

- In K. Hale & S. J. Keyser (Eds.), *The View from Building 20. Essays in Linguistics in Honor of Sylvain Bromberger* (pp. 111-176). Cambridge, MA: MIT Press.
- Harley, H. (2009). Compounding in Distributed Morphology. In R. Lieber & P. Stekauer (Eds.), *The Oxford Handbook of Compounding* (pp. 122-149). Oxford: Oxford University Press.
- Kiparsky, P. (1982). Word formation and the lexicon. In F. Ingeman (Ed.), *Proceedings of the Mid-America Linguistics Conference* (pp. 3-29). Kansas: University of Kansas.
- Kiparsky, P. (1997). Remarks on denominal verbs. In A. Alsina, J. Bresnan & P. Sells (Eds.), *Complex Predicates* (pp. 473-499). Stanford, CA: CSLI Publications.
- Lapointe, S. (1978). *A Theory of Grammatical Agreement*. Ph.D. dissertation. Massachusetts: University of Massachusetts – Amherst.
- Lebeaux, D. (2009). *Where does binding theory apply?* Cambridge, MA.: MIT Press.
- Lieber, R. (1992). *Deconstructing Morphology*. Chicago: The University of Chicago Press.
- Lieber, R. & Scalise, S. (2006). The Lexical Integrity Hypothesis in a new theoretical universe. *Lingue e Linguaggio* 5 (1), 7-32.
- Marantz, A. (1997). No escape from syntax. Don't try morphological analysis in the privacy of your own lexicon. In A. Dimitriadis *et alii* (Eds.), *UPenn WPL 4* (pp. 201-225). Pennsylvania: UPenn.
- Marantz, A. (2001). *Words*. Unpublished ms. Cambridge, MA: MIT.
- Marvin, T. (2008). The Interaction between stress, syntax and meaning in Slovenian Priscianic formations. In L. Marusic & R. Zaucer (Eds.), *Studies in Formal Slavic Linguistics. Contributions from Formal Description of Slavic Languages 6.5* (pp. 189-190). Frankfurt am Main: Peter Lang.
- Montermini, F. (2006). A new look on word-internal anaphora on the basis of Italian data. *Lingue e linguaggio* 5 (1), 127-148.
- Patel-Grosz, P. & Grosz, P. (2010). On the typology of donkeys: two types of anaphora resolution. *Sinn und Bedeutung* 14, 339-355.
- Postal, P. M. (1969). Anaphoric islands. In R. I. Binnick *et alii* (Eds.), *Papers from the Fifth Regional Meeting* (pp. 205-239). Chicago: Chicago Linguistic Society.
- Rizzi, L. (1990). *Relativized Minimality*. Cambridge, MA: MIT Press.
- Sproat, R. (1988). On anaphoric islandhood. In M. Hammond & M. Noonan (Eds.), *Theoretical Morphology: Approaches in Modern Linguistics* (pp. 291-301). San Diego: Academic Press.
- Zamparelli, R. (2001). *Layers in the Determiner Phrase*. New York: Garland.

*Antonio Fábregas*  
Universitetet i Tromsø  
HSL-Fakultet  
N-9037, Tromsø  
Norway  
e-mail: antonio.fabregas@uit.no

## INVESTIGATIONS ON THE REFERENTIAL STATUS OF BIOLINGUISTICS

### A COMPARATIVE OVERVIEW OF PUBLICATIONS AND LEXICOGRAPHY

ELISA PELLEGRINO

**ABSTRACT:** In the last ten years ongoing attention has been paid to the study of language structure, acquisition and evolution from a biolinguistic perspective. As a consequence, since the late Nineties many articles and books on biolinguistics started to be published, and many conferences on the same topic have been organized. The widespread and recent interest towards biolinguistics induce to wonder about the true and actual meaning of the term itself. In particular it is crucial to determine whether the term “biolinguistics” is currently being used to designate a new approach to the study of language which developed in the late Nineties (together with the editorial “boom” on biolinguistics), i.e. a well-established paradigm of linguistic research, or just a neighbouring discipline of linguistics. The present research provides the answer to this question. The comparison between the data drawn from recent publications and those coming from lexicography indicates that biolinguistics is an umbrella term encompassing both generative grammar and all the disciplines concerned with the bio-neurological basis of language and with the ontogenetic and phylogenetic development of language.

**KEYWORDS:** biolinguistics, generative grammar, lexical ambiguity.

### 1. INTRODUCTION

Since the late Nineties the biolinguistic approach to the study of language has received a great deal of attention from linguists, anthropologists and biologists as well. The article by Jenkins (1997) *Biolinguistics – Structure, development and evolution of language*, published on the occasion of the 40<sup>th</sup> anniversary of Generativism, paved the way to a fruitful season of international conferences, articles and books on structure ontogenetic and phylogenetic development of language (see Figure 1).<sup>1</sup>

<sup>1</sup> See Appendix 1: Chronological list of publications with “biolinguistic(s)” in the title.

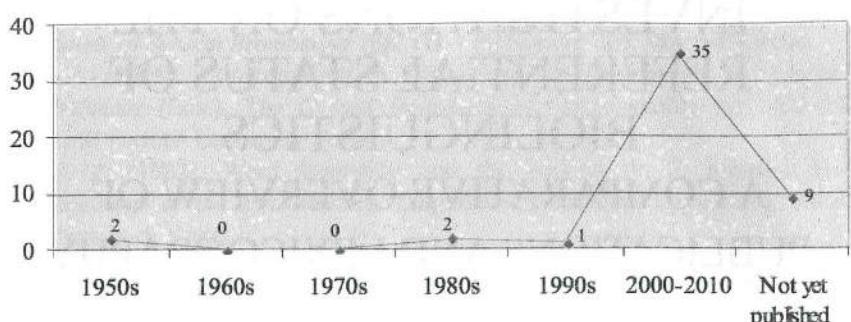


FIGURE 1. ARTICLES AND BOOKS WITH "BIOLINGUISTIC(S)" IN THE TITLE PER DECADE

The graph above indicates that the number of articles and books which present "biolinguistics" in their title has risen sharply in the last thirteen years, if compared to the amount of publications available before 1997. From 1950 to 1997 only three books and one article present "biolinguistics" in their titles. From 1997 to nowadays, instead, three books, more than thirty articles with "biolinguistics" in their titles have been published and many others are still in press. In the same years the journal *Biolinguistics* was founded, the *Laboratory for Biolinguistics* was organized at Riken Brain Science Institute and The Grup de Biolingüística (GB) was established at University of Barcelona as well. Seven international conferences and workshops on the same topic were organized:

1. *Conferencia Inaugural del Grup de Biolingüística* (GB), Universitat de Barcelona, July 2004.
2. *Biolinguistics investigations*, Santo Domingo, February 2007.
3. *Biolinguistics: Language Evolution and Variation*, University of Venice, June 2007.
4. *International Network in Biolinguistics, First Meeting*, University of Arizona, Tucson, February 2008.
5. *Biolinguistics: Acquisition, Language, Evolution*, University of York, July 2008.
6. *The Language Design*, UQAM, May 2010.
7. *Graduate Workshop on Biolinguistics*, University of Groningen, January 2011.

On the basis of these considerations, a descriptive-comparative research on the referential status of biolinguistics is carried out. Furthermore, the study is intended to shed light on the reasons why the editorial trend on biolinguistics has occurred only since the end of the XX century, despite the first works on biolinguistics date back to the 1950s.

In order to reconstruct the referential identity of biolinguistics, an analytical three-step procedure was followed. First of all the titles of the articles and books where "biolinguistic(s)" occurred were examined. Secondly the focus shifted on the definitions, descriptions, synonyms for "biolinguistics" which were found in recent publications. In the end, the entries of such lemmas like "linguistics" and "biolinguistics" were considered.

## 2. BIOLINGUISTICS IN PUBLICATIONS

### 2.1 A quick look at the titles

A careful reading of the titles where "biolinguistic(s)" occurs, together with the journals where the articles are published, allows to sketch an initial profile of both the referential status of biolinguistics and its main research fields. Some of them, indeed, disclose a relation, though approximate, between Biolinguistics, Chomsky, Generative Grammar and Minimalism.

- Fujita, K. (2003). Progress in biolinguistics – Geneses of language – A view from Generative Grammar. *Viva Origino* 31 (2), 104-121.
- Bird, S. (2006). Biolinguistics: What is it, who does it, and how should it proceed? *Chomskyan studies* 1 (2), 29-62.
- Lee, S. W. (2006). Chomsky and biolinguistics. *Chomskyan studies* 1 (1), 91-117.
- Epstein, S. D. & Seely, D. T. (2007). The anatomy of biolinguistic minimalism. *Biolinguistics* 1, 135-136.
- Labelle, M. (2007). Biolinguistics, the Minimalist Program, and psycholinguistic reality. *Snippets* 14, 6-7.

Some others instead anticipate the cores of the biolinguistic investigations, that is structure, ontogenetic and phylogenetic development of language:

- Jenkins, L. (1997). Biolinguistics – Structure, development and evolution of language. In V. Solovyev (Ed.), *The 40<sup>th</sup> Anniversary of Generativism*. Special issue of *Web Journal of Formal, Computational and Cognitive Linguistics* [Available at: <http://fccl.ksu.ru/papers/gp008.pdf>].
- Chomsky, N. (2007a). Biolinguistic explorations: Design, development, evolution. *International Journal of Philosophical Studies* 15 (1), 1-21.
- Di Sciullo, A. M. & Boeckx, C. (Eds.) (in press). *The Biolinguistic Enterprise. New Perspectives on the Evolution and Nature of the Human Language Faculty*. Oxford: Oxford University Press.

Last but not least is the title of an article written by Chomsky, where he evokes the years when the biolinguistic approach began to take shape:

- Chomsky, N. (2004a). The biolinguistic perspective after fifty years. *Quaderni del Dipartimento di Linguitica - Università di Firenze* 14, 3-12.

According to Chomsky, therefore, biolinguistics would have developed in the middle 1990s, at the same time as Generative Grammar started to establish itself against the structuralist tradition.

To sum up, data from titles and journals suggest that biolinguistics has to do undoubtedly with Chomsky and with his generative approach to the study of language and languages. Accordingly, they would lead to the conclusion that biolinguistics is as old as generative linguistics.

The relationship between biolinguistics and Generativism somewhat

conveyed by titles and journals is confirmed by the definitions, the descriptions and the synonyms for biolinguistics which are found in recent articles and books dealing with biolinguistics. In the body of the publications, as well as in the titles of articles listed above, a common trend in using biolinguistics as a synonym for Generative Grammar is detected. Nevertheless, despite this common starting point, three main specific positions about when biolinguistics was first introduced can be distinguished. Except for those linguists who simply regard biolinguistics as a synonym for Generative Grammar (Fujita, 2003: 104) or for generative linguistics (Patnaik, 2003: 3), there is strong disagreement among linguists about the phase of the generative program in which biolinguistics originated. Those who claim that the first phase in the development of biolinguistics runs up through the middle 1990s clash against those who think that biolinguistics was born in more recent years.

Noam Chomsky is the leading representative of the view according to which biolinguistics is now about sixty-years old. On more than one occasion, indeed, he has avowed the coincidence between the birth of biolinguistics and that of generative grammar (Chomsky, 2004a, 2007a).

Aniela Improta França (2004), Lorenzo Messeri (2006) and Luigi Rizzi (2004) are of the same opinion as Chomsky. At the very beginning of her *Introduction to Neurolinguistics*, for example, Aniela Improta França asserts that language investigations took a biolinguistic direction only in the 1950s with the advent of Noam Chomsky's Generative Grammar (Improta França, 2004: 1). Messeri (2006), indeed, draws up a decalogue for biolinguistics in which he illustrates the evidence that Chomsky has advanced in the last sixty years to support the biological nature of language. Rizzi (2004), instead, enhances the profile of biolinguistics by providing details on its theoretical basis and on the people who contributed and are still contributing to the development of this research paradigm. According to the Italian generativist, indeed, biolinguistics has a remote root and recent one. The former is represented by "the first cognitive revolution" with a special reference to the Cartesian philosophical tradition. The latter, instead, lies in the history of Generative Grammar and in the Lenneberg's (1967) study of the biological foundations of language (Rizzi, 2004: 323). Unlike many other linguists who remember Lenneberg only in footnotes (Boeckx & Hornstein, 2003), or in brackets (Boeckx & Grohmann, 2007) or even do not mention him at all (Yang, 2002) when painting their portrait of biolinguistics, Rizzi emphasizes openly Lenneberg's role in giving a vital impetus to the biolinguistic approach.

An intermediate position between the Chomskyan opinion on the origin of biolinguistics and the perspective supported by linguists who postpone it to more recent years is occupied by Di Sciullo *et al.* (2010) and Jenkins (1997). The former believe indeed that biolinguistics initially developed in

the late 1950s and early 1960s thanks to the interdisciplinary collaboration between biologists and linguists (Di Sciullo *et al.*, 2010: 6). Jenkins' point of view, instead, is somehow ambiguous. In the very first lines of his article *Biolinguistics: Structure, development and evolution of language* he does not only advocate the full equivalence among generative linguistics, I-linguistics and biolinguistics, but he also emphasizes the commitment of Generative Grammar to the biological basis for human language over the years. Nevertheless, at the same time, he states that the early development of biolinguistics runs up through the late 1960s (Jenkins, 1997: 2).

Cedric Boeckx and Norbert Hornstein (2003) are on the same wavelength as Jenkins. They distinguish three periods within the generative enterprise: the Combinatoric, the Cognitive and the Minimalist. The Cognitive period is divided into two parts: an early part which dates back to the 1960s and a later part which corresponds to the 1980s. According to Boeckx and Hornstein, it is only in the early part of the Cognitive phase that the generative program becomes biolinguistics. In the later part, instead, the biolinguistic research program experiences broad empirical and theoretical successes (Boeckx & Hornstein, 2003: 1-5).

Martin Nowak (2002) and Charles Yang (2002), instead, delay the early development of biolinguistics development until the 1970s. Although Yang's position is not very different from what Nowak has claimed about biolinguistics, it deserves more attention because his statements validate exactly one of the initial hypotheses about the referential status of biolinguistics. He asserts clearly that the formulation of the theory which is being currently called biolinguistics considerably precedes its designation as such (Yang, 2002: 2). This means that the biolinguistics is just "a new look at an old classic". Far from what is assumed by Martín (2006), i.e. that biolinguistics was first introduced in the 1990s, biolinguistics rather represents a well-established paradigm of linguistic research (generativism) that has come up again in the 1990s thanks to the Minimalist Program (Boeckx & Grohmann, 2007: 3). Thus, the editorial trend on biolinguistics recorded since 1997 is not a sign of a new research paradigm. It rather represents the litmus test of a renewed interest in the biolinguistics research areas, i.e. structure, development and evolution of language.

### 3. BIOLINGUISTICS IN LEXICOGRAPHY

#### 3.1 *The corpus*

The referential profile of biolinguistics sketched above is completed by the analysis of the entries "biolinguistics" and "linguistics" taken from a wide and diverse sample of lexicographic sources. The corpus is composed of

100 volumes written in Italian, French, English and Spanish. The 41% of the sources are dictionaries and encyclopaedias of linguistics,<sup>2</sup> the 35% are general purposes encyclopaedias<sup>3</sup> and the 25% are monolingual dictionaries.<sup>4</sup> The research covers also monolingual dictionaries because calques of biolinguistics were found in the following languages:

- Italian: *biolinguistica* (in *Grande dizionario illustrato della lingua italiana*, edited by A. Gabrielli, 1989);
- Chinese: *shēng wù yǔyánxué*; French: *biolinguistique*; German: *biolinguistik*; Russian: *biolingvistika*; Spanish: *biolinguística* (Liu, Wu & Cui, 1988);
- Portuguese: *Biolinguística* (*Vocabulário Ortográfico da Língua Portuguesa*);
- Japanese: 生物言語学: 生物 *seibutsu* ‘living organism’ + 言語 *gengogaku* ‘linguistics’ (Fujita, 2003).

All lexicographical sources that form the sample were published in the space of 60 years, from 1950 to the early XXI century (Figure 2).

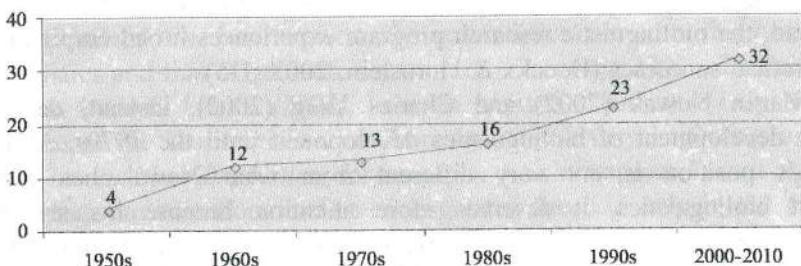


FIGURE 2. NUMBER OF DICTIONARIES AND ENCYCLOPAEDIAS PER DECADE

Dictionaries and encyclopaedias that were published before 1950 were not consulted, since the present study intends to reconstruct the referential status of biolinguistics through the comparison of data coming from publications and data coming from lexicography. The first book with “biolinguistics” in the title, indeed, dates back to the middle of the XX century.

### 3.2 Some details on the occurrence of “biolinguistics” in lexicography

The data on the occurrence of the lemma “biolinguistics” and of its equivalents in other languages reveal a widespread trend among compilers to omit the entry. The lemma occurs in only 25 volumes out of 100.<sup>5</sup> Since the lexicographic

<sup>2</sup> See Appendix 2 – List 1.

<sup>3</sup> See Appendix 2 – List 2.

<sup>4</sup> See Appendix 2 – List 3.

<sup>5</sup> See Appendix 2 – List 4.

sample under study is pretty variegated (it consists of 41 encyclopaedias of linguistics and 25 monolingual dictionaries), it is not possible to determine the sources where the lemma most frequently occurs.

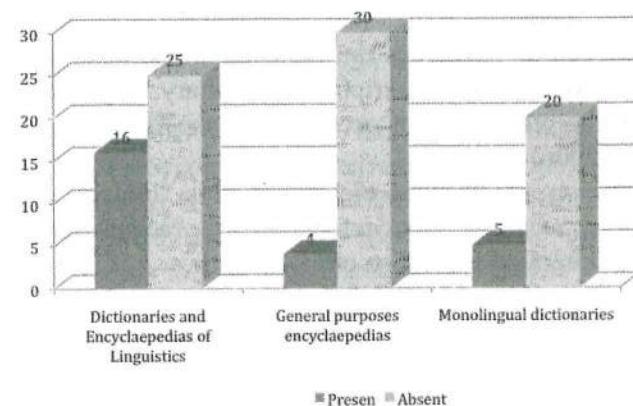


FIGURE 3. OCCURRENCE OF LEMMA PER KIND OF LEXICOGRAPHICAL SOURCE

Nevertheless, the high percentage of absence of the entry in monolingual dictionaries (19 volumes out of 24) cannot pass unnoticed. The exceptions to this trend are represented only by some Italian dictionaries and by the web version of the orthographic dictionary of the Portuguese language.

When the lemma is present, it is written either as a single word (92%) or as a compound hyphenated word (8%).<sup>6</sup> However, differences in orthography do not correspond to differences in meaning.

The lemma under study occupies different positions in the lexicographic sources in which it actually occurs (Figure 4).

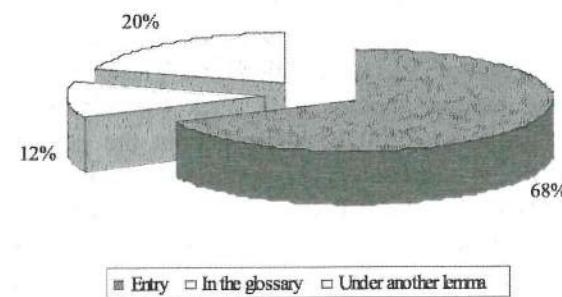


FIGURE 4. POSITION OF “BIOLINGUISTICS” IN DICTIONARIES AND ENCYCLOPAEDIAS

Most compilers (68%), indeed, dedicate a specific entry to “biolinguistics”; some others prefer to put it into the glossary (12%), or under another entry

<sup>6</sup> See Appendix 2 – List 5.1, List 5.2.

(20%).<sup>7</sup> In 4 volumes out of 5 it appears under “linguistics”. The only exception is represented by the second edition of *The Encyclopaedia of Language and Linguistics* (Brown, 2006), in which “biolinguistics” occurs within two entries with antithetical meaning: on the one hand, it appears under an article about “Integrational Linguistics”, i.e. “a general, non generative approach to linguistics that aims at providing a comprehensive theoretical framework for the description of arbitrary languages” (Sackman, 2006: 704); on the other hand, it occurs under the “Generative Grammar” entry (Rooryck, 2006).

A very common synonym of biolinguistics is “biological linguistics”, whereas its most recurrent cross-references are “acquisition”, “language impairment”, “zoosemiotics” and so on.

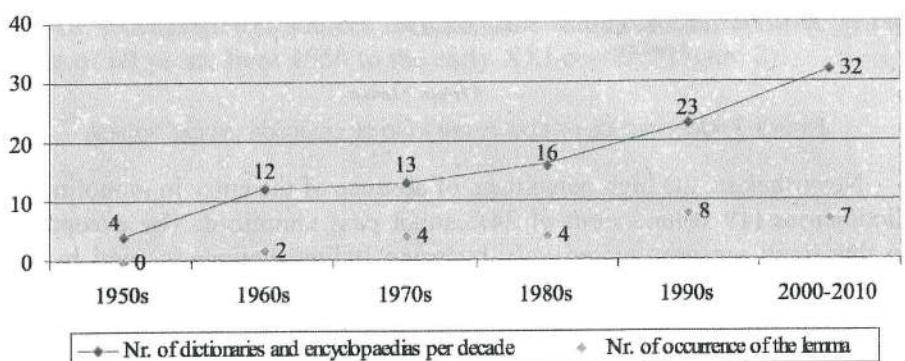


FIGURE 5. OCCURRENCE OF THE LEMMA “BIOLINGUISTICS” PER DECADE

The data illustrated in Figure 5 indicate that the occurrence of the lemma does not increase as much as the number of volumes published in recent years. In the 1990s, it appears in 8 volumes out of 23, in the XXI century, only in 7 out of 32. In addition, the graph shows that the first sources where the lemma appears date back to the 1960s. This datum contradicts what Chomsky (2007b) claims about the period in which the term “biolinguistics” was invented. According to Chomsky, the term itself was coined by Massimo Piattelli-Palmarini as the topic for an international conference in 1974 that brought together different researchers concerned with language and biology (Chomsky, 2007b: 9). However, calques in Italian and in German from the English word were found in volumes published before that conference. In Italian, “biolinguistica” already appears in the 12<sup>th</sup> volume of *Lessico Universale Italiano di Lingua, Lettere, Arti, Scienza e Tecnica*, published in 1973. In German, “Biolinguistik” can

<sup>7</sup> See Appendix 2 – List 6.1, List 6.2, List 6.3.

be found in *Wege der Sprachwissenschaft* by Ivić (1971). In addition, further denials of Chomsky’s statement derive from the very first book with “biolinguistics” in the title: the first edition of *The Handbook of Biolinguistics* by Meader & Muyskens was indeed published in 1950.

### 3.3 Some details about the meaning of biolinguistics

Unlike the publications in which the term “biolinguistics” is used homogeneously as a synonym for Generative Grammar, the lexicographic sources do not manage to draw an unambiguous profile of the discipline. Even if the compilers share a very general starting point, namely that biolinguistics concerns the study of linguistic phenomena in relation to their biological basis, the status of the discipline and its scope change according to the compiler and the year of publication.

In some dictionaries and encyclopaedias the term “biolinguistics” appear devoid of any definition in the gloss of another lemma (above all “linguistics”). This is the case of the *Encyclopaedia Europea* and of the second edition of *Encyclopaedia of Language and Linguistics*. In the first volume indeed, “biolinguistics” occurs only once under “linguistics” and it is considered as a neighbouring disciplines of linguistics together with linguistic geography, sociolinguistics, ethnolinguistics, dialectology and typology. In the volume edited by Keith Brown, instead, it is regarded as a branch of linguistics: it occurs under the article “Integrational Linguistics” and as a synonym of the Principles & Parameters approach under “Generative Grammar”.

The view of biolinguistics conveyed by some Italian monolingual dictionaries and by general purposes encyclopaedias is slightly more specific. For example, in the *Grande dizionario illustrato della lingua italiana* by Aldo Gabrielli and in the two editions of the *Dizionario di linguistica* by Gian Luigi Beccaria, the discipline is defined as the study of biological foundations of language. De Mauro in his *Grande Dizionario Italiano dell’Uso* (GRADIT) as well as Devoto and Oli in their *Dizionario della lingua italiana*, refer to biolinguistics as the study of the biological aspects of linguistic phenomena. In various volumes edited by the *Istituto della Encyclopedie Italiana*, like *Lessico Universale Italiano*, *La Piccola Encyclopedie Treccani*, *Il Vocabolario Treccani*, biolinguistics is referred to as the study of the biological basis of linguistic phenomena. However, these volumes do not specify whether the scope of biolinguistics is restricted to humans or whether it extends to animals as well. It is also interesting to note that, in both editions of the *Dizionario di linguistica* by Gian Luigi Beccaria, “biolinguistics” occurs only under the lemma “linguistics” and it is the only branch of linguistics that has not a distinct entry in the dictionary.

In some entries where the discipline is defined more accurately,

the research areas of biolinguistics sometimes overlap with those of neurolinguistics. According to Pei (1966), the study of language as a biologically determined activity cannot be separated from the influence exerted by neurophysiological, embryological and genetic factors (Pei, 1966: 29-30). In the *Moderna Enciclopedia Rizzoli* the field of investigation of biolinguistics is restricted to neurophysiological and genetic factors, thus excluding the influence of the embryological ones. Abraham (1981, 1988) provides a slightly different version of biolinguistics: he defines it as the study of language and biologically determined human behaviours involved in the communication process. Unlike Pei, Abraham assigns neurophysiological investigations to linguistics and not to biolinguistics (Abraham, 1988: 109).

The highest level of accuracy in defining biolinguistics is achieved in those dictionaries and encyclopaedias which do not only provide information about its research areas, but also specify the perspective from which human language structure and development are to be studied. The definitions examined so far, indeed, do not explain whether the study of linguistic phenomena concerns with the human being as an individual and/or as a species. In the most recent definitions of biolinguistics, instead, the discipline is claimed to be concerned with the study of the biological preconditions for the development and use of language in human beings, as both individuals and species (Bright, 1992; Crystal, 1997). Species-specific peculiarities of the human language, factors constraining the development of the human language in childhood, neurophysiological processes involved in language disorders and speech production, genetic transmission of language, anatomical parallels between human and other species are supposed to be the main areas of interest of biolinguistics (Crystal, 1992, 2003).

Original approaches to biolinguistics are suggested by Trask (1997), Hartmann & Stork (1973) and Rooryck (2006). According to the author of *A Student's Dictionary of Language and Languages*, "biolinguistics addresses the structure and evolution of those parts of the brain and of the nervous system dealing with language, with the biological aspects of the development of language in children, and with the biological basis of disorders of language and speech" (Trask, 1997: 29).

What distinguishes, for example, the view of biolinguistics offered by Hartmann and Stork in their *Dictionary of Language and Linguistics* from the definitions examined so far, is that they do not identify biolinguistics with a theoretical research field, rather "with the use of special research techniques from the fields of biology and linguistics to the study of language in relation to the growth and the structure of living organisms, particularly of man." (Hartmann & Stork, 1973: 27).

Finally, Rooryck's picture of biolinguistics is much different from the

referential trend found so far. According to him, the discipline has nothing to do with the biological basis of language. Rather, it is a synonym of the Principles & Parameters approach, it is an elegant label that Chomsky uses to differentiate his "broader" notion of Generative Grammar from a "narrower" one (Rooryck, 2006: 767-768). His position on biolinguistics, therefore, is the only one that can bridge the referents found in lexicography with those deriving from articles and books.

#### 4. CONCLUSION

Data from our study convey two different pictures of biolinguistics: one is made up of complementary colours, the other is marked by contrasting ones. On the one hand, in articles and books such term is coherently used to refer to Generative Grammar, generative linguistics, I-linguistics. The only differences among the authors concerns the years in which biolinguistics became to take shape. On the other hand, it was much more complicated to unearth the status of biolinguistics from lexicographic sources. Here, indeed, it was not possible to establish unambiguously either the relation between biolinguistics and linguistics, or its specific research areas. They differ qualitatively and quantitatively according to the date of publication and the compiler. They range from the vaguely stated study of the biological basis of language to the genetic transmission of language, to language deficits or the ontogenetic and phylogenetic development of language.

To sum up, it is possible to assert that biolinguistics can be considered both as a synonym for Generative Grammar, and as the study of the biological basis of language, the result of interdisciplinary collaboration between linguists and biologists. These two macro-meanings correspond exactly to the weak and strong sense of the term "biolinguistics" proposed by Grohmann & Boeckx (2007). In the light of this distinction, it is possible to assert that in articles and books the weak sense of biolinguistics prevails, while in dictionaries it is the strong one to be predominant. In conclusion, an exact definition of the term must include both meanings. In addition, in our view it would be better to present the weak sense before the strong one, since the generative work on the properties of grammar is supposed to be the basis for more interdisciplinary studies (Grohmann & Boeckx, 2007: 2).

#### REFERENCES

- Aaron, P. G. & Joshi, R. M. (2006). Written language is as natural as spoken language: A biolinguistic perspective. *Reading Psychology* 27 (4), 263-311.
- Benítez-Burraco, A. & Longa, V. M. (2010). Evo-Devo – Of course, but which one? Some comments on Chomsky's analogies between the biolinguistic

- approach and Evo-Devo. *Biolinguistics* 4 (4), 308-323.
- Berwick, R. C. (in press). Syntax facit saltum redux: Biolinguistics and the leap to syntax. In A. M Di Sciullo & C. Aguero (Eds.), *Biolinguistic Investigations*. Cambridge, MA: MIT Press [Available at: [http://alpha-leonis.lids.mit.edu/~berwick/Publications\\_files/syntax-facit-saltumv3.pdf](http://alpha-leonis.lids.mit.edu/~berwick/Publications_files/syntax-facit-saltumv3.pdf)]
- Berwick, R. C. & Chomsky, N. (in press). The biolinguistic program: The current state of its evolution and development. In A. M Di Sciullo & C. Aguero (Eds.), *Biolinguistic Investigations*. Cambridge, MA: MIT Press [Available at: [http://alpha-leonis.lids.mit.edu/~berwick/Publications\\_files/mitpress-biolinguistics.pdf](http://alpha-leonis.lids.mit.edu/~berwick/Publications_files/mitpress-biolinguistics.pdf)]
- Berwick, N. & Chomsky, N. (in press). The biolinguistic program: The current state of its evolution. In A. M. Di Sciullo & C. Boeckx (Eds.), *The Biolinguistic Enterprise. New Perspectives on the Evolution and Nature of the Human Language Faculty*. Oxford: Oxford University Press.
- Bird, S. (2006). Biolinguistics: What is it, who does it, and how should it proceed? *Chomskyan studies* 1 (2), 29-62.
- Boeckx, C. & Grohmann, K. K. (2007). The *Biolinguistics Manifesto*. *Biolinguistics* 1, 1-8.
- Boeckx, C. & Grohmann, K. K. (2008). A brief note on the scope of BIOLINGUISTICS. *Biolinguistics* 2 (1), 1-2.
- Boeckx, C. & Grohmann, K. K. (2009a). A brief note on the scope of BIOLINGUISTICS. *Biolinguistics* 3 (1), 1-2.
- Boeckx, C. & Grohmann, K. K. (2009b). Introducing Special Issues in BIOLINGUISTICS. *Biolinguistics* 3 (2-3), 124-125.
- Boecks, C. & Hornstein, N. (2003). The varying aims of linguistic theory. Manuscript [Available at: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.111.517&rep=rep1&type=pdf>].
- Boeckx, C. (in press). Some reflections on Darwin's problem in the context of Cartesian biolinguistics. In A. M. Di Sciullo & C. Boeckx (Eds.), *The Biolinguistic Enterprise. New Perspectives on the Evolution and Nature of the Human Language Faculty*. Oxford: Oxford University Press.
- Cheng, B. Y. M., Carbonell, J. K. & Seetharaman, J. (2004). *Biolinguistics: The Use of Analogies for Interdisciplinary Research*. Manuscript [Available at: <http://www.andrew.cmu.edu/course/60-427/aisd/biolinguistics.pdf>]
- Chomsky, N. (2004a). The biolinguistic perspective after fifty years. *Quaderni del Dipartimento di Linguistica - Università di Firenze* 14, 3-12.
- Chomsky, N. (2004b). Biolinguistics and the human capacity. Lecture delivered at MTA, Budapest, May 17, 2004 [Available at: <http://www.chomsky.info/talks/20040517.htm>].
- Chomsky, N. (2007a). Biolinguistic explorations: Design, development, evolution. *International Journal of Philosophical Studies* 15 (1), 1-21.
- Chomsky, N. (2007b). Of minds and language. *Biolinguistics* 1, 9-27.
- Di Sciullo, A. M. (2007). A remark on Natural Language Processing from the biolinguistic perspective. In H. Fujita & D. M. Pisanelli (Eds.) *New Trends in Software Methodologies, Tools and Techniques* (pp. 126-144). Amsterdam: IOS Press.

- Di Sciullo, A. M. (2010). The biolinguistics network. *Biolinguistics* 4 (1), 149-158.
- Di Sciullo, A. M. (in press). A biolinguistic approach to variation. In A. M. Di Sciullo & C. Boeckx (Eds.), *The Biolinguistic Enterprise. New Perspectives on the Evolution and Nature of the Human Language Faculty*. Oxford: Oxford University Press.
- Di Sciullo A. M. & Boeckx, C. (in press). Introduction: Contours of the biolinguistic research agenda. In A. M. Di Sciullo & C. Boeckx (Eds.), *The Biolinguistic Enterprise. New Perspectives on the Evolution and Nature of the Human Language Faculty*. Oxford: Oxford University Press.
- Di Sciullo A. M. & Boeckx, C. (Eds.) (in press). *The Biolinguistic Enterprise. New Perspectives on the Evolution and Nature of the Human Language Faculty*. Oxford: Oxford University Press.
- Di Sciullo, A. M. Piattelli-Palmarini, M., Wexler, K., Berwick, R. C., Boeckx, C., Jenkins, L., Uriagereka, J., Stromswold, K., Lai-Shen Cheng, L., Harley, H., Wedel, A., McGilvray, J., van Gelderen, E. & Bever, T. G. (2010). The biological nature of human language. *Biolinguistics* 4 (1), 4-34.
- Epstein, S. D. & Seely, D. T. (2007). The anatomy of biolinguistic minimalism. *Biolinguistics* 1, 135-136.
- Fitch, W. T. (2009). Prolegomena to a science of biolinguistics. *Biolinguistics* 3 (4), 283-320.
- França, A. I. (2004). *Introduction to Neurolinguistics*. Manuscript [Available at: [http://www.punksinscience.org/kleanthes/courses/UCY10S/IBL/material/Franca\\_Neurolinguistics.pdf](http://www.punksinscience.org/kleanthes/courses/UCY10S/IBL/material/Franca_Neurolinguistics.pdf)]
- Fujita, K. (2002). Review of *Biolinguistics* by L. Jenkins (2000). *Gengo Kenkyu* 121, 165-178.
- Fujita, K. (2003). Progress in biolinguistics – Geneses of language – A view from Generative Grammar. *Viva Origino* 31 (2), 104-121.
- Givón, T. (2002). *Bio-linguistics: The Santa Barbara lectures*. Amsterdam: Benjamins.
- Hauser, M. & Bever, T. (2008). A biolinguistic agenda. *Science* 322, 1057-1059.
- Ivić, M. (1971). *Wege der Sprachwissenschaft*. München: Jachnow.
- Jenkins, L. (1988). Second language acquisition: A biolinguistic perspective. In S. Flynn & W. O'Neil (Eds.), *Linguistic Theory in Second Language Acquisition* (pp. 109-116). Dordrecht: Kluwer.
- Jenkins, L. (1997). Biolinguistics – Structure, development and evolution of language. In V. Solovyev (Ed.), *The 40<sup>th</sup> Anniversary of Generativism*. Special issue of *Web Journal of Formal, Computational and Cognitive Linguistics* [Available at: <http://fccl.ksu.ru/papers/gp008.pdf>].
- Jenkins, L. (2000). *Biolinguistics: Exploring the Biology of Language*. Cambridge: Cambridge University Press.
- Jenkins, L. (Ed.) (2004). *Variation and Universals in Biolinguistics*. Amsterdam: Elsevier.
- Jenkins, L. (2006). Explanation in biolinguistics. *Linguistic Variation Year Book* 6 (1), 1-24.
- Jenkins, L. (in press). Biolinguistic investigations: Genetics and dynamics. In A. M.

- Di Sciullo & C. Boeckx (Eds.), *The Biolinguistic Enterprise. New Perspectives on the Evolution and Nature of the Human Language Faculty*. Oxford: Oxford University Press.
- Kelemen, J., Kelemenová, A. & Mitrana, V. (2001). Towards biolinguistics. *Grammars* 4 (3), 187-203.
- Labelle, M. (2007). Biolinguistics, the Minimalist Program, and psycholinguistic reality. *Snippets* 14, 6-7.
- Ladd, D. R., Dediu, D. & Kinsella, A. R. (2008). Languages and genes: Reflections on biolinguistics and the nature-nurture question. *Biolinguistics* 2 (1), 114-126.
- Larini, G. (2007). Biolinguistica e cognitivismo nelle lingue classiche. *Pragma* 30.
- Lee, S. W. (2006). Chomsky and biolinguistics. *Chomskyan studies* 1 (1), 91-117.
- Lenneberg, E. H. (1967). *Biological Foundations of Language*. New York: John Wiley & Sons.
- Longobardi, G. & Guardiano, C. (in press). The biolinguistic program and historical reconstruction. In A. M. Di Sciullo & C. Boeckx (Eds.), *The Biolinguistic Enterprise. New Perspectives on the Evolution and Nature of the Human Language Faculty*. Oxford: Oxford University Press.
- Lothmann, T. (2005). Psycholinguistics, Neurolinguistics, Biolinguistics. Manuscript [Available at: <http://www.narr-studienbuecher.de/downloads/Psycholinguistics.pdf>]
- Madhavi Ganapathiraju, N., Balakrishnan-Raj, R. & Klein-Seetharaman, J. (2004). Biolinguistics: analogy of speech and language processing in computational biology. Manuscript [Available at: <http://www.cs.cmu.edu/~madhavi/publications/BiolinguisticsFinal.pdf>]
- Manzini, R. & Savoia, L. (in press). (Bio)linguistic diversity. In A. M. Di Sciullo & C. Boeckx (Eds.), *The Biolinguistic Enterprise. New Perspectives on the Evolution and Nature of the Human Language Faculty*. Oxford: Oxford University Press.
- Martín, J. (2006). Another linguistics is possible: Nature, culture and the study of language. In J. Rossello & J. Martín (Eds.), *The Biolinguistic Turn. Issues on Language and Biology* (pp. 1-18). Barcelona: Publicacions Universitat de Barcelona.
- Meader, C. L. & Muyskens, J. H. (1959). *Handbook of Biolinguistics*. Toledo, OH: Herbert C. Weller.
- Messeri, L. (2006). L'orientamento biologico della linguistica chomskiana. Grammatica Universale e dati sperimentali. *Annali del Dipartimento di Filosofia dell'Università di Firenze* XI, 227-274.
- Muyskens, J. H. & Ross, H. B. (1958). *Speech Therapy from the Bio-Linguistic Point of View. With Organized Exercises for Public School Classes*. H. B. Ross.
- Narita, H. & Fujita, K. (2010). A naturalist reconstruction of minimalist and evolutionary biolinguistics. *Biolinguistics* 4 (4), 356-376.
- Nowak, A. M. (2002). From quasi species to Universal Grammar. *Zeitschrift für physikalische Chemie*, 216 (1), 5-20.
- Patnaik, B. (2003). Language and thought: a generative linguistic perspective. In C. Chakravorti, M. K. Mandal & R. B. Chatterjee (Eds.), *On Mind and Consciousness*, Indian Institute of Advanced Study, Shimla.
- Piattelli-Palmarini, M. & Uriagereka, J. (2008). Still a bridge too far? Biolinguistic questions for grounding language on brains. *Physics of Life Reviews* 5, 207-224.
- Postal, P. M. (2009). The incoherence of Chomsky's "biolinguistic" ontology. *Biolinguistics* 3 (1), 104-123.
- Rizzi, L. (2004). On the study of the language faculty: Results, developments, and perspectives. *The Linguistic Review* 21, 323-344.
- Rooryck, J. (2006). Generative Grammar. In K. Brown (Ed.), *The Encyclopaedia of Language and Linguistics* (pp. 767-769). Amsterdam: Elsevier.
- Rosselló, J. & Martín J. (Ed.) (2006). *The Biolinguistic Turn. Issues on Language and Biology*, Barcelona: Publicacions Universitat de Barcelona.
- Sackman, R. (2006). Integrational linguistics. In K. Brown (Ed.) *The Encyclopaedia of Language and Linguistics* (pp. 704-713). Amsterdam: Elsevier.
- Von Raffler-Engel, W. (1984). *A contribution to biolinguistics: The synchronous development of language & kinesics*. Duisburg: L.A.U.D.T.
- Wilden, W. (2009). Sketch of an evolutionary grammar based on comparative biolinguistics. In L. Rökska-Hardy & E. M. Neumann-Held (Eds.), *Learning from Animals? Examining the Nature of Human Uniqueness* (pp. 45-59). Hove/New York: Psychology Press.
- Yang, C. D. (2002). *Knowledge and Learning in Natural Language*, Oxford: Oxford University Press.

#### Lexicographic bibliography

General purposes encyclopedias

- Brockhaus Enzyklopädie*, 24 voll., 1986-1994. Wiesbaden, Mannheim: F. A. Brockhaus.
- Chambers's Encyclopaedia*, New revised edition, 15 voll., 1969. London: International Learning Systems Co. Ltd.
- Columbia Encyclopedia*, VI ed., 2001-2006 [Available at: <http://www.encyclopedia.com/The+Columbia+Encyclopedia,+Sixth+Edition/publications.aspx?pageNumber=1>]
- Dizionario di scienze cognitive: neuroscienze, psicologia, intelligenza artificiale, linguistica, filosofia*, 2000. Rome: Editori riuniti.
- Dizionario encicopedico moderno*, 1951. Milan: Edizioni Labor.
- Enciclopedia del Novecento*, 7 voll., 1975-1984. Rome: Istituto della Enciclopedia Italiana.
- Enciclopedia del Novecento*, Supplemento I, 1989. Rome: Istituto della Enciclopedia Italiana.
- Enciclopedia del Novecento*, Supplemento II, Vol. A-G, Vol. I-Z, 1998. Rome: Istituto della Enciclopedia Italiana.
- Enciclopedia del Novecento*, Supplemento III, Vol. A-G; Vol. I-Z, 2004. Rome: Istituto della Enciclopedia Italiana.
- Enciclopedia Einaudi*, 16 voll., 1977. Turin: Einaudi.
- Enciclopedia Europea Garzanti*, 12 voll., 1976. Milan: Garzanti Editore.
- Enciclopedia Garzanti*, 1959. Milan: Garzanti Editore.
- Enciclopedia Garzanti di filosofia e epistemologia, logica formale, linguistica*,

- psicologia, psicoanalisi, pedagogia, antropologia culturale, teologia, religioni, sociologia*, 1983. Milan: Garzanti Editore.
- Encyclopedie Garzanti Universale*, 1962. Milan: Garzanti Editore.
- Encyclopedie Italiana di scienze lettere ed arti*, 1979-1992, Appendice Vol. I A-D (1991); Vol. V IT-O (1993). Rome: Istituto della Encyclopedie Italiana.
- Encyclopedie Italiana di scienze lettere ed arti*, Appendix IV, 1961-1978; Vol. I A-GA (1978); Vol. II GE-PI (1979). Rome: Istituto della Encyclopedie Italiana.
- Encyclopedie Italiana di scienze lettere ed arti*, Appendix Vol. \*A-LA; Vol. \*\*LE-Z, 2000. Rome: Istituto della Encyclopedie Italiana.
- Encyclopedie Zanichelli: Dizionario encyclopedico di arti, scienze, tecniche, lettere, filosofia, storia, geografia, diritto, economia*, 2005. Bologna: Zanichelli.
- Encyclopaedia Universalis*, 17 voll., 1970-1973. Paris: Encyclopaedia universalis.
- Encyclopaedia Universalis* [Available at: <http://www.universalis.fr/>]
- Encyclopedia of Cognitive Science*, 2003. London: Nature Publishing Group.
- Grand Larousse Encyclopédique*, 10 voll., 1960-1964. Paris: Librairie Larousse.
- Grand Larousse Encyclopédique*, Supplément Vol. XI, 1968. Paris: Librairie Larousse.
- Grande dizionario encyclopedico. Gli strumenti del sapere contemporaneo*, Vol. I *Le discipline*, 1985. Turin: UTET.
- Grande dizionario encyclopedico Utet*, 20 voll., 1967-1975. Turin: UTET.
- Il novissimo Melzi. Dizionario encyclopedico italiano in due parti* (Parte I Linguistica; Parte II Scientifica), XXXIII ed., 1950. Milan: Vallardi.
- La piccola Treccani. Dizionario Encyclopedico*, 12 voll., 1995-1997. Rome: Istituto della Encyclopedie Italiana.
- La piccola Treccani. Dizionario Encyclopedico*, Supplemento Vol. A-INTEN; Vol. INTEN-Z, 2002. Rome: Istituto della Encyclopedie Italiana.
- Lessico Universale Italiano di Lingua, Lettere, Arti, Scienze e Tecnica*, 24 voll., 1968-1981. Rome: Istituto della Encyclopedie Italiana.
- Lessico Universale Italiano di Lingua Lettere Arti Scienze e Tecnica*, Supplemento A-H (1985); Supplemento I-Z (1986). Rome: Istituto della Encyclopedie Italiana.
- Moderna Encyclopedie Rizzoli*, 20 voll., 1977. Milan: Rizzoli.
- The MIT Encyclopedia of the Cognitive Sciences*, 1999. Cambridge, MA: MIT Press.
- The New Encyclopaedia Britannica, Macropaedia - Knowledge in depth*, 17 voll., 2005. Chicago: Encyclopaedia Britannica Inc.
- The New Encyclopaedia Britannica, Micropaedia - Ready reference*, 15<sup>th</sup> ed., 15 voll., 2005. Chicago: Encyclopaedia Britannica Inc.

#### Dictionaries and encyclopaedias of linguistics

- Abraham, W. (1981). *Diccionario de terminología lingüística actual*. Madrid: Gredos [Spanish translation of *Terminologie zur neueren Linguistik*. Tübingen: Niemeyer, 1974].
- Abraham, W. (1988). *Terminologie zur neueren Linguistik*. Tübingen: Niemeyer.
- Aitchinson, J. (1992). *Introducing Language and Mind*. London/New York: Penguin English.
- Asher, R. E. (Ed.) (1994). *The Encyclopaedia of Language and Linguistics*. Oxford/

- New York: Pergamon Press.
- Balboni, P. (1999). *Dizionario di glottodidattica*. Perugia: Guerra Edizioni.
- Beccaria, G. L. (1994). *Dizionario di linguistica*. Turin: Einaudi.
- Beccaria, G. L. (2004). *Dizionario di linguistica e di filologia, metrica e retorica*. Turin: Piccola Biblioteca Einaudi.
- Bright, W. (1992). *International Encyclopaedia of Linguistics*. New York/Oxford: Oxford University Press.
- Brown, K. (Ed.) (2006). *The Encyclopaedia of Language and Linguistics*. Amsterdam: Elsevier.
- Bussman, H. (1998). *Routledge Dictionary of Language and Linguistics*. London/New York: Routledge.
- Byram, M. (2000). *Routledge Encyclopaedia of Language Teaching and Learning*. London/New York: Routledge.
- Cardona, G. R. (1969). *Linguistica generale*. Rome: Armando Editore.
- Cardona, G. R. (1988). *Dizionario di linguistica*. Rome: Armando Editore.
- Casadei, F. (2001). *Breve dizionario di linguistica*. Rome: Carocci.
- Collinge, N. E. (1990). *An Encyclopaedia of Language*. London/New York: Routledge.
- Crystal, D. (1992). *An Encyclopedic Dictionary of Language and Languages*. Oxford: Blackwell.
- Crystal, D. (1993). *Encyclopedie Cambridge delle scienze del linguaggio*. Bologna: Zanichelli [Italian translation of *The Cambridge Encyclopedia of Language*. Cambridge: Cambridge University Press, 1987].
- Crystal, D. (1997). *The Cambridge Encyclopaedia of Language*, 2<sup>nd</sup> edition. Cambridge: Cambridge University Press.
- Crystal, D. (2003). *A Dictionary of Linguistics & Phonetics*, 5<sup>th</sup> edition. Oxford: Blackwell.
- Décsy, G. (1983). Entries to a Linguistic Dictionary of the '80s/'90s. In G. Décsy (Ed.), *Global Linguistic Connection* (pp. 37-129). Bloomington: Eurolingua.
- Dubois, J., Giacomo, M., Guespin, L., Marcellesi, Ch., Marcelles, J.-B. & Mével, J.-P. (1979). *Dizionario di Linguistica*. Bologna: Zanichelli [Italian translation of *Dictionnaire de linguistique*. Paris: Librairie Larousse, 1973].
- Ducrot, O. & Schaeffer, J. M. (1995). *Nouveau Dictionnaire Encyclopédique des Sciences du Langage*. Paris: Éditions du Seuil.
- Ducrot, O. & Tzvetan, T. (1972). *Dizionario encyclopedico delle scienze del linguaggio*. Milan: ISEDI [Italian translation of *Dictionnaire encyclopédique des sciences du language*. Paris: Éditions du Seuil, 1972].
- Frawley, W. J. (Ed.) (2003). *International Encyclopedia of Linguistics*. Oxford: Oxford University Press.
- Greimas, A. J. & Courtés, J. (1986). *Semiotica. Dizionario ragionato della teoria del linguaggio*. Florence: Usher [Italian translation of *Sémantique, dictionnaire raisonné de la théorie du langage*. Paris: Hachette, 1979].
- Hartmann, R. R. K. & Stork, F. C. (1973). *Dictionary of Language and Linguistics*. London: Applied Science Publishers Ltd.
- Hudson, R. A. & Meetham, A. R. (Ed.) (1969). *Encyclopaedia of Linguistics, Information and Control*. Oxford/London: Pergamon Press.

- Johnson, K. & Johnson, H. (2006). *Encyclopaedic Dictionary of Applied Linguistics*. Malden: Blackwell.
- Kerstens, J., Ruys, E. & Zwarts, J. (1996-2001). *Lexicon of Linguistics*, Utrecht Institute of Linguistics (OTS), Utrecht University [Available at: <http://www2.let.uu.nl/UiL-OTS/Lexicon/>]
- Liu, Y., Wu, J. & Cui, Z. (1988). *Duōyǔ dùzhào yǔyánxué cíhuì - Multilingual Lexicon of Linguistics*. Běijīng: Rén mǐn jiāo tōng.
- Malmkjær, K. (Ed.) (1991). *The Linguistics Encyclopedia*. London/New York: Routledge.
- Marouzeau, J. (1951). *Lexique de la terminologie linguistique*. Paris: Paul Geuthner.
- Martinet, A. (1969). *La linguistique. Guide Alphabetique*. Paris: Éditions Denoël.
- Matthews, P. H. (1997). *The Oxford Concise Dictionary of Linguistics*. Oxford/New York: Oxford University Press.
- Mounin, G. (Ed.) (1974). *Dictionnaire de la Linguistique*. Paris: Presses Universitaire de France.
- Pei, M. (1966). *Glossary of Linguistic Terminology*. New York/London: Columbia University Press.
- Pei, M. (1969). *A Dictionary of Linguistics*. Totowa/New Jersey: Littlefield, Adams & Co.
- Richards, J., Platt, J. & Weber, H. (1985). *Longman Dictionary of Applied Linguistics*. Bungay/Suffolk: Longman.
- Simone, R. (1969). *Piccolo dizionario della linguistica moderna*. Turin: Loescher.
- Trask, R. L. (1997). *A Student's Dictionary of Language and Linguistics*. London/New York: Arnold.
- Treccani.it. *L'enciclopedia italiana. Arte Lingua e Letteratura / Lingua* [Available at: [http://www.treccani.it/enciclopedia/arte\\_lingua\\_e\\_letteratura/lingua](http://www.treccani.it/enciclopedia/arte_lingua_e_letteratura/lingua)]

#### Monolingual dictionaries

- Brockhaus Wahrig Deutsches Wörterbuch*, 6 voll., 1980-1984. Wiesbaden: F.A. Brockhaus/Stuttgart: Deutsche Verlags-Anstalt.
- Collins English Dictionary*, 5<sup>th</sup> ed., 2000. Glasgow: Harper Collins Publishers.
- Deutsches Wörterbuch: mit einem "Lexikon der deutschen Sprachlehre"*, by G. Wahrig, 1968. Gütersloh: Bertelsmann Lexikon.
- Diccionario de la lengua española*, Real Academia Española, 22<sup>nd</sup> ed., 2001. Madrid: Espasa Calpe.
- Dicionário da língua portuguesa*, Edição revista e actualizada, 2005. Porto: Porto editora.
- Dictionnaire de l'Academie française*. 2 voll., 9<sup>th</sup> ed., 1994-2000. Paris: Imprimerie Nationale Julliard.
- Duden Deutsches Universalwörterbuch*, 2003. Mannheim: Dudenverlag.
- El Vox Mayor. Diccionario General Ilustrado de la Lengua Española (with Il Nuovo Vox)*, 1989. Bologna: Zanichelli.
- Grande dizionario della lingua italiana*, founded by S. Battaglia, 21 voll., 1961-2002. Turin: UTET.

- Grande dizionario della lingua italiana moderna*, 5 voll., 1998-1999. Milan: Garzanti.
- Grande dizionario illustrato della lingua italiana*, edited by A. Gabrielli, 2 voll., 1989. Milan: Mondadori.
- Grande dizionario italiano dell'uso*, edited by T. De Mauro, 7 voll., 2000. Turin: UTET.
- Il Devoto-Oli. Il dizionario della lingua italiana*, 2004-2005. Florence: Le Monnier.
- Il Vocabolario Treccani*, edited by A. Duri, 8 voll., 2<sup>nd</sup> ed., 1997-2006. Rome: Istituto della Enciclopedia Italiana.
- Le grand dictionnaire terminologique* [Available at: [http://www.granddictionnaire.com/btml/fra/r\\_motclef/index800\\_1.asp](http://www.granddictionnaire.com/btml/fra/r_motclef/index800_1.asp)]
- Le Grand Robert de la langue française. Dictionnaire (2<sup>nd</sup> ed. of *Dictionnaire alphabetique et analogique de la langue française de Paul Robert*, edited by Alain Rey. Varese: La tipografica Varese), 6 voll., 2001. Paris: Dictionnaires Le Robert.*
- Le Trésor de la langue française informatisé* [Available at: <http://atilf.atilf.fr/tlf.htm>]
- Lo Zingarelli 2004. Vocabolario della lingua italiana*, 2003. Bologna: Zanichelli.
- Merriam-Webster's Collegiate Dictionary*, 10<sup>th</sup> ed., 1998. Springfield: Merriam-Webster, Incorporated.
- Tesoro de la lengua castellana o española*, by S. de Covarrubias Orozco, 1998. Barcelona: Editorial Alta Fulla.
- The New Oxford Dictionary of English*, by Pearsall J. & Hanks, P., 2001. Oxford: Oxford University Press.
- The Oxford English Dictionary*, by Simpson, J. A. & Weiner, E. S. C., 1989. Oxford: Oxford University Press.
- Trésor de la langue française: dictionnaire de la langue de XIXe et du XXe siècle*, 16 voll., 1971-1994. Paris: Éditions du centre de la recherche scientifique.
- Vocabulário Ortográfico da Língua Portuguesa* [Available at: <http://www.academia.org.br/abl/cgi/cgilua.exe/sys/start.htm?sid=23>]
- Word Net* [Available at: <http://wordnet.princeton.edu/>]

#### APPENDIX 1

Chronological list of publications with “biolinguistic(s)” in the title

##### 1950s

1. Muyskens, J. H. & Ross, H. B. (1958). *Speech Therapy from the Bio-Linguistic Point of View. With Organized Exercises for Public School Classes*. H. B. Ross.
2. Meader, C. L. & Muyskens, J. H. (1959). *Handbook of Biolinguistics*. Toledo, OH: Herbert C. Weller.

##### 1980s

1. Von Raffler-Engel, W. (1984). *A contribution to biolinguistics: The synchronous development of language & kinesics*. Duisburg: L.A.U.D.T.
2. Jenkins, L. (1988). Second language acquisition: A biolinguistic perspective. In S. Flynn & W. O'Neil (Eds.), *Linguistic Theory in Second Language Acquisition* (pp. 109-116). Dordrecht: Kluwer.

##### From 1990 to 2010

1. Jenkins, L. (1997). Biolinguistics – Structure, development and evolution of

- language. In V. Solovyev (Ed.), *The 40<sup>th</sup> Anniversary of Generativism*. Special issue of *Web Journal of Formal, Computational and Cognitive Linguistics* [Available at: <http://fccl.ksu.ru/papers/gp008.pdf>]
2. Jenkins, L. (2000). *Biolinguistics: Exploring the Biology of Language*. Cambridge: Cambridge University Press.
  3. Kelemen, J., Kelemenová, A. & Mitrana, V. (2001). Towards biolinguistics. *Grammars* 4 (3), 187-203.
  4. Givón, T. (2002). *Bio-linguistics: The Santa Barbara lectures*. Amsterdam: Benjamins.
  5. Fujita, K. (2002). Review of *Biolinguistics* by L. Jenkins (2000). *Gengo Kenkyū* 121, 165-178.
  6. Fujita, K. (2003). Progress in biolinguistics – Geneses of language – A view from Generative Grammar. *Viva Origino* 31 (2), 104-121.
  7. Cheng, B. Y. M., Carbonell, J. K. & Seetharaman, J. (2004). *Biolinguistics: The Use of Analogies for Interdisciplinary Research*. Manuscript [Available at: <http://www.andrew.cmu.edu/course/60-427/aisd/biolinguistics.pdf>].
  8. Chomsky, N. (2004a). The biolinguistic perspective after fifty years. *Quaderni del Dipartimento di Linguistica - Università di Firenze* 14, 3-12.
  9. Chomsky, N. (2004b). Biolinguistics and the human capacity. Lecture delivered at MTA, Budapest, May 17, 2004 [Available at: <http://www.chomsky.info/talks/20040517.htm>].
  10. Jenkins, L. (Ed.) (2004). *Variation and Universals in Biolinguistics*. Amsterdam: Elsevier.
  11. Madhavi Ganapathiraju, N., Balakrishnan-Raj, R. & Klein-Seetharaman, J. (2004). Biolinguistics: analogy of speech and language processing in computational biology. Manuscript [Available at: <http://www.cs.cmu.edu/~madhavi/publications/BiolinguisticsFinal.pdf>]
  12. Lothmann, T. (2005). Psycholinguistics, Neurolinguistics, Biolinguistics. Manuscript [Available at: <http://www.narr-studienbuecher.de/downloads/Psycholinguistics.pdf>]
  13. Aaron, P. G. & Joshi, R. M. (2006). Written language is as natural as spoken language: A biolinguistic perspective. *Reading Psychology* 27 (4), 263-311.
  14. Bird, S. (2006). Biolinguistics: What is it, who does it, and how should it proceed? *Chomskyan studies* 1 (2), 29-62.
  15. Jenkins, L. (2006). Explanation in biolinguistics. *Linguistic Variation Year Book* 6 (1), 1-24.
  16. Rosselló, J. & Martín J. (Ed.) (2006). *The Biolinguistic Turn. Issues on Language and Biology*. Barcelona: Publicacions Universitat de Barcelona.
  17. Lee, S. W. (2006). Chomsky and biolinguistics. *Chomskyan studies* 1 (1), 91-117.
  18. Boeckx, C. & Grohmann, K. K. (2007). The Biolinguistics Manifesto. *Biolinguistics* 1, 1-8.
  19. Chomsky, N. (2007). Biolinguistic explorations: Design, development, evolution. *International Journal of Philosophical Studies* 15 (1), 1-21.
  20. Di Sciullo, A. M. (2007). A remark on Natural Language Processing from the biolinguistic perspective. In H. Fujita & D. M. Pisanelli (Eds.) *New Trends in Software Methodologies, Tools and Techniques* (pp. 126-144). Amsterdam: IOS Press.
  21. Epstein, S. D. & Seely, D. T. (2007). The anatomy of biolinguistic minimalism. *Biolinguistics* 1, 135-136.
  22. Labelle, M. (2007). Biolinguistics, the Minimalist Program, and psycholinguistic reality. *Snippets* 14, 6-7.
  23. Larini, G. (2007). Biolinguistica e cognitivismo nelle lingue classiche. *Pragmatics* 30.
  24. Boeckx, C. & Grohmann, K. K. (2008). A brief note on the scope of BIOLINGUISTICS. *Biolinguistics* 2 (1), 1-2.
  25. Hauser, M. & Bever, T. (2008). A biolinguistic agenda. *Science* 322, 1057-1059.
  26. Ladd, D. R., Dediu, D. & Kinsella, A. R. (2008). Languages and genes: Reflections on biolinguistics and the nature-nurture question. *Biolinguistics* 2 (1), 114-126.
  27. Piattelli-Palmarini, M. & Uriagereka, J. (2008). Still a bridge too far? Biolinguistic questions for grounding language on brains. *Physics of Life Reviews* 5, 207-224.
  28. Wildgen, W. (2009). Sketch of an evolutionary grammar based on comparative biolinguistics. In L. Rökska-Hardy & E. M. Neumann-Held (Eds.), *Learning from Animals? Examining the Nature of Human Uniqueness* (pp. 45-59). Hove/New York: Psychology Press.
  29. Boeckx, C. & Grohmann, K. K. (2009a). A brief note on the scope of BIOLINGUISTICS. *Biolinguistics* 3 (1), 1-2.
  30. Boeckx, C. & Grohmann, K. K. (2009b). Introducing Special Issues in BIOLINGUISTICS. *Biolinguistics* 3 (2-3), 124-125.
  31. Fitch, W. T. (2009). Prolegomena to a science of biolinguistics. *Biolinguistics* 3 (4), 283-320.
  32. Postal, P. M. (2009). The incoherence of Chomsky's "biolinguistic" ontology. *Biolinguistics* 3 (1), 104-123.
  33. Benítez-Burraco, A. & Longa, V. M. (2010). Evo-Devo – Of course, but which one? Some comments on Chomsky's analogies between the biolinguistic approach and Evo-Devo. *Biolinguistics* 4 (4), 308-323.
  34. Di Sciullo, A. M. (2010). The biolinguistics network. *Biolinguistics* 4 (1), 149-158.
  35. Narita, H. & Fujita, K. (2010). A naturalist reconstruction of minimalist and evolutionary biolinguistics. *Biolinguistics* 4 (4), 356-376.

## In press

1. Berwick, R. C. (in press). Syntax facit saltum redux: Biolinguistics and the leap to syntax. In A. M. Di Sciullo & C. Aguero (Eds.), *Biolinguistic Investigations*. Cambridge, MA: MIT Press [Available at: [http://alpha-leonis.lids.mit.edu/~berwick/Publications\\_files/syntax-facit-saltumv3.pdf](http://alpha-leonis.lids.mit.edu/~berwick/Publications_files/syntax-facit-saltumv3.pdf)]
2. Berwick, R. C. & Chomsky, N. (in press). The biolinguistic program: The current state of its evolution and development. In A. M. Di Sciullo & C. Aguero (Eds.), *Biolinguistic Investigations*. Cambridge, MA: MIT Press [Available at: [http://alpha-leonis.lids.mit.edu/~berwick/Publications\\_files/mitpress-biolinguistics.pdf](http://alpha-leonis.lids.mit.edu/~berwick/Publications_files/mitpress-biolinguistics.pdf)]
3. Berwick, N. & Chomsky, N. (in press). The biolinguistic program: The current state of its evolution. In A. M. Di Sciullo & C. Boeckx (Eds.), *The Biolinguistic Enterprise. New Perspectives on the Evolution and Nature of the Human Language Faculty*. Oxford: Oxford University Press.
4. Boeckx, C. (in press). Some reflections on Darwin's problem in the context of Cartesian biolinguistics. In A. M. Di Sciullo & C. Boeckx (Eds.), *The Biolinguistic Enterprise. New Perspectives on the Evolution and Nature of the Human Language Faculty*. Oxford: Oxford University Press.
5. Di Sciullo, A. M. (in press). A biolinguistic approach to variation. In A. M. Di Sciullo & C. Boeckx (Eds.), *The Biolinguistic Enterprise. New Perspectives on the Evolution and Nature of the Human Language Faculty*. Oxford: Oxford University Press.
6. Di Sciullo A. M. & Boeckx, C. (in press). Introduction: Contours of the biolinguistic research agenda. In A. M. Di Sciullo & C. Boeckx (Eds.), *The Biolinguistic Enterprise. New Perspectives on the Evolution and Nature of the*

7. *Human Language Faculty*. Oxford: Oxford University Press.
7. Jenkins, L. (in press), Biolinguistic investigations: Genetics and dynamics. In A. M. Di Sciullo & C. Boeckx (Eds.), *The Biolinguistic Enterprise. New Perspectives on the Evolution and Nature of the Human Language Faculty*. Oxford: Oxford University Press.
8. Longobardi, G. & Guardiano, C. (in press). The biolinguistic program and historical reconstruction. In A. M. Di Sciullo & C. Boeckx (Eds.), *The Biolinguistic Enterprise. New Perspectives on the Evolution and Nature of the Human Language Faculty*. Oxford: Oxford University Press.
9. Manzini, R. & Savoia, L. (in press), (Bio)linguistic diversity. In A. M. Di Sciullo & C. Boeckx (Eds.), *The Biolinguistic Enterprise. New Perspectives on the Evolution and Nature of the Human Language Faculty*. Oxford: Oxford University Press.

## APPENDIX 2

### List 1: Chronological list of dictionaries and encyclopaedias of linguistics

- Marouzeau, J. (1951). *Lexique de la terminologie linguistique*. Paris: Paul Geuthner.
- Pei, M. (1966). *Glossary of Linguistic Terminology*. New York/London: Columbia University Press.
- Pei, M. (1969). *A Dictionary of Linguistics*. Totowa/New Jersey: Littlefield, Adams & Co.
- Hudson, R. A. & Meetham, A. R. (Ed.) (1969). *Encyclopaedia of Linguistics, Information and Control*. Oxford/London: Pergamon Press.
- Martinet, A. (1969). *La linguistique. Guide Alphabetique*. Paris: Éditions Denoël.
- Simone, R. (1969). *Piccolo dizionario della linguistica moderna*. Turin: Loescher.
- Ducrot, O. & Tzvetan, T. (1972). *Dizionario encyclopédico delle scienze del linguaggio*. Milan: ISEDI [Italian translation of *Dictionnaire encyclopédique des sciences du language*. Paris: Éditions du Seuil, 1972]
- Hartmann, R. R. K. & Stork, F. C. (1973). *Dictionary of Language and Linguistics*. London: Applied Science Publishers Ltd.
- Mounin, G. (Ed.) (1974). *Dictionnaire de la Linguistique*. Paris: Presses Universitaire de France.
- Dubois, J., Giacomo, M., Guespin, L., Marcellesi, Ch., Marcellesi, J.-B. & Mével, J.-P. (1979). *Dizionario di Linguistica*. Bologna: Zanichelli [Italian translation of *Dictionnaire de linguistique*. Paris: Librairie Larousse, 1973].
- Abraham, W. (1981). *Diccionario de terminología lingüística actual*. Madrid: Gredos [Spanish translation of *Terminologie zur neueren Linguistik*. Tübingen: Niemeyer, 1974].
- Décsy, G. (1983). Entries to a Linguistic Dictionary of the '80s/'90s. In G. Décsy (Ed.), *Global Linguistic Connection* (pp. 37-129). Bloomington: Eurolingua.
- Richards, J., Platt, J. & Weber, H. (1985). *Longman Dictionary of Applied Linguistics*. Bungay/Suffolk: Longman.
- Greimas, A. J. & Courtés, J. (1986). *Semiotica. Dizionario ragionato della teoria del linguaggio*. Florence: Usher [Italian translation of *Sémantique, dictionnaire raisonné de la théorie du langage*. Paris: Hachette, 1979]
- Cardona, G. R. (1988). *Dizionario di linguistica*. Rome: Armando Editore.
- Liu, Y., Wu, J. & Cui, Z. (1988). *Duoyu duizhao yuyanxue cihui - Multilingual Lexicon of Linguistics*. Bēijīng: Rénmín jiāo tōng.
- Abraham, W. (1988). *Terminologie zur neueren Linguistik*. Tübingen: Niemeyer.
- Collinge, N. E. (1990). *An Encyclopaedia of Language*. London/New York: Routledge.
- Malmkjaer, K. (Ed.) (1991). *The Linguistics Encyclopedia*. London/New York: Routledge.

- Bright, W. (1992). *International Encyclopaedia of Linguistics*. New York/Oxford: Oxford University Press.
- Aitchinson, J. (1992). *Introducing Language and Mind*. London/New York: Penguin English.
- Crystal, D. (1992). *An Encyclopedic Dictionary of Language and Languages*. Oxford: Blackwell.
- Crystal, D. (1993). *Encyclopedie Cambridge delle scienze del linguaggio*. Bologna: Zanichelli [Italian translation of *The Cambridge Encyclopedia of Language*. Cambridge: Cambridge University Press, 1987].
- Beccaria, G. L. (1994). *Dizionario di linguistica*. Turin: Einaudi.
- Asher, R. E. (Ed.) (1994). *The Encyclopaedia of Language and Linguistics*. Oxford/New York: Pergamon Press.
- Ducrot, O. & Schaeffer, J. M. (1995). *Nouveau Dictionnaire Encyclopédique des Sciences du Langage*. Paris: Éditions du Seuil.
- Trask, R. L. (1997). *A Student's Dictionary of Language and Linguistics*. London/New York: Arnold.
- Crystal, D. (1997). *The Cambridge Encyclopaedia of Language*, 2<sup>nd</sup> edition. Cambridge: Cambridge University Press.
- Matthews, P. H. (1997). *The Oxford Concise Dictionary of Linguistics*. Oxford/New York: Oxford University Press.
- Bussman, H. (1998). *Routledge Dictionary of Language and Linguistics*. London/New York: Routledge.
- Balboni, P. (1999). *Dizionario di glottodidattica*. Perugia: Guerra Edizioni.
- Byram, M. (2000). *Routledge Encyclopaedia of Language Teaching and Learning*. London/New York: Routledge.
- Casadei, F. (2001). *Breve dizionario di linguistica*. Rome: Carocci.
- Kerstens, J., Ruys, E. & Zwarts, J. (1996-2001). *Lexicon of Linguistics*. Utrecht Institute of Linguistics (OTS), Utrecht University [Available at: <http://www2.let.uu.nl/UiL-OTS/Lexicon/>]
- Crystal, D. (2003). *A Dictionary of Linguistics & Phonetics*, 5<sup>th</sup> edition. Oxford: Blackwell.
- Frawley, W. J. (Ed.) (2003). *International Encyclopedia of Linguistics*. Oxford: Oxford University Press.
- Beccaria, G. L. (2004). *Dizionario di linguistica e di filologia, metrica e retorica*. Turin: Piccola Biblioteca Einaudi.
- Brown, K. (Ed.) (2006). *The Encyclopaedia of Language and Linguistics*. Amsterdam: Elsevier.
- Johnson, K. & Johnson, H. (2006). *Encyclopaedic Dictionary of Applied Linguistics*. Malden: Blackwell.
- Treccani.it. *L'enciclopedia italiana. Arte Lingua e Letteratura / Lingua* [Available at: [http://www.treccani.it/enciclopedia/arte\\_lingua\\_e\\_letteratura/lingua](http://www.treccani.it/enciclopedia/arte_lingua_e_letteratura/lingua)]

### List 2: Chronological list of general purposes encyclopaedias

- Il novissimo Melzi. Dizionario encyclopédico italiano in due parti* (Parte I Linguistica; Parte II Scientifica), XXXIII ed., 1950. Milan: Vallardi.
- Dizionario encyclopédico moderno*, 1951. Milan: Edizioni Labor.
- Encyclopédia Garzanti*, 1959. Milan: Garzanti Editore.
- Grand Larousse Encyclopédique*, 10 vols., 1960-1964. Paris: Librairie Larousse.
- Encyclopédia Garzanti Universale*, 1962. Milan: Garzanti Editore.
- Grande dizionario encyclopédico Utet*, 20 vols., 1967-1975. Turin: UTET.
- Grand Larousse Encyclopédique*, Supplément Vol. XI, 1968. Paris: Librairie Larousse.
- Chambers's Encyclopædia*, New revised edition, 15 vols., 1969. London: International

Learning Systems Co. Ltd.  
*Encyclopaedia Universalis*, 17 voll., 1970-1973. Paris: Encyclopaedia universalis.  
*Lessico Universale Italiano di Lingua, Lettere, Arti, Scienze e Tecnica*, 24 voll., 1968-1981. Rome: Istituto della Enciclopedia Italiana.  
*Enciclopedia del Novecento*, 7 voll., 1975-1984. Rome: Istituto della Enciclopedia Italiana.  
*Enciclopedia Europea Garzanti*, 12 voll., 1976. Milan: Garzanti Editore.  
*Enciclopedia Einaudi*, 16 voll., 1977. Turin: Einaudi.  
*Moderna Encyclopaedia Rizzoli*, 20 voll., 1977. Milan: Rizzoli.  
*Encyclopaedia Italiana di scienze lettere ed arti*, Appendice IV, 1961-1978: Vol I. A-GA (1978); Vol. II GE-PI (1979). Rome: Istituto della Enciclopedia Italiana.  
*Encyclopaedia Garzanti di filosofia e epistemologia, logica formale, linguistica, psicologia, psicoanalisi, pedagogia, antropologia culturale, teologia, religioni, sociologia*, 1983. Milan: Garzanti Editore.  
*Grande dizionario encyclopédico. Gli strumenti del sapere contemporaneo*, Vol. I *Le discipline*, 1985. Turin: UTET.  
*Lessico Universale Italiano di Lingua Lettere Arti Scienze e Tecnica*, Supplemento A-H (1985); Supplemento I-Z (1986). Rome: Istituto della Enciclopedia Italiana.  
*Brockhaus Enzyklopädie*, 24 voll., 1986-1994. Wiesbaden, Mannheim: F. A. Brockhaus.  
*Encyclopaedia del Novecento*, Supplemento I, 1989. Rome: Istituto della Enciclopedia Italiana.  
*Encyclopaedia Italiana di scienze lettere ed arti*, 1979-1992, Appendice Vol. I A-D (1991); Vol. V IT-O (1993). Rome: Istituto della Enciclopedia Italiana.  
*La piccola Treccani. Dizionario Encyclopédico*, 12 voll., 1995-1997. Rome: Istituto della Enciclopedia Italiana.  
*Encyclopaedia del Novecento*, Supplemento II, Vol. A-G, Vol. I-Z, 1998. Rome: Istituto della Enciclopedia Italiana.  
*The MIT Encyclopedia of the Cognitive Sciences*, 1999. Cambridge, MA: MIT Press.  
*Encyclopaedia Italiana di scienze lettere ed arti*, Appendice Vol. \*A-LA; Vol. \*\*LE-Z, 2000. Rome: Istituto della Enciclopedia Italiana.  
*Dizionario di scienze cognitive: neuroscienze, psicologia, intelligenza artificiale, linguistica, filosofia*, 2000. Rome: Editori riuniti.  
*La piccola Treccani. Dizionario Encyclopédico*, Supplemento Vol. A-INTEN; Vol. INTEN-Z, 2002. Rome: Istituto della Enciclopedia Italiana.  
*Encyclopaedia of Cognitive Science*, 2003. London: Nature Publishing Group.  
*Encyclopaedia del Novecento*, Supplemento III, Vol. A-G; Vol. I-Z, 2004. Rome: Istituto della Enciclopedia Italiana.  
*Encyclopaedia Zanichelli: Dizionario encyclopédico di arti, scienze, tecniche, lettere, filosofia, storia, geografia, diritto, economia*, 2005. Bologna: Zanichelli.  
*The New Encyclopaedia Britannica, Micropædia - Ready reference*, 15<sup>th</sup> ed., 15 voll., 2005. Chicago: Encyclopaedia Britannica Inc.  
*The New Encyclopaedia Britannica, Macropædia - Knowledge in depth*, 17 voll., 2005. Chicago: Encyclopaedia Britannica Inc.  
*Encyclopaedia Universalis* [Available at: <http://www.universalis.fr/>]  
*Columbia Encyclopedia*, VI ed., 2001-2006 [Available at: <http://www.encyclopedia.com/The+Columbia+Encyclopedia,+Sixth+Edition/publications.aspx?pageNumber=1>]

### List 3: Chronological list of monolingual dictionaries

*Deutsches Wörterbuch: mit einem "Lexikon der deutschen Sprachlehre"*, by G. Wahrig, 1968. Gütersloh: Bertelsmann Lexikon.

*Trésor de la langue française: dictionnaire de la langue de XIXe et du XXe siècle*, 16 voll., 1971-1994. Paris: Éditions du centre de la recherche scientifique.  
*Brockhaus Wahrig Deutsches Wörterbuch*, 6 voll., 1980-1984. Wiesbaden: F.A. Brockhaus / Stuttgart: Deutsche Verlags-Anstalt.  
*The Oxford English Dictionary*, by Simpson, J. A. & Weiner, E. S. C., 1989. Oxford: Oxford University Press.  
*El Vox Mayor. Diccionario General Ilustrado de la Lengua Española (with Il Nuovo Vox)*, 1989. Bologna: Zanichelli.  
*Grande dizionario illustrato della lingua italiana*, edited by A. Gabrielli, 2 voll., 1989. Milan: Mondadori.  
*Dictionnaire de l'Academie française*. 2 voll., 9<sup>th</sup> ed., 1994-2000. Paris: Imprimerie Nationale Julliard.  
*Grande dizionario della lingua italiana*, founded by S. Battaglia, 21 voll., 1961-2002. Turin: UTET.  
*Il Vocabolario Treccani*, edited by A. Duri, 8 voll., 2<sup>nd</sup> ed., 1997-2006. Rome: Istituto della Enciclopedia Italiana.  
*Merriam-Webster's Collegiate Dictionary*, 10<sup>th</sup> ed., 1998. Springfield: Merriam-Webster, Incorporated.  
*Grande dizionario della lingua italiana moderna*, 5 voll., 1998-1999. Milan: Garzanti.  
*Tesoro de la lengua castellana o española*, by S. de Covarrubias Orozco, 1998. Barcelona: Editorial Alta Fulla.  
*Collins English Dictionary*, 5<sup>th</sup> ed., 2000. Glasgow: Harper Collins Publishers.  
*Grande dizionario italiano dell'uso*, edited by T. De Mauro, 7 voll., 2000. Turin: UTET.  
*Diccionario de la lengua española*, Real Academia Española, 22<sup>nd</sup> ed., 2001. Madrid: Espasa Calpe.  
*Le Grand Robert de la langue française. Dictionnaire (2<sup>nd</sup> ed. of Dictionnaire alphabétique et analogique de la langue française de Paul Robert*, edited by Alain Rey. Varese: La tipografica Varese), 6 voll., 2001. Paris: Dictionnaires Le Robert.  
*Le Trésor de la langue française informatisé* [Available at: <http://atilf.atilf.fr/tlf.htm>]  
*The New Oxford Dictionary of English*, by Pearsall J. & Hanks, P., 2001. Oxford: Oxford University Press.  
*Duden. Deutsches Universalwörterbuch*, 2003. Mannheim: Dudenverlag.  
*Lo Zingarelli 2004. Vocabolario della lingua italiana*, 2003. Bologna: Zanichelli.  
*Il Devoto-Oli. Il dizionario della lingua italiana 2004-2005*, 2004 Florence: Le Monnier.  
*Dicionário da língua portuguesa*, Edição revista e actualizada, 2005. Porto: Porto editora.  
*Vocabulário Ortográfico da Língua Portuguesa* [Available at: <http://www.academia.org.br/abl/cgi/cgilua.exe/sys/start.htm?sid=23>]  
*Le grand dictionnaire terminologique* [Available at: [http://www.granddictionnaire.com/btml/fra/r\\_motclef/index800\\_1.asp](http://www.granddictionnaire.com/btml/fra/r_motclef/index800_1.asp)]  
*WordNet* [Available at: <http://wordnet.princeton.edu/>]

### List 4: Chronological list of publications where “biolinguistics” occurs

Pei, M. (1966). *Glossary of Linguistic Terminology*. New York/London: Columbia University Press.  
 Pei, M. (1969). *A Dictionary of Linguistics*. Totowa/New Jersey: Littlefield, Adams & Co.  
 Hartmann, R. R. K. & Stork, F. C. (1973). *Dictionary of Language and Linguistics*. London: Applied Science Publishers Ltd.  
*Lessico Universale Italiano di Lingua Lettere Arti Scienze e Tecnica*, Vol. XII LEO-MAO,

1973. Rome: Istituto della Enciclopedia Italiana.  
*Encyclopedie Europea Garzanti*, Vol. VI IM-LUS, 1976. Milan: Garzanti Editore.  
*Moderna Encyclopedie Rizzoli*, 20 voll., 1977. Milan: Rizzoli.
- Abraham, W. (1981). *Diccionario de terminología lingüística actual*. Madrid: Gredos [Spanish translation of *Terminologie zur neueren Linguistik*. Tübingen: Niemeyer, 1974]
- Liu, Y., Wu, J. & Cui, Z. (1988). *Duōyǔ duìzhào yǔyánxué cíhuì - Multilingual Lexicon of Linguistics*. Bēijīng: Rén mǐn jiāo tōng.
- Abraham, W. (1988). *Terminologie zur neueren Linguistik*. Tübingen: Niemeyer.  
*Grande dizionario illustrato della lingua italiana*, edited by A. Gabrielli, 2 voll., 1989. Milan: Mondadori.
- Bright, W. (1992). *International Encyclopaedia of Linguistics*. New York/Oxford: Oxford University Press.
- Crystal, D. (1993), *Encyclopedie Cambridge delle scienze del linguaggio*. Bologna: Zanichelli [Italian translation of *The Cambridge Encyclopedia of Language*. Cambridge: Cambridge University Press, 1987].
- Beccaria, G. L. (1994). *Dizionario di linguistica*. Turin: Einaudi.
- La piccola Treccani. Dizionario Encyclopedico*, Vol. II Bart-Cica, 1995. Rome: Istituto della Encyclopedie Italiana
- Trask, R. L. (1997). *A Student's Dictionary of Language and Linguistics*. London/New York: Arnold.
- Il Vocabolario Treccani*, edited by A. Duri, 8 voll., 2<sup>nd</sup> ed., 1997-2006. Rome: Istituto della Encyclopedie Italiana.
- Crystal, D. (1997). *The Cambridge Encyclopaedia of Language*, 2<sup>nd</sup> edition. Cambridge: Cambridge University Press.
- Grande dizionario italiano dell'uso*, edited by T. De Mauro, Vol. 1 A-CG, 2000. Turin: UTET.
- Treccani.it. L'encyclopédie italienne. Arte Lingua e Letteratura / Lingua* [Available at: [http://www.treccani.it/encyclopédie/arte\\_lingua\\_e\\_letteratura/lingua](http://www.treccani.it/encyclopédie/arte_lingua_e_letteratura/lingua)]
- Vocabulário Ortográfico da Língua Portuguesa* [Available at: <http://www.academia.org.br/abl/cgi/cgilua.exe/sys/start.htm?sid=23>]
- Crystal, D. (2003). *A Dictionary of Linguistics & Phonetics*, 5<sup>th</sup> edition. Oxford: Blackwell.
- Beccaria, G. L. (2004). *Dizionario di linguistica e di filologia, metrica e retorica*. Turin: Piccola Biblioteca Einaudi.
- Il Devoto-Oli. Il dizionario della lingua italiana*, 2004-2005. Florence: Le Monnier.
- Brown, K. (Ed.) (2006). *The Encyclopaedia of Language and Linguistics*. Amsterdam: Elsevier.

List 5.1: Chronological list of publications where “biolinguistics” is written as a single word

- Pei, M. (1966). *Glossary of Linguistic Terminology*. New York/London: Columbia University Press.
- Pei, M. (1969). *A Dictionary of Linguistics*. Totowa/New Jersey: Littlefield, Adams & Co.
- Lessico Universale Italiano di Lingua, Lettere, Arti, Scienze e Tecnica*, Vol. XII LEO-MAO, 1973. Rome: Istituto della Encyclopedie Italiana.
- Encyclopedie Europea Garzanti*, Vol. VI IM-LUS, 1976. Milan: Garzanti Editore.
- Moderna Encyclopedie Rizzoli*, 20 voll., 1977. Milan: Rizzoli.
- Abraham, W. (1981). *Diccionario de terminología lingüística actual*. Madrid: Gredos [Spanish translation of *Terminologie zur neueren Linguistik*. Tübingen: Niemeyer, 1974]
- Liu, Y., Wu, J. & Cui, Z. (1988). *Duōyǔ duìzhào yǔyánxué cíhuì - Multilingual Lexicon of Linguistics*. Bēijīng: Rén mǐn jiāo tōng.

- Abraham, W. (1988). *Terminologie zur neueren Linguistik*. Tübingen: Niemeyer.
- Grande dizionario illustrato della lingua italiana*, edited by A. Gabrielli, 2 voll., 1989. Milan: Mondadori.
- Crystal, D. (1992). *An Encyclopedic Dictionary of Language and Languages*. Oxford: Blackwell.
- Bright, W. (1992). *International Encyclopaedia of Linguistics*. New York/Oxford: Oxford University Press.
- Crystal, D. (1993), *Encyclopedie Cambridge delle scienze del linguaggio*. Bologna: Zanichelli [Italian translation of *The Cambridge Encyclopedia of Language*. Cambridge: Cambridge University Press, 1987].
- Beccaria, G. L. (1994). *Dizionario di linguistica*. Turin: Einaudi.
- Trask, R. L. (1997). *A Student's Dictionary of Language and Linguistics*. London/New York: Arnold.
- Il Vocabolario Treccani*, edited by A. Duri, 8 voll., 2<sup>nd</sup> ed., 1997-2006. Rome: Istituto della Encyclopedie Italiana.
- Crystal, D. (1997). *The Cambridge Encyclopaedia of Language*, 2<sup>nd</sup> edition. Cambridge: Cambridge University Press.
- Grande dizionario italiano dell'uso*, edited by T. De Mauro, 7 voll., 2000. Turin: UTET.
- Treccani.it. L'encyclopédie italienne. Arte Lingua e Letteratura / Lingua* [Available at: [http://www.treccani.it/encyclopédie/arte\\_lingua\\_e\\_letteratura/lingua](http://www.treccani.it/encyclopédie/arte_lingua_e_letteratura/lingua)]
- Vocabulário Ortográfico da Língua Portuguesa* [Available at: <http://www.academia.org.br/abl/cgi/cgilua.exe/sys/start.htm?sid=23>]
- Crystal, D. (2003). *A Dictionary of Linguistics & Phonetics*, 5<sup>th</sup> edition. Oxford: Blackwell.
- Il Devoto-Oli. Il dizionario della lingua italiana*, 2004-2005. Florence: Le Monnier.
- Beccaria, G. L. (2004). *Dizionario di linguistica e di filologia, metrica e retorica*. Turin: Piccola Biblioteca Einaudi.
- Brown, K. (Ed.) (2006). *The Encyclopaedia of Language and Linguistics*. Amsterdam: Elsevier.

List 5.2: Chronological list of publications where “biolinguistics” is written as a compound

- Hartmann, R. R. K. & Stork, F. C. (1973). *Dictionary of Language and Linguistics*. London: Applied Science Publishers Ltd.
- La piccola Treccani. Dizionario Encyclopedico*, Vol. II Bart-Cica, 1995. Rome: Istituto della Encyclopedie Italiana.

List 6.1: Chronological list of publications where “biolinguistics” occurs as a single entry

- Pei, M. (1966). *Glossary of Linguistic Terminology*. New York/London: Columbia University Press.
- Pei, M. (1969). *A Dictionary of Linguistics*. Totowa/New Jersey: Littlefield, Adams & Co.
- Hartmann, R. R. K. & Stork, F. C. (1973). *Dictionary of Language and Linguistics*. London: Applied Science Publishers Ltd.
- Moderna Encyclopedie Rizzoli*, 20 voll., 1977. Milan: Rizzoli.
- Abraham, W. (1981). *Diccionario de terminología lingüística actual*. Madrid: Gredos [Spanish translation of *Terminologie zur neueren Linguistik*. Tübingen: Niemeyer, 1974]
- Liu, Y., Wu, J. & Cui, Z. (1988). *Duōyǔ duìzhào yǔyánxué cíhuì - Multilingual Lexicon of Linguistics*. Bēijīng: Rén mǐn jiāo tōng.

- Abraham, W. (1988). *Terminologie zur neueren Linguistik*. Tübingen: Niemeyer.
- Grande dizionario illustrato della lingua italiana*, edited by A. Gabrielli, 2 voll., 1989. Milan: Mondadori.
- Crystal, D. (1992). *An Encyclopedic Dictionary of Language and Languages*. Oxford: Blackwell.
- La piccola Treccani. Dizionario Encicopedico*, Vol. II Bart-Cica, 1995. Rome: Istituto della Enciclopedia Italiana.
- Trask, R. L. (1997). *A Student's Dictionary of Language and Linguistics*. London/New York: Arnold.
- Il Vocabolario Treccani*, edited by A. Duri, 8 voll., 2<sup>nd</sup> ed., 1997-2006. Rome: Istituto della Enciclopedia Italiana.
- Grande dizionario italiano dell'uso*, edited by T. De Mauro, Vol. 1 A-CG, 2000. Turin: UTET.
- Treccani.it. L'encyclopédia italiana. Arte Lingua e Letteratura / Lingua* [Available at: [http://www.treccani.it/encyclopedia/arte\\_lingua\\_e\\_letteratura/lingua](http://www.treccani.it/encyclopedia/arte_lingua_e_letteratura/lingua)]
- Vocabulário Ortográfico da Língua Portuguesa* [Available at: <http://www.academia.org.br/abl/cgi/cgilua.exe/sys/start.htm?sid=23>]
- Crystal, D. (2003). *A Dictionary of Linguistics & Phonetics*, 5<sup>th</sup> edition. Oxford: Blackwell.
- Il Devoto-Oli. Il dizionario della lingua italiana*, 2004-2005. Florence: Le Monnier.

List 6.2: Chronological list of publications where “biolinguistics” occurs in the glossary

- Bright, W. (1992). *International Encyclopaedia of Linguistics*. New York/Oxford: Oxford University Press.
- Crystal, D. (1993). *Encyclopedia Cambridge delle scienze del linguaggio*. Bologna: Zanichelli [Italian translation of *The Cambridge Encyclopedia of Language*. Cambridge: Cambridge University Press, 1987].
- Crystal, D. (1997). *The Cambridge Encyclopaedia of Language*, 2<sup>nd</sup> edition. Cambridge: Cambridge University Press.

List 6.3: Chronological list of publications where “biolinguistics” occurs under another entry

- Lessico Universale Italiano di Lingua, Lettere, Arti, Scienze e Tecnica*, Vol. XII LEO-MAO, 1973. Rome: Istituto della Enciclopedia Italiana.
- Encyclopédia Europea Garzanti*, Vol. VI IM-LUS, 1976. Milan: Garzanti Editore.
- Beccaria, G. L. (1994). *Dizionario di linguistica*. Turin: Einaudi.
- Beccaria, G. L. (2004). *Dizionario di linguistica e di filologia, metrica e retorica*. Turin: Piccola Biblioteca Einaudi.
- Brown, K. (Ed.) (2006). *The Encyclopaedia of Language and Linguistics*. Amsterdam: Elsevier.

*Elisa Pellegrino*  
Università degli Studi di Napoli L'Orientale  
Facoltà di Lingue e letterature straniere  
via Nuova Marina 59, 80133 Napoli  
Italy  
e-mail: [pellegrino.elisa.1981@gmail.com](mailto:pellegrino.elisa.1981@gmail.com)

## ON THE SYNTAX AND SEMANTICS OF SPANISH SER AND ESTAR

FRANCESCO-ALESSIO URISINI

**ABSTRACT:** This paper offers a novel approach regarding the Syntax and Semantics of the two Spanish copulas *ser* and *estar*. The novelty of the approach lies in the combination of three key assumptions. First, it is argued that both copulae, as abstract functional heads, denote “part-of relations” over “situations”. Second, it is consequently argued that their semantics is that of *Q-adverbs*: in particular, it is proposed that *ser* receives an “identity”-bound interpretation (“no aspect”), whereas *estar* has a more restricted “episodic”-bound interpretation; Third, it is argued that their syntactic and semantic properties determine which predicates can merge with each copula, via a process of “local licensing” of features. It is then argued that the combination of these three assumptions in a unified proposal can offer an unified formal account of these two copulae, which may be extended to other copulae as well, e.g. English *to be*.

**KEYWORDS:** copulae, Spanish, aspect, features, lexical semantics.

### 1. INTRODUCTION<sup>1</sup>

In this paper I shall propose a novel approach to the syntax and semantics of the two well-known Spanish copulae *ser* and *estar*. Informally, I will propose that the subtle difference in interpretation between (1a) and (1b) below can be captured by assuming that *ser* denotes one basic situation in which Mario is blonde, while *estar* denotes this basic situation, and possibly others, in which Mario has the property of being blonde.

- (1) a. *Mario es rubio*  
           Mario is blonde  
           ‘Mario is blonde (as such)’

<sup>1</sup> I wish to thank an anonymous reviewer for the useful insights, and for suggesting many examples (e.g. (27)-(30)) which have helped me to refine and improve the proposal. The proposal presented in this paper originated in a presentation I offered at the *First Cambridge Italian Dialect Syntax Meeting*, in 2006. Although the present paper differs quite dramatically from the presentation offered at the time (e.g. it focuses on Spanish data, not on Aquilan ones), I believe that suggestions from various people have managed to find their way in the present work. I wish to thank Roberta D'Alessandro, Christina Tortora, Theresa Biberauer, Adam Ledgeway, Ian Roberts and the participants at the conference who offered interesting questions and general feedback; and my (then) roommate Nick Gaylord, for the late night shenanigans in that of Cambridge. I also wish to thank my Princess for the enduring support in the moments of difficulty, and dedicate this paper to her. Errors and horrors are, of course, entirely my own, for which I apologise in advance.