

On the disciplinary and functional status of economic lexicography

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Abstract

Dictionaries of Economics in the broad sense of the word have existed in the European context for more than 300 years. The article shows how these dictionaries have been extremely flexible in their adaptation to the complex and ever changing needs of their users. The great differences in terms of name, size, content, style, and structure may, at least partially, be explained by this fact. In this respect, the article systematizes the functions registered in economic dictionaries during the past 300 years, and presents some suggestions for the immediate future of online dictionaries.

Keywords: economic lexicography, specialised lexicography, dictionaries of economics, online dictionaries, function theory.

Resumen

Sobre el status disciplinario y funcional de la lexicografía económica

Los diccionarios de economía en el sentido amplio de la palabra existen en el contexto europeo desde hace más de 300 años. El presente trabajo muestra cómo estos diccionarios han sido muy flexibles en su adaptación a las necesidades complejas y cambiantes de sus usuarios. Las grandes diferencias en lo tocante a sus títulos, tamaños, contenidos, estilos y estructuras pueden, por lo menos parcialmente, explicarse por este hecho. El trabajo sistematiza las funciones detectadas en los diccionarios económicos durante los últimos 300 años y presenta unas propuestas para futuros diccionarios de Internet.

Palabras clave: lexicografía económica, diccionarios especializados, diccionarios de economía, diccionarios en línea, teoría funcional.

Introduction

In the present-day library, scientific, technical, and other specialized dictionaries greatly outnumber all other kinds, and present special problems for the lexicographer and historian alike. (Hoare, 2009: 47)

Dictionaries of Economics in the broad sense of the word – i.e. dictionaries of macro- and micro-economics, business, trade, commerce, etc. – have been published for centuries. Nobody knows their exact number. Besomi (2011) has listed 650 titles published since 1709, the overwhelming majority in the European languages. If dictionaries from other language groups are added together with the many lexicographical works dedicated to specific subfields of economics – such as financing, accounting, etc. – the number will grow considerably. And if not only dictionaries conceived to transmit knowledge are counted, but also the ones designed to assist and facilitate specialised communication related to economics – including those made available on the Internet – then we are no longer talking about hundreds, or even thousands, but probably about tens of thousands of dictionaries published during the last few centuries in relation to the broad field of economics.

The thousands of dictionaries published during this long period constitute an immense body of experience, although they have never been subjected to a systematic study in order to draw theoretical and practical lessons for future works. Surprisingly, within lexicography – the academic discipline supposed to deal with dictionaries – only a few studies have been conducted in order to analyse economic dictionaries. In addition, these studies seem always related to a single or a limited number of such dictionaries, or to a specific approach.

Within economics, or the history of economics, such systematic studies do exist, but mainly through the prism of economics and without taking necessary account of the specific lexicographical aspects. Astigarraga, Zabalza and Almodovar (2001), for instance, have looked at the treatment of political economy in Spanish and Portuguese Dictionaries of Economics from the 18th to the 20th century. Guidi (1994) has done the same with Italian dictionaries published from 1726 to 1861; Bientinesi (2001) has picked up the thread and studied how commercial policy was reflected in dictionaries compiled in the period between Italy's unification and the founding of the European Community. Besomi (2011) has analysed the

treatment of crises and business cycles in economic dictionaries and encyclopedias during the last three hundred years, etc.

By contrast, in the second volume of the *Oxford History of English Lexicography* (Cowie, 2009), entirely dedicated to “specialized lexicography”, the perhaps most important British Dictionary of Economics from the Enlightenment Era, Postlethwayt’s *Universal Dictionary of Trade and Commerce*, published in four editions between 1751 and 1774, is not even mentioned. The same fate is shared by Rolt’s *New Dictionary of Trade and Commerce* (1756), Mortimer’s *New and Complete Dictionary of Trade and Commerce* (1766), and many of their influential successors.

How can we explain this surprising fact which, due to the evident importance and relevance of Dictionaries of Economics in social and economic life, goes against all logic?

A schism with harmful consequences

Although lexicography as a cultural practice has existed for more than four thousand years, it seems that it started to derail, paradoxically, back in the Enlightenment Era. This was the period where Danton shouted out his famous “audacity, audacity, audacity!” It was a refreshing period where everything old and traditional was put on trial; scientists and philosophers sincerely believed that information and knowledge could change the world for the better; new ideas and ways of doing things sprouted like mushrooms after a shower of rain. Among the many results was a large number of new and innovative lexicographical works, some of them very advanced specialised dictionaries, including Dictionaries of Economics (cf. Tarp & Bothma, 2013).

In 1826, the French economist Charles Ganilh reflected on the role of dictionaries in the development and dissemination of economics and other sciences in the Preface to his *Dictionnaire analytique d'économie politique*:

Dictionaries are the best means to disseminate sciences, speed up their progress, and make them quickly move to the highest stage they can reach. The greatest perfection of human thought is in its proliferation. (*Dictionnaire analytique d'économie politique* 1826: xxvii)

A similar idea, but with other words, was expressed three quarters of a century earlier by Postlethwayt (1749) in a small dissertation where the

British economist outlined his plans for the *Universal Dictionary of Trade and Commerce*:

Foreign and domestic trade admitting of so infinite variety of matter, and the knowledge communicated to the world, by those skilled and experienced therein, being scattered in an infinity of volumes, it is no easy matter to have immediate recourse to what may be occasionally requisite... A subject of this extensive nature therefore being reduced to the form of a Dictionary, for alphabetical reference, seems the most naturally adapted to answer these desirable purposes, and especially so, as the compilers can have no motive to deceive. (Postlethwayt, 1749: 2)

This idea of reducing a specific subject field to the form of a dictionary was very common in the 18th century. It was frequently referred to as putting “arts and things” into the dictionaries. For instance, in the Preface to his *Lexicon Technicum*, Harris (1704) explained his intentions with the dictionary:

That which I have aimed at, is to make it a Dictionary, not only of bare *Words* but *Things*; and that the Reader may not only find here an Explication of the *Technical Words*, or the *Terms of Art* made use of in all the *Liberal Sciences*, and such as border nearly upon them, but also those *Arts themselves*; and especially *such*, and *such* Parts of them as are most useful and advantageous to Mankind. (*Lexicon Technicum* 1704: Preface)

A similar vision was expressed by Cambers (1728) in his *Cyclopædia*, which, according to the author, contained both “definitions of the terms, and accounts of the things signify’d thereby, in the several arts”. A reference to arts can also be found in the 1767 edition of Chomel’s *Dictionnaire oeconomique* which, according to its subtitle, “includes *the art* of farming the land and taking advantage of the most barren places”.

In 1754, d’Alembert published an article titled *dictionnaire* in the famous *Encyclopédie*, where he initially distinguished between three categories of dictionary: “dictionaries of words, dictionaries of facts, and dictionaries of things”. D’Alembert himself preferred a slightly different typology, i.e. “language dictionaries, historical dictionaries, and science and art dictionaries”. Yet, in this way he took into account the lexicographical practice of his époque, as well as the ideas expressed by contemporary authors of specialised dictionaries.

With all this in mind, it is interesting to see how Samuel Johnson (1755), who worked within general lexicography, only one year later, provided a quite

different idea in his *Dictionary of the English Language*. In this classical work, a dictionary was defined as a “book containing the words of any language in alphabetical order, with explanations of their meaning; a lexicon; a vocabulary; a word-book”. As can be seen, the British lexicographer works with a much narrower concept than other authors from the same century. In his view, a dictionary is apparently only about words. The “things” – that is, the content of arts, sciences and crafts – emphasized by some of his contemporaries, seem to be completely ignored. Neither are they reflected in his article on *encyclopedia* (or *encyclopedy*), which is defined in correspondence with its original meaning as “the circle of sciences; the round of learning”, without even relating it to a reference work. All this cannot but surprise considering that Johnson was perfectly aware of the existence of specialised dictionaries. Proof of this is the Preface which he dedicated to the second edition of Rolt’s *New Dictionary of Trade and Commerce* (1761) without, according to himself, even knowing the author or the dictionary:

Sir, (said he) I never saw the man, and never read the book. The booksellers wanted a Preface to a Dictionary of Trade and Commerce. I knew very well what such a Dictionary should be, and I wrote a Preface accordingly. (Quoted from Boswell, 1791: 359)

So, in the Preface to the dictionary, which he never read, Johnson wrote:

It has lately been the practice of the learned to range knowledge by the alphabet, and publish dictionaries of every kind of literature. This practice has, perhaps, been carried too far by the force of fashion. Sciences, in themselves systematical and coherent, are not very properly broken into such fortuitous distributions. A dictionary of arithmetic or geometry can serve only to confound; but commerce, considered in its whole extent, seems to refuse any other method of arrangement, as it comprises innumerable particulars unconnected with each other, among which there is no reason why any should be first or last, better than is furnished by the letters that compose their names. (Johnson, 1761)

The quotation shows that Johnson was well-informed and knew of the existence of certain types of specialised dictionaries, but considered them to be “carried too far”. This opinion is perfectly legitimate (and Johnson is certainly not the only one sharing it), but it does not justify that these dictionaries are treated as non-existent. Although Johnson accepted the “commercial” dictionaries of his époque (that is, before economics was transformed into a science), this disapproval of a number of

contemporaneous dictionaries may explain why he defined this type of work as he did in his own dictionary. Johnson's merits as a distinguished pioneer of *British lexicography* cannot be neglected. But it seems that his "innocent" definition of a dictionary, in one way or another, was the starting point for a profound change of vision which took place within the predominant circles of the lexicographical establishment between the 18th and the 20th centuries.

Due to this development, specialised dictionaries, among them Dictionaries of Economics, have got lost in what Gouws (2011) has called "linguistic colonialism". We are not talking about some major conspiracy or anything of that sort; it is rather the sad story of a "one-sided vision of lexicography", which little by little took root among many linguists devoted to the compilation of general dictionaries. Due to their specific tasks in dictionary making, many of these linguists – without being able to see the wood for the trees – eventually ended up considering their discipline to be a branch of linguistics, i.e. a sort of applied linguistics.

As a result, dictionaries of "things" – among them Dictionaries of Economics – which have played an extremely important role in the dissemination of science and progress since the Age of Enlightenment were increasingly ignored or treated as some sort of unwanted child by the predominant trends within Western lexicography. An example of this can be found in the first issues of the prestigious *International Journal of Lexicography*, in which two scholars coming from linguistics and terminology, respectively, openly call upon subject-field experts to desist from dictionary making and content themselves with being mere "informants" (Frawley, 1988; Riggs, 1989). By doing this, they try to dispute the undisputable, namely, that the best Dictionaries of Economics have been compiled by experts in economics, among them vanguard researchers and even Nobel Prize winners; the *New Palgrave Dictionary of Economics* and the *Oxford Dictionary of Economics* are well-known examples of this.

Fortunately, as the two mentioned dictionaries prove, high-quality Dictionaries of Economics are still being produced. "Things" are still being put into these dictionaries together with "explications of words". These dictionaries are still playing a very important role in society. They still contribute to the dissemination of science and knowledge. But the above problems have created a situation where authors of these dictionaries have nowhere to go in order to discuss the challenges posed to their specific types

of dictionary. They cannot get much assistance and inspiration from the general lexicographical conferences and journals, which mainly focus on specific linguistic and corpus-linguistic questions related to general dictionaries. Neither can they get this assistance from economics, whose theories do not cater for specific problems related to the design and compilation of advanced reference works.

It goes without saying that this situation is extremely harmful to economic lexicography, especially in the present period of transition from printed to digital media, which presents completely new possibilities, as well as problems, in terms of serving the multifaceted needs of the users of this branch of dictionaries. The undesired orphanage may be the main reason why specialised lexicography – including economic dictionaries – has developed at a very slow rate during the last 20 years (cf. Tarp, 2012).

On the disciplinary status of economic lexicography

Here it is appropriate to briefly comment on the disciplinary status of economic lexicography. It is evident that it cannot reasonably be considered a subdiscipline of linguistics. But does this mean that economic lexicography should be reconsidered as a subdiscipline of economics? Of course not! If we can speak of dictionaries of various kinds – e.g. economic, legal, geographic, historical, linguistic, etc. – this is due to the fact that there are some important aspects and elements common to all these works, regardless of their specific and highly varying content. These uniting aspects and elements constitute the core of lexicography, a millennial independent discipline which has long ago proven its considerable interdisciplinary vocation and co-operative spirit towards almost all areas of human activity.

In today's online environment, no high-quality specialised dictionary can be produced without, on the one hand, knowledge of lexicographical theory and practice, and on the other hand, an interdisciplinary collaboration between various types of experts, among them lexicographers, subject-field experts, programmers, web-designers, professional publishers, etc. From this perspective, no high-quality Dictionary of Economics can be imagined without the active participation of experts in economics, contrary to the unfortunate claims of Frawley (1988) and Riggs (1989). By contrast, most such dictionaries can easily be imagined without the incorporation of experts in linguistic theory. Whereas the overall dictionary concept and design can only

be made together with experts trained in lexicography, many – and frequently most – decisions in terms of the specific data to be included in the dictionaries can only be taken by subject-field specialists such as economists.

A recent example will illustrate this point. In a review of a book about e-lexicography, Kilgarriff (2012) recommends the introduction of corpus linguistic methods also in the making of economic dictionaries, and criticises the following definition of the accountancy term “deemed cost” taken from the *Accounting Dictionaries*:

Deemed cost is an amount used instead of cost or depreciated cost at a specific date. Any following amortisation or depreciation is made on the assumption that the enterprise initially recognised the asset or liability at a cost equal to the deemed cost.

Instead of this definition, written together with experts in accounting, he recommends the following definition which he has googled on the Internet and found as the second hit:

‘Deemed cost’ is a surrogate for cost at a given date. For example if a building is purchased at \$100000 this is cost and also the deemed cost at that given date, [...]

After presenting this googled definition, Kilgarriff comments:

Accurate, extensive encyclopedic entries are very often already available, and very easily accessible via google, as here. A case has to be made for what value lexicographers are adding. (Kilgarriff, 2012: 27)

For anybody who is not an expert in accountancy, it may be difficult to judge which of the two definitions is the best one. This also seems to be the case with Kilgarriff who is apparently not in a position to see that the definition found on the Internet might be correct in a specific context or for a specific purpose, but not as a definition of the term treated in the *Accounting Dictionaries* where it is defined according to existing *International Financial Reporting Standards* (IFRS), and for the benefit of the specific target user in question. The definition googled by Kilgarriff is far too broad and covers much more than the IFRS standards relevant to the *Accounting Dictionaries*.

The method proposed by Kilgarriff is but a new variant of the old “definition fishery” used by some terminologists who are not subject-field experts. This method has led to really pitiful lexicographical definitions

where the same phenomenon has been defined not only inappropriately but sometimes completely differently in two or more languages treated in one and the same bilingual or plurilingual specialised dictionary.

Subject-field knowledge combined with knowledge of the target users' needs cannot and should not be replaced by blind faith in data extracted from the Internet or any other corpus. One could just imagine how the quality of the *Oxford Dictionary of Economics* would be if its definitions had been googled by corpus linguists. In this regard, it is evident that the successful production of cognitive Dictionaries of Economics, apart from experts in lexicography, requires the active participation of experts in economics.

On the functional status of economic lexicography

If one looks at the Dictionaries of Economics published during the past three centuries, one will find that this branch of lexicography has been extremely flexible in its adaptation to the complex and ever changing needs which a heterogeneous group of potential and factual users may have in various types of social situation. The variety of economic dictionaries existing today is astonishing. This great variety in terms of name, size, content, style, and structure may, at least partially, be explained by the different functions which they display in order to serve their respective users' lexicographical needs, although it must be admitted that high-quality Dictionaries of Economics go hand in hand with dictionaries of much lower quality, i.e. dictionaries not sufficiently adapted to these needs.

When we speak about functions, we refer to the specific types of need which the respective dictionaries intend to meet by means of their carefully selected and elaborated lexicographical data. By definition, these needs are never abstract but always concrete ones determined by three main parameters:

- The *language(s)* and *subject field* (if any) which the dictionary is designed to cover.
- The *type of social context* where the needs occur.
- The *type of user* determined by his or her relevant characteristics.

According to the lexicographical function theory (Fuertes-Olivera & Tarp, 2014), dictionaries may have various types of function, among them:

- *Cognitive functions*, i.e. to transmit specialised knowledge directly to the users.
- *Communicative functions*, i.e. to assist users having communication problems, e.g. related to text reception and production in a native or foreign language or translation between these languages.
- *Operative functions*, i.e. to provide advice or instructions to users on how to perform specific actions.

In the following, we will briefly try to systematize the functions registered in economic dictionaries during the past centuries. The first thing that strikes the eye when looking at the great amount of economic dictionaries published until now, is that these works seem to have developed along *two main lines with no or only little interconnection and overlapping*. On the one hand, we have dictionaries designed to transmit knowledge about economics (cognitive dictionaries); and, on the other, dictionaries – mainly bi- or plurilingual ones – conceived to assist communication within this area of human activity (communicative dictionaries). We will now look at these types one by one.

Dictionaries with cognitive functions

In his book about *Crises and Cycles in Economic Dictionaries and Encyclopaedias*, Besomi (2011: 27) notes:

So far, no complete and detailed history of economic dictionaries has been compiled, in spite of the pervasive usage of such reference tools by laypeople, students and researchers.

Besomi himself provides some relevant reflections on the development of cognitive Dictionaries of Economics. These comments are centred on the elected audience of these works, which has evolved during the past centuries and impacted on the lexicographical works in question.

In the 18th century, two main types of user could be detected, thus leading to two different types of lexicographical work: on the one hand, the *learned people* who needed information in order to keep track of the scientific development reflected in a rapidly growing number of publications, and, on the other hand, more *practical people* such as traders, merchants and occasionally bankers and industrialists who needed specialised information

directly related to their profession. As a starting point, the needs of the former gave birth to the *classical European encyclopaedias*, whereas the needs of the latter resulted in *specialised Dictionaries of Economics*, in the first period frequently called *Dictionaries of Commerce*, or of *Trade and Commerce*, like the ones compiled by Savary des Bruslons (1723), Postlethwayt (1751-55), Rolt (1756) and Mortimer (1766).

Starting in the early 19th century, the encyclopaedias diversified and gave rise to the so-called *conversation lexica*, and later the *popular lexica*, as a consequence of the still broader public they intended to cover. An example of a dictionary appealing to such a broad user segment is Whitelaw's *Popular encyclopaedia*, published in 1846 with the subtitle "*Conversations lexicon*": *being a general dictionary of arts, sciences, literature, biography, history, ethics, and political economy*.

At the same time, the specialised Dictionaries of Economics also went through a transformation in terms of audience. In the first period, before the institutionalisation of the discipline, these works could not find a sufficiently solid market among the specialists and were, therefore, also addressed to other types of user, for instance, "those in charge of public and collective interests", the "civil servants, merchants and capitalists", etc. (Besomi, 2011: 15). This situation changed towards the end of the 19th century when the studies of economics little by little became institutionalised. Now, a new kind of user appeared on the scene, namely *students*:

Soon students became a large and appetizable market; this, combined with the exponential growth of the literature, made it interesting to publish ready-made reference books for students. Indeed, they have become the main target of economic lexicography, at least in terms of the number of works published. The larger (and more expensive) of these books are meant to be bought by libraries; those meant to be sold to students are much smaller in size, and are therefore much more limited in scope. Similar to the latter are quick reference works addressed to the general public, such as newspaper readers... (Besomi, 2011: 15-16)

To complete the picture, the production of specialised encyclopaedias and encyclopaedia-like dictionaries also continued up to our time. Examples of this are the *New Palgrave Dictionary of Economics*, primarily dedicated to researchers, university teachers and graduate students, and the *International Encyclopaedia of Social Sciences*, addressed to a more generalist public. Both of them were published in their latest (last?) printed version in 2008; and both of them have now become available on the Internet.

Hence, although all the lexicographical works analysed have a declared cognitive function, the fact that they are addressed to various types of user with different characteristics (academics, experts, semi-experts, educators, students, interested laymen, general public, etc.) – and are supposed to be consulted in different contexts by these users – may partially explain their highly different sizes and other features. However, also *national traditions and peculiarities* are important in this respect, as there are notable differences in terms of the sizes of the works and the relative number of titles (taking into account the size of the respective markets) in various countries such as England, Germany, France and Italy (cf. Besomi, 2011: 44-45).

To this should be added that the *available technology* also plays a relevant role. This can be seen in the recent publication of a large number of online Dictionaries of Economics. In this environment, the size of the dictionary, i.e. the total amount of data included, is no longer relevant to its availability, inasmuch as the users can take it almost anywhere and consult it in any context. Much more relevant now is the amount of data popping up on the screen in each consultation, not least due to the still bigger risk of suffering from *information overload* (cf. Fuertes-Olivera & Tarp, 2014).

The varying standard of the Dictionaries of Economics published so far interferes directly in the ongoing discussion between those scholars who claim that the evolution is always going from a lower to a higher stage, and those who defend the view that, whilst this is the general tendency, history in all its aspects only advances in the middle of temporary ups and downs, progress and retrogression. In this respect, Besomi (2011: 45) observes that quantity and quality have not evolved along parallel lines:

While in purely numerical terms the century of dictionaries is not the nineteenth, as is commonly maintained, but the twentieth, the nineteenth century is surely an epoch when economic and social sciences dictionaries and encyclopaedias were all first-rate, not only in size but also in terms of quality.

These remarks are undoubtedly highly relevant for our discussion, as every new step is not necessarily a step forward in terms of quality. In this sense, it seems appropriate to qualify the very concept of quality in relation to lexicography. Let us take a random article from the prestigious *Oxford Dictionary of Economics*:

gearing The ratio of a company's debt to its equity. Gearing (UK) or leverage (US) is the ratio of a company's debt to the part of its capital owned

by shareholders. High gearing or leverage means high reliance on debt financing. This is risky for the shareholder, as debt service absorbs a large proportion of profits in a normal year, and in a bad year the cost of debt service may exceed total profits. This could lead to dividends being reduced or passed, and possibly to loss of control of the company to creditors or debenture holders.

It is no easy task to write correct and readable definitions, especially when the target user group is heterogeneous in terms of its subject-field knowledge. But there is little doubt that the above definition is appropriate if it is seen in the light of its declared function, namely, to be “an essential point of reference for students and teachers of economics, business, and finance, and invaluable for anyone needing a reliable guide to economic terms” (quoted from the cover).

However, if the mentioned “students and teachers”, as well as “anyone”, instead needed, for instance, assistance to write an economic text in English, then the dictionary would be far from high-quality, as it totally lacks any data on grammar, collocations, and syntax, which are the data most frequently needed in that context. Similarly, the relatively short definitions included in the *Oxford Dictionary of Economics* cannot live up to the more extensive and in-depth type of information which researchers, teachers, and students demand when consulting a dictionary like the *New Palgrave Dictionary of Economics*. Although both dictionaries have cognitive functions in relation to economics, they cover different types of cognitive information need and are, so to say, complementary in terms of a specific target user group.

The quality of the lexicographical data contained in dictionaries cannot be evaluated based upon the correctness of these data alone, but only relating them to the specific types of need which a specific type of user may experience in specific types of situation. In addition, the quality of a lexicographical product does not only depend on the quality of the data it contains; these data should also be *quickly accessible*, and prepared in such a way that the required information is *easily retrievable*.

English belongs to a big language community, and is currently lingua franca for many international researchers; as such it is generally well-supplied with dictionaries. It is, however, a fact that most other language communities lack a similar set of economic twin dictionaries like the ones from Oxford and Palgrave. Hence, even if cognitive Dictionaries of Economics during the

past centuries have adapted to the complex and ever changing needs of their users, there are still many lacunae waiting to be filled.

Dictionaries with communicative functions

We will now look at the other big line of development within economic lexicography, namely, the communicative dictionaries. These lexicographical works aim at assisting communication within the broad area of economics and its various subfields, most frequently between the various language communities, for which reason they are often bilingual or even plurilingual. Examples of the latter are Veitelle's English-Spanish-French *Mercantile Dictionary* (1864) and Graham and Oliver's English-German-French-Spanish *Foreign Traders' Dictionary* (1906), among others. Many of these dictionaries contain very little lexicographical data except for the lemmata and their equivalents. One such example is provided by the Danish-English *L&H Compact Business Ordbog* from which the following article is selected:

marked *fair, market, marketplace, mart; [mart.] market, market area/outlet, outlet, sales area/district*

This dictionary was once described as “the nude words dancing over the blank pages”. It was aimed at Danish users, either translators or other persons experiencing text-production problems in English, but it is nonetheless difficult to see its use value. The users who do not already know the English equivalents provided by the dictionary will simply have to guess which one to use in each situation, thus encountering new problems instead of having them solved; and those already knowing them would probably consult the dictionary in order to get other types of information which they do not get. Both translation and foreign-language text production are complex processes, which, apart from specific data types, require various routes of access to these data (cf. Tarp, 2004, 2013). The *L&H Compact Business Ordbog* does not cater for these complex processes, and neither does it furnish any relevant data on grammar, syntax, or collocations in order to allow the production of fluent and stylistically correct English business texts. This problem is the rule rather than the exception within communicative Dictionaries of Economics.

There are, however, a small number of authors who have tried to provide the necessary data and access options. In the soft end of the subject field, the twin Danish-Spanish and Spanish-Danish *Erbvervsordbøger* (Business

Dictionaries), designed to assist Danish users in the production of Spanish texts related to business communication, constitute one such example:

nedlægge VB

1. (lukke) **cerrar** <e → ie> <DO>
2. (afskaffe, ophæve) **suprimir** <DO>
3. (arbejdspladser) **destruir** <u → uy foran a, e, o> <DO>
 ▲ ~ *arbejdet* declararse en huelga; ~ *arbejdspladser* destruir empleo; ~ *forbud mod noget* prohibir algo; ~ *en institution* cerrar una institución; ~ *protest* protestar; ~ *påstand om noget* interponer demanda de algo; ~ *1.000 arbejdspladser* destruir 1.000 puestos de trabajo; ~ *12 stillinger* suprimir 12 puestos de trabajo; ~ *en virksomhed* cerrar una empresa

This article, taken from *Danske-Spansk Erhvervsordbog*, provides relevant data necessary for the successful production of Spanish texts (although the experience has shown that the strongly codified data on inflection and syntax are too difficult to operationalise for part of the intended user group, among them students of business Spanish and translation). If needed, the Spanish words can also be accessed directly through its Spanish-Danish twin dictionary. Almost similar data, and access options, can be found in the *Oxford Spanish Business Dictionary*, which comprises both a Spanish-English and an English-Spanish part:

- cerrar** 1 *vt* (tienda, negocio) close; (definitivemente) close down; (salida) seal off;
 ~ **un acuerdo** close a deal; ~ **una posición** close a position; ~ **un trato** make a deal; ~ **una venta** complete o close a sale
 2 *vi* close down

The two articles reproduced above deal with relatively easy words. But if these words were more complex – e.g. terms with more specialized content – then some kind of explanation would be required in order to fully serve the foreseen user group. Both dictionaries contain such terms but without offering the necessary explanations or definitions. As a result, they suffer from clear limitations. It could, therefore, be a solution to cover both cognitive and communicative needs in one and the same dictionary. Only a few printed Dictionaries of Economics try to combine such functions. One of them is the English-Spanish *Diccionario de Contabilidad* from which the following article is taken:

effect on cash flow

= cash flow effect

When an action has an effect on cash flow, this results in an outflow of cash from or an inflow of cash to an enterprise. Some actions, such as depreciation, amortization and credit selling, do not have an immediate effect on cash flow.

efecto en el flujo de efectivo

▲ *a negative effect on cash flow* un efecto negativo en el flujo de efectivo ▲
 ▲ *a negligible effect on cash flow* un efecto poco significante en el flujo de efectivo ▲
 ▲ *a positive effect on cash flow* un efecto positivo en el flujo de efectivo ▲
 ▲ *a substantial effect on cash flow* un efecto considerable en el flujo de efectivo

This article contains an English lemma, an English synonym, a definition, a Spanish equivalent as well as Spanish translations of various English collocations with the term “effect on cash flow”. It is primarily designed for Spanish users and therefore does not provide data on inflection and syntax. The dictionary is, as such, very helpful to Spanish users with different types of need, but even so the above article, which is one of the shorter ones in the dictionary, points to a serious problem. The dictionary is multifunctional; it therefore includes a lot of data, the amount of which would grow even more if the user group was primarily native speakers of English. An increasing part of these data would be superfluous in each concrete consultation. Consequently, a user with a specific problem or need would have ever more difficulty in finding the specific data required to solve this problem or need; the access time would be longer, and the risk of not finding the relevant data would also be bigger (cf. Bergenholtz & Gouws, 2010). This problem cannot be solved satisfactorily in the framework of printed lexicography.

Generally, it can be said that a considerable number of dictionaries have been published in order to assist communication within economics, although there are still many areas and sub-disciplines which have not been sufficiently covered by these works. However, an even more serious problem is that many of these dictionaries are of dubious quality, inasmuch as they do not provide the data required to satisfy their intended users’ real communicative needs. This tendency is especially evident in the Internet environment, as it has been documented by Caruso (2011) in her analysis of 700 specialised online dictionaries. A possible solution to this serious problem could be the integration of communicative functions into future cognitive online

Dictionaries of Economics. But before discussing this proposal, we will briefly look at other relevant functions found in existing Dictionaries of Economics.

Dictionaries with operative functions

It is interesting to see how specialised dictionaries from the Enlightenment Era were frequently designed not only to transmit knowledge to their users, but also to give *advice*, *suggestions*, and *instructions*, i.e. the sort of information which we would normally expect to find in manuals, how-to's, user guides, instruction books, etc. For instance, in the impressive subtitle of the 1767 edition of Chomel's *Dictionnaire oeconomique*, we are told that, among other things, it includes "an exact description of the plants", which can be used as food, to cultivate the land or embellish our gardens, as well as "*instructions* on how to prevent diseases and how to cure them".

In the same vein, in his *Introduction* to the fourth edition of the *Universal Dictionary of Trade and Commerce*, Postlethwayt (1774) declares that the "work abounds with no small variety of suggestions and intimations for the advancement of numerous branches of the trade and commerce of these kingdoms" (page iii).

Unfortunately, the limits of this article do not permit a thorough discussion of this interesting experience which seems to have been completely forgotten in modern lexicography. The question, however, is whether the current transition to online media is not the right moment to re-saddle and reintroduce it into a new generation of advanced economic dictionaries and information tools.

Recommendations for future Dictionaries of Economics

To summarise, so far Dictionaries of Economics have displayed cognitive, communicative and operative functions with a view to serving the highly different needs of their target users, although the last two functions seem to have been forgotten in modern lexicography. As a rule, the cognitive and communicative functions have lived their own separate lives in different lines of dictionaries with little or no overlapping, whereas the operative functions – to the extent they exist – have been addressed by cognitive dictionaries. In

general, the quality of cognitive Dictionaries of Economics seems to be at the higher end of the scale, whereas communicative dictionaries tend to be of much lower quality with only relatively few exceptions.

From a social and economic point of view, the real challenge today is to continue producing high-quality Dictionaries of Economics adapted to the specific needs of specific target users in specific contexts, while simultaneously filling the many gaps in partially or totally unsatisfied user needs. In this light, the main task of cognitive dictionaries today is to cover as many relevant language communities and sub-disciplines of economics as possible, whereas the main challenge posed to communicative dictionaries is to raise standards. With this in mind, we will make the following suggestions for the immediate future of Dictionaries of Economics:

- Authors of Dictionaries of Economics, as well as publishing houses, should regain the spirit from the Enlightenment Era, and display “audacity, audacity, audacity” without being afraid of *innovation in the most radical sense of the word*.
- Lexicographers should *put everything old and traditional on trial* and only continue with methods and principles which have been tested and found useful in terms of reducing production costs, speeding up production time, improving the quality of the end product, and adapting it to the users’ specific needs in each context.
- Lexicographers should take full advantage of the new computer and information technologies, as well as the digital media, and should, without hesitation, *go online with their products* in order to compete with the continuous flow of low-quality dictionaries placed on the Internet.
- Online Dictionaries of Economics should, in order to guarantee maximum quality in all aspects, be produced in *close, interdisciplinary collaboration* between experts in lexicography, economics, programming, web-design, etc.
- Online Dictionaries of Economics should include *any type of data* required to assist their users.
- Online Dictionaries of Economics should, as far as it is possible and relevant, *combine* cognitive functions with communicative and operative functions, among others.

- Online Dictionaries of Economics should make provision for various functions and types of need by means of *differentiated access routes*, as well as *dynamic articles* adapted to the user's specific needs in each situation or consultation.
- Online Dictionaries of Economics as a whole should contain *as much relevant data as possible*, whereas the individual articles popping up on the screen should display *as little data as possible* with a view to fully satisfying their users' needs in each concrete consultation and, at the same time, avoiding information overload.
- Online Dictionaries of Economics should not only be evaluated by the quality and quantity of their lexicographical data, but also by *the time it takes* to access these data and make use of them.
- Lexicographers and other interested people should consider introducing a *future certificate* that could be given to all online Dictionaries of Economics displaying a certain minimum standard in terms of subject-field coverage, data quality, and usability.

The main idea is that Dictionaries of Economics should be viewed as much more than traditional “dictionaries”, and transformed into advanced *information tools* belonging to the 21st century. Why, for instance, does the online *Oxford Dictionary of Economics* not offer collocations and other relevant types of linguistic data to native speakers, foreign researchers, and anybody else who experience text-production problems when writing economic texts in English? Why do the online *Accounting Dictionaries* not offer instructions and advice to their users on how to prepare and send in the annual accounts?

The idea, of course, is not to suffocate the user with a lot of new data which may be totally irrelevant and superfluous in order to solve a specific need, but to include such data in the dictionary, and simultaneously make allowance for advanced access options leading the user to exactly the *amount* and *type* of data required in each situation or consultation. The idea is to leave the past behind and take serious steps towards a new generation of advanced lexicographical information tools of the types called *Models T Ford* and *Rolls Royces*, according to the typology proposed by Tarp (2011).

As can be seen, all this is impossible to achieve without combining an advanced lexicographical theory with expert knowledge of economics, high-class programming, user-friendly designing, among other things. In this way,

lexicography, as a millennial independent discipline, will once more prove its great interdisciplinary and co-operative spirit.

Article history:

Received 21 May 2014

Received in revised form 18 August 2014

Accepted 20 August 2014

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