# Concept Systems and Frames in Terminology (CSFT)

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# **Book of Abstracts**

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| Marie-Claude L'Homme (Université de Montréal) – <i>Keynote</i>   |
|--|
| Predicative Terms, Frame Semantics and Specialized Knowledge1  |
| Maria Koliopoulou (National and Kapodistrian University of Athens) – <i>Keynote</i>  |
| Terms as Linguistic and Domain-Specific Units: A Translation Perspective 2   |
| Khadija Belfarhi (University of Annaba Algeria), Said Ghendir (University of El Oued),<br>Mouhamed Abidi Chouchani (University of El Oued)                       |
| Identification of Collocation in Electronics Communications based on Procedural Patterns3  |
| Laura Giacomini (University of Innsbruck)  |
| AI for Terminology Work: A Useful Device for Concept Modeling and the Creation of Domain<br>Ontologies?5   |
| Daniela Giordano (University of Naples)  |
| MedScape as an Information Source of Expert Perspective: Linguistic Insights into Health<br>Speeches6  |
| Kaja Gostkowska (University of Wrocław), Agnieszka Kaliska (University of Adam Mickiewicz),<br>Mavina Pantazara (National and Kapodistrian University of Athens) |
| A Colour's Anatomy: A Model for the Terminological Definition of Blue8   |
| Ksenia Hain (Palacký University)   |
| Comparative Approach to Terminological Concepts: Film Terminology from a Diachronic<br>Perspective in Russian and Czech10  |
| Julie Humbert-Droz (Université Lumière Lyon 2)   |
| Representing Endometriosis Terms in a Specialised resource: How to Deal with Variation<br>Between Experts, Laypeople, and the Press12                            |
| Irene Jiménez Alonso (University of Innsbruck)   |
| Domain Representation with Frames for Translators and Interpreters 15  |
| Flávia Lamberti (Universidade de Brasília)   |
| Meaning Distinctions in the Terminology Research: A Lexicon-Driven Approach Applied to<br>Brazilian Portugese17  |

Christian Lang (Kaleidoscope GmbH), Kelvin Zifla (University of Vienna)

An Evaluation and Overview of GenAI Use-Cases for Enterprise Terminology Management\_19

Anita Nuopponen (University of Vaasa)

| Criteria for Terminological Concept Systems  | 20          |
|--|-------------|
| Beatrice Ragazzini (University of Bologna)   |             |
| Cultural and Contextual Aspects as Triggers of Term Variation. The Classification of the V<br>Force in the 18th and 19th Century in English and French through Different Semiotic System |             |
| Natascia Ralli (Institute for Applied Linguistics – Eurac Research), Elena Chiocchetti (Institute Applied Linguistics – Eurac Research)  | for         |
| Representation of Gender-Sensitive Language in Terminological Definitions. A Case Stud<br>Italian  | ly on<br>25 |
| Rossella Resi (University of Innsbruck)  |             |
| Terminological Consistency Beyond Terms  | 28          |
| Nato Shavreshiani (Ivane Javakhishvili Tbilisi State University) Lela Giglemiani (Ivane<br>Javakhishvili Tbilisi State University)   |             |
| Adaptation of Archaic Religious (Christian or Pagan) Lexical Units in Svan   | 29          |
| Pius ten Hacken (University of Innsbruck)  |             |
| Taxonomic and Process-Oriented Domains   | _32         |

Marie-Claude L'Homme (Université de Montréal) - Keynote

# **Predicative Terms, Frame Semantics and Specialized Knowledge**

Terminological resources have evolved considerably over the past decades and now offer different ways to discover and navigate the knowledge structure of specialized domains. Additionally, new types of data are added, such as term variants, collocations, new terminological relations, which contribute to enrich resources and meet a wider range of user needs. In this presentation, I will focus on terms of a specific nature, i.e. predicative terms (such as contaminate, green, eutrophication, sustainable) and their addition to domain-specific resources. I argue that these terms contribute to the knowledge structure of a domain, and complement more traditional structures with generic-specific, part-whole and cause-effect relations. I also argue that new descriptive models need to be defined and show how structures associated with predicative terms can be represented with methods and tools based on Frame Semantics (Fillmore 1982; FrameNet 2023). In this presentation, I focus on environment terms and explain how innovative descriptions were developed and implemented in the resources DiCoEnviro and Framed DiCoEnviro.

#### References

- DiCoEnviro (http://olst.ling.umontreal.ca/cgi-bin/dicoenviro/search.cgi). Accessed 2 October 2023.
- Framed DiCoEnviro (http://olst.ling.umontreal.ca/dicoenviro/framed/index.php). Accessed 2 October 2023.
- Fillmore, C.J. Frame Semantics. In The Linguistic Society of Korea (ed). Linguistics in the Morning Calm. Seoul: Hanshin. 1982, 111–137.
- FrameNet (https://framenet.icsi.berkeley.edu/fndrupal/). Accessed 2 October 2023.

# Maria Koliopoulou (National and Kapodistrian University of Athens) – *Keynote*

# Terms as Linguistic and Domain-Specific Units: A Translation Perspective

Representation of specialized domain knowledge has been used in different forms and for several purposes in order to describe the system of concepts behind the terms of a certain domain. Terms and their relations are rather central in specialized texts and become even more important when texts are transferred into another language, i.e. within specialized translation. This paper explores two axes, both related to terminology, that intersect. The x axis represents specialized translation, and the y axis represents domain representation. On one hand, the x axis includes the different levels of equivalence in specialized translation starting with the narrower which includes words and also terms and goes up to the pragmatic level. The y axis represents levels of depth in domain representation. The point where these two axes intersect, the so-called "origin" or (0,0) point is where terms are found.

But what are terms, and more precisely what are terms for specialized translation? How can they and their relations be represented in the best possible way, so that this representation method can be of assistance for specialized translation? This paper is found at the intersection between domain representation and specialized translation. The analysis goes beyond terms as linguistic and domain units and discusses the needs of specialized translation and how they could be covered through a knowledge representation method in order for it to be a useful tool for translators of specialized texts.

#### **Selected References**

Baker, Mona (2011): *In Other Words. A coursebook on translation.* 2<sup>nd</sup> ed. London & New York: Routledge.

Roelcke, Thorsten (2020): *Fachsprachen. Grundlagen der Germanistik.* 4., neu bearbeitete und wesentlich erweiterte Auflage. Berlin: Erich Schmidt Verlag.

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### **Identification of Collocation in Electronics Communications based on Procedural Patterns**

Procedural concepts are derived from processes that fall in the same conceptual frames and group vocabularies and phrases in similar functional patterns. Conceptual frames provide ways to understand the relations between terms based on their cognitive realization as processes. Frame semantics considers meaning of words to be constructed from knowledge and analyzed into semantic frames (Fillmore & Baker, 2010). In the electronics domain, frames are processes that provide the underlying conceptual structure. The technical domain has a network of concepts, and its context provides the frame in which the concept is embedded (Faber & Leon-Arauz, 2016). Every technical domain has its own processes and the core of conceptual terms abstracting the processes. In electronics, a circuit has some processes that correlate with combinations of terms accounted for by the functional aspect of the processes and not by their linguistic occurrences. Words collocate to express functional aspects in the circuit design and have a set of collocational aspects peculiar to the domain of electronics. To understand these conceptual frames, we analyzed collocations in digital communication based on functional patterns. We collected a list of (235,373 tokens) extracted using Profilier. Then, the word list was analysed using AntConc to extract vocabulary based on frequency of occurrence. The first twenty-five terms were object of componential analysis (Belfarhi, 2013) to extract the possible patterns: The componential analysis aimed at obtaining the underlying structure behind the phrases used in digital communications. It takes the keywords and obtains their major and minor signals and then draws a lexico-semantic interaction to find the central processes. This model was set by Belfarhi (2013) for the study of English literary meaning. It was adopted here for the purpose of establishing "words' signals' interaction". The lexical-to-process categorization draws on the work of Hudson (2002) and resulted in four processes: encoding, quantization, recovery and correction. The last step was to obtain phrases which contain one of the twenty-five words, or key words, in order to check the existence of collocations in relation to the four identified patterns. Syntactic patterns of the first one hundred phrases selected from AntConc were object of analyzing collocations. It was found that phrases form three types of collocations: phraseological fusions, phraseological unities and two-forms in the paradigm. It's the functional processes that account for the structure of the collocation and not the syntactic aspect. For example, the phrase "signal-to-noise" does not have the preposition expressing "movement" as it is the case in the linguistic description of prepositional phrases. The phrase expresses division: signal/noise. This phrase functions directly within the four processes of Encoding, Quantization, Recovery, and Correction. "Probability of Error", another example, refers to the chance of a mistake happening during the transmission or processing of a signal. It is calculated by (Number of Errors) / (Total Number of Bits Transmitted). It relates to "Recovery" and "correction" indirectly. This process attempts to fix errors that might have occurred during transmission or processing.

The underlying conceptual structure of phrases in the electronics circuit define in terms of nouns and deverbal nouns as they carry the semantic load and refer to one of the four processes (Encoding, Quantization, Recovery, and Correction). The schematic representation of the domain of electronics makes words collocate to reflect a procedural pattern, and the collocations relate to the patterns in two ways: (1) the collocation represents the four patterns as it is the case of signal-to-noise; (2) the collocation's underlying structure has sub-relations with the four patterns as the collocation's realization involves other concepts. "Probability of error", for instance, stands on other mathematical operations involving signal and noise characteristics. A collocation in the domain of electronics is defined as the combination of terms expressing cognitive concepts and reflecting procedural patterns, and these patterns condition the choice of words to use in the collocation.

#### References

Link to the list (Digital Communications Word List) https://drive.google.com/drive/folders/1WrA3litrCzesAdlLDcg5ecnJkpQZ6I0U

Belfarhi, K. (2013). The Componential Analysis of Literary Meaning, Colomb. Appl. Linguist. J. vol. 15 no. 2.

Faber, P & Leon-Arauz, P. (2016). Specialized knowledge representation and the parameterization of context. Frontiers in psychology, 7: 196.

Fillmore, C.J & Baker. C. (2010). A frames approach to semantic analysis. The Oxford Handbook of Linguistic analysis, Bernd Heine and Haiko Narog (eds): 313–339. Oxford University Press.

Hunston. S. (2002). Corpora in applied linguistics. Cambridge University Press.

#### Laura Giacomini (University of Innsbruck)

# AI for Terminology Work: A Useful Device for Concept Modeling and the Creation of Domain Ontologies?

There are currently a number of studies dedicated to the use of artificial intelligence in terminology work, which demonstrates the growing interest in the potential of new technologies. The application of new artificial intelligence tools together with the optimisation of their usage strategies is primarily analysed for the part of terminology work that concentrates on specialised vocabulary, in particular on data acquisition (terminology extraction, including the extraction of term variants and of specialised phraseologisms).

In this presentation, the focus is rather on the conceptual knowledge side of 'terminologically unexplored' domains, in particular on concept modeling and the creation of domain ontologies, which is of interest for various stakeholders, e.g. in industry, research, and specialised translation. The main questions the presentation seeks to answer are:

- 1. Can traditional sources of conceptual knowledge be complemented by means of artificial intelligence tools and to what end? Our current goal is not to replace traditional sources but to enrich them through the use of new tools.
- 2. Can bottom-up and top-down analysis procedures be employed and what results do they lead to? In this regard, the subject of prompt engineering will not be investigated. Instead, the focus will be on the overall methodology to be applied to gather conceptual knowledge of a domain.

Data presented in the talk belong to the domain of Wood Technology, a rather extensive and interdisciplinary technical field that has gained considerable attention not only in industry but also at universities of applied sciences in many European countries, including Austria, Germany and Italy. Data repositories like ontologies and terminology databases available in this domain only cover a small fraction of the related lexical and conceptual knowledge. This leaves much room for optimising the creation of new resources.

#### Daniela Giordano (University of Naples)

### *MedScape* as an Information Source of Expert Perspective: Linguistic Insights into Health Speeches

This research sets out to focus on how the specialised knowledge of medical science is conveyed in today's digital age. In fact, over the last few decades, technological advances have impacted every walk of life as well as the way professionals communicate. Digitalisation has resulted in novel genres, such as scientific and health blogs, which are an effective way to communicate and represent specialised knowledge to lay people, building online networks and communities of practice through which the lay audience can address professionals (Tessuto 2020, 2021, 2024). Among them, the emerging platform MedScape.com targets both healthcare professionals, updating them on the latest medical news and showcasing experts' perspectives, and the lay public. The MedScape website consists of several sections, including medical popularisation articles, peer reviewed journals, and videos of expert talks. Its communicative modes are pragmatically orientated towards making specialised knowledge as accessible as possible to the lay public. Some linguistic studies have dealt with similar online sources, such as TED Talks (e.g. Caliendo/Compagnone 2014) though to the best of my knowledge little research has been carried out on this particular web resource. In an attempt to bridge this gap, I rely on a representative corpus of video scripts of interviews and monologic speeches delivered by medical experts for MedScape to investigate their use of linguistic and discursive features to express ideas and viewpoints by holding a persuasive dialogue with the audience. Such features are examined in relation to linguistic patterns (e.g. the use of pronouns, future tenses, modals, conditionals, attitude verbs/adjectives, (dis)agreement adverbs/verbs, sense verbs, interjections, and directives), which are relevant not only for effectively conveying scientific outcomes and achievement, but also for expressing personal stance and position, and shaping their professional identities (Hyland's 2005a/b, 2010). Preliminary findings reveal differences in the use of those linguistic patterns in video interviews and monologic speeches.

#### References

Caliendo G., Compagnone A., 2014. Expressing epistemic stance in university lectures and TED talks: a contrastive corpus-based analysis. *Lingue e linguaggi*, 11: 105–122.

Hyland, K. 2005a. Stance and engagement: A model of interaction in academic discourse. *Discourse Studies*, 7(2): 173–192.

Hyland, K. 2005b. Metadiscourse. London: Continuum.

Hyland, K. 2010. Constructing proximity: Relating to readers in popular and professional science. *Journal of English for Academic Purposes* 9, 116–127.

Tessuto, G. 2020. Academic medicine and health research blog posts as interaction and knowledge-making resources. In Gotti, M. / S. Maci / M. Sala (eds.), *Scholarly Pathways: Knowledge Transfer and Knowledge Exchange in Academia*. Peter Lang, Bern, 233–254.

Tessuto, G. 2021. Medicine and biology science communication blogs: Investigating stance patterns for gender identity construction. In D'Angelo L. / Consonni, S. (eds.), *New Explorations in Digital Metadiscourse*, CERLIS Series, 10, 143–165

Tessuto, G. 2024. Blogging about health: Investigating interpersonal language for discourse features of stance and engagement. Peter Lang, Bern.

Kaja Gostkowska (University of Wrocław), Agnieszka Kaliska (University of Adam Mickiewicz), Mavina Pantazara (National and Kapodistrian University of Athens)

# A Colour's Anatomy: A Model for the Terminological Definition of Blue

Colours and their denominations in different languages have attracted the interest of many researchers foryears, but it is rare to find research papers that consider colours from a strictly terminological point of view (on this subject, see, among others, Piselli 2021, Gostkowska & Kaliska 2022). In this paper, we will focus on colour terms, i.e. terms that designate paints, pigments, dyes and hues, used by specialists such as art historians, chemists, colour professionals and artists (painters, ceramists, dyers, etc.). We aim to propose a model for describing our knowledge of colour materials and their terminological designations with a view to developing a future ontoterminology of colours (on this subject, see e.g. Roche et al. 2009).

Our starting point and main reference is Bernard Guineau's *Glossaire des matériaux de la couleur* (2005). The author, being himself a physicist and a specialist in ancient colours, has prepared an extensive inventory of colour terms, providing them with more or less elaborate definitions, including information of encyclopedic (e.g. *used in the Middle Ages, discovered by Dippel and Diesbach*) or metaterminological nature (e.g. *term used by dyers*). To compile it, he consulted numerous written sources, in particular old recipes and manuals of the colour manufacturers. Nevertheless, his perspective being that of an expert and not of a terminologist, the definitions proposed in the Glossary do not meetthe specifications of a proper terminological definition (see e.g. Larivière 1996, Hacken 2015, Löckinger, Kockaert & Budin 2015, Nilsson 2015, Roche 2015, L'Homme & San Martin 2016).

In our paper, based on the definitions of 210 terms related to blue, collected from Guineau's Glossary, we will identify the categories of terminological data to be included in a resource such as an ontoterminology of colour. Then, we will determine which characteristics are essential and which are optional for a systematic description of colour-related concepts, with the focus on specific difficulties related to this domain's conceptualisation. We will conclude by proposing a model for the terminologicaldefinition of blue.

### Corpus

Guineau B. (2005). Glossaire des matériaux de la couleur et des termes techniques employés dans les recettes de couleurs anciennes. Turnhout: Brepols Publishers.

#### References

Gostkowska K., Kaliska A. (2022). "L'histoire d'une couleur vue à travers un dictionnaire. Sur l'exempledes termes de couleur BLEU dans les neuf éditions du *Dictionnaire de l'Académie Française*". [In:] 8e Congrès Mondial de Linguistique Française : Université d'Orléans, France, 4-8 juillet 2022, (eds.) F. Neveu, S. Prévost, A. Steuckardt, G. Bergounioux and B. Hamma. Les Ulis: EDP sciences, 1–11. DOI: https://doi.org/10.1051/shsconf/202213804007.

Hacken P. ten (2015). "Terms and specialized vocabulary. Taming the prototypes". [In:] *Handbook of Terminology*, vol. 1., (eds.) H. J. Kockaert, F. Steurs. Amsterdam / Philadelphia: John Benjamins Publishing Company, 3–13.

#### Ksenia Hain (Palacký University)

### **Comparative Approach to Terminological Concepts: Film Terminology from a Diachronic Perspective in Russian and Czech**

The paper will focus on the specialized terminology of the field of cinema in the Russian and Czech languages. With the emergence of cinema, there was a need to name and label previously non-existent phenomena, objects, professions, activities and functions related to it, which meant the development of a new field of professional vocabulary with new concepts, terms and names. Since the development of cinema took place globally and simultaneously in several countries, the emerging language of the field was greatly influenced by international cooperation and the global dimension of the new phenomenon itself, as well as by the cultural and social circumstances in specific countries.

On the basis of the research material (journals and periodicals, theoretical publications, encyclopedic and terminological dictionaries in Russian and Czech languages from the early days of emergence of the cinemal till nowadays), the definition of professional or field-related terms that form the core of the terminological system of this field in Russian and Czech will be carried out. The selection will then be subjected to a structural-semantic analysis, which among other things shows the ways in which terms are formed in both languages and the continuous changes in their formal or semantic aspects, identifies the most unproductive types of derived vocabulary in this field, and suggests ways of systematizing specialized vocabulary on the basis of word-formation patterns, taking into account social, cultural and historical contexts. The research, partly based on the comparative terminology suggested by Faina Tsitkina, will offer insight into the dynamics of terminological system in different languages from diachronic perspective on the background of cultural and social changes, taking into account the importance of historical and political impact, the role of connotation and the degree of influence that extra-linguistic reality during the emergence of newly developed terminology.

#### References

GÜRTLER, František. Malý filmový slovník. Brno: Čs. filmové nakladatelství, 1949.

LEVINSKÝ, Otto. Film a filmová technika. Vyd. 1. Praha, 1974.

MÜLLER, Vladimír. Nejpoužívanější filmové výrazy v praxi: Rusko-čes. a česko-rus. verze. Praha, 1990.

SZCZEPANIK, Petr, ed. a ANDĚL, Jaroslav, ed. *Stále kinema: antologie českého myšlení o filmu 1904-1950*. Vyd. 1. Praha: Národní filmový archiv, 2008. Knihovna Iluminace; 25.

TROSHIN, Alexandr (ed.), Istoria otechestvennogo kino: chrestomatia. Moskva: Kanon,

<sup>&</sup>lt;sup>1</sup> As a beginning of the research I consider to be the written texts related to the cinema of the Lumière brothers from 1896 onwards.

2012.

TSITKINA, Faina. Terminologiya i perevod. Lviv: Vischa shkola, 1988, 156 p.

YUTKEVICH, Sergei. Kinoslovar'. V 2 tomach. Moskva: Sovetskaia encyklopedia, 1966.

Julie Humbert-Droz (Université Lumière Lyon 2)

# **Representing Endometriosis Terms in a Specialised resource:** How to Deal with Variation Between Experts, Laypeople, and the Press

Endometriosis is a benign though incurable disease that affects 10-20% women (Ilschner et al. 2022). It is poorly understood by laypeople and it is most often misrepresented in the media (Young et al. 2015). Because the media tend to remain the main source of health information for laypeople (Dempster et al. 2022), certain misrepresentations can lead to minimising the severity of the disease and to considerably delaying its diagnosis (Bullo 2019). It is known that, when terms circulate outside specialised discourses, semantic variations are likely to occur (Meyer 2000, Beacco et al. 2002) and to contribute to disseminating these misrepresentations (Nikitina 2020, Dempster et al. 2022). In the medical field, these processes can have an impact on how patients understand medical concepts (Carretier et al. 2009) and on how laypeople perceive certain diseases (Balfour 2023). Researchers in terminology have delved into these issues and works driven by the need of making medical knowledge accessible to patients have emerged, for example to simplify medical texts (e.g. Pecout et al. 2019, Estopà & Montané 2020) or to describe and define medical terms in specialised resources (patient-oriented or not) (e.g. Tercedor Sánchez et al. 2014, Carvalho 2018, Vezzani et al. 2018).

In this context, this communication aims at discussing the challenges raised by the circulation of endometriosis terms for their description and the representation of associated concepts in a specialised resource dedicated to patients. This is part of a broader project that addresses the impact of term circulation on laypeople's understanding of endometriosis in French. It is mainly based on the analysis of a comparable corpus composed of four subcorpora representing key stages of term circulation between experts, journalists, associations of patients, and patients. This communication will focus on issues identified in both the context of the circulation of endometriosis terms and the analysis of the textual data so far. Specific examples will be presented, for instance the coexistence of term variants with subtle semantic variations (e.g. adénomyose [adenomyosis] and endométriose interne [internal endometriosis]), competing classifications of endometriosis types, diverging theories leading to diverging conceptualisations of endometriosis, or certain collocations and metaphors used to express pain. The examples will be discussed in relation with comprehension issues that they are likely to trigger, based on existing research on semantic opacity, confusion, and ambiguity (as defined by Estopà and Montané (2020: 216)), on terminological appropriation by laypeople and patients (Delavigne 2019), and on term variation and its representation in specialised resources (Cabezas-García & León-Araúz 2021).

The discussion will provide insights into the types of information to be included in a resource about endometriosis dedicated to patients, to facilitate their comprehension of the disease and to enhance their communication with health professionals. An assessment of the users' needs will be conducted in the next phases of the project to provide more information as to what users would expect from such a resource. Both aspects – the corpusbased analysis and interviews with potential users – are complementary and necessary to design a specialised resource that meets these objectives.

#### References

Balfour, J. (2023). *Representing Schizophrenia in the Media: A Corpus-Based Approach to UKPress Coverage*. Routledge.

Beacco, J.-C., Claudel, C., Doury, M., Petit, G., & Reboul-Touré, S. (2002). Science in Mediaand Social Discourse: New channels of communication, new linguistic forms. *Discourse Studies*, *4*(3), 277–300.

Bullo, S. (2019). "I feel like I'm being stabbed by a thousand tiny men": The challenges of communicating endometriosis pain. *Health*, *24*(5), 476–492.

Cabezas-García, M., & León-Araúz, P. (2021). Term Variation in Terminographic Resources: A review and a proposal. *Lexicography for Inclusion: Proceedings of the 19th EURALEX International Congress*, 405–414.

Carretier, J., Delavigne, V., & Fervers, B. (2009). Du langage expert au langage patient : Versune prise en compte des préférences des patients dans la démarche informationnelle entre les professionnels de santé et les patients. *Sciences-Croisées*, *6*.

Carvalho, S. (2018). *A Terminological Approach to Knowledge Organization within the Scopeof Endometriosis: The EndoTerm Project*. PhD Dissertation. Universidade NOVA de Lisboa & Université Grenoble Alpes.

Delavigne, V. (2019). Littératies en santé et forums de patients : Des formes d'ergonomie discursive. *Éla. Études de linguistique appliquée*, *195*(3), 363–381.

Dempster, G., Sutherland, G., & Keogh, L. (2022). Scientific Research in News Media: A casestudy of misrepresentation, sensationalism and harmful recommendations. *Journal of Science Communication*, 21(1), A06.

Estopà, R., & Montané, M. A. (2020). Terminology in Medical Reports: Textual parameters and their lexical indicators that hinder patient understanding. *Terminology*, *26*(2), 213–236.

Ilschner, S., Neeman, T., Parker, M., & Phillips, C. (2022). Communicating Endometriosis Painin France and Australia: An Interview Study. *Frontiers in Global Women's Health, 3.* 

Meyer, I. (2000). Computer Words in Our Everyday Lives: How are they interesting for terminography and lexicography? *Proceedings of EURALEX 2000*, 39–58.

Nikitina, J. (2020). Representation of Gene-Editing in British and Italian Newspapers: A cross-linguistic corpus-assisted discourse study. *Lingue e linguaggi*, *34*, 51–75.

Pecout, A., Tran, T. M., & Grabar, N. (2019). Améliorer la diffusion de l'information sur la maladie d'Alzheimer : Étude pilote sur la simplification de textes médicaux. *Éla. Études de linguistique appliquée*, *195*(3), 325–341.

Tercedor Sánchez, M. I., López-Rodríguez, C. I., & Prieto-Velasco, J.-A. (2014). También lospacientes hacen terminología: Retos del proyecto VariMed. *Panace@: Revista de Medicina, Lenguaje y Traducción, 15*(39), 95–102.

Vezzani, F., Di Nunzio, G. M., & Henrot, G. (2018). Trimed: A multilingual terminological database. *Proceedings of 11th International Conference on Language Resources and Evaluation (LREC)*, 4367–4371.

Young, K., Fisher, J., & Kirkman, M. (2015). Women's Experiences of Endometriosis: A systematic review and synthesis of qualitative research. *Journal of Family Planning and Reproductive Health Care*, *41*(3), 225–234.

#### Irene Jiménez Alonso (University of Innsbruck)

# **Domain Representation with Frames for Translators and Interpreters**

In terminology, the terms of a domain are traditionally represented in the form of an ontology – understood as a graphical representation in which terms are represented by nodes and the relationships between them by arrows. Ontologies are a good way of representing a domain for experts. However, they don't provide an overview of the domain that can be easily understood by non-experts. Frame-based terminology proposes frame-like representations in the form of conceptual templates that underlie the knowledge encoded in technical texts. Frames are typically divided into agent, process and patient/result. The innovation of this type of representation is that it provides a quick overview of the domain that can be also understood by non-experts, although it doesn't provide a detailed representation of the domain. Therefore, for translators and interpreters who need to familiarise themselves quickly with new domains, frames can be an advantage as a first approach to them.

Apart from the difference in user group, the choice between frames and classical ontologies also depends on the type of domain. Frames are usually better suited for representing eventbased domains, while ontologies tend to be a better option for representing taxonomy-based domains. This fact could play a crucial role in systematising the process of domain representation according to the type of domain involved, which could lead to the incorporation and standardisation of new methods such as frames. However, in order to work with this assumption, the concepts of event-based domain and taxonomy-based domain need to be precisely described and differentiated.

In order to do this, I will on the one hand draw on my own experience with both ways of representing domains and with both types of domains, as well as on other work done by students at the University of Innsbruck. On the other hand, I will report on work aimed at supporting the implementation of a combination of ontologies and frames for domain representation by means of dedicated terminology management software. Therefore, taking into account the past experience of creating frames according to the existing template and the future-oriented approach of modifying and combining this template to make it more versatile, I intend to make a clear distinction between event-based and taxonomy-based domains. The main aim of this distinction is to facilitate the work of translators and interpreters by systematising the use of different methods of domain representation according to the type of domain and, therefore, the specific needs and requirements associated with it.

#### References

Faber, Pamela, Carlos Márquez Linares & Miguel Vega Expósito (2005), 'Framing Terminology: A Process-Oriented Approach', in *Meta: Translators' Journal* 50(4).

- Faber, Pamela & L'Homme, Marie Claude (eds.) (2022), Theoretical perspectives on terminology: explaining terms, concepts and specialized knowledge, Amsterdam/ Philadelphia: John Benjamins Publishing Company.
- Fillmore, Charles J. (1982), 'Frame Semantics', in *Linguistics in the Morning Calm*, 111–137.
- *Frame-Based Terminology*, Eco Lexicon research group, http://lexicon.ugr.es/fbt, accessed 16.03.2024.
- Nistrup Madsen, Bodil & Erdman Thomsen, Hanne (2009), 'Ontologies vs. classification systems', in NEALT (Northern European Association of Language Technology), 26–32.

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# Meaning Distinctions in the Terminology Research: A Lexicon-Driven Approach Applied to Brazilian Portugese

This proposal is related to a terminological research developed to account for terms from the field of the environment in Brazilian Portuguese. This research is an ongoing project that has been implemented in two multilingual terminological resources, the DiCoEnviro – *Dictionnaire fondamental de l'environnement* – and *The framed version of DiCoEnviro*, both under the coordination of the *Observatoire de Linguistique Sens-Texte* (OLST), Université de Montréal, Canada.

The research draws on the lexicon-driven approach (L'Homme, 2020:26) and on an adaptation of the methodology developed within the FrameNet project (Fillmore and Atkins 1992; Ruppenhofer et al. 2016) for the terminological work (L'Homme et al. 2020). The terminological research concentrates on the linguistic properties of terms to uncover the specialized knowledge and the meaning of terms in running texts, that is, on the linguistic relations terms establish among themselves in contexts, such as paradigmatic and sintagmatic relations and the predicative structure (arguments and circumstancials labelled with semantic role). For instance, a polysemous lexical item (i.e. verb POLUIR), necessarily related to the same specialized domain, is distinguished based on two different scenarios (L'Homme, 2020: 134-140), each meaning being assigned to distinct semantic frames, as detailed below.

Based on the methodological steps of the terminological work, terms and their meanings are identified, selected and analysed taking into account the annotation of up to 15 contexts. Once the linguistic properties of terms are analysed, a formal connection is ready to be established to the conceptual background of the specialized knowledge. Frames are then defined guided by different lexico-semantic properties of terms, such as the same number of arguments, arguments of similar nature and shared circumstantials (L'Homme 2017; L'Homme et al. 2020).

The focus here is on the distinction of two meanings of *poluir* (to pollute), the verb POLUIR 1a and the verb POLUIR 1b, and on the account of the conceptual background of each of these terms. One main meaning distinction here is captured based on two different scenarios evoked by each lexical unit. Each meaning presents a different configuration of participants, represented by arguments and their semantic roles : POLUIR 1a [poluir : substância 1 (MATERIAL) ~ (*polui*) atmosfera 1 (DESTINATION)] and POLUIR 1b [poluir : homem 1 (AGENT) ou atividade 1 (CAUSE) ou veículo (INSTRUMENT) ~ (*polui*) atmosfera 1 (DESTINATION)]. Consequently, two lexical units are established, and two conceptual scenarios (frames) are devised. Poluir 1a is characterized by a Material that penetrates a Destination and changes the composition of the Destination (frame name « Contamination ») and Poluir 1b is characterized by an Agent, a cause or an instrument that contributes to the change of composition of a Destination by discharging a Material into the Destination (frame name «Cause\_Contamination »), both available at *The framed version of DiCoEnviro*.

#### References

Fillmore, C. J., and B.T. Atkins. 1992. Toward a Frame-based Lexicon: The Semantics of RISK and its Neighbors." In *Frames, Fields and Contrasts*, ed. by A. Lehrer, and E. Feder Kittay, 75-102. Hillsdale, New Jersey: Lawrence Erlbaum Assoc.

L'Homme, M. C. Maintaining the balance between knowledge and the lexicon in terminology: a methodology based on Frame Semantics. *Lexicography, Journal of Asialex*, v. 4, n. 1, 2017. DOI <u>https://doi.org/10.1007/s40607-018-0034-1</u>

L'Homme, M. C. *Lexical Semantics for Terminology*: an introduction. Amsterdam/Philadel-phia: John Benjamins Publishing Company, 2020. DOI https://doi.org/10.1075/tlrp.20

L'Homme, M. C.; Robichaud, B.; Subirats, C. Building multilingual specialized resources based on FrameNet: Application to the field of the environment. In: INTERNATIONAL FRAMENET WORKSHOP 2020: Towards a Global, Multilingual FrameNet. Marseille, França, 2020. Available at <u>https://aclanthology.org/2020.framenet-1.12.pdf</u>.

Ruppenhofer, J, M. Ellsworth, M. Petruck, C. Johnson, and C. Baker, and J. Scheffczyk, 2016. *FrameNet II: Extended Theory and Practice*. Available at https://framenet2.icsi.ber-keley.edu/docs/r1.5/book.pdf. Accessed June 12, 2024.

#### Language Resources References

DiCoEnviro. *Dictionnaire fondamental de l'environnement* (http://olst.ling.umon-treal.ca/cgi-bin/dicoenviro/search.cgi). Accessed June, 2024.

*A Framed Version of DiCoEnviro* (http://olst.ling.umontreal.ca/dicoenviro/framed). Accessed June, 2024.

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# An Evaluation and Overview of GenAI Use-Cases for Enterprise Terminology Management

Generative large language models hold significant promise for linguistics, particularly in the realm of terminology work. This paper aims to provide an overview of common use-cases for generative and other AI tools within the context of terminology management in enterprises. Specifically, we evaluated the use of AI for the terminology check and replacement function in our own software, "Kalcium Checkterm," where we found strong performance of LLMs regarding the task of grammatically adapted terminology replacements in natural language text of various languages. Furthermore, we explore the automatic generation of definitions, example sentences, and identification of parts of speech, term type, and other relevant terminological data for our terminology management system "Kalcium Quickterm". Our findings based on various prompting and fine-tuning techniques across different GPT models as well as various retrieval techniques demonstrate the potential of these applications. Finally, we investigate the influence of terminological definitions and concept maps by using them as a grounding context for generative large language models. We compare the different approaches across a small human evaluated test set of queries that can only be answered with the knowledge embedded in the terminological data. In summary, this paper aims to present an overview of the potential enterprise applications of AI in terminology and vice versa. On the basis of empirical evaluations and critical analysis, it delivers valuable insights into how AI can profit from but also enhance the effectiveness and significance of terminology management within enterprises and the localization industry.

#### References

- 1. San Martín, Antonio (2024) What Generative Artificial Intelligence Means for Terminological Definitions. doi: <u>https://doi.org/10.48550/arXiv.2402.16139</u>
- 2. Ouyang, L. et al. (2022) Training language models to follow instructions with human feedback. doi: <u>https://doi.org/10.48550/arXiv.2203.02155</u>
- de Schryver, Gilles-Maurice (2023) Generative AI and Lexicography: The Current State of the Art Using ChatGPT. *International Journal of Lexicography*, Volume 36, Issue 4, December 2023, Pages 355–387, doi: <a href="https://doi.org/10.1093/ijl/ecad021">https://doi.org/10.1093/ijl/ecad021</a>
- Borji, A. (2023). A categorical archive of ChatGPT failures. doi: https://doi.org/10.48550/arXiv.2302.03494 (several failures are not so anymore in GPT 40. Probably good to show how quickly the model has evolved from April 2023 to date) (<a href="#">@ ChatGPT</a> )
- Jakubíček, M. & Rundell, M. (2023) The end of lexicography? Can ChatGPT outperform current tools for post-editing lexicography? eLex 2023: Invisible Lexicography. Proceedings of the eLex 2023 conference. Brno, 27–29 June 2023. Brno: Lexical Computing CZ s.r.o.

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# **Criteria for Terminological Concept Systems**

Concept systems have been in the focus for terminology work from the early beginning of the systematic terminological activities. In the terminological literature, their properties and various types of requirements for them have been presented. For instance, Picht and Draskau (1985: 64) list clarity, intelligibility, transparency, and potential for amplification as requirements for the representation of terminological concept systems.

In this paper, a framework of criteria for representing concept systems will be proposed as synthesis from a content analysis of a material which consists of a selection of terminological standards, handbooks, textbooks and research articles in the field of Terminology Science. Concept systems and concept relations are fundamental elements also in compiling ontologies, classifications, taxonomies and other knowledge ordering systems, and therefore also concept system descriptions in related disciplines are included in the material.

Terminology work has a practice-oriented approach to concept systems (c.f. philosophy or psychology). In the literature, the term *concept(ual) system* is therefore often used to refer not only to the mental conceptual structure but also to its representation, mainly the visual depiction of concepts of a field in the form of a diagram. It may refer to everything from the whole multi-relational network to a single-relational hierarchy of all or part of the concepts of a field.

Finding out and representing concept systems are usually mentioned as the prerequisite phases for the other phases of terminology work. Concept system representations are structured for various purposes, e.g., to visualize or organize structure, knowledge, or terms of a field. Each of the uses have their own constraints. Early on, concept system diagrams were added in the printed glossaries and/or terminological entries were organized according to the system. Today's terminological resources and software enable additional, more versatile ways for concept system representations.

The type of concept system depends in each case on the type of entity that is the object of the analysis. Generally, more focus has been on generic typologies and relations between the wholes and their parts while other relation types have been classified as "associative". Including associative relations multiplies the amount of concept system types, properties as well as criteria for them. There are efforts to create ways to represent them (e.g., Nuopponen; Faber).

In addition to the domain, type of entity, type of concept system and relations in them, and purpose, other relevant properties or aspects to be considered are e.g. target group, tools for the presentation, etc. Furthermore, properties of concept systems and/or relations, such as multidimensionality, dynamicity, recursiveness, reciprocity, sequentiality, etc., have influence on elaboration and representation of concept systems.

#### **Selected References**

Faber, Pamela (2014). Frames as a framework for terminology. In: Frida Steurs & Hendrik Kockaert (eds.): *Handbook of Terminology: Volume 1*, 14–33. John Benjamins.

ISO 704:2022(E). *Terminology work – Principles and methods*. International Organization for Standardization.

Keller, Nicole (2021). Visualisierung von Begriffsbeziehungen in mehrsprachigen Terminologiedatenbanken. In: *edition* 1/2021, 21–28.

Nuopponen, Anita (1994). *Begreppssystem för terminologisk analys*. [Concept systems for terminological analysis]. Vaasa: University of Vaasa.

Nuopponen, Anita. (2018). Terminological Concept Systems, In: John Humbley, Gerhard Budin & Christer Laurén (eds.): *Languages for Special Purposes. An International Handbook*, 453–468. Berlin, Boston: Mouton De Gruyter

Picht, Heribert & Jennifer Draskau (1985). *Terminology: An Introduction*. University of Surrey, Department of Linguistic and International Studies.

Wright, Sue Ellen (1997). Representation of Concept Systems. In: Sue Ellen Wright & Gerhard Budin (eds.): *Handbook of Terminology Management*, 89–97. Amsterdam, Philadelphia: Benjamins.

Wüster (1975/1985). *Einführung in die Allgemeine Terminologielehre und Terminologische Lexikographie*. 2. Auflage. Fachsprachlichen Zentrum, Handelshochschule Kopenhagen.

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# Cultural and Contextual Aspects as Triggers of Term Variation. The Classification of the Wind Force in the 18th and 19th Century in English and French through Different Semiotic Systems

This contribution addresses representations of specialised knowledge in 18<sup>th</sup> and 19<sup>th</sup>-century scientific domains in an historical perspective. Specifically, it describes the cultural aspects of the historical context which triggered term variation in the classification and naming of wind force in two fields of research.

Through the comparison of 18<sup>th</sup> and 19<sup>th</sup>-century classifications of wind strength in the fields of meteorology and engineering, concepts systems and nomenclatures are examined, in relation to the discipline in which they were applied, the aspects of concepts they highlighted, and the necessities of the experts they addressed (Defoe 1704). Among others, the classifications showed how symbols identified the wind force in logbooks for mariners, and how descriptions of the wind force effect on trees and buildings helped to categorise it. At the same time, terms were adapted to engineering, to describe wind force "to turn Mills, and other Machines, depending on a circular motion" (Smeaton 1859: 100), as these classifications highlighted different aspects of the same concepts, which were considered more relevant for engineers.

The discussions among experts - who were the protagonist of the historical sources and expressed their opinions on the nomenclatures - are considered as processes behind the formation of term variants (see Freixa 2022), and other contextual elements such as their *trasmittability* to other experts (Huler 2004), or the international communication with other scholars. In this regard, this contribution examines classifications and nomenclatures in English and French, as well as various semiotic systems, such as numbers and symbols (Lamarck 1801; Beaufort 1832). Specifically, it describes cultural and pragmatic aspects influencing term formation and variation within the progress of knowledge, evaluating how these factors contributed to the development these nomenclatures.

The historical sources are analysed from the perspective of contemporary terminology, to access the extent to which the terminological practices of the time relate to today's theories of terminology. This contribution describes the process of term formation, which according to Sager (1997: 26) "obeys strict rules that mirror conceptual relations", in relation to the progress of cognitive models, which contributes to the evolution of knowledge (Temmerman and Van Campenhoudt 2014: 3). The role of experts in the formation of knowledge and terms is underlined. As Johnson and Sager state (1980: 87), terms can be said to belong to a "structured system of knowledge" possessed by a community of users, who then ratify this knowledge in the form of standards. As Delavigne (2006) underlines, terms cannot be separated from the historical and social situation in which they evolve, and from the necessities of the experts coining them, as terms are identified as "the reflection of how knowledge is structured in the expert's mind" (Fernandéz-Silva et al. 2011: 49).

To conclude, this proposal focuses on the analysis of the contextual motivations which brought the experts to propose different classifications, and to the factors which influenced the evolution of classifications and nomenclatures to respond to the needs of a scientific domain. Through the analysis of 18<sup>th</sup> and 19<sup>th</sup>- century original sources, emphasis is attributed to the role of experts in the formation of conceptual classifications and therefore of knowledge, as their reflections express contextual necessities, to which terms should respond.

#### References

#### Historical sources

Beaufort, Francis. (1832). "The Log-Board". The Nautical Magazine 1 (10): 537-539.

- Defoe, Daniel. (1704). *The Storm. Or a collection of the most remarkable casualties and disasters which happen'd in the late dreadful tempest, both by sea and land.* London: G. Sawbridge.
- Lamarck, Jean-Baptiste de. (1801). "Sur la distinction des tempêtes d'avec les orages, les ouragans etc. Et sur le caractère du vent désastreux du 18 brumaire an 9". *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 52 : 377–382.
- Smeaton, John. (1759). "An experimental Enquiry concerning the Natural Power of Water and Wind to turn Mills, and other Machines, depending on a circular motion". *The Philosophical Transactions of the Royal Society of London* 51: 100–174.

#### Secondary sources

- Delavigne, Valérie. (2006). "La formation du vocabulaire de la physique nucléaire: quelques jalons". In : *Aspects diachroniques du vocabulaire*. Candel, Danielle and François Gaudin (Eds.). Rouen : Publications des Universités de Rouen et du Havre : 89–109.
- Fernández-Silva, Sabela, Judit Freixa, and Maria Teresa Cabré. (2011). "A Proposed Method for Analysing the Dynamics of Cognition through Term Variation". *Terminology* 17 (1): 49–74. DOI: <u>https://doi.org/10.1075/term.17.1.04fer</u>
- Freixa, Judith. (2022). "Causes of terminological variation". In: Theoretical Perspectives on Terminology. Explaining terms, concepts and specialized knowledge. Faber, Pamela and Marie-Claude L'Homme (Eds.). Amsterdam: John Benjamins: 399–420. DOI: <u>https://doi.org/10.1075/tlrp.23.18fre</u>
- Huler, Scott. (2004). *Defining the wind. The Beaufort Scale, and how a 19th century Admiral turned Science into Poetry*. New York: Three Rivers Press.
- Johnson, Robert L. and Sager, Juan C. (1980). "Standardization of Terminology in a Model of Communication". *International Journal of the Sociology of Language* 23: 81–104.
- Sager, Juan. C. (1997). "Term Formation". In: Handbook of Terminology Management: Basic Aspects of Terminology Management. Wright, Sue Ellen and Gerhard

Budin (Eds.): 25–41. Amsterdam: John Benjamins. DOI: https://doi.org/10.1075/z.html

Temmerman, Rita and Van Campenhoudt, Marc (Eds.). (2014). Dynamics and Terminology. An interdisciplinary perspective on monolingual and multilingual culturebound communication. Amsterdam: John Benjamins. DOI: <u>https://doi.org/10.1075/tlrp.16</u> Natascia Ralli (Institute for Applied Linguistics – Eurac Research), Elena Chiocchetti (Institute for Applied Linguistics – Eurac Research)

### **Representation of Gender-Sensitive Language in Terminological Definitions. A Case Study on Italian**

In recent years, efforts for a more equal and inclusive society have led to reviewing sexist language in dictionaries (e.g., Oxford English Dictionary, Duden, Treccani). Definitions and examples are being cleaned of gender stereotypes. In grammatical gender languages (Stahlberg et al. 2007) like Italian and German, agentives, i.e., "linguistic forms that indicate an agent, as job titles, etc." (Bengoechea 2017:200), are recorded both in their masculine and feminine form.

In terminology, the debate on which forms of agentives should be recorded is still open. Terminology puts a strong focus on concepts that are abstract units of knowledge (ISO 1087:2019, 3.2.7). Traditionally, terminology databases record the canonical form of designations that represent concepts; generally, the masculine form. Adding the feminine forms is possible, but sparks an essential question: is gender the mere "feature of an object", i.e., a property (ISO 1087:2019, 3.1.3) or a characteristic of a concept, i.e., an "abstraction of a property" (ISO 1087:2019, 3.2.1) (Winter 2021:29). In the first case, the masculine and feminine form of an agentive designate the same concept and should be described in the same concept entry. In the second case, they designate two different concepts and should be described in different concept entries.

Public and private organizations are expressing an increasing need for feminine agentives in their terminology databases to be able to use them correctly and consistently in their texts (e.g., job advertisements, business cards, organizational charts, e-mail signatures) (Evers 2022:13) and, in general, in authoring and proofreading tools, ontologies, CAT tools and machine translation engines. The latter are known for their male bias (Savoldi et al. 2021).

This affects also definitions in terminology databases. In terminology, concepts are preferably defined according to their intension. Intensional definitions follow the model  $definiendum = genus \ proximum + differentiae \ specificae$  (Arntz et al. 2021:67). Concepts are described starting with the (closest) generic concept and by specifying the delimiting characteristics (cf. ISO 1087:2019, ISO 704:2020).

Against this background, we explore to what extent terminological definitions can be drafted in a gender-sensitive language following terminological principles. As a case study, we use 640 definitions in Italian from a multilingual database containing legal terminology and

- identify which definitions are (not) gender-neutral and why
- classify strategies to write gender-neutral definitions in Italian (e.g. using genderneutral terms or phrases)
- draft guidelines for gender-neutral definitions in Italian

The study shows three main challenges:

- Agentives in the legal domain are often abstract. They do not focus on a person, who can be male, female or non-binary, but rather on a function or role (Ralli & Evers 2023, Chiocchetti & Ralli 2022). Following this abstraction process, agentives are usually recorded in their masculine form (Ralli & Evers 2023).
- Defining hyponyms requires mentioning the hypernym. This implies semantic (not conceptual!) cross-references between concepts to achieve gender-neutral definitions.
- Many feminine agentives in Italian are rarely used and cannot be described by contexts from real texts.

Considering the aforementioned issues, we will illustrate our analysis while contributing to the debate on gender equality in terminological definitions.

#### References

Arntz, R., Picht, H. & Schmitz, K.-D. (2021). *Einführung in die Terminologiearbeit*. 8<sup>th</sup> ed. Hildesheim: OLMS.

Bengoechea, M. (2017). "Agentives for women, a gap still to fill: Dismissing non-sexist language policies in terminological resources. In Faini, P. (ed.), *Terminological approaches in the European context*. Newcastle upon Tyne: Cambridge Scholars Publishing, 200–221.

Chiocchetti E, and Ralli, N. (in review). "Comunicazione istituzionale inclusiva in Alto Adige: esperienze e questioni aperte". *Convegno Internazionale di Linguistica e Glottodi- dattica Italiana CILGI5 2023*. March 23–25, 2023, Salerno.

Drewer, P., & Schmitz, K.-D. (2017). *Terminologiemanagement. Grundlagen—Methoden—Werkzeuge*. Berlin: Springer Vieweg.

Evers, E. (2021). "Geschlechtersensible Sprache. Wie bringe ich es meiner Terminologiedatenbank bei?" In *edition* 2/22: 13–20.

ISO 704 (2022). Terminology work—Principles and methods. International Organization for Standardization.

ISO 1087 (2019). *Terminology work and terminology science*—Vocabulary. International Organization for Standardization.

Ralli, N. & Evers, E. (in review). "To gender or not to gender, that is the question: genderinclusive language in the legal context". In *Terminology Science & Research*.

Savoldi, B., Gaido, M., Bentivogli, L., Negri, M. & Turchi, M. (2021). "Gender Bias in Machine Translation". In Roark, B. & Nenkova, A. (eds), *Transactions of the Association for Computational Linguistics*. Vol. 9. Cambridge. Association for Computational Linguistics, 845–874.

Stahlberg, D., Braun, F., Irmen, L. & Sczesny, S. (2007). "Representation of the sexes in language". In Fiedler, K. (ed.) *Social communication*. New York: Psychology Press, 163–187.

Winter, T. (2021). "Das Gendern. Terminologisch betrachtet ein Missverständnis mit Skandalpotential". In *edition* 2/21: 29–30.

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# **Terminological Consistency Beyond Terms**

In technical communication and translation, terminological consistency is a crucial factor in ensuring clarity and precision (Göpferich 2002; Rogers, 2008). This paper argues that, beyond consistency at the level of individual terms, text continuity is another essential and related factor in technical communication and translation since terms are an integral part of textuality (Beaugrande and Dressler 1981). Text continuity includes logical, enunciative, and referential aspects (Ferrari, 2022). Translator competence is involved in all three aspects of continuity, but while the first two require the translator to recognize and conceptually transfer elements into the target language, maintaining referential continuity hinges on the equivalence of lexical chains (here referred to as terminological chains) between the source and target languages. These chains represent interconnected terms (nouns, adjectives, verbs, phrases, etc. as well as reductions, repetitions, overspecifications, clipping) that guide the target reader through the technical reasoning process, thereby enhancing the intelligibility of technical documents (Rogers, 2007).

Different languages construct terminological chains in different ways (Andersen, 2002), presenting translators with the challenge of balancing terminological consistency and text continuity using these chains. So, for example, the German term Luftdichtigkeit ('air tightness') is chained with the adjective *luftdicht* ('airtight') while the corresponding Italian term tenuta all'aria ('air tightness') does not similarly link with the adjective ermetico ('airtight'). Maintaining the same level of referential continuity in the target text using standard terminology is not always feasible. Terminological chains can be preserved by enforcing the use of non-standard terminology in the target language (e.g., ermeticità (as an enforced non-standard term for Luftdichtigkeit or a tenuta d'aria for luftdicht) but this might be perceived by recipients of the target language as translationese or interference (Roveri, 2005) rather than an appropriate translation strategy for text continuity. This approach might also be perceived as contradicting the quality requirements for translations set by ISO standards, according to which the adoption of contrived terminological chaining is considered a major error. Terminological errors derived from the quality standards for translations include: non-compliance with specific domain and client terminology, lack of lexical cohesion (in the sense of use of term variations) (ISO 17100 entry 5.3.1, ISO/DIS 5060:2022 and SIO 5060:2024 entry 5.4), and wrong concept (ISO/DIS 5060:2022 and ISO 5060:2024 entry 5.4).

The present study examines the use of terminological chains in German technical manuals within standardized domains, and their translations into Italian. It explores potential translation strategies to ensure text continuity, particularly when the linguistic systems of the source and target languages differ in their construction of terminological chains. The discussion also assesses whether maintaining terminological continuity should be considered a quality criterion in technical translations, even if it partially contradicts established definitions of terminological errors.

This discussion is currently of particular relevance, considering the implications of incorporating terminological chains and related translation strategies in the evaluation of machine translation, which traditionally includes terminological consistency (e.g. Keller, 2020, Dalla-Zuanna, 2020, MQM scoring model 2024).

#### References

Andersen, Øyvin 2002. 'Terminology and Pragmatics'. In: Merja Koskela, Christer Laurén, Marianne Nordman & Nina Pilke (eds) Porta Scientiae I. Vaasa: University of Vaasa, pp. 136–46.

Beaugrande, Robert de and Dressler, Wolfgang 1981. *Introduction to Text Linguistics*. London and New York: Longman.

Dalla Zuanna, Jean-Marc (2020) Quality evaluation according to the expanded SAE standard J2450 as applied by Volkswagen AG's Language Services. In Dalla-Zuanna, Jean-Marc and Christopher Kurz (eds) Translation Quality in the Age of Digital Transformation. Berlin: BDÜ-Fachverlag. 254-268

Ferrari, Angela. 2022. Il testo scritto tra coerenza e coesione. Italiano di oggi 4. Firenze: Franco Cesati editore.

Göpferich, Susanne (1998) Interkulturelles 'Technical Writing'. Fachliches adressatengerecht vermitteln. Tübingen: Gunter Narr.

ISO 17100 Translation services — Requirements for translation services

ISO 5060:2024: Translation services — Evaluation of translation output — General guidance

ISO/DIS 5060:2022: Translation services — Evaluation of translation output — General guidance

Keller, Nicole (2020) Automatic quality assurance: advantages and disadvantages of current tools. In Dalla-Zuanna, Jean-Marc and Christopher Kurz (eds) Translation Quality in the Age of Digital Transformation. Berlin: BDÜ-Fachverlag 165-183

MQM Scoring model. (accessed: 29/06/2024) https://themqm.org/error-types-2/the-mqm-scoring-models/

Rogers, M. (2007). Lexical chains in technical translation: A case study in indeterminacy. In B. E. Antia (Ed.), *Terminology and Lexicography Research and Practice* (Vol. 8, pp. 15–35). John Benjamins Publishing Company. <u>https://doi.org/10.1075/tlrp.8.05rog</u>

Rogers, Margaret (2008) Consistency in Terminological Choice: Holy Grail or False Prophet". In: Simonnæs, Ingrid (ed.). SYNAPS 21, Festskrift for Magnar Brekke. Bergen: NHH. 107-113.

Roveri, Sara (2005) Interferenza linguistica nella traduzione dal tedesco all'italiano. In Anna Cardinaletti and Giuliana Garzone (eds.) L'italiano delle traduzioni. Lingua, traduzione, didattica. 123-152 Milano: Franco Angeli.

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# Adaptation of Archaic Religious (Christian or Pagan) Lexical Units in Svan<sup>2</sup>

Keywords: Religion, lexicology, terminology, phonetics, semantics, etymology

The unwritten Svan language, included in the endangered languages list, is rich in various branches, particularly archaic religious (pagan-Christian) lexemes, most of which come from the Common Kartvelian root language. Svan, on the other hand, contains Greek, Turkish, Persian, Arabic, Ossetian, North Caucasian, and other language data, which come directly from Georgian-Zan, as well as through Georgian. Naturally, the above-mentioned material has undergone significant metamorphosis from ancient times to the present day.

The research topic "Adaptation of archaic religious (Christian or pagan) lexical units in Svan" envisages ethnolinguistic research of the terminology related to fasting and the Eucharist (e.g. ziräb /zīreb/ziareb/ziareb/ziareba/zjäreba ziar-eba "the Eucharist"; marxw/marxwob markh-ul-ob-a "fasting") based on the data of Svan sub-dialects.

The scientific research includes descriptive, historical-comparative, and internal reconstruction methods. The religious (pagan, Christian) vocabulary and related ethnographic material presented by us have not been the subject of special research in linguistics. Hence, the purpose of our report is to overcome this gap using the method of complex analysis. The theoretical-methodological base is represented by ethnological and linguistic works of various researchers about archaic religious lexical units.

The dialectological material used for illustration is compared with the Georgian-Zan language data using the contrasting method, which revealed lexical units not only from the Common Kartvelian (e.g. lilčäl (US.)/lin/lčäl (UB.)/lilčal (LB.)/linčāl (Lash., Chol.)/lilečäl Lent.) "fasting"), but also materials assimilated from different languages (e.g. marxwob (Lash., Chol.) *relig.*. < Old Geo. markh-ul-ob-a (< Pahlavi pāhr- through metathesis pāhr > parx > marx) "keeping the fast, following the rules of the fast"). We present a discussion based on relevant studies and new interpretations considering the differentiation and transformation of word forms related to fasting and the Eucharist, as well as their origins regarding religious and folk motives. Also, the report will focus on Svan material properly (e.g. bapa žagi līmne/liymūne (Ushg.) "fasting (exactly \_ eat priest's medicine / mywdli{s} camli{s} čmewa)"; liţme (UP., Lash., Chol.)/liţäme (Lent.) "fasting; starving"; lišräwi (UP.)/lišrawi (Lash., Chol.)/lišeräwi (Lent.)...) which is particularly interesting from both linguistic and psycho-emotional points of view. Even small details are crucial to provide a complete picture of the old worldview and beliefs because they "can restore and illuminate

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the important moments of the holiday and faith." The explanation of these lexical elements will help keep the language alive.

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### **Taxonomic and Process-Oriented Domains**

In Wüster's *Allgemeine Terminologielehre*, the starting point for terminology work is a set of concepts identified in a domain. These concepts are then defined, named, and organized into an ontology. The backbone of ontologies are the structure-building relations of hyponymy and meronymy. For some domains, these relations characterize the structure of the domain quite well. Examples can be found in zoology and chemistry. In a domain such as primates or rodents, setting up a taxonomy and describing the internal makeup of a body, i.e. hyponymy and meronymy relations, result in a structure that needs only few additions to become a full terminology for the domain. In other domains, hyponymy and meronymy are much less prominent. Examples can be found in the production and marketing of beverages or in sports. In domains such as wine-making or football, there are purposeful actions that structure the domain. Classification plays a role, but much less so than in zoology. Meronymy is not prominent at all. In such domains, frames offer a tool for structuring the terminology that cannot easily be matched in a classical ontology. In order to operationalize the distinction, I will discuss some criteria that can be applied to domains and used as a test to predict to what extent frames and taxonomy-based approaches are more felicitous.