



FRAME-BASED TERMINOLOGY OF MARKETING TERMS

Mansurova Nodira Anvaronva

Tashkent Institute of Finance, Senior teacher, "Foreign Languages" Department

Email: nodira_anvarovna@mail.ru ORCID: 0000-0002-4636-10777

Abstract

Terminological resources have traditionally focused on terms referring to entities, thereby ignoring other important concepts (processes, events and properties) in specialized fields of knowledge. Consequently, large parts of the conceptual structure of these fields are not taken into consideration nor represented. In this article, we show how terms that refer to processes and events (and, to a lesser extent, properties) can be characterized using Frame Semantics (Fillmore, 1982) and the methodology developed. Frames are unveiled first by comparing similarities between the argument structures of terms already recorded in a terminological database and the relationships they share with other terms. A comparison is also carried out with the lexical units. Then, relations between frames are defined that allow us to build small conceptual scenarios that are specific to the field of the environment. This article reports on the methodology, the frames defined up to now and two specific conceptual scenarios.

Keywords: frame terminology, conceptual structure, terms, comparison, linguistic components, the valence

Introduction

Traditionally, terminological resources have been designed as knowledge repositories and until recently the focus has been placed on finding ways to represent the knowledge conveyed by terms. In fact, in several terminological applications, terms are viewed as the linguistic components of knowledge structures (i.e. linguistic labels attached to nodes that represent concepts). This perspective has led to the design of domain ontologies (or less formal structures) in which concepts are linked via a network of relations (is-a, part-of, cause-effect, etc) and terms are disambiguated linguistic labels assigned to these concepts. However, it has been pointed out that, although interesting, these knowledge structures have important drawbacks as far as linguistic aspects are concerned: 1. They tend to focus on terms that denote entities (expressed by nouns) and little consideration is given to processes and events; 2. Other types of units that could be relevant for terminology, such as predicative terms (that designate processes, events and properties) are not represented in a way that fully captures their meaning; 3. They either overlook the linguistic properties of terms altogether, or linguistic properties (such as variation) are taken into account in a peripheral component of the representation. An increasing number of researchers proposed alternative methods to add linguistic components to terminological knowledge structures (Faber, 2006, 2012; Montiel et al., 2010, among others). Others have developed methods to describe terms as linguistic units with frameworks designed for the lexicon in general. An interesting aspect of this latter work is the consideration given to terms that have been overlooked in knowledge structures, i.e. predicative terms and more specifically verbs (Condamines 1993; Lerat 2002; L'Homme



1998; Lorente 2002). It is generally recognized that both the relationship with knowledge and linguistic properties are important aspects of terminological description, and methods should be developed to merge them into resources. However, it seems that terminologists still struggle to find an adequate balance between conceptual and linguistic representations (L'Homme, 2014). One possible solution resides in frames or frame-like representations that attract the interest of an increasing number of researchers (Dolbey et al., 2006; Faber, 2006, 2012; Schmidt 2009, among others, see Section 3).

In Frame Semantics, word meaning is characterised in terms of experience-based schematizations of the speaker's world, i.e. Frames which impose order on prototypes. Thus, prototype is viewed as one of the essential concept in linguistic description with respect of frames. This innovative idea inspired linguists to investigate cognitive models developed on the basis of our interaction with the environment and to provide understanding of the meaning encoded in the language. The principles of this theory became the basis of Frame Semantics. Valence is also an important concept of Frame Semantics. Valence enables researchers to describe the lexical unit in accordance with the dependents required by it. Moreover, the semantic and grammatical features of a lexical unit interact with each other in creating the meaning of a phrase/sentence. According to Fillmore, valence is one of the consequences of a frame; it is related to the ways in which lexical items-verbs can combine with other words to make grammatical sentences. Fillmore started word valence research by classifying verbs according to the types of events or situations they express. He defined situations as assemblies of roles; however, this approach did not give him satisfactory results. Therefore, he turned from role identification to situation identification. The situation types expressed by lexical units constituted a frame filled up with roles. In so doing, Fillmore constructed cognitive frames based on linguistic frames. Following his ideas, cognitive frames are the background understandings necessary for making sense of things that happen around us; and linguistic frames are specifically coded in lexical units or other features of linguistic form. He explained the process of activation of frames in the following way: a person can invoke a frame in a particular situation from his/her personal 'mental lexicon' to help himself/herself to understand the situation; in the same way a word can invoke a frame as it is related by conventional associations with it (Andor, 2010, p. 158).

In Frame Semantics, the valence is a property of a verb to activate an argument structure of a verb with participants required by the verb, varying in number and nature. The arguments are the semantic roles assumed by those participants (Evans & Green, 2006, p. 225). The *Commercial transaction* frame seems to be the best to illustrate the valence or argument structures of verbs activated by this frame. The verbs buy, sell, pay, spend, cost, change, charge etc. Can be arranged to the *Commercial transaction* frame. In order to understand these verbs one needs to get access to a knowledge structure. As the valence is the basis of the construction of the frame, after the analysis of numerous examples, one can reveal that the verb buy is usually bivalent, it requires two participants, *the buyer* and *the goods*, while the verb pay is usually trivalent, as it activates three participants; *the buyer*, *the seller*, and *the goods*. The valence is not stable. The verb pay could also occur in a sentence with two participants (The depositor pays a penalty) or with four participants (The manufacturing company pays a royalty to Starbuck Corporation for its production). Both verbs are related to the actions of the buyer



buy reflects the interaction between *the buyeyr and the goods*, while pay relates to the interaction between *the buyer and the seller*. This knowledge is a consequence of the Commercial transaction frame; moreover, it requires a particular grammatical organization. The sentences Institutions buy credit protection (from the shareholders)/ The person pays the tax authorities (for telecommunication services) show that buy and pay take 29 the same number of arguments. Syntactically they are realised as subject and direct object, and optionally as indirect object. The verb buy sets a relation between the semantic role of *buyer* and *goods*, not a relation between the *buyer* and the *seller*. This explains why the sentence Institutions buy the shareholders is not grammatically correct. The verb pay links the *buyer* role with the *seller* role rather than the *goods* role; the verb can also activate a relation between *buyer* and AMOUNT PAID (Company pays 100 million for new shares), or between *buyer*, *seller*, and AMOUNT PAID (The third party pays the borrower an amount of 100 million). Such approach to frames later was generated into Construction Grammar. In the frame Commercial transaction the verb pay is connected to the transfer of *money* from the *buyer* to the *seller* in order to get the *goods*, while the verb buy is related to the transfer of *goods*, from the *seller* to the *buyer* in order to get *money*. Thus, the frame Commercial transaction can be seen from two different perspectives: from the perspective of the *buyer* or from the perspective of the *seller*. As it was mentioned above the concept of perspective is considered to be fundamental in Frame Semantics. Perspective indicates that there are at least two different possible points of view on a neutral frame. The frame Commercial transaction is considered to be an unpespectivized parent frame (also a neutral frame), its children frames are commerce_goods-transfer and commerce_money-transfer, which perspectivize the Commercial transaction frame from the *seller*'s and the *buyer*'s point of view. Each perspective provides the frame with quite different frame elements (Ruppenhofer et al., 2016, p. 82). The verbs selected by the speaker (buy, sell, pay etc.) Denote a particular perspective in the frame, a way for relating various participants in order to highlight certain aspects of the frame. In the sentence Shareholders bought new shares from the company the frame is viewed from the perspective of the buyer 's while in the sentence The company sold new shares to shareholders the frame focuses on the perspective of seller's. The frame establishes relationships that define how lexical items pay, buy etc. Are understood and how they can be used, this has impact on the grammatical behaviour of these lexical items (Evans & Green, 2006, p. 227). To know the meaning of any of these verbs one needs to know what take place in a commercial transaction, on the other hand, if one knows the meaning of the verb, he/she has access to the meaning of verbs connected to this frame. The knowledge and experience structured by the frame Commercial transaction provide the background and motivation for the categories represented by the words. The semantic research of Fillmore and his colleagues gave birth to the project framenet which now functions as an open database constantly updated by new research findings. The framenet is a lexical resource of modern English based on semantically and syntactically annotated sentences; it is also a lexicographic project (Fillmore & Baker, 2001, p. 1). Framenet provides cognitive frames of English lexical units, which are based on annotated evidences of lexical units extracted from the actual texts. More than 200 000 sentences were manually annotated in order to establish cognitive frames. Now there are more than 1 200 frames. Framenet is available freely online



and easily downloaded. Students, teachers, lexicographers and researchers all over the world can use framenet. This project has aroused great interest among scholars and inspired many other research projects in the world. As frames are semantic, they are often similar across languages; therefore, framenet principles are applicable to description of lexical units in various languages. Similar projects already exist in French, Chinese, Japanese, Spanish, German, Swedish and Korean. Framenet project, developed as a corpus-based lexicon, provides a precious source for the description of semantic and syntactic combinatorial properties of lexical units that belong to the same semantic domain. Moreover, the project is available in English and other languages, thus, it opens great problematics for description of various languages. As it was already mentioned, the theoretical background for framenet was provided by Frame Semantics, as a descriptive and analytical framework (Boas, 2005, p. 1-2). Description of each lexical unit in framenet is performed in the following steps: first, project developers identify the semantic frame under which the lexical unit can be described and to which it belongs. Each frame contains vocabulary for the description of the frame elements. The following step presupposes the syntactic description of lexical unit in question, i.e., its distributional possibilities/combinations within and around phrases headed by that word: types of phrases, grammatical function, and annotated examples. In order to illustrate a fragment of syntactic analysis accomplished in framenet, the examples discussed by Boas are going to be provided. Boas took examples from the Communication-Statement frame; this frame involves such frame elements as the Speaker, the Addressee, the Message and the Topic. Each frame element more or less differs in syntactic realization, e.g., the Speaker can be expressed as an external argument (Nancy announced her retirement) or as a genitive modifier of the noun (Nancy's announcement that she would retire); the Addressee can be expressed as a direct object (Nancy told Collin about what happened) or a prepositional phrase introduced by to (Nancy announced the sale to the staff), etc. (Boas, 2005, p. 2). Each frame element undergoes granular analysis in order to establish the combinatorial syntactic properties of lexical units. The further work consists on the organization of the data into tables to illustrate the multiple ways in which frame elements are realised by the verbs.

In specialised language, a frame is understood as 'a type of mental representation, involving the organization of knowledge about a concept or a set of related concepts' (Faber & Cabezas-García, 2019, p. 9). Thus, Frame Semantics and the framenet project enabled terminologists to describe specialised knowledge structures and to supplement the existing set of frames with new ones evoked by lexical units of various specialised fields. Framenet research has been already carried out in various specialised areas ranging from legal domain to soccer and tourism. Researchers of conceptual frameworks of specialised domains distinguish two types of frames: concept frames and predicative frames (Busse, 2012; Faber & Reimerink, 2019). Concept frames represent concepts designated by nouns and noun phrases; they consist of elements that specify properties by which the entity is characterised. In the present study the concept 'frame' is also viewed as the micro-context of terms with the nominal base risk. Predicative frames are the ones evoked by verbs and their nominalisations. They represent events and states of affairs and depend on the situation type and participants (Faber & Cabezas-García, 2019, p. 10). In this research predicative frames are seen as the macrocontext of terms with the nominal base



risk/risque/rizika. Predicative frames link together various concept frames, thus, the observation of relations between a verb and attached 33 arguments as a fusion of meanings in a single semantic space provides new insights about knowledge constructions underlying specialised texts. Thus, predicative frames present the expansion of knowledge that allows to understand better the text of specialised language. Analysis of predicative frames adds a new dimension to terminology analysis as it enables to reveal a broader picture of the conceptual framework of the relevant domain.

Concepts appear in a specialised frame, which visually illustrates their interrelationships. All concepts are presented with their terminological denotations in English, Spanish, German, French, Russian, and Greek. The synthesis of the conceptual, linguistic and graphic information in ecolexicon facilitates the perception units of the specialised language as well as the conceptual relations within the domain of environment (Faber et al., 2012, p. 124-125).

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