

## SURVEY

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# INDO-IRANIAN TERMS DENOTING TIME

Sanskrit and Iranian<sup>1</sup> are in possession of a number of terms that denote either time<sup>2</sup> as such or some specific and concrete division of it.<sup>3</sup> It is the purpose of the present *Paper* to study in depth a couple of noun forms defining time in its abstract, durational, and momentary or punctual aspects, namely, *samaya-kāla-kalpa*-and *mubh-* and its derivatives. Lest the study should become too unwieldy, we shall consider from Iranian only *xrvan-*, the usual word for time in Avestan. The method of approach will be philological, and an endeavour will be made to trace briefly the semantic evolution of the individual terms. Before

1. I.e., the language of the Aryans who had settled down in what is now Iran. A generic term, Iranian includes Avestan (the language of the Avesta or Zoroastrian scriptures), Old Persian (the language of the inscriptions of the Achaemenid emperors), Middle Persian or Pahlavi, and Modern Persian. In this paper our interest in the earlier varieties of Iranian.
2. This common word goes back to Anglo-Saxon *ti-ma* (Old Norse *ti-mi*), and etymologically it is related to *tide* (German *Zeit*), etc. The element *ti-* is a derivative of the Indo-European (abbr. IE) root *di-* : *da(i)-*, "to divide, cut," underlying Sanskrit *dati*, *dyati*, Greek *daiesthai*, "to divide," and Armentian *ti*, "age, year, time" (cf. F. Kluge-W.Mitzka, *Etymologisches Wörterbuch der deutschen Sprache* /20th ed., Berlin, 1967- p. 878). For a catalogue of words denoting time in the IE languages with etymological and semantic indications, cf. C.D. Buck, *A Dictionary of Selected Synonyms in the Principal Indo-European Languages* (2nd impr., Chicago, 1965) § 14-11 (pp. 953-55).
3. Compare Sanskrit *dina-*, *divasa-*, *masa-*, *matra-*, etc. and Avestan *azan-* (*ayan-*, *ayar-*), *mah-*, *raocah-*, etc.

passing on to the topic of our paper we wish to point out that IE, verbs, no matter whether they are finitive or stative,<sup>4</sup> had originally only aspects and not tenses in the strict sense,<sup>5</sup> and it would therefore be a mistake to think that the earliest sources at our disposal for the study of the Indo-Iranian vocabulary of time embody abstract and philosophical notions.

## I

The term *samaya-* (mas.) is a compound consisting of the prefix *sam-* and the nominal element *-aya-* derived from the root *i-*, "to go." Sanskrit *sam-* presupposes IE *seem-/som-*<sup>6</sup>, the first form of the prefix surviving in Latin *sem-per*, "always", and the second in Lithuanian *sa(n)-*,<sup>7</sup> in Germanic *sam-jan*, *sam-ana*, etc.; here belong too Old Slavic *sa (n)-*, and Avestan and Old Persian *ham-*<sup>8</sup>. IE *sem-/som-* conveys the basic notion of being together; compare, for example, Lithuanian *sa(n) narys*, "joint, member" (of the body, *sá(n)rasas*, "list", *sa(n)skaita*, "bill, cheque", *sa(n)spara*, "joint, dovetailing," etc. In Sanskrit itself *sam-* has such connotations as "with, together with, along with," and conveys the idea of conjunction, union, thoroughness, intensity, completeness, and so on; this is clearly borne out by such common and frequent expressions as *sam-yuj-*, "to join together," *sam-dhā-*, "to place together," *sam-tap-*, to consume utterly by burning," and the like.

To *som-* may be added the extension *-o-* and thus is obtained the prefix *som-o-*, which becomes in Sanskrit *sama-*,

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4. On this point, cf. B. Delbruck, *Grundriss der vergleichenden Grammatik der indogermanischen Sprachen*. Bd. III. *Vergleichende Syntax der indogermanischen Sprachen* (repr., Berlin, 1967) passim.
  5. Verbs that denote a *fieri* (becoming or activity) are called finitive; e.g., "to give" (transitive), "to walk" (intransitive), the one denoting a condition or state are stative; compare Latin *infirmatur*, "he is sick," *senescit*, "he is becoming old," etc.
  6. Detailed list of correspondences in J. Pokorny, *Indogermanisches etymologisches Wörterbuch* I (Bern, 1957) pp. 902-5.
  7. Lithuanian and Slavic have nasalized vowels which are indicated with the help of a special diacritical sign, but as use of it will make printing difficult we add *n* within brackets.
  8. IE *s* becomes *h* in Iranian, and hence *ham-* in contradistinction to Sanskrit *sam-*; examples such as *asura-*: *ahura-*, *soma-*: *haoma-*, *sena-*: *haena-*, etc. may be recalled here.

in Iranian *hama-*, etc.<sup>9</sup> The basic sense of *sama-* is "even, smooth, plain, level, parallel; equal, the same;" compare *sama-kāla-*, *sama-jātiya-*, *sama-dyuti-*, and other, similar expressions. At times *sam-* has the same sense as *sama-*, but since this is a point that has not much relevance to our topic, it can safely be left out of consideration.

The element *-aya-*<sup>10</sup> is a formation from the athematic stem *i-*<sup>11</sup> which in its turn goes back to *ey-*, "to go," the IE base from which are derived Avestan *ay-*, *aēiti*, Old Persian *aitiy*, Greek *eimi*,<sup>12</sup> Lithuanian *eimi*, Latin *eō* (from *ey-ō*), etc. The sense of *aya-* is, of course, "going", and there is also the form the *ayana-*,<sup>13</sup> giving such meanings as "going, walking, path, road."

The combination *sam-aya-* never occurs in the Rigveda, but it is found in the Atharvaveda with the meanings "coming together (*con-venire*), meeting (*con-ventio*), place of meeting." Among the other meanings accruing to our term we may mention "coming to a mutual understanding, agreement, contrast, engagement, stipulation." The following idiomatic expressions bring out very well the etymological sense: *tena samayena*, "in consequence of this agreement," *samayam kar-*, "to make an agreement," *samayam bru-*, *vac-*, "to state the terms of an agreement," *samayam sthā-*, "to fulfil an agreement, keep one's word," and *samayam dā-*, "to propose an agreement." Such meanings as "convention, custom, law, rule, direction, doctrine" and the like are also supported by the sources and finally in the classical age we meet with the specific sense "time agreed upon, appointed time, point of time, right moment for doing something," and lastly, "time in general, time as such." Compare the idiomatic expressions *tena samayena*, "at that time," *samayā*, "at the appointed time, at the right moment," *samayocita-*, "befitting the occasion, suitable to the occasion", etc.

9. Sanskrit *saman-*, *samana-*, *sama-gir-*, etc., with vrddhi of the initial vowel, are formations from the prefix mentioned here.

10. This form has no etymological connection with *aya-*, "iron!"

11. For details, cf. C. Watkins, *Indogermanische Grammatik*. III/1. *Formenlehre. Geschichte der indogermanischen Verbalflexion* (Indogermanische Bibliothek. Erste Reihe: Lehr- und Handbücher, Heidelberg, 1969) §§ 1-24 (pp. 23-48).

12. Not to be confused with *eimi*, "sum" (from IE *esmi* = Sanskrit *asmi*)

13. Morphologically an action noun formed with the help of the suffix *-na-* (IE *-no-*).

Pānini, who employs our term a couple of times, must be recalled here of as evidence.<sup>14</sup> According to 5:1:104, *-ik-* after *samayā* signifies "opportune time;" e.g., *sāmayikam Karma-*, "a timely action." In 5:4:60 it is seen that the adverbial form *samayā* is used with the verb *kr-* (*kar-*): *samayā karoti=kāla-ksepam karoti*. Elsewhere (3:3:167-168) the word is cited together with *kāla-* and *velā-*, with the remark that in conjunction with these nouns the verb appears in the infinitive form *-tum*: *samaye (kāle, vele) bhoktum*.

The semantic evolution that has given rise to the sense "time as such" must be clear from the series of meanings listed above: coming together, agreement, engagement, stipulation, etc. are happenings that take place at a fixed point or moment of time; they are events necessarily bound up with time, so that it was quite an easy matter to link the word designating them with time as such.

The next noun we propose to examine is *kāla-*,<sup>15</sup> a term that should not be confused with its homonym meaning "black"; for, whereas the latter, in Sanskrit, is a loanword from Dravidian, the former is a genuine IE form, though its etymology remains anything but clear. Dr. Hermann Gundert, the great Malayalam scholar, in the last century, put forward the suggestion that *kāla-* is a derivative of Dravidian *kāl-*, "leg!"<sup>16</sup> The word has also been connected with Latin *calendae*, "calends", Greek *kēr*, "doom, fate", and Hittite *ak(k)-/ek(k)-*, "to die"; all these correspondences are only apparent, for, when examined in the light of comparative IE phonology, they will be seen to be without any scientific foundation. This remark is also true of the suggestion that *kāla-* corresponds to Greek *kairos*, "point of

14. The edition of Panini's grammar used in this study is the one by O. Bohtlingk, *Panini's Grammatik* (repr., Hildesheim, 1964).

15. Cf. M. Mayrhofer, *Kurzgefasstes etymologisches Wörterbuch des Altindischen I* (Indogermanische Bibliothek. Zweite Reihe: Wörterbücher, Heidelberg, 1956) pp. 202f. A. Thumb-R. Hauschild, *Handbuch des Sanskrit II* (Indogermanische Bibliothek. Erste Reihe: Lehr- und Handbücher, 2nd ed., 1953) p. 202.

16. Cf. Mayrhofer, *op. cit.*, p. 203.

time,"<sup>17</sup> Gothic *hveila*,<sup>18</sup> and Sanskrit *kal-* (*kalyati*).<sup>19</sup> There now remain two proposals which deserve to be taken seriously, and these we shall discuss at some length.

The great grammarian Jakob Wackernagel suggested that *kāla-* is a derivative of the Sanskrit root *kar-*, which could, according to the rules of vowel gradation, quite easily yield *kāra-* and this latter could give rise to *kāla-*.<sup>20</sup> The common stem *kar-* (*karoti*) goes back to IE *(s)kwer-*,<sup>21</sup> "to do, make, form", and the formation *kāra-*, which represents the vrddhi-grade, has the meanings "making, doing, working, action, deed, bringing into being"; from this rich variety of meanings there evolved the sense "decision, success, victory," and finally "the decisive point of time, time in general."

The fact that the base in this explanation has *r* and derivative *l*, is not a problem at all, for we know that among the Aryan tribes there was some sort of oscillation in the treatment of *l/r*.<sup>22</sup> At times IE *l* was retained unchanged; compare,

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17. On the question of etymology, cf. H. Frisk, *Griechisches etymologisches Wörterbuch* I (Indogermanische Bibliothek. Zweite Reihe: Wörterbücher, 2nd ed., Heidelberg, 1973) pp. 755f.
  18. The form cited in the text presupposes IE *qwo(i)lo-*, and several scholars have accepted this derivation.
  19. The verbal root means "to compel, impel, carry, bear;" *kala-*, the vrddhi formation, is supposed to have denoted the godhead that drove out cattle in the morning, and thence evolved the meaning "morning time, time as such!" This etymology is cited with approval by Buck, *op. cit.*, p. 955.
  20. Cf. J. Wackernagel-A. Debrunner, *Altindische Grammatik*. II/2. *Nominalsuffixe* (Gottingen, 1954) § 20c (p. 64).
  21. Cf. Pokorny, *op. cit.*, pp. 641f.
  22. Exhaustive discussions in K. Brugmann, *Grundriss der vergleichenden Grammatik der indogermanischen Sprachen* I/I (repr., Berlin, 1967) §§ 465-470 (pp. 427-32), and Wackernagel-Debrunner, *Altindische Grammatik*. I. *Lautlehre* (repr. with L. Renou's "Introduction générale" and A. Drbrunner's "Nachträge", Gottingen, 1957) § 189 (pp. 209-12). §§ 191-193 (pp. 214-21). Brief discussions in T. Burrow, *The Sanskrit Language* (2nd ed., London, 1959) § 12 (pp. 238-41). Thumb-Houschild, *Handbush des Sanskrit* 1/1, § 86 (pp. 238-41). Incidentally, the inconsistency in the treatment of *l/r* is a feature of Indo-Aryan, whereas in Iranian *l* always becomes *r*.

IE *leubh*—*lubhyāmi*, Latin *lubet*, “to be pleasing.”

IE *leuk*—*locyāmi*, Greek *leussō*, “to look, behold”.

IE *tel*—*tula*—, Greek *talas*, *talanton*, “talent”.

At other times *l* was changed to *r*; thus we have

IE *leikw*—*rinakti*, Greek *leipō*, Latin *linquō*, “to leave.”

IE *k'leu*—*sruta*—, Greek *klutos*, Latin *in-clutus*, “famous”.

IE *g'hesl*—(y)o—*sahasra*—, Greek (Doric) *chelioi*

Finally there are stems that attest both *l* and *r*; for example,

IE *leip*—*limpati* and *rimpati*

IE *k'leu*—*sru*—and *sloka*—

IE *pleu*—*plavate* and *pravate*

The lack of consistency in the use of *l/r* (*r/l*) is borne out by the Prakrits.<sup>23</sup> A myth in the Satapatha Brāhmana narrates how the asuras who were deprived of articulate speech once cried out, *helávo*, *heláv(o)*, or *hailo*, *hail(o)*, according to another tradition (III:2:1:23). And this exclamation is a dialectal variant of *he'ryah*, “O Arya!” Furthermore, the inscriptions of Asoka found in the Gangetic basin and on the coast of Orissa substitute *l* for *r*: hence *lāja*—(*rāja*—), *cila*—(*cira*—), *gālava*—(*garava*—), *vihalaya* (*vihāra*—), etc.<sup>24</sup> At times the tendency to dissimilation has been responsible for the origin of *l* in words; e.g., *ludda*—(*raudra*—), *haladda*—(*haridrā*—), *dalidda*—(*daridra*—), and *daddula*—(*dardura*—). In conclusion, the development of *kāla*— from *kāra*— as postulated by Wackernagel is quite in keeping with all that we know of Indo-Aryan phonology.

What shall we say about this theory? Purely from the philological point of view it is beyond objection, but from the semantic point of view it is not so easy to see how a base meaning “making, doing, working” could so easily acquire the nuance “decisive moment of time, time in general.” It would, therefore, be better to look for another explanation which does not present any such difficulty.

It is possible to derive *kāla*—,<sup>25</sup> a stem which survives in Greek

23. For what follows, cf. J. Bloch, *Indo-Aryan from the Vedas to Modern Times* (Paris, 1965) pp. 74-77.

24. Cf. Bloch, *Les inscriptions d'Asoka* (Coll. Emile Senart, Paris, 1950) pp. 46f.

25. Pokorny, *op. cit.*, pp. 639f.

*teleō* and *pelō* (*pelomai*). The phonological modification involved here, namely, the change of *kw-* to *t-* and *p-*, is quite well known,<sup>26</sup> but the two Greek words call for some comment. As for *pelō*, we say that it is a Homeric word,<sup>27</sup> with the basic meaning "to turn", the nuances, "to turn out to be, become, come into being," and also, "to be." In Homer *teleō* is much more frequent<sup>28</sup> and, naturally, has also a rich variety of meanings; with particular reference to time, what is important is the meaning "to bring round in the course, bring on, come round, pass, happen; "compare, for instance, the statement, *ēmata poll'etelesthē* (t: 153=ō: 143), "many days had come round."

The understanding of *kāla-* as the derivative of a root whose basic sense is "to rotate, turn round, come round," is quite satisfactory, and though our word is not an integral part of the vocabulary of the first Veda,<sup>29</sup> we know that in the age of the Atharvaveda it was widely used and was even personified,<sup>30</sup> nay, there were thinkers who regarded it as the absolute.<sup>31</sup> In the age of Pāṇini, for example, *kāla-* was the term par excellence denoting time,<sup>32</sup> indeed, a term that was far more important than the one we have just studied. From among the idiomatic expressions we may cite *ubhau kālau*, "the two times" (= morning and evening), *kāle-kāle*, "always, in time," *mahantam kālam*, "for a long time," *kriyā-kāla-*, "time for action," etc.

Gradually *kāla-* came to be interpreted as the destroyer of everything, with the result that there accrued to it the meanings "time of death" and "death;" it was even endowed with the

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26. Cf. E. Schwyzer, *Griechische Grammatik* I (Handbuch der Altertumswissenschaft II/1/1, 4th ed., Munich, 1968) pp. 293ff. Cf. too Brugmann, *op. cit.*, §§ 651-659 (pp. 588-597).
  27. List of passages in R.J. Cunliffe, *A Lexicon of the Homeric Dialect* (repr., Norman, Okl., 1963) p. 321.
  28. Cunliffe, *op. cit.*, p. 377.
  29. For it occurs but once in 10:42:9.
  30. A poem in honour of Time is preserved in the tenth book of the fourth Veda, and though it is now divided into two halves (nos. 53-54), there is no reason to doubt its original unity.
  31. This tradition survives in the Maitri Upanisad; the passage dealing with it (6:14-16) is discussed in detail in a monograph entitled *The Sacred Syllable Om and Other Studies* the present writer plans to publish in the near future.
  32. We wish to point out here that *kala-* is an important part of Panini's *Wortschatz* (cf. Bohtlingk' index).

attributes of Yama, and was finally identified with him. Accordingly it is often connected with *antaka-* and *mṛtyu-*, and when used idiomatically, in conjunction with the verbs *eti* and *karoti*, it means "to die." The semantic evolution involved here is no doubt quite legitimate.<sup>33</sup>

Unlike *samaya-* and *kāla-* which denote time as such, *yuga-* and *kalpa-* signify what we may call long, indefinite duration. A study of the etymology and semantic evolution of these terms is imperative as they have a direct bearing on our understanding of classical mythology. The neuter noun *yugam*, which goes back to IE *yugom* and corresponds to Latin *iugum*, Greek *zugon*,<sup>34</sup> Gothic *yok*, Hittite *i-ú-ga-an*,<sup>35</sup> Tocharian *yokām*,<sup>36</sup> etc., generally means "yoke, team, pair, couple." The verbal base of the noun form is *yeug-*, from among whose survivals in the historical languages may be cited Avestan *yaoj-*, Greek *zeugnumi*, and Latin *iungō*; in Sanskrit the original base appears as *yuj-* and in the course of inflection assumes the nasal infix (cf. *yunakti*).

Our term came to acquire a reference to time inasmuch as it involved the idea of yoking together couples: it is through this yoking that a generation arises! In Sanskrit *yuga-* is used with *manusa-*, "race of men," i.e., a human generation, and this ex-

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33. A traditional Indian concept that should be mentioned in this connection is *kala-cakra*, time visualized as an ever-rotating wheel. This idea may go back to the period of IE unity, for Sanskrit *cakra* is a cognate of Anglo-Saxon *hweol*, and Greek *kuklos*, in Homer, "ring, circle," and in the classical age, "revolution of the seasons, cycles of events, the recurrence of fate," etc. Among the Greeks whose compositions recounted the events from the beginnings to the death of Ulyssus were given the honorific title *hoi kuklikoi*, and when the Romans borrowed the term *kuklos* (in Latin *cyclus*) it became synonymous with periodic change, recurrence, and *cyclicus scriptor* meant an epic poet who treated in regular order the myths from the beginning of the world to the age of Telemachus. One of the basic concepts of Indian thought has, then, excellent parallels in the traditions of Greece and Rome.
34. In some instances IE appears as z in Greek; e.g., Sanskrit *yasati* : Greek *zeo*, "to seethe, boil," Sanskrit *yava-* : Greek *zeiai* (from *zeFai*), "grain spelt," Sanskrit *yu-* : Greek *zu-me* (from *zusma*), "leaven," Avestan *yasto* : Greek *zostos*, "girdled," etc.
35. To be read *yugan-* (cf. J. Friedrich, *Hethitisches Wörterbuch* Indog. Bibl. Zw. Reihe: Wörterb., Heidelberg, 1952 p. 93).
36. This form, which might very well be a loanword from Sanskrit, is found in the so-called dialect A and means "door."



pression has an admirable parallel in Greek *genos anthrōpōn*, "human generation," considered as a particular period of time; compare *trīs gene'andrōn* (g:245), "three generations," i.e., during the span of time covered by three successive generations. The sense here indicated occurs in the first Veda which uses the phrase *mānusā yugā* a couple of times (8:46:12); 62:9; 9:12:7; 10:140:6). The same source gives the expressions *dasame yuge* (1:158:6), *pare yuge* (1:166:13), *uttare yuge*, *pūrvye yuge*, *yuge prathame* (10:72:1.2.3.), *yuge-yuge* (1:139:8; 3:26:3; 6.8:5 etc.) and so on. The derivation, from this usage, of the idea of the mythical world-ages, of the so-called yugas of classical Hinduism, was just a matter of course: the periods of the world's duration can be visualized in terms of generations that cover fantastically long spans of time.<sup>37</sup>

Etymologically considered *kalpa-* is a derivative of the IE stem *(s)kel(e)-p-* "to cut"; the element *-p-* here is of course the extensional suffix, and since initial *s-* was anceps in the parent-language itself, we have in the historical languages forms both with and without it. As examples of forms with *s-* may be cited Greek *skalops*, "the digger" (the mole), and *skolops*, "pale, stake," Latin *scalpō*, "to carve, engrave," and *sculpō*, id., Lithuanian *sklempiù*, "to polish," and Old High German *scelfa*, "defoliated piece" (of wood). The base without *s-* is represented by Gothic *halbs*, Old High German *halb*, English *half* (lit. "cut, divided"), and Sanskrit *kalp-* (cf. *kalpyati*), "to succeed, fit, be partaken of, be shared."<sup>38</sup> The form *kalpa-* is both an adjective and noun; as a qualification it means "practicable, feasible, proper, fit, competent," and as substantive "sacred precept, law, ordinance, rule" (prescribed by the Vedas); the noun form is also used by grammarians.<sup>39</sup> Reference must finally be made to the passive participle *klpta-* which has its own specialized meaning.

In mythology *kalpa-* has come to mean a fabulous period of time, counted in terms of thousands and tens of thousands of years, and so it is not very difficult to account for the emergence of this concept *kalpa-* is doubtless something determined which includes within its radius time as well, insofar as it is subject to determination, but when there is a question of the world of the

37. Incidentally *yuga-* and *yuj-* are part of Panini's *Wortschatz*.

38. Pokorny, *op. cit.*, p. 926.

39. Details in Böhtlingk's *Panini* (n. 14).

gods, the determination or circumscription of time must not certainly be on the basis of human experience; it should rather be in terms of duration that is infinite, without human limitations, and it is this belief that has persuaded the myth-makers in India to visualize *kalpa-* as a fantastically long span of time.<sup>40</sup>

We come, at last, to the study of the root *muhu-* and the forms created from it by the addition of suffixes. As for etymology, *muhu-* is a Prakrit formation wherein the cluster *mur-* occurring in the IE base *mrg'bu-*, "short," has been simplified. The different shades of meaning this stem has will become clear if we but bear in mind that it survives in Greek *brachus*,<sup>41</sup> "short," Latin *brevis*, Avestan *merezu-*, Sogdian *murzak*, Khotanese Saka *mulysga* (from *mrzuka-*), Gothic *ga-maurgjan*, "to shorten," etc.

Though a Prakrit formation, *muhu-* is quite old, occurring in the Rigveda as a hapax legomenon in a context where there is question of suddenness and the like.<sup>42</sup> It is true that the poems of the first Veda are written in language which is artistic, quite different from the type of speech the Aryans were wont to use in ordinary parlance,<sup>43</sup> and one can, without being a professional philologist or vedist, perceive that the language of banal everyday life can surreptitiously creep into professional poetry: and this is indeed what has happened in the case of *muhu-* and its derivatives.

The Rigveda evidences too the hapax legomenon *muburgir*

40. Compare the Jaina chronologies in J. Finegan, *The Archaeology of World Religions I* (Princeton, N.J., 1965) p. 190. To cite an example, the age of the first Jaina saviour Rsabha was 84 lakhs of purvas (1 purva = 8,000,000 years); the next saviour Ajita appeared 5 lakhs of krores of sagaras (1 sagara = 10 krores of palyas) after Rsabha!

41. The change of initial *m-* to *b-* is something clearly attested in Greek (cf. Schwyzer, *op. cit.*, passim); compare too Avestan *mru-* = Sanskrit *bru-*.

42. Cf. Renou, "Introduction générale." *Altindische Grammatik I/1*, p. 7, n. 80 (pp. 54f.). For *muhu-*, cf. 4:20:9; there is too the form *muhur-*, with the suffix *-r-* which is a distinctive feature of words denoting time. References in H. Grassmann, *Wörterbuch zum Rigveda* (4th ed., Wiesbaden, 1964) col. 1052.

43. On this point, cf. Renou, *op. cit.*, pp. 1-10. Antoine Meillet on his part has stressed the "airstocratic" nature of early India (cf. *Introduction à l'étude comparative des langues indo-européennes* Alabama Philological and Linguistic Series 3, Alabama, 1964).

(1:128:3), "swallowing suddenly."<sup>44</sup> There is in addition the form *mubuka-*, occurring just twice (4:16:17; 17:12) and formed by the addition of *-ka-*, a termination whose function is to indicate a part, segment or section of time,<sup>45</sup> and words thus created point immediately and primarily to what pertains to or what has happened during these segments. Compare the following forms with *vrddhi* which make their appearance in late vedic times: *naisika-*, from *nisa-*, "night," *vāsantaka-*, from *vasanta-*, "spring," *sāradika-*, from *sarad-*, "autumn," *sāmayika-*, from *samaya-* (discussed above), *ākālika-*, from *ākāla-*, "moment," etc.

The last form we have to consider is *mubūrta-*, "moment, instant, auspicious time," a term that is quite common in epical and classical literature but extremely rare in the first Veda (3:33:5; 53:8). Regarding its origin there is a divergence of opinions among specialists. Jules Bloch derives it from *mubur-tu-*, explaining the lengthening of the final vowel of the base as the result of the influence of the ensuing vocalic liquid;<sup>46</sup> Hermann Jacobi postulated the combination *mubur-rta-*,<sup>47</sup> but the most satisfactory explanation seems to be the one put forward by Emile Benveniste: our word must be analysed as *mubur-ta-*,<sup>48</sup> and in support one can appeal to two facts: First, the element *-r* occurs words denoting time, such as *punar-*, *ahar-*, *usar-* (cf. *usarbudh-*), *tar-* (cf. *tar-hi*), *amur-* (cf. *amur-hi*), etc.;<sup>49</sup> second, one may also adduce here from Hittite *mebur-*, "time," *lammar-*, "hour," and

44. Another possible reading is *muhurgir-*, "repeatedly singing" (cf. K.F. Geldner, *Der Rig-Veda I*, Harvard Oriental Series 33, Cambridge, Mass., 1951, p. 178).

45. On *-ka-*, cf. Wackernagel-Debrunner, *op. cit.* (n.20) §§ 360-368 (pp. 515ff.).

46. Cf. *op. cit.*, (n. 23) p. 37; cf. too Wackernagel-Debrunner, *op. cit.*, § 438 (p. 590). J. Gonda, *Old Indian* (Handbuch der Orientalistik. Zweite Abteilung, 1. Bd., I. Abschn., Leiden, 1971) p. 19, n. 4.

47. Cf. *Zeitschrift der deutschen morgenländischen Gesellschaft* 74 (1920) pp. 249f.

48. Cf. his monograph *Origines de la formation des noms en indo-européen* (4th impr., Paris, 1973) p. 34.

49. The element *-hi* (cf. *etar-hi*, "now", and *yar-hi*, "where") is a modification of IE *-dhi*, surviving as *-thi* in Greek *po-thi*, *to-thi*, etc. We may also cite here *pra-tar*, "early" (Burrow, *op. cit.*, pp. 277, 280); cf. too Albanian *kur*, "as, when."

*tapessar-*, "earlier time,"<sup>50</sup> and from Greek *nuktōr*, "by night." *Second*, the suffix *-ta-* is a distinctive feature of words denoting time; e.g., *vasanta-*, "spring," *hemanta-*, "winter," *simanta-*, "crown, head," and also "elder, eldest, first," etc.

Indian tradition regards *muhūrta-* as a specific division of time, the 30th part of a day, a period of 48 minutes, and in the plural these are regarded as the children of *muhūrtā-*, the daughter of Daksa and the wife of Dharma or Manu! We can bring out the full significance of *muhūrta-* by defining it as *kairos*, the noun in the Greek language denoting time in its aspect of punctum.

## II

The term *zrvan-* is *jungavestisch*, i.e., belonging to a dialect posterior to the one used by Zarathushtra in the Gāthās; furthermore, it is not a common word; nor is its etymology clear, so much so that professional Iranists express sheer helplessness.<sup>51</sup> Other specialists, however, are inclined to think that it is derived from the base *g'er-*, "to become, mature, ripe, old,"<sup>52</sup> which survives in Sanskrit *jarati*, *jarant-* (IE *g'eront-*), Ossetan *zārond-*,<sup>53</sup> Greek *gerōn*, etc. The Avesta itself attests *zaurvan-* (mas.), "old age, debilities of old age," *zaurura-*, "old, decrepit," *zareta-*, id.,

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50. The first word is a formation from the IE root *me-*, "to measure" (A. Kammenhuber, *Altkleinasiatische Sprachen, Handbuch der Orientalistik. Erste Abteilung, II. Bd., 1-2 Abschn., Lief. 2*, Leiden, 1969 p. 198) and the second has been put on a par with Latin *numero* (Kammenhuber, *op. cit.*, p. 347); the precise sense of the third word remains doubtful.
51. Cf., for instance, C. Bartholomae, *Altiranisches Wörterbuch* (repr., Berlin, 1961) col. 1704, and H. Reichelt, *Awestisches Elementarbuch* (Indogermanische Bibliothek. Erste Abteilung, 1/5, 2nd ed., Heidelberg, 1967) p. 505.
52. From among those who accept this etymology we may cite especially Emile Benveniste whose theory regarding the nature of the IE root explains very well the genesis of the Avestan term: from *g'er-w-* is formed the theme *g'r-eu-*, which, when enlarged by the addition of the suffix *-en-*, will yield *g'r-w-en-*, a form that will give rise to the word under consideration (cf. *op. cit.*, p. 179; compare too Benveniste, *Le vocabulaire des institutions indo-européennes II*, Paris, 1969, p. 49).
53. Cf. Benveniste, *Očerki no osetinskomu yazyku* (Russian translation of *Etudes sur la langue Ossète*, Paris, 1960, Moscow, 1965) p. 144.

*azarasant-*, "not becoming old," etc. As a curiosity we may note here that the name Zarathushtra has been interpreted as a combination of *Zarant-*, the participle corresponding to Sanskrit *jarant-*, and *ustra-* (Sanskrit *ustra-*), "camel;" this would mean, "he whose camels are old!"<sup>54</sup>

From the semantic point of view there is no impossibility in the origin of *zrvan-*, "time," from a root meaning "to be old," for age can itself be identified with time as such. As a parallel to what is involved here may be cited what happened to the Greek word *aiōn*: originally it meant "life, lifetime," but subsequently it also acquired the nuance "a long span of time, an age, a definite period of time," etc.<sup>55</sup>

In the Avesta *zrvan-* has several different shades of meaning.<sup>56</sup> To begin with, it stands for "point of time, setted (fixed) time, appointed time;" compare, "And now they grow up...in the time appointed for them" (Yt. 13:56); "...when worked at the right time, it shines to the eye" (Yt. 5:129); "If men would worship me with sacrifice..., then I would have come to the faithful at the appointed time" (Yt. 8:11), i.e., at the right time of the year when rain is expected. Further, in the language of law *zrvan-* means "appropriate time for legal action." A third sense is "segment of time;" compare, "They meet together...(and) fight together... till the time of noon" (Yt. 8:28; cf. 9:11). Our word has, in the next place, the meaning "period of time, length of time, duration," as is clear from the following passages: "... (the waters) which had stood for a long time in the same place without flowing" (Yt. 13:53); "...for a long time be thou (fire) thus to the furtherance of the heroic (renovation)..., yea, even till the good heroic (millennial) time when the renovation shall become complete" (Ys. 62:3). Finally, there are passages in which *zrvan-* appears as a godhead; this is a point that must be studied in some detail.

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54. Cf. Bartholomae, *op. cit.*, col. 1676; Reichelt, *op. cit.*, p. 503.

55. It may be noted here in passing that the Greek idea of *aion* has been regarded as something borrowed from ancient Iran; this thesis is defended by H.F.J. Junker, *Ueber den iranischen Ursprung der hellenistischen Aionsvorstellung* (Heidelberg, 1922).

56. Citations are from the "Sacred Books of the East" series.

The Avesta makes a distinction between *zrvan akarana-*,<sup>57</sup> "boundless time," and *zrvan dareghō-xvadhāta-*,<sup>58</sup> "the sovereign time of long period," the latter being a species emanating from unlimited time, and supposed to cover 12,000 years and then return to its matrix.<sup>59</sup> The following text mentions both the varieties of time in the same breath: "We worship the Boundless Time and the Sovereign Time of Long Period" (Ohr. Yt. 33). At times *zrvan akarana-* is invoked along with "the Sovereign Heaven and Vyau whose action is most high" (Vid. 19:13.16). In a Zoroastrian litany the two types of time are invoked side by side with the gods Wind and the Sky:

We sacrifice to the Sovereign Sky  
 We sacrifice to Boundless Time  
 We sacrifice to the Sovereign Time of Long Period  
 We sacrifice to the beneficent, well-doing Wind  
 (Ny. 1:8)

What we have here is veritable apotheosis of *zrvan-*, attested elsewhere too in the Avesta (compare Sir. 1:21; 2:21), and from the occurrence of the phrase *zrvō-dhāta-*,<sup>60</sup> "created by time," it is clear that time was visualized even as the creator: "The soul enters by the way that is created by time" (Vid. 19:29).

We wish to consider here three more texts where the durational and divine aspects of time come to the forefront.

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57. The qualification *akarana-*, composed of the privative particle *a-* and the nominal element *karana-*, "end, limit, boundary," means "endless, limitless, unbounded," and is used of both time and space.
58. The first element in the compound corresponds to Sanskrit *dirgha-*, and the second, to be analysed as *xva-* (= Sanskrit *sva-*) and *dhata-*, rendered *svyamdatta-* in the Sanskrit translation of the Avesta; the sense is "one who follows his own law, imperishable, eternal."
59. For details one should consult the classical works on Avestan religion; the following books deserve to be specially noted. J. Duchesne-Guillemin, *La religion de l'Iran ancien* (coll. Mana, Paris, 1962). H.S. Nyberg, *Die Religionen des alten Iran* (Mitteilungen der vorder-asiatischen-ägyptischen Gesellschaft 43, repr., Osnabrück, 1966). H. Lommel, *Die Religion Zarathustras nach dem Avesta dargestellt* (repr., Hildesheim, 1971). S. Widengren, *Die Religionen Irans* (Die Religionen der Menschheit 14, Stuttgart, 1965).
60. The form *dhata-* is the passive participle of *dha-*, "to create," whose equivalent in Sanskrit is *dha-*, "to put, place, create" (cf. the corresponding forms *the-* in Greek *ti-the-mi*, *fe* in Latin *fe-ci*, etc.).

Zarathushtra tells the evil spirit: "To me Spenta Mainyu gave it, he gave it to me in Boundless Time" (Vid. 19:9); the writer is enunciating the belief that the prayer Ahuna Vairya,<sup>61</sup> was revealed to the pre-existent Zarathushtra before the creation of the world, and consequently in Boundless Time. Once when the fiend, after he had failed in his effort to put the prophet to death, tempted him, Zarathushtra prayed to Ahura Mazdāh who on his part exhorted him: "Invoke...the Boundless Time" (Vid. 19:13). In obedience to this command the prophet said: "I invoke...the Boundless Time" (Vid. 19:16).

In Persia there were also sectarians who visualized *zrvan-* as the highest principle, but this development, usually known as Zurvanism (also Zervanism) or the Zurvanite (Zervanite) heresy,<sup>62</sup> strictly speaking, has nothing to do with the theme of our contribution. For our purpose suffice it to note that the term *zrvan-* was taken over by the Manichaeans and used as the name of the ruler of the realm of light, and the Buddhist Sogdians adopted it, in the form *zrwa*, as the equivalent of the god Brahma!

By way of conclusion the writer would like to point out that the philological method is a very valuable help to all those who are interested in *Geistesgeschichte*. The history of the evolution of the *Geist* is recorded in the words man has been using, and this is the reason why words deserve to be analysed with care. And professional philologists have often stressed the importance of their discipline has for the study of *Geistesgeschichte*.<sup>63</sup>

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61. This is one of the three or four most sacred prayers of the Zoroastrians, though its translation remains a moot problem; for a study, cf. W. Hinz, "Zum Ahuna-Vairya-Gebet," *Indo-Iranian Journal* 4(1960) pp. 154-59.

62. Discussions in the works listed in n. 59.

63. Compare W. Eilers, *Die vergleichend-semasiologische Methode in der Orientalistik* (Abhandlungen der Akademie der Wissenschaften und der Literatur, Geistes- und sozialwissenschaftliche Klasse, Wiesbaden, 1973). J. Lohmann, "Der Sinn der indogermanischen Etymologie," *Kratylos* 10(1965) pp. 79-98. Mention must be made here of a most original contribution of the great Assyriologist Benno Landsberger, *Die Eigenbegrifflichkeit der babylonischen Welt* (Libelli 162, Darmstadt, 1965). The writer is well aware that philology has its limitations, and he would also remind the reader that not every correspondence in Pokorny's *Wörterbuch* can stand close scrutiny, yet in spite of everything the philological approach has its validity.