6, aṣṭābhir api, Bhārata,
long vowel required; ib. 17, Nakulāya 'ṣṭānā 'ṣṭān, indifferent.
Respecting the alleged difference between aṣṭāvara aṣṭagārāma, PW. i. 531, there are two verses, one of which is
viii. 67. 6, aṣṭāgarām aṣṭa 'ṣṭānī bāṇām (sc. vakantī),
which Nilakaṇṭha interprets as "eight eight-cow wagons carry hundreds of arrows," his teṣām aṣṭāgarām implying a short
nitive modelled on varāṃ (aṣṭāu gāro yasmīś ca uṣṭāgarān
'ṣṭānī niṣṭāṃ aṣṭāgarām aṣṭa uṣṭa anikhyānī 'ṣṭānī, niṣṭāhī Śarīrātā,
'ṣṭānī bāṇān anekāca pārāṇyān vakantī).
One is tempted to read aṣṭāgarāṇī, as in the next passage, which, however, has the short vowel:
viii. 20. 30, aṣṭāv aṣṭāgarāṇī āṇuḥ 'ṣṭānī yad āyudham
utmaṣṭu aṣṭāhṛī gana Drāvaṇīs cikṣepa, māraṇa,
"Drona's son, Sir, threw as many missiles in an eighth of a day
as eight eight-cow wagons carry," which repeats with elaborate
definiteness the statement of the preceding verse that the hero
poured arrows as Pūṣan's "younger brother," Pūṣāṇaja, that is
Parjanya, pours rain. The scene is late and instructive for the
critique of the epic. The hero here particularly lauded is a cer-
tain Pāṇḍya, quite unnoticed previously but now extolled as the
ablest warrior on the Pāṇḍu side. It is he who, as explained
above, is quartered and made with his elephant a ten-fold
oblation. There appears to be no grammatical difference between
aṣṭāgārā and aṣṭa-gārāma.¹

In regard to aṣṭa-vaṇa, the Petersburg lexicon gives only the
Vedic aṣṭa-vaṇa, but aṣṭa-vaṇa is found (of Hari's wagon,
yānu) in vi. 8. 16; xii. 335. 11; and (of a demon's car, ratha)

¹ Compare for these compounds, haṣṭa-gārā, viii. 38. 7, of a war-
car, and aṣṭāgarāṇī 'ṣṭānā, ib. 78. 17. In xii. 37. 32, sixteen cows
are yoked to a war-car.
Remarks on Numbers.

in vii. 156. 61; 167. 38; 175. 13; and (of an aṣāṇī) in vii. 175. 96.- In the first three Droṇa cases, samāyuṅka is added, a set formula. In the first case, from Bhīṣma, the word also begins a pathyā and the whole verse is repeated in the next Čanti case, aṣṭacakraṁ hi tad yānam bhūtayaktam manoraman. As the last case, too, stands at the head of a pathyā and in this situation aṣṭacakraṁ would be metrical, the choice must be due to preference for the later form.

Nava. The Vedic phrase jaghāna navaṁ nava I have already, Journal, vol. xxii. p. 389, located in the epic, ii. 24. 19. To this example should be added also the same phrase occurring at ix. 51. 36 and xii. 22. 11. The last is farthest removed in context from the original, while the passage in Čalya gives the Vedic text very closely in making the weapon the bones of Dadhica (epic form):

RV. i. 84. 13, Indro Āstabhī aṣṭacakraṁ eṣṭaṁ apratiṣkutaḥ jaghāna navaṁ navaṁ,
Mhb. ii. 24. 19, yena (rathena) Čakra dānavānām jaghāna navaṁ navaṁ,
ib. ix. 51. 36, (Dadhica, tasyā'śrībhī) dāityadānavaṁvārānām jaghāna navaṁ navaṁ,
ib. xii. 22. 11, ("Indra the son of Brahman became a Kṣatriya by his acts and") jādiṁnām pāparṛttinām jaghāna navaṁ navaṁ.

In each case (but the first is not annotated) Nilakaṇṭha says that the number is (not ninety-nine but) eight hundred and ten (nine nineties). In i. 32. 24, navatyā navatīḥ (kṛtvā), v. 1. navatyo, the multiplication is definite, 8100.

To the forms recognized in grammars and lexicons I am tempted to add navāih as instrumental plural. Otherwise we must assume that new arrows are especially used when their number is ninety, whereas generally there is a natural predilection for such conjuncts as six and sixty, seven and seventy, and nine and ninety. So by analogy with navatyā navabhīc ca in viii. 30. 25 we find navāih navatyā ca ca in viii. 90. 60. At the same time, "nine" and "new," owing to their like sound, are found together, as in viii. 48. 50, navāih navabhīr āyasāih, but in the case above ca seems to show that navāih is a numeral.
I would remark, by the way, on the partially formulaic character of most of the shooting in the battle-scenes. The test of an archer's skill is not only to shoot one arrow well but to shoot many arrows at once. Among digits the object shot at determines, for the main part, the number of arrows used. With four arrows one shoots the four steeds; with three, the arms and forehead or the three charioteers, etc. But even here there is an occasional irruption of eights, the favorite number of the later epic. Thus in viii. 89. 63, ten and eight; 65, eight; 68, eight hundred and eight thousand; 76, eight; all in a bunch, though up to this passage the whole preceding eighty odd sections show only half a dozen cases. So in the late wonder-tales of the first book, larger numbers are by preference expressed in terms of eight or its multiples, e. g., i. 100. 20, to express thirty-six years, "years sixteen and eight and also four and eight more." I shall have occasion in a later section of this paper to show how this Buddhistic number has driven out the more ancient holiness of nine.

In the "down-pour" of arrows said to be shot by decades there is a certain preference for stereotyped groups. Twelve, fourteen, fifteen, and sixteen are shot more often than seventeen and eighteen. Twenty-one, triśaptā, is a favorite for the same reason that endears triśapti, as three and seven(ty) are sacrosanct numbers. In this decade, twenty-five is also a favorite, while twenty-seven is the rarest; in the third decade, thirty-six is the conventional number, with a few cases of thirty and thirty-two. The fourth decade is almost ignored; the fifth appears rarely as fifty; then come sixty and six and sixty (less common are three and four and sixty); seventy and seven and seventy (less common are two and three and seventy); eighty (rare); ninety (nine and ninety as above); and occasionally one hundred, three hundred, five hundred, and even ten thousand arrows all discharged from one bow at one shot!

Daça. The dāṇḍa of vi. 2,700 (rightly condemned in PW.) is replaced in B. 61. 21, by triṇḍa. The epic has dṛṇḍi, analogous to saṇḍha, narati, not as decade but as one hundred (as who should say "ninety, tenty"), the form, however, being formulaic like narati narā (above), and probably a new formation, as it occurs only in the later part of the epic. The decisive cases as regards the meaning are (i. 16. 8–13 and) v. 108. 14, the latter:
Remarks on Numbers.

Oṃkārasya ‘tha jāyante sṛtyo daṣatār daṣa,

where a “thousand branches” is Nilakanṭha’s undoubtedly correct interpretation. In xiii. 30. 21, the ten might be decades or hundreds (of days), though here also Nilakanṭha admits only the latter and says the word is Analogie-Bildung.¹

Holtzmann, op. cit., § 483, has spoken of saptaddaṃṣu at iii. 268. 11. I think Nilakanṭha’s explanation (having eight royal acts and nine siddhis and jñaktis) is quite inadmissible. Families “having seventeen” would be more likely to be thought sinful than virtuous. Compare the “seventeen fools and sinners” of v. 37. 1–6. Then in v. 36. 22, the “great families” are defined as those which ete saptadānu vasanti, “seven virtues” being their possession, which suggests saptadānu as the right reading. But here the meter alone is enough to change saptadānu to saptaddaṃṣu (vagam pānāḥ saptaddaṃṣu Kṛṣṇa kuleṣu sarve ‘naraṃśe jātāḥ).

Higher numbers. Nineteen is not navaṃśa in the epic but, as in Latin undeviginti, ekonaviṃśati.² In xiii. 107. 87, ekonaviṃśat serves as an ordinal, ekonaviṃśati dīne standing parallel to gocās, saptaddaṃṣe, anādaṃṣe, and pūrṇe viṃśe (divase). At C. xi. 561, pariviṃśat offers a form parallel to trināc (also trināci); but B. 19. 15 has paccya Kṛṣṇa for pariviṃśat (Viśnudatta). In i. 2. 330, B. has viṃśat, C., trināc; ib. 379, viṃśae chkolacaṃṭāi. The late Rāmāyaṇa also admits viṃśat in ekaviṃśat (ref. PW.). The epic accusative of the following decades is frequently identical with the nominative; for example, in i. 86. 15, abhakṣaḥ gadaṃ trināc, either form doing duty for either case. Examples of trinācaḥ and pañcācaḥ, as accusatives of object and duration respectively, are given below, and in xiii. 168. 5 and 27, respectively, pañcācaḥ is accusative, purvarūḥ pañcācaḥ, and pañcācaṃṭam is nominative, asatapāñcācaṃṭam rātryaḥ caṇānasya ‘duḥ me gatāḥ, as in the further case cited below. The corresponding ordinals in the text (the adhyāyas are counted by -tāna forms as well) are short, ekaviṃśa, dvāriṃśa, tayorīṃśa, caturīṃśa, pañcāriṃśa, saṃvīṃśa, saptaviṃśa, astaviṃśa, ekonaviṃśa (compare ekonaviṃśat, ekonaviṃśati, i. 2. 204, 289, etc.), xiii. 107. 93–121.

¹ For thousand the later epic uses daçaçatam: lathe ‘ṣṭiṇāḥ daçaçatam prāpanuvanti, xiii. 102. 36, etc. (meter, Great Epic, p. 305).
² Or viṃśatir ekon, vi. 4. 15.
Before leaving this subject I would say a few words on certain declined forms of *eka*, not because they are irregular as forms, but on account of the way they are used. The first point is the parallelism between the adverbial ablative and the instrumental, as shown in

v. 43. 21, *tribhir drābhyaṃ ekato rā 'rthito yaḥ.*

According to the commentator, *artha* here means possessed of or furnished with, *artha*, a meaning not usually recognized, but in accordance with the sense of the passage, which says that one who has in his power all the twelve virtues is fit to rule the earth, while “he that is furnished with three, two, or one,” is to be known as one having wealth, *tasya svam asi 'ti sa redivyagāḥ*. In any case, *ekataḥ* is used freely here as a correlative of the instrumental.¹

The same form has a meaning almost recognized in the Pet. lexicon, which ascribes to it, besides the ablative sense and that of “on the one hand,” the meaning of “together,” or “in one.” By a slight extension of meaning *ekataḥ* means altogether, solely, or, quite literally, one-ly, only, as in vi. 107. 20,

... *yathā praṇavaḥ catuḥ samahkhāvān ekato māyaṃ abhyeti* tatha 'ham Bhīṣmasya igrāvān...

“As an insect entering a blazing fire meets only with death, so I, on having encountered Bhīṣma.” This, at least, is Nilakaṇṭha’s exposition, who takes the word as equivalent to *(ekam) karam, māyaṃ āra*, rather than as contrasting the insect “on the one hand” with the speaker. The plural *eka* meaning “alone” may be used as well as the singular, *nāt ke 'canti sastampanām, "eat dainties alone,"* xii. 228. 44.

Examples of the correlation by two *ekataḥ* are not uncommon. One is found in

xii. 12. 12, *ekataḥ ra traya vājan ghatkāvrama ekataḥ*,

where against the other three orders is weighed that of the household, which is said to be equal to all the others put together.

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¹ For the usual meaning if applied here would be “he who on the one hand is furnished with three or two.” Compare the parallel use of *prathamataḥ* in xii. 82. 1, *ēṣā prathamato pṛttir devīyāṁ grau, Bhārata.*
In the following stanza I think we may see an extension of Vedic usage surviving in the epic:

xii. 21. 7, anye sāma praçaṁsanti vyāyāmam apare janāḥ
nāi'kain na ca 'pare kecīd ubhayāin ca tathā 'pare.

The commentator admits the double negative as an affirmative and according to him the stanza would mean: "Some praise mildness, others praise a strenuous life, still others praise the one (Yoga-discipline, ṛgāmur), and others again praise both." But, although the affirmative double negative is not an impossibility, it carries with it a strength of affirmation' that is quite uncalled for in this passage, where ekam certainly has no right to be represented by ṛgāmam. In the continuation it is said that some sit in quiet meditation, some are active in governing, and others are ekāntaçīlinaḥ, which may have led the commentator here to set up a third object of devotion. But with the antithesis of ubhayām there can be no doubt that ekam is one of the two already mentioned, and the meaning to be expected is that some praise mildness, some praise energy, some praise neither, and some praise both; which, in my opinion, is what the passage was intended to mean when it was first written. In other words, for nāi'kain na ca, we should read nāi 'kain ca na, which preserved the old phrase found in BAU. vi. 2. 2, nā 'ham uta ekain ca na vedā; ib. 3, tato nāi. 'kain ca na vedā. Otherwise na ca na survives only in indefinites, na kathān ca na, etc. The sense of nāi 'kum as "many a " is here excluded. This latter meaning is common, e. g., nāi 'kum yugaviparyayam (neasam), "many an age," xii. 229. 49.1

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1 It is used, however, generally, where two clauses are distinguished, e. g., na cā 'va na prayaṁija, samkīrṇam pariṇarjaye, " not that one should not commit (these faults, but) one should avoid excess," xii. 56. 42; or in strong affirmation, na sa yajñā na bhavitā, i. 88. 2, "it will surely occur;" nāi tvāṁ no tvahe hantum, xii. 227. 80, " assuredly I can kill thee." Compare the parallel in the same scene (repeated) in xii. 224. 88, evaṁ nāi 'va na cet kāla... pātayeyah ahaṁ tvā 'dyā, "I could kill you now: if it were not so, if Time did not (prevent)." Compare xii. 289. 4-6, ending etad evaṁ ca nāi 'vah ca na co 'bhe nā 'nubhe tathā.

2 In xiv. 49, a similar but longer string of opinions is given by kecīt, anye, apare, and eke, indifferently, ending with cl. 12, sarvam eke praçaṁsanti na sarvam iti ca 'pare, "some praise everything and others nothing."
In regard to the choice between eka or ekaturā, the epic uses either, as in xii. 81. 9, vṛṇonya ekaturāṁ na ca; 10, ekasya jayaṁ āgraṁse, ("like the mother of two gamblers") I prefer neither, hope for victory of the one." In i. 119. 15, vāsyaṁ "kaṁ takṣatah bāhuṁ vandunenaṁ "kahum ukṣatah nā "kalyāṇaṁ na kalyāṇaṁ cintayant ubhayos tayoḥ, "not thinking ill or good to appertain to [these both] either of these, him cutting one arm with an axe and him anointing one with sandal-paste" (for anyatāram). In triads, one, another, and a third, anya, aparā, para; eka, aparā, eka, and so forth, xii. 86. 30; 137. 4. Though katurā is used quite regularly, kim may take its place, as in xii. 126. 16, where, after two are mentioned, we find kim "nu jyāyastaram, "which (of these two) is more greater?" So katurā and ku, xii. 167. 2.

On the form of other epic numbers I may refer to what has already been given in the Petersburg lexicon and in Profesor Speyer's Sanskrit Syntax. I will only register another paṁcāvatatam (pamāḥ praktaḥ) for paṁcāvat, xii. 256. 8, and observe that deśapati appears in Manu, vii. 157, but epic deśaptati (in the same passage) at xii. 59. 71; at the same time remarking as to catuḥ for caturī, in iii. 67. 6, where C. has caturī catuḥ, that masculine catuḥ belongs to the more recent parts of the epic, whence catuḥ, like rīṣeṇā, may have been the original. As to the feminines, triṣṭi, etc., which have been noticed by Speyer, op. cit., § 294, these forms are also late in the epic, triṣṭi and saṁkṣaṭi (i. 2. 324) and cognate forms are found in still later works. Further: besides daśaṁvatam, above (and daśasahasraṁ), "a ten-hundred," there is the uncommon uncompounded singular form (as if plural), as in xiii. 112. 14–15, where, parallel to daśaṁvatam vedaridām (in ṣl. 28), appears brahmacarīṇaṁ caturī daṣa.

The question as regards appositional construction may be discussed here though it pertains to syntax rather than to form. All substantive numerals may take this construction, sahaṁvatam purṇaṁvatam, i. 94. 41, etc., which is not irregular if we understand "years, a thousand," rather than "thousand (of) years." But with the higher numbers the noun is usually either compounded, vṛṣṇiṇiṁ, etc., or is in the genitive, purusame-dhāṁ ṣyutam, i. 95. 20.
The particular example just given has indeed a sort of stereotyped form, especially when “eleven thousand years” are referred to. As one says bahuvrśaṇaṁ, “many year-rows,” e.g. xiii. 111. 98, so one says year-hundreds or thousands, pāṇca-varśaṇa, etc., and uses a formula with eleven, ten thousand and ten hundred: daśa varśaṇaḥraṇī daśa varśaṇaṭāṇi ca, iii. 12. 12; daśa kalpāṇi, ib. 200. 121. A modifying number is placed in the same construction, as a general thing, ayaṇāṁ pāṇca- (accusative) with genitive, xiii. 107. 31; yudh- dhānaṁ varṣaṇaḥraṇī devatṛṇaḥ abharat kila, “the war (of the gods and their elder brothers, the devils) lasted thirty-two year-thousands,” xii. 33. 26. But here also a genitive is often found (more correct), dve yugāṇāṁ sahasre, xiii. 107. 113, etc., and an inverted order, as in ṣatarṣaṇa, not as adjective but noun, is permitted, nṛṣaḥ ṣatarṣaṇi (jirati), xiii. 111. 86 (compare ṣatarṣaṇaṃ), in this instance due, perhaps, to the meter (to avoid a third ripulā after a trochee), but found also ib. 118, kṣmir viṇaṭivṛṣaṇi. The very unusual construction found in i. 90. 1 is probably due to meter also. Here we have saivrat- sarāṇāṁ ayaṇāṁ ṣatāṇāṁ, “a ten-thousand of hundred years.” Close by occurs another case of apposition, i. 93. 24, tadā ’dayam gāḥ ṣatān arbudāni, “then I gave cows, a hundred hundred-millions.”

An adjective may or may not agree with the implied genitive; both together, for example, in iii. 127. 2 and 13, bhāgyaṇaṁ saḍgṛhaṇ and saḍgṛhaṇ. Possessives, by the way, put the numeral either first or last, with possessive ending, duṣṣaṇaḥ, sahasraḥ, gṛhaṇaḥ, xiii. 78. 11. Compare with the last, ib. 102. 43, ya gosahāri ṣatadhaḥ samāṇaḥ samāṇa, gṛhaṇaḥ gati dādadā ca.

In regard to the syntax of decades, both genitive and apposition are common, and, beginning with viṇaṭat, we find, for example, saivmāraṇ viṇaṭatim, xiii. 111. 117; triṇaḥ agnīn (ayaṇaṁ), xiii. 103. 36. An interesting case historically is found in xii. 335. 35–37, ekaviṇaṭatīr utpanno te prajāpatayaḥ smṛtiḥ, not only because “twenty-one Prññpatis” are late-epic, but because in the twenty names given as those of the sons of Nārāyaṇa one has been left out, the list being Brahman, Sthānu, Mānu, Daksīa, Bhṛgu, Dharmas, Yama, Marici, Aṅgiras, Atri, Pulastyas, Pulaha, Krau, Vasiṣṭha, Paramēṣṭhin, Vivasvat, Soma, Kardama, Kroha, Vikrita.
The singular noun (an unusual case, compare Speyer, S. Syntax, § 294) occurs with triṇṭat in xiii. 101. 15, maraṇaṁ triṇṭatam prāpya (v. 1. in C.). The plural decade is also found in the later epic, e. g. triṇṭatam bhadān, xiii. 103. 34.

The word viṇṭati gives the name Viviṇṭati, a hero whose foregone fate is to be attacked with twenty arrows, in a repeated phrase: Viviṇṭatiṁ ca viṇṭatyā virathāṁ kṛtavāṁ prabhuk, vi. 117. 44 = vii. 14. 27, etc. Such number-names are not confined to this hero and the three wise men, Ekata, Dvita, Trata, as they are found also in the satyrs' names, Āštaka and Navaka, Skanda's goat-faced sons, iii. 228. 12; and in xiv. 4. 5 are mentioned Ikṣvāku's descendants Viṇḍa and Viviṇḍa, who are unknown to the early epic but appear in the Purānic literature and the pseudo-epic so clearly associated with it.

An ordinal may be employed to take the place of a cardinal prefixed to another cardinal, as in i. 95. 37, caturvīṇḍam putrāṇam babhāra, "a twenty-fourth son-century was born," that is one hundred plus twenty-four, which leads eventually to caturvīṇḍa being used for caturvīṇḍati as in caturvīṇḍākṣara for the Gāyatrī in the Harivaṇḍa (v. PW.), a meaning that may belong to the passage above as well.

The ordinal may (but does not generally) agree with distributed singulars, although combined with one, as in the verse of ii. 77. 31 repeated at xiii. 148. 61, Durgodhanasya Kṛṣṇasya Čakunēś ca . . . Dvīṇḍaraccherthagūn bhūmiḥ pāṣyati gani.

The ordinal in such a phrase as "five and she too (as) sixth" needs no comment, and almost as common is such a turn as "they five set out having her (as) sixth;" but "with self as" is probably a late locution, though like the Greek idiom. It is found in (xii. 177. 52, ātmanā septamānāṁ kāmaṁ hatrā) the same passage from which examples of these constructions may be taken, namely, "seventh with himself (instrumental) went the king," xvii. 1. 23–25, prasthitān Drāupadiṇḍān . . . bhūtaṃ patāca Kṛṣṇa ca saṁśthi ēva cā va ca ātmanāḥ, followed by ātmanā septamānāṁ rāja nṛṇayān tājanāṁhayaḥ (late addition to Pāṇini, vi. 3. 6, PW. Rām. examples). As ātman, plural reflexive in singular, is not very fully illustrated in PW., I will add nāthavāntam ēva tāmānām manir, "they regarded themselves as having a savior," i. 183. 10.
The word *dvitiya*, "second," passes in compounds from the meaning "having as second" to that of "with," and independently to that of alter (ego), i.e., a friend. Familiar examples are those given by Speyer, *chāyādvitiya*, "(doubled) with his shadow," *nandvitiya* "seconded by his sword." An example of the personal construction is *Yudhānadvitiya*, "along with Y.," xiv. 66. 11 (compare *dvitiyavat*, with instrumental, iii. 313. 47); *me dvitiyāḥ*, "my friend," xiii. 102. 57. The idiom, though perhaps not new, is not often used,—generally in late passages. Another case occurs in v. 50. 26, *Krṣṇadvitiyāḥ*, a passage not removed from the suspicion of being a late adornment.

The second ordinal answers to our "another" in such phrases as *dvitiyanāgaraṇibha*, "like another ocean," while the "same" is expressed by the first cardinal: *ekadhukkāh prathukukkāh*, "having the same sorrows but separate pleasures," i. 10. 4 and 50; *ekārtha, ekabhojana*, "having the same aim, food," etc.¹

Ordinals are occasionally used to indicate time. First in time, as contrasted with a subsequent event, is, indeed, generally given by *pūraya*, "former," *pūrvaropāni*, "preliminary symptoms," xii. 228. 1; or *purastāt*, "previously," i. 189. 22; but *prathama* is used in the same way, *prathamam... pucrāt*, "at first and afterwards," xii. 227. 68, etc. A "second time" is *dvitiyam*, iii. 60. 7; *dvīḥ pūraya indic tṛtiyam*, "twice before and now for the third time," iii. 92. 9; *pūraya... punaḥ... indic tṛtiyam*, "first, then again, and now for the third time," xviii. 3. 35; often as adj., *cā tṛtiyā jijñāsā tava kṛtaḥ*, "this is the third examination you have taken," ib. 32.

Before passing on to the epic methods of indicating arithmetical processes in detail, I may remark that with the exception of time (and religious observances),² where the duodecimal sys-

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¹ The next stanza, xiv. 66. 12, has a form not recognized in the lexicon, *pitravasīm*, as compared with the regular *pitravasāram*, the latter found in v. 90. 1; viii. 87. 16; xiv. 52. 33. Another late passage, vi. 116. 3, has *vvasām* (like *dahilām* in Vṛṣṇi; the last noticed by Holzmann, *Anhang*, § 871).

² Occasionally ambiguous. Thus, *ekapatnita* is the condition of having "the same wife"; but in R. v. 38. 18, *ekapatnītvaṁ* is having "only one wife." But the context makes the meaning clear.

The expansion is rather wide on this side and varies between time-divisions (twelve years of fasting, sacrificing, etc.) and religious numbers, for example, the twelve syllables of the *pāḍa* of the *jagati* verse, iii. 184. 19 (observe *navāksara dhṛtaḥ*, ib. 16).
tem, 12, (30) 60, etc., is naturally selected, the decimal system is in ordinary use, both for the system of administration, xii. 87. 1 ff., and for the army, ib. 100. 31, etc. But it does not appear in any system of measures and only once is used of weights, though it should be added that the indications of values are so rare as to be of little importance (in iii. 134. 15, aśāṇā satamānai vahanti; also dūmikā, ref. PW.).

COUNTING AND ADDITION.

Except in counting up money, sampīdayati, and a poetical use of yuṣ and yuga (navāi 'va yogo guṇanāme 'ti sūcet, of the nine digits in counting, iii. 134. 16; tam mūhurtāna kṣaṇam velāna diceṣāna ev yuṣa eva, “she reckoned the time,” ib. 296. 7), the usual word for count (counting is guṇanā) is (pra)' guṇayati, as in iii. 193. 28, yatra 'hāni na guṇante, “where days are not counted”; saṁguṇanā nā vinī, “there’s no counting,” xiv. 73. 24; guṇayasya, “count,” iii. 72. 23; a word that passes into the sense of reckon, think, especially with ri, and regard, na ca tām guṇayām ānaḥ, “disregarded them,” viii. 37. 10 (gaṇayev in R. vii. 16. 42 appears as gane, mānasāna na gane, “I don’t regard men”). Often follows the object compared in the instrumental, na guṇayāmy etāṁ tvaṁ āpi, “I do not care a straw for them,” ii. 44. 34. Though gaṇeyya is used, yet the corresponding adjective, calculable, is usually purimēya or saṁkhyeya, saṁkhyā, i. 74. 33; iii. 121. 11, etc.; i. 55. 2, āvamgaṇya gajānā satasaṁkhyā uktāḥ; xiii. 107. 36, saṁkhyā atigānā, “incalculable number.” The idea of addition is given both by simple juxtaposition, usually prefixing, of cardinal or even ordinal (above) numbers, whereby it is sometimes doubtful whether, as in duṣācaṇam, the modification is by addition or by multiplication; and by adhikam, as in ekā guṇadhihā (i. 115. 21 and 41, ekūdikarātam pūrṇam, satam pañcadhihikam, or prefixed); that of completeness, by pṛṇa, full, sāgra, all, and api and pari. Only the last requires a word. The native scho-

1 tataḥ prgaṇayām ānaḥ kasya vārō dya, “they calculated whose turn it was,” i. 164. 14.

2 For pṛṇa: “they say that ten hundreds are a full, pṛṇa, thousand,” iii. 184. 17. For sāgra: cātām sāgram, “a whole hundred,” xii. 112. 6; R. G. v. 7. 28; for api: “still be to thee even (full) ninety-nine sons, but abandon this one,” cātām ekānam api āstu putrāyām, Tyajī 'nam ekam, i. 115. 37.
liast gives to pari not the sense of completeness but of addition. Unfortunately he does not recognize the reading pariviṣṭat, given above, but he renders parivāraṇaṇa by fifteen at iii. 11 and iii. 93. 28, and at ii. 3. 37 by “fourteen over” (more). On pariṣṭodaṇa, at iii. 78. 2, he says nothing. Completeness would seem to be the real meaning by analogy with parivāraṇaṇa, for example in iii. 108. 13 ff., sahasraparivaṇaṇaṃ . . . sahasraparivaṇaḥsa tu gate dīve.

Less common is the use of uttara. In i. 128. 18, caturma ekottarai teṣām “a hundred of them with one more.” So in iii. 308. 1, duṣṭottara in the phrase duṣṭottara paksë, “on the eleventh bright half-month” (after ten full months). This accords not only with the scholiast’s explanation but also with the usual allotment of ten (whole) months of pregnancy. Other examples of uttara as plus will be found correctly given in the Petersburg lexicon. Colloquial is kim uttaram, “what more?”; “not to have uttaram” is to be unable to reply to a remark. Another word for “more” is ārdhram, over, beyond, with ablative. An adjective with paraś or param also does duty for “more”: paramāraṇaṇa paraṇaśatān “beyond a hundred guards,” vi. 95. 36; paraṇaśaḥsaḥ śvāpāh, “over a thousand priests,” xii. 38. 24; as para itself is used, evaś ca ’pi satāṁ paraḥ, “one more than a hundred,” i. 115. 1; saivaṇaṇaṇaḥ kṣāpāh, “more than a year (of) nights,” i. 221. 13 (viii. 90. 61; 78. 55, paraṇaṇaṇa and paraṇaṇaṇa have already been cited by Professor Holtzmann, Zur Geschichte, i. p. 161. Examples are not numerous). Nilakanta follows an improbable tradition in attributing the meaning of “more” to nīś in nītriṣṭa, (a sword) “more than thirty” thumbs in length, triṇaṇaśaṇgala-dhikā, iv. 42. 16, and elsewhere.

The word, adhika or abhyadhika, is used to convey a comparative notion, “more than,” dirgyebhyas ca maniṣyebhyah pramanād adhiko bhavi, “greater in size even than tall men,” xiii. 160. 15; which leads to the sense “superior to,” lāghare sāṣṭāveṣu survesām abhyadikāḥ, i. 132. 15, and even to that of “more happy.” The ablative usually follows. Examples:

viii. 35. 4, ḍvarād adhikāḥ, (Brahman) “greater than Īśvara.”
vii. 74. 25, yogāt tenaḥ ‘adhiko ‘rjunaḥ, “superior to you through practice.”
viii. 32. 61, Karṣaṇo hy abhyadikāḥ Pārthā, the same.
viii. 83. 31, abhyadhiko ranah, "a better taste."

iii. 92. 15, ko nāmā bhyadhikas tatah, "more blessed (superior, better off) than he."

So (abhya) adhikan is used as the comparative-maker of adjectives: Somo Rohiṇīyām abhyadhikam prītimān bhūtah, "Soma was more in love with Rohini," xii. 343. 57; sā 'dhikan ārtha- mānā, "she was more lovely," i. 221. 20. But adhika may mean "too great," as in the only defect of Arjuna: pindīkṛ 'nyā 'dhike, xiv. 87. 8 (his cheekbones were too prominent).¹

SUBTRACTION.

The farmer's crop which is sadbhāyagariśuddha is "cleared" of the royal tax, that is, the sixth part of it has been subtracted, xiii. 112. 19. The usual term to indicate that one number has been subtracted from another is āna, lacking, deficient, pañcānaṁ gatam, "a hundred less five," iii. 72. 11. The independent use of this word is rare: āne dviyajane gatān, "two incomplete leagues" (not quite two), ix. 5. 50. Nilakaṇṭha recognizes the meaning of nyāna, the usual word for almost, in avara, which occurs in ii. 15. 22, evaṁ sarvāṁ vage cakre Jarāsāndhah gatā- varān, "he has overcome almost all a hundred," after it has been said that the kings overcome were a hundred and one, and just before the more precise statement that they numbered eighty-six and that fourteen remained, īṣā ṛāṣyaṁ caturdaśa, cl. 18 and 25, to complete the tale of one hundred. As one and a hundred means only a large number, nyāna, "not quite," is supported by the context as the probable meaning of avara, and another passage also seems to show that this meaning, not recognized in the lexicon, which gives only "at least" with numbers, is possible. This is na kaś cid āhārat tum sahasrāvanam arhaṇam, "no one brought as tribute there less than a thousand," ii. 35. 11, literally "a tribute having a diminished thousand," so that avara, "less," forms the counterpart to uttara, "more." The other meaning, from the idea of "less," that of "at least," is, however, the usual one, as in mantrīṇaṁ trya-

¹ For "a half more than all" we have "all and more by" in xiii. 125. 10 (extension of Manu iv. 85); ardhenaṁ 'tāṁi sarvāṁi nṛpatiḥ kathaye 'dhike. The scholiast says adhikaḥ is in antithesis to a little, kṣudra, king (equal to all these by a half is a great king).
"varāh, "at least three," xii. 83. 47. The "deficient" idea is common enough with nouns, for example, guṇāvara, "deficient in qualities," and glides naturally into the combination with numbers. Another example of the rarer sense may, I think, be found in xii. 321. 158: sa (rājā) tuṣyed daṇḍahāgena tataś te anyo daṇḍavarāh, where "at least ten" scarcely makes the required antithesis of not even ten; for the sense seems to be that a very energetic warlike king "should be satisfied with a tenth and any other with still less." Opposed, by the way, to avara in the usual sense is parama. As shown above, para means "more;" but para means "at most," suṣuraparama, "at most a thousand," and this "most" is used for "whole," trisvaraparamaṇa, of seeds kept to the highest point of three years, or, as we should say, three whole years, xiv. 91. 16.

The "remainder" is cēṣum or cīṣṭam, as in pañcācaṣṭauṁ śat ca cēṣum dināhūṁ tann jīvitaṁ, "the remainder of thy life is fifty-six days," xii. 51. 14; cīṣṭam apāṁ naḥ, "our life's remnant is short;" cēṣum anyesu kālaṁ "at other times, on remaining occasions," i. 122. 26; cēṣ, "as for the rest," aṛṣataḥ, "wholly" (without remainder). The participle is more common than the noun, vasaṁi triṁ cīṣṭāni, "three years remain," xv. 20. 32, and so often, especially with other participles, hata-cīṣṭāḥ, "those left from the killed," still alive, xii. 54. 5, etc.

The verb commonly used is hiyate, "is less" (avaṣīṣyat, "remains," avaṇḍīṣṭam = cīṣṭam), opposed to atiricyate "is more;" uṣībhavati, "is equal" (equal in size is generally sammitam); for "equal" as quit, the same word, uṣīyam tat samībhātam, "both sides are quit," xii. 139. 24; equal, of scales, tudā me surabhātēṣu samā tiṣṭhati (samo 'hain surabhātēṣu), xii. 263. 10. Compare xii. 176. 10:

ākīmancayam ca rājyaṁ ca tulayaṁ samatolayam atyāricyata dāridryaṁ rājyaṁ api guṇādhihkan.

"I weighed in the scale poverty and kingship; poverty having more good qualities surpassed even kingship." The measure is given by pramāna, either of size (as usual) or of number, as in

1 Just before, the daṇḍavarga is the group of imperial factors, but this does not seem to be referred to in this verse. The king, sa, is expressly mahotsāha and fond of military duties.
xiii. 107. 32, 

sc. *pārvatātāsya,* (he is exalted in the Brahman world) 
“equally (as to years) with the number of hairs” (of a hundred 
bearskins). “Less” as inferior, secondary, is gāṇya (see the 
next paragraph).

MULTIPLICATION.

While the word for times in its literal sense is (-varun) 
kṛtraḥ, pārśvakṛtraḥ tvaḥ iti, i. 197. 49; triśaṁkṛtraḥ, 
passim, the verb for times, multiply, is gāṇya, whence gāṇita, 
multiplied by (the number preceding), literally “qualified.” In 
later texts, gāṇikṛta is used in just the same way, but in the 
epic this word is, I think, used only in dvīpaṇakṛtaśirikramah 
(Great Epic, p. 419). In the same way, gāṇīdhūta is used in 
later texts for gāṇita, multiplied, but in the epic it means infe-
rior (compare gāṇu), gāṇīdhūta gāṇāḥ saccā tīṣṭhanti hi parā-
krame, “all qualities are qualified in (inferior to) valor,” ii. 16. 
11. But usually no verb is needed to express multiplication, 
which as a formal arithmetical process the epic has as little occa-
sion to make use of as subtraction. But the informal multipli-
cation of ordinary language, double, thrice, a hundred-fold, 
without formal sums, is as common as in any other language, 
and the times thus indicated is regularly expressed either by 
simple juxtaposition of numbers, whereby, as has already been 
said, one is uncertain whether addition or multiplication is 
intended, as in paṇḍavatam, one hundred and five or five hun-
dred, iv. 43. 6 (only the syntax sometimes shows decidedly, naśa-
nam paṇḍavatāvad esa pattir vidhiyate, “a pati is reckoned as 
five [and] fifty men,” v. 155. 28); or by the noun gāṇa, as in 
śatāśirā dvīpaṇakṛtraḥ, “having six heads and double as many 
ears,” iii. 225. 17; ekākām triṇyaṁ śatikāṃ, “each one (he 
wounded) with three times the number of arrows” (each had 
used), viii. 48. 70; tataḥ śatīguṇe kāle, “in a time sixty times 
longer than that,” xiii. 28. 10. In this last case the same idea 
is expressed in the following stanzas without gāṇa, but perhaps 
only because this word has been used several times already. 
Thus in 11, tatas tu dvīcata kāle labhate kāṇḍappṛtham, “in a 
time two hundred (times longer) than that.” As an adverb: 
tataḥ śatīguṇāṁ dukkhāṁ idam māṁ aspirebd bhṛgam, “this 
grief has afflicted me sorely, a hundred times worse than that.”
xi. 27. 33. In this use yuna has ousted almost completely the old vṛt of triyṛt, which survives only in a few hereditary turns. A very uncommon equivalent is saṁkhyā, as in xv. 3. 63, yasya nāgasahasreṇa saṁkhyāṃ vāḥ balam, “whose strength is comparable with a thousand elephants’ a hundred times over” (numbered a hundred). Between the qualitative and temporal meaning, where the word is equivalent to kṛteḥ, “times,” lies the application found in ii. 24. 6, where, in a wrestling-match, one is whirled about a hundred times, catagunam, a description, by the way, copied in many details by the writer of iv. 13, where ā. 36, for example, has the same expression. Here dvigunam occurs in a physical sense also, rakṣo dvigunam cakre, “he doubled that demon up,” i. 163. 27 and elsewhere.

A combination of adding and multiplying, as in “more than so many times that” is expressed by the yuna numeral (to use this word thus) plus the word for “more.” Thus, “he gave them wealth more than five times what they had asked him for” is prādāc ca dravīṇam... yatho kṣaṇaṃ te tapaṁniḥ tataḥ paścavatītikam, ii. 12. 15. Without “more”: yatho padiṭṭam avārāṇā khāyaḥ paścavatītī rathah, “let my chariot be furnished with five times (as many arrows) as the teachers enjoin,” vii. 112. 48; yathā vedā dvigunam vetti, “you know twice as much as he knows,” viii. 32. 62. Here partial correlation takes the place of the comparative (ablative) idea. The more elaborate construction is also common, as in xiii. 100. 7: yathā ca ghiṃas toṣaḥ... tathā catagunāḥ prītir devatānām, “a hundredfold so great is the joy of the divinities as is the satisfaction of the householder.”

Sometimes, when the completion of the clause is easily understood, it is left out entirely, and we find (of the ahūna sacrifice) dakṣinām triagunān kura, trieṇuṃ erojatu, “make the fee threefold, let it reach treble,” xiv. 88. 14, that is, make it three times more (than ordinary).

Some curiously awkward methods of multiplying are found. In i. 55. 2, after saying that Indra’s sacrifices are a hundred in

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1 So in using the ablative it is not necessary, any more than in Greek, to be precise in the application of the case following “times that;” ayaṃmedhād daśaṇunam phalam āduḥ, “they say the fruit is ten-fold (that of) a horse-sacrifice,” iii. 82. 27.
number, saṅkhya, the poet adds: “But your sacrifice here, O Bhārata, is tathā paraṁ tulya saṅkhyaiṁ gataṁ vāi,” which the scholiast explains as equal to an ayuta of Čakra’s (100×100), but perhaps only another hundred is intended. In xiv. 65. 18, however, there is no escaping the awkwardness with which one number is multiplied into another of a separate category. What the poet wants to say is sixty thousand camels and twice as many hundred horses, which he expresses by “twice as many horses hundreds,” saṣṭīr uṣṇasahasrāṇi gataṁ dviguṇā hṛdayāh. This is followed by tāvad eva with the plural noun, gakaṣṭāṁ rathāḥ cāi’eva tāvad eva kareṇavaḥ, that is, “just as much” instead of “as many.” So in iii. 281. 10–12, “fourteen crores of Piśacas, twice as much of Rakṣasas, dvistāvat (with genitive and with kotyajñ supplied), and three times as many Yaksas,” tataḥ triguṇā yaksāḥ. Similarly, yāvat tasya bhavet puṣṭis tejo (etc.), Kṛṣṇe tatṛtriyaṁ, “however much may be Arjuna’s prosperity, glory, etc., Kṛṣṇa’s is three times that,” xiii. 148. 34. Ordinarily the numeral adjectives agree with the nouns compared, as in iii. 122. 27, yāvantakaḥ pāvakaḥ proktāḥ somās tāvanta eva tu; vii. 201, 59, saṣṭīṁ varṣasahasrāṇi tāvanta eva gataṁ eva. A connecting link is furnished by tāvat as part of a compound yāvanti tasya romāni tāvadyugasahasrāṇi, iii. 200. 71, etc.

Another case of comparing numerically different sorts of things is found in vii. 65. 9, but here the number is the same: vārkaṁ eva yuṣṭa yāvantah . . . te tathāi ’eva punaḥ cā ’anye tāvantah kāṇcanā ’bhavan.

Distribution is expressed by repetition, with or without an adverb: navame navame ‘hāni . . . daṇḍe vāi gate gate, “each ninth day . . . as often as the tenth day passed,” xiii. 107. 39, 43; trayānaṁ mitthautiṁ savam ekākasya pṛthak pṛthak, “each one separately has two of the three,” xiv. 18. 21. This relieves one of the necessity of distinguishing between each and all; for example, in xiv. 90. 34, kuṭarauṁ kuṭarauṁ sarve eva-bhajanta, “they all divided (so that each obtained) one kuṭara;” iii. 124. 21, caturṣaḥ cā ’gata duṣṭā vyajanānāṁ gataṁ gataṁ, “four fangs extending a hundred leaguses each.” But ekāka is usually expressed, as above and in ii. 52. 21, dat-tvāi ’kāko daṇḍaṁau kusārau, “each giving ten hundred elephants.” The noun used alone may be singular, jātaṁ jātaṁ
ca sā putraṁ kṣipty ambhāsi, "she throws in the water (each) son when born," or plural, jātān jātān praksipā 'smān (putrān), i. 98. 13 and 99. 43. The verb may agree with the singular: ekākaṇa te tadā pāchā kramaṇaḥ parimokṣyate, xii. 227. 116, perhaps only metrical, as in the same chapter śocimi for śocāmi, ā. 88. The late derivative ekākaṇya is found in xii. 326. 38, tad antahprakāṇanaṁ svamyaṁ darṣayām āsur ekākaṇya (here the grove opens out from the third kukṣya of the palace).

With adjectives the cardinal stem prefixed multiplies the adjective, caturbhadrataraś tvaya, "four times as happy (compared) with you," in vii. 55. 49. and xii. 29. 30, two scenes where all the "kings that died" are spoken of at length in two different but related accounts, of some value for the history of the epic. In vii. 70. 25, the phrase is intensified: caturbhadratārās tvaya bhadraçatādikāḥ.

Finally, there is the multiplication expressed by dhā as an ending, which gives not only the times of division and consequent multiplication of parts, and time literally, ekadā, "at one time," but also the multiple times in numbers, saptaṅī, "seven times (over)." Saṁta tridā is thus equivalent to saṁta triṅṇāṇi. In xii. 223. 22, the Gandharvas dance saṭ sahasrāṇī

1 The instrumental is not so very rare. Compare eko hi bahubhīṣ creyāṁ, "one (sage) better than many" (fools), iii. 99. 23; ko nu svantaṭara mayā, ix. 64. 21; sā 'yā kṛṣñāri mayā, xii. 128. 14; durmaṇaṭaras tvayā, xii. 227. 81. The ablative is used after a positive, mama balam bhūnam rāgor api, "my strength is greater than the wind," xii. 165. 6. One case expresses comparison, the other the distance from, sukhāt sukhatarām prāptah, "coming from joy to more joy," xiii. 119. 11. The ablative is found with only an implied comparison, rājyād devatvam ichchāti, "they wish godship from kingship," xii. 180. 20, leading to preference (yore and abl.; also creyāṁ dāho na bhakṣayām, i. 280. 21, etc.; Holtzmann, § 292 b). Noticeable is the double ablative showing clearly the construction's origin, svāvijyād rājavijyāca ca sva, vijyam balavattaram, "from (of) his own and a king's, his own power is stronger," xii. 165. 18. Holtzmann, at § 281, gives a few more examples of the instrumental. To the gen. comparat., my Great Epic, p. 473, add maraṇaḥ gōbhanāḥ (=varam) tasya, i. 79. 13.

1 The introduction of the former is in the latter put at the end of the account and the latter omits the second Rāma, which completes the list of sixteen in Droṇa. Bharata, too, changes places, being the antepenultimate king in Čaṇi but the fifth in Droṇa, which has several later features.
saptadhā, literally in seven groups of six thousands, or seven times six thousand, that is, a not unusual amplification by a sacred multiple of an old group, for the Atharva Veda, xi. 5. 2, gives the same conventional satsahasraḥ, though here three hundred thirty-three are added. The epic itself gives to the Gandharvas another conventional number at iii. 139. 6, where they are eighty-eight thousand in number and the Yakṣas are four times as many, astaçit śahasraṇi Gandharvāḥ... Yakṣas caīr vā caturgranāḥ. Another example is furnished by the list of Munis in seven groups of seven each, at xiii. 151. 43: ity ete munayo divyā ekākāḥ saptā saptadhāḥ, etc., “seven, one by one, reckoned sevenfold” (a different account in xiii. 166. 37 ff.). Compare also saptadhā saptā sahasraḥ; jaṁma saptadhā, xiv. 20. 23 and 27. The number of times a multiplied god appears is often expressed thus, as when Rudra, kind and terrible, one-eyed and three-eyed, appears as ekadhā, dvīdhā, bahudhā, gatadhā, sahasradhā, gatasahasradhā, xiii. 161. 43. One of his forms, by the way, is dhūmbra, which gives, it is said, his name of dhūrjarit (u), a title found only here, xiii. 162. 9, and vii. 202. 129, two passages of the same period and content, a late epic “Çatarudriya.”

DIVISION.

Halving is expressed by dvādhiḥbhū or -kār or dvīdhākār; other divisions by triḍhā (trādham), catuḍhā, and so on, with kar or vibhāj, e.g., daṇḍhā kāryaṁ gṛaṇaṁ, “the remainder is to be divided tenfold;” dvīdhā kṛta jīvaṁ, (“therefore the snakes’) tongues were cloven,” i. 34. 23 (dvijaṁ ca kṛtaṁ, 24); gacchān dvādhiḥkṛtaḥ kuruṁ, kuruṁ dvādhiḥ ’krod, “Rudra clove the hoofs of his bull and other cattle,” viii. 34. 105. The half, ardha, is used no more with nouns than with participles: ardhaṁ saṁyāt labhāvaṁ, “he got half of Indra’s throne,” iii. 126. 38; ardhaṁ saṁyātāntum, “half flung from their seat,” vii. 196. 15; also of course with other numbers. With words of time, ardha follows or precedes in māsa-ṛgha, ardhamāsa, and means either the middle (of day or night, ardhadrīvasa, -rātra) or half: ardhaṁ samaye, “at midnight” (so passim); yady ardhaṁ saṁyātaṁ yudhyaṁ, “if he fights half a day,” vii. 190. 46 (ardhaṁ saṁyātaṁ gatvā, “going half a day,” R. vii. 46. 24).
Besides ardhamānu, "a month and a half" may of course be expressed in full. Thus, where mā is used exactly as in mā cīram, in iv. 21. 17, mā dīrghaṁ kṣama kālaṁ tvaṁ māsam ardhaṁ ca sammataṁ, "have patience for a short time, a month and a half" (=sārdaṁ).

The use of ardha with other numbers shows that, as in the case of two numbers joined and indicating that the former influences the latter without specifying how (e. g. dyaḥṣataṁ 110 or 1000), the prefixed ardha modifies the word with which it is connected, but does not specify whether by addition or subtraction or multiplication. So ardaḥṣataṁ is one hundred modified by one half, just as ekṣataṁ is one hundred modified by one, and the hearer is left to determine whether this means half a hundred or one hundred plus a half (hundred). With other fractions, however, there is understood a conventional modification of subtraction. Thus "half-fourth" is always (as adjective) three and a half, that is four as modified by a half. For example, up to two and a half koss is "to the half-third koss," i. e. to the third koss as modified by a half, koraḍ ardhaṭṭyaṁ.\(^1\)

When not defined, bhāya and aṅga, "part," mean a quarter, caturbhāyaṁ=pādaṁ, a (fourth) part (of a quadruped). For three quarters is used either "three quarter parts" or "three parts." The usual meaning of "three-part," tribhaṁga, is one third, but it occurs also in the later epic (as in still later literature) in the meaning of three quarters. For other divisions, the part is made explicit, aṣṭiḥbhāya, s\(_{t}\), etc. Only kalā is almost always Ṣraṁ.

iii. 190. 10, (kṛpte caturśpaḍ dharmaṁ) aḍharmapāḍaviddhas tu tribhir aṁcāṁ pratiṣṭhitaṁ;\(^2\)
i. 11 and 12, tribhir aṁcāṁ, caturthāṅgema.

In the pseudo-epic, the same situation is expressed by pādono dharmaṁ (in Tretā), deśpaḍa, pāda (adhaṛ acćacro), to which is added the unique idea that even this quarter in Kali is so diminished as to leave one sixty-fourth, bhuvrañīṣvena kalā dharmasya ṣoḍaṣi, xii. 268. 33–34 (caturthāṅga also xii. 283. 51).

\(^1\) The passage is cited in full on p. 147, below. I fail to understand Speyer's explanation. S. Syntax, § 301. that ardhaṭṭya in such a case means "having the third being [but] half."
ii. 68. 78, ardhahān harati vāi gṛesṭhah pādo bhavati karteṣv.
iv. 52. 17, bhanecaturbhāga, "one fourth the army."
xii. 24. 12, adāya balīndhāgaṁ yo rāstraṁ nābhikṛṣṭi pratigṛhaṁ tattāpam caturāṅgena dhūmīpaṁ.

ii. 5. 70,
kaacid āyasya ca 'rthena caturbhāgena vā punaḥ pādaabhāgaṁ tribhir vā 'pi viyaho saṁsuddhyate tava, "are your expenses covered by a half or a quarter, or at any rate by three quarters of your income?"

vii. 186. 1,
tribhāgamātraçeśeṇāṁ rātryāṁ yuddham avartata, "the battle was renewed when one third the night was left."

vii. 191. 9,
tusya ca 'hnaḥ tribhāgena kṣayaṁ jagmaḥ putatrināḥ, "in the course of one third of that day."

The "third" may of course be expressed, as in xii. 285. 23, lubheta bhāgaṁ . . . ardhāṁ tathā bhāgaṁ ato tṛṭyām. In xiii. 168. 28, tribhāgaṁsa means "having three quarters left."

In i. 96. 21 (as ardhāṁsi still later means a fourth) one eighth is expressed by "half a fourth," turiyārdham pradāśyāmo vīryadābi 'kāikaṁ cayam, "we shall severally give a half of the fourth of our power," said by the eight Vasus. It is rather remarkable that Kṛṣṇa is described in xii. 281. 62 as this fraction of God: mūhasthāyā mahādecaḥ . . . tuṣṭāḥ srjati tān bhāvān . . . turiyārdhena tuṣye 'maṁ vídhī Kēṣavaṁ.

When quarters are mentioned, as when Ĥri is quartered, caturāṅgā vibhaktā, and the quarters are enumerated, the first is pāda alone, the others are drīṭiya, tṛṭiya, caturtha, pādas, xiii. 225. 19 ff.

According to the commentator, triyama, threefold, like tribhāga, also means one third in v. 55. 66, where, after eleven armies have been contrasted with the seven which in comparison are called nyūnah, "deficient," the deficiency is declared to be great enough to warrant a battle, for

balāṁ triyamato kīnāṁ yudhyam pṛāha Bṛhaptiḥ
caretbhyaṁ triyam ca 'yam mama rājaṁ anikīnāṁ,

wherefore N. remarks that the adverb means (deficient) by a third, tryaṅgama, and the adjective "a third more." And cer-
tainty if number is implied at all, eleven are not thrice seven but may be loosely reckoned as a group of three fours, deducting one of which would leave seven, so the "deficient" host would be "a third less" and the host of eleven would be "a third more" (measured by itself). There seems, however, to be a conscious play on words here, for in the next stanza the "deficiency," nyūnatā, is explained as guruhinam or a moral lack.

In vituperation, which exercises the epic poets a good deal, it is customary to say that an opponent is not worth a half, a quarter, or a sixteenth of the other man. In praise, on the other hand, one says that the object of praise is worth one and a half of the other. One sixteenth, expressed either as "sixteenth particle" or simply a particle or a particle-part, denotes the smallest part usually taken into account. The word gives the last imperishable fraction of the moon visible before it disappears (xii. 305. 4, so the pure soul, kalā sākṣmā, ib. 6 and 335. 40). The adjective full is sometimes added to the part. Twice this fraction is exceeded, once by saying that one eighteenth will not express the relation of inferiority, once by descending to one hundredth part to express contempt. Apart from vituperation, the "sixteenth particle" is employed in a few old phrases. It is found also in Manu and in Buddhistic literature. Examples:

i. 100. 68, agnihotraṁ trayi vidyā santānam api vā ksayam survāṇy etāṁ apatyaṣya kalāṁ nā rhati ṣoḍaśīm.

ii. 41. 27, iṣṭāṁ dattam adhītraṁ ca yeṣāṁ ca bāhuḍākṣiṇāṁ sūrvaṁ etad apatyaṣya kalāṁ nā rhati ṣoḍaśīm.

iii. 91. 23, na sa Pārthasya samgrāme kalāṁ arhati ṣoḍaśīm.

So iii. 174. 3; 254. 27; 257. 4 (your sacrifice is inferior); vii. 36. 7 (the army); vii. 111. 30. 1. With pūrṇa: iv. 39. 14, na cā 'ṛjunaḥ kalā pūrṇā na mam, "Arjuna is not (as much as) one whole (sixteenth) part of me;" v. 49. 34, na 'yay kalā pī sam-pūrṇā Pāṇḍarāṇāṁ, "he is not even one whole (sixteenth) particle of the Pandus." So in vii. 197. 17,

yah kalāṁ ṣoḍaśīm pūrṇām Dhanaijaya na te 'ṛhati.

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1 In the next stanza, nā 'lam Pārthasya sahyuge (rare genitive), "not equal to."

2 So I read (compare the next citation). PW. accepts the text, kalā-pūrṇa, s. v.
In viii. 15. 28 it is said, "all weapons are not worth a sixteenth part of him." As an equivalent of 1/16, prastha (1/12 of a measure) is used where it is appropriate, xiv. 90. 7, "this sacrifice is not equal to a prastha of grain of (given by) a man living by glean- ing corn," saktaprasthena na tulyah.

In religious writing, besides the phrase above is found a (Buddhistic) comparison, repeated, xii. 174. 46; 177. 51; 277. 6:

\[\text{ya ca kāmasukhāṁ loke ya ca dīryam māhat sukham} \]
\[\text{thrṣṇākṣayasaṁkaśāyāṁ 'te nā 'rhatah śodaraṁ kulaṁ.} \]

This stanza is in fact attributed to the same Buddhistic king who sings of his happiness in having nothing, and it is associated with that famous stanza in the last two passages. In the same way is used kula alone:

\[\text{āryavedhasahasasya vājapeyaçatasya ca} \]
\[\text{yogasya kalayā tāta na tulyāṁ vidyate phalam,} \]
\[\text{xii. 324. 9 (a Yoga improvement of Spruch 791).} \]

I have found the "sixteenth" phrase but once in a tristubh stanza, with a slight alteration in form and sense (truth surpasses all possessions):

\[\text{iii. 34. 22, rājyaṁ ca patrāc ca yuço dhanaṁ ca} \]
\[\text{svano na satyasya kalāṁ upāti.} \]

A curious account of the distribution of the world’s wealth in vi. 6. 23 asserts that Kubera has one quarter of the valuables of Meru, out of which he dispenses one particle-part to mankind, equivalent to one sixty-fourth of all, as in the case of Kali’s virtue (above):

\[\text{tasmañ kutero bhayacauṣya carurtham bhāygam agnute} \]
\[\text{tataḥ kulaṁca vittasya manasgebhaya prayaçchati.} \]

Examples of other fractions in scorn: i. 201. 13, (yuddhe) Rādhayasya na pādabhāk, "not worth a quarter of him;" iii. 253. 9, ma ca 'pi pādabhāk Kāryan Pāṇḍavānāṁ (dhanavrede); vii. 76. 1, teṣām viryam mamā 'rhatuh na tulyam, "their power is not equal to half of me;" xii. 155. 6, kulaṁ aṣṭādaṁ prāvaṁ na me prāmottam mārataḥ; x. 12. 17, na saṁa mama viryasya catāyaṁ 'pi pūrṇitāh, "they all together are not equal to one hundredth part of my power."

\[1 \text{This } \frac{1}{16} \text{ for the older } \frac{1}{12} \text{ is a pseudo-epic alteration of the old phrase. It occurs in the Wind and Çālmali fable.} \]
A back-handed boast of Karna, which, I think, the poet intentionally makes incoherent, is that of viii. 43. 9. te Cālyasaahasrena vijayeṇa ahau parāṇā. "I could conquer the enemy without (the help of) a thousand Cālyas," i.e., "I am equal to a thousand Cālyas," or rather "without C., a thousand times over." Cālya mockingly replies that Karna talks nonsense; whereupon Karna returns "more and double abuse," paruṣaṇī dṛiṣṭam bhīyaḥ.

On the other hand, in lauding a friend, one and a half is the norm of comparison, as in the following examples:

vii. 72. 34, mayā ‘adhyārdhagṛṇaḥ (putraḥ), "my son is equal to me one and a half times over" (sometimes simply "equal to me").

xi. 20. 1, adhyārdhagṛṇam āhur yam bale... pitrā tvayā ca, "who in power they say is equal to one and a half times his father and you" (Kṛṣṇa!). But the comparison, too, is once used scornfully:

ix. 33. 19, adhyārdhena gūneṇe ‘yāṁ gatā gurarī mama na tathā Dhārtarāṣṭrasya, "this club of mine is one and a half times heavier than that of D."

Apart from this belligerent use, one and a half is used of measurement of numbers, i. 1. 103, adhyārdhagṛta, "having one hundred and fifty;" of land, viii. 88. 10, adhyārdhaṁatre dhanusāṁ sahasre, "on (land) measuring one and a half thousand bow-lengths;" v. 8. 2, tvaya senānīreṇa ‘bhūd adhyārdham iva yojanaṁ, "his camp was about a league and a half."

In reckoning interest, pādikauṇa gatam is twenty-five per cent., but the verse in which this occurs, ii. 5. 78, pādikauṇa ca catam vṛddhyā dvāraya āṣeṣam annaṁ samyaksam, has a varied reading, pratyekauṇa ca gatam (metrical for prati gatam ca ekam).\(^1\)

As observed above, the current words for fraction are pāda, bhāga, and aṅga. In xiii. 26. 97, appears in this sense ekadeṣa, a single part of a whole: udāhṛtaḥ sarvathā te guṇaṁ mayā ‘kadeṣaḥ... gatir na me... guṇaṁ sarvān purimātum, "a single part of (Ganges') virtues I have told thee, I cannot count them all."

\(^1\) The later epic, by the way, has two coins not previously recognized, besides the Roman denarius (implied), namely, the kākṣi and astāpa-dapada (a gold kārṣāpaṇa), xii. 294. 16; 299. 40.
DIMENSIONS, TERMS, VALUES, SYNTACTICAL CONSTRUCTION.

The usual dimension, prāmāṇa, mentioned in the epic is length, and with few exceptions distance (length) or height is the prāmāṇa, a general word for size and extent. Certain measurements are made in the case of the few small things measured, but short distances are loosely cast in such forms as "near by," "not far," "within sight," or "within hearing," and indefinite smallness of extent in the same natural manner is described as "not an atom," "nor a bit," etc.

Distance: teṣāṁ samyaścaraṇaṁ, "within hearing of them," xv. 18. 21 (ib. 20, avidārtha, "not far off," like samyaścaraṇa, "near," with genitive; also with ablative, nā tādāraṇa mudram evam ad hi lokṣṭe, i. 151. 44; avidāra evamāt, 152. 1; na dāraṇa evamāt, 154. 35; abhyārāye, 156. 10, "in the neighborhood"); āyamam prati, uṣasanā garbhām, i. 8. 7, "near the asylum"; also antikam and antike, according to the verb. In the case of sākṣaṁ, "with(in) sight," proximity, the original sense in many cases has well-nigh disappeared, mītah sākṣaṁ taṁ gāpāṁ centvā, "hearing of the curse on the part of his mother," i. 37. 1.

The Rāmāyaṇa has another, more modern, phrase to indicate proximity, namely mūla, as in akhaṁ gamitaṁ Yamasya mūlam, v. 28. 17; mūla mūlam, ii. 64. 49, which belongs rather to Purānic than to epic diction.

Extent: na tasyāḥ sākṣaṁ api, "no (superficial) atom of her," i. 211. 16; na tasyā kāye antaram, "no space on his body," iii. 21. 7; hagnāṁ nā nātaram, "no interval between the horses," iii. 172. 6; chidraṁ na rathayoh, "no chink between the two chariots," i. 226. 3. Indeterminate size is given by compounds, much as in English, gajā acalasukāgāh, "mountain-size elephants," xv. 23. 9, etc.

The verb extend, āgama, is used of extending a circle, synonymous with uṣarn, mandalam uṣaryā, v. 195. 15. The circumference is prāmāṇa, the diameter, viśkāmbha. To express the idea of equal distance from a center, the term usually employed is samanta, "on every side," in adverbial form, vedī samantaṁ prāmāṇaṁ, "five leagues on every side," iii. 129. 22. Generally, the geometrical figures implied by battle-arrays, called vyāhaḥ, are described in figurative language, as a bird, a
needle, a dolphin, and the troops are stationed on the beak, tail, and wings. Thus karṇa, ear, becomes "corner" in vi. 60. 10, catuṣcatarrayāhasahasrakarṇaḥ, "(an array) with four thousand elephants on each corner" (N. karṇaḥ vividhāgeṣu). But there is a peculiarity here in that no figure has been mentioned, and according to the account this array should be like a former one of crescent shape with two horns, gṛiṇḍe, but, not to speak of the plural, we cannot take this statement too literally, and I do not know that karṇa is even cornu.

A gṛiṇḍika, named from a triangular nut which has "horns," is used to describe one of these vyahus in vi. 87. 17, and may be a triangle, though here also the scholiast gives the usual epic meaning "shaped like a four-road place," just as at iv. 68. 25, catuyathā, etc. A triangle is trīkūṭa, trīpryovos, (trīguna), of the γουνα, late, as explained in my Great Epic, p. 372. A city square is a "four place," catur, xii. 69. 52, squares and markets being mentioned together in descriptions of cities. In xii. 73. 21, in antithesis to the whole, kṛtsna, city, this word may mean as in English a town-quarter; but in xii. 86. 8, caturāpancaṣṭhita is simply "beautified by squares and markets." The "four" of a square is used also to give the idea of a four-square house, catuḥṣāla, and anta, boundary, is also used to imply a square, as in dayakiskusahasānta, of a hall, "ten thousand cubits square," a meaning made clear by a parallel passage, where saṃantaḥ, "on all sides," is expressly added, ii. 1. 21; 3. 23, and no circle can be intended. Earth, caturanta, "has four boundaries," that is, it is bounded by the "four seas." In xiv. 64. 10, a camp is satapada or satpatha (and navaśānta or saṃsthana), with three streets running north and south and three east and west, according to the scholiast; but in xv. 5. 16 he explains satpadam param as having six (traversable) places within the seven walls (up to the inner city), which is not a likely meaning, since the word is followed by sarvatoḍiṣyam, "in all directions." Octagonal is aṭā-γri and other numerals are used with the same word, but only of edges, eight-edged posts and clubs.

Land is measured by bow-lengths (above), and by cow-hides, api gocarunaṁtetreṇa bhūmidārena pāyate, "purified by giving even a cow-hide measure of land," xiii. 62. 19; and the length of a cord is measured in the same way, na tām vadhri pariṇāhec
caturcarmi, “a cord of a hundred hides could not encircle it,” i. 30. 23. A “span of land” and “as much land as a needle’s point could cover” are contemptuous terms.

From these general methods of measurement I turn to the more exact specifications found in the epic, arranging them on an ascending scale of comparison, from the “smallest finger” to the indefinite yajna, which is best rendered league, because its length varies like that of a league, while it approximates most closely to the three-mile league, though it ranges from that extent to about ten miles, according to later authorities; but nothing in the epic determines its length.

Finger-measurement: A thumb-joint serves as the measure of a small bit in general, aurgataparvanatara garbhah, i. 115. 20, and “thumbkin” spirits are perhaps conceived as being of thumb-size in relation to breadth as well as height. God himself, as a spirit, is measured by the size of a thumb-joint, hidayantu sarvahhitanum parvanu yugasthamatrakah, xii. 313. 15; as all spirits are described as aurgasthamatra, thumb-size. All shortest measured distances are calculated by this norm, usually by twos and fours, the application showing, however, that “two thumbs” and “four thumbs” refer to thumb-breadths.

Thus there is a stereotyped battle-phrase, na tasay sid anirbhinnau gatre deyugalam antaram, “there was not an unwounded space of two thumbs on his limb,” vi. 119. 86; 175. 54; iv. 55. 5 (v. l.); xii. 77. 27. The same phrase is found in R. vi. 45. 20, with the verb of the Virata passage but with only one “thumb”: na hy avidham tayor gatre babhivab yugalam antaram, perhaps to be corrected as in Mbh. Earth is flung up “four thumbs,” caturaugalam, by a chariot, viii. 90. 106. In a late scene, Yudhishtira’s chariot floats four thumbs from the earth, prthiviyar caturaugalam acchritah, vii. 190. 56.

The “littlest finger” serves as a comparison in the description of xii. 127. 7–8 (Tanum):

angair narair mahabaho rasah styaunancitam...

varum api rajendrapasya kashiikosanam,

“eight times in shape compared with other men (i.e. eight times as tall),” the body being (slender) as the littlest finger”;

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1 References in my Great Epic, p. 32.

2 A man’s height is often given by saying how many cubits he has (as below). For tall and short are used prastu and hrasa, respectively,
where the poet has to change the regular form of the word \textit{kunāthikā} on account of the meter. I do not know whether in i. 52. 7, snakes that are the size of a \textit{gokarna}, in antithesis to those that are leagues long, \textit{gokarṇasya pramāṇataḥ}, \textit{kroṣaṣya-namātrāḥ}, are imagined to be the length of a \textit{gokarna}-arrow or of a thumb-and-finger-span, a late meaning of the word. When subsequently re-described, they are \textit{yojanāyāmavistārā} (also a \textit{Rāmāyaṇa} phrase) \textit{dvijyojanamāṇaṇa}tāḥ, i. 57. 23, that is, measured by leagues only.

**Hand and span**: The triangular altar referred to above is described as “of eighteen hands,” \textit{aṣṭādaṣaśakrātmukāḥ}, xiv. 88. 32. The hand, however, is usually reckoned as a two-span cubit and not as a hand-length. Probably the “hand-tip” gives a double-span, for in the description of a slender woman it is said that her waist measures “a hand-tip,” \textit{karaṇasammitam madhyam}, iv. 13. 22. So in xi. 18. 5, \textit{anuvadānīyā karasammitamadhyamā}, “of irreproachable form, measuring a ‘hand’ about the waist.” This measurement shows that the \textit{kara} is equivalent to the \textit{hasta}, a synonymous term, and equal to about a cubit (eighteen inches nominally, but perhaps only about sixteen), “eighteen inches round the waist” being (as I am informed) the boast of slender maids to-day, and Hindu women being petite. Double this length, two \textit{hastas}, is given in Hindu tables as the circumference of a man’s body, about the average thirty-four to thirty-six-inch waist.

The span, \textit{prādeṣa}, is used of the measure of the breast about the spirit: \textit{prādeṣamātre hṛdi niḥstān gat}, “what is made manifest in the span-measured breast,” xii. 246. 28, that is, in the vital circle, measured as twelve thumbs in extent from the center; a late view if this reading be accepted.\(^1\) Elsewhere the \textit{prādeṣa} is mentioned a few times in the epic, but never in such a way as to betray what is meant. It measures, for example, the difference in height between the Pāṇḍus and other men, and

\(^{1}\) Reading \textit{prādeṣamātram} we should have a reflex of Chānd. v. 18. 1; Mātrī, vi. 88. The Āditya Purāṇa, cited by Colebrooke, \textit{Essays}, vol. i. p. 539, says that Vyūṣa makes the \textit{prādeṣa} only one thumb-breath, and not ten or twelve, as taught by others.
between Bhīṣma and Arjuna, for "Bhīṣma in size was more by a span than Arjuna," pramāṇato Bhīṣmaṇaḥ prādeṣeṇā 'dhiko 'rjunāḥ, v. 51. 19, and (the same expression except for the instrumental case) in v. 169. 8, the Pañḍus are a span taller than all others, prādeṣeṇā 'dhikāḥ pumbhir anyās te ca pramāṇataḥ.

Another word for span is vitasti, whence the arrows "called span-long," vātastikā nāma, used only by special warriors at short distances in the descriptions of the late seventh book and nowhere else till they are met with again in the Harivaṃśa and in the later Rāmāyaṇa. Thus in vii. 191. 42 and in R. vi. 49 of the Gorresio edition, but not in the Bombay text. This is one of the many little indications that show how close Droṇa stands to the latest additions made to the epic. On the other hand, it helps to a terminus ad quem to find that haste is never used for a measure in the epic, though common in the Purāṇas, and reckoned as two vitastis or twenty-four thumb-breadths.

Cubits: The cubits mentioned are kīṣku, in vii. 134. 10, "a club of four cubits," and aratni, in i. 167. 25, "a bow (of Droṇa) of six cubits" (vātakīṣku and sañcaratnādhanaḥ, respectively, as possessive and determinative compounds). Post-epic authorities (cited by Colebrooke) make the aratni equal to twenty-one thumb-breadths, and two aratnīs are one kīṣku; though some reckon a kīṣku as equal to four cubits. In vii. 175. 19, both these names, as if synonymous, are united in the description of a demon's bow, "a twelve-cubit-bow a cubit round," vyaktāṃ kīṣkaparīṇāhāṁ dvādaśaratnikārmukam. Arjuna's bow, i. 189. 20; v. 160. 108, is as long as himself, tālamātra, "palm-tree tall," a common though indefinite measure, which according to i. 197. 39 is the height of all the Pañḍus. The five-cubit (kīṣku) bow of x. 18. 6 is allegorical but may indicate the usual length. Arrows are "axle-long," aksamātra, passim, and the añjālīku arrow mentioned in viii. 91. 41 is three cubits, tryaratni. A later form, ratni, is used in this same book. Here, viii. 72. 30, it is said that Karna was aṣṭaratnīḥ, "eight cubits" tall (in iii. 126. 32 a man "grew thirteen cubits," avar-dhata kīṣkūn trayodasa, but he was Maṇḍhātar, and enjoyed peculiar nursing). We might almost suppose that this so-called cubit, whether kīṣku or aratni, was really a foot, or about twelve inches instead of eighteen. For the actual length of
Hindu bows and arrows are for the ordinary bow five feet and for the ordinary arrow two and a half to three feet (Ruling Caste, pp. 270, 276), and both five and six "cubits" are the size of the epic bows, while the one arrow measured is given as three cubits, the heroes being a little above but not much over the normal height and only Karna being of eight ratnis. Even he is not extolled as a giant, as a man of eight cubits would be. "Palm-tree tall" and another phrase used of the heroes, cūla-stambhā ivo dyutaḥ, "lofty as Čīl trees," v. 169. 7, are more grandiose than exact. As the later schemes reckon the cubits in thumbs (or fingers), the twenty-one and twenty-four thumbs that go, respectively, to an aratni and hasta must be estimated by the size of a Hindu hand, which at present is rather small. Further, the relation between thumb-joints and span, reckoned as from the end of the thumb to the outstretched fore-finger, is given as twelve, which is too many, for the distance corresponds rather to the relation between the span and the finger-breadth. Reckoned as eight inches, a normal span, the later cubit would be nearer sixteen than eighteen inches and the ratni, being still shorter, would not be much over a foot. According to the Śuṣruta, a man’s height is one hundred and twenty thumbs, i. 126. 11, or ten spans, which at nine inches to a span would make the average Hindu seven and a half feet tall and at seven inches would still make him nearly six feet.

Foot and Pace: The measure by foot-pace is almost confined to a conventional "eight paces," padāni, often used in battle-scenes, but always, if I am not mistaken, in the same way, āplatu, or abhyetya, padāny astūn, as in vii. 15. 28; ix. 12. 20. Even a deer "went eight paces and then turned," tataḥ sa harino gatā padāny astūn na varata, xii. 273. 14. According to the Markandeya Purāṇa, cited by Colebrook, Essays, vol. i., p. 539, a padā is a foot-breadth and not a pace, being only half a vistār span or six fingers (thumbs). In the epic, as in "seven paces" in the marriage-rite, and in the colloquial phrase pade pade, "step by step," the word means a general pace-length or step. "Not a step" is almost equivalent to the French ne pas; for example, nā kampata padāt padam, "he did not budge a step" (at all), a common phrase, as in ix. 57. 46. The later epic has padakum padakāṁ gurāḥ, "step by step, slowly," xiii. 53. 35, and another passage has ekapadam in the sense of "in one word," iii. 313. 69.
Arms and fathom: Estimated at four or five cubits in later works, the vyāma, space between the outstretched arms, is used a few times, but only of trees and sacrificial appurtenances. A bough daśavyāma, ten vyāmas long, is mentioned in a repeated phrase, iv. 23. 21, etc., and a vedī daśavyāmāyata navalvedhā, "ten vyāmas long and nine high," in iii. 117. 12; while the circumference of a sacrificial post, as made in the good old days of marvels, is given as one hundred, yāpah śatavyāmaḥ puripāhena, vii. 68. 12. The divine discus of Kṛṣṇa is vyāmāntara, which the scholiast says is "five cubits, the space between the outstretched arms," prasāritayor hastayor yācān vistārak maṇe hastanaṁtah tāvat, v. 68. 2. It may be called in general (cf. ṣat. Br. i. 2. 5. 14, etc.) a sacerdotal measure, not employed in the tables, and, except for the measurement of trees, it keeps this character in the epic.

Rods and Bows: Another sacerdotal implement was the śamyā rod, the cast of which, according to the epic, measures the interval between the altars set up by a very pious man. The rod, according to the scholiast, is pointed at one end and has a thick knob at the other, and is thirty-six thumbs, two and a half statute cubits, in length. When one "sacrifices by the rod-cast," one goes around the earth sacrificing at intervals, which are measured by the distance a strong man can fling the rod, śamyā in the epic, or, according to the scholiast, sampā, from its fall, sampatati. The technical expression is śamyākṣepena (vidhinā) or śamyākṣepāḥ (devān yanāt), "sacrifice to the gods by the cast of the rod," iii. 90. 5; xii. 223. 24; xiii. 103. 28. The only varying usage is found in iii. 84. 9, where a Tirtha is described as being "six rod-casts from an anthill," sāsa śamyāni pāṭeṣu vālmikāt, but this is still in a sacerdotal connection. Measure by arrow-casts is confined to estimating time, as will be shown hereafter.

Bows are used for measurement, but the epic examples give no clue to the length, though later authorities reckon this as equal to a staff, danda, or four cubits, which must be regarded as the length of a bow (six feet). In the three epic cases, two forms of the word are used, dhanus and dhanu: "dragged eight dhanusī, i. 153. 40; "struck ten dhanvantavāni," viii. 83. 9; "land measuring one and a half thousand of bows," dhanusām, viii. 88. 10 (cited above, p. 137).
Vol. xxiii.]
Remarks on Numbers. 145

Yuga: This is said to be a measure of four cubits. In iii. 296. 10, *yugamātrodite sūrye,* "when the sun is up a *yuga*" (N. *yugain hastacatskam*), when the matutinal-rites are performed (*krtvā paurvāhnikih kriyāh*). I have not found the word elsewhere in this sense, and as a measure it does not appear to be an old term.

Nalva: I am not aware that the *nalea* or *nala* is an early term of measurement. In the great epic it is confined to the seventh book and to the mass which I call pseudo-epic, especially to the Hariyana. It is, further, not in the Rāmāyaṇa in its earlier form but it has been added to it in the later re-writing of that poem. The word epitomizes the gradual growth of the epic. The Bombay text has *nala* and *nalea*, but not without metrical reason for the choice. We find in vii. 70. 16 (the latest addition to the chronicles of kings), *vedim aṣṭamalotaśdhām*, which is repeated in xii. 344. 60. In the former case it is defined by the scholiast as four cubits; in the latter, as a finger, with *tala* as v. 1. Again, vii. 156. 58, *mahāratham triṇagannalvāntaraṇāram*, and, in a scene which in many points is a mere repetition1 of this, vii. 175. 12, *nalvamātram mahāratham*, which is repeated in 176. 15 (written *nulla* in these two verses in C.), but nowhere else till we get to xii. 29. 143, where, also in the chronicles of the "kings that died," we find that Prthu Vāinya gave to the priests *hāryanyāns triṇalotschedhān parvatān ekavīcātim*. It is interesting to see that the Drona account of the "sixteen kings," in adding the sixteenth, has taken from Prthu this laudation and inserted it in the next and last (lacking in Cānti). In vii. 62. 13, the phrase is *hāryanyān yojanotschedhān ayatān yatayojanam*, giving height and length. In the cases cited it will be observed that *nala* is not simply a *falsche Schreibart* (PW.), but a necessary metrical alteration (*nulla* alone being wrong). In xii. 154. 7, a tree is *nalvamātraparīnahāh* (where N. defines the measure as *hastānāṁ patacatusṣyam*, which removes the doubt expressed in PW. as to *caturhcatanam*), "four hundred cubits in circumference" (this attributes the greatest circumference to the tallest

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1 It repeats the preceding text, but *adhyāya* 175 is the original. Besides the one *nalea* raised to thirty in 156, we have the *cakra*, which in 175. 46 has still only 1000 spokes while in 156. 77 it has 100,000.

vol. xxiii. 10
tree known, the गोभति). A Kālāmra tree is योजनस्वेदह, vi. 15 (not a Dvipa, PW., but a tree that gives perpetual youth). A following stanza tells of another wonder-tree, estimated as being one thousand and one hundred leagues tall, which measures the उत्सेद्वा or height from earth to sky, vi. 7. 21. Its circumference is “of अवत्मि one thousand and hundreds ten and five” (2500 cubits).

Kroça: The kroça, Anglo-Indian koss, which means literally a “scream” and is estimated in later works as two thousand “bows” or a fourth of a yojana, is the usual number to indicate travelling distances, not in multiples but always as a koss, as if one always went just one koss unless he went at least as much as half a yojana (rare, ii. 2. 22, योजनारिद्धम अध पगव, in accompanying a departing guest) or a yojana, which latter is used for all long stretches. The almost universal use of yojana for this purpose rather than two or three koss would indicate that the yojana was shorter than is usually assumed. It is not often that a koss indicates height, but the examples below will show one case of mountains thus measured. For journeys, besides the use of the half-league in the example just given and the league, as in vii. 112. 12, इति त्रियः जनम मनोत अद्वीयाम... जत्र र्वाटिष्ठि, “I think it is a course of three leagues from here (to) where he stands,” we have in the following examples the regular (single) koss: iii. 271. 53, क्रोषमात्रायताँ अर्धत्रालिन; vii. 99. 9, रत्ने क्रोषम अतिक्रांतेः; ix. 29. 42, क्रोषमात्राः अपक्रांताः; xi. 11. 1, क्रोषमात्राः तत्तो गतव. In other measurements: vii. 103. 37, तत्तार्कर क्रोषमात्रेः सम- अताताः, “at a distance of a koss on every side.”

A great archer shoots a koss: “He seized several arrows and when he had fitted them to his bow quickly as if they were one, they fell at a distance of a koss,” क्रोषमात्रे विपद्वरी, viii. 79. 57; रत्नाभिषेक युगोऽ र्क्रोषम अस्याः पदव, vii. 99. 9. Mountains “raised a koss” are mentioned in vii. 65. 10, परवाताः क्रो- षम उद्विताः. Most of the other cases of the use of koss are quite as useless in helping to a determination of its real length. They are as follows: For a koss on every side around a beleaguered city the earth is broken up and mined, समातित क्रोषमात्रम, iii. 15. 16; ponds are of this extent, वर्याः क्रोषसमिताः, vii. 56. 7; the heroine can be smelt up to a koss, gandhaś cā 'स्याः क्रोषमात्रत प्रवति, i. 197. 36; kroṣit pradācāt, i.
167. 46 (see below on yojam). The only passage that seems to cast light on the epic measure is found in xiii. 90. 37, where speaking of the purifying effects of the men "fit for the row" and of the daçgapāruṣa (yś. 27), that is, a man tenth in descent in inherited Vedic wisdom (one who has nine generations of pious and learned ancestors), the poet says: "They purify as far as they see... even one such would purify to a distance of two and a half kossa," yāsad ete praṇaçyanti pañktyos tāvat punantu uta... kroṣād ardhatrīya ca (above, p. 133) pāsāyed eka eva hi. Here, as two and a half kossa are regarded as less than the limit of ordinary ability to see a person, and five and a half miles far exceeds this, it would seem that in the epic the kossa was not two miles and a quarter but nearer one mile, as is the estimate of the Vśuṇa Purāṇa (which ascribes to it, Colebrooke, loc. cit., four thousand cubits, a thousand bows, against the Āditya Purāṇa's estimate of eight thousand cubits), or, exactly one mile and one eighth rather than two miles and a quarter. This, however, is based on two surmises, first, that the "even one" clause introduces a restriction applicable also to the distance as less than that previously mentioned, which seems to me legitimate, and, second, that the expression "as far as they can see" means as far as they can see a person (that person becomes pure by being seen). This latter surmise also seems to me to rest on the intended meaning, though it is possible that the expression merely means as far as eyesight can reach, in which case the passage is as useless as the others.

Gavyūti: After the kossa comes the gavyūti, estimated by later writers as two koss. It is used in the epic to give distance, gavyūtīmātre nyavasat, "stayed at a distance of four miles," iii. 239. 29; and, in the bombast of the late book of Droṇa, the battle-array is estimated as extending twelve gavyūtis or forty-eight miles, dirgho dvādaçagavyūtih (pupā 'rdhe pañca vistṛtañ, and twenty in the rear), vii. 87. 22, a statement the more remarkable as the whole battle-field is only five leagues in extent, v. 195. 15. In vii. 87. 14 is found also the expression, gavyūtīnu trimātrānum (tiṣṭhatu). The gavyūti is seldom used for travellers, but often for stationary extent of hall, camp, and quiescent distance, as in xii. 125. 18, where a deer springs ahead, but stands a gavyūti distant, gavyūtīmātṛṇa, bānāpatham muktvā, tuṣṭhivān. At least, it is not till the
late "house of lac" scene, i. 151. 20, gavyātimātrād āgatya, "coming up to a distance of a gavyātī," and in the (also late) scene at (Gorresio) R. i. 79. 27, gatē gavyātimātrākam, that I find it with a verb of motion. This is doubtless because of its meaning originally a meadow, that is a field or acre, rather than a measure of length. According to Nilakantha, goyata is the equivalent of gavyātī, as used in xiv. 65. 22, goyute goyute-cāt eva nyavasat, "he rested (camped) at every gavyātī," designating a daily march retarded by the weight of treasure carried. In any case the term is a solecism. A march like this, by the way, is described as being made kramaṇa, step by step, "slow march," xv. 23. 16.

Yojana: The "yoking" called yojana, estimated at two gavyātī, four koss, eight thousand bows, and consequently sixteen thousand cubits in the Āditya Purāṇa, is reckoned in the Viṣṇu Purāṇa as only half of this distance, that is, as nine miles in the former and four and a half in the latter work (Colebrooke, loc. cit.), but in the Mārkaṇḍeya Purāṇa as four gavyātī or eight koss (cit. PW.). I shall render it league. It is the longest measure and is used in estimating extent of length and surface. As the syntactical construction of this word includes that of all the others previously mentioned, I have reserved the subject for this paragraph. The construction varies between adjective compounds in the modifying word, adjective compounds with yojana, and accusative (nominative) or ablative of extent, as follows:

i. 30. 23, sa tatāt gatsivasanī yojanāntaram ayataḥ kālant eva timātreṇa,

"in a short time he went a hundred-thousand league-interval," i. e. a distance (measured by) a hundred thousand leagues.

xiv. 9. 34–35: suhasanī dantānāṁ caturāya jāmanāṁ... daśastre vatsrāśa dve āśe yojanaṁ, "a thousand of hundred-league teeth... four fangs two hundred of leagues." i. 175. 43, tat śānyain kātyamāntam triyanaṁ, "the army was driven three leagues;" xii. 170. 15, itas triyanaṁ gatvā, "going three leagues from here."

ii. 7. 2: vistārā yojanavatām catur adhyārādham āyatā... panca yajnam anuvritītā, (a hall, sāhu) "one hundred leagues broad, one hundred and fifty long... five leagues high;" ib. 8. 2,
\[\text{"catayoganā vistārāyamamāṇaṃ bhāyasi ca 'pi, (a hall) "of a hundred-leagues, complete in breadth and height, and even more";}\] ib. 10. 1, thus in B:

\[\text{saabhā Vaiśravānī, rājan, catayoganām āyatā vistārāh saptatiś ca va yojanā 'visiṭṭhābhā,}\]

where C. has yojanāni sitaprabhā. C. has the right reading; the construction is "broad, seventy leagues" (in the nominative), and not "seventy were broadened" (leaving yojana to be construed as a Vedic form with saptatiḥ), for the construction throughout, as is customary with visiṭṭha and vistāta, is to make visiṭṭha agree with saabhā.

Ordinarily, the accusative, as in kroṣam uccṛitaḥ (above, p. 146), expresses the extent, and this may be assumed to be the construction when the form leaves the case ambiguous, as in the answer to the question, "How long is the road between the world of Yama and the world of men?" (given as) "between (etc., is) eighty-six thousands of leagues," Yāmalokasya ca 'dhvānaṃ antaram mānasasya ca kidṛśāṃ kim pramāṇaṃ vāi? saṇṭhitimārṣāni yojanañāni narādhipa Yāmalokasya ca 'dhvānaṃ antaram mānasasya ca, iiii. 200. 44 and 46. Here it is clear that the numeral is in the accusative, and it is probably governed, as is adhvaniḥ, by gaṇtaryam, as in the following: kiyaḥ adhvaniḥ asmaḥbhir gaṇtaryam imam idṛṣyam? etāvad gaṇamañān taiva, xviii. 2. 26 and 28: The locative may take the place of the accusative when the word "way" is used, as in xiv. 27. 3, kiyaḥ adhvaniḥ tad vaṣanam, "(on) how great a way is that forest?"

I do not find the nominative used to measure distance of movement (evidently because it is impossible to say one goes to a nominative) but only of stationary distance, that is, where no progress toward is implied. For example, one may not say the way is a kroṣah but only kroṣam by analogy with "one goes a kroṣam." But, as in the example above, one may say a hall is extended so much and use the nominative, because the word extended does not mean goes to that distance; but extended is broad, and this ptc. adj. is equivalent to the noun breadth.

\[\text{1 But kiyantaḥ kālam, ib. 5. 4. There is a passage, i. 126. 8, where adhvani appears as a neuter, prasannā dirghaṃ adhvānam saṃśṣiptam tad amanyata (N. supplies gaṇanaṃ).}\]
So in estimating the (stationary) height of a mountain one says that it is “upraised” so much in a compound preceding, as in śadyojanaśamucciritaḥ (Kālāsah), “a six-league-upraised” (mountain), iii. 139. 11; or that it is so many leagues, without anything to indicate that the numeral is not a predicate nominative, as in troyustriṇcataḥ sahasrāṇi yojanāni hiranyayāh, “golden (Meru is) thirty-three thousand leagues,” iii. 261. 8; yojanānām sahasrāṇi paṅca śaṃ Mālyāvan atba, “Mālyavat (is) five-six (eleven) thousands of leagues,” vi. 7. 29; or that it is “upraised” so many leagues in the nominative, as in

Meruḥ kanakaparvataḥ . . . se. tiṣṭhati
yojanānāṃ sahasrāṇi catuṣṭāditar ucchiritaḥ
adhistacet catuṣṭādīr, yojanānāṃ,
“golden Meru . . . (stands) eighty-four (nom.) thousands of leagues upraised, (and) under(-ground) eighty-four (nom., sc. thousands) of leagues,” vi. 6. 10–11.

Further, there is the one construction where, instead of saying that the height or breadth of a mountain is so much, one may employ partitive apposition with (apparently) a nominative (predicate), as in

aḍāḍaya sahasrāṇi yojanāni, viśampate,
ṣaṭ guṇān ca pārṇāni viśkambho Jambaparvataḥ
lārṇaṣya samudrasya viśkambho dvignāna smṛtaḥ,
“eighteen thousand leagues and six full hundreds the breadth (is) Jambu-dvīpa, and the salt sea’s breadth (is) recorded (as) twice as much,” vi. 11. 5–6. The ordinary construction in such a case is to prefix the number, if it is easily managed, as part of a compound, as in ādityaparvataṁ daṣyajamaniśvīram, “of ten-league-extent,” xii. 328. 23; or to put the dimension in an oblique case, as in

ekākānā yojanaśataṁ viśāḍyāṁataṁ samah,
“each (city was) one hundred leagues (of a league-hundred) alike in respect to breadth and length,” viii. 33. 19 (compare pramāṇāyāmataḥ samah, of a man, i. 223. 31); but with such

1 Here occurs a word rare enough in early texts to be noticed, mahāraja as gold(-colored people). Cf. JAOS., xx., p. 221 for hiraśya as silver.

2 For the meter. cf. No. 37 in the Čloka-forms of my Great Epic.
an unmanageable number as that above it is more natural to have the construction of the second part of the sentence a genitive, with the dimension in the nominative.

The locative gives the extent only when this is implied or conditioned by the context, as "on the way" (above) and in ekādaśa sahasrāṇi yejanāṇāṁ samucchitam, adho bhūmer sahasreṇa tāvatr eva pratigīhitam, (Mt. Mandara), "eleven thousand of leagues upraised, and supported on just as many thousands below the earth," i. 18. 3. So "at six-roil-casts from the anthill" (above, p. 144), is only a location of place, not of extension; also kṛṣṇamātre (p. 146).

Finally, in estimating distance to a certain extent, the ablative may be used with some prepositions to convey the notion of exceeding the limit, or simply, beyond, while the ablative alone or with ā indicates the limit itself up to which the distance implied extends. Of the first case an example is found united with the instrumental in

xii. 336. 9, Meru sahasrāḥ su hi yejanāṇāṁ
dvātriṣyaṁ ṛthaṁ karibhir niruktam,

"this (white island) is said by the poets (to be) from Meru more than thirty-two thousands of leagues" (by thousands more than thirty-two).

The antique expression mūlāt, "up to the root," is used, though rarely, both in this sense and in that of "from the root," that is from the beginning, but it is significant that the epic usually expresses the idea by a compound, as in

tataḥ samūlo kriyate madikulād iva drumah,

xii. 95. 21; or it is paraphrased, for example, na mūlāghātah kartavyah, xii. 268. 12. Moreover, in words expressing distance, the examples leave it a little doubtful whether the ablative means "from" or "up to," but by analogy with the same phrase with the preposition it would seem that the latter idea was that of the simple ablative. Thus, to express the idea of a smell extending a koss we find kṛṣṇamātraḥ pravātī and kroṣāt

1 Of course I omit idioms which may be translated to give extent without really expressing this, such as brahmāṇāṁ trānteṣu bhūteṣu parivartate, "pervades all beings from Brahman to grass," iii. 2. 72 (a common phrase).
pradhāvatī (above, p. 146); tasyās tu yojanād gandham ajih-
ranta narā bhucī, i. 63. 82; āyojanasugandhin, i. 185. 21; and,
in the province of sight, yojanād dadṛṣe, ii. 24. 22; āyojana-
sudarçana; and finally, a with the ablative, as in locanāir anu-
jagnus te tam a drṣṭipāṭhāt tadā, “then they followed him with
the eyes up to the limit of their vision,” ii. 2. 26. As with
time-words, yāruc is also used, yāvac ārmanavatī, “as far as
the river,” i. 138. 74.

Another reason for taking the ablative as one expressing
the limit up to (rather than the origin) is that it thus offers a perfect
parallel to the use of the ablative with time-words, for, as I
shall show in the next section of this article, the idea of a simple
time-ablative expressing the time after which any thing occurs
is erroneous, though this is the only explanation of this ablative
given by Speyer (and adopted by Whitney). On the contrary,
the time-ablative, unless expressly accompanied with ārdhām
or its equivalent in the sense of “beyond,” always indicates
time up to the limit expressed by the ablative, and so the
extent-ablative indicates the extent up to the limit expressed by
this case. With adhi the ablative means above, over.¹

When the name of a dimension is given, it is usually com-
pounded with the number, and this has led Speyer in his excel-
 lent Sanskrit Syntax, § 54 a), to remark that “when naming
the dimension of a thing one does not use this accus. [of space],
but avails one’s self of bahuviḥri compounds.” With few
exceptions this is quite correct and as a general rule is perfectly
unimpeachable. Thus in iii. 82. 107:

ārdhāyojanavistārā pañcayojanaṁ áyatā
eçāvati Devikā tu,

“of half-league-breadth, five leagues long (extended)—such is
the size of Devikā.”

vii. 66. 16, sattriṅcayojanaṁyānāṁ triuṇcayojanaṁ áyatā
pravāt paraç caturciṅcād vedi bhād dhirānmayi,¹

¹ I take yojanād adhi in C. ii. 619 in this sense, but B. 14. 54 has yojā-
nāc adhi (triyojanāyataṁ sudma triskhandhān y. a.), and PW. inter-
prets C. as “a Yojana high.” This preposition, by the way, is used (in
a way not recognized in PW. or pw.) with gen. of place, in H. ii. 79.
12, sapatnīnam adhi niyam bhaveyam, “over my rivals.”²

² C. has pācvīçad, cl. 2,349, which inverts the ratio and makes
áyatā, length, into breadth.
"of thirty-six-league-length, thirty leagues broad (extended), in the rear (and) in front twenty-four (leagues), was the golden "vedi."

This arrangement, by which one member is made a compound of the noun of dimension and the other has the participle, is quite a favorite. The following example illustrates it again, together with another illustration of the extent given by a number-word, apparently in the accusative:

xiv. 58. 33, ṛta hi nāgaloka vāi yojanāṇī sahāraṣṭaḥ,
"from here the dragon-world (is) leagues by the thousand;"

ib. 37 and 40, nāgalokāṁ víveśa ha, dadasrā nāgalokāṁ ca yojanāṇī sahāraṣṭaḥ . . . dhvārin sa dadasrā pañcayojana-vistāraṁ ayatāṁ yatayajanaṁ, "he went to the dragon-world, and he saw the dragon-world, leagues by the thousand . . . and he saw the five-league-size gate, a hundred leagues extended."

Another example of the exceptional usage, whereby when naming the dimension of a thing one uses the accusative, is given by this case:

xii. 282. 7–8, (dadasṛ) Vṛtraṁ dhīṣṭitam parvatopanam, yojanāṇāṁ yatāṁ ārdhraṁ pañcānām, arindama, yatāṁ viśtaṇāṁ 'tha tryaṁ ca 'bhṛadhikāṇā vāi, "he saw Vṛtra stand like a mountain five hundreds of leagues upraised on high (tall), and three hundred more in extent."

When two dimensions are given, they may follow adverbially, as in one of the examples above and in xii. 339. 9, yatayajana-vistāre tryaṁ ārdhraṁ ca, "hundred-league-extent (peaks) transversely and up," that is, two peaks having this extent in both directions; for viśta, viśṭra is extent in general (ākhyānam bahūvastaram, "a long story," vii. 52. 37; yatayajana-and anukyujana-vistāraḥ, of ocean. "leagues broad," iii. 282. 59 and 45), and may even limit, as a general term, āyana, which is always length, as in (dṛṇyajanamānamsauṣṭhadā) yojanāyā- mahāviṣṭorā, "(two leagues high and) a yojana-length-extent weapon," vii. 175. 97 (not in C.).

This last sentence (compare also the nādra citations, above, p. 145) gives the regular word for height, which is construed in compound form, as here and in i. 29. 30: saḥ viśṭra yojanāṇi yajas tadārghūyaḥ yātāḥ kāryas tryaṉavajjukha daṇḍaṇayaṇa-
"an elephant six leagues upraised and twice as extended; a three-league-height and ten-league-circle tortoise" (in English, three leagues tall and ten round).

ON π.

Although no word in the epic expresses the relation between the diameter and the circumference, yet this relation is given in figures, as applying to the size of the sun, the moon, and the "planet" that swallows them, the moon being rather larger than the sun. The account of the size will be found at vi. 11. 3 (Rāhu); 12. 40 ff.: of the cause of eclipse, i. 19. 9 (rāhu-mukha). The relation between the diameter and the circumference differs inversely according to the size of the object, the greatest circle having the smallest ratio. Of the three heavenly bodies, Svarbhānu or Rāhu (the devouring planet) is circular, parimāṇḍala, no less than the moon and the sun, so that π can be established in this case as well as in the others. Its diameter, vīktoradhā (breadth), is twelve thousand leagues, gōma-s, and "in its circumference and extent," parināhena vipulatena ca, it is "thirty-six thousand sixty hundred" or 42,000 leagues, as say the Pauranic sages, budhāh pārāṇikāh. The moon’s diameter, vīktoradhā, is eleven thousand and its circle, maṇḍala, is thirty-three (thousand) and "sixty-less-one" (hundreds, given in the text as the vīktoradhā, but this must be parināha, as in the preceding case), making the sum in thousands (33) and in hundreds (59) equal in all to 38,900. The sun in diameter is "eight thousand and two more," ange, and its circle is equal to thirty (thousand), maṇḍalanī triṇγatā samanam, and fifty-eight (hundred) in extent, vipulatena, or 35,800. Thus (instead of π=3.1416):

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1 This is not strange. In fact, the full moon in India on a clear night certainly looks larger than the sun even when the latter is on the horizon. Especially at the end of a dusty day; when the moon seems twice the size even of the harvest moon of this country. But this is not the only reason for the great size attributed to the heavenly bodies as compared with that assigned by the Greeks. Even the stars are regarded as huge worlds "because though small as lamps in appearance they are so far removed" (the passage is given in my India, Old and New, p. 59. from iii. 42).
Rāhu, 12,000: 42,000 \( \pi = 3.50 \)
Moon, 11,000: 38,900 \( \pi = 3.53+ \)
Sun, 10,000: 35,800 \( \pi = 3.58 \)

There is nothing to indicate that the \textit{yojana} here used is the special astronomical \textit{yojana} of later works. According to the Sūryasiddhānta, iv. 1, the sun's diameter is 6,500 (astronomical) \textit{yojanas}, and the moon's is 480, while \( \pi \) in that work is 3.1623 and 3.14136, according to circumstances (Whitney's notes, \textit{J.A.O.S.}, vi. pp. 183 and 201). A little later, in the fifth century, Āryabhaṭa (Thibaut, \textit{Astronomic}, etc., p. 75, in Bühler's \textit{Grundriss}) knew that \( \pi = 3.1416 \), and it seems grotesque enough that even an epic poet could give such statements as those made above, if he had an approximate notion of the true relation. For it is not as if the author carelessly (poetically) said that the sun's circumference is about three and a half times its diameter. The numbers are given in detail for three different circles and show that the calculation had been made in each case. But any boy with a string and a tree-stump could get nearer to the true ratio than 3.5.

[To be continued.]
A Phoenician Royal Inscription.—By CHARLES C. TORREY,
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In the summer of the year 1900, a number of stones, bearing
the same Phoenician inscription in somewhat varied form, were
unearthed near Sidon. They formed part of an extensive ruin,
the existence of which had been unsuspected until accident
brought it to light.

The locality is somewhat less than two miles north of the
modern city, half way up the slope of the hills, which face the
sea and are here about half a mile distant from it. At this
point the Auwaly river breaks through, and the hills rise very
abruptly from it, especially on the south side, where the ruin
just mentioned was discovered. It has long been known that
large buildings of some sort must have stood in this neighbor-
hood, for great blocks of hewn stone have been found, in con-
siderable number, on either side of the river. The bridge
which crosses the Auwaly here is built in part of such blocks,
the position of the marginal draft on some of them showing that
they were not originally intended for their present place.

There is good reason to believe that the ancient city of Sidon
extended far beyond the limits of the present city, especially to
the northward. Indeed, we have some evidence that it reached
even to the locality just described. The geographer Dionysius
Periegetes (third or fourth century A.D.) says of Sidon, in an
oft-quoted passage, that it was situated "on the Bostrenus."
It is quite beyond question that the Auwaly river is here meant,
but few in modern times have been disposed to believe that the
old city actually extended so far; see, for example, the article
"Bostrenus" in the new edition of Pauly's Real-Encyclopädie.
It is quite possible, however, that the statement of Dionysius
was literally accurate; at any rate, the evidence now brought to
light must re-open the question.

The discovery of the inscriptions was on this wise. Work-
men engaged in removing the stones of a large wall which had
been partially uncovered came upon a block with an inscribed
face. No sooner had this been removed than another, similarly
inscribed, was found. Others followed, until (as was reported) five in all had been taken out.¹

Happening to be in Sidon soon after this, in the fall of 1900, and hearing of the discovery of the inscriptions, I visited the spot several times, and also managed, after some difficulty, to get sight of one of the inscribed stones—the same one which is reproduced in the present article, though its two pieces were then in different localities, and it was not until some time later that I was able (thanks to the help of Professor Jewett, of the University of Minnesota) actually to get possession of it. A rather poor squeeze made from one of the other stones gave valuable help. The inscription presented the usual proportion of difficulties, though nearly every letter could be made out with tolerable certainty. All its most important features, however, were plain at the first glance. The building from which the stones had been taken was a temple, built and dedicated to the god Ešmun by Baš-‘Aštar, King of Sidon, “grandson of King Ešmun’azar.” The points of contact with the Ešmun-‘azar inscription were also sufficiently obvious, and seemed to furnish a clue to the relative position occupied by this king Baš-‘Aštar in the Sidonian dynasty already partially known. The new inscription thus proved to be one of no ordinary importance.

As for the temple-ruin, the little that could be seen consisted of portions of two parallel walls running east and west. Each was built of nearly cubical blocks of limestone, from three to four feet in thickness. The upper wall consisted of two courses of stone; that is, was seven or eight feet in thickness. The lower wall, perhaps fifty yards further down the slope of the hill, was still more massively built. The whole edifice, thus solidly constructed, and of such imposing dimensions, was situated just at the turn of the mountain, where the river valley opens out into the narrow maritime plain. It is an ideal site for a temple, the outlook embracing a wide strip of the sea, the picturesque river below, and the whole extent of the deep valley beyond; it is, moreover, the one spot near Sidon where a comparatively unobstructed view eastward is to be had.

I was unable to gain sufficiently exact information as to the position of the inscribed stones in the wall (it was the lower

¹ Regarding the subsequent discovery of a sixth stone, see below, p. 178.
wall) where they were found. Of this, however, I was repeatedly assured by workmen who had seen them *in situ*, that they occupied no typical position, but that the inscribed face was sometimes uppermost, and again beneath, or on one of the perpendicular sides. All five were found very near together, the blocks containing them being of the same general shape and size as those already described, and situated in the core of the wall, so that no one of them could have been seen when the edifice was completed.

The inscription was not exactly the same in all cases. On two of the stones it was practically identical with the one which I was so fortunate as to secure; the only differences, so far as I could ascertain, being due to peculiarities of orthography, or to the carelessness of the stone-cutter. My knowledge of one of these two (which I shall cite, for convenience, as Inscription B) was gained from an imperfect copy—not a squeeze—made by one who was quite unable to read the inscription; the other—the one from which the squeeze above mentioned was made—I was permitted to see on one occasion, but only for a moment, not long enough to enable me to study it, or even to make a hasty copy. This latter inscription, a very carefully executed and well-preserved specimen, exhibited one or two forms of letters which were so peculiar as to lead me to doubt its genuineness; these doubts I have since withdrawn, however, and shall have occasion to refer to it (citing it as Inscription C) once or twice in the sequel. On a fourth stone (Inscription D)—to judge again from a single copy—the wording was somewhat abridged; moreover, in this case just half of the inscription was missing, and it was evident that it had originally occupied two adjacent stones, in two long lines and the beginning of a third, instead of filling five or six lines on a single stone. Regarding the fifth stone which was reported to have been found I could gain no information at all. Possibly it may have contained the missing half of the two lines just mentioned.¹

It remains to describe the stone containing the inscription (designated as Λ) which is published and commented upon in the following pages.

¹ All of these stones were "on the market," and at least two of them had left Sidon before my arrival. I do not know what has become of any one of them excepting the one which I myself purchased.
It is a slab of soft limestone, three and one-half feet in length, one foot and eleven inches wide, and five inches thick. It seems to have been sawn from one of the blocks described above as forming the building units of the temple, and to have been accidentally broken in the process, so that it now consists of two pieces, which join fairly well. Fortunately, this break has not obliterated any letters which cannot be supplied with certainty. In the lower right-hand corner, a piece which contained several letters or parts of letters has been broken away. The surface of the stone is not evenly weathered, but is somewhat more worn towards the left side. For this reason, a number of the characters on the smaller piece are nearly obliterated, while those on the larger fragment are for the most part very distinct.

The inscription is in four and one-half lines, the number of letters to the line varying between nineteen and twenty-four. The end of the line happens in each case to coincide with the end of a word. The characters used are of a type identical with that which appears in the inscriptions of Tabnit and Eshmun'azar. The only letter whose shape seems to deserve special mention is the 𐤇 which stands at the beginning of the fourth line. So far as its form is concerned, it might well be a 𐤇 (though somewhat long, and with not quite the usual slant); but if I am right in my understanding of the passage, the letter is a form of 𐤇, differing but very slightly, after all, from the one which is seen at the end of the first line.

The workmanship is generally very good, though occasionally a trifle careless. The letters were originally colored with red paint, which still appears very distinctly in the better preserved parts of the stone, and can often be found by lightly scratching the surface in the more weathered portions.

The text of the inscription follows. Letters destroyed either wholly or partially by the accidental breaking of the stone are indicated by square brackets [ ]; letters which cannot be clearly made out or which for any reason should be designated as uncertain, by a dot placed above above.

1 In the parallel inscriptions, on the other hand, it happens in several cases that a word is divided between two lines.
A Phoenician Royal Inscription.

This I should divide as follows:

מלך בר אשתראת מלך זרענא בן בן מלך
אשעמעackages גאולה זמקד בן
שם רומ אדר חינש המסחל בן
לזר נש פאיה בן בני
לאשמecha קיוש

Translation. 1

The king Bad-‘Astart, king of the Sidonians, grandson of the king | Ėšmun‘azar, king of the Sidonians; reigning in Sidon-on-the-Sea, | High Heavens, [and] the Rēseph District, belonging to Sidon; who built | this house like the eyrie of an eagle; (he) built it for his god, | Ėšmun, the Holy Lord.

Commentary.

Line 1. Regarding the name Bad- (or Bod-) ‘Astart, בר אשתראת “Offshoot (or Branch) of Astarte,” see Lidzbarski, Handbuch der nordsemnitischen Epigraphik, p. 134, note 4. A king of Sidon bearing this name is known to us from the inscription CIS. I 4. On the question whether our king is to be identified with this one, or with either “Strato” mentioned by Greek writers, see below.

The word מלך, in the middle of the line, is entirely broken away.

זרענא as usual for the people, or the political unity (as almost always on the coins of Sidon, for example); for the city itself,

1 It is hardly necessary to say that this translation is offered as an attempt, not as the final solution. No one can realize more keenly than I the uncertain character of many of the conclusions which are reached in the following pages.

Or, ruling over.
so in lines 2 and 3—in the latter case, the city inclusive of its outlying districts. The letters of the word are all distinctly legible.

ם. Grandson of King Ešmun‘azar.” The very same words in the Ešmun‘azar inscription, line 14. As will soon appear, the coincidence is not merely verbal, but the same king—the one known to us as Ešmun‘azar I.—is meant in both inscriptions. It is unfortunate for us that Bad-‘Astart should have omitted to give the name of his father. It would not be difficult to imagine a plausible reason for the omission, even if we suppose the father to have been King Tabnit. It is possible, however, that the latter was the uncle of Bad-‘Astart, not his father. See further below.

Line 2. יִבְצרמ. In Inscription C, this is written יִבְצרמ. that is, this text affords us a new example of the rare form כ of the preposition כ, a fortunate circumstance. It is plain that יִבְצרמ is the equivalent of the phrase יִבְצרמ, which occurs twice (lines 16 and 18) in the Ešmun‘azar inscription. In the latter passages, there is nothing to show that the phrase meant anything more definite than ‘the parts of Sidon adjoining the sea.’ In the new inscription, on the other hand, if my reading of it is not erroneous, three separate and definite districts “belonging to Sidon” are mentioned by name; and in such a way as to imply that these three districts comprised in themselves all the territory properly included within the limits of the city. The name “Sidon-on-the-Sea,” as the designation of one (and apparently the principal one) of these districts, suggests first of all the cape on which the modern city stands. Here, of course, was the citadel, and the most important part, of the ancient city, and it is highly probable that this was the יִבְצרמ of our inscriptions. The district bearing this name may, however, have included also an adjoining portion of the maritime plain; see further below.

Line 3. An extremely interesting phrase, especially because it at once suggests the problematic יָשִׂים

1 For a third (probable) variation of this phrase, see below, page 172.
2 The reading of Inscription C is noteworthy here. In the second כ of יָשִׂים, the shank of the letter slants sharply to the right, and the top has a somewhat unusual shape: the resulting character does not closely resemble any known Phoenician letter (it certainly is not כ).
of the Ešmun‘azar inscription (lines 16 and 17), with which it is certainly to be connected. As the name of a district—which seems to be absolutely required in the Bad-‘Astart inscription—it can only have designated the heights just back of Sidon, including probably in that case a strip of hill-country extending as far northward as the city itself extended. The name “High Heavens” is a fanciful one, it is true; but abundant parallels in this regard can be found among Semitic place-names. Regarding the use of the twice-repeated דָּרוֹן דָּם in the Ešmun‘azar inscription, I confess to some perplexity. This much, indeed, seems now to be established by the new evidence, that the letters are to be divided in the way just indicated, דָּם being the noun, “heavens,” and דָּרְון (דָּרְון) the attributive adjective, “glorious, mighty.” Two difficulties seem to stand in the way of regarding this phrase as merely another form of the name given by the Sidonians to the hill-district of their city: (1) We should expect the form of a proper name such as this to be fixed, not variable; (2) the meaning “hill-district,” while it suits the context admirably in Ešm., line 17, does not, at first sight, seem to be in place in line 16. But these two difficulties are more apparent than real. As for the variation in the form of the name, such unstable usage in the case of local designations is very frequently met with, especially where the name has been only a short time in use, as may well have been true in this case. It is possible, of course (though the supposition is not a necessary one), that the district was first named in this way in the time of Bad-‘Astart, and that the adjective דָּרְון, “high, lofty,” was very soon improved to the more high-sounding דָּרוֹן, “glorious, mighty.” As for the context of the word in Ešm., line 16, the whole passage (lines 16, 17) runs as follows: “It was we who built . . . .”

Moreover, in דָּרְון the second letter is not ד, but ד. These singular variations, with the reading ד for ד in line 4 (see below), and one or two minor peculiarities, seemed to me at first to prove beyond question that Inscription C was a forgery. I am inclined now to think that even such blunders as these may have been possible for a Phoenician stonecutter. My copies of B and D (untrustworthy, to be sure) both give דָּםיךְ.

1 Compare the use of this adjective in Ešm. line 9, Ma‘ṣūb line 6.
2 The variation between ד ד and ד ד in these same inscriptions, is a somewhat similar case.
the temple of ‘Aštar in Sidon-on-the Sea, and who made ‘Aštar
to dwell in לְשֹׁמֶךְ דָּרוּאָר; and it was we "who built a temple to
Ešmun . . . in the mountain, and made him dwell in לְשֹׁמֶךְ
דָּרוּאָר." At first sight, one temple only seems to be thought of
in line 16, as only one is intended in line 17; and in that case,
דָּרוּאָר could not be the name of the hill-district. But
the wording in line 16 is not quite parallel to that in line 17;
notice the repetition of the name ‘Aštar. It is more probable
that two temples are intended in line 16, one in the sea-district
and another in the hills overlooking the city. Recollect that
the mother of Ešmun‘azar was a priestess of ‘Aštar; it must
be borne in mind also that the verb בֵּית in such passages as
these may be a technical term referring to some special cere-
mony, which might have the nature either of the dedication of
a new building or of the re-dedication of an old building. In
view of all these facts, it seems to me that no other theory can
hold its ground against this one, that לְשֹׁמֶךְ לְשֹׁמֶךְ and לְשֹׁמֶךְ
לְשֹׁמֶךְ are merely slightly differing forms of the same phrase,
which is everywhere to be regarded as the proper name of the
hill-district included in the city of Sidon.¹

ךֶשֶׁבך, "The District of Rešēp (or Rešūp)." If the
designation בֵּיתך included merely the cape where the modern
city stands, it is easy to determine the position and the approxi-
mate limits of theךֶשֶׁבך. It could only be the region
lying east and north of the cape, the strip of nearly level plain
between the mountains and the sea, running northward perhaps
as far as the Auwaly river.² We should then have three dis-
tricts which are topographically very well defined, and which
would comprise all the territory that we know to have been

¹ Why the word לְשֹׁמֶךְ should have been chosen, in naming this dis-
trict, it is perhaps useless to conjecture. Flights of fancy are not
easily followed. But the use of the adjective דָּרוּאָר seems to show
that the meaning of לְשֹׁמֶךְ in the phrase was neither simply "skies"
or "heights." Perhaps the region was thought of as being in an
especial degree the "abode of the gods." It would be strange, indeed,
if it had not contained a number of conspicuous temples. And
finally, it is quite possible that the designation was very short-lived, and
employed in its day chiefly by the members of this royal family.

² This region is now occupied, for the most part, by the famous
orange groves of Sidon; but traces of the old city are still to be found,
here and there, if the spade goes far below the surface.
included in the city proper. The plain to the southward seems to have been used only as a burying-ground. It is, of course, possible that the term ב [741] תור included more than the cape; on this supposition, any attempt to determine the limits of the three districts must be fruitless.

The crack passes directly through the letter ב, so as to efface the perpendicular stroke across the top line. I have therefore marked it with a dot, although the reading is practically certain.

Of the two dotted letters, the first is entirely gone, but the hole in the stone is of such a shape and size as to show that the missing character must have been either ש or נ. The ב following is practically certain, for the horizontal line, with the angle at the left, remains distinct, and it is quite plain that the letter was not continued downwards. My copies of B and C both read ל here; in D, this part of the inscription is missing. Compare the use of הבש (participial noun, as here) in Esm. line 9. The word is evidently to be connected with the preceding, not with the following; יִבְשָׁנָה begins a new clause. The preposition ב in [742] תור (line 2), whose force extends also over the following names of the Sidonian districts, may be either the preposition of place, "ruler in Sidon-on-the-Sea, &c.", or the complement of the verbal idea, "ruling over" these districts.

My copy of C reads נ in the place of these two letters, and this reading seems to be confirmed by the squeeze. But the squeeze is quite untrustworthy at this point; and as my copy was made from memory (see above) and before I had translated this part of the inscription, the variant reading deserves little confidence, especially as both letters are perfectly plain on stone A.

Line 4. הבש. On the form of the הבש, see above, page 160. In what follows, נ might be read (twice) instead of נ, but no plausible reading would result, so far as I can see. On the other hand, the comparison of this temple, perched in its commanding position on the spur of the mountain, with "the eyrie of an eagle" would be a happy one, though something of an exaggeration. הבש is probably הבש (or הבש), "rock," so that הבש נ is the rock or crag where the eagle dwells.

The letters are somewhat widely separated, but all three are very distinctly legible. In place of the נ, Inscription
C gives distinctly and unmistakably ה, the upright stroke of the character being unusually long.

ג. If I have divided the text correctly, this word begins a new clause, the preceding noun מם being the direct object of the הב at the end of line 3. The object is then understood with the verb in line 4. Inscription D ends with the words ריא ובין, which stand at the beginning of line 3 (the preceding words, in the second half of line 2, are missing; see above).

יִנ. The י is hardly legible. All this portion of the stone is very much weathered.

Line 5. [ץ usaמ]. The י is almost entire, and the upper part of the מ is preserved; both letters are unmistakable. The remaining space at the beginning of the line was of course occupied by the two characters נל.

שְׁרָה. An accident to the stone has somewhat obscured the lower part of the י. י is probably ר, "lord," though the word has not been found elsewhere in Phoenician inscriptions. שְׁרָה might be either adjective or noun (as usually in Hebrew), but is probably the former, whose plural occurs in the expression מִלְאָנָם כָּרָה, "holy gods," Esm. 9, 22. Finally, the whole phrase, מִלְאָנָם שָׁחָה יָשַׁר, finds an extremely interesting and important parallel in the passage Esm. 17, where the reading given by Lidzbarski (Handbuch, p. 418) is מִלְאָנָם יָשַׁר יָשַׁר. It would be obvious, even without further evidence, that the Bad-‘Astart inscription furnishes the true reading of this hitherto doubtful passage; there is, however, additional evidence sufficient to prove not only the identity of the two phrases, but also to show that one and the same temple is mentioned in the two passages, as will appear in the sequel.

Several noteworthy verbal coincidences with the Esmun‘azar inscription have been pointed out in the preceding pages; and when it is remarked in addition that king Bad-‘Astart styles himself a "grandson of Esmun‘azar," רַבּ מִלְאָנָם, the probability becomes very strong that we have found a new member of the famous dynasty. Fortunately, however, the evidence is such as to lead to much more definite conclusions, and the value of the new inscription is enhanced accordingly.
As has already been observed, above, it is the passage Ešm. line 17 which affords the all-important point of connection with our inscription. The full text of the passage is as follows:

ואפגן את בן בָּתָלךְ זָרָא שַר קָרָשׁ עַן רֵילְלָא בַּרְאֶר שֶׁמֶשׁ אֲרָכָּה; "And it was we who built a temple to Ešmun the Holy Lord, by the spring רֵילְלָא, in the mountain, and made him to dwell in [the district] שֶׁמֶשׁ אֲרָכָּה." The detailed manner of the description of this particular temple is noticeable; and it is a fortunate circumstance for us, for it enables us to recognize with certainty in this house for Ešmun, of which the queen-mother Em-(or Am-)'Astart, speaking for herself and her dead son, says, "we built it," the very same temple whose ruin now stands on the hill above the Auwaly river. The coincidences already noticed, that the temple was in each case "in the mountain" and dedicated "to Ešmun the Holy Lord," might not be sufficient of themselves to put the identification beyond question; but when the remaining item of the description, the mention of a "spring" רֵילְלָא; however the second word of this phrase may be translated), is added, the proof is quite conclusive. There is only one spring of any importance in all the mountain district adjoining Sidon, and that one is on the hillside near the Bad-'Astart ruin. It is about two hundred yards distant, in the direction of Sidon, in a recess of the mountain slightly below the level of the temple, and in full view from it. The fountain itself is now quite concealed from sight, for it lies well below the surface of the ground, and its waters disappear at once, but reappear a dozen paces to the northwest, where the mouth of a tunnel, now hidden by bushes, is seen in the hillside. From this point the waters are led by a remarkable subterranean aqueduct straight through the mountain to the gardens of the city.\footnote{I could see nothing to indicate that the fountain itself had its origin in a similar tunnel-aqueduct, but this may possibly have been the case, water being conducted hither from some point on the Auwaly far to the eastward. Supposing this to have been true, the present argument would not be affected, for the juxtaposition of artificial spring and temple would be the best of evidence that the aqueduct was of Phoenician origin. It may be that the problematic לְאַחְיָא contained some reference to this most important bit of engineering. Is it not possible to fall back on the Arabic לֹא, "lead, conduct," and interpret לְאַחְיָא?}
The temple on the "Bostreus", then, is included in the list of buildings claimed by Em-‘Aštart and her son. It is of course beyond question, however, that Bad-‘Aštart, and not Ešmun-‘azar II., was the one who built the house; or rather,—to speak accurately,—that he was the one who began the work and carried it on for some time, whether he finished it or not. It follows, that the reign of Bad-‘Aštart came between those of Tabnit and Ešmun‘azar II.; in all probability, his was the only reign in that interval. The time during which he occupied the throne must have been brief, probably only a few years, for we know that Ešmun‘azar was quite young (perhaps a mere boy) at the time of his accession. It is perhaps most likely that Bad-‘Aštart was the elder brother of Ešmun‘azar, though he may have been his half-brother, and possibly was not the son of Tabnit at all. Supposing him to have been the son of the last-named king, we should gain at least one more bit of information as to his personal history. King Tabnit himself died in middle life; and even his eldest son must have been a young man at the time of the father’s death.

"fountain that is conducted," "conduit-spring"? We could then compare the name of the Jerusalem aqueduct, כּוֹדֶשׁ.

1 In this case, the fact that Bad-‘Aštart omits the name of his father in the inscription would receive a probable explanation, namely, that the latter never occupied the throne.

As the evidence on which this statement rests is not generally known, I subjoin it here: When the sarcophagus of Tabnit was exhumed, in the year 1887, and the lid was removed, the body of the king was found to be in a very good state of preservation. It was lying in a brownish-colored, somewhat "oily" fluid, which nearly filled the sarcophagus. The eyes were gone: the nose, lips, and the most prominent part of the thorax, which had not been covered by the liquid, had decayed away; in other respects, however, the corpse was like that of a man only recently buried. It was but slightly emaciated; plenty of flesh remained on both face and limbs, and the skin was soft to the touch. The vital organs and viscera had not been removed (a noteworthy circumstance), and were perfectly preserved. Dr. Shibly Abela, of Sidon, a physician of education and experience, remarked that the face showed traces of small-pox; it was not apparent, however, that the king had died of that disease. The color of the skin was described as somewhat "coppery," the tinge being perhaps due to the influence of some substance, or substances, held in solution by the enveloping fluid. The fluid itself may have been partly, or even wholly, rain-water, which finds its way into most of the tombs about
As for the assertion of Em-‘Astart, “We built” the temple, it may be explained in more than one way. This daughter of Ešmun‘azar I., and priestess of ‘Astart, may well have co-operated with the young king Bad-‘Astart in this undertaking (especially if he was her own son), or even have been the moving spirit in it. More probably, however, the words of the epitaph are literally true, the fact being that Bad-‘Astart died before the work was finished, whereupon the queen-mother and her son completed the building and inducted the god Ešmun into his new abode.

The genealogical table of the Ešmun‘azar dynasty, as now known to us, would therefore have the following form:

```
Ešmun‘azar I.
   /\                  /
  /   \                /
Tabnît   Em-‘Astart  Ešmun‘azar II.
   \             /\      /
    \         /   \    /
      Bad-‘Astart
```

It is an interesting question, whether the name of this same king Bad-‘Astart is known to us from any other source. Neither one of the two kings mentioned by Greek writers under the name “Strato” (Στράτω) can be thus identified. The first of these was the well known friend of the Athenians, who reigned in the first half of the fourth century B.C. The length and character of his reign would ill accord with what we know of the brief career of young Bad-‘Astart. The date of this

Sidon: but in any case it is evident, from the facts just given, that the body of the king had been skilfully embalmed. I do not know that any similar case has ever been observed and reported. After the body had been removed from the sarcophagus and exposed to the sun, it decomposed and shrunk to withered skin and bones in a very short time.

My chief authority for these facts is the Rev. William K. Eddy, of Sidon, a keen observer and cautious reporter, who was one of the few who saw and touched the body of Tabnît when it was first exposed to view. Mr. Eddy was positive in his opinion that the king, at the time of his death, had not passed middle life; the face, he thought, was that of a man of less than fifty years of age.
Strato, moreover, is probably more than half a century earlier than that of the Esmun‘azr dynasty—though this is a matter still in dispute. And finally, if the Delos bilingual inscription (CIS. I 114) can be admitted as evidence,¹ the Phoenician name, of which Σρπάτων was the accepted Greek representative (not ‘corruption’), was in this case not Bad-‘Aṣṭart, but ‘Abd-‘Aṣṭart.

The other “Strato” named by the Greek writers is the monarch who was reigning in Sidon at the time when Alexander the Great invaded Phoenicia, and who was deposed at that time. It is plain that this king, also, may be left out of account here.

In the Phoenician inscription CIS. I 4, on the other hand, it is quite likely that we may recognize our temple-builder. The inscription is that of a Sidonian king Bad-‘Aṣṭart. The stone containing it is now in the Louvre. The text runs as follows:

\begin{verbatim}
בייחְוּ מַטָּה יְשָׁרַת מָלָךְ
יָדָנוּ בַּר יְשָׁרַת מָלָךְ
יָדָנוּ כ בַּר יְשָׁרַת
מָלָךְ יָדָנוּ אֲחֵי שָׁר אַרְבָּא
לַאֵל יְשָׁרַת
\end{verbatim}

Passing through Paris in the summer of 1901, I had an opportunity to re-examine this inscription with some care. All of the letters in the transcription given above are quite certain, with the possible exception of the  in line 5. The  in line 1 has been broken away, but can be supplied with certainty. Of the seven or eight other letters of the inscription which are more or less obliterated, each one is placed beyond the reach of doubt by the traces which remain or by the context; in almost every case, the evidence of both kinds is quite satisfactory. In the lower right-hand corner of the stone, a large piece has been broken away, and the gap extends into the beginning of the fifth line. At the very beginning of the line, before the letter , there is space sufficient for two letters; too large a space for a single

¹ It is at all events the inscription of a Phoenician king, named יְשָׁרַת, who was friendly to the Greeks, and lived in the fourth century B.C. (judging from the Greek palaeographical evidence).

² The portion of the letter  which remains at the end of line 4, for example, could not possibly be a part of any other character.
letter (judging from the scale of those adjacent), and not large enough for three. The editors of the inscription in the Corpus Inscriptionum Semiticarum have adopted the strange conclusion that no letters ever stood in this space; the main reason for the conclusion being evidently this, that their translation would admit of no word between יבּ and י. But the traces of at least one letter can be seen with perfect distinctness, and I think it is hardly claiming too much to assert that parts of two letters can be made out. The character at the left is apparently י. The curve at the end of the top stroke can be seen distinctly in the photograph published in the CIN. The top of the vertical stroke at the right is also plainly visible; and the manner of the break between these two points suggests the top of the vertical cross-bar. Just at the right of this letter there appears a bit of nearly horizontal line, curving slightly downward at both ends. This might be the top of any one of the letters י, י, י, י, or י. All of these traces are to be seen in the photograph just mentioned (as any one can satisfy himself), and I made sure by repeated examination of the original that in every case we have to do with lines carved by the stone-cutter, not with mere accidental abrasions. In my own opinion, the missing word is י, and I would translate the whole inscription as follows:  

"In the month יבּ in the year of the accession of Bad-‘Aṣtart, king of the Sidonians; for that (or, when) Bad-‘Aṣtart, king of the Sidonians, built this column (?) of the Sea-District in honor of his god ‘Aṣtart."

I have ventured to explain the difficult word י in line 4) by the Assyrian ʾurīnu, which appears to mean "column, pillar";  

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1 As my translation differs at several points from the one given in the Corpus, I append the latter: "In mense ... in anno [regn]i regis Bodastrati, regis Sidoniorm, [dicavit] Bodastratus, rex Sidoniorum, planitiem terr[ae] [hujus] Deo suo Astartae." "Dicavit" is the translation of a supposed verb יבּ.

1 It is barely possible that this word should have one more letter; there is room for another character at the right, and the stone is somewhat broken away at that point. In all probability, however, the gap was left because of the imperfection in the stone.

2 The attempt has often been made to explain both the י of this inscription and the Assyrian ʾurīnu by the aid of the word יבּ. Ezra 5:3. But the latter is merely the result of text-corruption, as the old.
see Delitzsch, *Handwörterbuch*, s. v. It is plain that the structure which was “built” in this case was not a temple of any kind. The king, who had only just come to the throne, had not had time for any such building operations; moreover, the word הָב would then certainly have been used. But the erection of a pillar, or monument, to ʻAstart would be a very natural proceeding on the part of the newly-crowned king. This monument, apparently in distinction from others already existing, is spoken of as that “of the sea-district.” If my restoration of the text is correct here, we have a third form of the name of this district, דֶּר הַזָּר, standing side by side with דֶּר יִזְבַּל and דֶּר הַזֶּר.

There is of course nothing in all this to prove that Badi-ʻAstart the grandson of Esmun’azar is the one named in this last inscription. The identity of name, however, combined with the slight verbal coincidences, the honor paid to ʻAstart at the beginning of the reign, and the palaeographical evidence, which would assign the inscriptions to approximately the same date, may be said to render the identification probable.

If the sarcophagus of King Badi-ʻAstart should at last come to light, we have reason to hope that it would give us new and important information regarding this royal family. Both his predecessor and his successor on the throne were buried in Egyptian sarcophagi furnished with Phoenician inscriptions; and it is an interesting possibility, or even probability, that somewhere in the neighborhood of Sidon another of the same kind is hidden away—unless, indeed, the fragment described by Clermont Ganneau in his *Études d’Archéologie Orientale*, i. 91 ff., came from the sarcophagus of this king.

There is new light to be expected from still another source. In the summer of 1901, the temple-ruin on the Auwaly was partially excavated by Macridy Bey, of the Imperial Ottoman Museum. Because of the very limited time, as well as limited

versions prove. The Greek of our canonical Ezra renders by χαρνία (=ץֶירָא), while the Greek First Esdras has στίγμα (=ץֶירָא). It is thus evident (though the evidence has been overlooked by all commentators and critics, so far as I am aware) that the original text had צירא, 'roof.' The בּי following was responsible for part of the corruption, which was taken over from verse 8 into verse 9.
funds, at his disposal, he could undertake nothing beyond a sort of preliminary examination of the ruin; this, however, as I have heard, was thoroughly and skilfully conducted. It is to be hoped that the results of this trial excavation may soon be published, with a full description both of the building itself and of the many and various objects—among them a sixth stone bearing the same inscription as the others—which were found. It is also very much to be desired that the whole site be thoroughly excavated, and that means be taken to preserve in as good condition as possible this sole surviving temple of old Phoenicia.