

# Identifying Equivalents of Specialized Verbs in a Bilingual Comparable Corpus of Judgments: A Frame-based Methodology

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## Abstract

Multilingual terminological resources do not always include the equivalents of specialized verbs that occur in legal texts. This study aims to bridge that gap by proposing a methodology to assign the equivalents of this kind of predicative units. We use a comparable corpus of judgments produced by the Supreme Court of Canada and by the *Supremo Tribunal de Justiça de Portugal*. From this corpus, 200 English and Portuguese verbs are selected. The description of the verbs is based on the theory of Frame Semantics (Fillmore 1977, 1977, 1982, 1985) as well as on the FrameNet methodology (Ruppenhofer et al. 2010). Specialized verbs are said to evoke a semantic frame, a sort of conceptual scenario in which a number of mandatory elements play specific roles (e.g. the role of judge, the role of defendant). Given that semantic frames are language independent to a fair degree (Boas 2005; Baker 2009), the labels attributed to each of the 76 identified frames (e.g. [Crime], [Regulations]) were used to group together 165 pairs of candidate equivalents. 71% of them are full equivalents, whereas 29% are only partial equivalents.

**Keywords:** equivalence, specialized verbs, Frame Semantics, comparable corpus

## 1. Objectives

Multilingual resources that describe legal terminology do not always include all the equivalents that translators need to produce translations of legal texts. There are two main reasons for this. Firstly, legal systems are known to differ from one linguistic community to another and even from one country to another because each has its own history and traditions. As a result, legal terminologies are often anisomorphic, i.e. the conceptual structures may vary from one national legal system to another. Secondly, by focusing especially on the definition of equivalence, a notion widely discussed in translation studies but insufficiently debated in terminology, the literature does not provide sound and systematic methodologies to identify equivalents. There is thus a lack of criteria to search for and validate equivalent terms that occur in specialized texts. This problem is even more evident in the case of predicative units, such as verbs. Although some terminologists (L'Homme 1998, Lorente and Bevilacqua 2000, Costa and Silva 2004) have worked on specialized verbs, terminological equivalence regarding this kind of units would benefit from a thorough study.

In this paper, we propose a methodology for describing specialized verbs and for identifying their equivalents. The methodology is based on the theory of Frame Semantics (Fillmore 1977, 1982, 1985; Fillmore and Atkins 1992) (hereafter FS) as well as on the FrameNet project (Ruppenhofer et al. 2010). Our hypothesis is that frames, i.e. conceptual scenarios in which words participate, can function as interlingual representations (Boas 2005; Baker 2009) grouping together not only synonym and near synonym terms but also equivalents. The ultimate goal of the research is to present criteria for validating equivalents of this kind of units, so as to improve multilingual terminological resources, in general, and lexical resources covering the subject field of law, in particular.

This paper is organized as follows. Section 2 defines what we understand by terminological equivalence, briefly accounts for the criteria guiding the identification of equivalents that have been put forth by lexicographers and terminologists, and explains how FS can be of assistance to our project. Section 3 describes the methodology, namely the constitution of the corpus, the selection of specialized verbs, the description of the verbs and the identification of their equivalents. Section 4 presents the results of the research obtained up to now. Finally, section 5 draws some concluding remarks and discusses future research perspectives.

## 2. In search of terminological equivalence

As Adamska-Sałaciak (2010: 387) states “to be able to talk about equivalence, there must be (at least) two entities of some kind, a certain relationship between those entities, and a certain value of that relationship”. In our research, the entities between which the relationship of terminological equivalence obtains are specialized verbs, i.e. lexical units (hereafter LUs) that are very relevant in the discourse of judges. This perspective is closer to that adopted by lexicographers, who view the entities in question as LUs (Wiegand 2005), than to that adopted by classical terminologists (e.g. Picht and Draskau 1985) who consider the entities between which the relationship of terminological equivalence obtains to be concepts. Both lexicographers and terminologists agree that the relationship between these entities is one of more or less symmetrical correspondence.

Although the tripartite division of equivalence degrees (full, partial and zero equivalence) is accepted by most, the literature is rather silent when it comes to the presentation of methodologies for identifying equivalents. In addition, the few ideas that lexicographers and terminologists propose as to what should be taken into account in the task of identifying equivalents can differ quite considerably. For instance, Piotrowski (1994) and

Atkins and Rundell (2008) consider it relevant to examine the discursive and formal dimension of the LUs, i.e. their collocational context, their value and function in discourse. Piotrowski (1994) suggests that equivalence should be equated as a third external entity or “*tertium comparationis*”. Atkins and Rundell (2008) argue for the use of corpora for finding equivalents.

In contrast, authors like Sandrini (1995, 1996, 1999) and Chromá (2004) reject the existence of full equivalents between terms belonging to different legal systems and prefer to document national concepts for each language separately, instead of providing translators with equivalents. Although we agree that the documentation of concepts is unavoidable in legal terminography, it seems to us that a terminological resource built in these moulds is not entirely helpful for translators. As they often have to meet short deadlines to produce translations, translators will not have the time to study the documentation, make a decision on the best equivalent and then look up another resource to find the correct usage of the equivalent term. Therefore, we believe that a suitable resource for legal translators is a lexical resource that balances the documentation of concepts with the description of the linguistic behavior of terms.

FS can be of assistance in the elaboration of such a resource as it offers a formal basis for linking the linguistic functioning of terms to conceptual scenarios. FS and its application FrameNet (Ruppenhofer et al. 2010) have been adapted in several terminological projects (e.g. Dolbey et al. 2006, Faber et al. 2006, Schmidt 2009). Some of these contributions include a multilingual dimension. For instance, the Kicktionary (Schmidt 2009), a resource describing football terminology, illustrates how valuable the FrameNet approach is to account for interlinguistic correspondences (and problems of true correspondence) between items pertaining to specialized subject fields.

### 3. Methodology

In this section we present a methodology to describe specialized verbs and to assign their equivalents. It is based on the theory of FS (Fillmore 1977, 1982, 1985; Fillmore and Atkins 1992) as well as on the methodology developed by FrameNet lexicographers (Ruppenhofer et al. 2010). Some of the adaptations that we made to our project are mentioned throughout the following sections.

#### 3.1 Corpus design

Whereas FrameNet mainly uses the BNC corpus (British National Corpus), we use a corpus of authentic judgments produced by the Supreme Court of Canada and by the *Supremo Tribunal de Justiça de Portugal*. This comparable corpus totals approximately 2,500,000 words for each language (i.e. English and Portuguese). Judgments are final decisions in legal disputes which are argued and settled in a court of law and determine winners and losers (Songer 2008: 78). They are written not only for the benefit of the parties involved in the case, but also

for the benefit of legal profession, for the benefit of other judges and for the benefit of appellate courts.

The corpus used in the research is composed of a single genre of texts, so as to facilitate the interpretation of the terminology therein (cf. Condamines 2008, Costa 2004, Rogers 2000). As text genres are social products, their instantiations can vary from one community of experts to another. For instance, although the Canadian and Portuguese judgments have a similar macrostructure, the Canadian judgment is in average twice longer than the Portuguese judgment. This can be explained by the fact that Canadian judges must look up not only the published legislation but also former judgments that relate to the case on which they are working and justify their selection. In contrast, this principle of binding precedent or *stare decisis* is not a formal principle that Portuguese judges must follow.

#### 3.2 Selection of specialized verbs

Candidate-terms were extracted from the comparable corpus by means of a term-extractor called TermoStat (Drouin 2003). They were then validated by applying the lexico-semantic criteria provided in L’Homme (2004), according to which a given lexical item may be a term if: 1) it has a meaning related to the subject field in question; 2) its actants (or arguments) are terms themselves according to criterion 1; 3) its morphological derivatives are terms themselves according to criteria 1 and 2 at the same time that there is a semantic relation between the lexical item and its derivatives; and 4) the lexical item has other paradigmatic relations to other terms validated by the same criteria.

The characteristics of judgments as a text genre are particularly helpful for applying criterion 1) as they provide clues about what happens in judgments (for an illustration of the application of these criteria please see Pimentel, forthcoming). Therefore, not only terms such as *to acquit* and *to convict* were selected but also other verbs, such as *to adduce*, *to argue*, *to satisfy* that are relevant in the corpus given the importance (and amount) of argumentation in the judgments.

#### 3.3 Frame-based description of the verbs

FS (Fillmore 1977, 1982, 1985, Fillmore and Atkins 1992) is based on the principle according to which the linguistic functioning of words can be linked to conceptual scenarios or *frames*. LUs are defined against the frames that they evoke which correspond to background knowledge. For instance, defining *Tuesday* (the LU) presupposes defining the notion of *cyclic calendar* (the frame). In addition, as extralinguistic entities, frames are considered to be language-independent to a fair degree (Boas 2005; Baker 2009).

Frames contain mandatory meaning slots or core Frame Elements (hereafter FEs) as well as optional slots or non-core FEs. We adopt this principle and adapt the methodology developed by the FrameNet lexicographers (Ruppenhofer et al. 2010). Whereas FrameNet lexicographers describe a frame and then the LUs that evoke it, we describe the selected verbs and then group them into frames. Therefore, in this research, verbs were

first analyzed by examining their behaviour in concordances. Then, their actantial structures (or number of arguments) were identified and each actant (or argument) was attributed a semantic label (e.g. Arguer, Evidence, Law). These elements were assumed to be the core-FEs of the frame evoked by the verb. For instance, the verb *to codify* has two actants: Law and Issue. The labels attempt to describe the classes of entities to which the linguistic realizations of the actants refer (Table 1).

For each verb we selected about twenty contexts illustrating its specialized meaning, its cooccurrents, other related terms, etc. We encoded the data in an XML editor and annotated the actantial structures of the verbs, i.e. the core-FEs, as well as optional information, such as the criteria used by the judge to make a decision (statutes, codes, previous decisions), i.e. the non-core FEs. We attributed labels to the frames that the verbs evoked and provided a tentative definition of them. Only then were the verbs grouped together into frames (Table 1). We did this for each language separately.

|                   |   |
|-------------------|---|
| <b>Frame</b>      | Regulations   |
| <b>Definition</b> | Written legal documents (Law) constitute or constrain a certain Issue.  |
| <b>Core FEs</b>   | Law – Written legal documents that have the force of law (e.g. Constitution, jurisprudence) or will have the force of law once enacted (e.g. bill, legislature). They arrange and regulate a set of Issues.<br>Issue – It refers to what is required or forbidden by Law but also to rights, responsibilities and principles that are defined in the Law. |
| <b>Terms</b>      | codify <sub>1</sub> (Law ~ Issue)<br>establish <sub>1</sub> (Law ~ Issue)<br>govern <sub>1</sub> (Law ~ Issue)<br>mandate <sub>1</sub> (Law ~ Issue)<br>prescribe <sub>1</sub> (Law ~ Issue)<br>provide <sub>1</sub> (Law ~ Issue)<br>recognize <sub>1</sub> (Law ~ Issue)  |

Table 1: The frame [Regulations] groups together 7 English verbs

Frames can group together certain synonyms, near-synonyms, opposites and related LUs. So, *codify*<sub>1</sub>, *establish*<sub>1</sub>, *govern*<sub>1</sub>, *prescribe*<sub>1</sub>, *mandate*<sub>1</sub>, *provide*<sub>1</sub> and *recognize*<sub>1</sub> were all grouped into the same frame because they have exactly the same core FEs: Law and Issue. We decided to call this frame *Regulations* and wrote a definition of it by taking into account the roles played by the core FEs as well as their linguistic realizations in the contexts (Table 1).

### 3.4 Identification of equivalents

Once the verbs in each language were grouped into frames, we then used the frame labels to link the verbs in the two languages. Thus, verbs with the same frame label were taken to be candidate-equivalents, this reflecting the idea that frames can function as interlingual representations (Boas 2005; Baker 2009).

In order to accomplish this task, we asked the

computational linguist, Benoît Robichaud, who works in the *Observatoire de linguistique Sens-texte* (OLST), to program search queries that group together those terms that contain the same frame label in their descriptions. For instance, the Portuguese verbs *consignar*<sub>1</sub>, *determinar*<sub>1</sub>, *disciplinar*<sub>1</sub>, *estabelecer*<sub>1</sub>, *estatuir*<sub>1</sub>, *estipular*<sub>1</sub> and *prescrever*<sub>1</sub> had all been attributed the same frame label, i.e. [Regulations], which is also the label attributed to *codify*<sub>1</sub>, *establish*<sub>1</sub>, *govern*<sub>1</sub>, *prescribe*<sub>1</sub>, *provide*<sub>1</sub> and *recognize*<sub>1</sub>. This means that the [Regulations] frame groups together 14 specialized verbs, i.e. 7 English verbs and 7 Portuguese verbs (see Appendix). Thus, we are dealing here with 49 pairs of candidate equivalents. As each of the aforementioned verbs has 7 candidate equivalents, the pairs of equivalents were studied closely because it was necessary to examine if they were full equivalents. If they were not full equivalents it was necessary to understand what differentiated the verbs in the pair. In order to do so, we compared the terms in the two languages by taking into account the following criteria:

1. **The way the verbs evoke the frame.** Here, we examined if the verbs evoked the frame in the same way. For instance, if the verbs in one language corresponded to opposites of verbs in the other language, then this meant that they profiled the frame in a negative or positive way. In this case, only candidate equivalents that profiled one of these possibilities were retained. For example, the verbs grouped together in the [Regulations] frame (see Appendix), do not display any difference in the way they evoked the frame because they are not opposites.
2. **The actantial structures of the verbs.** After selecting the relevant candidate equivalents, we proceeded to examine their actantial structures, namely the number and nature of the actants. For instance, all aforementioned verbs have the same actantial structures (see Appendix). Even if the application of this criterion did not reveal any difference between the verbs, we continued to examine them in more detail by means of criteria 3 and 4.
3. **The linguistic realizations of the FEs.** The linguistic realizations of the actants that correspond, by implication, to the core FEs were analyzed, so as to confirm or refute whether the nature of the verbs' actants is entirely identical. For instance, the linguistic realizations of the actants of the verbs grouped together into the [Regulations] frame all refer to the same kind of entities (see Appendix).
4. **The syntactic patterns of the verbs.** Finally, it was necessary to verify if there was any significant difference between the syntactic patterns of the verbs. Major differences between the syntactic patterns of the verbs, such as the lack of coincidence of the syntactic patterns of two or more actants of a verb, can raise translation challenges and may indicate that we are not dealing with full equivalents. For instance, no significant differences were identified in the syntactic patterns of the verbs grouped together into the [Regulations] frame.

Whenever all these criteria were met, the verbs were considered full equivalents. However, if there were significant differences in any of these elements, the verbs were considered partial equivalents.

#### 4. Results

The methodology described in the previous section allowed us to group together 200 verbs into 76 frames. 165 pairs of equivalents were identified. Among these, 117 pairs of equivalents (71%) not only evoked the same conceptual scenario but the actantial structures of the verbs, the linguistic realizations of the actants and their syntactic patterns were similar. Therefore, they were considered full equivalents. For instance, the verbs included in the Appendix section are full equivalents because no particular differences in the elements mentioned in section 3.4 were identified. However, 48 pairs of equivalents (29%) did not entirely meet these criteria and were considered partial equivalents. More precisely, these verbs did not have the same number of actants; the semantic nature of the actants differed; and/or their syntactic patterns were considerably different.

About 8% of the total number of equivalent pairs (i.e. 13 out of the 165 pairs of equivalents) were given the partial equivalence status because the comparison of the actantial structures of the verbs revealed that some verbs did not

have the same number of actants. For instance, *remit*<sub>1</sub> and *transitar*<sub>2</sub> evoke the same conceptual scenario in which a court transfers a case or a matter to another court for further consideration or decision. However, the court from which a case or a matter is transferred (COURT1) is never instantiated in the Portuguese corpus, although it is conceptually mandatory because a case or a matter cannot be transferred to a different court (COURT2) if it wasn't already in a previous one (COURT1). As the entity responsible for the action of transfer is never expressed, the Portuguese verb is intransitive whereas the English verb is transitive. As a result, these verbs may raise translation difficulties because when translating *transitar*<sub>2</sub> into English, the translator will necessarily have to use a term that denotes COURT1 because COURT1 is one of the actants of the equivalent *remit*<sub>1</sub>. However, as COURT1 is never expressed in the Portuguese contexts, the translator will not know which term they should use.

About 16% of the total number of equivalent pairs (i.e. 27 out of the 165 pairs of equivalents) were given the partial equivalence status because the comparison of the actantial structures of the verbs revealed that the nature of the actants differed from one verb to another. For instance, *commit*<sub>1</sub>, *engage*<sub>1</sub>, *incorrer*<sub>1</sub> and *praticar*<sub>1</sub> were grouped together into the frame [Crime] (Table 2).

|  |  |                              |  |
|--|--|------------------------------|--|
| <b>Frame:</b>  |  |                              |  |
| Crime  |  |                              |  |
| <b>Definition:</b>   |  |                              |  |
| A PROTAGONIST does something that is prohibited by law (CRIME).  |  |                              |  |
| <b>Core FEs:</b>   |  |                              |  |
| PROTAGONIST – The PROTAGONIST can be anyone: the accused or the accuser (criminal suit), the petitioner or the respondent (civil suit) and even the judge.   |  |                              |  |
| CRIME – Conduct or behaviour that is prohibited by law.  |  |                              |  |
| <b>Non-core FEs:</b>   |  |                              |  |
| CRITERION, MANNER, MEANS, PLACE, REASON, TIME  |  |                              |  |
| <b>Contexts:</b>   |  |                              |  |
| <i>It did not appear that a stranger could have <b>committed</b> the murder.</i>   |  |                              |  |
| <i>H.L. became addicted to alcohol, had emotional difficulties, and <b>engaged</b> in criminal conduct.</i>  |  |                              |  |
| <i>Por o mais, ficou sobejamente provado que o arguido <b>incorreu</b> na prática dos crimes pelos quais foi condenado - todos no espaço de cerca de 1 mês e meio, mais precisamente entre 011/05/2008 e 19/06/2008 -, única e exclusivamente para conseguir custear o consumo de cocaína e heroína.</i> |  |                              |  |
| <i>Os arguidos não <b>praticaram</b> os crimes pelos quais foram condenados, onde não haver, como não há, prejuízo sofrido pela assistente nem étimo fundante.</i>   |  |                              |  |
|  | <b>PROTAGONIST</b>   | <b>Terms</b>                 | <b>CRIME</b>   |
| English  | accused, appellant, defendant, firm, individual, mr. dinardo, mr. last, person, police chief, police officer, respondent, suspect, stranger, witness | <i>commit</i> <sub>1</sub>   | abuse, act, assault, breach, break and enter, crime, fraud, homicide, fault, offence, manslaughter, murder, neglect, perjury, robbery, theft, tort |
|  | Subject, NP  |                              | Object, NP   |
| English  | accused, City, Crown, euro-excellence, firm, H.L., one, Sanofi, they   | <i>engage</i> <sub>1</sub>   | activity, behaviour, bid shopping, conduct, dispute, infringement, misconduct, patenting, practice, production                                     |
|  | Subject, NP  |                              | Complement, PP   |
| Portuguese   | arguido, autor, condutor, devedor, lesante, réu  | <i>incorrer</i> <sub>1</sub> | abuso, crime, desobediência, falta, inadimplemento, incumprimento, infracção, lesão, mora, prática, responsabilidade, violação                     |
|  | Subject, NP  |                              | Complement, PP   |
|  | agente, arguido, autor, devedor, filho, lesante, pessoa, recorrente, relação, réu  | <i>praticar</i> <sub>1</sub> | acto, crime, facto, ilícito, infracção, violação   |
|  | Subject, NP  |                              | Object, NP   |

Table 2: The [Crime] frame

The PROTAGONIST can be anyone: the accused or the accuser (criminal suit), the petitioner or the respondent (civil suit) and even the judge. The CRIME is the conduct or behaviour that is prohibited by law and is typically instantiated by terms denoting the generic idea of crime (e.g. *crime*, *misconduct*, *infringement*) or by terms denoting specific types of crime (e.g. *break and enter*, *theft*, *homicide*). We observed that the instantiations of the FE CRIME in the contexts in which the term *commit*<sub>1</sub> occur denote specific types of crime, whereas the instantiations of the FE CRIME in the contexts in which the terms *engage*<sub>1</sub>, *incorrer*<sub>1</sub> and *praticar*<sub>1</sub> occur denote the generic idea of crime. As a result, the term *engage*<sub>1</sub> can be translated by *incorrer*<sub>1</sub> as well as by *praticar*<sub>1</sub>, but *commit*<sub>1</sub> cannot be translated by *incorrer*<sub>1</sub> or by *praticar*<sub>1</sub> in all contexts.

Finally, about 6% of the total number of equivalent pairs (i.e. 10 out of the 165 pairs of equivalents) were given the partial equivalence status because the comparison of the actantial structures of the verbs revealed that the verbs' syntactic patterns were different. For instance, *commit*<sub>2</sub>, *impose*<sub>1</sub>, *order*<sub>1</sub>, *require*<sub>1</sub> and *determinar*<sub>2</sub> were grouped together into the frame [Order]. This frame describes a scenario in which the LAW or its representative, the JUDGE, commands somebody to do something. Thus, this frame involves four core FEs: JUDGE, LAW, DUTY and PROTAGONIST. The full equivalent of *determinar*<sub>2</sub> is *order*<sub>1</sub>, whereas *commit*<sub>2</sub>, *impose*<sub>1</sub> and *require*<sub>1</sub> were considered partial equivalents because the observation of these verbs revealed significant differences in their syntactic patterns when compared to the syntactic patterns of *determinar*<sub>2</sub>. The Portuguese verb admits three syntactic patterns:

JUDGE (Sub. NP) ~ PROTAGONIST (Obj. NP) DUTY (Comp. That-clause)  
 JUDGE (Sub. NP) ~ DUTY (Comp. That-clause)  
 JUDGE (Sub. NP) ~ DUTY (Obj. NP)

The first pattern occurs only once, whereas the second and the third pattern occur very often. Similarly, the English term *order*<sub>1</sub> admits the first pattern three times, but the most frequent patterns are the second and the third. In contrast, *commit*<sub>2</sub> only admits the pattern JUDGE (Sub. NP) ~ PROTAGONIST (Obj. NP) DUTY (Comp. PP) which is similar to the first mentioned pattern of *determinar*<sub>2</sub> but only occurs once in its contexts. The term *impose*<sub>1</sub> only admits the patterns JUDGE (Sub. NP) ~ DUTY (Obj. NP) PROTAGONIST (Comp. PP) and LAW (Sub. NP) ~ DUTY (Obj. NP) PROTAGONIST (Comp. PP) which never occur in the contexts of *determinar*<sub>2</sub>. Among the syntactic patterns that the term *require*<sub>1</sub> admits the only one that coincides with those of *determinar*<sub>2</sub> is JUDGE (Sub. NP) ~ DUTY (Obj. NP) but this pattern occurs only twice in the contexts of *require*<sub>1</sub>, whereas it is very frequent in the contexts of *determinar*<sub>2</sub>.

For the moment, we cannot draw considerations on zero equivalents because only 200 specialized verbs were analyzed and because the purpose of the research was to find valid equivalents rather than zero equivalents. Nevertheless, we make the hypothesis that when none of the aforementioned criteria are met, then we are dealing with zero equivalents.

## 5. Concluding remarks and future work

In this study, we proposed a methodology for describing specialized verbs and for identifying their equivalents based on FS. The methodology consisted in: extracting verbs from a comparable corpus, validating the specialized meaning(s) of the verbs, identifying their actantial structures, describing the frames that they evoke, grouping the specialized verbs together, and assigning their equivalents by means of the labels attributed to them. Every piece of information concerning the verbs served to compare the 165 pairs of candidate equivalents as well as to validate their equivalence status. The methodology revealed that the vast majority of the candidate terms indeed corresponded to valid equivalents. It also revealed that: full equivalents evoke the same frame; they have the same number of mandatory meaning slots (FEs or actants); their FEs are instantiated by means of terms that refer to the same kind of entities; and their syntactic patterns are similar. Differences concerning these elements proved to be the reason why certain specialized verbs are only partial equivalents.

Taking this into account, the findings of the research indicate that the extralinguistic descriptions of the verbs (the frames that they evoke) as well as the description of their linguistic behaviour provide sufficient information to assign and examine the candidate equivalents. Moreover, the methodology also allowed us to differentiate between full and partial equivalents. Particularly helpful in the task were the actantial structures of the verbs that correspond to the core FEs of the frames that they evoke as well as the labels attributed to each frame and that were used to identify the candidate equivalents. This may be an important clue for future work, namely for the automatization of the manual process of identification described in the paper. One of the improvements to our method could consist in the automatic annotation of the contexts in which the verbs occur, such as the system proposed by Hadouche et al. (2011a) and evaluated in Hadouche et al. (2011b). As contexts contain the information used to describe the verbs and assign their equivalents, the automatization of the annotation would accelerate the terminologist's work. Finally, it would be helpful to design an automatic system that groups together verbs by means of their actantial structures because, when compared to the frame labels, this kind of information is richer and more objective.

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**Appendix: The frame [Regulations] groups together synonym terms, near synonym terms as well as equivalent terms**

|  |   |  |  |
|--|---|--|--|
| <b>Frame:</b>  |   |  |  |
| Regulations  |   |  |  |
| <b>Definition:</b>   |   |  |  |
| Written legal documents (LAW) constitute or constrain certain matters (ISSUE).   |   |  |  |
| <b>Core FEs</b>  |   |  |  |
| LAW – Written legal documents that have the force of law (e.g. Constitution, jurisprudence) or will have the force of law once enacted (e.g. bill, legislature). They arrange and regulate a set of Issues.<br>ISSUE – It refers to what is required or forbidden by LAW but also to rights, responsibilities and principles that are defined in the LAW.  |   |  |  |
| <b>Non-core FEs:</b>   |   |  |  |
| CASE, CONDITION, MANNER, MEANS, MODE, TEXT   |   |  |  |
| <b>Contexts:</b>   |   |  |  |
| <p><i>Section 3(1)(a) <b>codifies</b> the foreign aspect of double criminality by requiring that the offence upon which extradition is requested be criminal in the requesting state and carry the specified penalty.</i></p> <p><i>Article 416 <b>establishes</b> a principle of equal partition of the patrimony between the spouses upon dissolution of the marriage.</i></p> <p><i>Section 84(2) <b>governs</b> the release of foreign nationals.</i></p> <p><i>The Legal Rights provisions of the Charter neither <b>mandate</b> nor prohibit specific conduct by Canadian officials.</i></p> <p><i>The Government may, by regulation, <b>prescribe</b> additional hiring requirements for police officers and special constables.</i></p> <p><i>Section 146(2)(a) <b>provides</b> that a statement will be inadmissible unless it is voluntary.</i></p> <p><i>The Act respecting administrative justice <b>recognizes</b> certain legal principles, such as the duty of fairness and respect for basic procedural safeguards.</i></p> <p><i>O artigo 13º da Lei Fundamental <b>consigna</b>: 1. Todos os cidadãos têm a mesma dignidade social e são iguais perante a lei.</i></p> <p><i>O artº 56º nº 2 do C. P. Civil <b>determina</b> que no caso de execução por dívida provida de garantia real sobre bens de terceiro a execução seguirá directamente contra esse terceiro se se quiser fazer valer a dita garantia.</i></p> <p><i>As normas que <b>disciplinam</b> a interpretação da declaração negocial são, pois, igualmente válidas para a interpretação de uma sentença.</i></p> <p><i>O nº2 do art.808º do Código Civil estabelece que “A perda do interesse na prestação é apreciada objectivamente”. Para além deles, <b>estatuí</b> o artigo 69.º n.º1, que: “As crianças têm direito à protecção da sociedade e do Estado, com vista ao seu desenvolvimento integral...”</i></p> <p><i>Em sentido idêntico <b>estipula</b> o art. 66º do C.P.Civil que são da competência dos tribunais judiciais as causas que não sejam atribuídas a outra ordem jurisdicional.</i></p> <p><i>Ademais, a Constituição <b>prescreve</b> também gozarem os salários de garantias especiais, nos termos da lei (artigo 59º, nº 3).</i></p> |   |  |  |
|  | <b>LAW</b>  | <b>Terms</b>   | <b>ISSUE</b>   |
| <b>English</b>   | article, chapter, legislature, provision, section   | <i>codify</i> <sub>1</sub>   | aspect, case law, criterion, doctrine, immunity, principle, right, standard, test  |
|  | Subject, NP   |  | Object, NP   |
|  | article, court, bill, Charter of the French language, section, act, New Brunswick Human Rights Code, Criminal Code, Code, text, case law, jurisprudence, law, legislature, Ridge v. Baldwin and Nicholson | <i>establish</i> <sub>1</sub>  | principle, rule, framework, criterion, test, scheme, duty, presumption, confine, system, right, discretion, limit, power |
|  | Subject, NP   |  | Object, NP<br>Complement, that-clause  |
| Charter, Financial Administration Act, law, Local Authorities Election Act, Miranda, progeny, provision, regulation, rule, section, statute  | <i>govern</i> <sub>1</sub>  | action, administration, admissibility, conduct, determination, disposition, joinder, management, proceedings, promotion, release, relation |  |

|            |   |                                 |  |
|------------|---|---------------------------------|--|
|            | Subject, NP   |                                 | Object, NP   |
|            | act, Charter, Constitution, Convention, law, provision, section, standard   | <i>mandate</i> <sub>1</sub>     | approach, assessment, compliance, conduct, dismissal, floor, form, holding, inquiry, requirement, rules, use   |
|            | Subject, NP   |                                 | Object, NP   |
|            | administrative body, City, court, Government, Governor in Council, judge, law, Parliament, section, state, statute, standard  | <i>prescribe</i> <sub>1</sub>   | approach, consequence, dismissal, limit, offence, period, procedure, requirement, rule, violation  |
|            | Subject, NP   |                                 | Object, NP   |
|            | Taxation Act, Labour Relations Act, section, rule, Automobile Insurance Act, act, agreement, Charter, legislature, law, article, Parliament   | <i>provide</i> <sub>1</sub>     | case, freedom, statement, disqualification, relief, introduction, appeal, partition, compensation, rehabilitation, factor, possibility, protection, procedure, benefit     |
|            | Subject, NP   |                                 | Object, NP<br>Complement, that-clause  |
|            | act, article, British Columbia Court of Appeal, Canada Transportation Act, court, doctrine, equity, jurisprudence, law, liability scheme, principle, provision, Rail Code, remedy, standard | <i>recognize</i> <sub>1</sub>   | ability, burden, difference, distinction, duty, free will, judgment, obligation, presumption, principle, right   |
|            | Subject, NP   |                                 | Object, NP   |
| Portuguese | artigo, lei, lei preambular, notário, propósito legal, relação  | <i>consignar</i> <sub>1</sub>   | agravamento, direito, modalidade, possibilidade, prazo, regra  |
|            | Subject, NP   |                                 | Object, NP<br>Complement, that-clause  |
|            | artigo, constituição, decreto-lei, juiz de instrução criminal, legislador, lei, preceito, regra   | <i>determinar</i> <sub>1</sub>  | caso, cominação, competência, obrigatoriedade, transcrição, valor probatório   |
|            | Subject, NP   |                                 | Object, NP<br>Complement, that-clause  |
|            | Código do Trabalho, diploma, disposição, empregador, norma, regime, regra   | <i>disciplinar</i> <sub>1</sub> | Acidentes de Trabalho, actividade, contrato, despedimento, exploração, Grelha de Comutação, indemnização, interpretação, extinção, recurso, regime, relação, trabalho, uso |
|            | Subject, NP   |                                 | Object, NP   |
|            | artigo, código, constituição, disposição, lei, nº, normativo  | <i>estabelecer</i> <sub>1</sub> | agravamento, momento, obrigatoriedade, presunção, princípio, regra   |
|            | Subject, NP   |                                 | Object, NP<br>Complement, that-clause  |
|            | artigo, número, ECD, EDFP, Convenção Europeia dos Direitos do Homem, lei, disposição, diploma, norma  | <i>estatuir</i> <sub>1</sub>    | linha da força, regime, consequencia, distinção, sentido, base, principio  |
|            | Subject, NP   |                                 | Object, NP<br>Complement, that-clause  |
|            | alínea, artigo, lei, número   | <i>estipular</i> <sub>1</sub>   | modo, prazo  |
|            | Subject, NP   |                                 | Object, NP<br>Complement, that-clause  |
|            | artigo, cláusula, Código, Constituição, diploma, disposto, número, lei, redacção  | <i>prescrever</i> <sub>1</sub>  | conversão, forma, princípio, tempo   |
|            | Subject, NP   |                                 | Object, NP<br>Complement, that-clause  |