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# International terminology as an integration of different cultures into global science

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## Abstract

The study aims to investigate international terminology as an integration of different cultures into global science via comparative qualitative research methods. As a result, language structure cannot be studied without taking into account the nature of language use. This perspective is what characterizes argumentative discourse as a functional rather than a formal approach to language. In conclusion, the investigation of international terminology could help facilitate knowledge communication.

**Keywords:** international terminology, cognitive discourse paradigm.

# La terminología internacional como una integración de diferentes culturas en la ciencia global

## Resumen

El estudio tiene como objetivo investigar la terminología internacional como una integración de diferentes culturas en la ciencia global a través de métodos comparativos de investigación cualitativa. Como resultado, la estructura del lenguaje no puede estudiarse sin tener en cuenta la naturaleza del uso del lenguaje. Esta perspectiva es lo que caracteriza el discurso argumentativo como un enfoque funcional más que formal del lenguaje. En conclusión, la investigación de la terminología internacional podría ayudar a facilitar la comunicación del conocimiento.

**Palabras clave:** terminología internacional, paradigma del discurso cognitivo.

## 1. INTRODUCTION

The majority of researches define modern society as an information society, because theoretical knowledge occupies the central position, being the core of new equipment, technology, economic growth, and social stratification organization. In such a society, science not only performs an epistemic-logical but also innovation, socio-cultural, and praxeological functions.

The current explosive development of science and technology, the increase of the inter-cultural changes, and a great deal of

knowledge acquired in different activity fields determined the emergence and development of international terminology. The concept of international terminology has two meanings: the interdisciplinary branch of knowledge and the number of terms specific to various terminologies providing knowledge in different fields of professional activity. As a specialized language, terminology represents a linguistic system that uses certain terms and other linguistic means to eliminate ambiguity in a particular field. In different activity fields, the specialists use certain linguistic systems – the functional styles of the language, each of them with its specific features as well as with some common characteristics.

As a branch of science, international terminology deals with the thematically organized system of the lexical units belonging to science and technique. All the changes in the science system entail others in the denomination's system and the role of terminology is to solve this problem. The implication of terminology as a specific method of science must be functional especially in technology, law, and in all the fields where there is a large circulation of scientists (CABRE, 2003). From a practical point of view, the terminology is also different from lexicology as far as methodology is concerned. The lexicological methodology follows a semasiological pathway starting from a linguistic form it studies all the possible semantical values; whereas the terminological methodology has an onomasiological character since the research starts from the concept towards the sign.

Both lexicology and terminology study the relation between the denominative units and the objects, but while the former deals with the

vocabulary, all the words existing in a language, the latter refers to the specialized lexical units. Besides drawing up dictionaries, lexicography, a linguistic branch, deals with sciences and terminology as well. There is terminological lexicography, special lexicography relying on the concepts of the special and general languages. We can notice an obvious and mutual relation between terminology and lexicography as all the described objects are identical but the conceptual field of the mentioned system is the specific object of terminology.

International terminology is a clear example of an interdisciplinary matter, which takes its theoretical foundations from the disciplines with which it is interrelated: linguistics, the theory of knowledge, and the theory of communication. International terms are also interdisciplinary units and must be analyzed from different perspectives: from cognitive linguistics, from the theory of cultural language evolution, from theoretical aspects of corpus linguistics, from the theory of knowledge, which can explain how reality is conceptualized. They must be analyzed from a theory of communication, which can describe and clarify the characteristics of specialized communication; and from a theory of language which, based on discourse, can detect the specialized lexical units and describe them grammatically, semantically and pragmatically (EVANS, 2007).

Conceptual use of nouns and adjectives, use of terms with a clear and narrow denotation, absence of expressive lexemes, exclusiveness, characterize scientific style lexicon. A term is a

dynamic phenomenon that is born, formulated, and delves into the process of cognition, the transition from a concept to a verbalized concept associated with some theory to conceptualize a particular field of knowledge or activity (DANILENKO, 1975). This understanding of the term is inextricably linked with the implementation of the main tasks of cognitive linguistics – explaining connections between the structures of language and knowledge structures, as the term acts as a carrier of information about these relationships.

Scientific discourse lexis can be divided into terms and non-terms. Non-term lexis may be of common use, general scientific and technical one. The problem of scientific communication optimization primarily requires the analysis of non-term lexis because terms constitute no more than 20% of the total number of the text lexis. The possibility to correlate a lexical unit with a strictly scientific definition allows differentiating between the terms being special professional lexical units from the common-literary words. This is particularly important while dealing with consubstantial terms, the ones that are congruent in the form of common-literary language words. They account for one-third of all terms.

The boundary between terminological and general vocabulary is unstable, its character being not historical but functional one. The process of term transformation into commonly used words and vice versa is constant. Common lexis item transition into a terminological one started with the use of the former in specific contexts. The heterogeneous character of scientific discourse terminology may be

explained by the fact that research and technology knowledge had been predominantly formed based on experimental natural science.

General scientific lexis constitutes the semantic basis of scientific discourse. The universal character of the general scientific lexis is fully manifested in its interrelation with terminology. Lexical units that constitute the core of general scientific lexis are both the lexical-semantic basis of scientific communication in the broadest context and are also used in coining various terminological phrases. The system character in word-formation can be studied based on terminology primarily because the terminology is consistent and the system of terms defines interrelated concepts.

## **2. METHODOLOGY**

The possibility to consider international terminological lexis from different points of view, **namely, to** analyze its morpheme, word-building and semantic structure seem timely. Constant penetration of science into new social practices being realized through the use of information and computer technology gradually leads to the need for understanding science as a form of public discourse. The unity of theoretical, pragmatic, and socio-cultural aspects of modern scientific discourse defines the essence of **the information society**. Human language is the basis and means of transformation in the post-modern society, which presupposes significant expansion in the scope of linguistic research and its consistent correlation with other areas of the



humanities. We need to study both linguistic and communication problems through the perspective of other fields of science, reframing the traditional language concepts and studying different aspects of verbal and cognitive activities that have arisen in modern linguistics. A cognitive discourse approach rooted in traditional linguistic analysis with the use of other sciences methods has advanced linguistics to a qualitatively new level of cognition and discourse research based on the complex cognitive concept.

Cognitive discourse paradigm presupposes the study of language in action when the language is an instrument, a tool, a means and a mechanism of reaching specific aims and realizing definite intentions of a person both in the sphere of the reality cognition and description and also in the act of communication and interaction by means of language. From this point of view, discourse is defined as a coherent text in conjunction with the extra-linguistic, pragmatic, sociocultural, psychological, and other factors; the text in event-driven aspect, speech, considered as a purposeful, social action, as a component involved in the interaction of people and their cognitive processes. Discourse is speech immersed in life (ARUTYUNOVA, 1990).

### **3. FINDINGS**

Computing terminology is an example of young terminology: being formed in the middle of the XX century, it is still in the process

of active development. The dynamic character of computing terminology makes it suitable for the study of means of international terminology. Keeping in mind that terminology is a sub-system of the overall lexical-semantic system of a language, it contains all structural word types, all means of nomination, and all semantic processes that are characteristic of the lexis in general. The system of computing terminology means of nomination can be considered from different points of view: terms structural types, ways of terms formation, distinguishing units of primary and secondary nomination. These approaches do not contradict but rather complement each other enabling to create a comprehensive pattern of computing terminology. Analysis of linguistic literature on the subject made it possible to distinguish the following structural types of terms: underived, derived, compound, terminological word combinations, abbreviations. The term's structural model is understood to be the total amount of term-elements and **its** system organization.

Corpus linguistics is understood here as a set of tools and methods for empirical linguistic analysis based on the utilization of real linguistic usage samples coming from speakers of a language or one of its varieties. International terminology and corpora constitute the documentary basis for the preparation of terminological vocabularies, where corpora have provided especially useful tools as they not only constitute an ensemble of texts containing potential candidates to become terms but also provide information about the context together with linguistic information about sources, word combinations as a result of their design.

Corpus linguistics is a methodology, comprising a large number of related methods, which can be used by scholars of many different theoretical leanings. On the other hand, it cannot be denied that corpus linguistics is also frequently associated with a certain outlook on international terminology. At the center of this outlook is that the rules of language are usage-based and that changes occur when speakers use language to communicate with each other. The argument is that if you are interested in the workings of a particular language, it is a good idea to study language in use. One efficient way of doing this is to use the corpus methodology.

Jan Svartvik presented the advantages of corpus linguistics in a preface to an influential collection of papers. His arguments are given here in abbreviated form: corpus data are more objective than data based on introspection. Other researchers can easily verify corpus data and researchers can share the same data instead of always compiling their own. Corpus data are needed for studies of variation between dialects, registers, and styles. Corpus data provide the frequency of occurrence of linguistic items. Corpus data do not only provide illustrative examples but are a theoretical resource. Corpus data give essential information for a number of applied areas, like language teaching and language technology (machine translation, speech synthesis). Corpora provide the possibility of total accountability of linguistic features--the analyst should account for everything in the data, not just selected features. Computerized corpora give researchers all over the world access to the data. Corpus data are ideal for non-native speakers of the language.

Corpus linguistics has generated a number of research methods, which attempt to trace a path from data to theory. **CARTMILL, ROBERTS, LYN & CORNISH (2014)** first introduced what they called the 3A perspective: Annotation, Abstraction, and Analysis. Annotation consists of the application of a scheme to texts. Annotations may include structural markup, part of speech tagging, parsing, and numerous other representations. Abstraction consists of the translation (mapping) of terms in the scheme to terms in a theoretically motivated model or dataset. The analysis consists of statistically probing, manipulating, and generalizing from the dataset. Analysis might include statistical evaluations, optimization of rule-bases, or knowledge discovery methods. Most lexical corpora today are part-of-speech-tagged (POS-tagged).

Our starting point is the classical definition of corpus proposed by **SINCLAIR (1991)**: a collection of natural language texts selected to characterize the state of a language or one of its varieties. Since each corpus is created for a specific research purpose (Leech 1992: 116), texts must be collected using a strict selection criterion, for which a number of parameters need to be considered. Firstly, the international terminology requires a specialized corpus because the research is focused on a specific field of study. Thus, the documentation revolves around the social sector, for which several types of texts (journalistic, informative, or oriented to the general interest, research-based) should be used. This means that the corpus format is predominantly written since most of the original documents come from the written language: newspapers, monographs, guides,

brochures. However, the fact that this is a traditional, autochthonous sector implies that there will be certain terms. Secondly, our purpose is not to examine the evolution of this field but its current state, which is why the documentary sources need to be based on contemporary usage –in this sense, the corpus should be synchronous. Thirdly, it has already been mentioned that each thermographic entry should define the term, its real context of usage. Therefore, the corpus is going to be multilingual about the degree of specialization in the texts.

Some linguistic theories have attempted to separate the mental knowledge of language from language use, which is important for the investigation of international terminology. In **CHOMSKY's (1991)** terms, this is the distinction between competence (knowledge) and performance (use). **CHOMSKY (1991)** privileges competence over performance as the subject matter of linguistics. In rejecting the distinction between competence and performance, cognitive linguists argue that knowledge of the language is derived from patterns of language use, and further, that knowledge of the language is knowledge of how language is used.

In the words of psychologist and cognitive linguist, **MICHAEL, MALINDA, JOSEP, TANYA, & HENRIKE (2005)** language structure emerges from language use. This is known as the usage-based thesis. It follows from the assumption that language structure cannot be studied without taking into account the nature of language use. This perspective is what characterizes argumentative discourse as a functional rather than a formal approach to language. Perhaps the most important concept of the usage-based approach is utterance. An

utterance is a particular, actual occurrence of the product of human behavior in communicative interaction, as it is pronounced, grammatically structured, and semantically and pragmatically interpreted in its context. An utterance is a linguistic act in which one person expresses towards another, within a single intonation contour, a relatively coherent communicative intention in a communicative context. As these statements indicate, an utterance is an instance of linguistic behavior on the part of a language user. A language user is a member of a particular linguistic community who attempts to achieve a particular interactional goal or set of goals using particular linguistic and non-linguistic strategies. Interactional goals include attempts to elicit information or action on the part of the hearer, to provide information, to establish interpersonal rapport.

The linguistic strategies employed to achieve these goals might include the use of speech acts (requesting, informing, promising, thanking, and so on). Non-linguistic strategies include facial expressions, gestures, the orientation of the speaker, in terms of interpersonal space, and so on. However, the utterance is not a discrete or precisely identifiable unit. This is because utterances involve grammatical forms (word order), semantic structures (patterns of the meaning), speech sounds, patterns of intonation, slight pauses, and accelerations and decelerations.

In this respect, utterances differ from the related notion of **a sentence**. A sentence, as defined by linguistics, is an abstract entity. Utterances typically occur spontaneously, and often do not conform to the grammaticality requirements of a well-formed sentence. For

example, in terms of structure, an utterance may consist of a single word, a phrase, an incomplete sentence, or a sentence that contains errors of pronunciation or grammar because the speaker is tired, distracted or excited. As this discussion indicates, while a sentence can be precisely and narrowly defined, an utterance cannot. While sentences represent the structure associated with an utterance, utterances represent specific and unique instances of language use in business communication. Typically, cognitive linguists place little emphasis on the sentence as a theoretical entity. In contrast, the notion of a usage event or utterance is central to the cognitive perspective.

After outlining the main components of a usage-based view of the language system, we focus on two areas of cognitive linguistics that attempt to integrate the usage-based thesis with theoretical models of various linguistic phenomena. The first phenomenon we consider is a language change. Here, we examine William Croft's Utterance Selection Theory of language change. This theory views language use as the interface that mediates between the conventions of a language (those aspects of use that make a language stable) and mechanisms that result in deviation from convention resulting in language change.

The second phenomenon is focused on knowledge of the language. In this context, the term grammar is used in its broadest sense to refer to the system of linguistic knowledge in the mind of the speaker. In this sense, grammar refers not just to grammatical phenomena like syntax but also meaning. The cognitive model of grammar encompasses the units of language, which constitute the language; and the processes that relate and integrate the various

constructions in a language system. The specific theory is called Cognitive Grammar, developed by (LANGACKER, 2008).

Moreover, in accordance with the aspect of the discourse, it is necessary to highlight the functions of the language and communicative acts lied under the position of international terminology. In almost all the situations in which we find ourselves, language allows quick and effective expression, and provides a well-developed means of encoding and transmitting complex and subtle ideas. In fact, these notions of encoding and transmitting turn out to be important, as they relate to two key functions associated with language, the symbolic function, and the interactive function. One crucial function of language is to express thoughts and ideas. That is, language encodes and externalizes our thoughts. The way language does this is by using symbols. Symbols are bits of language. These might be meaningful subparts of words, whole words, or strings of words. These symbols consist of forms, which may be spoken, written or signed, and meanings with which the forms are conventionally paired. Meaning is the semantic content associated with the symbol. The meaning associated with a linguistic symbol is linked to a particular mental representation termed a concept. Concepts, in turn, derive from percepts.

In social life, language serves an interactive function. The messages we choose to communicate can perform various interactive and social functions. For example, we can use language to change the way the world is or to make things happen. The language provides a means of communication, allowing us to share our wishes and desires.



Another way in which language fulfills the interactive function relates to the notion of expressivity. Language is allowing us to express our thoughts and feelings about the world, consider the different mental images evoked by the argumentation. The language also plays a role in how we affect other people in the world, and how we make others feel by our choice of words. That is, language can provide information about the effect. The language we choose to use conveys information about our attitudes concerning others, ourselves, and the situations in which we find ourselves. Language can be used to create scenes or frames of experience, indexing and even constructing a particular context. In other words, just by hearing or reading the argumentation an entire frame is invoked, this guides how we should respond to what follows, what our expectations should be, and so forth.

The primary commitments to cognitive linguistics give rise to a specific and distinctive worldview of international terminology, which has a number of dimensions. Collectively, these give rise to a distinctive cognitive linguistic perspective on the nature of international terminology, its interaction with non-linguistic aspects of cognition, and the nature of the human mind. Five dimensions of the cognitive linguistics worldview can be identified: language reflects the embodied nature of the conceptual organization; language is a lens for studying conceptual organization; language provides a mechanism for construal; language can influence aspects of non-linguistic cognition; humans have a common conceptualizing capacity.

#### **4. CONCLUSION**

The current explosive development of science and technology, the increase of the inter-cultural changes, and a great deal of knowledge acquired in different activity fields determined the emergence and development of international terminology. The concept of international terminology has two meanings: the interdisciplinary branch of knowledge and the number of terms specific to various terminologies providing knowledge in different fields of professional activity. As a specialized language, terminology represents a linguistic system that uses certain terms and other linguistic means to eliminate ambiguity in a particular field. In different activity fields, the specialists use certain linguistic systems – the functional styles of the language, each of them with its specific features as well as with some common characteristics. As a branch of science, international terminology deals with the thematically organized system of the lexical units belonging to science. All the changes in the sciences system entail others in the denomination's system and the role of international terminology is to solve this problem.

The implication of international terminology as a specific method of science must be functional especially in technology, law, and in all the fields where there is a large circulation of scientists. From a practical point of view, **the terminology** is also different from lexicology as far as methodology is concerned. The lexicological methodology follows a semasiological pathway starting from a linguistic form it studies all the possible semantical values; whereas

the terminological methodology has an onomasiologic character since the research starts from the concept towards the sign. Without going into too many theoretical considerations, it seems advisable for us to establish the theoretical premises on which our international terminology is based.

International terminology is understood here as the field of knowledge to which the study, description, and collection of the international terminological units based on different theories are entrusted, and not only as a mere practical activity intended for the preparation of glossaries or oriented toward the resolution of equivalence problems in translation. International terminology is a clear example of an interdisciplinary matter, which takes its theoretical foundations from the disciplines with which it is interrelated: cognitive linguistics, the theory of cultural language evolution, theoretical aspects of corpus linguistics, the theory of knowledge, and the theory of communication.

The article's objects are international terms, which are interdisciplinary units and must be analyzed from different perspectives. They can be analyzed from cognitive linguistics, which can explain how reality is conceptualized; from a theory of cultural language evolution, which identifies the system and strategy of language development. From a theory of communication, which can describe and clarify the characteristics of specialized communication; and from a theory of corpus linguistics which, based on corpora, can detect the international lexical units and describe them grammatically, semantically and pragmatically.

**REFERENCES**

ARUTYUNOVA, N. (1990). "Discourse, Linguistic Encyclopedic Dictionary". **Moscow: Soviet Encyclopedia**. Russia.

CABRE, C (2003). "Theories of terminology: Their description, prescription, and explanation". **Article in Terminology**. Vol. 9, N° 2: 163-199. UK.

CARTMILL, A., ROBERTS, S., LYN, H., & CORNISH, H. (2014). "Evolution of Language, the Proceedings of The 10th International Conference". **A Glossary of Cognitive Linguistics**. P. 592. UK.

CHOMSKY, N. (1991). "Kasher, Asa (ed.). Linguistics and Cognitive Science: Problems and Mysteries". **Oxford: Blackwell**. p. 50. UK.

DANILENKO, V. (1975). "Russian terminology. The experience of linguistic description". **Moscow: Science**. Russia.

EVANS, V. (2007). "A Glossary of Cognitive Linguistics". **A Glossary of Cognitive Linguistics**. P. 5-14. UK.

LANGACKER, R. (2008). "Cognitive grammar: a basic introduction". **Oxford University Press**. UK.

MICHAEL, T., MALINDA, C., JOSEP, C., TANYA, B., & HENRIKE, M. (2005). "Understanding and sharing intentions: The origins of cultural cognition". **Behavioral and brain sciences**. Vol. 28, N° 5: 721-727. UK.

SINCLAIR, J. (1991). "Corpus, concordance, collocation". **Oxford University Press**. UK.



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