

A New Kind of Dictionary: *REDES, Diccionario combinatorio del español contemporáneo*

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Abstract

In this paper we discuss the features of a new kind of dictionary that appeared at the end of 2004. *REDES, Diccionario combinatorio del español contemporáneo*, under the direction of the Spanish grammarian Ignacio Bosque, is a combinatory dictionary based on data from a newspaper corpus of Spanish of approximately 250 million words and is quite different from other combinatory dictionaries in many respects. The main feature of the dictionary, according to Bosque, is the fact that the dictionary entries provide the semantic restrictions that words impose on other words. In this paper we explain the type of entries and information that can be looked up, and briefly compare the information provided with that found in some general language dictionaries of Spanish.*

1 Introduction

A new dictionary of Spanish, *REDES, diccionario combinatorio del español contemporáneo* (Madrid: Ediciones SM; 174 pages of front matter + 1389 pages of text; hereinafter, *REDES*) was published at the end of 2004. *REDES* differs from other combinatory dictionaries that we are familiar with (such as the *BBJ*) in several important aspects. In this paper we discuss the most salient features of this lexicographical project and analyze some examples of the various types of entry found in the dictionary. We pay particular attention to the concept of "lexical class," which is the basis of the dictionary and which, in our opinion, constitutes a significant contribution to lexicography.

* The research carried out here benefited from two grants awarded by the Spanish Ministry of Education and Science (BFF2003-08043: *La gramática de los sustantivos en los diccionarios bilingües y de aprendizaje*, Principal Investigator, Janet DeCesaris, and BFF 2003-07301: *El tratamiento de la polisemia en el artículo lexicográfico*, Principal Investigator, Paz Battaner), which the authors gratefully acknowledge.

2 Innovative aspects of REDES in the context of Spanish lexicography

Although linguistics in Spain has developed substantially over the past thirty years, lexicography has remained more static. Grammatical description of Spanish has benefited from new linguistic paradigms and theories, as well as from political stability and economic growth. Developments in lexicography are conditioned both by standardizing institutions, which are extremely influential in Iberian languages, and by a publishing industry that is unwilling to take many risks.

This is the context in which *REDES* appeared. The project was directed by Ignacio Bosque, member of the Spanish Royal Academy and professor of linguistics at the Universidad Complutense in Madrid. Bosque has been a leading figure in applying modern linguistic theory to Spanish grammar since 1980.

It is impossible to discuss this dictionary without bearing in mind the innovation that it represents. As mentioned above, Spanish is not experiencing the lexicographic boom that can be observed in other languages, particularly in English. English has benefited from changes in lexicography, as well as from a change in theoretical linguistics. On the one hand, English-speaking societies have responded to the need to teach English to practically everyone in the world who is schooled. As early as 1938, Hornby realized that if he truly wanted to help Japanese students of English, he needed to introduce new information in dictionaries and omit some of the information that had been included. Hornby initiated learner's dictionaries, of which English has several that compete with one another commercially in terms of the type of information provided as well as in terms of the style of presentation. New editions of these dictionaries appear frequently. In addition, since the 1980s learner's dictionaries have been used to implement information that computer science needs to process natural language (to process English, in most cases), which has revealed the strengths, as well as the weaknesses, of these dictionaries and the existing descriptions of the language. It seems clear that better lexical description, both in terms of semantics and grammar, is needed. This requirement is being addressed by linguistic theories that focus on the lexicon, which in turn leads to new dictionaries that are more geared towards a description of actual usage (e.g. *Collins Cobuild English Dictionary*, *Longman Dictionary of Contemporary English*, and the *New Oxford Dictionary of English*) or geared more towards implementing a particular theory in a dictionary (e.g. dictionaries based on Mel'čuk's meaning-text theory or those planned within Frame Semantics). Even in this general climate of renovation and innovation in lexicography, *REDES* represents a welcome addition to dictionary typology.

3 Features of REDES

The dictionary's subtitle contains the adjective *combinatorio*, which clearly links it to dictionaries such as the *BBI* or to collocational dictionaries written in the British tradition established by Firth and then continued by Sinclair. This tradition relies heavily on the notion of frequency of use, and the work on collocations carried out therein often does not develop a detailed analysis of meaning because "meaning is use." The adjective *combinatorio* places *REDES* closer to the dictionaries being developed within the meaning-text theory of Mel'čuk, which starts from a universal semantic categorization of relations and functions. In

Mel'čuk's framework, it is the task of the dictionary to specify those relations and functions (cf. the dictionary projects in progress for Spanish (Alonso) and French (Polguère)). Whereas the British tradition starts from usage data, the Russian tradition starts from pre-established universal semantic categories.

REDES does not claim to be as comprehensive as the abovementioned works. It is not a general dictionary; rather, the list of headwords was limited to 4000 after a preliminary study. Lexical combinations are presented as restrictions of predicates, which are the headwords in the dictionary. The dictionary not only aims to describe usage, which it does by being based on corpus data, but also to identify the lexical semantic classes that respond to syntactic constructions, which requires subsequent analysis of semantic categorization. This, we feel, is the most significant contribution of *REDES* to lexicography and to the lexical description of Spanish. It establishes lexical classes based on the syntactic behavior of words as observed in corpus data. The concept of "lexical class" is thus crucial to the dictionary. A lexical class is the description or definition of each set of arguments of a word that have been grouped together semantically. In other words, the dictionary identifies the semantic preferences of words, and in that sense goes beyond the mere description of usage and narrows the gap between lexical semantics and syntax. Let us take a sample entry, that for the adverb *limpiamente* 'cleanly' (*REDES* 2004: 1269):¹

- (1) **limpiamente** adv. # en el sentido de 'honestamente, con corrección' se combina con...
- A VERBOS QUE DESIGNAN LA ACCIÓN DE SOBREPASAR UN LÍMITE, ASÍ COMO LA DE IMPONERSE A ALGUIEN U OBTENER LA VICTORIA FRENTE A UN ADVERSARIO: 1 ganar (...); 2 vencer (...); 3 derrotar (...); 4 imponer (...); 5 batir (...); 6 superar (...); 7 desbordar (...)**
- B VERBOS QUE DESIGNAN LA ACCIÓN DE PARTICIPAR EN UNA COMPETICIÓN O EN UN ENFRENTAMIENTO: 8 competir (...); 9 participar (...); 10 luchar (...)**
- C VERBOS QUE DESIGNAN EL TRANSCURSO DE UN EVENTO: 11 celebrarse (...); 12 (...)**
- D LOS VERBOS ACTUAR Y CUMPLIR: 13 actuar (...); 14 cumplir (...)**
- # Véase también: **deportivamente, lealmente.**
- # En el sentido de 'con destreza y sin error' se combina con algunos verbos que designan lances deportivos, más frecuentemente futbolísticos (*rematar, golpear, despejar la pelota*) y también con...
- E VERBOS QUE DENOTAN ESCISIÓN: 15 cortar (...); 16 rebanar (...); 17 seccionar (...); 18 dividir (...)**
- F VERBOS QUE DESIGNAN LA ACCIÓN DE IR O MOVERSE A TRAVÉS DE ALGO, O LA DE CONSEGUIR QUE OTRA COSA LO HAGA. SE USAN EN SENTIDO FÍSICO Y TAMBIÉN EN EL FIGURADO: 19 atravesar (...); 20 cruzar (...); 21 perforar (...); 22 agujerear (...)**
- G VERBOS QUE DENOTAN LA ACCIÓN DE QUITAR LA VIDA: 23 ejecutar (...); 24 matar (...)**

¹ We have maintained the typefaces used in *REDES* to the extent possible in all the examples.

H VERBOS QUE DESIGNAN LA ACCIÓN DE SUSTRAR ALGUNA COSA: 25 robar (...); 26 sustraer (...); 27 quitar (...); 28 hurtar (...); 29 despojar (...);

I ALGUNOS VERBOS QUE DESIGNAN LA ACCIÓN DE LLEVAR A CABO UNA DETERMINADA ACTIVIDAD: 30 ejecutar (...); 31 realizar (...)

Véase también: **deportivamente, limpiar, limpieza, limpio, limpio (de).**

The adverb *limpiamente* is assigned to nine lexical classes² corresponding to the two traditional senses that are introduced by the number sign and the phrase *en el sentido de* 'in the sense of'. Thirty-one arguments gleaned from corpus are given, in addition to some observations about frequency of use.

The starting point for this dictionary is not nouns, which has been general practice consciously or unconsciously since Aristotle, but rather predicates, which require a specific type of argument. Full entries (called *entradas analíticas*) contain words that impose selectional restrictions on other words, and the arguments of these predicates are grouped together semantically (lexical classes) with examples taken from corpus. This explains why entries that may be quite short in conventional dictionaries, such as that for *limpiamente* or for an adverbial phrase such as *por completo* 'completely', are some of the longest found in the dictionary. We may compare the above entry for *limpiamente*, which we have presented without the corpus citations, with that given by the Spanish Royal Academy's *Diccionario de la lengua española* (2001), the most widely cited dictionary for Spanish:

- (2) **limpiamente** 1. adv. m. Con limpieza. 2. adv. m. Dicho de jugar o de actuar: Con suma agilidad, desembarazo y destreza. 3. adv. m. Sinceramente, con candor. 4. adv. m. Con integridad, honestamente, sin interés.

Bosque argues in the front matter that lexical restrictions are not part of phraseology but rather part of grammar, because in his approach conceptual requirements account for the combinatorics of words. As a result, *REDES* must include both the literal and figurative use of words and in this sense the dictionary coincides with the approach to linguistic metaphor set forth by Lakoff and Johnson (1980). Bosque's goals are clearly stated in the long introduction (99 pages, in addition to the guide of how to use the dictionary):

... analyzing objective linguistic data that allows us to uncover an important part of language structure that has not been described in either grammars or dictionaries... how to distinguish between words that we choose and combine in function of our intentions, and those words that are chosen and combine with one another in function of the properties of the grammatical system and of the specific characteristics of lexical items. (our translation of *REDES*, p. LXXIX).

² The nine classes are marked with capital letters. The English equivalents for the categories are as follows: (A) Verbs designating the action of surpassing a limit or imposing oneself upon another, or being victorious over an adversary; (B) Verbs designating participating in a competition or contest; (C) Verbs denoting that an event is taking place; (D) The verbs *actuar* 'act' and *cumplir* 'achieve'; (E) Verbs denoting separation; (F) Verbs designating movement through something or making something else move; used both literally and figuratively; (G) Verbs denoting the taking of life; (H) Verbs denoting theft; (I) Some verbs that designate carrying out a certain activity.

4 Types of entries

The dictionary is based on a journalistic corpus of approximately 250,000,000 words from the Spanish-speaking world, which provided the combinatorics for the words and expressions listed, and the restrictions found in the corpus data were classified into categories ("lexical classes"). The team that compiled *REDES* decided to exclude headwords that did not impose restrictions as well as headwords for which groupings into lexical classes were difficult to establish. The phrasing used to present the information in the dictionary differs according to the type of argument: restrictions on internal arguments are introduced by *selecciona como argumento* 'chooses as an argument', whereas external arguments are introduced by *se combina con* ('combines with') or *se predica de* ('predicated by'). An example of the formulation of one of these classes is given below, for the eighth (of the 13) classes given for the verb *diluir(se)* 'to dilute; dampen (fig.)':³

- (3) [se combina con] SUSTANTIVOS QUE DENOTAN JUICIOS. TAMBIÉN CON OTROS QUE DENOTAN SENSACIÓN, OPINIÓN PERSONAL Y OTRAS NOCIONES QUE DETERMINAN EN DIVERSA MEDIDA LA CONSTITUCIÓN DE UN JUICIO: **40 planteamiento** (...); **41 valoración** (...); **42 posición** (...); **43 impresión** (...); **44 criterio** (...).

Each noun is accompanied by a corpus example, which we have not included here due to space limitations.

In addition to this type of entry, *REDES* also includes some entries for which the combining words have not been grouped into lexical classes. Compare below the entry for the adjective *limpio* 'clean' with that given in section 3 for its derived adverb *limpiamente*:

- (4) limpio ■ (*adj.*) ◆ como el agua, como la nieve, como los chorros del oro, como una patena ◆ alma, amor, arte, batalla, campaña, carrera, color, combate, competición, conciencia, corazón, corte, dinero, ejecución, elección, energía, enfrentamiento, espíritu, expediente, fotografía, gobernante, gobierno, gol, guerra, horizonte, imagen, intención, juego, jugada, juicio, mentalidad, mente, mirada, objetivo, ojo, operación, palabra, partido, pase, pelea, persona, proceso, propósito, regate, remate, reputación, sonido, tento, texto, trabajo, trayectoria, victoria, voz.
(*adv.*) ◆ jugar
Véase también: **limpiamente, limpiar, limpieza, limpio (de).**

The entry for *limpio* is called an 'abbreviated entry' (*entrada abreviada*) and the information presented therein is based on that presented in the analytic entries. While it is true that these abbreviated entries act, as Bosque remarks in the front matter, as indices to other information available in *REDES*, in our opinion their presence complicates use of the dictionary because users generally expect dictionary entries to be similarly structured. In addition, there are two other types of abbreviated entry in the dictionary. One type provides possible combinations starting from arguments in order to provide predicates, i.e. in the order presented in

³ See also the entry for *limpiamente* given in section 3 of this paper.

most other combinatory dictionaries; the cross-reference is to the corpus example (which is given in the entry for the predicate). We continue with an entry from the same family of words, that for *limpieza* 'cleanliness; cleaning':

- (5) *limpieza* # a fondo⁴¹, deslumbrante, en profundidad, en seco, escrupuloso, étnico, extraordinario, integral¹, sumo #extremar, hacer, llevar a cabo
Véase también: lavado, lavar, limpiamente, limpiar, limpio, limpio (de), solventar

The remaining type of abbreviated entry does not relate the headword to other words but rather links a concept to expressions in which the concept is frequently found. An example of this sort of abbreviated entry is given in (6):

- (6) LIMPIEZA
(SUSTANTIVOS) Véase: a fondo^K, empañar(se)^H, en aras de^C, integral^A, velar (por)^B
(VERBOS) Véase: a fondo^H, pulcramente^A
Véase también: SUCIEDAD

This entry reads as follows: lexical class K of the analytical entry for the expression *a fondo* ('thoroughly') corresponds to nouns of 'cleanliness, cleaning'; lexical class H of *a fondo* corresponds to verbs of 'cleanliness, cleaning'. The dictionary contains few of these conceptual entries.

5 Using REDES

The starting points for looking up information in *REDES* are several: one may look up predicates (such as *limpiamente*) and words that combine with predicates, in a few cases, concepts. In other words, the dictionary allows users to look up words that select other words, words that are selected by other words, and semantic notions that are relevant to the lexical classes as seen in the corpus.

This variety of entry type, together with a complete system of cross-references, provides an insightful view of the lexical semantics of the language. At the same time, however, it may make *REDES* difficult to use for many, because all the entry types are ordered alphabetically in the body of the dictionary and the potential for mistaking one type of entry for another is considerable, despite the complex system of fonts and typefaces used.

6 Comparison with traditional lexicography

REDES is a dictionary with an extraordinary amount of new information, in terms of the lexical classes described and the usage data provided. The basic questions behind *REDES* are: What contexts do Spanish speakers use the word X in, and what do those contexts tell us about the syntactic and semantic properties of that word? General language dictionaries based on corpus explicitly aim to answer the first question, as do the proposals to simplify analysis of corpus concordances set forth by Hanks (2004) and Kilgariff et al. (2004). Research in Frame Semantics attempts to answer these two questions, although there is yet to be a complete dictionary published in that framework.

Bosque sees this dictionary within the Spanish tradition as a “dictionary of environments,” in reference to Manuel Seco’s (1979) well-known view on the role of contextual information in dictionary definitions.⁴ Although this dictionary, in our opinion, is not exactly a dictionary of environments, the amount of contextual information it provides about how a word is much greater than that provided by Spanish general language dictionaries. As seen in (7), the entry in *REDES* for the verb *nublar(se)* ‘to cloud (over)’ is quite long, even without the corpus evidence:

- (7) **nublar(se)** v. En su sentido físico de ‘cubrirse de nubes’, se combina con el sustantivo *cielo*, así como con otros que denotan área o territorio (*región, ciudad, paisaje*) y algunas unidades temporales, por lo general no mayores que un día (*día, mañana, tarde*). En su sentido figurado de ‘oscurecer, enturbiar, empañar o turbar’, se combina con...
- A SUSTANTIVOS QUE DENOTAN FACULTAD U ÓRGANO DE LA VISIÓN: 1 vista ++ (...), 2 ojo ++ (...), 3 visión (...), 4 mirada (...), 5 retina(...)**
- B SUSTANTIVOS QUE DESIGNAN LA CARA DE LAS PERSONAS O CIERTOS ASPECTOS DE LA EXPRESIÓN FACIAL: 6 semblante (...), 7 rostro (...), 8 sonrisa (...)**
- C SUSTANTIVOS QUE DESIGNAN FACULTADES MENTALES, ESPECIALMENTE LAS INTELECTIVAS. POR EXTENSIÓN, CON OTROS QUE SE REFIEREN A LOS ÓRGANOS O LOS SISTEMAS EN QUE RESIDEN ESTAS CAPACIDADES, ASÍ COMO ALGUNOS DE SUS RESULTADOS: 9 mente ++ (...), 10 pensamiento (...), 11 entendimiento (...), 12 entendederas (...), 13 sentido (...), 14 juicio (...), 15 conciencia (...), 16 memoria (...), 17 intuición (...), 18 cerebro (...), 19 idea (...)**
- D EL SUSTANTIVO *IMAGEN* Y CON OTROS QUE DESIGNAN ALGUNOS EFECTOS DE LA CAPACIDAD DE PERCIBIR: 20 imagen ++ (...), 21 impresión (...), 22 percepción (...)**
- E SUSTANTIVOS QUE DESIGNAN EL FUTURO, ASÍ COMO OTRAS NOCIONES DE NATURALEZA PROSPECTIVA: 23 horizonte (...), 24 futuro (...), 25 porvenir (...), 26 destino (...)**
- F SUSTANTIVOS QUE DESIGNAN EL RESULTADO FELIZ DE ALGO. TAMBIÉN CON OTROS QUE EXPRESAN CIERTOS ESTADOS DE RECONOCIMIENTO: 27 triunfo (...), 28 éxito (...), 29 victoria (...), 30 fama (...)**
- G OTROS SUSTANTIVOS; POSIBLES USOS ESTILÍSTICOS: ... y se nublan con flores los hierros de los balcones**
- # Véase también: **embotar(se), ensombrecer(se).**

Comparison of that entry with those found in two recently published dictionaries of Spanish clearly points up major differences:⁵

- (8) (a) *Diccionario de la lengua española de la Real Academia Española (2001)*
nublar 1. tr. Ocultar el azul del cielo o la luz de un astro, especialmente la del Sol o la de la Lu-

⁴ We have translated *contorno* as ‘environment’. Seco’s notion of *contorno* refers to the elements that are a part of the definition but which do not strictly speaking form a part of the defining paraphrase. The *contorno* or ‘environment’ includes elements that are usually or always found in the contexts in which the defined word is used.

⁵ We have underlined the information that corresponds to arguments of the verb in both definitions to ease comparison.

na. U. t. c. prnl. 2. tr. oscurecer (|| privar de luz y claridad). U. t. c. prnl. 3. tr. oscurecer (|| disminuir la estimación y esplendor de algo). *Nublar la fama, las virtudes, la alegría*. 4. tr. Hacer que la visión se vuelva turbia o poco clara. U. t. c. prnl. 5. tr. Ofuscar o confundir la razón o los sentimientos. U. t. c. prnl. 6. tr. Hacer que el semblante exprese tristeza o inquietud. *La indecisión y el temor nublaron su rostro*. U. t. c. Prnl. 7. prnl. impers. Cubrirse el cielo de nubes. *Se está nublando*.

(b) *Diccionario de uso del español de América y de España (2002)*

nublar

1 Ocultar (las nubes) el azul del cielo o la luz del sol o la luna: **ej** *nublar el cielo*; **se medio**: *la tarde se nubló temprano y el aire en calma se vistió de frío*.

2 Oscurecer o enturbiar la visión: **ej** *una infinita copia de insectos ocupaba y nublabla el entero campo visual*; **se medio**: *empezó a bostezar y sus ojos se nublaron*.

3 Oscurecer o producir confusión en la razón: **ej** *nublar el entendimiento*; **se medio**: *con este constante atropello de imágenes se le acabó nublando la idea de la realidad*.

4 Enturbiar o empañar un sentimiento: **ej** *nublar la honra*; *intentó esconder su melancolía y no nublar el gozo de sus padres*; **se medio**: *su alegría se nubló*.

Whereas discussion of Spanish dictionaries often concentrates on the number of senses listed, the order of senses, the number of labels used, among other topics, in the context of Spanish lexicography there has been relatively little discussion about the nature of the information provided. In considering REDES, many of the traditional topics are irrelevant because the type and amount of information provided is so different from that found in general language dictionaries. Any comparison, of course, must bear in mind that REDES “only” covers the behavior of approximately 4000 words and expressions.

7 Concluding remarks

In the context of Spanish lexicography specifically, and in current lexicography more generally, REDES is an innovative reference work. REDES uses corpus data to identify the semantic properties of words that are chosen by other words. These semantic properties may entail syntactic restrictions, and it is the claim of this dictionary that combinatory restrictions as registered in a large corpus can be categorized into lexical classes. Making these lexical classes explicit for a large number of words in Spanish represents a major contribution to the grammar of the language and at the same time an innovation in lexicography. Bosque, who sees himself as a grammarian, not a lexicographer, has developed a new type of combinatory dictionary, albeit one that requires users to possess very good reference skills. We wonder if the complexity of using this dictionary merely reflects the complex relationship that exists in language between words, lexical semantics and syntax, or if it is more a function of the dictionary format used to present the information. In our view, the fact that the dictionary contains several types of entries, all ordered alphabetically, hinders easy consultation. We hope that this dictionary stimulates research into lexical categorization, as well as discussion of how best to represent those classes.

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