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Framing terminology in legal translation

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Abstract: Legal language and its translation are considerably more complex than scientific and technical translation because the legal object is a text that performs an action. For this reason it is not only necessary to consider the legal terminology but also the structure of the text itself as well as the verbs used and their performative act. In this paper, we explore how the analysis of terminological meaning in legal texts can be addressed from the perspective of Frame-Based Terminology (FBT), a cognitive approach to domain-specific language, which directly links specialized knowledge representation to cognitive linguistics and cognitive semantics. In a case study on international agreements in the context of environmental law, we analyze the argument structure of verbs as well as the conceptual categories of their semantic arguments providing insights into the semantic profile of this text type. The representation of the verb class and its semantic arguments can be considered a type of interlingua that could be used as a basis for translation.

Keywords: international environmental agreements, frame-based terminology, predicate-argument structure

1 Introduction

An important issue in translation is how to achieve sameness of meaning across languages and at all levels of the text. In the case of specialized texts, whether scientific or legal, a considerable percentage of translation quality depends on finding optimal correspondences for the specialized language units or terms used to convey the text message. However, even though both legal and scientific terms name concepts in the outside world, their nature is fundamentally different. Whereas

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scientific terms generally refer to concrete entities or actions, legal terms designate abstract or metaphysical ones, which have been created by humans (Mattila 2006). As pointed out by Brakjus (1956), if a botanical text describes a plant inaccurately, the nature of the plant does not vary. However, if a legislator describes or interprets a legal act differently, reality can change. The specialized knowledge in a legal text is, on the one hand, contained in the document itself as the language object that represents the act, and, on the other, in the legal system as a whole in which the legal act takes place and produces an effect.

In legal translation, differences in legal systems in the source and target language-cultures are conducive to the absence of equivalent terminology across languages (Cao 2007; David and Brierly 1985). This is a major problem since categories and concepts basic to one system may be totally foreign to another. However, gaps in terminology correspondences are only one part of the problem of legal translation. The real difficulty goes somewhat deeper since a legal text is a 'many-splendored entity' with various layers, which are organized in 'frames'. In its most general sense, a frame is a type of mental representation. It is based on the belief that cognitive states and processes are constituted by the occurrence, transformation, and storage (in the mind/brain) of information-bearing structures (representations) of one kind or another (Pitt 2017).

In Cognitive Science, a frame is regarded as an organized package of knowledge that humans retrieve from long-term memory to make sense of the world. Framing experience involves applying stored knowledge derived from similar contexts and situations with a view to facilitating social interaction as well as an understanding of complex events and how to deal with them. Frames have also been applied in Language. Frame Semantics (Fillmore 1982; Filmore and Baker 2010) refers to a wide variety of approaches to the systematic description of natural language meanings. It studies how linguistic forms evoke or activate frame knowledge, and how the frames thus activated can be integrated into an understanding of the passages that contain these forms. This process is useful for understanding legal texts because it includes the integration of non-linguistic information.

At the heart of legal frames are events and actions in the real world, which humans have the need to evaluate, describe, and regulate in some way. The legal document is based on how such activities are lexicalized and conveyed in language. This is not only a question of terminology and syntax, but rather the configuration of semantic roles and categories.

It is unfortunate that many authors, who (quite understandably) lament the absence of interlinguistic correspondence, limit their research to the compilation of large inventories of idiosyncratic grammatical and lexical characteristics. Such structures include redundancies, formulaic (often archaic) expressions, foreign

words and Latinisms, syntactic discontinuity, impersonal and passive constructions, nominalization, and complex sentences (Hiltunen 2012; Williams 2004: 112–115). These lists of items, though interesting from an anecdotal perspective, only confirm what is already known. As Azuelos-Atias (2017: 6) points out, the factor that explains the difficulty of laypersons to understand legal language is the frequent use of implicit professional information. However, "this is not a plot of lawyers against legal laypersons: it is a characteristic of any professional jargon rich enough to count as a sub-language" (Azuelos-Atias 2017: 7).

This emphasis on the half-empty glass (instead of the half-full one) means that considerably less is said about macrotextual structure, conceptual organization, and implicit knowledge structures that do match or at least overlap to some degree in legal texts and are the basis of some level of interlinguistic correspondence. Part of the problem lies in the tendency in legal translation to tiptoe around semantics and meaning structures in general, perhaps because semantics is messier than syntax and more difficult to analyze. Yet, at the end of the day, meaning is what translation is all about.

Theories of legal translation have become increasingly elaborate in highlighting contextual factors and the relevance of comparative legal analysis for the application of translation techniques. However, these elements are not always integrated into operational models encompassing key parameters for decision-making (Prieto Ramos 2014: 122).

One of the exceptions is the sociosemiotic approach towards legal translation (Cheng et al. 2014), which involves the interaction between language and law, discourse and society (Cheng et al. 2014: 23). They present the Translational Triangle as a means to address translation problems, where the possible equivalence between a source term and target term can be established, depending on whether the terms are embedded in the same or a different legal context. Another context-aware approach towards legal translation is the application of functionalism by Prieto Ramos, *inter alia*, who proposes an integrative model for problem-solving in legal translation with a strong emphasis on the communicative situation of the translation and the legal macro-contextualization according to the legal systems involved, branches of law, and legal text-type and genre (Prieto Ramos 2014: 122).

In this paper we take a cognitive approach that complements these sociosemiotic and context-aware translation approaches. Specialized knowledge units in legal texts as well as their relations must be examined at deeper levels. Although the meaning of certain concepts and relations seems to be evident in the surface structure of the text, this is merely the tip of the iceberg. There is a whole world of meaning lying beneath the surface, which translators should be enabled to perceive and access. Legal terminology, as

the repository of legal meaning, thus has a wider scope since it includes not only the usual single and multi-word units, but can extend to entire mental and physical perception acts as well as speech acts within legal text types, each with a specific template.

The legal document should thus be envisaged as a language document with a macro-objective such as *authorizing*, *denouncing*, *guaranteeing*, *ratifying*, etc. As shall be seen, the legal document should be regarded as an object consisting of parts, each of which can be decomposed into a set of meaning clusters. These clusters are formed by their predicate-argument structures with their relevant lexical domains and the conceptual categories of their arguments.

In this paper, we explore how the analysis of terminological meaning in legal texts can be addressed from the perspective of Frame-Based Terminology (FBT) (Faber 2012, Faber 2015), a cognitive approach to domain-specific language, which directly links specialized knowledge representation to cognitive linguistics and cognitive semantics. In FBT, knowledge acquisition begins at the term-level, progresses to the phrase level, and finally results in the codification of an entire knowledge frame.

The specific legal context addressed here is international environmental law. We explore how specialized knowledge frames can be derived through the progressive expansion of term contexts, based on the information obtained from a corpus of specialized legal texts and its configuration with specific sections of the text template. The data thus obtained can be used to structure categories and create frames that characterize general processes and actions in the legal domain.

2 The concept of *frame*

As previously mentioned, Frame-based Terminology is based on Frame Semantics (Fillmore 1968, Fillmore 1982). Generally speaking, Frame Semantics studies how linguistic forms evoke or activate frame knowledge, and how the frames thus activated can be integrated into an understanding of the passages that contain these forms. This process includes the integration of non-linguistic information. Although frames have been applied in a wide range of disciplines from Linguistics to Social Psychology to Computer Science, they are slippery customers and not easy to pin down. To complicate matters further, different researchers have adapted frames to their own purposes. This has led to a proliferation of proposals and perspectives on what a frame is, what it consists of, and how it can be specified.

Gamerschlag et al. (2014) highlight Busse's (2012) distinction between *concept frames* and *predicative frames*. *Concept frames* mostly represent entities designated by nouns and noun phrases. They are what Barsalou (1992) refers to when he states that frames are a general format for the representation of categories. According to Petersen and Gamerschlag (2014: 317), a concept frame consists of a set of attribute-value pairs with each attribute specifying a property by which the concept is characterized.

In law, one example of a conceptual category is a LEGAL AGREEMENT. One member of this category is the concept of TREATY, whose subtypes (e.g. convention, covenant, protocol, etc.) can vary, depending on their purpose, number of participants, and contents.

In contrast, *predicative frames* are used for the description of predicates (usually verbs and their nominalizations). They represent events and states of affairs in terms of their situation types and participants. This type of frame stems from Fillmore's (1968) case frames that characterize verbs and clauses in terms of the semantic roles of their arguments. When frames are specified as an action or process involving participants, this provides a predicative frame linking two or more semantic categories.

Frame-based Terminology differs from FrameNet (Baker 2014), the lexical database of English that is both human- and machine-readable, based on Fillmore's frames, because frames are assumed to be non-language specific and derived from conceptual invariants in a wide range of languages. The existence of such near-primitives has been documented in many linguistic theories and approaches, as observed by Apresjan (1993), Wierzbicka (1996), Goddard (2003), and Van Valin (2006).

Nevertheless, one might well ask whether in the case of legal translation, any of this really matters since many legal texts tend to be culture-specific. In the legal domain, it is true that non-culture-specific frames are not feasible. However, it is possible to talk about frames that are present in some form in most language-cultures that possess a legal system. One example of such a frame is that of RATIFY, which establishes the relational context for the act of RATIFICATION (participants, object, means, and effect). The participants in the ratification frame would be 'parties' (usually political bodies such as nations or states) and the object would be some sort of agreement between the parties, such as a treaty. Concept frames and predicative frames are thus closely linked.

In the same way as general language words, specialized knowledge units or terms acquire their meaning in context, more specifically within a frame in which their role in a process, activity, or event is highlighted and related to other concepts in the same frame. In the legal domain, both concept and predicative frames are useful for knowledge representation since the concept

frame for TREATY is one of the participants in the predicative frame of RATIFY. Both types of frame are anchor points, on which the translator can base his/her translation since these are very general structures that exist in most cultures. However, the focus here will be mostly on predicative frames, which encode actions and events.

3 Frames in law

Within the context of the law, *framing* a given situation, event or activity generally involves describing it as a configuration of legal concepts, designated by specialized knowledge units. Such concepts can be entities, attributes, relations, actions, or processes. The intention of the text sender is generally to present an action or sequence of actions as a legal issue. This construction of an event involves categorizing the participants and relating them through the actions that they have performed or are performing or have been affected or are being affected by.

This is what occurs in legal documents, where such frames are lexicalized. The exact lexicalization depends on the syntactic structure and rules of each language. The legal document itself can thus be conceived as the 'translation' of a situation in the same way as we as human beings 'translate' and process information each day through our senses. This is how we understand the world by identifying concepts, and placing them within meaning clusters.

In law frames, legal terms and their configurations may define the subject matter of a dispute or crime to make it susceptible to obtaining a judgment in favor of or against one of the parties involved. In environmental law, crimes usually refer to activities that have damaged the environment. They may also refer to an agreement for all participants to act in a certain way to preserve or favor the environment. Since such events may be formulated from more than one viewpoint, this can be regarded as a kind of (monolingual) translation because a given real-world occurrence is translated from thought into language within the context of a legal system and with a certain intention.

Consequently, at the heart of many legal frames and documents, we find events and actions in the real world, which are related to the general lexical domains of GENERAL ACTION, PERCEPTION, CHANGE, POSSESSION and sometimes even FEELING. Accordingly, superimposed on the legal portrayal or 'translation' of these events are one or more cognition, perception, manipulation, and/or speech acts whose purpose is to communicate, define, and regulate participants and their actions.

This signifies that verbs in legal texts are the real *terms* because they are at the center of legal meaning. In specialized language, this may sound strange because

general language verbs are rarely regarded as terms, much less legal terms, and thus are not included in specialized knowledge resources. Nevertheless, they are crucial because their meaning as well as their argument structure relates legal concepts.

For this purpose, we semantically classified 12,000 general language verbs based on their meaning.[1] The inventory of verb classes was derived from definition factorization, as described in the Lexical Grammar Model (LGM), and validated by corpus analysis. This resulted in the following general lexical domains: EXISTENCE (*be, happen*), CHANGE (*become, change*), POSSESSION (*have*), SPEECH (*say, talk*), EMOTION (*feel*), ACTION (*do, make*), MENTAL PERCEPTION (*know, think*), MOVEMENT (*move, go, come*), PHYSICAL PERCEPTION (*see, hear, taste, smell, touch*), MANIPULATION (*use*), CONTACT/IMPACT (*hit, break*) and POSITION (*put, be*). Other smaller classes included LIGHT, SOUND, BODY FUNCTIONS, WEATHER, etc.

Our proposal is that these conceptual classes and the verbs within them are the driving force in legal documents, which can be conceived as structured clusters of acts of PHYSICAL PERCEPTION, COGNITION, and SPEECH, which present states of affairs that either exist or will exist, and may be acted upon in some way by the parties, who generally aspire to control them in some way. This combination of propositions and the semantic classes activated must also be considered within the context and structure of the legal document as well as the place that it holds within the text typology of the legal system in question.

Of all lexical domains within this context, SPEECH is perhaps the one that is most important since a legal document is a kind of text that performs an act with the help of certain speech verbs. It presents, affirms, ratifies, denounces, etc. a certain state of affairs in the real world that generally must be controlled, regulated, improved, or acted upon in some way. Table 1 shows the main structural parameters and subparameters of the domain of speech verbs, which were also valid for Spanish.

The dimensions most applicable to legal texts are *to say sth is the case* and *to say sth for a certain purpose*. These dimensions are important because they include the most prominent speech act verbs (within the framework of Austin's (1962) Speech Act Theory, as developed by Searle 1969), and places them in a much wider context since speech in legal language is also closely linked to physical and mental perception as well as action. This is evident in the fact that many speech verbs (*recognize, acknowledge, consider, observe, note*, etc.) can also be cognition verbs or even visual perception verbs, depending on

1 In previous research within the framework of the Lexical Grammar Model (Faber and Mairal 1999), we analyzed and categorized the semantic and syntactic structure of 12,000 general language verbs, first in English and subsequently in Spanish.

Table 1: Structural parameters and subparameters of the lexical domain SPEECH.

SPEECH: TO SAY/SPEAK/TELL/TALK				
TO SAY STH IN A CERTAIN WAY	duration	Long		*repeat, insist*
		Short		*mention*
	velocity	Quickly		*chatter, babble*
		Slowly		*drawl*
	voice tone	Loud		*exclaim, shout, yell*
		Soft		*whisper, mutter, murmur*
	emotion	anger		*snarl*
		pride		*boast, brag*
TO SAY STH POSITIVE OR NEGATIVE	positive (to say that sth is the case)	to say yes		*accept, agree*
		to say that sth is true	to say sth will happen	*foretell, predict,*
			to say sth is certain	*promise, guarantee*
		to say sth positive about sb/sth	speaking favorably	*praise, extol*
	negative (to say that sth is not the case)	to say no		*refuse, reject*
		to say negative things about sb/sth		*criticize, slander*
		to say sth bad may happen		*warn, threaten*
TO SAY STH FOR A CERTAIN PURPOSE	so that they will do sth			*order, direct*
	to obtain sth from sb			*ask, request, petition*
	to tell sb about sth	to express an opinion/judgement		*reason*
		so that they will remember it		*remind*
		so that they will be aware of it		*inform, notify*
		to give an account of it		*describe, discuss*
TO SAY STH BY A CERTAIN MEANS	*telephone, telegraph, fax*, etc.			
TO SAY STH IN A DIFFERENT LANGUAGE	*translate*			

whether the thoughts or perceived entity are vocalized. As verbs, each has a specific argument structure that sets the stage or configures the participants in the action.

The assumption is that verbs within the same lexical subdimension have a similar syntax and, even more important, combine with the same semantic types of argument. In the case of specialized language, the polysemy of these general language verbs is limited because the scope of their meaning is restricted to the field of Environmental Science. However, verb meaning is not restricted by syntax, but rather by the nature of their arguments, which belong to a set of specific conceptual categories.

As is well known, *predicate argument structure* refers to the lexical representation of argument-taking lexical items (Levin 2013). These are typically verbs and their nominalizations. The specification of the argument structure of a verb involves identifying the number of arguments that a lexical item can take, their syntactic expression, and their semantic relation to the predicate. Although syntactic expression is language-specific, semantic relations are not. Semantic relations generally take the form of semantic roles such as Agent, Patient, Instrument, Experiencer, Location, Goal/Theme, etc.

For example, as shall be seen, most of the verbs used in the constructions in an international treaty have an Agent (partners/nations/parties) and a Goal or Theme that codifies a current situation or past event, classified as a need, threat, vulnerability, concern, etc. This second argument may either be in the form of a proposition or encapsulated proposition. As shall be seen, these verbs are the real terms in legal language and provide the frame and context in which legal texts should be understood.

However, apart from the semantic role, each argument also has a language-independent semantic class. These semantic classes or concepts belong to a larger structure or ontology, defined in its artificial intelligence sense as the specification of a conceptualization. The ontology contextualizes each argument within a hierarchy.

4 A case study in environmental law

Environmental Law is a rapidly growing area of legal activity. It generates a wide range of legal documents. Environmental crime covers acts that breach environmental legislation and cause significant harm or risk to the environment, its inhabitants, and their health. The need to prevent such actions and protect the environment and its inhabitants has given rise to laws, directives, treaties, protocols, conventions, etc.

One of the most prominent areas of environmental crime is pollution or the illegal emission or discharge of harmful substances into the air, water, or land. In EcoLexicon,[2] our environmental terminology knowledge base, we have begun to include the basic terms referring to environmental law. Though still incomplete, our inventory is rapidly growing (see Figure 1).

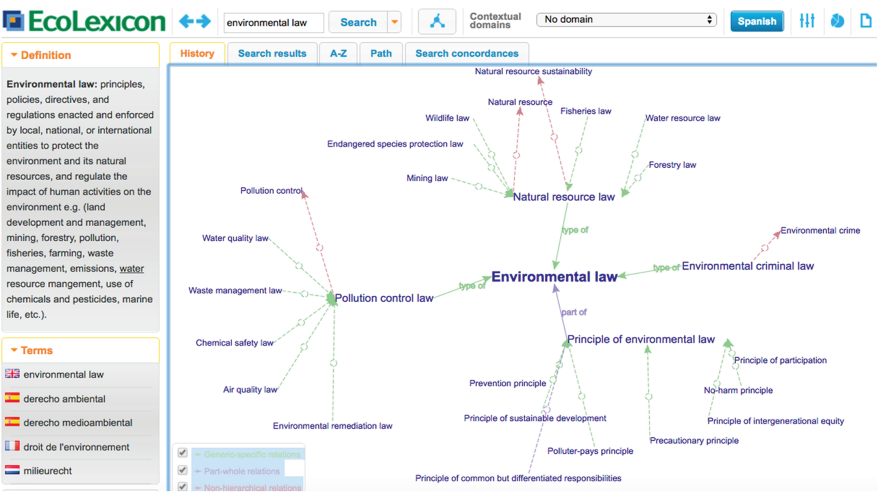

Figure 1: Conceptual network of environmental law in EcoLexicon.

Because of the cross-border aspect of pollution and of environmental crimes, accidents, and disasters, many environmental law documents are international. They are either simultaneously created in different languages or subsequently translated, usually from English. Such texts focus on processes and actions (pollution, contamination, etc.) which are lexicalized as verbs or as the nominalizations of verbs.

For this reason, verbs are the central component of these texts and should be regarded as terms since they are the main structuring component. An analysis of their argument structure as well as the conceptual categories of their semantic arguments thus provides insights into the semantic profile typical of a certain type of document such as an environmental treaty or international agreement. In this way it is possible to highlight the most prominent speech acts, actions, and processes as well as the semantic categories of the typical participants in legal frames.

The corpus used for this research, which is a subset of the Environmental Law corpus in EcoLexicon (9,208,695 words, see Appendix), has 338,958 words,

2 Available at: ecolexicon.ugr.es.

and is exclusively composed of the most significant international environmental agreements that have been ratified over the last 50 years in regard to climate change, the ozone layer, wetlands, marine dumping, biodiversity, air pollution, etc. The agreements, which are both bilateral and multilateral, are frameworks, protocols, and conventions.

Although these agreements focus on different issues, they all have a similar structure, consisting of a preamble followed by articles divided into larger thematic groups. Presumably, each section includes verbs belonging to the same or related lexical domains and dimensions, which means in turn that their argument structure would be similar. Furthermore, the verbs typically found in each section and subsection are those that convey the performative nature of each subsection of the text. This information structure generated the following template or frame (see Table 2).

Table 2: Macrostructure of international environmental agreements.

International Treaty	Environmental
	1. Preamble
	2. General Provisions
	a. Definitions/Use of terms
	b. Objectives/Scope
	c. Principles/Obligations
	3. Cooperation actions/Action plans
	a. Measures
	b. Regulations
	i. Penalties (liability, compensation)
	c. Monitoring
	d. Communication
	i. Information exchange
	ii. Public education (awareness raising)
	e. Research and development
	i. Capacity building/strengthening
	ii. Technology development/transfer
	4. Institutional arrangements
	a. Conference of the parties and meetings
	b. Secretariat
	c. Subsidiary bodies
	d. Financial agreement
	e. Adoption of protocols, annexes and amendments

(*continued*)

Table 2: (*continued*)

International Treaty	Environmental
	f. Right to vote
	g. Compliance control
	h. Settlement of disputes
	5. Formal Provisions
	a. Entry into force
	b. Ratification/Approval/Acceptance
	c. Withdrawal
	d. Depositary
	e. Authentic texts

Not surprisingly, most of the variation was found in Section 3, whose information structure depends on the topic addressed as well as how specific and regulatory the document is. Nevertheless, even though the information can vary, the typical verbs used to lexicalize the actions largely coincide.

The sentences in these sections often consist of two parts. The first section of the sentence is a proposition ruled by a cognition or speech verb, and the second is a proposition that refers to either a current negative state of affairs or a possible future action, usually in regard to pollution.

4.1 Section 1 of environmental treaties: Preamble

For example, if we look at the preamble of environmental agreements, there is the systematic repetition of the following verbs (*ing*-form):

Example of Preamble Structure
The Parties to this Convention,
Acknowledging that change in the Earth's climate [...],
Noting that the largest share of historical and current global emissions [...]
Noting that there are many uncertainties in predictions of climate change [...]
Acknowledging that the global nature of climate change calls for [...]
Recalling the pertinent provisions of the Declaration of the United Nations [...]
Reaffirming the principle of sovereignty of [...]
Recognizing that States should enact effective environmental legislation, [...]

It is hardly an accident that most of the verbs belong to the lexical domains of VISUAL PERCEPTION, COGNITION, and SPEECH, and some, such as *recognize*, *note*, and *consider* can even belong to all three (see Table 3). In the domain of COGNITION, *recognize, consider*, and *acknowledge* all belong to the dimension *to use one's mind to form an idea of something* [*think of*], which is subcategorized in degrees of certainty. Part of this same structure is mirrored in the lexical domain of SPEECH as well. The correspondence between subdimensions is a reflection of the close connection of thought and language (see Table 4).

Table 3: Most frequent verbs and lexical domains in preambles of international environmental agreements.

Preamble verbs	International Treaties
recognize [COGNITION] [also speech and visual perception]	Aarhus, AEWA, Alpine, Antarctica, Barcelona, Basel, Bern, Bucharest, Cartagena, CBD, CITES, Paris, GenevaAir, GenevaTimber, Helsinki2014, Helsinki Industry, London, Minimata, Montreal, Nagoya, Ospar, Ramsar, Stockholm, UNFCC, UNCCD
note [COGNITION] [also speech and visual perception]	Aarhus, Antarctica, Barcelona, Basel, Bern, Bucharest, Cancun, GenevaTimber, Helsinki2014, HelsinkiIndustry, London, Minimata, Montreal, Paris, Stockholm, UNCCD, UNFCC
recall [COGNITION] [also speech]	Aarhus, AEWA, Antarctica, Cancun, Cartagena, GenevaTimber, Helsinki2014, HelsinkiWater, London, Minimata, Nagoya, Ospar, Stockholm, UNCCD, UNFCC, Vienna
consider [COGNITION] [also speech and visual perception]	Aarhus, AEWA, Antarctica, Basel, Bern, GenevaAir, HelsinkiIndustry, Montreal, Ospar, Ramsar, UNCCD
acknowledge [COGNITION] [also speech]	Aarhus, AEWA, CBD, Montreal, Nagoya, Stockholm, UNCCD, UNFCC
reaffirm [SPEECH]	Cancun, Cartagena, CBD, GenevaTimber, Nagoya, Stockholm, UNCCD, UNFCC
affirm [SPEECH]	Basel, CBD, GenevaAir, Helsinki Industry, Nagoya, Paris, UNCCD, UNFCC
emphasize [SPEECH]	Cartagena, DRPC, HelsinkiWater, Minimata, Paris
desire [FEELING]	Aarhus, Bern, CBD, Helsinki2014, Ramsar

Recognize, *consider*, and *acknowledge* all belong to the first subdimension of MENTAL PERCEPTION. As can be observed in Table 5, *consider, accept, recognize*, and *acknowledge* are hyponyms of *believe*, which is the most general term in this subdimension. At a more specific level, *accept* is a hyponym of *consider*, and *recognize* and *acknowledge* are hyponyms of *accept*.

Table 4: Dimensions and subdimensions of the lexical domains MENTAL PERCEPTION and SPEECH.

MENTAL PERCEPTION (COGNITION): *To use one's mind to form an idea of something* [*think of*],
To think something is true [*believe*]
To think something is likely to be true [*suppose*]
To think without knowing that something is true [*guess*]
To think that something may not be true [*doubt*]
SPEECH: to say that something is the case
To say yes [*accept, agree*]
To say that something is true [*accept, acknowledge, recognize*]
To say something without knowing that it is true [*guess*]

Table 5: Semantic hierarchy of mental perception subdimension *to think something is true*.

believe to think something is true even when it cannot be proved.
consider to believe that somebody/something is a certain way (after thinking about it).
accept to consider something to be true/reasonable/ satisfactory, often showing agreement.
recognize to accept that something is true, legal, or important.
acknowledge to accept the truth, existence, or importance of something.

The difference between these verbs largely resides in the entity that is considered, recognized, or acknowledged within the specific context of a legal document or part of a legal document. This would presumably be the same in different languages. When the semantic (and syntactic) characteristics of the verbs are also specified, this type of lexical organization codifies the range of choices available to each text sender in the lexicalization of a given area of meaning.

As previously mentioned, the assumption is that verbs within the same lexical subdimension and knowledge frame have a similar syntax and, even more important, combine with the same semantic types of argument when they operate within the same context. The representation of the verb class and its semantic arguments would be a type of interlingua that could be used as a basis for translation. In the case of specialized language, the natural polysemy of these general language verbs is limited because the scope of their meaning is restricted to the field of Environmental Law, and in this case to environmental treaties.

The interconnectedness of the lexical domains of COGNITION and SPEECH reflects the nature of our mind and bodies since perception is the human way of constructing the world. In the environmental treaties in our corpus, syntactic form

is minimally informative though it is important to highlight that the subcategorization structures of these verbs are constrained by the section of the treaty.

For example in the preamble of international environmental agreements, these verbs usually appear in the form of a present participle with either an NP or a *that*-clause. However, what is much more interesting for translation purposes are the semantic categories of the arguments in each slot.

As an example, Table 6 shows the argument structure of *recognize* within the context of environmental law and international environmental treaties.

Table 6: Argument structure of *recognize*.

Recognize to accept that something is true, legal, or important		
Argument 1: Agent	**Argument 2: Theme**	
[NATION]	[ATTRIBUTE]	
Parties (to Protocol/Convention)	***POSITIVE VALUE***	
	importance	enhance [CHANGE]
		promote [MANIPULATION]
		develop [CREATION]
		establish [CREATION]
		integrate [POSITION]
	benefits	prices, costs [CURRENCY]
	usefulness	information [SPEECH]
	POSSESSION	
	necessity	cooperate [ACTION]
	need	promote, support, enhance, study [COGNITION],
		develop [CREATION]
		strengthen [CHANGE]
	TIME	
	urgency	measures … [ACTION_CONTROL]
	EMOTION	
	desirability	establishing [CREATION]
		extending [CHANGE]
		coordinating [ACTION E]
		sharing [POSSESSION]
	concern	pollution, emissions, etc. [POLLUTION_ENTITY]
	ACTION	
	efforts	reduce [CHANGE]
		adapt [CHANGE]
		disseminate [POSSESSION]

In the preamble of these agreements, the parties are *recognizing*, *acknowledging*, *noting*, etc. an awareness of a certain state of affairs, thus the predominant use of verbs of COGNITION followed by a second argument which is a proposition (or an encapsulated proposition) such as the following (see Table 7):

Table 7: Examples of lexical expression of argument structure of *recognize* in preambles.

1st-order	**RECOGNIZE** $(\text{partners})_{\text{agent}}$ $(\text{need})_{\text{theme}}$
2nd -order	IMPROVE $(\text{partners})_{\text{agent}}$ $(\text{cooperation})_{\text{goal}}$
Recognizing the urgent need to improve the effectiveness and coordination of international cooperation	
Recognizing that the effectiveness and coordination of international cooperation needs to be urgently improved	

The same thing is true for *acknowledge*, a verb within the same dimension of the lexical domain as *recognize*. It could be said that the performative act is the combination of *recognize* and *improve*, where the first acts upon the second and the second is the theme of the first.

4.2 Section 2 of environmental treaties: General provisions

Section 2 of environmental treaties usually contains information related to the use of terms in the agreement, the scope and objectives, and general principles and obligations of the parties involved. This information is not always provided in the same order and only sometimes subheadings are given to divide up the section into these three subsections. Nevertheless, in most international environmental agreements some information related to this content is included.

To define the terms (see examples in Table 8), mostly the simple present of the verb *mean* from the lexical domain COGNITION is used. The second argument is either a hypernym of the first with an additional explanation or a closed list of

Table 8: Examples of term definitions in environmental treaties.

Example of Definitions/Use of terms
For the purposes of this Convention,
"Party" **means**, unless [...], a contracting party to this Convention
"Convention Secretariat" **means** the body established under Article IX [...]
"Pollution of the marine environment" **means** the introduction by man [...] of substances or energy into the marine environment [...]
"Export" **means** intentional transboundary movement from one Party to [...]

hyponyms. The semantic categories of the arguments always include the parties to the convention and institutional bodies that take on the tasks included in the agreement, the geographical area or species that must be protected or the pollution that has to be dealt with and the definition of the type of protection. As these agreements are all international agreements, a semantic category related to transboundary movement (export, import, etc.) is also included.

The definitions are normally given in logical order, putting all definitions of the same semantic category together and going from the most general concept to the most specific (see Table 9).

Table 9: Extract from use of terms in CITES (1983).

"Trade" means export, re-export, import and introduction from the sea;
"Re-export" means export of any specimen that has previously been imported;
"Introduction from the sea" means transportation into a State of specimens […]

In all international agreements on the environment, either a Scope or Objectives subsection is found. Scope is normally expressed through verbs such as *cover* and *apply* (lexical domain EXISTENCE), whereas the Objectives are expressed by verbs such as *contribute* [POSSESSION], *guarantee* [SPEECH], *protect, preserve* (EXISTENCE: *to cause to continue to exist*). Verbs are in the present simple or in combination with the modal verb *shall*. In the scope of an international agreement, the first argument usually belongs to the semantic category of ACTION_CONTROL_DOC (*convention, protocol*) and the second argument either refers to a geographical area (LOCATION: e.g. *Alpine region, area of the migration systems of African-Eurasian waterbirds*), LIVING_ORGANISM (e.g. *endangered species*) or a POLLUTING_AGENT (e.g. *waste*).

If there is an Objectives subsection, the first argument belongs to the category of HUMAN_GROUP (*Parties, States, Parties to this Convention*) and the second argument can be categorized in different ways depending on what the object of the agreement is (See Table 10).

Table 10: Extracts from the objectives/scope subsections.

Examples of Objectives/Scope
The geographic scope of this Agreement **is** the area of the migration systems of African-Eurasian […] The Convention **shall cover** the Alpine region, as described and depicted […]
This Convention **applies** to the Antarctic marine living resources of the area […]
This Protocol **shall apply** to the transboundary movement, transit, […]
[…] the objective of this Protocol **is** to contribute to ensuring an adequate level of protectionThe objective of this Convention **is** the conservation of Antarctic marine living resources.
In order to […], each Party **shall guarantee** the rights of access to information […]

The Principles/Obligations subsection normally refers to three different types of information: (1) general obligation of the parties as to the object of the agreement; (2) obligation of the parties to adapt local legislation according to the agreement; and (3) limitations of the agreement, i.e. where the agreement does not interfere with the possible actions of the parties.

The lexical domains of the verbs, the argument structure, and the semantic categories of the arguments in (1) are very similar to what is described in Section 3.3, although the argument slots are filled with the most general options in the category hierarchy. The first argument is always the parties to the agreement [HUMAN_GROUP], the lexical domains of the verbs are basically the same ones as those in the Objectives subsection, and the second argument refers to the object of the agreement (see examples 1, 2, 3 and 4 in Table 11).

Table 11: Extracts from the principles/obligations subsection.

Examples of Principles/Obligations
1. Parties **shall take** co-ordinated measures to maintain migratory waterbird species in a favourable conservation status or to restore them to such a status.
2. The Contracting Parties **shall pursue** a comprehensive policy for the preservation and protection of the Alps [...]
3. Each Party **shall promote** the application of the principles of this Convention in international environmental decision-making processes [...]
4. The Parties **shall not allow** trade in specimens of species included in Appendices I, II and III except in accordance with the provisions of the present Convention [...]
5. Each Party **shall take** the necessary legislative, regulatory and other **measures**, including measures to achieve compatibility between the provisions implementing the information
6. States **have** [...] the sovereign right to exploit their own resources pursuant to their own environmental policies
7. Nothing in this Protocol **shall affect** in any way the sovereignty of States over their territorial sea established in accordance with international law [...]

For (2), the first argument is again the parties and the predicate is a verb from the lexical domain EXISTENCE (more specifically, *to cause something to begin to exist*) such as *implement* or *introduce*. The second argument (*measures, provisions, actions*) can be included in the semantic category ACTION_CONTROL.

Finally, in (3) there are two possibilities: (a) each party or state to the agreement (HUMAN_GROUP) has (lexical domain: POSSESSION) the sovereign right (PRINCIPLE) to undertake actions, or (b) the convention or agreement (ACTION_CONTROL_DOC) shall not affect (CHANGE) sovereignty (PRINCIPLE) of the parties.

4.3 Section 3 of environmental treaties: Cooperation actions/ action plans

The situation is rather different in the third section of these conventions and protocols, where the focus is on the negative state of affairs (pollution) that is present and should be changed. Here, one of the central verbs is *pollute*, which is a verb in the lexical field of CHANGE (*to change something for the worse*). Its argument structure has the same number and semantic type of arguments as its correspondences in different languages (i.e. *poluer*, *vershmutzen*, *contaminar*, *inquinare*, or *polua*). In all language-cultures, *pollute* is characterized by a polluting agent as well as a polluted (or affected) entity.

Again, the propositional representation of *pollute* can be used as the basis for semantic equivalence. Based on the corpus information extracted from concordances of *pollute* and its different forms, Table 12 shows that the most frequent polluting agents or contaminants belong to the semantic categories of

Table 12: Semantic classes of the arguments of *pollute*.

ARG 1 Polluting agent	**Contaminant**
Human activity	[**Activity**] fracking, drilling, mining
Industrial location	[**Location**] factory, power plant, mine
Waste	[**Solid**] garbage, landfill, sludge [**Liquid**] effluent, wastewater, runoff
Chemical	[**Element**] mercury, carbon, nitrogen, phosphorus [**Natural mixture**] coal, oil, petroleum [**Artificial mixture**] pesticide, fertilizer
Gaseous emission	[**Industrial source**] gases, fumes [**Vehicle source**] exhaust
Vehicle	[**Land vehicle**] car, diesel vehicle [**Water vehicle**] container ship, oil tanker [**Air vehicle**] aircraft, jet
Microorganism	Bacteria
POLLUTES	
ARG 2 Polluted Entity	**Environmental element/location**
Environment	Environment
Water	[**Water**] water, groundwater, drinking water [**Water body**] aquifer, river, ocean, stream, creek, watershed, lake
Air	[**Gas**] air, airwaves, atmosphere
Soil	[**Soil**] land, soil, ground, Earth

human activity, industry, waste, chemical, gas emission, vehicle, and microorganism. In contrast, the second argument, which is the polluted entity, consists of different specifications of air, water, and soil.

Pollution is the situation that the legal act must improve, correct, and/or regulate in some way. What is important is not the syntactic realization of the predicate and its nominalization, but rather the combination of semantic categories, which reflect the polluting activities of the human race (since the implicit agent is human) as well as the three main environmental spheres (air, water, and soil) where pollution occurs. Consequently, the frame is generated by this combination of semantic categories, in this case, POLLUTING AGENT and ENVIRONMENTAL ENTITY/SPACE and the relation between them.

This frame is an important part of the context in Section 3 of the Environmental Treaty document, which describes cooperation actions or action plans, involving measures, regulations, monitoring, communication, and research and development. Here the typical sentence also has two propositions, but the semantic combination is different. Instead of Cognition/Speech in the first proposition, the meaning clusters are more varied since in this part of the treaty, the objective is to act in some positive way to control pollution. The parties thus *implement/establish/develop* measures. The predicates in the first proposition belong to CAUSATIVE EXISTENCE or the creation of something such as *action, measures, guidelines*, etc. Also important are MANIPULATION verbs such as *control, regulate*, and *monitor* (Table 13).

This third section of the treaty is the most complex because it specifically refers to the actions to be carried out. It is thus only natural that there should be a series of prototypical agents, actions, and themes or goals. As can be observed, the first argument or agent is always a human or group of humans, who perform a four-step sequence (see Table 14).

In so doing, they create a frame. This is the basis for the correspondence between languages. The great majority of languages with a legal system have words that correspond to the verb classes and dimensions as well as to the semantic classes activated. This is one of the few types of analysis that can provide insights into and facilitate the translation of legal texts.

4.4 Section 4 of environmental treaties: Institutional arrangements

Where Section 3 showed the most variation as its information structure depends on the specific topic addressed, Section 4 has a more conventional or formal structure similar to Sections 1 and 2. However, how this information structure is

Table 13: Predicates, lexical domains, arguments and their semantic categories in Secion 3 of international environmental treaties.

		1ST ARGUMENT	PREDICATE	2ND ARGUMENT
1	**EXISTENCE** [creation]	[**HUMAN_GROUP**]parties	implement	[**ACTION_CONTROL**] action, measure, protocol
				[**ACTION_CONTROL_DOC**] plan, program, provision, convention
			develop	[**ACTION**] strategy, method
				[**ACTION_CONTROL_DOC**] program, guideline
		[**HUMAN_GROUP**] parties, council, commission, organization	establish	[**INSTRUMENT_MEASURING**] criteria
				[**INSTRUMENT**] mechanism
		[**DOCUMENT_LAW**] treaty agreement, law, article		[**ACTION_CONTROL_DOC**] program
				[**DOCUMENT_LAW**] framework
2	**MANIPULATION**	[**ACTION_CONTROL**] measures, protocol	control	[**CONDITION_NEG**] pollution
		[**HUMAN_GROUP**]state		[**POLLUTION_AGENT**] greenhouse gases, mercury, emissions, releases, alien species, hazards
		[**HUMAN_GROUP**] commission	regulate	[**LOCATION**] marine environment,
		[**DOCUMENT_LAW**] treaty, law		[**PROCESS**] water management
		[**PROCESS**] program, system	monitor	[**CONDITION_NEG**] pollution
				[**POLLUTION_AGENT**] ozone
		[**DEVICE**] station		[**LOCATION**] forest

(*continued*)

Table 13: (*continued*)

3	**CHANGE** [to cause sth to become smaller]	[**ACTION**] procedure, activity	reduce	[**CONDITION_NEG**] pollution [**POLLUTION_AGENT**] emission release
		[ACTION_CHANGE] waste treatment,	mitigate	[**CONDITION_NEG**] pollution
				[**POLLUTION_AGENT**]
		[ACTION_CONTROL] measures, [**INSTRUMENT**] technologies		climate change
				greenhouse gas emissions
				[**POLLUTION_RESULT**]
				drought
		[**ACTION_CONTROL**] measures	abate	[**CONDITION_NEG**] pollution
				[**POLLUTION_AGENT**] eutrophication
				[**POLLUTION_RESULT**] harmful effects
	CHANGE [to cause sth to become larger]	[**HUMAN_GROUP**] partners, states	reinforce	[**ACTION_GROUP**] cooperation, participation
		[**HUMAN_GROUP**] partners, government	strengthen	[**ACTION_GROUP**]
				cooperation, networking
4	**EXISTENCE** [to cause sth not to exist]	[**HUMAN_GROUP**] parties	eliminate	[**CONDITION_NEG**] pollution [**POLLUTION_AGENT**] emission release
				[**POLLUTION_RESULT**] damage
			eradicate	[**POLLUTION_RESULT**]
				poverty, alien species
	EXISTENCE [to cause sth not to happen]	[**HUMAN_GROUP**] parties	prevent	[**CONDITION_NEG**] pollution [**POLLUTION_AGENT**] emission release, accident
		[**ACTION_CONTROL_DOC**] convention		[**POLLUTION_RESULT**] damage

Table 14: Four-step action sequence in Section 3 of international environmental treaties.

Step 1	**EXISTENCE_BEGINNING**: *implement, develop, establish*
Step 2	**MANIPULATION**: *control, regulate, monitor*
Step 3	**CHANGE**
	3.1. [to cause sth to become smaller] *reduce, mitigate, abate*
	3.2. [to cause sth to become larger] *reinforce, strengthen*
Step 4	**EXISTENCE_END**
	4.1. [to cause sth not to exist] *eliminate, eradicate*
	4.2. [to cause sth not to happen] *prevent*

divided into subsections depends on how specific and regulatory each document is. As shown in Table 16, Section 4 of international environmental agreements almost always refers to the conference of the parties and its meetings, the creation and functioning of the secretariat and any subsidiary bodies, the financial agreement between the contracting parties, when and how new protocols or amendments are adopted, voting rights, compliance control and settlement of disputes. In many of these subsections, how information is exchanged, when and how parties are informed and in what time frame is also considered.

The convention of the parties and its meetings, the secretariat and subsidiary bodies present a similar information structure based around three ideas: creation, functions and time frame (see Table 15).

Table 15: Creation, functions and meetings of the conference of the parties (United Nations 1992 extract from article 23 of the convention on biological diversity).

1. A Conference of the Parties is hereby established. [...] The first meeting of the conference of the Parties shall be convened by the Executive Director of the United Nations Environment Programme not later than one year after the entry into force of this Convention. [...]
4. The Conference of the Parties [...] shall:
(a) Establish the form and the intervals for transmitting the information to be submitted [...];
(b) Review scientific, technical and technological advice on biological diversity provided in accordance with Article 25. [...]

Although the information structure for the different bodies is similar, their functions are different. This is shown through the lexical domains of the verbs that are used. Functions of the conference of the parties are lexicalized with verbs such as *consider, review* (COGNITION), and *establish, adopt, make, undertake*, and *approve* (CAUSATIVE EXISTENCE). The secretariat on the other hand

arranges meetings, *prepares* and *presents* reports and *coordinates, receives* and *communicates* information. Subsidiary bodies such as scientific councils *identify* technologies, *provide* and *prepare* assessment and advice, and *respond* to questions.

The financial agreement of the parties normally refers to how and to what extent the parties provide financial resources. For example in the Cartagena Protocol on Biosafety to the Convention on Biological Diversity (Montreal 2000), the conference of the parties shall take into account the needs of developing countries and parties, and developed countries may provide additional financial resources. This distinction leads to a need to define what a developed country is, which we can find for example in the Convention on Biological Diversity (United Nations 1992): "The Conference of the Parties shall establish a list of developed country parties ...".

In the subsection on the adoption of new protocols and annexes or possible amendments, each contracting party may propose new protocols, annexes or amendments, the secretariat then informs the other parties within a specific time frame and, finally the conference of the parties may adopt them at a meeting of the conference of the parties with a certain amount of votes. The subsection related to the right to vote, normally is short and refers to who and to what extent a contracting party can exercise a vote.

In the compliance control subsection, the conference of the parties shall consider and approve a procedure to promote compliance and address non-compliance, or the meetings of the conference of the parties shall assess compliance with the convention, protocols, measures and/or recommendations.

Finally, for settlement of disputes, the parties shall seek solution by negotiation or request mediation. If no solution is found, a dispute shall be submitted to arbitration. Parties may also accept an arbitration procedure or another means of dispute settlement. (See Table 16 for some examples of the information contained in Section 4 with their lexical domains and semantic categories.)

4.5 Section 5 of environmental treaties: Formal provisions

As with the previous section, and even more so, Section 5 of environmental treaties is very conventional and syntactic structures and verbs are repeated in most agreements in our corpus. The agreement process is carried out in several steps.

The first step is the signature by the parties at a specific time and place: "... convention shall be open for signature at [place] from [date] until [date]". The second step is the ratification, acceptance or approval (SPEECH: *to say yes to sth*)

Table 16: Subsections, predicates, lexical domains, arguments and semantic categories in Section 4 of international environmental treaties.

Conference of the parties		
IST ARGUMENT	PREDICATE	IIND ARGUMENT
[**HUMAN_GROUP**]conference of the parties, meeting of the parties	review, consider [**COGNITION**]	[**ACTION_CONTROL**] action, measure, protocol, implementation [**OBJECT_SPEECH**] report
	establish, develop, make [**CAUSATIVE EXISTENCE**]	[**HUMAN_GROUP**] working group, subsidiary body [**OBJECT_SPEECH**] recommendations [**ACTION_CONTROL_DOC**] program, guideline
	adopt, approve [**CAUSATIVE EXISTENCE**]	[**ACTION_CONTROL_DOC**] protocol, annex [**INSTRUMENT_FINANCE**] budget
	perform [**ACTION**]	[**PROCESS**] function
[**HUMAN_GROUP**] conference of the parties	hold [**POSSESSION**]	[**HUMAN_GROUP**] meeting
Secretariat		
[**HUMAN_GROUP**] conference of the parties [**ACTION_CONTROL_DOC**] convention, protocol	establish [**CAUSATIVE EXISTENCE**]	[**HUMAN_GROUP**] secretariat
[**HUMAN_GROUP**] conference of the parties	decide [**COGNITION**]	[**INSTRUMENT_FINANCE**] budget

(*continued*)

Table 16: (*continued*)

[HUMAN_GROUP] secretariat	convene [SPEECH]	[HUMAN_GROUP] meeting [PROCESS] functions
	perform [ACTION]	[OBJECT_SPEECH_DOC] report, appendix
		[OBJECT_SPEECH] recommendation
	prepare [CAUSATIVE EXISTENCE]	
	present, publish [SPEECH]	
	distribute [POSSESSION]	
	coordinate [ACTION]	[HUMAN_GROUP] body
Subsidiary bodies		
[HUMAN_GROUP] subsidiary body, scientific council	serve [POSSESSION]	[ACTION_CONTROL_DOC] protocol
	provide [POSSESSION]	[OBJECT_SPEECH] advice, assessment
	comprise [POSSESSION]	[HUMAN] representative
	identify [COGNITION]	[INSTRUMENT] technology, know-how
	prepare [ACTION]	
	report [SPEECH]	[OBJECT_COGNITION] information
	respond [SPEECH]	[OBJECT_SPEECH] question
[HUMAN_GROUP] parties	take [possession]	[OBJECT_COGNITION] decision
Financial agreement		
[HUMAN_GROUP] contracting parties	adopt [POSSESSION]	[PRINCIPLE_FINANCE] financial rules

(*continued*)

Table 16: (*continued*)

[HUMAN_GROUP] conference of the parties	consider [COGNITION]	[OBJECT_COGNITION] needs
[HUMAN_GROUP] country, contracting party	provide [POSSESSION]	[INSTRUMENT_FINANCE] resources, support
[HUMAN_GROUP] conference of the parties	determine, decide, establish [COGNITION]	[ACTION_CONTROL] policy, strategy, program
Adoption of protocols, annexes and amendments		
[HUMAN_GROUP] contracting parties	adopt [POSSESSION]	[ACTION_CONROL_DOC] protocol, annex, amendment
[HUMAN_GROUP] contracting party	propose [SPEECH]	[OBJECT_SPEECH] amendment
[HUMAN_GROUP] depository, secretariat	communicate, notify [SPEECH] submit [POSSESSION]	[OBJECT_SPEECH] ratification, acceptance, approval
Right to vote		
[HUMAN_GROUP] European Economic Community, economical grouping	exercise [ACTION]	[PRINCIPLE] right
[HUMAN_GROUP] contracting party	have [POSSESSION]	[OBJECT_SPEECH] vote
Compliance control		
[HUMAN_GROUP] meeting, party	assess, monitor [CONTROL]	[ACTION_CONTROL] compliance, implementation

(*continued*)

Table 16: (*continued*)

[**HUMAN_GROUP**] conference of the parties	undertake [**ACTION**]	**[ACTION_COGNITION]** evaluation
[**HUMAN_GROUP**] conference of the parties	approve [**SPEECH**]	[**OBJECT_CONTROL**] procedure
[**HUMAN_GROUP**] party	report [**SPEECH**]	[**ACTION-CONTROL**] measures
Settlement of disputes		
[**HUMAN_GROUP**] contracting parties	seek [**POSSESSION**]	[**OBJECT_COGNITION**] settlement, solution
	request [**SPEECH**]	**[PROCESS]** mediation

of the agreement: "... convention shall be subject to/open for ratification, acceptance or approval by [state/organization]." Then it is explained that the "instruments (DOCUMENT_ACTION) of ratification, acceptance or approval shall be deposited (POSSESSION) with the depository". The next step is the entry into force: "... convention shall enter into force [number] days after the deposit of the [number] instruments of ratification ...". In the following, there is normally a subsection on withdrawal or denunciation: "... party may denounce/withdraw from this convention/protocol by written communication to the depository at any time."

Some of the agreements in the corpus also make reference to the authenticity of the original conventions and its translation into other languages and define the functions of the depository which are mostly concerned with the deposit (POSITION) of the original of the convention (ACTION_CONTROL_DOC), receiving (POSSESSION) instruments of ratification, acceptance, approval, and withdrawal (ACTION_DOC), and informing (SPEECH) the other parties to the agreement.

5 Conclusion

Legal language and its translation are considerably more complex than scientific and technical translation because the legal object is a text that performs an action. For this reason it is necessary to consider the structure of the text itself as well as the verbs in the text and their performative act. This is evidently a difficult task, and the reason why many scholars claim that legal translation is impossible (e.g. Ainsworth 2014). In this regard, the only way to overcome some of the difficulties of translation correspondence is to look for what legal texts in different cultures have in common, not how they diverge.

The quest for commonalities must be based on actions that are basic to all human beings as well as structured semantic classes, many of which exist in all cultures. When these are organized in clusters or structured in an ontology, then they can be used as the basis for semantic structures that each language will naturally lexicalize according to its own grammatical and syntactic rules.

However, these structures must be considered within the context of a typology of legal documents in each culture, whose configuration is similar. This combination and convergence of the semantic and textual world is what makes legal translation so unique yet so difficult. However, when the spotlight is placed on a more expanded context, this gives texts from different cultures a new perspective, and makes it possible to begin to establish semantic bridges between them.

In this sense, applying FBT to the study of the predicate-argument structure of legal texts complements the sociosemantic and context-aware approaches to legal translation. It provides a means to extract the underlying knowledge structures directly related to human interaction and communication and thus focuses on the sameness between cultural phenomena, the half-full glass, without disregarding their complexity.

Appendix: International environmental agreements in our corpus

Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, Aarhus, 1998.

Advancing the Durban Platform for Enhanced Action, Ad Hoc Working Group, Durban, 2014.

Agreement for cooperation in dealing with pollution of the North Sea by oil and other harmful substances, Bonn, 1983.

Agreement on the Conservation of African-Eurasian Migratory Waterbirds, Bonn, 2015.

Alpine Convention, Alpine Conference of Environment Ministers, Berchtesgaden, 1989.

Bali Action Plan, United Nations, Bali, 2007.

Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Basel, 1989.

Cartagena Protocol on Biosafety to the Convention on Biological Diversity, Montreal, 2000.

Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, Barcelona, 2004.

Convention for the Protection of the Marine Environment of the Nort-East Atlantic, 1992 OSPAR Convention, 2007.

Convention on Biological Diversity, United Nations, Rio de Janeiro, 1992.

Convention on Cooperation for the Protection and Sustainable use of the Danube River, Sofia, 1994.

Convention on Long-range Transboundary Air Pollution, Geneva, 1979.

Convention on the Conservation of Antarctic Marine Living Resources, Canberra, 1980.

Convention on the Conservation of European Wildlife and Natural Habitats, Bern, 1979.

Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter, London, Mexico City, Moscow and Washington, 1972.

Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Helsinki, 1992.

Convention on the Protection of the Black Sea against Pollution, Bucharest, 1992.

Copenhagen Accord, United Nations, Copenhagen, 2009.

Convention on the Protection of the Marine Environment of the Baltic Sea, Helsinki, 1992.

Convention on the Transboundary Effects of Industrial Accidents, Helsinki, 1992.

Convention on Wetlands of International Importance especially as Waterfowl Habitat, Paris, 1994.

Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa, United Nations, Paris, 1994.

Cooperation Agreement for the Protection of the Coasts and Waters of the North-East Atlantic against Pollution, Lisbon, 1990.
Handbook for the Vienna Convention for the Protection of the Ozone Layer, 1985, Tenth edition, Nairobi, 2016.
International Tropical Timber Agreement, United Nations, Geneva, 2006.
Kyoto Protocol to the United Nations Convention on Climate Change, Kyoto, 1997.
Minimata Convention on Mercury, United Nations, Kumamoto, 2013.
Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal, 1987.
Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Montreal Convention on Biological Diversity, United Nations, Nagoya, 2010.
Paris Agreement, United Nations United Nations Framework Convention on Climate Change, Paris, 2015.
Stockholm Convention on Persistent Organic Pollutants (POPs), Stockholm, 2009.
The Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention, United Nations, Framework Convention on Climate Change, Cancun, 2011.
United Nations Framework Convention on Climate Change, United Nations, New York, 1992.

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