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Specialised Dictionaries of Economics and Translation

Abstract

This article describes the "Dictionary of Economics" in terms of the Function Theory of Lexicography. It defends the thesis that such information tools must be designed for assisting specific users to solve the specific needs they have in a translation situation. In particular, I will focus on the solutions offered for individualising data retrieval, which will in turn eliminate the so-called *information stress* or *information death* produced when users retrieve so much data that they cannot cope with it. This process is illustrated in two recent online dictionaries, the *Diccionario Inglés-Español de Contabilidad: Traducción* (Fuertes-Olivera et al. 2012a) and the *Diccionario Inglés-Español de Contabilidad: Traducción de Frases y Expresiones* (Fuertes-Olivera et al. 2012b). They are especially suitable when translating English accounting texts into Spanish. These two dictionaries are considered high quality 21st Century dictionaries, e.g., as candidates for assisting in the training of professional translators within the field of Economics, one of the topics discussed in this Special Issue of *Hermes.*

1. Introduction

The key role information tools play in the field of translation has attracted researchers' attention in different ways. Bowker/Marshman (2009), for instance, have focused on translator training and have defended the integration of terminology work and terminology management tools in translator training programs, especially as these tools are commonly used and seem set to play an increasingly important role in any translation activity.

This paper follows suit, although in a rather different fashion. It is not concerned with translation programs but focuses on information tools, particularly on the so-called "Dictionary of Economics" (see 2 below) and the type of expert knowledge needed "to conceive and produce high-quality dictionaries of economics, especially for assisting in the formation of professional translators." (Call for papers, special Issue of *Hermes*).

The use of information tools in a professional translation situation has been documented extensively (see White/Matteson/Abels 2008 for a review). It has also been shown that some of them are more suitable than others in a translation situation (Tarp 2002), and that their suitability increases when lexicographers conceive them as tools for meeting *user needs*, i.e., the specific needs users have in specific usage situations. This demands the use of, say, a lexicographic theory that addresses key lexicographic elements, usually dictionary data, access routes, and users' needs, as well as operational requirements, e.g., a working framework that also deals with (technical) means, lexicographic information costs, time constraints, delivery options, and medium possibilities. All these elements are analysed in this article, which defines the term "dictionary of Economics" under the tenets of the Function Theory of Lexicography (Section 2). It then focuses on the role dictionaries have in the formation of professional translators by illustrating which data type each dictionary type contains and its suitability for translation (Section 3). Section 4 discusses new concepts, also under the tenets of the Function Theory. These are presented in the realm of *e-lexicography*, particularly in connection with the recent compilation of a set of usage-based

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dictionaries, some of which offer data that is particularly useful in translation situations. The paper ends with a summary of the main ideas discussed.

2. The Function Theory of Lexicography and the Dictionaries of Economics

The *Function Theory of Lexicography* was originally initiated in the Centre for Lexicography at the Aarhus School of Business (Bergenholtz/Tarp 2002, 2003, 2004; also Tarp 2008), and has since been subjected to continuous evolution (Section 4). Since the time of its inception, the function theory has been presenting lexicography as an academic and independent science that focuses on the design of utility tools that can be quickly and easily consulted for satisfying specific needs occurring for particular types of users in specific types of extra-lexicographic situations.

The ontological nature of lexicography is maintained in the two related dictionary definitions offered so far (Bergenholtz 2012). One definition describes the "dictionary" and hence "the dictionary of Economics" as an information tool that contains dictionary articles related to business/economics matters or language elements, mostly business/economics terms, and possibly one (or more) external texts, which can be consulted if someone needs assistance in a specific situation. The other definition refers to the "dictionary", e.g., the "dictionary of Economics", as any information tool that consists of several dictionaries, each of which contains dictionary articles related to business/economics matters or language elements, mostly business/economics terms, and possibly one (or more) external texts, which can be consulted if someone needs assistance in a specific situation.

Under the two related definitions, this article refers to the "dictionary of Economics" as an umbrella term, which includes information tools with general and specific names, the following general names being among the common ones: "Dictionary of Economics", "Business Dictionary", "Encyclopaedia of Economics", "Encyclopaedic Economics Dictionary", "Terminological Dictionary of Economics", Specialised Dictionary of Economics", "Economics Lexicon", "Business Lexicon", "Vocabulary of Economics", "Vocabulary of Business" and "Economics Glossary". To these names more specific ones can be added, either those that include one or several languages, e.g., "Business English Dictionary", one or more sub-fields, e.g., "Dictionary of Trade and Commerce", or even one or more usage-based dictionaries, e.g., "Diccionario Inglés-Español de Contabilidad: Traducción" (see Section 4, below). In addition, some researchers have also added new names; ones that do not contain the word "dictionary" but "fancier names", although all of them are described as information tools: "Economics Databank", "Economics Databases", " Economics Knowledge Bases", and "Ontologies of Economics". For the purpose of this article, all these information tools are identified in terms of their main *function*, i.e., the "satisfaction of the specific types of lexicographically relevant needs that may arise in a specific type of potential user in a specific type of extra-lexicographical situation" (Bergenholtz/Tarp 2010: 30). This results in two main types of dictionaries of Economics:

- *Communicative-oriented dictionaries of Economics*: these aim to assist the reception, production, or translation of an economic text. They are designed for assisting users in understanding the meaning of economic terms and their linguistic characteristics, both of which are necessary for reading, writing and/or translating. For instance, a good communicative dictionary of Economics must offer an equivalent and lexicographic solutions to translate, e.g., *collocations* and *examples* that inform users on the specific usage of the term in its textual context (Section 4).
- *Cognitive-oriented dictionaries of Economics*: these aim to assist in the acquisition of *economics knowledge*, e.g., facts, theories, schools of thought, and similar data that must be transformed into economic information in a particular usage situation.

An adequate understanding of the usability of the above two types of dictionaries is necessary for increasing the dictionary culture of potential users and lexicographers, which implies being fa-

miliar with the use of dictionaries and knowing what type of dictionary data is more adequate for which user in which usage situation. For instance, existing dictionaries of Economics can be analysed for uncovering which type of data is more necessary for becoming a professional translator.

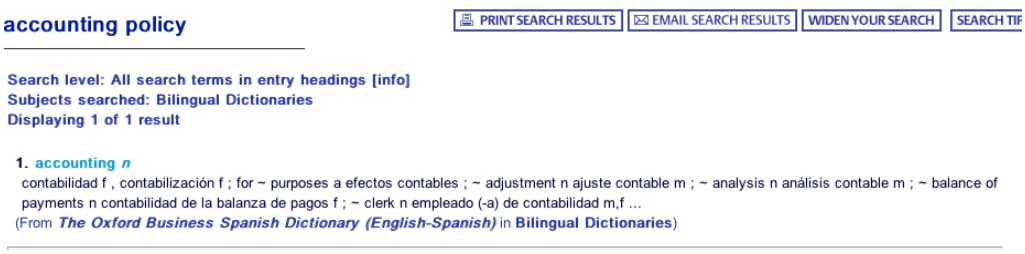
3. Dictionaries of Economics and the Professional Translator

The translation process can be divided into three general stages: a planning, an execution and a finalisation stage. The only stage that is directly relevant to lexicographers is the execution stage, as this is where translation activities proper – writing, editing and revising – are carried out.

A professional translator must take into consideration several factors. In the first place, the status a translator has in a particular society and their ability for making a living is crucial for becoming a professional translator. It is also important to have a *dictionary culture*, which implies being familiar with the use of dictionaries and knowing which type of dictionary data is more appropriate for a particular type of user in a particular type of usage situation. Finally, professional translators need a constant upgrading of their *professional know-how* and *skills*. Know-how refers to understanding *operational translation procedures* and working under them: economic prices and costs, time constraints, degree of specialisation and number of working languages and language directions, e.g., whether a particular translator only translates from their L1 into an L2 or whether they also translate from an L2 into their L1 or another L2. Translation skills focus on developing translation competences, which are as follows in the field of Economics:

- factual competence, which concerns the knowledge of Economics;
- linguistic competence, which involves the knowledge of general language (LGP) and the language of Economics;
- textual competence, dealing with the knowledge of textual conventions for standard language and the language of Economics in both the source and the target languages;
- cultural competence, which deals with knowledge facilitating cross-cultural interaction within the field of Economics;

A review of existing dictionaries of Economics reveals that there are several sub-types of cognitive-oriented and communicative-oriented dictionaries. Some of them are even dangerous and may jeopardise the work of a professional translator. For instance, a dictionary that does not disambiguate meaning nor offer textual and/or knowledge clues can only be used for confirming translators' intuitions but never for translating (example 1):



Example 1. **accounting** in the *Oxford Business Spanish Dictionary* (López/Walt 2002)

Example (1) does not differentiate between the two Spanish meanings of **accounting**: *contabilidad* and *contabilización* are presented as cumulative equivalents but they are not synonyms. It offers a primitive system of grammar codes, which is not useful and can be misleading, e.g., "n" for both *noun* and *neuter*; it mixes the grammar of **accounting**: in several collocations, e.g., **accounting adjustment**, it is an adjective; this will confuse users, especially inexperienced translators who might be wondering whether the term is a noun or an adjective. (Below I will offer more information on example (1))

3.1. Cognitive Dictionaries of Economics

Cognitive dictionaries of Economics can be classified in terms of several criteria. The following discussion presents some of these criteria and refers to their utility for translators or would-be translators with a working knowledge of Economics, i.e., for a prototypical translation situation (for obvious reasons, I do not address the situation in which a translator without knowledge of Economics translates economic texts. Although this situation may occur, it is not appropriate and is subject to pure chance, requiring several types of revision before it can be confidently published):

a. The role dictionaries of Economics play in the popularisation and systematisation of economic knowledge as well as in the support of teaching or research. For instance, the *New Palgrave Dictionary of Economics Online* is a prototype for systematising knowledge and supporting teaching and initial research (e.g., at masters level), whereas the *Penguin Dictionary of Economics* (Bannock/Baxter 2011) is a prototype for popularising Economics and for assisting students at undergraduate level. This is basically connected with the extent of knowledge coverage, which affects two main dictionary decisions: the microstructure of the dictionary and the organisation of the dictionary. The microstructure reflects the organization of the information given by each individual entry: it can be evaluated by the number of words, paragraphs, sections, sub-sections, as well as the inclusion of a reference section that contains the microstructure of each article. The organisation of the work is basically concerned with ordering, i.e., whether the dictionary has an alphabetical or a systematic ordering, extent of the word-list, topics included, and retrieval systems. For instance, *the New Palgrave Dictionary of Economics Online* has several retrieval systems, including a "keyword retrieval system", an alphabetical ordering and a maximised word list which makes it suitable for research purposes, but not for translation, as any search in this dictionary will retrieve a vast amount of data; this is ineffective in terms of information costs and could easily lead to the translator's abandoning the search before confirming or acquiring the gist of the concept.

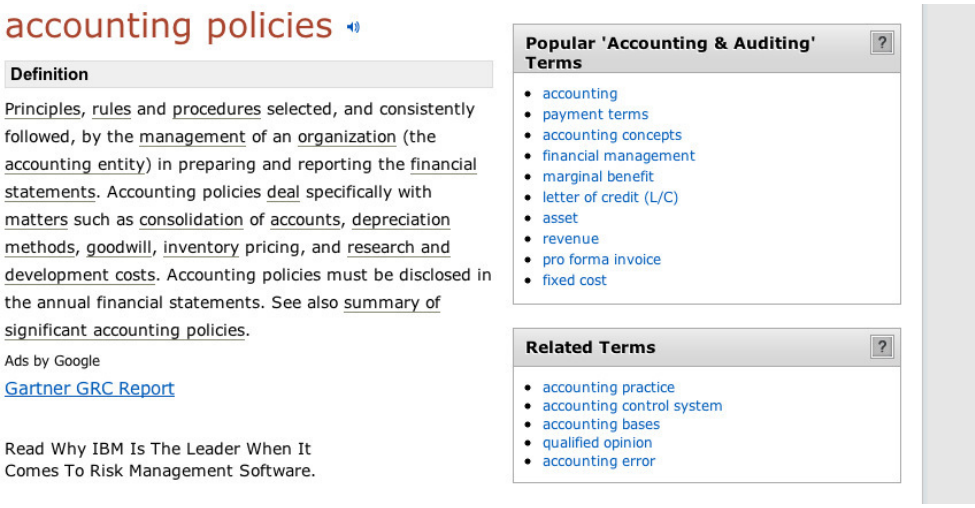
b. The influence dictionaries of Economics exert, "in particular for those works recognized by contemporaries to be authoritative." (Besomi 2011: 3) For instance, the *New Palgrave Dictionary of Economics Online* is regarded as "authoritative" in the field of Economics and thus reviewed in top-rated Economics journals such as *Journal of Economic Literature*. A search in the ISI World of Knowledge reveals that there are 32 articles on *the Palgrave* published in economics and information science journals, which is an indication of the influence this dictionary exerts in this field of knowledge. For translation purposes, this criterion is mostly irrelevant.

c. The way in which dictionaries of Economics deal with the fragmentation of knowledge that characterises cognitive dictionaries. Under this criterion, the dictionary of Economics can be subdivided into multiple sub-fields, domains, and sub-domains. For instance, the classification system of the *Journal of Economics Literature*, which is highly regarded in Economics, contains 20 fields. All of them are further subdivided into sub-fields, which are also subdivided into more domains and sub-domains. In a word, for translation purposes the compilation and consultation of sub-domain dictionaries is more appropriate than the compilation and consultation of general dictionaries of Economics. For instance, in the *Diccionario Inglés-Español de Contabilidad: Traducción* (Fuertes-Olivera et al. 2012a) users have a precise definition, explanation and Spanish equivalents of key concepts such as *net realisable value* and *fair value*. These are necessary for translating accounting texts such as the International Accounting Standard "Inventories". None of these terms are described in the *Oxford Business Spanish Dictionary* (López/Walt 2002), which is a general dictionary of Economics.

d. The way in which Dictionaries of Economics cross-refer users to related terms and texts. A dictionary with a well-conceived system of external and internal cross-references not only

helps to avoid the fragmentation of knowledge but it also helps in a translation situation by offering terms in contexts, e.g., collocations, relations among terms, and more precise conceptual descriptions (Section 4).

e. The purpose of the dictionary of Economics, especially in connection with the targeted user type. This affects the means of transmitting knowledge and making it accessible, as well as the quantity and quality of data to be included. For instance, in a translation situation, a professional translator needs two basic cognitive sets of data: (a) a system for disambiguating meaning that is precise, clear and easy to cope with, e.g., a definition (Section 4, below), and (b) semantic information, which can be given in encyclopaedic notes in the dictionary articles, in encyclopaedic labels addressed to the individual terms, e.g., "accounting" for an accounting term, and in *systematic introductions*, i.e., separate dictionary components that aim to provide help by offering a description of the basics of the domain (Bergenholtz/Nielsen 2006; Fuertes-Olivera 2009a). For instance, some free online dictionaries (Fuertes-Olivera 2012a) can be used for translation purposes: Example (2) includes an understandable definition, several types of external and external cross-references, and collocates, e.g., *accounting practice*, which can help users to acquire the gist of the concept, a need professional translators have mainly at the documentation stage; its access route is easy to handle and makes this quick and easy for users. In a word, this dictionary article contains data that is useful when a professional translator is translating and needs knowledge of a particular concept:



Example 2. Screenshot of the cognitive online dictionary *businessdictionary.com*

3.2. Communicative Dictionaries of Economics

For translation purposes, the usefulness of communicative dictionaries depends on how well they support the translation process, especially at the micro-level, i.e., how well they disambiguate the economic concepts and whether or not they offer insertable equivalents as well as contextual and lexical clues, e.g., collocations, fixed expressions and examples. Example (3) offers an example of a dictionary article suitable for translation purposes. It is taken from *El Diccionario Inglés-Español de Contabilidad* (Nielsen et al 2009):

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Regnskabsordbøgerne

Centre for Lexicography

Accounting Dictionaries
- Inglés-Español

El Diccionario Inglés-Español de Contabilidad:

Your search word ... is Search

4 instances of *accounting* have been found.

accounting [1]

<noun no indefinite article, the, no plural>

contabilidad

1 IAS/IFRS/US

definition

Accounting refers to the professional activities carried out by accountants such as the preparation and audit of financial statements, the keeping of financial records and consultancy on tax and other financial matters.

contabilidad

collocations

- competence in accounting and/or auditing
  competencia en contabilidad y/o auditoria
- financial accounting
  contabilidad financiera
- financial and management accounting
  contabilidad financiera y de gestión
- management accounting
  contabilidad de gestión

example

- The members of the audit committee should collectively have a recent and relevant background in and experience of finance and accounting for listed enterprises.
  Todos los expertos del comité de auditoría deben tener conocimiento relevante y reciente de las empresas cotizadas, además de experiencia en finanzas y contabilidad.

synonyms

accountancy UK

2

definition

Accounting is the process procedures activities including identification, measurement and recognition of an enterprise's transactions and includes financial and management accounting. For financial accounting, i.e. the communication to external users, the financial data are prepared in monetary units and presented in financial statements such as a balance sheet, an income statement, and a cash flow statement. Management accounting applies to the internal use of financial data by managers.

contabilidad

synonyms

contabilización

reflejo contable

collocations

- accounting for construction contracts
  la contabilidad de las empresas constructoras
- the initial accounting for goodwill
  la contabilización inicial del fondo de comercio
- the primary basis of accounting
  los principios básicos de la contabilidad

see also:

financial accounting

management accounting

accounting [2]

<adjective no indefinite article, the, no plural>

definition

Accounting refers to accountancy, i.e. the professional activities carried out by accountants such as the preparation and audit of financial statements, the keeping of financial records and consultancy on tax and other financial matters.

contable

collocations

- accounting amortisation
  amortización contable

Example 3. Screenshot from *El Diccionario Inglés-Español de Contabilidad* (Nielsen et al. 2009)

Examples (1) and (3) offer dictionary data on the same English term, **accounting**, for the same target usage situation: translation of English accounting texts into Spanish. The differences between (1) and (3) illustrate the type of data necessary for this situation, and offers clues on the dictionary data necessary for use in a translation situation:

1. Meaning: in (1) users have two different meanings of **accounting**: *contabilidad* and *contabilización*. They are presented as synonyms, which is a mistake as they are not synonyms in Spanish. On the other hand, in (3) *contabilidad* and *contabilización* are separated by Arabic numbers (1 and 2) and defined by means of English definitions.
2. Equivalent: in (1) the Spanish equivalents are not disambiguated, whereas in (3) they are made precise by an English definition and further dictionary data, e.g., collocations.
3. Definition: in (1) there are no definitions, whereas each meaning is accompanied by a definition and an equivalent in (3).
4. Grammar: in (1) only the nominal function is explicitly indicated, whereas the adjectival function is implied in the collocations, e.g., "accounting adjustment". In (3) both the nominal and adjectival functions are explicitly indicated, their meanings being made very precise by means of English definitions and the use of superscripts.
5. Grammar code: in (1) the use of grammar codes such as "n", "m", "f" can be misleading, e.g., "n" for both "noun" and "neuter" and not very useful as this demands users' knowledge of grammar codes. In (3) users have part of speech "noun" and "adjective", inflections, e.g., "the accounting", and rules, e.g., "no plural".
6. Collocations: in (1) there are 5 English collocations translated into Spanish. These are neither disambiguated nor differentiated. In (3) each meaning has its own collocations: there are four and three English collocations translated into Spanish for the two meanings of **accounting** as noun, and there are 14 English collocations translated into Spanish for the adjectival function of **accounting**.
7. Examples: in (1) there are no examples, whereas there is an example for one of the meanings of **accounting** in (3).
8. Synonyms: in (1) there are no synonyms whereas there are several synonyms for **accounting** as noun in (3).
9. Pragmatic labels: in (1) there are no labels, whereas in (3) there are three types of labels: IAS/IFRS; US; and UK: they indicate that the term in each corresponding meaning is used as international accounting English (IAS/IFRS), as a British English accounting term (UK), or as an American English accounting term (US).
10. Cross-references: in (1) there are no cross-references, whereas in (3) users are cross-referred to **accountancy**, **financial accounting**, and **management accounting.**

To sum up, example (3) signals the way ahead: dictionaries of the 21st century must *make it a point* to offer data for increasing factual, linguistic, cultural and textual abilities if they are expected to be useful tools in the training of professional translators. Section 4 discusses a way of achieving such an endeavour. It is rooted in recent theoretical developments of the Function Theory of Lexicography, which are illustrated with the conversion of the original *Danish Accounting Dictionary* (Nielsen et al. 2003) into a set of specialized dictionaries: the *accounting dictionaries.* Two of the dictionaries in the set are especially appropriate in a professional translation situation: the *Diccionario Inglés-Español de Contabilidad: Traducción* (Fuertes-Olivera et al. 2012a) and the *Diccionario Inglés-Español de Contabilidad: Traducción de Frases y Expresiones* (Fuertes-Olivera et al. 2012b).

4. Dictionaries for the 21st Century: A Set of Usage-based Dictionaries

The Function Theory is evolving and making room for adapting the construction of information tools to new developments in every field that is deemed suitable. For instance, the Internet has prompted its originators and colleagues to evaluate the options offered by the new medium. This has resulted in a conception of *e-lexicography* as part of lexicography and associated with several other disciplines, especially Information Science, in its quest for developing, planning, compiling, and publishing electronic reference tools, e.g., the cognitive and communicative dictionaries of Economics.

The association of lexicography and Information Science has proven prolific and has resulted in a large amount of recent research into *online information tools* (see Almind 2005; Almind/Nielsen 2011; Almind/Bergenholtz/Vrang 2006; Andersen/Almind 2011; Bergenholtz 2011; Bergenholtz/Bergenholtz 2011; Bergenholtz/Bothma 2011; Bergenholtz/Gouws 2010; Bergenholtz/Bothma/Gouws 2011; Bothma 2011; Fuertes-Olivera 2009a, 2009b; Fuertes-Olivera/Bergenholtz 2011; Fuertes-Olivera/Nielsen, 2011, 2012; Fuertes-Olivera/Tarp 2011; Leroyer 2011; Nielsen 2008; Kwary 2012; Tarp 2011; Xue 2011).

The above research has given extra impetus to and precise descriptions of the term *users' needs* in the context of the Internet. As the Function Theory defends the argument that *users* do not have needs in general but punctual needs in specific situations, scholars have to deal with three related problems in the sphere of the Internet: (i) precise definitions of users and needs, (ii) information overload; (iii) selection of technologies for individualisation.

In the context of the Function Theory, these three issues are jointly addressed. User needs are defined deductively and refined with insights from active and passive feedback. Defining deductively means to "imagine" the process of user's consultation in a specific usage situation (Tarp 2008). This is a scholarly activity that is based on an extensive review of existing literature, expert knowledge on lexicographic means and costs, and a sound understanding of potential needs in prototypical use situations. For instance, when reading a text a user only has one specific need: to understand the meaning of the word and/or expression that prompted the consultation. Hence, a dictionary constructed for solving needs in a reception situation will suffice with offering precise meaning of the words covered, either by offering a definition, an equivalent, or both.

Refining means adapting dictionary data to real users' demands. Lexicographers can check whether or not a user has obtained what they were consulting and act accordingly. This occurs when users contact lexicographers directly and explain their particular problem (this is usually achieved by e-mails and is called *active feedback*), or when lexicographers consult *log files* in order to find whether or not a consultation was successful (this is called *passive feedback*).

Information overload, also referred to as *Google effect*, is a by-product of the information society in which we are currently living, characterised by an information explosion. This "simply means that there is more information available than any user can conceivably need in any given situation and that, when a user searches for information, he/she is overwhelmed by the results." (Bergenholtz/Bothma 2011: 54-55). This information overload causes either *information stress* or *information death,* i.e., the user receives so much information that they feel insecure about the hits they receive or abandon the search before obtaining what they were looking up. The best way for avoiding information overload is to give users the data they need in the specific use situation and as quickly as possible, i.e., to offer them some kind of individualisation of data access (Bergenholtz/Gouws 2010a; Tarp 2011). The solutions adopted for coping with these problems have resulted in the adoption of three new and related lexicographical concepts.

The first is the conception of the information tool as a triadic structure in which there are three separate, although interrelated, elements: a lexicographic database, a dictionary website and a dictionary search engine. This implies the necessity of using several types of knowledge for achieving this. Typically, lexicographers store as much data as possible in a database that has been designed by experts in this area. These have equipped it with technologies that result in well-de-

signed and simple-to-use websites in which users can make focused searches with the aim of obtaining only the lexicographic data needed for the specific usage situation.

The second is the description of the lexicographic work as an activity in progress, which means that lexicographers have access to the specific needs users have, typically by active feedback, i.e., users email lexicographers and ask them questions, or by passive feedback, i.e., lexicographers analyse *log files* and react accordingly. The third is the adoption of a proscriptive approach to lexicography (Bergenholtz 2003; Bergenholtz/Gouws 2010b). This means that lexicographers must be prepared for making recommendations, especially for suggesting one or other word form and for linking users to external texts where more detailed data can be downloaded.

Finally, online dictionaries are typical products of knowledge-based economy, which not only has implications for dictionary making but also for dictionary selling, for instance, through subscription. Four types of experts (or one expert with four types of knowledge) usually work in an online dictionary project under the supervision of one general editor, usually the main lexicographer: lexicographer(s); Internet and database expert(s); expert(s) in the dictionary content(s); and expert(s) in marketing and selling through the Internet. The Internet allows them to work in different locations at the same time and offers them a repository of data that can be used for completing the dictionary project (see Fuertes-Olivera 2012b for a review of the Internet as a lexicographic resource). Also, the Internet facilitates the selling of the dictionary worldwide, which demands the participation of experts in managing sales through the Internet and the obligation of having a saleable product, e.g., a dictionary that is updated regularly, offers quality in access, data, location, etc., and attracts customers who find it worth the subscription fee they pay for consultation.

These topics have resulted in the construction of online dictionaries that are quite different from the online products defended and constructed under different lexicographic approaches, for instance, that taken in the *DanNet* project (Lorentzen/Trap-Jensen 2011; Trap-Jensen 2010), which conceives specialised dictionaries as repositories of language knowledge related with ontology modelling and knowledge construction, e.g., the construction of (terminological) knowledge bases, and terminological data banks (L'Homme 2006). To the best of my knowledge, most of these projects have resulted either in "prototypes", i.e., dictionaries that are still on the drawing board, or lexicotainment information tools, i.e., dictionaries for having fun or for satisfying a curiosity (Almind/Bergenholtz/Vrang, 2006). Example (4) illustrates a lexicotainment article (the entry for **intervene** in the *Kicktionary*).

Intervene [Scene: Shot]

Lexical Units / Lexikalische Einheiten / Unités lexicales

abblocken abfälschen ablenken abwehren blocken klären lenken retten
block block clear deflect deflection turn
bloquer contrer dégager détourner déviation dévier écarter s_interposer sauver

Frame elements / Frame-Elemente / Eléments de frame

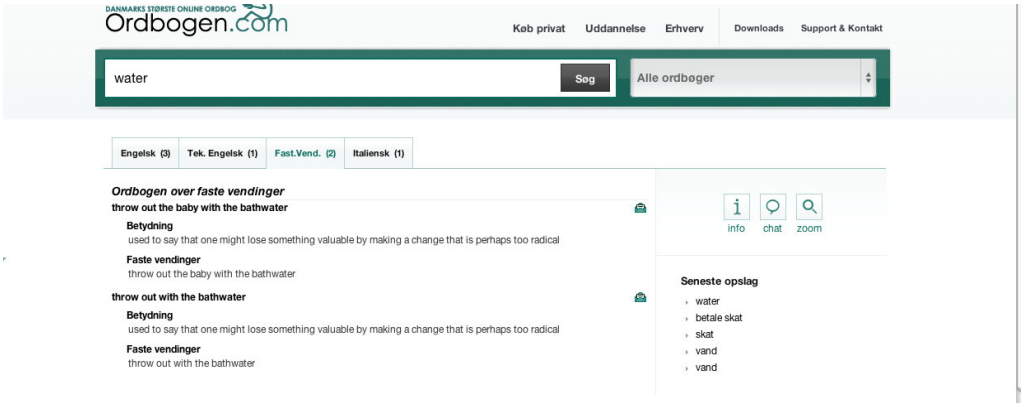
1. INTERVENING_PLAYER
2. SHOT
3. BALL
4. INTERVENTION_RESULT
5. INTERVENTION_TARGET
6. INTERVENTION_LOCATION
7. PART_OF_BODY
8. INTERVENTION
9. GOALKEEPER
10. SHOOTER
11. TARGET
12. OPPONENT_TEAM
13. PATH

*	1	2	3	4	5	6	7	8	9	10	11	12	13
abblocken.v	■	■											
abfälschen.v	■	■	■		■		■						
ablenken.v	■	■	■	■	■								
abwehren.v	■	■	■	■	■								
blocken.v	■	■											
klären.v	■	■		■	■	■			■				
lenken.v	■	■	■		■	■	■						■
retten.v	■	■		■		■		■	■	■		■	
block.n	■	■											
block.v	■	■											
clear.v	■	■	■	■		■							
deflect.v	■	■	■		■			■					
deflection.n	■	■											
turn.v	■	■		■			■				■		
bloquer.v	■	■	■			■							
contrer.v	■	■	■										
dégager.v	■	■	■			■	■		■				
détourner.v	■	■	■	■									
déviation.n	■												
dévier.v	■	■	■		■		■						
écarter.v	■	■	■				■						
s_interposer.v	■	■						■		■			
sauver.v	■	■				■							

Example 4. The entry **intervene** in *Kicktionary*

Example (4) has no quick and easy access to the data. It includes relations that are not informative for potential users, e.g., translators, of this information tool. For instance, it shows "frame elements", mixes languages and forces users to a lot of extra work to disambiguate the meaning and usage of intervene.

Instead of (4), dictionaries constructed under the tenets of the Function Theory, e.g., *Ordbogen over faste vendinger* (Bergenholtz 2010), offer focused data that can be retrieved in an easy way and without being in danger of suffering either information stress or information death: they receive the data needed in the specific use situation which prompted the search (example 5).

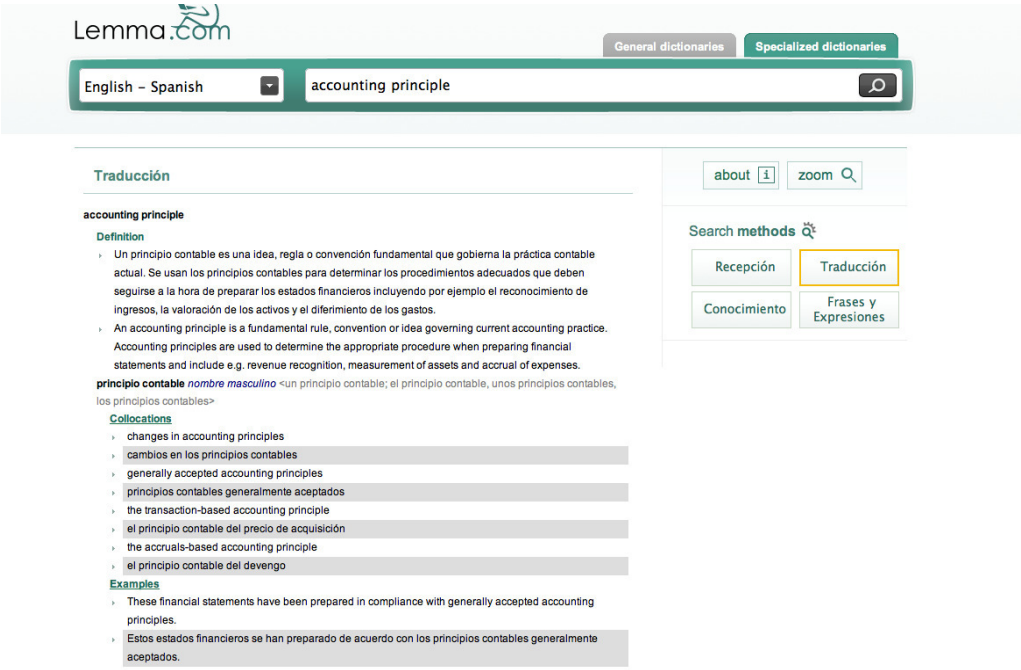


Example 5. **Water** in *Ordbogen.com*

Example (5) offers just two idiomatic expressions with *water* and their definitions, which is what users only need when consulting the *Ordbogen over faste vendinger* (Bergenholtz 2010) in a reception situation. In sum, comparing examples (4) and (5) explicitly indicates two different views of e-lexicography. Example (4) does not target any particular user; at least I cannot "imagine" any user who can understand the data and use it for satisfying a need in an easy and quick way. However, example (5) offers precise data on the meaning of two synonymous English idiomatic expressions *throw out the baby with the bathwater* and *throw out with the bathwater*.

Regarding translation, specifically the conception of information tools for assisting users translate economic texts, the dictionary of the 21st millennium is currently identified under the two conceptions already mentioned: a set of dictionaries and every component in the set (Bergenholtz 2012). This means that the set encompasses the lexicographic concepts at an abstract and general level. All these concepts are also present in every component of the set. At the same time, every component of the set has its own particular concepts, which are based on the specific needs identified for a specific usage situation. In other words, the presentation of the dictionary as a set with usage-based individual components reflects our understanding that the best way for achieving individualisation is eliminating the suffocation effect under the general conception of the functional approach to lexicography. The latter represents lexicography as an academic and independent science that focuses on the design of utility tools that can be quickly and easily consulted for satisfying specific needs occurring for specific types of users in specific types of extra-lexicographic situations.

This stance allows lexicographers to prepare concepts for both cognitive and communicative dictionaries. The starting point is the understanding of functions and user needs in specific usage situations. Then we need a lexicographical database suitable for storing data typically needed in cognitive-oriented and communicative-oriented situations, as well as equipping the project with search and result sites that allow users to individualise their searches. For instance, a translator of an English accounting text into Spanish would access the *accounting dictionary* homepage (http://lemma.com/) and search in the *Diccionario Inglés-Español de Contabilidad: Traducción* (Fuertes-Olivera et al. 2012a) and/or in the *Diccionario Inglés-Español de Contabilidad: Traducción de Frases y Expresiones* (Fuertes-Olivera 2012b), which are two individual components of the *accounting dictionaries*. These two (and several more) replace *El Diccionario Inglés-Español de Contabilidad* (Nielsen et al. 2009) (example 3) and offer more focused data, i.e., more individualised data. For instance, examples (6) and (7) show the dictionary data retrieved when searching *accounting principle* in the *Diccionario Inglés-Español de Contabilidad: Traducción* (Fuertes-Olivera et al. 2012a) (example 6) and in the *Diccionario Inglés-Español de Contabilidad: Traducción de Frases y Expresiones* (Fuertes-Olivera et al. 2012b) (example 7):



Example 6. **accounting principle** in the *Diccionario inglés-español de contabilidad: traducción*

Example (6) shows that the translator obtains all the data they need for increasing their factual, linguistic, and textual competence in connection with their search (the concept is the same in all English and Spanish variants and, therefore, no cultural data is needed here):

- Inflections. They offer data on grammar, orthography and derivations (e.g., Spanish plurals)
- Definitions in English and Spanish. They describe the concept in an understandable way for translators and semi-experts. For instance, the Spanish text can offer a clue on the best way of translating the English "Accounting principles are used to determine…": it is translated "Se usan los principios contables para determinar…". The Spanish text informs the user that the Spanish *se-passive* is preferable in specialised texts to the Latin passive (i.e., *se usan* instead of *son usados*).
- Spanish equivalent. It is an insertable one, i.e., the Spanish is a translation equivalent and can be inserted into the Spanish text.
- Original and Translated collocations and examples. These offer examples of real translation and textual conventions, if any. For instance, Spanish uses articles (e.g., *los*) whereas English does not do when referring to concepts in general (e.g., *changes in accounting principles* vs. *cambios en los principios contables*). The translated example also offers indication of the preference of the *se-passive* to the Latin passive (e.g., *se han preparado* instead of *han sido preparados*).

accounting principle

Definition

- Un principio contable es una idea, regla o convención fundamental que gobierna la práctica contable actual. Se usan los principios contables para determinar los procedimientos adecuados que deben seguirse a la hora de preparar los estados financieros incluyendo por ejemplo el reconocimiento de ingresos, la valoración de los activos y el diferimiento de los gastos.
- An accounting principle is a fundamental rule, convention or idea governing current accounting practice. Accounting principles are used to determine the appropriate procedure when preparing financial statements and include e.g. revenue recognition, measurement of assets and accrual of expenses.

principio contable *nombre masculino* <un principio contable; el principio contable, unos principios contables, los principios contables>

Collocations

- changes in accounting principles
- cambios en los principios contables
- generally accepted accounting principles
- principios contables generalmente aceptados
- the transaction-based accounting principle
- el principio contable del precio de acquisición
- the accruals-based accounting principle
- el principio contable del devengo

Examples

- These financial statements have been prepared in compliance with generally accepted accounting principles.
- Estos estados financieros se han preparado de acuerdo con los principios contables generalmente aceptados.

cost accounting

Definition

- La contabilidad de costes es una disciplina contable realizada y utilizada en el ámbito interno de la empresa para determinar el coste de un producto, el punto de equilibrio, y distintos márgenes económicos, como puede ser el margen comercial.
- Cost accounting is that part of the cost management system that measures costs for the purpose of management decisions and financial reporting. Cost accounting involves budgeting, breaking down of costs and revenues by product and location as well as analysing variances, profitability and use of funds.

contabilidad de costes *nombre femenino* <una contabilidad de costes; la contabilidad de costes, no plural >

Collocations

- the application of cost accounting principles
- la aplicación de principios de una contabilidad de costes poco desarrollada
- managerial cost accounting concepts
- la contabilidad de costes en la empresa

fundamental accounting principle

Definition

- Un principio contable fundamental es el supuesto básico con el que se preparan los estados financieros. Son principos contables fundamentales el principio del devengo, el de la consistencia, el de la empresa en funcionamiento, el de prudencia y el de no compensación.
- Fundamental accounting principles are the basic assumptions that underlie the preparation of financial statements such as the accruals, consistency, going concern, separate valuation and prudence concepts.

principio contable fundamental *nombre masculino* <un principio contable fundamental; el principio contable fundamental, unos principios contables fundamentales, los principios contables fundamentales>

Collocations

- the fundamental accounting principles relating to derivatives
- los principios contables fundamentales relacionados con derivados

Example 7. **accounting principle** in the *Diccionario inglés-español de contabilidad: traducción de frases y expresiones* (excerpts)

In addition, the translator could also consult example (7), which offers real examples of translations that give extra information, i.e., information that is not presented in (6), and that is not found in current cognitive or communicative dictionaries of Economics:

a. **accounting principle** can also be a sequence of words instead of a multiword term. For instance, the translation of *cost accounting principles* is "principios de la contabilidad de costes", i.e., it has nothing to do with "principio contable";

b. **accounting principle** can also be a part of a larger multiword term, e.g., *fundamental accounting principles* and *generally accepted accounting principles*.

In sum, the construction of sets of usage-based dictionaries integrates online dictionary projects in the realm of Information Science. This has three related implications for the dictionary of the 21st century. The first is that the preparation of either multi-field dictionaries of Economics or single-field dictionaries of Business must be abandoned. Instead, we must construct the most focused sub-domain dictionary we can, provided there is a market for this dictionary, i.e., there are users for the dictionary. This means that instead of preparing a "dictionary of Economics" we are in

favour of constructing sub-domain dictionaries of Economics, e.g., the *accounting dictionaries*. This accounting dictionary project is undergoing continuous preparation. It has expanded from its initial languages and polyfunctional nature (see example 3, above) to more languages and monofunctional situations (see examples 6 and 7, above). This has proved to be successful and signals the way ahead for achieving individualisation lexicographically, i.e., offering users the data they need in prototypical usage situations, as shown in examples (6) and (7).

The second is basically operational. For instance, when translating specialised texts, professional translators especially need information tools that are regularly updated, contain many terms, in particular multiword terms, and have some techniques for maintaining quality and verifying the accuracy of updates. In addition, the dictionary project must be run on a secure, robust network, and be equipped with technologies for contacting editors of the information tools. These operational requirements are also important in the *accounting dictionaries*: they are regularly updated, are run on secure and robust systems, and their editors are easily contacted.

The third is theoretical. The concept of *users' needs* demands the adoption of lexicographic solutions for catering for their needs, especially when the solutions envisaged are innovative and have not been tried previously. There are two examples of such an endeavour in the Spanish part of the *accounting dictionaries*. One of them deals with the finding that some of the translations of English IAS/IFRS terms into Spanish, which were made in the translation of English International Accounting Standards/International Financial Reporting Standards into Spanish, resulted in Spanish terms that are defined and used in these Standards, although some of them are almost nonsensical in Spanish. The finding demanded an innovative solution, which, on the one hand, maintained the nonsensical terms as these terms occur in accounting texts, and, on the other, informed users of their lack of sense. The inclusion of several types of *usage notes* was the solution adopted for informing users of this problem. A case in point is *cash equivalent*. The dictionary includes the following usage note: "Spanish accountants prefer 'equivalente de efectivo' to the IAS/IFRS term 'equivalente al efectivo'. The IAS/IFRS term is nonsensical in Spanish."

The second solution, also a very innovative one, concerns the inclusion of English definitions and their Spanish translations/adaptations for all the English lemmas (see example 6, above). In addition to offering textual clues, the Spanish texts are especially necessary for Spanish native speakers with poor English competence. Both solutions are possible in the *accounting dictionaries* because the Internet does not limit the lexicographic space devoted to the inclusion of dictionary data and because the Function Theory has proven an adequate approach for constructing information tools that can be adapted to the specific needs users have for the time in which they are living and for the space in which they are working. In sum, the adaptations and modifications prove that nothing "is more practical than a good theory" (Bergenholtz, cited in Nielsen/Tarp 2009: ix).

5. Conclusion

This article presents the dictionary of Economics as an information tool that assists professional translators. The concept of "dictionary of Economics" is analysed in terms of the Function Theory of Lexicography, which defends the argument that information tools must be designed for assisting specific users to solve the specific needs they have in specific usage situations. In particular, this article focuses on the needs of professional translators whose needs are factual, linguistic, textual, and cultural.

The article analyses the type of data found in prototypical cognitive and communicative dictionaries of Economics and offers solutions for the dictionary of the 21st Century, which is presented as an information tool that shows the existence of a close association between Lexicography and Information Science. This is illustrated by presenting a set of accounting dictionaries that contains the set and 27 individual components, each directed at solving needs users have in a specific usage situation. For instance, professional translators translating English accounting texts

into Spanish can search in two specific dictionaries, *El Diccionario Inglés-Español de Contabilidad: Traducción* (Fuertes-Olivera et al. 2012a) and *El Diccionario Inglés-Español de Contabilidad: Traducción de Frases y Expresiones* (Fuertes-Olivera et al. 2012b). These will offer them specific data for improving the afore-mentioned translation abilities, which makes them ideal candidates for being considered high quality dictionaries of the 21st Century. In particular, data retrieved when searching for collocations and examples, i.e., *frases y expresiones*, and the inclusion of a Spanish translation of the English definition makes this dictionary project innovative and signals the way ahead: this should always be embedded in a theory that aims to solve particular user needs in specific usage situations.

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6. References

Almind, Richard 2005: Designing Internet Dictionaries. In Barz, I./Bergenholtz, H./Korhonen, J. (eds), *Schreiben, Verstehen, Übersetzen, Lernen. Zu ein-und zweisprachigen Wörterbüchern mit Deutsch*. Frankfurt am Main: Peter Lang, 103-119.

Almind, Richard/Bergenholtz, Henning/Vrang, Vibeke 2006: Theoretical and Computational Solutions for Phraseological Lexicography. In *Linguistik Online* 27, 222. Accessed: http://www.linguistik-online.de/27_06/almind_et_al.pdf (Last accessed: May, 2012).

Bannock, Graham/Baxter, Ron E. 2011: *The Penguin Dictionary of Economics.* London: Penguin.

Bergenholtz, Henning 2003: User-oriented Understanding of Descriptive, Proscriptive and Prescriptive Lexicography. In *Lexikos* 13, 65-80.

Bergenholtz, Henning 2010: *Ordbogen over faste vendinger*. Database and design: Richard Almind. Odense: Ordbogen.com (www.ordbogen.com) (Last accessed: May 2012).

Bergenholtz, Henning 2011: Access to and Presentation of Needs-adapted Data in Monofunctional Internet Dictionaries. In Pedro A. Fuertes-Olivera/Henning Bergenholtz (eds.), 30-53.

Bergenholtz, Henning 2012a: Concepts for Monofuctional Accounting Dictionaries. In *Terminology* 18 (2), 243-263.

Bergenholtz, Henning 2012b: What Is a Dictionary? In *Lexikos* 22, 20-30.

Bergenholtz, Henning/Bergenholtz, Inger 2011: A dictionary is a Tool, a Good Dictionary is a Monofunctional Tool. In Pedro A. Fuertes-Olivera/Henning Bergenholtz (eds.), 187-207.

Bergenholtz, Henning/Bothma, Theo 2011: Needs-adapted Data Presentation in e-Information Tools. In *Lexikos* 21, 53-77. Available at: http://lexikos.journals.ac.za/pub/article/view/37/45 (Last accessed: May, 2012).

Bergenholtz, Henning/Gouws, Rufus 2010a: A New Perspective on the Access Process. In *Hermes. Journal of Language and Communication Studies* 44: 103-127 [online]. Available at: http://download2.hermes.asb.dk/archive/download/Hermes-44-bergenholtz&gouws.pdf (Last accessed: May 2012).

Bergenholtz, Henning/Gouws, Rufus H. 2010b: A Functional Approach to the Choice between Descriptive, Prescriptive and Proscriptive Lexicography. In *Lexikos* 20, 26-51.

Bergenholtz, Henning/Nielsen, Sandro 2006: Subject-field Components as Integrated Parts of LSP Dictionaries. In *Terminology* 12(2), 281-303.

Bergenholtz, Henning/Tarp, Sven 2002: Die moderne lexikographische Funktionslehre. Diskussionsbeitrag zu neuen und alten Paradigmen, die Wörterbücher als Gebrauchsgegenstände verstehen. In *Lexicographica* 18, 253-263.

Bergenholtz, Henning/Tarp, Sven 2003: Two Opposing Theories: On H.E. Wiegand's Recent Discovery of Lexicographic Functions. In *Hermes. Journal of Linguistics* 31, 171-196.

Bergenholtz, Henning/Tarp, Sven 2004: The Concept of Dictionary Usage. In *Nordic Journal of English Studies* 3, 23-36.

Bergenholtz, Henning/Tarp, Sven 2010: LSP Lexicography or Terminography? The Lexicographer's Point of View. In Fuertes-Olivera, Pedro A. (ed.), 27-37.

Bergenholtz, Henning/Bothma, Theo/Gouws, Rufus 2011: A Model for Integrated Dictionaries of Fixed Expressions. In Kosem, Iztok/Kosem, Karmen (eds.), *Electronic Lexicography in the 21st Century: New Applications for New Users. Proceedings of eLex 2011, Bled, 10-12 November 2011,* 34-42 [online]. Bled http://wwwtrojina.si/elex2011 (Last accessed: May 10, 2012).

Besomi, Daniele 2011: *Crises and Cycles in Economic Dictionaries and Encyclopaedias*. London & New York: Routledge.

Bothma, Theo J. 2011: Filtering and Adapting Data and Information in an Online Environment in Response to User Needs. In Fuertes-Olivera, Pedro A./Bergenholtz, Henning (eds.), 71-102.

Bowker, Lynne/Marshman, Elizabeth 2009: Better Integration for Better Preparation. Bringing Terminology and Technology More Fully into Translator Training Using the CERTT Approach. In *Terminology* 15(1), 60-87.

BusinessDictionary.com: http://www.businessdictionary.com/ (Last accessed: May 2012).

Cambridge Dictionaries Online: http://dictionary.cambridge.org/dictionary/business-english/

Fata, Ildikó 2010: The Bilingual Specialized Translation Dictionary for Learners. In Fuertes-Olivera, Pedro A. (ed), 83-103.

Fuertes-Olivera, Pedro A. 2009a: Systematic Introductions in Specialized Dictionaries: Some Proposals in Relation with the Accounting Dctionaries. In Nielsen, Sandro/Tarp, Sven (eds), 161-178.

Fuertes-Olivera, Pedro A. 2009b: The Function Theory of Lexicography and Electronic Dictionaries: Wiktionary as a Prototype of Collective Multiple-Language Internet Dictionary. In Bergenholtz, Henning/Nielsen, Sandro/Tarp, Sven (eds), *Lexicography at a Crossroads: Dictionaries and Encyclopedias Today, Lexicographica Tools Tomorrow*. Bern: Peter Lang, 99-134.

Fuertes-Olivera, Pedro A., Editor 2010: *Specialized Dictionaries for Learners*. Berlin/New York: De Gruyter.

Fuertes-Olivera, Pedro A. 2012a: On the Usability of Free Internet Dictionaries for Teaching and Learning Business English. In Granger, Sylviane/Paquot, Magali (eds), *Electronic Lexicography*. Oxford: Oxford University Press, 392-417.

Fuertes-Olivera, Pedro A. 2012b: Lexicography and the Internet as a (Re-)source. In *Lexicographica* 28, 49-70.

Fuertes-Olivera, Pedro A./Bergenholtz, Henning (eds.) 2011: *e-Lexicography*: *The Internet, Digital Initiatives and Lexicography*. London/New York: Continuum.

Fuertes-Olivera, Pedro A./Nielsen, Sandro 2011: The Dynamics of Terms in Accounting: what the Construction of the *Accounting Dictionaries* Reveals about Metaphorical Terms in Culture-bound Subject Fields. *Terminology* 17(1), 157-180.

Fuertes-Olivera, Pedro A./Nielsen, Sandro 2012: Online Dictionaries for Assisting Translators of LSP Texts: The Accounting Dictionaries. *International Journal of Lexicography* 25 (2), 191-215.

Fuertes-Olivera, Pedro A./Tarp, Sven 2011: Lexicography for the Third Millennium: Cognitive-oriented Specialised Dictionaries for Learners. *Ibérica. Journal of the European Association of Languages for Specific Purposes* 21, 141-162.

Fuertes-Olivera, Pedro A./Bergenholtz, Henning/Nielsen, Sandro/Gordo Gómez, Pablo/ Mourier, Lise/Niño Amo, Marta/Ríos Rodicio, Ángel de los/Sastre Ruano, Ángeles/ Tarp, Sven/Velasco Sacristán, Marisol 2012a: *Diccionario Inglés-Español de Contabilidad: Traducción.* Database and Design Richard Almind and Jesper Skovgård Nielsen. Odense: Lemma.com.

Fuertes-Olivera, Pedro A./Bergenholtz, Henning/Nielsen, Sandro/Gordo Gómez, Pablo/Mourier, Lise/Niño Amo, Marta/Ríos Rodicio, Ángel de los/Sastre Ruano, Ángeles/Tarp, Sven/Velasco Sacristán, Marisol 2012b: *Diccionario Inglés-Español de Contabilidad: Traducción de Frases y Expresiones.* Database and Design Richard Almind and Jesper Skovgård Nielsen. Odense: Lemma.com.

Gouws, Rufus H. 2011: Learning, Unlearning and Innovation in the Planning of Electronic Dictionaries. In Fuertes-Olivera, Pedro A./Bergenholtz, Henning (eds.), 17-29.

Kicktionary: *Kicktionary* 2009. Schmidt, Thomas 2009. *Kictionary. The multilingual electronic dictionary of football league* 2009 [online]. http://www.kicktionary.de/index.html. (Last accessed: December, 2012).

Kwary, Deny Arnos 2012: Adaptive Hypermedia and User-oriented Data for Online Dictionaries: A Case Study on an English Dictionary of Finance for Indonesian Students. *International Journal of Lexicography* 25(1), 30-49.

L'Homme, Marie-Claude 2006: The Processing of Terms in Dictionaries: New Models and Techniques. In *Terminology* 12(2), 181-188.

Leroyer, Patrick 2011: Change of Paradigm: From Linguistics to Information Science and from Dictionaries to Lexicographic Information Tools. In Fuertes-Olivera, Pedro A./Bergenholtz, Henning (eds.), 121-140.

López, Sinda/Walt, Donald 2002: *The Oxford Business Spanish Dictionary: English-Spanish*. Oxford: OUP.

Lorentzen, Henrik/Trap-Jensen, Lars 2011: There and Back Again – from Dictionary to Wordnet to Thesaurus and Vice Versa: How to Use and Reuse Dictionary Data in a Conceptual Dictionary. In Kosem, Iztok/Kosem, Karmen (eds.), *Electronic Lexicography in the 21st Century: New Applications for New Users. Proceedings of eLex 2011, Bled, 10-12 November 2011,* 175-179 [online]. Bled http://wwwtrojina.si/elex2011 (Last accessed: May 10, 2012).

New Palgrave Dictionary of Economics Online: http://www.dictionaryofeconomics.com/dictionary (Last accessed: May 2012).

Nielsen, Sandro 2008: The Effects of Lexicographical Information Costs on Dictionary Making and Use. In *Lexikos* 18, 170-189.

Nielsen, Sandro/Almind, Richard 2011: From Data to Dictionary. In Fuertes-Olivera, Pedro A./Bergenholtz, Henning (eds.), 141-167.

Nielsen, Sandro/Tarp, Sven 2009: *Lexicography in the 21st Century. In Honour of Henning Bergenholtz*. Amsterdam/Philadelphia: John Benjamins.

Nielsen, Sandro/Mourier, Lise/Bergenholtz, Henning/Fuertes-Olivera, Pedro A./Gordo Gómez, Pablo/Niño Amo, Marta/Ríos Rodicio, Ángel de los/Sastre Ruano, Ángeles/Tarp, Sven/Velasco Sacristán, Marisol 2009: *Diccionario Inglés-Español de Contabilidad*. Database and Design: Richard Almind.

http://www.accountingdictionary.dk/regn/gbsp/regngbsp_index.php (Last accessed: May, 2012)

Tarp, Sven 2002: Translation Dictionaries and Bilingual Dictionaries. Two Different Concepts. In *Journal of Translation Studies* 7, 59-84.

Tarp. Sven 2008: *Lexicography in the Borderland between Knowledge and Non-knowledge. General Lexicographical Theory with Particular Focus on Learner's Lexicography*. Tübingen: Max Niemeyer Verlag.

Tarp, Sven 2011: Lexicographical and Other e-Tools for Consultation Purposes: Towards the Individualization of Needs Satisfaction. In Fuertes-Olivera, Pedro A./Bergenholtz, Henning (eds.), 54-70.

Tarp, Sven 2012: Do We Need a New Theory of Lexicography? In Lexikos 22, 321-332.

Trap-Jensen, Lars 2010: Access to Multiple Lexical Resources at a Stroke: Integration Dictionary, Corpus and Wordnet data. In Granger, Sylviane/Paquot, Magali (eds), *eLexicography in the 21st Century: New Challenges, New Applications. Proceedings of eLex 2009*. Louvain-la-Neuve: Presses Universitaires de Louvain, 295-302.

White, Marilyn D./Matteson, Miriam/Abels, Eileen G. 2008: Beyond Dictionaries: Understanding Information Behaviour of Professional Translators. In *Journal of Documentation* 64(4), 576-601.