Terminological and Ontological Analysis of European Directives: multilinguism in Law

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The problem ...

The legal language used by the European Union is not the same of that of the Member States

- It is problematic the European Directive drafting
- It is problematic the European Directive translation
- It is problematic the European Directive implementation
Terminological Misalignment

English word: “reasonably” (Directive 99/44/EC)

- Italian (translation of Directive): “ragionevolmente”
- Italian (transposition law): “con ordinaria diligenza”

The latter is highly specialised, common to the terminology of the Italian legal literature and especially representing the correct fulfilment of the duties of the contractual parties: Art. 1176 civil code
Conceptual Misalignment

German term “Klar und verständlich” (Directive 97/7/EC)

1. the print or the writing of the information must be clear and legible (“Gestaltung der Information”)

2. the information must be intelligible by the consumer (“Formulierung der Information”)

3. the language of the information must be the national of consumer (“Sprache der Information”)

1. OK
2. ??
3. OK

1. ??
2. OK
3. ??
Terms are enough?

Need to distinguish between terms and concepts.

- Klar und verständlich
- Chiaro e Comprensibile
- Clear and Understandable

1. print or writing
2. intelligibility
3. national language
Outline

- Terms and Concepts
- Legal Taxonomy Syllabus
- A case Study
- Conclusions
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Outline

- Terms and Concepts – 3 wk HP:
  1. Terms ≠ Concepts
  2. Multi-Ontology, Multi-level
  3. One word, many concepts
1. HP: terms ≠ concepts

- Terms and concepts must be distinguished by using **ontologies**

- An **ontology** (computer science sense) is a set of interconnected concepts. The concepts must be connected to each other via meaning relations
Ontology fragment

Terms

Concepts

Cancellation
Consumer protection
Termination
Withdrawal

Con-1

Con-2

purpose

Con-3

is-a

Con-4

is-a
Ontology fragment

But ontologies depend on the legal system!
2. HP: multi-ontology, multi-level
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- HP: multi-ontology, multi-level
- Italian ontology
- EU ontology
- German ontology
- Term-Ita-A
- Term-Ger-A
2. HP: multi-ontology, multi-level

[Diagram showing multi-ontology with Italian, EU, and German ontologies with corresponding term nodes]

- Italian ontology: Ita-2, Ita-4
- EU ontology: EU-1
- German ontology: Ger-3, Ger-5
European Ontology

- European ontology plays a key role in drafting, translation and implementation

- E.g. translators can use European Ontology in order to have a rich annotated lexicon (see the case study)
3. HP: one word, many concepts

- Italian ontology
- EU ontology
- German ontology
Levels: **National and European**

- Cancellation
- Consumer protection
- Termination
- Withdrawal

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**National**  **European**  **National**
3 hypotheses

1. Terms and concept must be distinguished by using ontologies

2. Each national legislation must refer to a distinct legal ontology and to the European ontology too (n+1 ontologies)

3. Corresponding concepts at the EU level and at national level can be described by different terms in the same language
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Legal Taxonomy Syllabus

- An European Project aiming at Uniform Terminology

- www.uniformterminology.unito.it

- In-depth analysis of terms in different systems (including European Directives) on consumer law
Legal Taxonomy Syllabus

- The Syllabus comprises ninety terms identified within consumer law directives by a combination of qualitative and quantitative methods.

- These terms are explored following a two-step approach:

  - Horizontal Annotation
  - Vertical Annotation
Legal Taxonomy Syllabus

- **Step 1**: Horizontal Perspective (EU Law)
  - Mapping the occurrence of the selected terms in EU law and identifying terminological variants

- **Step 2**: Vertical Perspective (National Law)
  - Extending the research into Member States’ law including national case law and jurisprudence
Idea: using the result of this study as a starting point for the bottom-up construction of a light-weight ontology
Legal Taxonomy Syllabus

- Its goal is to provide the user with a friendly interface designed for experts in the legal field in order to annotate and to search terms and concepts.

- 2 annotation phases, 2 class of users:
  1. legal terminological expert
  2. legal ontology engineer
http://www.eulawtaxonomy.org
http://www.eulawtaxonomy.org
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European Ontology
European Ontology

- Eu74
- Eu70
- Eu68
- Eu69
- Eu25

Final seller
Seller
Creditor
Supplier
Seller or supplier
Trader
European Ontology
European Ontology

Venditore finale
Venditore
Creditore
Fornitore
Professionista
Commerciante

Final seller
Seller
Creditor
Supplier
Seller or supplier
Trader

Vendeur final
Vendeur
Préteur
Fournisseur
Professionnel
Commerçant
European Ontology
European Ontology: Language Gap

Venditore finale
Venditore
Creditore
Fornitore
Professionista
Commerciante

Final seller
Seller
Creditor
Supplier
Seller or supplier
Trader

Vendeur final
Vendeur
Préteur
Fournisseur
Professionnel
Commerçant

Letztverkäufer
Verkäufer
Kreditgeber
Lieferer
Gewerbetreibender
???????
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Conclusions

- Arguments in favour of tools able to deal with interconnected terminologies and ontologies
- Bottom-up development of knowledge bases (more than 400 terms included until now). Empirical verification about terminological and conceptual misalignment
- **Result**: An ontology expressly designed for jurists, with an associated search engine for document retrieval
Conclusions

- The cross-reference features enable lawyers to search for relevant case law and first insights into doctrinal questions from one Member States to another.

- Unlike a dictionary, the Syllabus does not only provide translators with a suggestion, but highlights the respective legislative context of each concept.
Conclusions

- The Syllabus may help legislators to enhance terminological coherency already at drafting stage and facilitate the elaboration of the envisaged Common Frame of Reference.

- The database can help scholars to perform cross-sector analyses on the use of legal terms and concepts and the genealogy of legal terms.
Future Work

- Semi-automatic ontological annotation

- Merging with top- & middle-level ontologies
Thanks!!
Other Slides
How to speed-up annotation?

- Lexical annotation
  - Latent Semantic Analysis

- Ontological annotation
  - ???
    - Some proposals ... patterns, clustering?
Lightweight Ontology
Top–Down vs. Bottom–Up approaches

Step 1: Define (choose) a foundational ontology (e.g. role concept)

Step 2: Design (and integrate) a core ontology (e.g. office concept)

Step 3: Design (and integrate) a domain ontology (e.g. head-of-state concept)

Step 4: Design (and integrate) an application ontology (e.g. president concept)