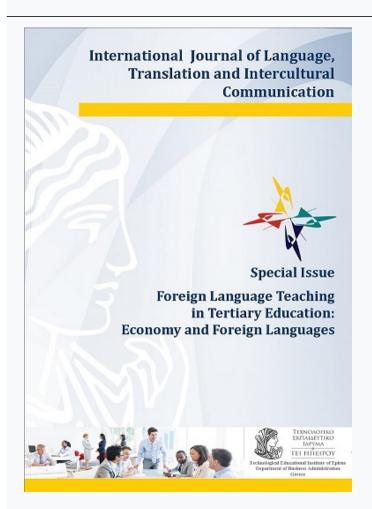




International Journal of Language, Translation and Intercultural Communication

Vol 4, No 1 (2016)

Special Issue: Foreign Language Teaching in Tertiary Education: Economy and Foreign Languages



Developing and exploiting linguistic resources in research and in the didactics of Specialised Translation

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doi: 10.12681/ijltic.10348

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To cite this article:

SARIDAKIS, I. E. (2016). Developing and exploiting linguistic resources in research and in the didactics of Specialised Translation. *International Journal of Language, Translation and Intercultural Communication*, *4*(1), 127–138. https://doi.org/10.12681/ijltic.10348

Developing and exploiting linguistic resources in research and in the didactics of Specialised Translation

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Abstract

This paper outlines the main state-of-the-art linguistic resources that can be developed and used in the research and in the didactics of Specialised Translation. In addition, it points to the still largely unexplored potential from the combination of Corpus Linguistics, Descriptive Translation Studies and Systemic Functional Linguistics into a single scientific and research agenda, to the benefit of both translation practitioners and trainee translators.

Keywords: Corpus Linguistics, Specialised Translation, Linguistic resources, Translation didactics

1. Introduction. Corpus Linguistics and the study of natural languages

Corpus Linguistics (CL) is nowadays the single major paradigm aiming at the systematic description of discourse: for more than three decades, it has been established as an increasingly developing and proven methodology for analysing textual material, for a variety of purposes and uses. Such uses cover the whole spectrum of social sciences and the humanities, to the extent that their disciplines utilise discourse as the framework for gathering empirical data for the targeted analyses. The development of CL as a distinct field, already since the 1970s and more particularly during the 1990s, relies on generally acknowledged scientific premises about the status, the structure and the functioning of natural languages (cf. McEnery & Hardie, 2012: 1-3).

In this context, natural languages are structured as semiotic systems, or codes, that systematise and describe what is socially and cognitively perceptible, in other words individual speech acts and their social relations. In order to describe conscious facts (*faits de conscience* [Saussure, 1916: 28]), speakers of a natural language resort to a common (and in any case socially recognisable and acceptable) organisation of the semiotic resources of the language at hand. Such resources make up the so-called *linguistic potential* or *logogenetic mechanism* (Halliday, 1978). In other words, semiotic resources organise a natural language into *social topoi*, which can be more conventionally described as groups of speakers with focalised, distinct and analysable lexicogrammatic habits and fixations. The systemic character of a language, as outlined above, is reflected on the science of language and without exception on all its targets and sub-fields, as systematicity of description:

Même si l'objectif de l'étude n'est pas directement le système mais n'en est qu'une partie, même minime, il faut toujours, si l'on veut que l'étude soit complète, considérer la partie en rapport à cette totalité qui lui donne sa valeur, ou bien en rapport à tout le système linguistique (de Mauro, 1967: ix-x)

Simply stated, the comprehension and description of linguistic phenomena, even in their most frugal and socially fixed expressions and formulations, relies on the substantial premise that language, both written and oral, is formulated in use, within communities sharing the same code and aims at covering "commonplace" communicative needs.

Extensive textual data, i.e. corpora are nowadays a powerful and promising tool in language analysis. Diachronically, the descriptive study of language draws on textual data and attempts to formulate hypotheses and theorems about the elements and norms (or "principles") that make up the system of language into a coherent semiotic entity, based usually on empirical generalisation. This is done by classifying and categorising such elements and norms, to the extent that this is hermeneutically feasible. In the final analysis, such an empirical study is "simply" (a) an effort to decode the information that is embedded in the measurable components of speech acts; and (b) an effort to substantiate hypotheses about the internal systemic and diasystemic functions of natural languages and their social logogenetic mechanisms.

2. The Corpus Linguistics "toolbox"

In addition, CL as a multidisciplinary field, develops and assists in the development of the computational research tools that are necessary for this analytic and synthetic effort. More specifically, CL is of significant benefit also to Translation Studies (TS), in identifying, describing and categorising the systemic and diasystemic study and documentation of linguistic choices of the ST author and of the translator (Σαριδάκης, 2010: 219ff). The textual material used in TS consists mainly of *parallel corpora*, i.e. collections of text pairs (original and their translations in the TL); and *comparable corpora*, i.e. text collections compiled on the basis of expressly stated and duly analysed sociolinguistic and textual criteria (cf. Σαριδάκης, 2011). These criteria aim to fulfil the following conditions:

- <u>Comparability</u>. The term designates the similarity or the affinity between the texts on the basis of the sociolinguistic parameters that constitute the act of communication, of which individual texts are samples.
- <u>Representativeness</u>. This criterion relates to the property of texts included in a corpus
 compilation to adequately characterise, qualitatively and quantitatively, the utterance of
 discourse in a given field, under specific conditions and in a communicative context of a
 given speech community. The documentation of the representativeness of text samples is
 analogous to the sampling used in other research fields, e.g. in gallops, and is based both
 on quantitative and qualitative variables.

Comparable corpora can be compiled either in the TL, with the aim being to familiarise the translator with the means and modes of discourse in a given field, or in the SL, with the aim being mostly to develop the necessary pragmatic background for comprehending the ideational field (or fields) of the text to be translated.

3. Corpus Linguistics in Translation

Corpus Linguistics methodologies enable researchers to:

- (a) **Identify** the lexical elements of the texts analysed, both in absolute terms and in terms of relative frequencies. Such "relative frequencies" are in turn determined:
 - <u>Internally</u> within a text, by obtaining the number and the frequency of occurrence of a given lexeme ("node") in relation to the number and frequency of occurrence of all other lexemes in a text. An example is shown in Fig. 1.

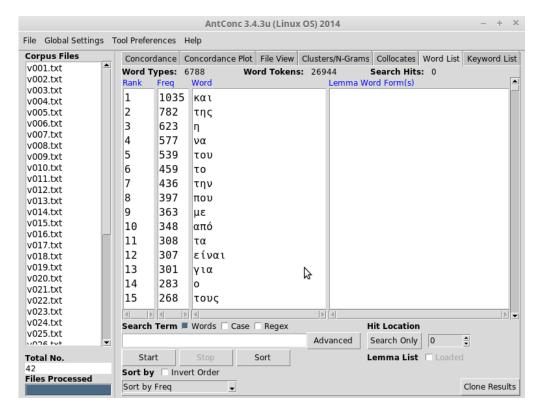


Figure 1. A frequency list in AntConc

- <u>Contrastively</u>, by comparing the absolute and relative frequencies of all the lexemes of a text with the corresponding figures of other texts that have been used to compile an "external" corpus, i.e. a comparable or general language corpus. Relating such findings to a *tertium comparationis* (Frawley, 1984) allows the researcher to identify the "keywords" of a corpus and to evaluate their significance. In this sense, keywords are units that characterise the texts analysed thematically and situationally, and therefore distinguish them from other texts in some significant respect.
- (b) **Contextually record** the meanings and the semantic variation of the main lexemes of a given text or corpus. This is briefly termed as KWIC (Keyword-in-Context) analysis (McEnery & Hardie, 2012: 35-37). Such identification, and the subsequent lemmatisation, classification, as well as analysis and interpretation, all rely on the examination of the "patterns" formed by the lexemes, in other words on the tendencies of lexemes to co-exist ("collocate") with specific other lexemes in pieces of authentic natural language, written and/or oral. In this approach, a fundamental "motto" subsuming the observation, the statistical measurement and the interpretation is that of the pioneer of empirical linguistics, John Rupert Firth (1890-1960): "You shall know a word by the company it keeps" (1935). Firth has also coined the "context-dependent" nature of meanings, and the concept of the "context of situation", which was later elaborated by M.A.K. Halliday in the paradigm of Systemic Functional Linguistics. SFL and the study of Specialised Translation are closely inter-related, as will be shown below.

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[&]quot;In a quantitative perspective, keywords are those whose frequency (or infrequency) in a text or corpus is statistically significant, when compared to the standards set by a reference corpus" (Bondi, 2010: 3). Keyword analysis and contextual interpretation can point to a social group's patterns of semiosis and culture/ideology formation (Σαριδάκης, 2010: 120-121; cf. Stubbs, 1996).

The utilisation of quantitative and statistical data on the lexis of a corpus and its combinatory analysis and interpretation allows for the formulation of hypotheses and conclusions in relation to the so-called *semantic profile* (cf. Stubbs, 1995) of words (and, by extension, also of conceptual units), in other words in relation to how the concepts and their related linguistic signs behave in natural discourse, in specific communicative conditions.

4. Corpus Linguistics and Specialised Translation

In Translation, and more specifically in Specialised Translation, CL techniques contribute to the systematic registration and to the functional and diachronic monitoring of:

- (a) The **semantic profile of lexemes**. This is usually done by identifying the collocates of lexemes. In specialised texts, the naturalness of utterances at the level of specialised terms is closely related to the analysis of collocations that is used traditionally in language teaching. In this case, however, this analysis:
- (i) relates mainly to the possible paradigmatic relations of terms, i.e. to the tendency of a conceptual node to be qualified and modulated by specific lexemes in specific grammatical structures (e.g. ADJective+Noun, or N+N) or, by contrast, to exclude other lexemes (these are relations *in praesentia* and *in absentia*) by creating the so-called "n-grams" or "word clusters" (bigrams, trigrams, etc.); and
- (ii) derives from the *in vivo* identification of utterances in authentic texts (cf. Sinclair, 2004) and, in this sense, places the translator at the centre of an experiential process of knowledge construction in the terminological effort at hand, making him also a critical receiver of pre-existing terminology material (dictionaries and glossaries, in printed or electronic form, of general or of specialised usage).
- (b) How **meanings are structured**, by means of the co-articulation of concepts, into units that extend beyond the lexeme (phrase, paragraph, text). The empirical and systematic registration of the extended conceptual structures of the texts in a given context of expression accelerates and substantiates the "act of mimesis", as a core mental process of translation (Chesterman, 1997). The translator is thus familiarised, fully and more rapidly, with the naturalness of discourse in specific domains of language use, both of the SL and of the TL.

5. Descriptive discourse analysis, Systemic Functional Linguistics and Translation Studies

In TS, the descriptive analysis of discourse is systematised in the paradigm of the so-called Descriptive Translation Studies (DTS). The descriptive paradigm is based on the work of Gideon Toury (1995/2012) and, more extensively, on the studies of the School of Tel-Aviv and Itamar Even-Zohar and his "polysystem theory" (Even-Zohar, 2010), in other words his systemic perception of discourse in translational analysis and critique. In the DTS paradigm, the study of translating and of translations develops from a marginal branch of Philology to a distinct field of systematic empirical study of cross-cultural, cross-linguistic communication.

The "models" and "norms" of DTS are complemented by the empirical focus of Corpus Linguistics which, since the works of M. Baker (1993) have been relating to translational discourse, as well as by the functional and sociological perception of language and linguistic competence of Systemic Functional Linguistics. Halliday's model (1978, cf. also Hatim & Mason, 1990) examines discourse on three "levels" (or "metafunctions"):

- (a) The **field**, which relates to the so-called "ideational" nexus of a text, i.e. its conceptual and informational content.
- (b) The **mode**, which corresponds to the so-called "textual" nexus of an utterance, in other words to the conventions of written and oral discourse, in specific domains and sociolinguistic circumstances. Macro-textual analysis using the systematic tools of Corpus Linguistics in the practice and in the didactics of Specialised Translation allows the classification of texts into "genres" and "sub-genres", as well as the identification of their elements and the ways in which their informational units are structured. This, in turn, allows faster access to, and comprehension of. the discourse samples that are considered to be reliable for a given translational effort, or, in other words, that are "ideationally" (thematically) identical or related to the text to be translated. It must be stressed in this respect that the documentation effort of the translator described here focuses mainly on the lexical and semantic context of the utterance, and that the "typology" of genres aimed at is empirical-descriptive and does not relate to the dogmatic and prescriptive approaches of text typologies that have in the past prevailed in Translation Studies: the latter are scientifically circular (cmp. e.g., the "text typology" of K. Reiss [1976] or the "functional continuum" of M. Snell-Hornby [1988]).
- (c) The **tenor**, which relates to the interpersonal elements of a given communicative act (written or oral), that determine or direct the micro-textual lexicogrammatic choices of the actors involved in communication, on the basis of specific conditions. The latter are either known *ex ante* and are thus taken into consideration during the analysis, or are arrived at or interpreted *ex post*, on the basis of measurable micro-textual elements of the texts scrutinised.

These metafunctions interact within a text and jointly determine its lexicogrammatical choices. Their relation is depicted in the (generally known) diagram of Figure 2. By relating translational research to this spectrum of analysis, we can broadly correlate the empirical findings derived from the CL-based textual analysis to registers, in other words to more extended functional sets of linguistic habits and fixations, both intra- and intertextual, which are considered "reliable", "habitual" and "acceptable" in every natural language examined and in relation to the utterance of discourse in specific domains. In this way, and no matter if and how such discourse registers are "tagged" or "typified", specialised communication is perceived and detailed on the basis of actual and extensive empirical data. This approach is descriptive, and linguistic conventions and habits are traced systematically and diachronically, well beyond the mere lexical and semantic level, which is usually the limit of specialised communication studies, intra- and cross-linguistically. Its is beyond doubt that, in Specialised Translation, terminology plays a critical role. However, this role is neither static, nor is it always dominant in specialised communication with authentic texts. The SFL approach unveils the absence of true crosslinguistic correspondences between registers, even in the "simplest" technical texts. This noncorrespondence is both functional and cultural: function and culture are once more perceived empirically and systematically, not dogmatically or meta-theoretically.

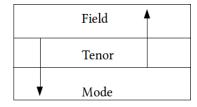


Figure 2. The metafunctions of language

6. Specialised Translation and linguistic resources

On a more practical line of thought, the main linguistic resources that can benefit Specialised Translation, both in practice and in the translation classroom, can be broadly distinguished as follows:

- (a) **Lemma lists** containing terms, created "in-house" (i.e., at the translation agency/organisation or in the translation classroom) on an *ad hoc* basis, or available in the public domain;
- (b) **Text databases** organised into simple or more complex corpora, monolingual or multilingual;
- (c) Databases of **aligned text segments** (**chunks**), now usually organised in TMX² format. Such databases can also be developed locally, on the level of the self-employed translator, of translation agencies, or of networked individuals and organisations.

6.1. Termbases

Typical examples of widely available electronic resources are IATE³, EU's multilingual terminological database (see Fig. 3), or, in the case of monolingual Greek lexicography, the online Dictionary of Standard Modern Greek⁴, published by the Centre for the Greek Language of the Aristotle University of Thessaloniki (see Fig. 4). Focusing on the translator-oriented IATE database, it must be stressed that the organisation of terms is based on a logical structure of metadata and includes definitions, reliability indexes by language, references to external sources and some examples of term usage in context. For more than two decades, this database (and its predecessor, Eurodicautom⁵) has been widely used by translators. However, in terms of *field* and mode, the terminological entries are by nature limited and, what is more, the "snapshots" of discourse included in the termbase, despite being authentic and thus somewhat reliable, are static, fragmentary and sometimes obsolete. Finally, in many cases, the "reliability" index does not fully reflect the status of the functions of terms in real texts and communicative situations. In the final analysis, in the didactics of Specialised Translation, this terminological resource may be somewhat useful, particularly during the first stages of the trainees' familiarisation with their field of study, yet it lags significantly behind fully covering the necessary semantic and terminological research, as outlined in this paper.

Translation Memory eXchange. See, e.g.: https://goo.gl/VxhSJc.

See: .

See: .

⁵ Eurodicautom was replaced by IATE in 2007.



Figure 3. The IATE interface

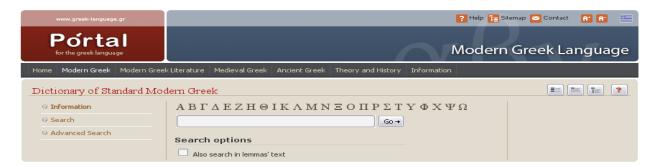


Figure 4. The Dictionary of Standard Modern Greek

6.2. Online parallel corpora

The EUR-Lex⁶ corpus database (see Fig. 5) combines a corpus of parallel and computationally aligned⁷ texts of primary and secondary EU law, each with a unique identifier (CELEX), with the corresponding online search tool. By means of a simple database query, the user can focus on the usage environment (context) of the term(s) selected. Generally speaking, the utterance of discourse covered by EUR-Lex is "standardised", in the sense that the drafting and the revision of the documents included in the corpus both rely on the multilingual *Inter-institutional style guide*, that is made available by the Publications Office of the European Union⁸. The guide includes even a specific section on translation problems⁹. However, it must be noted that the primary aim

See: http://goo.gl/ThGKO2.

See Tiedemann, 2011.

See: http://goo.gl/TKgj1i.

In the case of Greek, Section 10.9.

of this corpus database is not translation or, more widely, linguistic study and, consequently, it does not allow the extraction of statistical data on the use of lexemes in authentic texts, nor does it provide concordance tables. In addition, the automatic alignment of texts is not always postedited, i.e. error-free. In teaching Specialised Translation, we have observed that the trainees are trained easily in querying techniques, with regard to an "acceptable" register in this text genre, and realise that "acceptability" must be sought beyond the level of words. In addition, translation trainees seem to understand the limitations of state-of-the-art technologies and point to their resolution.



Figure 5. The EUR-Lex interface

Still another example of a multilingual online tool for extracting bilingual translation examples from extensive parallel and sentence-aligned corpora is *Linguee* 10 (see Fig. 6). The database can be queried by submitting a lexeme, as search term, and the results obtained correspond to the "concordance search" facility of "offline" translation memory tools (e.g. Trados/SDL, OmegaT, etc.). As in the case of TM systems, the "context" of the search hits extends to the limits of the aligned text segment. Even though such concordances are extracted from the database in their entirety, and in this sense give all the "snapshots" of use of the search term from all the aligned translation pairs of the database, there is no indication about the suitability of previous translation choices. In turn, this increases the risk of their re-use, particularly in the case of conflicting choices, and can also become a source of falsely perceived standardisation tendencies in the (translational) discourse within a specific domain. Such a standardisation can in fact be the result of "negative interference" (sensu Toury, 1995) and, by means of the translation process, can negatively alter the linguistic potential of languages that are used less in specific domains of (specialised) communication¹¹. Moreover, the "mechanisation" (or "industrialisation") of the translation process and the consequent demand for increasing the speed and the efficiency of translation by means of TM systems, has been observed to "decontextualise" (Zanettin, 2002) the observation and the description of discourse, both of that is primarily produced, and of that is produced through translation.

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See: .

For a more detailed description of standardisation and interference, as tentative translational norms, see Saridakis, 2015.



Figure 6. The Linguee interface

6.3. Specialised translation-oriented resources and tools

The problems and shortcomings outlined above, which under certain circumstances can have a negative impact on the didactic aims of the translation classroom, can be significantly overcome with the systematic use of specialised tools and resources that are more focused on the translation process and its inherent problems. Such tools combine access to extended linguistic data and, what is more, allow for a non-unidirectional (and therefore, evaluative and critical) use of such data. A typical linguistic resource in this category is Lexical Computing's *SketchEngine*¹², which offers a variety of tools and modules for developing, analysing and sourcing corpora, monolingual, multilingual, comparable and parallel (See Fig. 7).

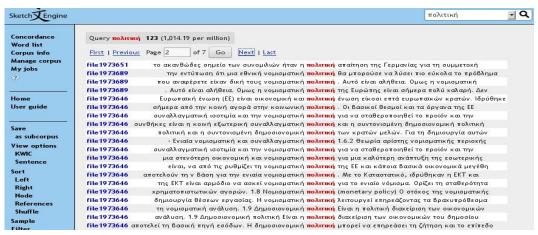


Figure 7. Concordance search in SketchEngine

Text corpora, as usable linguistic resources can also be developed on an *ad hoc*, or DIY, basis, to the benefit of both the practice and the didactics of translation. Such corpora can be used to organise textual material locally, using an appropriate structure, and to subsequently exploit it, using a variety of computational tools, particularly concordancers (e.g., *AntConc*¹³). The compilation of a DIY corpus can be assisted by selectively seeding textual data from the Internet,

See: See: <a href="mail

See: http://goo.gl/eGK6vB>.

using selection lists ("whitelists") and exclusion lists ("blacklists") when querying specific Internet resources or groups of resources ("domains"). Such an tool for retrieving textual data from the Internet is *BootCaT*¹⁴ (see Fig. 8), which has been developed in the context of the WaC (Web-as-Corpus) research initiative (Kilgarriff & Grefenstette, 2003).



Figure 8. The BootCaT interface

7. Conclusions

The following conclusions can be summarised, from the topics examined in this paper:

- 1. The practice of Specialised Translation has changed radically during the last years, and this has had a significant impact also on its didactics. In this, sense, there is a clear need to integrate the corpus-driven and computationally-supported research into modern translator training curricula. This is of particular importance for training translators in lesser used languages, e.g. Greek.
- 2. Dealing with the issues and problems arising on all levels of documentation of the translation practice and the cognitive approach to its process is clearly empirical and data-driven, not dogmatic and prescriptive.
 - 3. From a didactic perspective, this approach:
 - (a) is descriptive-hermeneutic;
 - (b) makes extensive use of linguistic and computational tools; and
- (c) under no circumstances can it be deemed compatible with the regulatory/prescriptive and therefore dogmatic approaches of the recent "translatological past" that have favoured the extraction of translation examples and of "proper" translational behaviour from the trainer's "authentic" and undisputed linguistic instinct.
- 4. Modern translation-oriented research is clearly multidisciplinary and combines methods and paradigms from Computational Linguistics, Corpus Linguistics and Systemic Functional Linguistics.

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See: .

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About the Author

Ioannis E. SARIDAKIS is Assistant Professor of Corpus Linguistics and Translation at the School of Economics and Political Science of the National and Kapodistrian University of Athens. He is the author of numerous articles and books in the fields of Translation Studies, with a particular focus on Specialised Translation, Terminology and Translation Quality Assessment (TQA) and of Critical Discourse Analysis (CDA). More specifically, his recent research interests include corpus-based political, legal and technical discourse studies from a cross-linguistic and translational perspective. He is co-director of the Postgraduate Programme in Translation and Interpreting and of the Research Laboratory for Linguistics and Translation at the University of Athens. Previously, he has worked as Assistant Professor of Technical and Computer-Assisted Translation and as co-director of the Postgraduate Programme Translation Science at the Ionian University (1998-2012) and, among others, as an EU expert for organising Bulgaria's national translation service in view of its EU accession, as a NATO consultant for recruiting translators and interpreters and as a chief consultant for organising the translation service of the Athens 2004 Olympic Games. Finally, he is a professional translator since 1990, specialising in scientific, legal and technical translation. His most recent translated book is A. Cassese's International Law (OUP, 2005; Gutenberg [Athens], 2012).