

LEXICOGRAPHICA

International Annual for Lexicography
Revue Internationale de Lexicographie
Internationales Jahrbuch für Lexikographie

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in conjunction with the
Dictionary Society of North America (DSNA)
and the
European Association for Lexicography (EURALEX)

Coordinating Editor: Thorsten Roelcke

7/1991

Sonderdruck

Max Niemeyer Verlag
Tübingen



Dictionaries of Indo-European and Their Problems

Abstract

The author discusses the existing Indo-European dictionaries against the background of an analysis of general problems connected with the reconstruction of the Indo-European protolanguage. Concrete postulates for further comparative Indo-European dictionaries (that are largely valid for etymological dictionaries of the single languages as well) are formulated.

1. Existing Dictionaries

By definition, a dictionary collects and studies the lexicon of a closed *corpus* of texts of a given language. Naturally, the lexical inventory which is its starting-point may be collected on the basis of diverse criteria. It may concern glosses or difficult words, "doubts" or special types of vocabulary (technical or otherwise), words which are "correct" or "proper usage" in the opinion of the author or certain learned corporations (prescriptive dictionaries); a dictionary may also aspire to be a total inventory.

Once the inventory has been collected, it may be treated in several ways: it may simply be expounded as such (lexicons) or dealt with in context (concordances), or its version in other languages must be given (bilingual dictionaries), or the dictionary must concern itself with etymology (etymological dictionaries), or with semantic correspondences (dictionaries of synonyms), or offer diverse explanations (encyclopedias). All this, which is no more than a brief outline, is well known¹.

Yet, what can be done with a language for which no texts are preserved and which is only partially reconstructed from derived languages? This is the case, as is known, of Indo-European (henceforth IE). This is the area in which reconstruction has been most complete and most successful. Yet it is nevertheless very incomplete. Even more so in the lexicon: it is in fact morphology that enables us to draw the clearest conclusions about what is ancient and what is modern, with diverse degrees of modernity. The lexicon is by definition far more permeable to all manner of influences, remodelings and loans. Even so, there is a tradition of dictionaries of IE: without doubt originally connected to the primitive, romantic idea that it was possible to reconstruct "the" IE, to even write the texts in Indoeuropean, an enterprise which, as is well known, was even attempted. These dictionaries began with FICK's of 1890-1900², continuing with WALDES, later revised by POKORNY and with a volume of

¹ See, among other bibliographies, L. ZGUSTA, "The Lexicon and the Dictionaries: Some Theoretical and Historical Observations", *Papers in Linguistics* 19, 1986, pp. 67-81.

² A. FICK, *Vergleichendes Wörterbuch der Indogermanischen Sprachen*, 3 vols. Göttingen.

indices by K. REICHARDT in 1930-1932³. Then followed POKORNY'S new dictionary, with a volume of indices by H. B. PARTRIDGE in 1959-1968⁴. Later, mention should be made of a dictionary which is so far incomplete, the one begun by S. E. MANN in 1984⁵.

The extent to which these dictionaries have attempted to reflect the lexicon of IE and how far they have succeeded will be our concern later on. It should be noted that their authors are cautious and speak of "comparative" or "etymological" dictionaries: their first concern is undoubtedly to offer an inventory of roots and words which occur in several Indo-European languages. They make up a kind of "addition" (albeit an abbreviated one) of the different etymological dictionaries of the Indo-European languages, which we shall not discuss here for they are not the subject of this paper. From this point of view, it should be said that these dictionaries - and particularly POKORNY'S, which is the standard work today - have been of invaluable assistance to scholars of Indo-European and of the different Indo-European languages.

There is certainly an essential difference between the etymological dictionaries of the diverse languages and those of IE. The former take words from the language under study as their entries; the latter, a mixture of Indo-European words, wherever these can be reconstructed (of the type **ul̥kʷos* "wolf", **ou̯is* "sheep") and of roots, under which they likewise give words reconstructed on the basis of the correspondences between a greater or lesser number of languages.

Naturally, the two procedures cannot be clearly separated: MANN, for example, fragments this material far more than POKORNY. He not only gives the root *dō* "to give", but also *dōnom*, *dōtis*, *dōtēr*, *dōsiō*, *dōteios*, *dōu*; POKORNY includes all this under "*dō-*: *dā-*, auch *dō-u-*: *dāu-*: *du-* "geben" ". As may be seen, the mere establishing of the inventory of entries in itself gives problems. Moreover, this inventory is totally mixed, however may be organized; only part of it may aspire to be a collection from the lexicon that was really used in IE (or, we would add, in any of its temporal or local variants).

In any case, this type of dictionary is the one closest to what a dictionary of IE might be. In order to avoid objections and also to indicate a useful complement, one should at least mention another type of work: dictionaries (either complete or partial) of IE organized on the basis of semantic fields, or content, if one prefers this.

They have no connection with etymology and show the different words which in the different Indo-European languages refer to the same entity from the natural or cultural world, whatever their etymology. Even when it is a case of reconstructing this natural and cultural world of the primitive Indo-European people or peoples, there is a stress on the ancient terms and on the lack of terms for a series of entities and concepts. These works are thus closely connected to studies in the linguistic

³ A. WALDE, J. POKORNY, *Vergleichendes Wörterbuch der indogermanischen Sprachen*. Berlin. Leipzig: de Gruyter, 1930-1932.

⁴ J. POKORNY, *Indogermanisches Etymologisches Wörterbuch*. Berne. Munich: Francke, 1959-1968.

⁵ S. E. MANN, *An Indo-European Comparative Dictionary*, Hamburg 1984 ff. Two volumes have been published so far (up to *grembhos*)

paleontology and to those which attempt to reconstruct Indoeuropean culture from the lexicon; they take their contents from such studies and vice-versa.

In this case, one should start with SCHRADER'S *REALLEXICON*, the first edition of which dates from 1901⁶. Especially worth noting within this genre are a work by E. GOTTLIEB on the names of animals, of 1931⁷, and above all, the dictionary of synonyms by C. D. BUCK of 1949⁸. There is not the slightest attempt in this latter to reconstruct the ancient Indo-European lexicon of entities and concepts, and synonyms are given even for the modern Indo-European languages.

One work which marks a transition between dictionaries of this type and the numerous studies on specific subjects of the natural and cultural world of the Indoeuropeans, is BENVENISTE'S book of 1969⁹, on the vocabulary of Indoeuropean institutions. Here, the vocabulary is not organized in the alphabetical order of the correspondences in a modern language (as SCHRADER), but by semantic fields or "themes" in general (as GOTTLIEB and BUCK). In works of this kind, an idea is reflected that is alien to the etymological dictionaries; words are semantically related to each other as synonyms or antonyms within semantic "fields". Authors such as BENVENISTE make an effort to establish their Indo-European vocabulary and its evolution.

We would insist that these works are not dictionaries of IE in the strict sense; but both they and the studies on which they are based, plus others of a similar orientation that have not yet been collected in works of synthesis such as these, contribute very important data which must be borne in mind in future dictionaries of IE. A synthesis of the two types of works would be of importance. For so far both the etymological and semantic approaches have each followed their own paths and this is not the ideal solution. Even less so at the present moment when studies in structural semantics cannot be ignored.

With this, we shall begin a critique of the currently existing dictionaries of IE. This critique covers both original insufficiencies and those resulting from advancements in our knowledge of the field. This is not an obstacle to acknowledging the assistance which these dictionaries still offer us, dictionaries in whose compiling a tremendous amount of work was expended. We also offer a few suggestions on how progress could be made in this field, which on the whole is a very difficult one. We do not know of many theoretical studies on the subject; an overall view with some personal ideas may be seen in a study by A. BERNABE of 1979¹⁰.

⁶ O. SCHRADER, *Reallexicon der indogermanischen Altertumskunde*, Strasburg 1901 (2nd ed. revised by A. NEHRING, Berlin. Leipzig, 1917-1929).

⁷ E. GOTTLIEB, *A systematic Tabulation of Indo-European Animal Names*, Philadelphia: Linguistic Society of America, 1931.

⁸ C. D. BUCK, *A Dictionary of Selected Synonyms in the Principal Indo-European Languages*. Chicago. London 1949 (reprinted in 1965).

⁹ E. BENVENISTE, *Le vocabulaire des institutions indo-européennes*. Paris: Les Editions de Minuit, 1969.

¹⁰ A. BERNABE, "Investigaciones sobre el léxico indoeuropeo", *RSEL* 9, 1979, pp. 377-394.

We begin with the idea that it is impossible to reconstruct the lexicon of "the" IE or the various IE's we could suggest. A dictionary of IE will always be incomplete, pan-chronic and diasystematic, as likewise unable to differentiate temporal and local levels absolutely. Even so, works of this type give an overall view that would otherwise be inaccessible and make up an indispensable working basis for anyone concerned with IE etymology, semantics and dialectology, as likewise for scholars of linguistic paleontology and the culture of the Indo-European people or peoples.

2. Problems of Dictionaries of IE and Tentative Proposals

2.1. Which IE Should Be Reconstructed ?

In POKORNY'S time and even much later, IE was a generally accepted concept, that disregarded its placing in time and space. This, despite the fact that a series of researchers such as SAUSSURE, MEILLET, BENVENISTE, HIRT, SPECHT, KURYLOWICZ and many others offered valuable works in which they explored the origin of phonemes, morphemes and categories of IE in traditional reconstruction. It was generally known that IE had a history, but this, so to speak, was placed between brackets when a grammatical treatise or a dictionary proposed the reconstruction of "the" IE from parts of the same.

As did E. H. STURTEVANT¹¹, a series of authors began to discover features in Hittite (and later in other languages of Anatolia) which they considered to be more archaic than those of the traditional reconstruction of IE, that of BRUGMANN and MEILLET: either phonetic features such as the existence of laryngeals, or morphological ones. STURTEVANT on this basis suggested that prior to traditional IE there existed another, more ancient one, which he called Indo-Hittite, from which Anatolian and IE would have emerged.

But naturally, in order to propose that this IE was a branch with its own characteristics, one would have to discover common innovations: STURTEVANT had pointed out none, unless this be the loss of the laryngeals. However, in 1946 J. A. KERNS and B. SCHWARZ tentatively suggested¹² that this common innovation may lie in the development of a verbal inflexion on multiple stems (present, aorist and perfect).

¹¹ He began publishing in 1929, but reached the peak of his activities in 1942 with his *The Indo-Hittite Laryngeals*, Baltimore 1942.

¹² Cf. J. A. KERNS / B. SCHWARZ, "Multiple stem conjugation: a Indo-Hittite isogloss ?", *Language* 22, 1946, pp. 57-68.

This is the thesis I developed in several papers, first in schematic form¹³ and later in detail¹⁴; according to this theory, inflexion on several stems in general (not only on the so-called temporal stems, but also the modals and, for the nouns and adjectives, those of masc. and fem. gender and comparatives and superlatives) is an innovation. It is what I call IE III, in opposition to IE II or monothematic IE, which is more ancient; from this Anatolian derived; from IE III, the IE of traditional reconstruction, the other languages derived. IE I or as yet non-flexional IE, is prior to IE II; we can to a certain extent see this from internal reconstruction.

This thesis although very poorly received, came into fashion after a paper by W. MEID from 1975¹⁵. Although it still has its detractors, it is practically the standard doctrine today. I will not give the details of the history of this matter here, for I do just this in my *MANUAL DE LINGÜÍSTICA INDOEUROPEA* (in collaboration with A. BERNABÉ and J. MENDOZA, forthcoming), and in a paper forthcoming in *Indogermanische Forschungen*.

On the other hand, within IE II, two main dialects must be differentiated, the one we call Indo-Greek (with Indo-Iranian, Armenian, Greek, Thracian-Phrygian) or dialect A; and the one we call western IE (with the other languages, including Tocharian) or dialect B. Each of the two has its own archaisms, its own innovations; this goes both for the field of phonetics and for that of morphology.

Yet there are isoglosses in these fields which link some languages of dialect A to one language or another of dialect B (Gr. to Germ. or Lat., or Balt., or Slav., above all; I-I to Balt. or Slav.). Within group A or B, others link two or more languages to each other; there are, for example, isoglosses of Gr. and Ir. that are alien to O.I.; there are some of Balt., Slav. and Germ.; of Germ., Lat. and Celt.; of Slav. and Toch., etc.

We therefore see that there is dialectal differentiation in the most recent stratum of IE, IE III, that is at times clearly limited and at others hazy; and that this differentiation in turn underwent secondary differentiations. All this is the result of evolutions of diverse epochs, at times carried out in common in geographical areas that later became linguistically fragmented, at other times the result of relatively recent loans. I will not give the details here, but once more refer to the above-mentioned work in which the relevant bibliography is given.

Yet I do wish to point out that the distinction between dialects A and B and the internal differentiations within one and the other have been known in Indo-European

¹³ Cf. F. R. ADRADOS, "Hethitisch und Indogermanisch", in *II. Fachtagung für idg. und allgemeine Sprachwissenschaft*, Innsbruck 1962, pp. 145-151.

¹⁴ Cf. F. R. ADRADOS, *Evolución y Estructura del Verbo Indoeuropeo*, Madrid: C.S.I.C., 1963 (2nd ed. 1974); *Lingüística Indoeuropea*, Madrid: Gredos, 1975; and numerous later articles collected in their Spanish version in *Nuevos Estudios de Lingüística Indoeuropea*, Madrid: C.S.I.C., 1988. Of these, I should like to point out here "The archaic structure of Hittite: the Crux of the Problem", *JIES* 11, 1982, pp. 1-35 and *Die räumliche und zeitliche Differenzierung des Indoeuropäischen im Lichte der Vor- und Frühgeschichte*, Innsbruck 1982 (translation from an article published in Spanish in *Emerita* 47, 1979).

¹⁵ W. MEID, "Probleme der räumlichen und zeitlichen Gliederung des Indogermanischen", in *Flexion und Wortbildung*, H. RIX ed., pp. 204-219. Wiesbaden: Reichert, 1975.

studies for a long time, chiefly on the basis of phonetics and the lexicon. This latter, precisely, was widely used to this end by very diverse authors¹⁶.

However, it is today acknowledged by all, at least theoretically, that it is not the archaisms that give us the key to the connection between languages. A morphological or lexical archaism may appear anywhere in the Indoeuropean domain, although it may have been lost here and there; as the word for father: **pātēr*, which almost totally disappeared in Goth. and was totally displaced by another word in Hitt. On the other hand, a word unknown in one language may at times be re-discovered with the aid of new texts: not long ago, we learned words in Hitt. such as that for "star" (*ḫašter-*), which did not figure in previously known texts¹⁷.

To attribute dialectal value to archaisms often gives rise to serious errors. The same goes for morphology, as when PEDERSEN and others related Hitt., Toch., Celt. and Lat., through this device rather than through the lexicon. To give just one example, most lexical isoglosses between Hitt. and Luw. on the one hand, and diverse languages such as Gr., Germ., I.-I., Lat., Toch., etc. on the other, proposed by A. KAMMENHUBER¹⁸ are just archaisms; consequently, they prove nothing.

It is merely the innovations, which in their turn are of variable antiquity, which prove a family likeness. A word like **teutā* "people", "land", for example, is only to be found in western IE (except for Lat.); in Celt., Germ., O.-U. and in border languages (Illyr., Balt., Thrac.). It is doubtless a coinage from a more widespread root, which is attested even in Hitt. *tuzzi-*.

Obviously, the decision as to what in the lexicon is archaic and what is recent, as likewise the degree of antiquity, is not an easy one. This has been the cause for such contradictory theories on, for example, the dialectal situation of Illyrian, Albanian or even Tocharian itself (also due to a disregard, at times, of the criterion of whether these were ancient words or not).

Yet to return to our dictionary of IE, it is clear that this should cover all types of IE, whatever their chronological or dialectal status. That is, that dictionary of IE should cover what was once called "the" IE, which we now consider to be a sum of dialects. Or if you will, it should cover a pan-chronic and diasystematic IE.

This not only means that we are no longer naive, that we know how far we are from having one of these dictionaries cover the lexicon of a unique, unitary language. It also means that on the one hand, the dictionary should give some idea of the status of its entries, whether these be roots or words; it should separate Pan-Indoeuropean archaisms from the innovations of diverse chronological and dialectal levels; and on

¹⁶ For example, by MEILLET, *Les dialectes indo-européens*. Paris: Champion, 1908 (2nd ed. 1950); W. PORZIG, *Die Gliederung des indogermanischen Sprachgebietes*. Heidelberg: Winter, 1924; G. R. SOLTA, *Die Stellung des Armenischen im Kreise der indogermanischen Sprachen*. Vienna: Mechitharisten-Buchdruckerei, 1960. And numerous specific works on the relationships with Toch., with Slav., with Germ., etc., etc.

¹⁷ Cf. J. TISCHLER, "Hethitische Etymologie", in *Das etymologische Wörterbuch*, A. BAMMESBERGER ed., pp. 277-293. Regensburg: Pustet, 1983.

¹⁸ A. KAMMENHUBER, "Zur Stellung des Hethitisch-Luvischen innerhalb der indogermanischen Gemeinsprache", *KZ* 77, 1961, pp. 31-75.

the other, it should supply materials for an in-depth study of the Indoeuropean dialects.

I believe that it should clearly indicate, either by abbreviations or conventional signs, the dialectal spreading of each entry and each sub-entry; the spreading of **tēu*, **tōu*- is one thing, that of **teutā* quite another. It should also from the semantic point of view indicate what the ancient meaning was and what the modern one or ones are; or what the specializations are from an older, broader meaning.

This means increasing the contents of dictionaries of this type, making room in them for conclusions drawn from works on linguistic paleontology, the culture of the Indoeuropean people, the relationship between the languages. It is clear, for example¹⁹, that *φράτηρ* preserves an ancient meaning of sacred or legal relationship, not one of immediate blood-tie; but that sometimes this latter meaning was lost, albeit previously included in the former. And that the word *ἀδελφός*, which substituted for it in Greek, also changed its meaning: from having meant "brother by the same mother", it came to mean simply "brother".

This is certainly a difficult field. BENVENISTE, for example²⁰, criticized the common theory that Lat. *sūs* is the legacy of a Pan-Indoeuropean word meaning "wild pig" whereas *porcus*, a word non-existent in O.I., meant "domestic pig": for him both terms are Pan-Indoeuropean and respectively mean the adult animal and the young. Or see the work in which MAYRHOFER²¹ rejects the well-known doctrine that **laks*, the name for "salmon", is Pan-Indoeuropean and came to mean "lacquer" in O.I., a country without salmon. For MAYRHOFER, the word simply has another etymology and the whole thesis is thus disintegrated.

A string of forms with approximate translations is no longer sufficient for us today. Today, a dictionary of IE must give us a whole map of the dialectal distribution of words, their antiquity, and their semantic evolution in relation to these two data. To achieve all this, it must include cross-references to other terms that may be synonyms or display semantic differences within a system or represent a different dialectal date or distribution. The study of semantic fields in the different dialects will thus be assisted, as likewise that of the dialects themselves.

In any case, it is clear that a dictionary of this type must still be pan-chronic and diasystematic; and that, in part, rather than giving conclusions to define words in these respects, it should offer data for research on the same.

It should also include different levels of language, as far as possible. A word as **atta*, which is present in several languages, belongs to child language, nursery talk. Likewise **anna*. This explains why Hitt., on account of the semantic laxity of this type of vocabulary, secondarily differentiated between *annaš* "mother" and *hannaš* "grandmother". Affective and expressive language also requires separate treatment, although this be solely on account of the phonetic and semantic features that typify the same.

¹⁹ Cf. BENVENISTE, op. cit. I, p. 213 ff.

²⁰ Op. cit. I, p. 27 ff.

²¹ M. MAYRHOFER, "Altindisch *lakša*", ZDMG 105, 1955, pp. 173-183.

What a dictionary of IE must indeed have is a chronological limit; it should only contain, to our mind, forms of the diverse languages that can be deduced from Indoeuropean forms with an asterisk, not forms with monolingual suffixes. I believe that a healthy principle should be to only give forms or words that can be reduced to a basic form with an asterisk that produces derivatives in at least two languages.

The following final proposal will perhaps seem strange: that the dictionary should offer data on the existing hypotheses that relate diverse words to non-Indoeuropean languages. And this not only in the case of terms which are IE loans to the same (likewise Germanic words to Finnish), but also of terms borrowed from non-IE languages or, perhaps, of common terms that would prove an ancient relationship.

Much work has been done in these fields. See, for example, proposals by GAMKRELIDZE-IVANOV²² on Semitic, Caucasian loans, etc. Also, a long series of words should be in a dictionary of IE that are generally held to derive from Pre-Indoeuropean languages, such as words for "wine" like Gr. οἶνος, Lat. *uinum*, Arm. *gini*; this, I believe, whenever they appear in more than one Indoeuropean language.

Add to this the proposals of diverse authors in relation to real or supposed coincidences with Ural-Altaic, Elamite or Etruscan. Whatever one may think of them, they are materials that could one day be useful.

2.2. Problems of Etymology and Semantics

The foregoing, which is no more than a sketchy outline, gives some idea of the task awaiting the author who may possibly compile a new, great dictionary of IE. Nevertheless, it is taken for granted that this will invariably be a provisional work and more an inventory of data and proposals than a clear presentation of the lexicon of the different types of Indoeuropean.

In fact, the out-and-out conservatism of authors of etymological dictionaries in general has rightly been criticized²³. And not only on phonetic grounds - we shall discuss this later. They usually repeat the standard doctrine and rapidly waive aside what is not to their taste. They offer scant bibliography. It is sufficient to review repertoires such as *L' ANNÉE PHILOLOGIQUE*, *BIBLIOGRAPHIE LINGUISTIQUE* of UNESCO or the "Indogermanische Chronik" of *DIE SPRACHE* to realize how backward these works really are.

Many traditional etymologies, which we all repeat almost mechanically, are today held up to doubt. To give an example, I should like to draw the reader's attention to a recent article by E. A. POLOMÉ concerning the isoglosses of Greek and Old Indian given in POKORNY'S dictionary²⁴. According to BIRD²⁵, these are 24 in number. Now,

²² Cf. T. V. GAMKRELIDZE / V. V. IVANOV, "The ancient Near East and the Indo-European Question...", *JIES* 13, 1985, pp. 3-48 and two other articles in the same volume.

²³ Cf. BERNABÉ, *op. cit.*, p. 388.

²⁴ Cf. E. C. POLOMÉ, "A few notes on Indo-Aryan-Hellenic isoglosses", *Indogermanica Indoeuropaea*, Graz 1989, pp. 209-224.

according to POLOME, all but six of them were discarded by recent etymological dictionaries; MAYRHOFER'S dictionary of Sanskrit²⁶ and those by FRISK²⁷ and CHANTRAINE²⁸ of Greek.

Of course, many suggested etymologies are dubious: but they should be given with the relevant bibliographical references, because despite all, they can give one ideas. Or at least perform the role of a *caue canem*. The treatment of the diverse interpretations of Mycenaean words in F. AURA JORRO'S *DICCIONARIO MICENICO* is to my mind a model²⁹.

And what is to be said of semantics, about which MEILLET³⁰ already said that the comparative method itself tended to lead one to reconstructions of general, banal meanings? UNTERMANN³¹ has made very precise statements on the difficulty of "ursprüngliche Form-Inhalt-Zuordnungen", as he calls etymologies. Naturally, the problem is worsened when roots are entailed, roots usually being given a meaning that is no more than the generalization of the derived words.

But to return to phonetics, POKORNY is undoubtedly right when he establishes an entry *nu-* "now", with indifferent quantity, on which words in different languages either with long or short vowels depend. I think, however, that in this and other parallel cases it would be advisable to point out that this indifferent quantity is typical of IE II and refers to this stage.

The forms with a laryngeal also date from IE II. POKORNY, in his introduction to the second volume of indices to his work, strongly defends his attitude of not introducing the laryngeals in his book. This may have been opportune at the time, but is no longer so today. At least the standard doctrine of the three laryngeals *H₁*, *H₂*, *H₃* and their traditional vocalizations should be introduced. Today, this is a generally accepted doctrine.

On the other hand, it would help to eliminate some of the many homonyms in this dictionary. We know that all the languages have homonyms that are disambiguated by context; we also know that homonymy in roots is solved by the different derivatives of the same. Even so, there are far too many homonyms in this, and all other, dictionaries.

We have, for example, a 1st *ker* "head", a 2nd *ker* "to grow", a 3rd *ker* "string", "to plait", a 4th *ker* "to destroy". Now these are invariably disyllabic roots with a laryngeal. And the first two are distinguished by the opposition of the laryngeal *H₂*

²⁵ Cf. N. BIRD, *The Distribution of the Indo-European Root Morphemes*. Wiesbaden: Harrassowitz, 1982.

²⁶ M. MAYRHOFER, *A Concise Etymological Sanskrit Dictionary*. Heidelberg: Winter, 1956 ff.

²⁷ Cf. H. FRISK, *Griechisches etymologisches Wörterbuch*. Heidelberg: Winter, 1960 ff.

²⁸ Cf. P. CHANTRAINE, *Dictionnaire étymologique de la langue grecque*. Paris: Klincksieck, 1968 ff.

²⁹ Vol. I, Madrid, C.S.I.C., 1985.

³⁰ A. MEILLET, *Introduction à l'étude comparative des langues indo-européennes*, 8th ed. Paris: Hachette, 1937, p. 382. Cf. also BERNABÉ, *op. cit.* p. 380.

³¹ Cf. his review of W. MEID (ed.), *Studien zum indogermanischen Wortschatz in Kratylos* 34, 1989, p. 48 ff.

(in the 1st) and H_1 (in the 2nd): Cf. for example, Gr. κρᾶτος and Lat. *crēsko*, respectively.

Naturally, if one accepts our laryngeal theory, in which three palatal and three velar laryngeals are entailed³², there is far greater economy of entries and far less homonymy. The first two above-mentioned roots *ker* take H_2^u and H_1^u respectively (Cf. Gr. κόρυς, κεράφος, Lat. *ceruus*, on the one hand; Gr. κόρυς, Lat. *crēui*, on the other). But the 3rd *ker* certainly comes from H_2^i . Cf. Arm. pl. *sarikh* "string", Gr. καῖρος. On the other hand, this is a dialectal root that is only to be found in Gr. and Arm. The 4th one very probably also has a laryngeal of this type, although this is open to doubt.

This is merely a single example out of many. In my LARINGALES mentioned above, one can find countless examples of the reduction of diverse roots to one through the new phonetic theory. In a later article³³, I proposed reducing to one single root, not only the names of animals that appear in the title, but others, too (a series that goes from the wolf, the vixen, the jackal and the dog to the wild cat and just the ordinary cat). Also, words which mean "white" such as Gr. λευκός, ἀλφός, ἄλωφός, Lat. *albus*, Russ. *otowo* "tin", etc. There is tremendous economy.

Other modifications in phonetics which should be made, in accordance with our current ideas, are the elimination of aspirated voiceless plosives, which are considered as a dialectal innovation of Indo-Greek, and above all, that of the distinction between palatal and velar gutturals. Strangely enough, POKORNY mixes them up at the same time as he differentiates them. After four roots *ger-* with a guttural, he gives *ġer-* with a palatal. But it so happens that the 4th *ger-* "to grow" is practically synonymous to *ġer-* "to mature, to grow old"; cf. for example, Old Indian *járate* "he grows" and *járatī* "he makes old", given as two different roots; just as the 3rd *ger-* "to make (something) spin round" is synonymous with *ġers-* "to make (something) to spin round".

It would also help to pay attention to expressive phonetics. See a drastic reduction of POKORNY's and others' entries as we suggest³⁴ with regard to Gr. χαίρω, κάρχαρος, χαρία and Hitt. *ḫaḫharija-*, etc.

2.3. Problems of entry organization

The foregoing once more points to the seriousness of the problem of entry space organization in these dictionaries.

³² Cf. F. R. ADRADOS, *Estudios sobre las sonantes y laringales indoeuropeas*, 2nd ed. Madrid: C.S.I.C., 1973, as likewise "Further considerations on the Phonetics and Morphologizations of H_2^i and H_1^u ", *Emerita* 49, 1981, pp. 232-271 and "More on the laryngeals with labial and palatal appendices", *FLH* 2, 1981, pp. 191-235.

³³ "Gr. ἄλωπηξ, O. I. *lopāsá*, Av. *urupis*, Lat. *uolpes* and the IE laryngeals with Appendix", in *Festschrift für Johann Knobloch*, Innsbruck 1985, pp. 21-27.

³⁴ Cf. "Griego χαίρω, κάρχαρος y hitita *ḫaḫharija-*, *ḫaḫharš-*, *ḫari-*, *ḫarš-*" in *Homenaje a Antonio Tovar*. Madrid: Gredos, 1982, pp. 245-278.

However, this is not merely a question of phonetics and semantics. The basic problem, on which something has already been said, is that of how a dictionary of IE should be organized: by reconstructed words? by roots? by a mixed system?

Organization by words is adequate for our languages, although it is not always easy and free from ambiguity to establish what really is a word; we discussed this in our *INTRODUCCIÓN A LA LEXICOGRAFÍA GRIEGA*³⁵. It would be an ideal system for the Indoeuropean languages to give a dictionary of Indoeuropean words (perhaps of different chronology and dialects) with asterisks. This is moreover possible to a certain extent. MANN attempted to progress in this direction. But in another sense it would not be so: reconstruction takes us no further than roots, stems and formative elements.

Other languages, in which words are easily derived from the root, lend themselves to the elaboration of dictionaries organized by roots; thus Old Indian (remember GRASSMANN'S dictionary of Vedic³⁶); it is the habitual system for Arabic for example. Within each root, there are separate paragraphs for the derived words. This is the model the authors of dictionaries of IE have followed. And, in view of our possibilities, I believe that this is still the right method, as long as all Indoeuropean forms, whether they be words, roots or stems, are given with an asterisk, instead of offering a confusing series of forms from diverse languages perhaps derived from each other.

However, there are still many unsolved problems, three above all: how the roots are to be given; whether the roots are at the same time independent words; and the problem of the reconstruction of words.

Works such as POKORNY'S are not absolutely systematic. Normally, roots are given as entries with their variants and enlargements; but at times, and we have seen examples of this, only the already enlarged root is given. Also, the root and enlarged root may appear in different entries; for example, 1st *mel-* "to grind, crush" (there are no less than eight *mel*-s) and later on *meldh-* "hammer", *melġ-* "to rub, to milk", which are obviously the same. In other instances, the entries are stems or words, which is admissible when the correspondences lead only to them (cf., for example, **k_uetuer-* and variants "four", *ghaido-* "goat"); when they lead to a root too, it would seem logical that words or stems should always appear as subordinate to roots. But it is not always like this.

To return to roots, however, it is hard to propose a rule of regularity. POKORNY usually gives the form of the full degree with *e* in the first place. Sometimes, there is no form of this type and he gives, for example, *op-* "to work", *ōr-* "to speak, to pray", *pō(i)-*, *pī-* "to drink", *rabh-* "to rage", *stā-* "to stand", *stāk-*, *stek-* (?) "to stand, to place" (which POKORNY himself calls an enlargement of *stā-*).

This is all somewhat chaotic. It is clear that the enlargements should go with the simple root; that once one uses the laryngeals, regularity is considerably increased and the wealth of homonymous forms is reduced.

³⁵ Cf. F. R. ADRADOS, E. GANGUTIA, J. LOPEZ FACAL and C. SERRANO, *Introducción a la Lexicografía griega*, p. 225 ff. Madrid: C.S.I.C., 1977.

³⁶ H. GRASSMANN, *Wörterbuch zum Rig-Veda*. Wiesbaden: Harrassowitz, 1972 (1st ed. 1872).

In the "Appendix" to my *LARINGALES* I gave alphabetic lists of roots organized in this way. Yet one must not deceive oneself for there is still an irrational remnant. For example, roots (and words) with non-apophonic *o*, studied by BERENGUER³⁷; cf. for example *ghous* "to resound", *ghroud* "convex", *kob* "to turn out well", etc. There are other parallel forms with *ǎ*, on which there are several theories³⁸.

I think it would be generally advisable to give monosyllabic roots in the full degree *ǎ*; the disyllabic ones in full degree *ǎ/ǎ*, both with their variants of alternation (to the extent that these are not recent innovations), and together with the enlarged forms. Yet there are inevitable exceptions when the full degree form with *ǎ* is simply not recorded, whereas another such as those mentioned above is.

It is precisely for this reason that one should avoid any rigid theory on the root, for example, BENVENISTE'S. If the non-enlarged root is not recorded, it should not be given. Neither should a non-recorded vowel degree or, as was stated above, a recent one³⁹.

Pronominal-adverbial roots and words are a special case, having their own characteristics as far as phonetics and root structure are concerned; I have given them in their disyllabic form, of the type *eke*; one should give their variants without an initial vowel, with other timbres, with consonantal variation, with agglutinated, tonic and atonus forms, etc.⁴⁰

As for those words of IE that can be reconstructed, it would be better to give their stem rather than the forms of the paradigm case or the 1st pers. sing.; of course, for the verb in IE III, there are several "primary stems", the so-called temporal ones. The stem should moreover be given with an asterisk, as a form that can be reconstructed for IE or for just one given area of the same. As we said, it is prudent when several stems derive from one and the same root for this latter to be given; when, so to speak, they are independent or their relationship to the root is merely hypothetical, they should be given apart as independent entries.

In any case, both as far as roots and stems are concerned, the most important thing is that their dialectal distribution, their oldest semantics and evolutions of the same, and their relationships to other terms of the lexicon be indicated. In the case of stems, it is also important to specify the word-classes: noun-adjective, verb, pronoun, non-declinable. However there is multifunctionality at times, or secondary derivation.

We would therefore propose an independent treatment of roots and stems, although practical reasons lead us to prefer including the latter within the former wherever possible. Yet it should be borne in mind that the distinction between root and stem is not absolute, and that in principle any root must have been a stem in Proto-Indo-European and that there are at times traces of this very use of some of

³⁷ J. A. BERENGUER, *Uso premorfológico de las alternancias vocálicas en Indoeuropeo*. Unpublished dissertation, Madrid 1985.

³⁸ Cf. J. MENDOZA, "La /a/ en indoeuropeo. I. Análisis de la *a- en posición inicial de raíz", *Emerita* 50, 1982, pp. 325-363.

³⁹ For criticism of the root theory, see my *Manual de Lingüística Indoeuropea* mentioned above.

⁴⁰ Cf. my *Lingüística Indoeuropea*. Madrid: C.S.I.C., 1975, p. 775 ff.

them; of the type **jug-* "to unite" in Lat. *coniux*, Gr. *σύζυξ*. One of these roots - root-words, as they are generally called - should naturally be an entry. But in order to indicate its special status within what can be reconstructed, I would mark it with an asterisk; as I would also mark reconstructed stems which are no longer roots with two asterisks.

In any case, root-words and stems make up a set. Each of the forms in question should have adequate dialectal and semantic definition, a definition that would differ from that of simple reconstructed roots as mere abstract entities.

Withal, phonetic and morphological consideration is not everything. We have already seen the problems posed by phonetics. Even though we reduce the number of entries enormously (and this can be done), there will always be a few homophones, unless we decide to unify those with the same form whatever their semantic differences.

This is a difficult matter. The semantics of words may vary radically as is to be witnessed from the history of languages, even from that of IE itself. Yet there has to be bridges or connections based, rather than on general plausibility and parallels, on the philological study of ancient texts from the diverse languages. The detailed study of etymological dictionaries and the "history of words" (included at times in some of these dictionaries, as in the Latin one by ERNOUT-MEILLET⁴¹ and the Greek one by CHANTRAINE) is indispensable.

It should be pointed out that this prior, indispensable task is in many instances very much behindhand; suffice it to quote the project for a historical-etymological dictionary of German (a reelaboration of KLUGE-GÖTZE) undertaken by HIRSCH which is still in its initial phase on account of its difficulty.⁴²

In the extreme case in which no connection is to be found between the meanings of two homophonous roots or stems, there is no other solution than that of provisionally considering them as independent. I say provisionally because the problem is often due to the insufficiency of our data, above all in the case of roots, whose over-generic meanings are deduced from a hazy vocabulary of very different dates and dialects.

3. Conclusions

To sum up, we could say that whatever the origin and first intention of dictionaries of IE, they are a considerable help to the scholar of IE and its different languages. It is a pity that the last complete one, POKORNY'S, should by now be in many aspects out of

⁴¹ A. ERNOUT / A. MEILLET, *Dictionnaire étymologique de la langue latine. Histoire des mots*. Paris: Klincksieck, 1979 (4th ed. revised by J. ANDRÉ).

⁴² Cf. R. HIRSCH, "Bericht über das Projekt eines historisch-etymologischen Wörterbuches des Deutschen", in *Das etymologische Wörterbuch* (ed. A. BAMMESBERGER), pp. 75-77. Regensburg: Pustet, 1983.

date. MANN'S new one does not contribute any great novelties, neither does it substitute for POKORNY'S. WATKIN'S new work⁴³ has different aims.

It is doubtful whether anyone will find time and courage under the current circumstances to compile a work that would substitute for the former ones. Without doubt, it would have to be compiled by a team. But before setting out on this enterprise, this team would have to reflect profoundly on its aims, method and limitations.

A dictionary of IE is no more than a collection of materials ordered in the most practical manner possible; it is not a repertoire of the lexicon of IE but a series of data on the same. Data which at times refer to roots and at others to stems; moreover these data are pan-chronic and pan-dialectal, so that only to a certain extent can one point to a date (however relative) and dialectal area.

Even so, there has been a lot of progress in our knowledge that must be inserted into a dictionary, progress that would at the same time make the organization of the material more rational and simpler.

Attention to our current knowledge of phonetics would greatly reduce the number of entries. Etymology has to be revised in depth: there has been a great deal of work on the subject. And one would have to revise the form in which roots are given.

Attention to diverse studies on linguistic paleontology, cultural lexicon, the history of words, etc., can also contribute improvements and perfectings. On the other hand, a dictionary thus conceived could also be an aid to these sciences.

I have also suggested other possible improvements:

1. To clearly distinguish between roots, root words and stems: one should give old reconstructed forms and those derived from the same in the diverse languages, not particular formations of the same.

2. It is important to refer to the hypotheses that have been put forward, even though one does not accept them; one should specify in each case the dialectal area of the root or form, with indication as to the antiquity of the word or its spreading, as likewise to the levels of language; one should even give suggestions as to the relationship with non-Indoeuropean languages and give as full a bibliography as possible.

3. The different root-words and stems should have cross-references to others, in order to be able to establish semantic fields in IE or in any of its branches.

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⁴³ C. WATKINS, *The American Heritage. Dictionary of Indo-European Roots*. Boston: Houghton Mifflin, 1985.