

More on the *Diccionario Griego-Español*

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1 The *Diccionario Griego-Español*

Upon the publication of Volume III of the *Diccionario Griego-Español* (hereafter *DGE*), under my direction by the Consejo Superior de Investigaciones Científicas (CSIC) in Madrid,¹ I should like to add a few remarks to what I wrote in Adrados 1986a and to what my collaborators and I have stated in several other publications.²

I shall essentially refrain from repeating things stated in the above-mentioned publications, particularly in Adrados 1986a, in which I discussed the fundamental characteristics of the work as regards lists of authors and works, of papyri and ostraka, and of inscriptions used as a basis of the Dictionary; the choice of editions to be used; the treatment of lemmatization, morphology, etymology; and the organization of entries. I also took a position regarding a series of reviews on Volume I of the work. If I discuss the *DGE* here, it is because Volume III offers an important series of innovations that could be of interest on the one hand to classical scholars, and on the other, to lexicographers in general. The *DGE* is the most extensive dictionary of Ancient Greek currently being produced; and the fact that, besides contributing new materials, it makes abundant use of the methods of computerization and modern semantics makes it worth-while presenting to the community of lexicographers the problems we have been faced with and the solutions we have sought.

In any case, it would first of all be advisable to give a general idea of the work, for the information of readers who are not familiar with it, either directly or indirectly. First, I should say that this is a collective work, written by a team of lexicographers from the CSIC and the universities and other teaching centers of Spain.³ Moreover, its aim is to give proper treatment to the whole of the ancient Greek lexicon, from Mycenaean (collected in a separate dictionary coordinated with the main one) to approximately the year 600 A.D. Our intention is that no recorded word or recorded meaning should be left out. Unlike the dictionary of Liddell-Scott-Jones (*LSJ*), it also

includes Christian Greek and (selectively) proper names (both personal and toponyms). It also has an etymological section.

The Dictionary is very broad in its range, about two-and-a-half times that of the *LSJ*, hitherto the most comprehensive in existence. This is due to the inclusion of abundant new materials from authors, papyri, and inscriptions, added to those of the earlier tradition, as well as extensive revisions. In actual fact, in terms of the compilation and interpretation of materials, the lexicography of ancient Greek had become outdated by the time we began our project. I should add that we have followed the principle of always quoting each author and work from the same edition, although when necessary, reference is made to variant readings or conjectures.

Volume III, which appeared in 1991, apart from covering dictionary entries from *apokoitéō* to *basileús*, includes a new, thoroughly revised edition of the three initial lists of Volume I which state the editions and collections we have adopted. List I covers authors and works; List II, papyri and ostraka; and List III, inscriptions.

List I contains important changes compared to the 2,488 entries of Volume I: There are 178 new entries, 40 old ones have been eliminated, and 900 have been corrected or enlarged. List II, which contained 250 entries in Volume I, adds 64 new entries, eliminates 84, and corrects or enlarges 161. List III adds 75 new entries to the 161 of Volume I, eliminates 29, and corrects or enlarges 29. All these changes reflect the volume of our base material and the effort involved in keeping it up to date. These lists, completed in Volume IV, are today the most complete inventory of ancient Greek texts in the broadest sense.

As stated above, I refrain from giving more details here on a series of points on which either the *DGE* in general or Volume III make contributions to Greek lexicography and to lexicographical methods in general. For this purpose, the bibliography given in note 2 can be consulted, in addition to the prefaces to each volume and the reviews of the same. Neither do I wish to go into personnel problems here, or economic and administrative problems that we have had to struggle with. I merely wish to stress, as I said before, the two points which may be of most general interest: the use of computers and of modern semantics.

We are working at an accelerated pace and intend to bring out a new volume every three or, at the most, four years. Volume IV, which goes as far as *daímōn*, has appeared in 1994. We are now working on Volume V, which goes as far as *diōnukhos* and will appear in 1997. At present, more than four fifths of the Greek lexicon still remain to be dealt with.

Moreover, it should be pointed out that we are collecting lexical excerpts and interpretations for the entire Dictionary: either by traditional methods or by computer (see below). We are collecting new words, new meanings, new interpretations; we are making occasional revisions in accordance with new editions; and we are increasing the documentation of hapax legomena and rarely attested words (or ones not recorded until now in a particular gender or at a particular date).

Two further undertakings are in progress:

One is the *Diccionario Micénico*, of which Volume I appeared in 1985 and Volume II in 1993. It is now completed. The second undertaking consists in preparations for future updated editions of published volumes. To this end we are feeding the Volumes I and II into the computer and incorporating the supplemental materials (additions and corrections) that we collect. This is the only way to keep a work like this up to date, a work which by nature progresses very slowly.

To conclude this section, let me emphasize that there will always be a need for a work of such extent as the *DGE*, a work of broad scope that covers all the essentials of the lexicon, even though, to remain manageable, it cannot attempt to be exhaustive. Of course, there is room, too, for indices, concordances, and specialized lexica, and for the nearly complete huge data base of the *Thesaurus Linguae Graecae (TLG)* produced at Irvine (California), under the direction of Professor Brunner, with whom we have worked in close contact. Yet it would be very difficult to lemmatize the *TLG*; and to turn it into a manageable lexicon would be well nigh impossible. In fact, the latter idea, although announced at the beginning, seems to have been abandoned. At the same time, its data base can naturally be useful for completing a dictionary such as ours. Finally, there is, of course, also room for shorter dictionaries and manuals and for all kinds of special dictionaries, which could be created quite easily as a byproduct of our own.

2 Computerization and the *DGE*

With Volume III, computerization has fully arrived for the *DGE*. Earlier attempts to use the computer are reviewed in the bibliography of note 2. These earlier attempts made use of computerized indices and concordances, either those available commercially, or ones prepared specifically for us by the Center of Calculus of Complutense University (Madrid) on the basis

of the tapes of the *TLG*. In addition, the computerized printing office that produced the first two volumes of the *DGE* prepared lists of authors' citations contained in it so that, once they were put in alphanumerical order, they could more easily be revised. This was more or less all.

Yet about half-way through the writing of Volume III, two great innovations occurred which were related to each other. (For details see Rodríguez Somolinos & Alvarez 1991.)

First, we acquired and used the necessary hardware and software to carry out a great deal of the tasks of composing and storing materials by means of the computer. We also used the computer for text revision and to get automatic printout. All this saves a great amount of time and helps avoid numerous errors and errata (see below).

Secondly, after countless problems due to an initial lack of appropriate software, we were able to obtain new materials from the CD ROM disks of the *TLG* and from the Packard Humanities Institute.

Without wanting to go into detailed technical explanations, I would like to point out how far these new techniques can be used in the elaboration of a dictionary like ours. Much has been written on computer-aided elaboration of indices and concordances, but our problems were different. We did not have to begin from zero; we have behind us a whole tradition of dictionaries, indices, concordances, lexica, and specialized bibliographical data collections, which we cannot disregard. Moreover, the process of composing entries can only be accomplished by an experienced lexicographer; the computer is merely a useful tool in this process.

What concerns us, then, is the question of how far new computer techniques can help us in our undertaking.

In the following, I shall merely give our answers to this question, indicating the extent and the manner in which we have used computers (or intend to use them in the future).

Text composition. From a point roughly halfway through Volume III, the entries of the *DGE* have been composed directly on the computer. We use the word processing program *Word Perfect* on networked IBM-compatible personal computers. The software has been adapted to our needs. The written text, with Greek characters and all necessary special symbols, is displayed on the screen. Revisions are made on the computer based on 'hard-copy' printouts.

Text composition carried out in this way has many advantages over the former, hand-written method. Outlines can be composed that can later be completed or modified; materials to be used later can be composed on the

screen, stored, and called up when needed, etc. Our writers have rapidly learned the mechanics of the system.

Data storage and retrieval. We have at our disposal a data base into which we enter the new lexical excerpts that we are still preparing. When our collaborators begin to compose an entry, they get a printout of the materials which they can use, together with all the materials in our traditional 'paper' archives. (It would be counterproductive to enter the latter materials into the data base.)

In addition, it is possible to search for words directly on CD ROM, thanks to the software that we use and to certain complementary programs. To be more precise, when words are rarely attested or there are doubts on the context in which they occur, the CD ROM materials make it possible to view them on screen, either alone or in context. We supplement this approach by marking in the index of the first CD ROM produced by the *TLG* those words that we are interested in searching for. The results of the search, i.e. passages in which the words appear, together with their contexts, are given to the writers of the articles. A program that converts the *BETA* format of the *TLG* to the *Word Perfect* format of the *DGE* makes it possible to use our computers to work on the CD ROM materials and to print lexical entries directly from our computers.

The use of the CD ROM materials has its limitations. In theory, it would permit one to do away with searching for new material directly in ancient texts or through lexica, bibliographical data collections, etc. When composing entries, one could even do away with looking up words and contexts in the editions of ancient texts. In practice, however, this cannot be done for several reasons:

First, the excerption of Greek literature on CD ROM is still incomplete and is very often done on the basis of editions different to ours. In addition, excerpts contain errors and indifferently mix common vocabulary with toponyms and anthroponyms, apart from offering non-lemmatized forms. Naturally, there are no comments, translations, and interpretations, as may be found in the bibliographical data collections we use. Moreover, the latter are often easier and quicker to consult.

Secondly, in theory, a dictionary like ours could be produced as a summary of the data base of the *TLG* contained in its CD ROM materials. But even if the difficulties just mentioned did not exist, we have neither the time nor the personnel to do so. In fact, it is impractical to systematically revise all occurrences of *kaí* or of *lógos*, for example. It is better to begin with the lexicographical tradition, adding materials wherever the tradition is deficient.

The CD ROM materials therefore are only one source among several, and are used above all to check on rarely attested lexical items.

Finally, a work such as ours has an overall plan and needs to keep a balance between its different parts. We must not permit successive parts of the Dictionary to differ significantly in their breadth of coverage.

Use of the data base *LABRIS*. Besides the data base mentioned above, we have developed another, called *LABRIS*, into which the written text of the *DGE* is fed. This procedure has several purposes, among which are the following:

First, since this data base is highly formalized as far as the organization of entries, abbreviations, etc. is concerned, it rejects anything that does not conform. Therefore, it is easy to use the program to make automatic corrections in the written version. Secondly, lists can be drawn up of all citations, ordered in terms of abbreviations of authors and works, and the numbering within these works. This makes revisions so much easier.

Finally, all kinds of data from the Dictionary can be collected: These may be lexicographical in nature (for example, the frequency of citations from the diverse authors); they may concern morphological or other data; special or reduced dictionaries can be compiled; etc.

Printing. We have developed a program that permits the conversion of the format used in the Dictionary to the one used by the printer, so that printing of the Dictionary can be done almost wholly automatically. This has already been done for the second part of Volume III (as well as for Volume IV) and has saved us a lot of time. It also avoids many errors.

New editions. So far, Volume I has been re-edited by conventional methods, as it went out of print. For the future we plan to have a continuous edition incorporating all the necessary additions and revisions.

In fact, we are constantly coming across new lexicographical materials. Volume III therefore includes a Supplement to Volume I. But it is impractical to accumulate Supplements, and Supplements to Supplements. As pointed out earlier, our intention is to feed into the computer (into the word processor and eventually into the data base) those parts of the Dictionary that were produced in the traditional way, viz. Volumes I and II, and the first half of III. Once this is done, the abundant supplementary materials and improvements that we have gathered will be added to the Dictionary text, so as to create what amounts to complete revisions of many entries. In this way, we shall be able to keep the work constantly up to date.

3 Semantics and the *DGE*

In Adrados 1986a and elsewhere (see note 2). I have deplored the fact that what is perhaps the most important contribution of the *DGE* to modern lexicography, the organization of entries according to semantic criteria, should have passed practically unnoticed.

Especially for very complex items, the organization of entries is multi-tiered. On the one hand, the organization is determined by appropriate translations into the target language, Spanish. On the other hand, it is organized in terms of classificatory headings which – in order of decreasing importance – are as follows: extralinguistic criteria, broad semantic classification, grammatical considerations, and lexical factors. The section of the Dictionary covered by Volume III does not contain important grammatical words, with the exception of the pronoun *autós*. On the other hand, it contains a lengthy series of words compounded with *apo-* (70 pages) and *aph-* (22), as well as with *auto-* (15 pages) and *arkhē-*, *arkhi-* (6). Entries of this type clearly illustrate a characteristic aspect of the Greek lexicon. But there are also important words, such as *bainō* and *bállō*, and a great deal of anthroponyms and toponyms of oriental origin.

Yet it is the semantics of the extensive entries which, as noted before, is of greatest interest. What is, we believe, new here is the procedure of organizing the different meanings of entries in terms of the target Spanish lexicon, so as to indicate in which contextual situation a particular Spanish translation is required. This means that our entries cannot be translated into other languages. Moreover, definitions on syntagmatic principles are at times supplemented with others on paradigmatic principles. Further, we have discarded classifications of the “logical” or chronological type.

It is not that attention to context (including indication of broad semantic categories) has always been neglected. The organization of *apokteínō* in three sections, for example, is close to that of the *LSJ*, although we add many more shades of meaning. But there is often a radical modification compared to our predecessors. The following examples may illustrate.

For the word *aporía*, *LSJ* gives four sections with the broad semantic classificatory headings ‘of Places’, ‘of Things’, ‘of Persons’, and ‘in Dialectic’. But it is hard to see why meanings like ‘difficulty’, etc. are classified under ‘Things’ (Section II); and Section III, ‘of Persons’, lumps together very different translations, such as *embarrassment*, *perplexity*, on the one hand, and *lack of* on the other. I believe our organization is more logical. Section II contains absolute uses that can be translated by Span. *duda*, *dificultad* (and

also the 'dialectic' meaning *dificultad, aporía*, which has its own Section in *LSJ*), whilst the construction with the genitive makes up another section (III *imposibilidad*, etc.). Translations and classificatory headings thus coincide, as they should.

In the entry *apostasía*, *LSJ* makes no distinction between the semantic classification 'with movement' (*departure, defection*, etc.) and the classification 'without movement' (*distance*). In the *DGE*, these classifications are kept separate. Similarly, for *bállō*, the *DGE* distinguishes between uses which imply a violent impulse (*lanzar*, etc.) and those which lack this implication (*poner, infundir*, etc.); the *LSJ* fails to distinguish them and lumps together the meanings *hit, cast, hurt, let fall*, and *put* in a single section (II).

Or consider the entry *harmonía*. Our Section III collects all the meanings, musical or otherwise, that are translated by Spanish *armonía*, a term which implies equilibrium between parts. On the other hand, the *LSJ* has a special musical Section IV which includes the meaning *harmony, concord*, as a metaphor for persons and things, but the latter use is supported by only one example, viz. Plato's *Republic*, 431 e. This procedure clearly is insufficient, for the meaning of *armonía* is much broader. For us, this meaning takes up the whole of Section III, while Section I treats the concrete meaning, and Section II treats the use of *harmonía* to indicate any kind of *ensamblaje* or *acuerdo*. The principle is that all the meanings of a given section should share a maximally possible common meaning. (Where necessary, we first list the generic use and then the more specific uses for each meaning category.)

The entry *árkhō* is organized by a combination of three criteria: (i) the distinction 'with movement': 'without movement'; (ii) the grammatical construction (with genitive of the person or of nouns of action, etc. vs. with dative of the person and accusative of extension); and (iii) voice distinctions. The combination of these criteria naturally motivates translations such as *mandar, conducir*, and *comenzar*. By contrast, the *LSJ* lumps together the translations *begin* and *show* in a single section (I: 'in point of Time'); and treats *rule, govern* in Section II, under the heading 'in point of Place or Station'. It also includes a special section for the passive, which we do not, since the passive is no more than a transformation of the active.

In this way, straightforward semantic classifications are achieved, as in the case of *apoleípō*, where we distinguish between uses 'with movement', 'without movement', and 'figurative uses'. And of course, there is an infinite gain in subtlety of meaning; cf. e.g. the case of *apothnēskō* (where the *LSJ* does not cover later uses, save for the morphology) or *árkhōn* (where our treatment leads to a tremendous gain in insight into the structure of political etc. institutions).

In our approach, the difference between intransitive and transitive uses is essential, because it affects translations. Thus in *baínō*, the intransitive use, in principle glossed as *ir*, is classified in Section I, even when it means *subir* or *bajar* in certain contexts; and the transitive use is treated in Section II, both as a simple transitive, *subir, montar*, and in causative use, *hacer subir*.

It is also worth mentioning that we pay attention to morphology only when it affects the meaning. Thus, in contrast to the *LSJ* we do not devote a special section to middle-voice uses of *bállō*. Rather, active and middle-voice uses are accounted for in one section, as *poner* 'put on a dress' and *ponérselo* 'put a dress on oneself'. (The same procedure is followed for *baínō*.)

On the other hand, in verbs such as *apoleípō*, the distinction between active and middle voice directly affects the meaning and, therefore, directly affects the semantic organization of the dictionary entry. Similarly, in *bállō* the aspectual opposition between present and aorist is reflected in the differences in translation (*lanzar* and *alcanzar* vs. *herir*); the two translations, therefore, must be given different sections.

Differences in grammatical use are even more important in a pronoun such as *autós*, the most extensive entry in the volume (covering more than two pages). Here, the differences between exclusive use (in explicit or implicit oppositions), determinative use, and indication of identity (with or without an article) are absolutely crucial and therefore are the primary criteria for classification. Within these classificatory sections, other differences, such as anaphoric use (in non-nominative cases), or the predicative use with verbs, determine the differences in translation. This is the point at which semantic-lexicographical considerations interact with syntactic ones and at which a dictionary can contribute to syntactic studies.

I hope that these – rather limited – examples suffice to show that, in addition to its increased coverage of lexical items, chronological stages, specialized lexis, etc., the *DGE* makes significant contributions to the semantic organization of entries, especially of complex and extensive ones.

Notes

1. Madrid, 1991, pp. cxlii, 425-620 pp. (ἀποκοιτέω ~ Βασιλεύς). Volume I appeared in 1980, Volume II in 1986, Volume IV in 1994, after this paper had been completed.
2. See Adrados 1971, 1979, 1986b, N.D.; Facal 1976, 1978, 1980, 1983; Facal & González 1977; Somolinos & Alvarez 1991; Adrados & Somolinos 1992, 1994; Gangutia 1994. In addition there are diverse publications by the present author on lexicography and semantics with reference to the dictionary, most of which

are collected in Adrados 1988 (above all 'Sintaxis y diccionario', 'Problemas de lingüística general en relación con la lexicografía griega: Aplicación a la lengua griega', and 'Organización de los artículos del diccionario: Criterios a seguir.')

3. The main collaborators on the *DGE* were as follows: Elvira Gangutia (Codirector), Dolores Lara (Secretary), Concepción Serrano, Juan Rodríguez Somolinos, Esperanza Rodríguez Monescillo, Alfonso Martínez, Alberto Bernabé, Jose F. González Castro, Helena Torres, Pilar Boned, Rosa Pedrero, Lucía Morán, José Antonio Berenguer, Helena Rodríguez Somolinos, Alicia Villar, Ma. Teresa Santesmases, Maximino Martínez, Ma. Paz de Hoz, Daniel Riaño, Eugenio Luján, Jorge Martínez de Tejada, Santiago Rubio, and Eva Vallines. The Dictionary of Mycenaean has been compiled by Francisco Aura Jorro. Computer assistance is provided by Ignacio Alvarez.

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