Horizontal denominative variation in an EU victim-related English-Italian parallel corpus

Katia Peruzzo

Università di Trieste

Abstract

The present study considers terminological variation from a bilingual perspective by analysing a parallel corpus made of EU texts in English and Italian concerning the criminal law subfield of crime victims. After providing a brief chronological overview of different terminological schools of thought questioning the univocity principle postulated by the traditional theory of terminology, the paper introduces denominative variation, i.e. the linguistic phenomenon in which different denominations are used to refer to the same concept (Freixa 2006). The aim of the paper is to present a case study on a specific form of denominative variation, i.e. horizontal denominative variation, which consists of the coexistence of more than one designation for the same concept in a set of texts which are to be considered homogeneous as regards their degree of specialization, and to propose a tentative classification of the horizontal denominative variants extracted from the corpus.

1. Introduction

Terminological variation is nowadays a well-known phenomenon that has been examined ever since the 1980s. In this respect, however, it is to be noticed that scholars have not yet reached full consensus as regards the forms in which terminological variation expresses itself in real specialized communication. Moreover, most empirical research conducted so far in this field focused primarily on

monolingual texts, as the standpoint from which the phenomenon was examined was mainly terminological. In line with the minority of scholars tackling the specific phenomenon of terminological variation from a contrastive point of view (cf. for example Merkel 1998, Rogers 2004, Rogers 2008) and unlike mainstream research, the purpose of the present study is to take into consideration a parallel corpus made of European Union texts dealing with the criminal law subfield related to the role of the victim in criminal proceedings in two languages, English and Italian, in order to verify – from a translational viewpoint – the presence of a single aspect of terminological variation, i.e. denominative variation.

The paper is structured as follows: Section 2 presents a brief chronological overview of different terminological schools of thought questioning the univocity principle postulated by the traditional theory of terminology; Section 3 introduces the concept of *denominative variation*; Section 4 describes the case study on a specific form of variation, i.e. horizontal denominative variation; Section 5 concludes the paper and suggests what future work should address.

2. From monosemy to polysemy and synonymy

The birth of terminology as a discipline dates back to the 1930s, when specialized lexicographic work was performed by subject field experts, must prominently by engineers such as Wüster, the developer of what is now considered the traditional terminology theory, in order to meet the need for standardization of the principles and methods used in terminology management, thus suggesting an overall prescriptive approach to the terminological discipline.

The resulting standardization activity, which differentiates itself from traditional lexicographic work because of its object of study – terms rather than words – and of its onomasiological rather than semasiological approach, focused on the compilation of repositories of terminological data – subject field concepts and their designations – intended to normalize existing terms so as to eliminate ambiguities and assure unambiguous, effective and efficient communication among subject-field professionals. In order to consider terms from such a language planning perspective, they necessarily need to fulfill the so-called univocity principle, according to which there is a one-to-one relationship between a concept and the term designating it, as synonymy and polysemy are linguistic phenomena to be avoided in specialized communication: a standpoint shared not only by the Wüsterian Vienna school, but also by the Prague and the Soviet school.

However, terminological variation is an observable linguistic phenomenon and Wüster (1979) himself did not deny the existence of synonyms within linguistic communities working in the same field of knowledge, although he considered them a danger compromising effective communication. The first branch of terminology to accept and try to cope with terminological variation, albeit always within a standardizing approach, was developed in Quebec in the 1980s (cf. for example Duquet-Picard 1983, Duquet-Picard 1986, Auger 1994): Canadian terminologists adopted a sociolinguistic perspective from which vari-

ation in terminology usage had necessarily to be taken into account, although the need for standardization still prevailed.

In the same period, translation studies scholars also started expressing some interest in the phenomena of polysemy and synonymy, as proved by the acknowledgement of polysemy as a fundamental device among available techniques for the purpose of assigning a linguistic denomination to a concept through similarities with other already designated concepts (cf. Sager *et al.* 1980: 78) and by the following statement: "a term may have several expression forms according to the number of different text types in which it occurs" (Sager *et al.* 1980: 231). As far as synonymy is concerned, the authors also notice that "absolute cognitive synonymy is common in socially diversified special languages but is text type bound and therefore not available for free variation" (Sager *et al.* 1980: 232).

A further development towards the full recognition of terminological variation is represented by the so-called Socioterminology (cf. for example Gaudin 1993, Boulanger 1995), founded in France in the mid 1990s. According to scholars following this approach, traditional terminology theory failed to consider the usage of terminology in real language, intended in the Saussurian sense of *parole*, and the social factors affecting specialized communication, not recognizing that terminology is a social science and should therefore satisfy social needs. Socioterminology thus constitutes a descriptive approach which questions the traditional and utopian ideal of monosemy and implies the study of real language usage, comprising terminological variation.

In the 1990s, Cabré and the IULATERM group developed the so-called Communicative Theory of Terminology (cf. Cabré 1999), which criticizes the traditional terminology theory for not being able to recognize the communicative and discourse aspects of terms nor formal or conceptual terminological variation, thus giving rise to the establishment of a mainly prescriptive practical method which traditional terminology theory considered valid in any kind of research, regardless of the subject field, the aims, the context in which the work is performed or the linguistic type (Cabré 2000: 39-40). In the same article, Cabré also states that it is impossible to defend the univocity principle when observing the behaviour of terminological units in real texts: the terminology used is inevitably subject to variation according to different parameters, which are the same parameters determining the variation of lexical units in general language, as terminology is simply a form of specialized communication within an existing language.

The questioning of the dogmatic monosemy postulated by traditional terminology continued into the early years of the new millennium, with Temmerman (cf. Temmerman 2000) proposing the Sociocognitive approach, according to which models for the description of linguistic creativity, including terminological variation in terms of synonymy and polysemy, need to be developed in order to analyze real specialized language in context both from a synchronic and a diachronic perspective.

In the previous section the shift from traditional, polysemiophobic and homonymiphobic terminological approach (cf. Temmerman 2000: 68) towards different real language-oriented perspectives has been outlined very briefly. It goes without saying that, based on the evidence provided above, terminological variation is nowadays a well-known phenomenon, ranging from morphological and morpho-syntactic to semantic variation: the purpose of the present study is to give further evidence of the existence of a specific aspect of terminological variation, namely denominative variation.

Before examining the manifestation of this linguistic phenomenon in real communication, it is necessary to define the terms *terminological variation* and *denotative variation*. One of the first authors to deal with the concept of terminological variation in French is Corbeil, according to whom terminological variation comprises both synonymy, which he calls "concurrence terminologique" (Corbeil 1988: 57, cited in Freixa 2002: 53), and polysemy. Almost a decade later, Daille *et al.* (1996: 201) provided the following definition: "a variant of a term is an utterance which is semantically and conceptually related to an original term". In their view, a variant is therefore any attested form of a designation of a specific concept encountered in a text, different from an authorized term listed in an authoritative resource and reflecting a different degree of semantic or conceptual identity or distance with the "original" term. Consequently, the definition proposed by Daille *et al.* differs from Corbeil's as terminological variation, apart from synonymy and polysemy, also includes cases of hypernymy and hyponymy.

In our view, terminological variation should be intended according to Freixa's broad definition "la variació que afecta els termes" (2002: 54). Provided that the existence of terminological units is based on both semiotic or linguistic and conceptual aspects, we can therefore assume that terminological variation includes two types of variation: *denominative variation*, defined by Freixa as "el fenomen pel qual a una mateixa noció li corresponen diverses denominacions", and *conceptual variation*, meaning "variació en un mateix concepte" (Freixa 2002: 54). The preference for the term *denominative variation*, further defined by the same author as "the phenomenon in which one and the same concept has different denominations; [...] restricted to variation among different denominations, i.e., lexicalized forms, with a minimum of stability and consensus among the users of units in a specialized domain" (Freixa 2006: 51), over the term *synonymy*, is due to the purpose of avoiding the much debated distinction between what is considered a proper synonym, i.e. a term designating the same concept as another term in which one or more lexical elements constituting the unit differ from the latter, and variants, which are usually identified with terms presenting syntactic, morphosyntactic, morphological or orthographical modifications (abbreviations, acronyms, presence/absence of articles in multiword terms etc.).

The purpose of the study is to examine denominative variation within EU texts
that have undergone a translation process that is "qualitatively different from
translation in other contexts due to the special character and organization of the
legal system" (Kjær 2007: 70). The resulting texts are not the product of transla-
tion in the strict sense of the word, but rather of "interlingual text reproduc-
tion" (Kjær 2007: 87), a process in which translators should reproduce "words
and phrases that can ensure coherence and consistency within and across the 23
equally authentic language versions" (Goddard 2009: 183). Consequently, as far
as EU legislation is concerned, the texts resulting from interlingual reproduc-
tion are not to be considered translations, but rather language versions that ful-
fill the equal authenticity principle.

   To safeguard consistency form a terminological perspective in all language
versions, Guideline 6 of the Joint Practical Guide of the European Parliament,
the Council and the Commission for persons involved in the drafting of legisla-
tion within the Community institutions,[1] adopted in 2003 by the three institu-
tions in order to improve the quality of Community acts, states that "The termi-
nology used in a given act shall be consistent both internally and with acts
already in force, especially in the same field." and that "Identical concepts shall
be expressed in the same terms, as far as possible without departing from their
meaning in ordinary, legal or technical language" (Joint Practical Guide 2003:
21).

   In its subsection 6.1, the same Guideline reads as follows:

> In order to aid comprehension and interpretation of a legislative act, the text must be
> consistent. A distinction can be drawn between formal consistency, concerning only
> questions of terminology, and substantive consistency, in a broader sense, concern-
> ing the logic of the act as a whole. (Joint Practical Guide 2003: 21)

and provides a definition for *formal consistency* in subsection 6.2:

> Consistency of terminology means that the same terms are to be used to express the
> same concepts and that identical terms must not be used to express different con-
> cepts. The aim is to leave no ambiguities, contradictions or doubts as to the meaning
> of a term. Any given term is therefore to be used in a uniform manner to refer to the
> same thing and another term must be chosen to express a different concept. (Joint
> Practical Guide 2003: 21)

It is subsequently (subsection 6.2.1) specified that formal consistency should be
ensured not only within a single act, but also within the broader framework of
existing legislation:

> This applies not only to the provisions of a single act, including the annexes, but also
> to provisions of related acts, in particular implementing acts and all other acts in the
> same area. In general, terminology must be consistent with the legislation in force.
> (Joint Practical Guide 2003: 21)

---

1   Available at http://eur-lex.europa.eu/en/techleg/pdf/en.pdf (last visited: August 2010).

The need for "better lawmaking by clearer, simpler acts complying with principles of good legislative drafting" (Joint Practical Guide 2003: 5) has been expressed since the Edinburgh European Council in 1992 and initial steps to meet it were taken with the Council Resolution of 8 June 1993 on the quality of drafting of Community legislation. This Resolution led to the adoption of the Interinstitutional Agreement of 22 December 1998 on common guidelines for the quality of drafting of Community legislation[2] of which the above mentioned Joint Practical Guide is an evolved formulation.

Given the guidelines constituting the Joint Practical Guide, which provide drafters and thus also translators with a reference resource establishing prescriptive provisions to be followed also with regard to terminological choices, the purpose of the study is to verify if Baker's statement that "it is impossible to reproduce networks of lexical cohesion in a target text which are identical to those of the source text" (Baker 1992: 206) also applies to a context where strict rules govern translators' choices – restricting the meaning of a "network of lexical cohesion" to the cases in which the identical terminological unit is repeated in a single text or set of texts –, thus proving the presence of the phenomenon of denominative variation also in a semi-controlled language.

4.1 Corpus and methodology

The English-Italian parallel corpus used for the purpose of the present study is made of twenty-two aligned documents – for a total number of around 269,000 word tokens – ranging from communications among Community institutions, green papers, directives, decisions, opinions and proposals to initiatives of single Member States and judgments of the Court of Justice. The time span covered by the selected texts, for which the selection criterion was the proximity of the content of the documents to the role of the victim in criminal proceedings, goes from 2000 to 2010. The findings presented here are the result of a pilot study to assess the feasibility of such research in the field of denominative variation and are thus limited to the contrastive examination of the Italian terminological units used to reproduce English units: the English versions of the texts included in the corpus are taken as the starting point from which the linguistic phenomenon in question is analyzed in the Italian texts. Furthermore, it also needs to be noticed that it is impossible to establish the number of drafters and translators involved in the production of the examined texts; for this reason, we can only infer that variation is also the result of several people dealing with the same texts.

As far as the methodology used is concerned, in the first phase of the study English texts underwent a first automatic candidate term extraction process and subsequently a manual elimination of both noise and too broad – although subject-field related – terms. The resulting mainly multiword terms were then searched in the aligned corpus to identify their Italian equivalents, in order to

2   Available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31999Y0317(01): EN:HTML (last visited: September 2010).

verify if equivalence in this kind of equally authentic texts is rendered through the reproduction of the same degree of consistency (repetition of the term in its identical form).

Before moving on to the results of the empirical study, it is necessary to point out that in what follows the focus will be on a subcategory of denominative variation, namely horizontal denominative variation, as opposed to vertical denominative variation. Horizontal denominative variation consists of the coexistence of more than one designation for the same concept in a set of texts which are to be considered homogeneous as regards their degree of specialization.

4.2 Horizontal denominative variation

The examination of the parallel corpus allowed for horizontal denominative variants to be identified in its Italian part by means of the analysis of the Italian equivalents of English terms which are repeated with no modifications at intra- and intertextual level. The so obtained variants, as already mentioned in the above section, are to be considered horizontal inasmuch they are not affected by conceptual variation and only formal changes occur in them. A possible classification of variants is found in Daille *et al.* (1996: 212-213), where they are classified under the following categories: graphical and orthographic variants, inflectional variation, syntactic variation (further divided into insertion and juxtaposition, coordination and permutation variation) and morphosyntactic variation. Just as the definition of term variant provided by Daille *et al.* and already discussed in section 3 cannot be fully agreed with for the scope of the present study, the classification proposed by the same authors cannot be applied in full to the data related to the examined corpus for two reasons: on the one hand, in their studies the classification has been applied to English (cf. Daille *et al.* 1996) and to French (cf. Daille 2005) and some of the variation types proposed do not seem to be appropriate to describe the behavior of Italian terminological variants, and on the other, it so broad – embracing cases where nor synonymy nor polysemy are involved – that also terminological units such as *abnormalities of chromosome* and *abnormal chromosome* are considered term variants[3] within its framework. Conversely, in our view, such terminological unit pairs need to be considered as two separate terms, relating to two different concepts, albeit presenting a very close semantic link within the same conceptual system.

Therefore, in order to adhere to the aim of the study, i.e. the analysis of horizontal denominative variation, only term variants referring to the same concept are taken into account. The categories proposed here to classify the identified denominative variants are derived from the more fragmentary classification also developed by Daille, in which several typologies of term variants are established depending on specific application-oriented terminology engineering activities, in her case information retrieval, text indexing, terminology watch and controlled terminology for computer-assisted translation systems (cf.

3   For further examples see Daille *et al.* 1996 and Daille 2005.

Daille 2005). Moreover, according to the author, "appropriate typologies could be developed case by case" (Daille 2005: 183). The aim of the paper is thus not to propose a comprehensive and systematic classification of terminological variants; we are, indeed, interested in identifying what type of modifications terminological units are subject to in a guideline-controlled language. The horizontal denominative variants encountered in the examined corpora can be grouped in five different categories: inflectional, syntactic, morphosyntactic, paradigmatic and anaphorical variation. A further group is provided in which different types of denominative variation are combined in the same terminological unit.

- Inflectional variation
The first category, inflectional variation, consists of variants in which an orthographic modification occurs in the target text term due to an inflectional process which is not justified by a change in the source text term and does not modify the semantic content of the original term. This type of variation can be illustrated by the following example: the English *moral damage* is rendered in Italian both by the singular form *danno morale* and the plural form *danni morali*.

- Syntactic variation
The second umbrella category is syntactic variation, under which two subcategories of variants are grouped. The first subcategory comprises syntactic modifications that affect the function words pertaining to a certain terminological unit without requiring a change in its content words, such as in the case of the substitution of a preposition, as in the equivalent terms for *compensation to crime victims*, which are *risarcimento delle vittime di reati* and *risarcimento per le vittime di reati*. The second syntactic subcategory, on the other hand, affects the distribution of content words through, for instance, permutation, such as in the following example: *sistemi di risarcimento nazionali* and *sistemi nazionali di risarcimento for national compensation schemes*.

- Morphosyntactic variation
The third category of variation is represented by morphosyntactic variants, in which both the content and the functional words of a terminological unit are modified although without semantic change: the Italian equivalents for *state compensation to crime victims* are *risarcimento statale delle vittime di reati* and *risarcimento da parte dello Stato delle vittime di reati*. In the just mentioned morphosyntactic example the first base term forming the terminological unit, *state compensation*, is rendered in Italian by two equivalent but syntactically different forms: *risarcimento statale* follows the noun+adjective formation pattern, while *risarcimento da parte dello Stato* is an example of noun+prepositional group+noun pattern.

- Paradigmatic variation
The fourth category is represented by paradigmatic variation, in which semantic equivalence is preserved although one of the base terms constituting the terminological unit is entirely substituted by a different but synonymous term, such as in the following example: *compensation to crime victims*, apart from the

Italian equivalents already mentioned as syntactic variants, is also rendered by *indennizzo delle vittime di reato*: here not only is the more frequently used base term *risarcimento* replaced by *indennizzo*, but the second base term is also subject to an inflectional variation in the lexeme *reato*, which shifts from a plural to a singular form.

- Anaphorical variation

Finally, the fifth category identified is represented by anaphorical variation, achieved for example using an elliptical form of the terminological unit, in which case the context supplies the information needed to provide the same meaning and a shorter form of the term is used for the sake of linguistic economy. Contrary to the above described categories of denominative variation, which can be found both intra- and intertextually, this specific form of variation is usually found within the same text, in which at least one of the occurrences of the term must be in its full form in order to make the referent for the anaphorical variants clear.

An example of anaphorical variation is represented by the Italian equivalent for *child victim* (*giovane vittima*), which presents heterogeneity in distribution and in the number of occurrences within the same text. In the English version of the Proposal for a Directive of the European Parliament and of the Council on combating the sexual abuse, sexual exploitation of children and child pornography, repealing Framework Decision 2004/68/JHA,[4] *child victim* occurs for a total number of twenty occurrences: ten in its singular and ten in its plural form. For the purposes of this study, in the Italian version *giovani vittime* is taken as the main term, of which the other terms presented below are considered variants mainly for two reasons: firstly, *giovani vittime* is the most frequent term used to refer to *child victims* within the examined text, and secondly, it is the first term to occur when in English the term *child victims* appears. The number of occurrences of *giovani vittime* is smaller than its English equivalent: it actually occurs seven times in its plural form and once in its singular form. Furthermore, in five occasions equivalence is achieved by the usage of a reduced version of the Italian term which implies the use of the head of the multiword term, i.e. *vittime* or *vittima*. The remaining eight occurrences of the English term are rendered using three different strategies: in one case the paradigmatic variant *minore vittima del reato* is used in its full form, in six cases the anaphorical reduced variant of the latter, *minore*, is used, and in a single case the plural personal pronoun *loro* appears. The same example is presented in the following Table:[5]

4   Available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0094:
     FIN:EN:PDF (last visited: September 2010).
5   Note that the first Italian equivalents provided in Table 1 and Table 2 are considered main
     terms and thus no variation type is indicated in the *Type of variation* column.

English term	Number of occurrences	Italian term	Number of occurrences	Type of variation
child victim	10	giovane vittima	1	
		vittima	2	anaphorical variation
		minore vittima del reato	1	paradigmatic variation
		minore	6	anaphorical variation
child victims	10	giovani vittime	7	
		vittime	3	anaphorical variation
		loro	1	substitution

Table 1: Types of variations in the Italian equivalents for *crime victim(s)*

- HORIZONTAL DENOMINATIVE COMBINED VARIANTS

In the previous section the English term *child victim* and its Italian equivalents have been used to illustrate different strategies and variation types used to render the same source text term. There are also cases in which more than one variation type co-occur in the same equivalent, as also shown in the example provided above. More examples of combined variants in Italian are shown in Table 2.[6]

English term	Number of occurrences	Italian term	Number of occurrences	Type of variation
protection of child victims	3	protezione delle giovani vittime	1	
		protezione delle vittime	1	anaphorical variation
		tutela del minore vittima del reato	1	tutela: paradigmatic variation minore vittima del reato: paradigmatic variation + inflectional variation
victim compensation schemes	4	sistemi di risarcimento alle vittime	3	
		programmi di risarcimento delle vittime	1	programmi: paradigmatic variation delle vittime: syntactic variation

Table 2: Combination of different variation types in a single variant

The two examples provided illustrate that combined variants are to be retrieved both intertextually and intratextually: the term *protection of child victims* has been extracted from a single text, which is the same text from which the *child victim(s)* example in the previous section has been taken from, while the *victim compensation schemes* example has been formulated taking into account three different texts.[7]

6   See note n. 5.
7   The examined texts are: Green Paper - Compensation to crime victims COM(2001) 536 final, available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2001:0536: FIN:EN:PDF; Council Framework Decision of 15 March 2001 on the standing of victims in

Terminological variation is a linguistic and conceptual phenomenon that was rarely tackled until the 1980s, when the focus of terminology and translation studies scholars started moving from a prescriptive, synonymy and polysemy intolerant approach towards a more descriptive and variation-prone approach. A descriptive perspective is adopted in the present English-Italian contrastive case study in order to prove that a specific form of terminological variation, i.e. horizontal denominative variation, can be observed also in legal texts for the drafting of which specific formal consistency guidelines on terminology usage are supposed to be adhered to. The variants resulting from the observation of terminological variation in the Italian versions of EU victim-related texts are grouped into six categories: inflectional, syntactic, morphosyntactic, paradigmatic, anaphorical and combined variation, which are not intended to be exhaustive and include all possible variation typologies, but only to provide a starting point for further research in the field of horizontal denominative variation. The results show that horizontal denominative variation is a linguistic phenomenon that occurs also in texts for which the need for formal consistency, involving both the avoidance of polysemy and synonymy and the fostering of monoreferentiality, urged Community institutions to consider the adoption of a common policy as regards drafting and stylistic choices which led to the latest 2003 version of the Joint Practical Guide.

Using the same methodology employed for the present study, future work should address the question of whether, apart from horizontal denominative variation, also conceptual variation can be discovered by examining a parallel corpus of equally authentic language versions, therefore questioning the equality of the texts in it.

6. References

Auger P. (1994) "Pour un modèle variationniste de l'implantation terminologique dans les entreprises au Québec", in *Actes du Colloque sur la problematique de l'amenagement linguistique*, Quebec, OLF, pp. 483-493.

Baker M. (1992) *In Other Words. A Coursebook on Translation,* London/New York, Routledge.

Boulanger J.-C. (1995) "Présentation: images et parcours de la socioterminologie", *Meta* 40:2, pp. 194-205.

Cabré M. T. (1999) *Terminology: Theory, Methods and Applications*, Amsterdam/Philadelphia, John Benjamins.

Cabré M. T. (2000) "Elements for a theory of terminology: towards an alternative paradigm", *Terminology* 6:1, pp. 35-57.

Corbeil J.-C. (1988) *Les terminologies devant Babel*. Actes du Colloque Terminologie et Technologies Nouvelles. La Défense, du 9 au 11 décembre 1985, Quebec, OLF.

criminal proceedings (2001/220/JHA), available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2001:082:0001:0004:IT:PDF; and Proposal for a Council Directive on compensation to crime victims COM(2002) 562 final, available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2002:0562:FIN:EN:PDF. The three documents were last visited in September 2010.

Daille B. (2005) "Variations and application-oriented terminology engineering", *Terminology* 11:1, pp. 181-197.

Daille B., Habert B., Jacquemin C. & Royauté J. (1996) "Empirical observation of term variations and principles for their description", *Terminology* 3:2, pp. 197-258.

Duquet-Picard D. (dir.) (1983) *Problèmes de la définition et de la synonymie en terminologie.* Actes du colloque international de terminologie. Université Laval (Québec), 23-27 mai 1982. Quebec, GIRSTERM.

Duquet-Picard D. (1986) *La synonymie en langues de spécialité: étude du problème en terminologie*, Quebec, GIRSTERM.

Freixa J. (2002) "La variació terminològica: anàlisi de la variació denominativa en textos de diferent grau d'especialització de l'àrea de medi ambient", tesis doctoral, Barcelona, Institut Universitari de Lingüística Aplicada, Universitat Pompeu Fabra.

Freixa J. (2006) "Causes of denominative variation in terminology. A typology proposal", *Terminology* 12:1, pp. 51-77.

Gaudin F. (1993) *Pour une socioterminologie: des problèmes pratiques aux pratiques institutionnelles*, Rouen, Université de Rouen.

Goddard C. (2009) "Where legal cultures meet: translating confrontation into coexistence", *Investigationes Linguisticae* XVII, pp. 168-205.

Kjær A. L. (2007) "Legal translation in the European Union: a research field in need of a new approach", in *Language and the Law: International Outlooks*. Ed. by K. Kredens & S. Gozdz-Roszkowski, Frankfurt am Main, Peter Lang, pp. 69-95.

Merkel M. (1998) "Consistency and variation in technical translations. A study of translators' attitudes" in *Unity in Diversity? Current Trends in Translation Studies*. Ed. by L. Bowker, M. Cronin, D. Kenny & J. Pearson, Manchester, St. Jerome, pp. 137-149.

Rogers M. (2004) "Multidimensionality in concepts systems: a bilingual textual perspective", *Terminology* 10:2, pp. 215–240.

Rogers M. (2008) "Terminological equivalence: probability and consistency in technical translation", in *LSP Translation Scenarios. Selected Contributions to the EU Marie Curie Conference Vienna 2007 (30 April-4 May 2007)*. Ed. by H. Gerzymisch-Arbogast, G. Budin & G. Hofer, *MuTra Journal* 2/2008, pp. 101-108.

Sager J., Dungworth D. & McDonald P. F. (1980), *English Special Languages: Principles and Practice in Science and Technology*, Wiesbaden, Oscar Brandstetter Verlag KG.

Temmerman R. (2000) *Towards New Ways of Terminology Description: the Sociocognitive Approach*, Amsterdam/Philadelphia, John Benjamins.

Wüster E. (1979) *Einführung in die Allgemeine Terminologielehre und Terminologische Lexikographie*, Wien/New York, Springer.