

Selected Topics in Terminology Work: Best Practices and Beyond

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1. INTRODUCTION

Terminology studies and terminology work are exciting fields of study and practice. Both centre around terminologies, which we define here as “structured set[s] of concepts and their designations <...> in a specific subject field” (Ahmad et al. ca. 2000; cf. DIN 2342:2011, 16). Thus, when working with terminologies, we are within a given domain of study or practice that may be easier or less easy to delineate. Activities dealing with terminologies are called terminology work, which we define as “work concerned with the identification, collection, processing, description, presentation and use of concepts and their designations” (cf. ÖNORM A 2704:2015, 6). In the two definitions, the characteristic related to concepts and their designations is of paramount importance: both concepts and designations are dealt with when people carry out various terminology work tasks.

The present article has a twofold aim: a) taking stock of three topics in terminology work, as practiced today, and b) presenting novel developments related to these topics that might drive the future of terminology work and terminology training. Thus, the three topics are discussed in a best practices/and beyond comparison. They have been chosen based on recent standardisation efforts for and research on terminology work: section 2 deals with designations as terminological units, section 3 is about concept modelling and section 4 discusses reference tools for translators. Section 5 contains some thoughts on possible implications for the training of terminology experts. We conclude and provide a brief outlook in section 6.


2. DESIGNATIONS AS TERMINOLOGICAL UNITS

Best practices ...

According to standard literature on terminology work, the concept ‘designation’ may be defined as “representation of a concept ... by a sign which denotes it” (ISO 1087-1:2000, 6). Basically, we distinguish between three types of designations: term, appellation and symbol (cf. Felber 1984: 169; Felber, Budin 1989: 3ff.; ISO 1087-1:2000, 6; Pavel, Nolet 2001: 18f. and 107; ISO 704:2009, vii and 34; DIN 2342:2011, 10). Terms, such as “high-performance chromatography” or “@ sign”, designate general concepts and consist of words or word-like character strings (cf. ISO 1087-1:2000, 6). Appellations, such as “Tempo®” or “Nobel Peace Prize 2013”, are similar, but designate individual concepts. Finally, symbols such as  or ¹, “are an important aid to international communication because their visual representation of concepts functions independently of any given language” (ISO 704:2009, 41). They represent general or individual concepts (cf. ISO 704:2009, 34).

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The above distinction between terms, appellations and symbols is useful in principle. Also, it is enriched by a description of various appellations in ISO 704:2009, 56ff. However, all in all we should have a concept system ‘designation’ that is more granular and more systematic than existing classifications. The recently published Austrian standard ÖNORM A 2704:2015 is an attempt to reach this objective: in cooperation with onomasticians and nomenclature experts, a comprehensive classification of designations, in particular of proper names and related designations, has been developed.

As a first example, let us have a look at the designation ². What is it according to the above division? An appellation because it refers to an individual concept related to a well-known information technology company? Or a symbol because parts of it are non-verbal? While terms may contain symbols (cf. ISO 1087-1:2000, 6), symbols have not yet been sufficiently defined and classified. Both in terminology studies and terminology work,

¹ Cliparts taken from <https://openclipart.org/detail/7608/statue-of-liberty> and <https://openclipart.org/detail/194680/map-of-africa-with-countries-in-cylindrical-equal-area-projection>, respectively.

² Taken from <http://www.hp.com/hpinfo/images/hplogo.jpg>.

we need a more detailed concept system ‘symbol’, not the least for easier data maintenance in terminological databases (data category selection, data import and export, etc.).

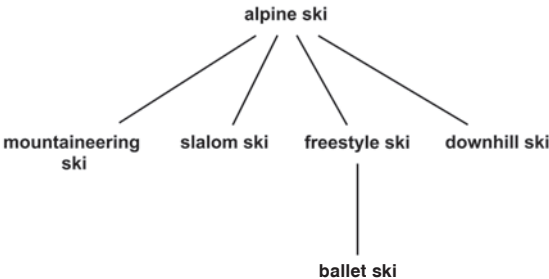
As a second example, let us reflect on the designation “978-3-7329-0053-4” (ISBN). Many terminology experts would not regard this character string as a designation at all. However, what is the fundamental difference between an ISBN and the corresponding book title, which we would consider an appellation, though? We need to broaden our interpretation of what constitutes a designation, since unconventional designations such as article numbers and identifiers used in e-commerce are gaining ground in many different fields (cf. Galinski, Giraldo Pérez 2012). A broader, yet more detailed classification of designations would also enable us to establish closer ties between software tools used in terminology management, product management, enterprise resource planning and the like. Hence, the degree of interoperability could be increased as well. To this end, experts in terminology, nomenclatures and name studies (onomastics) should cooperate more closely in the future. There are many common problems that will be easier to solve by means of common solutions.

3. CONCEPT MODELLING

Best practices ...

When terminology experts want to illustrate a concept system by graphical means, they usually do so by drawing a concept diagram, i.e. a “graphic representation of a concept system” (ISO 1087-1:2000, 4). The notation used in concept diagrams today has historical roots and is described in standard literature on terminology work, e.g. Wüster 1991; Suonuuti 1997; ISO 704:2009; Arntz, Picht, Schmitz 2014 (see fig. 1).

Figure 1. Concept diagram ‘alpine ski’ (derived from ISO 6289:2003, drawn according to ISO 704:2009)

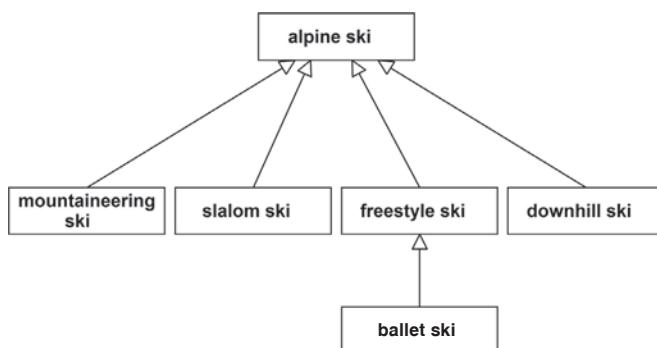


The above notation, however, does not follow a detailed specification providing a formal syntax. Also, it is difficult to interpret for computer applications: mostly, such concept diagrams come in the form of binary files that do not contain any semantics in addition to the pictorial information itself.

... and beyond

There are IT modelling languages, such as the Unified Modeling Language (cf. ISO/IEC 19505:2012), that lend themselves to use for terminological purposes. Thus, there have been standardisation efforts in the past years to offer alternative forms of graphical representations. For instance, a recent ISO standard on terminology work deals with concept models, i.e. “concept diagram[s] <...> formed by means of a formal language” (ISO 24156-1:2014, 1). More precisely, the use of the Unified Modeling Language notation is proposed (see fig. 2).

Figure 2. Concept model ‘alpine ski’ (derived from ISO 6289:2003, drawn according to ISO 24156-1:2014)



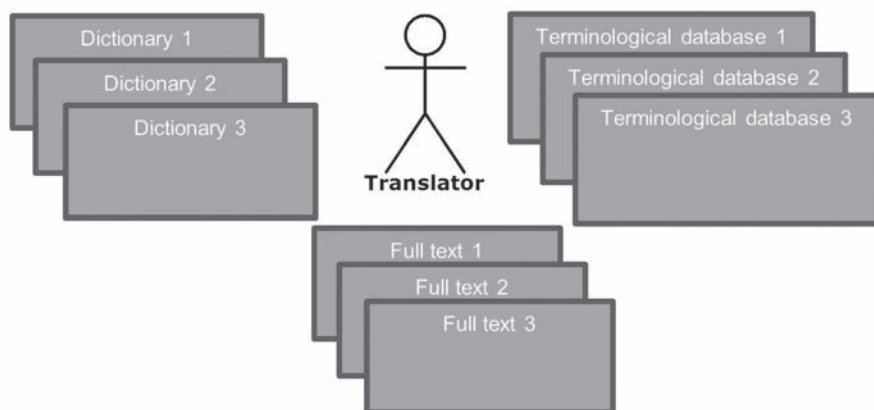
The main benefit of the above notation is that it follows a detailed (and freely available) specification providing a formal syntax. Also, it can be interpreted automatically by dedicated UML modelling tools. Furthermore, a semi-automatic conversion from UML concept models to terminological definitions and vice versa might be possible in the future (cf. Löckinger, Kockaert, Budin 2015: 78ff.). These are strong arguments for using formalised means instead of (or at least in addition to) conventional notations only. For innovative methods of representing terminologies in graphical form, a closer cooperation between terminology experts and data modelling experts is essential.

4. REFERENCE TOOLS FOR TRANSLATORS

Best practices ...

Language professionals need various types of domain-specific information to accomplish their complex tasks. Translators, defined as “language professional[s] who <...> render[s] written source language content into target language content in written form” (ISO 13611:2014, clauses 2.5.1 and 2.5.2), are no exception to this rule. At present, however, most reference tools do not fulfil their needs: relevant information is often scattered over different media (printed vs. online) and appears in various computer applications such as Internet browsers, terminology management systems, translation memory systems and local electronic dictionaries. This situation can be illustrated as follows (see fig. 3).

Figure 3. Translators and their reference tools today



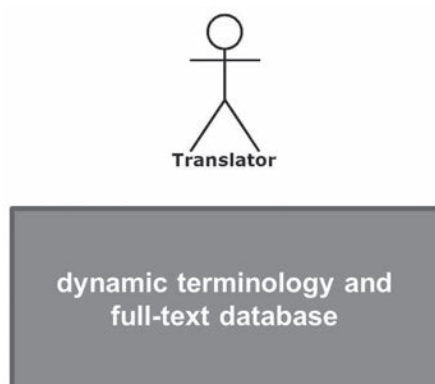
Some of the language resources available to translators may in fact be very sophisticated reference tools in electronic form. However, these resources are usually kept within individual information containers all of which have their individual user interfaces as well.

... and beyond

Recent research on the information needs of translators (Löckinger 2014 and Löckinger forthcoming) has demonstrated that an intelligent combination of tailor-made resources in “dynamic terminology and full-text database[s]” (Löckinger 2014: 316) is considered desirable by the language

professionals in question. Thus, innovative reference tools for translators should be integrated language resources as depicted below (see fig. 4; cf. also Bowker 2011 and Allard 2012).

Figure 4. Translators and their reference tools in the future



While there are many software tools that combine both translation memories and terminological databases, hardly any of them include text corpora as a third pillar. It is to be hoped that more language technology vendors will consider adding relevant text corpus management features to their software tools in the future. This would help translators to cover their information needs faster and in a more comfortable manner.³

5. IMPLICATIONS FOR TERMINOLOGY TRAINING

From the best practices/and beyond comparison above, we can draw a few conclusions specific to terminology training. With regard to **designations as terminological units**, terminology trainers both at universities and in other contexts should raise students' awareness of non-traditional designation types, since product classifications, e-commerce systems and the like are becoming more and more common. Closely related to that, the interdisciplinary nature of terminologies should be emphasised: many academic disciplines and fields of practice (name studies, nomenclatures, classification, etc.) deal with terminologies, albeit from different perspectives.

³ Machine translation is not included here, since the focus is on language resources created by humans rather than on language technologies enabling automated processes.

As to **concept modelling**, the role of graphical representations of concept fields and concept systems should be given more emphasis. Concept diagrams and concept models hold a great learning potential compared to the underlying traditional ‘terms and definitions’ texts (ease of comprehension due to a clear visibility of concept relations, etc.). Also, software tools for concept modelling should be part and parcel of terminology trainings when it comes to visualising terminologies.

Concerning **reference tools for translators**, the main need is in-depth training in language technology-related matters. Having received well-founded training in this area, translators will be in a position to better assess what software features are realistic and feasible today and where well-established and innovative features converge. Secondly, translators should be encouraged to communicate their (information) needs more often and more clearly to language technology vendors. Thirdly, integrated language resources such as those mentioned above should be built and/or used in translator training.

6. CONCLUSION AND OUTLOOK

Today, terminology work is carried out professionally in many fields and organisations. It is based on a state-of-the-art body of knowledge recorded in textbooks, specialist journals, national and international standards, etc. The main goal of this article was to identify and discuss three essential topics in terminology work: designations as terminological units, concept modelling, and reference tools for translators. To do so, we have described current “best practices” and presented novel solutions (“and beyond”) based on recent standardisation efforts and research.

In the future, the terminology expert community should continue to promote and refine the professional profile of terminology work and terminology experts. Also, the interaction between terminology studies and terminology work should be deepened, for instance via empirical research and relevant industry projects whose results may feed back into research in terminology studies. Finally, we should establish or foster cooperation with related fields in order to learn from each other, for mutual benefit and in a common interest.

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TERMINOLOGIJO DARBO PASIRINKTOS TEMOS: GERIOJI PRAKTIKA IR ATEITIS

Šiandien terminologijos darbas profesionaliai dirbamas daugelyje sričių ir organizacijų. Jis remiasi naujausiomis žiniomis, užfiksuotomis vadovėliuose, specializuotuose žurnaluose, nacionaliniuose bei tarptautiniuose standartuose ir kt. Pagrindinis šio straipsnio tikslas – išskirti ir aptarti tris svarbias terminologijos darbo temas: žymiklius kaip terminologinius vienetus, sąvokų modeliavimą ir informacines priemones vertėjams.

Kalbant apie **žymiklius kaip terminologinius vienetus** teigiama, kad dabartinė sąvokos „žymiklis“ sistema nėra tokia detali ir sistemiška, kokia turėtų būti. Ypač reikalinga išsamesnė tikrinių vardų ir į vardus panašių žymiklių klasifikacija, turint omenyje

augančią jų svarbą el. prekybos sistemose ir panašiais taikymo atvejais. Kalbant apie **sąvokų modeliavimą** atkreipiamas dėmesys į grafinio sąvokų laukų ir sąvokų sistemų vaizdavimo svarbą ryšiams tarp sąvokų parodyti. Tradicinė ženklų sistema turi keletą trūkumų (pavyzdžiui, nėra pagrindinės specifikacijos su formalia sintakse, sunku pritaikyti kompiuteriams), todėl pristatoma alternatyvi sąvokų modelių ženklų sistema, paremta Vieninga modeliavimo kalba (UML). **Informacinės priemonės vertėjams** yra trečia šiame straipsnyje nagrinėjama tema. Vertėjams, kaip ir kitiems kalbos specialistams, reikia įvairios tam tikros srities informacijos, padedančios atlikti sudėtingas užduotis, tačiau šiuo metu dauguma informacinių priemonių negali patenkinti jų poreikių. Remiantis naujais tyrimais, apimančiais empirinius tyrimus, „dinaminė terminologija ir visatekstės duomenų bazės“ siūlomos kaip informacinės priemonės vertėjams vietoj fragmentiškų kalbos išteklių, kurie dažniausiai naudojami šiandien.

Aptariamas galimas šių trijų temų įtraukimas į terminologijos mokymą. Terminologijos ekspertams siūloma daugiau dėmesio skirti gretimoms sritims, tokioms kaip vardų tyrimai ar nomenklatūros. Tai padėtų rasti bendrus sprendimus bendrų problemų, susijusių su terminologijos tyrimais ir darbu.

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