Variation and the dynamics of understanding in context
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The multilingual perspective

PART 1: Terminological variation in multilingual culture-bound and embodied understanding
(Temmerman & Van Campenhoudt 2014; Temmerman & Dubois 2017)

PART 2: Terminological variation in source texts and translations
(Kerremans 2014)
PART 1

Semantic triangle

mind: concept

world: object

word: language

A static model for terminology studies

Semantic triangle + variation

minds: units of understanding

static model moves towards dynamic model

worlds: observable objects, actions, features

words: linguistic variation
Semantic triangle revisited

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minds: units of understanding

worlds: observable objects, actions, features, ...

words: linguistic variation in context (corpora)
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Linguistic understanding

“You shall know a word by the company it keeps’
(Firth 1957:11)
(the syntagmatic aspect of understanding that can be studied in corpora)

Understanding via categorisation in the mind

Wittgenstein (1953) argued that the referents (exemplars) of a word need not have common elements to be understood and used in the normal functioning of language. A family resemblance might be what links the various referents of a word.

Each item has at least one, and probably several, elements (features) in common with one or more items, but no, or few, elements are common to all items (Rosch and Mervis 1975: 574-575).
Understanding via observation
e.g. via sensory experience

Visual perception

Definition of ???????
a creamy cold drink, which is made of blended fruit or berries together with fruit juice and possibly yoghurt or other dairy products or/and crushed ice cubes, that is, only natural ingredients. The texture is thicker than slush-drinks but may resemble that of milkshakes.
Definition of smoothie

Smoothie (from English smooth (tender, creamy) is a creamy cold drink, which is made of blended fruit or berries together with fruit juice and possibly yoghurt or other dairy products or/and crushed ice cubes, that is, only natural ingredients. The texture is thicker than slush-drinks but may resemble that of milkshakes.

A neologism: smoothie

Putnam (1975: 229) division of linguistic labor

Whenever a term is subject to the division of linguistic labor, the 'average' speaker who acquires it does not acquire anything that fixes its extension. In particular, his individual psychological state certainly does not fix its extension; it is only the sociolinguistic state of the collective linguistic body to which the speaker belongs that fixes the extension.

Cf. socially distributed understanding (Lindblom, 2015)

smoothie

Is a smoothie determined by what it looks and tastes like and how it feels in the mouth?
Is it a matter of which ingredients have been used and how they have been processed?
Can consumers rely on their own judgment or will they trust the judgment of experts?
Misleading product names?
Contested food names

experimental study: testing the limits for consumers' acceptance of smoothie
1. when tasting three samples (sensory descriptors),
2. when tasting samples in combination with ingredients lists and nutrition facts (adding factual information),
3. and both, in combination with authoritative definitions (adding experts' final judgments).
How can terminologists study the dynamics of understanding and variation?

What kind of information can we retrieve from what kind of method and conversely, what technique, or variant of a technique, is most appropriate for studying which semantic phenomenon?

Is the corpus sufficient as a context?

Sinclair distinguishes between the possibility of words combining freely (‘open choice’) and the combinatorial restrictions that come with collocational behaviour. Distributional corpus analysis provides sophisticated ways of studying the latter on an unprecedented scale— but would that take away the necessity of studying the former separately, with different kinds of methods? Can all the relevant information that language users have about the reference of words be retrieved from a corpus? (Geeraerts 2009: 178)
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(Geeraerts 2009: 178)

Example: furniture terms

Visual and functional information in Gipper’s (1958) analysis of furniture terms.

Could we get the same insights into the structure of the field if we only considered textual data?

Would it still be necessary to combine corpus methods with methods exploring other modes of cognition, like referential description or psychological experimentation?

Sessel? Stuhl? (Gippel, Helmut (1959))

(EN: armchair? easy chair?)
Understanding via visualisation
Geeraerts et al. (1994)
The process of understanding

Knowledge is the result of a continuous dynamics of understanding, misunderstanding, more profound understanding.

HOW TO STUDY THIS PHENOMENON?

by studying the cognitive potential and the development of natural language(s) and more particularly of lexical items, i.e. terminology, in specialized domains.

A SHIFT IN PERSPECTIVE IN TERMINOLOGY STUDIES

Renewed interest in both the dynamics of cognition and the creative potential of language has shifted the perspectives of terminology studies to:

- the creation of neologisms in special languages,
- research concerning ambiguity, synonymy, metaphor, phraseology
- the role of diversity, variation, polysemy, vagueness and indeterminacy, tentativeness in human understanding (e.g. Pecman 2012)
PART 2

Terminological variation in multilingual Europe

The case of English environmental terminology translated into Dutch and French
PhD research of Koen Kerremans

For translators, it is important to know:

• What options (variants) exist for translating a given term.
• Which options are more likely to be used in which contexts.

Example:

Global warming
warming of the planet
warming of the Earth
wereldwijde opwarming
aardopwarming
opwarming van de aarde
...
**Research context: information about terms**

<table>
<thead>
<tr>
<th>Domain</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment</td>
<td>A rise in Earth’s temperature, often used with respect to the observed increase since the 20th century.</td>
</tr>
<tr>
<td>Terrestrial</td>
<td>Global warming</td>
</tr>
</tbody>
</table>

**Why is it important to record terms and definitions in databases?**

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**Research context: descriptive approach**

Terminological variation is a common phenomenon in special language and can be motivated on different grounds.

- e.g. adapting a message to the recipient:
  - bovine spongiform encephalopathy (mad cow disease)

- e.g. communicative intentions (to inform, to persuade, a recipient):
  - biodiversity reduction / biodiversity loss / biodiversity destruction

- e.g. stylistic conventions (to avoid repetition):
  - the killer slug attacks herbs and vegetables. This slug can spread very quickly.

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**Research context: challenge for translators**

- Terminological variation should be limited for the sake of precision and consistency
- Terminological variation is often motivated and should therefore not be ignored (language choices are conditioned by linguistic, situational and cognitive factors)

**Research aims?**

I) To study how terminological variation is accounted for in translations

II) To propose a new type of translation resource covering term and translation choices
I) Variation in source and target texts

- **Research assumptions:**
  - Variation occurring in source texts will also be reflected in the target texts.
  - Several parameters or contextual factors can have an impact on the translation of terms, causing interlingual variation.

- **Research material:**
  A parallel corpus of 43 English source texts and their translations into Dutch and French (about 389,000 words).

**Research method (an example):**

1. Finding the different expressions of **INVASIVE ALIEN SPECIES** in the English text.
2. Finding the translations of the selected English terms in the target text.
3. Adding the extracted terms, translations and additional info into a database.

Total: 241 units of understanding
Total: 1034 co-referential chains
I) Variation in source and target texts

**Quantitative observations:**

1) More variation in Dutch and French co-referential clusters (unique number of lemmatised forms)
2) The number of variants in English clusters tends to correlate with the number of variants in translations
3) Patterns of change and consistency in English co-referential chains tend to be reflected in the translations

Variation in the source texts tends to be reflected in the target texts. More variation is observed in the translations (interlingual variation).

II) Variation in IATE

**Aims:**

- To examine to what extent it is possible in IATE to account for the different types of intra- and interlingual variants encountered in the parallel corpus.
- To examine to what extent the intra- and interlingual variation encountered in the parallel corpus is also reflected in the IATE database.

**Reason:**
To enrich IATE with variants derived from parallel texts.

**Research material:**
1138 term records (manually retrieved)
II) Variation in IATE

Observations:
1) Many possibilities are offered for structuring or representing different types of variants
2) Fields providing information on the specific use of terms in discourse (i.e., pragmatic info) are very often left unspecified
3) Not all language options (variants) found in the parallel corpus are covered
4) No conceptually-related variants on the same term record (due to concept-oriented structure)

III) New type of resource

A (multilingual) resource of semantically and contextually-structured translation units

Contextual filtering

Visualisation

III.1) New type of resource

Contextual factors:
- Linguistic
- Cognitive
- Situational

Source language options (SL)

Target language options (TL)

II.3.1) Prototype

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7) Prototype
III) New type of resource

Visualisation of common (core) vs. uncommon variants (periphery)

Network created on the basis of co-referential links in texts

Graph representation further builds on current trend in visualising terminological knowledge

SUMMARY OF PROJECT

- **Results/insights:**
  - Representation of terms and their translation equivalents in conventional terminologies is too restrictive to account for the many linguistic options to express specialized knowledge in texts.
  - Research into intra- and interlingual variation in specialized texts leads to the creation of a new type of special language resource:
    - Combination of semantic and pragmatic information in a terminological ‘product’ (explicit linking between terminologies and texts);
    - Contextually-conditioned network of co-referentially related term variants (as an extension to the current trend in visualising terminological data);
    - Implementation of a method and tools for supporting the manual creation of this resource.
We discussed ...

Variation and the dynamics of understanding in context. The multilingual perspective.
Terminological variation in multilingual culture-bound and embodied understanding
Terminological variation in EU source texts and translations