



## Cognitive Modeling of a Conceptual Domain Sociocultural Threats

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## **COGNITIVE MODELING OF A CONCEPTUAL DOMAIN SOCIOCULTURAL THREATS**

The principles of cognitive categorization, developed in cognitive psychology and cognitive linguistics over the past three decades, have not lost their significance at present. The undoubted merit of researchers who have studied categorization and conceptualization as mental and linguistic processes was the development of a methodology for cognitive modeling of both individual concepts and conceptual domains. Today the task of cognitive modeling of large conceptual areas is becoming even more urgent. The report presents a description of the process of cognitive modeling for the conceptual domain "socio-cultural threats" and the construction of the corresponding cognitive category. The novelty of this research lies in the use of an integrated methodology for the cognitive modeling process.

The texts included in the THREATCorpus (<http://www.threatcorpus.org>) became the basis for constructing the category model. This tool is a corpus of representative texts that manifest socio-cultural threats in the Russian language discourse during the 19th - 21st centuries (volume of 10.5 million words). Within the corpus, the following types of discourses were collected and investigated: 1) fiction, 2) history and historiography, 3) news texts. As a result, the analysis, based on the corpus, made it possible, on the one hand, to determine the key concepts of the conceptual area "socio-cultural threats" and to develop a macroframe, and on the other hand, to structure the initial thematic selection of corpus texts, following the identified macroframe slots. (Pozdnyakova, Zabotkina, 2019: 174).

At the second stage of the study, a thesaurus was developed, which was based on a macroframe and fragments of texts demonstrating the concepts of the conceptual area "socio-cultural threats". A hierarchical organization of concepts was arranged, representing various aspects of socio-cultural threats, in the form of a tree (more than 250 concepts).

With the help of the thesaurus, the following tasks of organizing and managing knowledge about such a vast area as socio-cultural threats were also solved: 1) creating an entry point into an information array based on a conceptual tree, 2) providing navigation through documents in addition to traditional navigation tools, 3) support for heuristic search strategies in the corpus. The concepts of the tree are associated with fragments of texts, and the thesaurus in conjunction with the corpus of texts is a cognitive tool for expert work with the subject area of socio-cultural threats.

Systematic work with the corpus of texts made it possible to create two models for representing knowledge about socio-cultural threats: a macroframe and a thesaurus. The first model allows one to see the main conceptual areas correlated with knowledge about the studied socio-historical phenomenon. The second model, the thesaurus, represents a hierarchy of concepts of various degrees of abstraction.

The technique of a multidimensional approach to the representation of knowledge made it possible to approach the modeling of the cognitive category "socio-cultural threats".

At the superordinate level, the complexity and multidimensionality of the conceptual domain "socio-cultural threats" leads to its further division, which proves the existence of equally voluminous conceptual areas, representing the three main components of socioculture: society, individual, culture. Thus, "threats to society", "threats to the individual" and "threats to culture" form the main directions of analysis of the conceptual area "socio-cultural threats". However, even at this level of subcategorization, the degree of abstraction continues to remain high; therefore, for example, "threat to institutions" as a subcategory of the category of the superordinate level "threat to society" does not provide the degree of concretization of conceptual attributes that can be perceived by speakers as attributes of the basic level. The superordinate level in the developed category model is represented by the highest level of abstraction - "socio-cultural threats" and two sublevels.

The basic and subordinate levels of the cognitive category "socio-cultural threats" also have attributes characteristic of categorizing a large conceptual area. In the course of texts analysis within three types of discourse in the corpus and correlating them with the concepts of each level of the thesaurus, experts linked

the selected fragments of texts both with the basic level and with the subordinate level. This indicates that the basic level of the category and the corresponding level of the thesaurus include those conceptual attributes that allow experts to identify them as specific, isolated and perceived in texts, or associated with the cognitive contexts of texts. At the same time, the words that represent the concepts of the subordinate level, as a rule, include words that represent the concept of the basic level. Let us show this by the example of the concept "education": "threats to society" - "threats to institutions" (superordinate level) - "threats to the institution of education" (basic level) - a number of specific threats ("decline in the level of secondary education", "commercialization of education", etc.) at the subordinate level. As the study demonstrates, the cognitive category "socio-cultural threats" is a model of the mental organization of concepts correlated with the knowledge and experience of native speakers of the Russian language.

The use of tools in the field of cognitive technologies, such as specially designed text corpus and thesaurus, open new ways to implement the process of cognitive categorization for large conceptual areas. From the standpoint of the methodology development in cognitive sciences, the research introduces a method for a multidimensional approach to the representation of knowledge, including frame, thesaurus and corpus analysis for a specific area of knowledge. This approach contributes to the creation of a model of the cognitive category "socio-cultural threats", which is a mental-linguistic representation of the investigated conceptual domain. The developed method contributes to new approaches to the study of knowledge representation and organization.

## References

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