

THE *DICCIONARIO GRIEGO ESPAÑOL*: ITS PRESENT STATE

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The *Diccionario Griego-Español* (*DGE*) is becoming well known in the philological world: we are particularly glad that Greek scholars are becoming increasingly aware of it, especially since it received the international Aristotelis award from the Onassis Foundation. Therefore, we are glad that we can present some information on our plans, problems and results here in Thessaloniki and that we can also say something about our involvement in the world of information technology.

The *Diccionario Griego-Español*, as you may well know, is an extensive Ancient Greek-Spanish dictionary. Even though it is bilingual, it is meant for the entire international community of classical scholars. Some people have suggested that it might be better for such a dictionary to have been, let us say, an Ancient Greek-English bilingual one. When we started, we tried to meet the demands created by a blossoming of classical philology in Spain over the last thirty years. But the work took on a momentum of its own and has become a true *instrumentum studiorum* of universal value. It would be difficult now to substitute English translations of Ancient Greek words for the Spanish ones, as the semantic differences between the two target languages would require a completely different internal organization of the entries. Besides, we think that Spanish is not such a difficult language for a classical philologist or a cultivated person in any part of the world to understand.

So far, five volumes of the *DGE* have been published, and a sixth¹ is in the making, which concludes with the letter “Δ” and proceeds well beyond the middle of the letter “Ε”. Even though it may sound strange, when the letter “Ε” is finished, we will have finished nearly half the work.

Conscious that we are only a link in a lexicographical tradition which began in antiquity and which has produced such eminent international scholars up till the present day, we thought that at some point this tradition needed updating, first of all, because there is now an enormous number of words and documentation com-

1. It appeared in 2002 (*δωξικέλευθος - ἐκπελεκάω*).

ing from new editions, inscriptions, papyri, which have become available to scholars only in recent years. Of course, supplements to great lexica such as *Liddell-Scott-Jones* exist (e.g., the recent one by P. Glare) and it is also possible to find additions and appendices in periodicals and elsewhere. However, supplementation represents only a partial solution and is sometimes cumbersome to use. What was needed was to integrate already known and new facts together in a new work based on up to date criteria.

Our initial lists (or *Canon Lists*) are a proof of this. It took great effort to draw up the initial lists for the *DGE* I, published in 1980, including also Greek Patristic and Byzantine authors until the 6th century A.D., as well as philological terms of later ages. These lists comprise 2,488 Greek authors, plus 250 and 161 lemma-ta of papyrological and epigraphical collections respectively.

But when we came to publish Vol. III, we decided to make a supplementary effort and bring out a revised canon list. Besides our own personal and constant attention to new editions in all fields, important repertories had appeared in the meantime: the *Canon List* of the *TLG*, whose staff got in touch with us very soon; two of our collaborators had published a *Repertorium Litterarum Graecarum*; also the *Clavis Patrum* and the *Papyrus Check List* had been published, and so on. These initial lists of Vol. III, and its second edition in *DGE* III, are a real tool for philologists in general and for papyrologists and epigraphists in particular. But already in Vol. IV and V it was necessary to offer supplementary lists. Vol. V has a supplementary *List I* (authors and works) which comprises 209 entries, of which 37 are entirely new authors and works; its *List II* (Papyri) contains 45 entries (24 of which are new); its *List III* (Inscriptions) contains 53 entries, 42 of them new. In the future we contemplate a third complete edition of these initial lists. They are essential, as we always quote every author and work by the edition included in our lists (exceptionally, we may add *variae lectiones* or *from codices*).

As you can see, the Dictionary tries to be the most up to date despite its very copious data. Every translation is documented with quotations, which extend from Mycenaean Greek and Homer to the 6th century A.D., that is to say, they cover 20 centuries of the history of a language in which we find the seeds of the intellectual vocabulary of the Western and Eastern worlds. In relation to Mycenaean Greek, we should note that the second and last volume of the *Diccionario Micénico* by Aura Jorro was published in 1994; it is the only comprehensive dictionary of Mycenaean Greek to this day. The *Diccionario Micénico* is conceived as an appendix to *DGE*, and is related to it through a system of cross references.

When confronting this amount of documentation, our attitude had to be one of critical exclusion: it was impossible to write up a thesaurus of all known testimonia of every word and word form. It is impossible even now that we have the *Thesaurus Linguae Graecae* collected at the University of California at Irvine, which is

a data bank, not a dictionary. There is still room for a dictionary of the size of ours, a dictionary which attempts to provide, as exhaustively as possible, all meanings, but not all occurrences. It is approximately three times larger than *LSJ*.

Making a lexicon involves not only collecting a significantly important amount of documentation, but also translating and processing it. This is why we have made an effort to structure the material inside each lemma with different translations, following a modern methodology, derived from structural theory, never losing sight of formal facts and the distribution of every meaning inside the lemmata. This is what reveals the semantic clues that allow translation, in this case, into Spanish.

With these trends we worked for many years in the first phases of the Dictionary since 1962 and published two volumes, in 1980 and 1986. That process, even though naturally slow, helped to create a staff specialized in several aspects of lexicography and prepared for the greater commitment of the Dictionary, its actual writing and editing; in other words, the meaningful processing of many facts from many different origins.

It was in 1989, when writing the third volume, that we decided to attempt integrated management of the dictionary with the help of computers. Some time before that we had approached computer specialists about our work on the Dictionary, but this almost pioneering activity affected, let us say, only peripheral sections of our work, mainly the collection of new materials. Even though we had contact with the *Thesaurus Linguae Graecae* in California from the early days of the project, there was not on the market any specific software which would achieve what we required: the integrated management of the project.

Previously, when *DGE* compilers sat down to write an entry, they had in front of them a pasted piece of paper with a lemma and a list of quotations excerpted from other lexica such as, for instance, *LSJ*, plus supplementary documentations of that word (the fruit of the labour of many people on our staff who had read old and recent publications of texts and studies). We have come to the conclusion that, for many reasons, it would be a waste of time to put all this information, collected in previous years, in the computer. Therefore, we keep it in our files, whereas the new documentation is being entered in a Data Base.

Nowadays when one of our compilers sits down to write a Dictionary entry, he has at his disposal not only this old documentation, which is kept in our rich files, but also a huge amount of data which can be retrieved and displayed on the computer screen. His first task is to decide what is relevant and what is not for constructing that Dictionary entry.

First of all, he now has at his disposal, as has already been noted, an auxiliary Data Base with all kinds of new material which has recently been read by members of our staff in new editions of authors, inscriptions, papyri, different lexica, etc. Many of them, especially papyri and inscriptions, have not yet been included

in any electronic Data Base. The Data Base where all this documentation is being stored –identified by the name MATERIAL– currently comprises almost 100,000 entries and it is being constantly enriched. It also stores a lexicological bibliography of studies on words.

In this respect, we may also profit now from another work which will be published as an appendix of *DGE*: Pilar Boned's *Repertorio bibliográfico de la lexicografía griega*. This work contains, on the one hand, all partial lexica and indexes of Greek classical authors: with its 600 entries it quite completes Riesenfeld's *Repertorium lexicographicum graecum*. On the other hand, it also contains more than 3,000 entries of comprehensive books and articles, and 60,000 bibliographical references to studies of single Greek words. This work was submitted as a doctoral thesis in 1992 but has lately been entered in a Data Base and updated, with the help not only of the author, but also of other members of our team, especially Dr. J.R. Somolinos.

Our interest in lexicological studies has developed another important line in the difficult fields of technical terminology, as may be seen in F.R. Adrados and D. Lara's *El vocabulario técnico en el DGE* (Seminario sui lessici tecnici, Messina, December 1995), and other papers.

Furthermore, the members of our staff are able to document the Greek words they work on with quotations taken from the CD ROM disks, which contain most of the *Thesaurus Linguae Graecae* and other related projects. Of course, the editor may look the words up directly in the CD ROM disk, but because in medium and large-size entries he might be overwhelmed by the huge number of quotations, we are devising a series of selective indexes of certain authors and fields. We are also trying to get a better documentation of low frequency words.

As far as the elaboration of selective indexes is concerned, we have devised what we call ISCAPLIG, that is *Indice selectivo de los cien autores principales de la literatura griega* ('A selective index of the hundred most important authors of Greek literature'). It collects from the *TLG* CD ROM (actually the whole of its fourth part) authors that must inevitably appear in any great dictionary of ancient Greek (Homer, archaic poetry, drama, history, philosophy, rhetoric, medical writers such as Hippocrates etc.).

With regard to the documentation of low frequency words, the editor has before him a printed paper with the (not lemmatized) *Index* of the *TLG* CD ROM, where he can easily look up the frequency of forms, and discover, for instance, that words that traditionally were *hapax* or had few quotations, may actually be better documented. So now, in the five initial pages of *DGE* V alone, we find that almost 20 previous *hapax* in *LSJ*, have now two, three or more quotations (we must acknowledge that some of them are also in the *Revised Supplement* of *LSJ*). As we have said elsewhere, we are making most of the *hapax legomena* vanish.

More details are given in F.R. Adrados and J.R. Somolinos *El volumen V del DGE*, to be published in *Museum Criticum*.

After this initial selection, we make a second one trying to document authors and epochs. After that stage, we apply the semantic methods which shall make the entry really meaningful. First of all, we have to verify the contexts and classify them formally, one of the keys of translation and distribution in different blocks. This age-old task of formal classification still has to be done, let us say, in an artisan-like manner, using computers only for support.

So for a word which could be defined as short, but complex, e.g. *ἑθελούσιος*, an editor finds in front of him the entry in *LSJ* constructed from 9 quotations; he also finds another 8 from readings by our collaborators in the MATERIAL Data Base and another 19 from *TLG*, via *ISCAPLIG* and via the *Index*. This is just a short, not extremely complex, word but just think of the process when applied to some of the words appearing in Vol. V, such as the preposition *διά* and the very long series of verbs, nouns and adjectives composed with it, many of which have to a certain extent passed into modern languages. We would like to point out the great number of important technical terms in this series: botany, medicine (*διαβήτης*, *διαλύω*); geometry (*διάμετρος*), architecture, engineering, as war and hydraulic engines or devices (*διωρυγή*); grammar and rhetoric (*διαίρεση*, *διαλέγω*), juridical, institutional, financial terms (*διαγραφή*); christian and patristic words which have acquired a special meaning different from their original one, such as the word *διάκονος* for instance. But also think of numerals such as *δεκα-*, *δεντερ-*; verbs as *δείκνυμι*, *δέχομαι*, *δέω* (both verbs), *δίδωμι*, *δώκω*; adjectives such as *δεινός* and *δῆλος*; substantives of a real compromising quality such as *δημιος* and *δίκη*; and the most difficult particles *δέ* and *δή*. The great number of quotations from various sources of data, literary genres and stylistic levels of the Greek language, complemented by semantic study, turn some of the articles into meaningful contributions to the knowledge of Greek language and culture.

The Dictionary also includes proper nouns: in Vol. V, besides theonyms such as *Δήμητρα* and *Διώνυσος*, which comprise under their lemmata 134 and 250 quotations respectively, we have their derivative anthroponyms *Δημήτριος* and *Διονύσιος*, which cover 77 and 111 mythical and historical persons.

Besides taking into consideration the grammatical context, the editor must study the contexts in relation to word classes and subclasses (e.g. person vs object/abstract names, and so on); to use an example from a word just mentioned, it is one thing to apply *ἑθελούσιος* to a person or to another entity such as god or city in a figure of speech, and quite different to use it with an inanimate object such as *κίνδυνος* for instance: in the first case, the translation is 'voluntario', whereas in the second, 'opcional, libremente elegido'. Other specifications of contexts may include: animate/inanimate; collective/not collective; local or temporal;

words of specialized or technical vocabulary; words used in political and/or administrative contexts. In addition to that, we note also the word's antonyms and synonyms. Furthermore, we consider very important in the creation of our conceptual world the opposition between concrete, material, corporal on the one hand, and the more spiritual fields of life and death on the other. Part of this methodology was published some time ago in our *Introducción a la lexicografía griega* (Madrid 1977) and in many articles; lately Dr. Dolores Lara has published an *Iniciación a la lexicografía griega* (*Colección Instrumenta studiorum*, Madrid 1997) with a methodological and practical approach.

So, syntactic and lexical context must always be taken into consideration to create some kind of a tree structure organized in function of the target language, in our case Spanish. For instance, let's take a word such as *δίκη*, which is organised in the following manner: first, we present the general, so to speak overall, meaning; we mark it with a capital **A**. Inside the block marked as **A**, we have a paragraph marked with the roman numeral **I**, characterized by a formal mark, which signals that the word has the tendency to appear in nominal clauses. Inside this paragraph, there are three blocks designated with the arabic numerals **1**, **2** and **3**, with the following meanings: **1** manera, modo de ser natural o propio, regla, ley, 'manner, (the) natural or proper way of being, rule, law' (the last one has a pre-judicial meaning, in the sense of "general law"); **2** curso general de las cosas, 'general course of events', which may develop a sense of nature, almost reality, understood as a system of reparations or retributions; **3** manera de obrar, comportamiento, 'manner of acting, behaviour', sort of a general behaviour. Then there is another paragraph designated with **II** which is also characterized by a formal mark signalling that the word acts as an adverb or preposition governing a noun in the genitive case and it means 'a la manera de', 'in the manner of'. After the general **A**, we descend to a more restricted block designated with a capital **B**: the word here appears semantically restricted, as it is produced only in social reality, with still pre-judicial meaning. Inside the **B** block, there is a paragraph marked as **I**, which contains divisions of meaning similar to those under **AI**: here the meaning of the word is 'retribution' or 'compensation', and it is presented in **1** in a positive sense: lo debido, justa compensación, 'debt, compensation' etc., and in **2** in a negative sense: lo merecido como castigo, 'a just and well deserved punishment'. Then comes a block marked as **II** where the meaning of the word appears as 'justice', defined as an abstract concept. Finally, there is a third block **C**, which contains the institutional and actual senses of previous divisions: **I** justicia, derecho, legalidad, 'justice, right, legality' manifest in **II** as veredict, dictamen, sentencia, 'verdict, edict, court sentence' and in **III** in the many ways of judicial procedure.

When the editor has collected all the data and has made a plan, he starts to write the entry; he no longer has to write draft after draft as he used to because he

now does it on the computer with a well proven, standard word processor. The previous time-consuming problem of typing Greek classical script on a computer and in our Data Bases has now been solved. We have designed special fonts which can be used not only for Greek texts but also for the transcription of etymologies of various origins (e.g. reconstructed Indo-European forms).

Afterwards, the whole dictionary is fed into a great Data Base called LABRIS. This operation follows two principles: first, following the semantic theory applied in lexicography explained above, the lemma is hierarchically organised in four fields or areas (general area, specific area and translated area, which would correspond roughly to the areas marked by a capital letter, a Roman numeral, an Arabic numeral –as exemplified in the example of *δίκη*– and also what we call a “nuance” area). Second, from a formal point of view, the programme receives one after the other all abbreviations and complete names of ancient Greek authors and works; it recognises whether the abbreviation written is the correct one. Once the whole volume is fed into a Data Base, the possibilities for managing the text will be enormous: for instance, it will be possible to make an inventory (partial, for the time being) of the semantic marks of the structure of the lexicon, in relation to Spanish.

Let us proceed to a presentation of figures: *DGE V* contains 6,773 lemmata; 1,105 of them are proper nouns; 388 are cross references. The number of quotations is 53,370 corresponding to 1,396 authors and 2,111 works. But we must say that we contemplate the inclusion of several conventional “authors” as well. Indeed, for the computer, *Inscription* and *Papyrus* are such conventional authors with several “works”, such as *Inscriptiones Graecae*, *Supplementum epigraphicum graecum* etc., and *Oxyrrhynchus papyri*, *Papiri della Società Italiana* etc. So the conventional “author” *Inscription* is now the most quoted (2,900) followed by *Papyrus* (2,700). The same system has been applied to *Septuaginta* (950 instances), *New Testament* and others such as *Periodical*, or ancient lexica. The most quoted single author for Vol. V is Plutarch with 2,230 quotations, followed by Plato (1,950 occurrences), Aristotle (1,650) and Homer (1,550). In Vol. IV, Homer was the most quoted single author, while, surprisingly, Hippocrates was in second position; he is now in seventh position.

The frequency list of the most quoted authors in Vol. V is quite revealing of the kind of Greek vocabulary included in it: for instance, the many words composed with *διά* pertain to a somewhat later stage of the language. Also in F.R. Adrados and J.R. Somolinos’ *The Diccionario Griego-Español and Byzantine Lexicography* it is possible to find a hint of the importance of new Byzantine words included in the *DGE*. No doubt this will be of great interest to Greek scholars.

Other fields in the LABRIS Data Base show whether the Greek word written is attested to in Mycenaean Greek, whether it has a known etymology, etc. The Da-

ta Base puts the lemmata in alphabetical order, automatically adds the punctuation, numbers and letters inside divisions, as well as the different printing styles. Until now, we had to re-enter the text in the Data Base. Nowadays we have an automatic module for inclusion of entire entries of the *DGE* in the LABRIS Data Base, which we shall start using experimentally in the autumn of 1998.

It is obvious that one of the most important advantages of this Data Base is that it enables us to make lists of all quotations of authors and works in the Dictionary and verify and index them in the order of their appearance in the original text: that is to say, we may cite for instance the verses of Aeschylus, from the first to last in each tragedy. This is of enormous help in correcting and unifying the texts, tasks that have to be done, if we want to maintain the high standard of the Dictionary.

At this point, we should ponder about whether the leap in quantity and quality brought about by the introduction of computers in lexicography has influenced our work only in a positive way or whether it may have a negative influence. The publication of Vol. IV relied only partly on computers; *DGE V* was created wholly with the help of computerized documentation and programmes. Our Data Base shows that if Vol. IV had 35,000 quotations, Vol. V has more than 55,000. All of these had to be revised, something which demanded a great effort from many people for more than one year. It also entails having a very good library at our disposal, something which we managed to acquire with great effort. The use of computerized techniques certainly saves time, but generates such a huge amount of data that it may sometimes overwhelm the editors. This situation can be managed only with greater critical acumen, as Prof. Koenen suggested at the FIEC congress in Pisa. This means that, although in general there is less need for general staff, when the work is done with computers, in a project such as ours the need for well-trained experts is greater than ever.

This entire process, together with the final preparation of the text for printing, took us in the past almost as much time as its actual writing. One should remember that it took nine years to prepare the first volume for print. As time went by we managed to cut down the time needed for the process. For the fifth volume we have achieved autoediting with the help of a system designed by our team. Not only have we designed fonts for Greek and phonetic transcription, but we have also aimed for and achieved a quality almost as good as that exhibited in the previous volumes and which has been widely acclaimed in the reviews. It has demanded a considerable amount of effort, mainly from our collaborators J.R. Somolinos and C. Gil, but now it can also be used for future volumes.

Henceforth, editing and correcting the manuscript will not be such an arduous and time-consuming job, taking up almost as much time as the actual writing of the entries. Furthermore, the task of proof correction has been enormously re-

duced, because all the publisher has to do now is to reproduce automatically the text from the disks we send instead of compositing the book.

Our goals for the near future are to reduce the time spent in producing our dictionary and to increase its reliability and productivity. But actually what we hope for is that this ambitious programme will result in setting the standard for the new lexicography of the future, since we believe it is an achievement not only in the field of ancient Greek lexicography but also for any other bilingual or authors' dictionaries.

Finally, another important task we have undertaken is the revision and reissuing of the earlier volumes of the dictionary. We have recorded Vol. I in the computer and are preparing a new edition with the help of some members of our staff, mainly J.A. Berenguer. We hope to publish this edition, which is going to be about 30 per cent larger than the previous one, next year. Hopefully we will do the same with the second volume.

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