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INTERCATEGORIAL LINKS OF A 'SOLID WATER' SUBCATEGORY IN GERMAN AND RUSSIAN

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Abstract

The article discusses the intercategorial links of the subcategory "solid water", which is the representation of one of the natural aggregate states of water in nature and, therefore, is part of the category "natural water". The article describes the most relevant concepts of the subcategory "solid water" which are "snow" and "ice". Based on the material of both explanatory and bilingual dictionaries, the author describes and compares the nominative resources of the German and Russian languages in the objectification of intercategorial connections of these concepts. The topic is on nominees for objects and phenomena of the world associated with ice and snow which allows to evaluate the involvement of the latter in the spheres of natural and human life. Nominees differ in the degree of semantic connection with concepts and in each case form structured nominative-functional microfields. In the article, the place of each microfield in the nominative space of the subcategory and the entire category of "natural water" are determined. Then the article describes and compares structural, word-building, semantic and stylistic characteristics of nominations. Differences and similarities are revealed in the methods of object nomination, in the nominative development of conceptual-language fragments, internal name forms, etc. Unique national-specific forms of linguistic expression of objects are given, as well as conceptual and laconic lacunae reflecting the special realia of the life of the German and Russian peoples.

Keywords: Category, subcategory, concept, nominative-functional field, nominee.

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1. Introduction

The subcategory “solid water” reflects one of the natural aggregate states of water in nature and is part of the category “natural water”. Losing for objective reasons in the significance and volume of the subcategory “liquid water”, it at the same time represents a complex phenomenon, manifested in the multicore nature of the conceptual structure and the large number of language signs that objectify it.

The scientific literature on hydrology, glaciology, meteorology, etc. widely covers the taxonomy of the solid phase of water. According to the Atlas of snow and ice resources of the world, the forms of natural snow and ice are divided into atmospheric (snow, hoarfrost, hail, ice), terrestrial perennial (glaciers, flying ice, snowfields), overland seasonal (snow cover, ice), floating perennial (pack ice, icebergs), etc. (Mikhailov & Dobrolyubov, 2017, p. 115). In German literature, ice is classified by type of water (freshwater ice: ice sheet from mainland ice and glaciers, icebergs, ice cover of rivers, lakes; saline ice: marine, pack ice), by crystalline structure (single-crystal and polycrystalline), temperature (cold, ice with a temperature equal to the melting point), etc. (Fellin, 2013). Among the varieties of snow, dry (powder) snow, wet snow, deep frost, firn, table snow, blizzard snow, etc. are distinguished (Bol’shaya rossijskaya enzyklopediya, n.d.; Fellin, 2013; Wetterlexikon des DWD, n.d.).

In the ideographic dictionaries of the German and Russian languages, reflecting the “naive” ideas of people about the objects of the world, the studied subcategory is presented in a series of related concepts in the areas “Characteristic of the Earth’s surface”, “Substances, their properties, conditions”, “Atmosphere, atmospheric phenomena” (Complex training dictionary…, 2004), and also differentially as “Frozen water, ice cover” (Khasanova & Morkovkin, 2000), “Cosmos. Land. Natural formations: Ice, snow” (Russian semantic dictionary, 1998), “Nature and the world around us”: “Winter weather” (Dornseiff, 2004), etc.

Data of explanatory and bilingual dictionaries of the German and Russian languages, eg. “Duden. Online Dictionary (n.d)”, “Dictionary of the Russian Language”, ed. A. P. Evgeneva, “The Great German-Russian and the Russian-German Dictionary (n.d)”, also allows to identify the heterogenety of the subcategory “solid water” and determine the most significant concepts in its structure. Using the technique of a routine vocabulary selection, we found 749 German and 684 Russian nominees for the concept “ice” and 528 German and 550 Russian nominees for the concept “snow”, which together accounted for 23% and 22% of the macrofield of the category “natural water” in German and Russian data collection. The concepts "hail", "hoarfrost" showed a significantly smaller number of characters. Subcategory “solid water” represented only by the concepts “ice” and “snow”, takes the second place in terms of the number of its nominees in the German and Russian versions of the category “natural water”.

2. Problem Statement

The subcategory "solid water" is objectified in German and Russian by heterogeneous in nature and function signs. The subject of the article are signs that convey the intercategorial links of the concepts “ice” and “snow”. We are talking about nominees for objects and phenomena of the world associated with ice and snow which allows to evaluate the involvement of the latter in the spheres of natural and human life.

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According to hydrologists, solid water plays an important role in natural and social processes. Thermal balance of the planet, temperature and salinity of the ocean's waters, flow of mountain rivers and thus the water supply of mountain regions, irrigation of crops, etc. depend on it. Snow and ice are necessary for railroad system, snowmobile and air transport, they are widely used as construction material when creating engineering structures. Impossible to think about skiing and sledding, mountain climbing without snow. Snow and ice possess tremendous destructive power which is able to perish all living and nonliving matter (Mikhailov & Dobrolyubov, 2017).

Natural language reflects the diverse functions and relationships of "solid water", using the resources available to it. Given the role of "solid water" in the life of our planet, we can assume that there are ample opportunities in the lexical systems of German and Russian for objectification of the objects of the world associated with it.

3. Research Questions

To reveal these opportunities, it is necessary to classify the described signs according to the type of connection with the subcategory and present them in the form of nominative-functional microfields. Then we need to determine the place of each microfield in the nominative space of the subcategory and thereby quantitatively confirm or refute the breadth of intercategorical connections of the concepts "snow" and "ice" in the studied material. The next step will be the description and comparison of structural, word-building, semantic and stylistic characteristics of the names, identification of similarities and differences in the methods of their nomination, nominative development of conceptual and linguistic fragments and in the internal form of names. Further, we are to find unique national and culture-specific forms of object verbalisation, as well as conceptual and laconic lacunae, reflecting the special realities of German and Russian peoples.

4. Purpose of the Study

The purpose of the research is to describe and compare the nomination potential of two modern European languages in the objectification of the intercategorial connections of the subcategory "solid water". The research is based on the material of explanatory and bilingual dictionaries of German and Russian languages.

5. Research Methods

Field method is used in describing the language of the subcategory. In this study, a field is a naturally existing way of representing conceptual units (categories, subcategories, concepts) in a language. We recognize the following features of a linguistic field (as highlighted by A. V. Bondarko, I. A. Sternin, A. P. Babushkin, Z. K. Tarlanov, et al). A field is an group of elements interconnected by structural relationships. The elements that make up the field are linked semantically and perform a single function in a language. A field can combine homogeneous and heterogeneous elements; microfields are distinguished in a field structure. The composition of a field includes nuclear and peripheral constituents. Between the core and the periphery, the functions performed by the field are distributed; part of the

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functions falls on the core, part on the periphery. Nuclear constituents are most specialized for performing field functions. The boundary between the core and the periphery is fuzzy and blurred (Babushkin & Sternin, 2018; Bondarko, 2017; Sternin, 2016; Tarlanov, 2019).

The data shows that the category “natural water” is represented in the language by a single macrofield, its subcategories and concepts – by fields and microfields. The main type of a field in the study are nominative-functional fields. A nominative-functional field of the concept is a set of linguistic units that serve for naming and isolating a given fragment of the world and are characterized in terms of the core / periphery concepts by varying degrees of implementation of these functions. Nominees of objects of the real, surreal world, connected with the concepts of "ice", "snow", form a special nominative-functional microfields, the analysis of which allows us to clarify their place and role in the conceptual and linguistic picture of the world of Germans and Russians.

6. Findings

Using routine vocabulary selection, we identified 268 German and 206 Russian names of other objects of the ice concept, which, 36 and 30% of the total number of concept nominees in our data overall. They are of periods in the life of our planet, the names of precipitation, objects similar to ice on any basis, substances for fighting ice, winter sports, competitions, equipment, frozen foods, appliances, low-temperature rooms, birds, animals, plants, institutions, etc. Identified signs form a microfield that outnumbers all other fragments of the nominative-functional field of “ice” concept in the German and Russian data. With a similar content and diversity of nominative groups, the concept of "snow" shows the average volume of the nominative-functional microfield of other objects – 118 German and 101 Russian designations, i.e. 22 and 18% of the concept field. They belong to various fields of human knowledge – “Technique”, “Sport”, “Weather”, “Structures”, “Items of clothing”, “Substances”, “Animals”, “Plants”, etc.

The revealed names differ in the degree of semantic connection with concepts and form specially structured nominative-functional microfields. The highest degree of “closeness” is demonstrated by nuclear names with a formally and semantically expressed subcategory attribute: *der Eisboden, die Gletscherkunde* .., *ледотехника, льдохранилище* ... (50 and 38% of the microfield); *der Schneefang, der Schneepflug* (1st, 2nd meanings) .., *подснежник* (1st, 2nd meanings), *снегоуборочный поезд* ... (38 and 41% of the microfield). Perinuclear signs, according to our research, have a semantically sound sub-categorical trait: *der Rodelsport, der Froster .., фигурист, мерзлотоведение* ... (33 and 49% of the microfield); *der Propellerschlitten, die Winterlandschaft* .., *метелица, аэросани* ... (24 and 25% of the microfield). The periphery includes various types of nominees with a weaker semantic connection: *die Eisdruse, die Eiseiche .., сухой лед, ледяное дыхание* ... (17 and 13% of the microfield); *der Scheibenwischer, der Matsch* (2a meaning) .., *движок* (3rd meaning), *ищейка* (1st meaning) ... (38 and 35% of the microfield).

The main means of objectification in the described microfields are substantive forms, which is associated with the objective nature of the researched concepts. The German variant of the core of “ice” and “snow” concepts is characterised by a predominance of composites with two or more components: *das Eisgebirge, die Zwischeneiszeit ..; das Schneemobil, das Schneeräumgerät* ... In the Russian variant,

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on the contrary, complex signs prevail: *ледовая обшивка* (*судна*), *бедствие во льдах* ..; *роторный снегоочиститель, снегозадерживающие щиты* ... The circumnuclear zone of microfields of the concepts “ice” and “snow” in the German material contained mainly one-word nominees, among them primarily composites, then derivatives, root lexemes, etc.: *der Bobsport, die Schlittschuhläuferin .., der Defroster* (a, b, c ex.) .., *die Moräne ..; die Winterlandschaft, der Streudienst .., das Gestöber* (1st meaning) *.., die Piste* (1st meaning) ... In the Russian version of the near-nuclear zone of the ice concept, we observe a balance between complex and single-word names (derivatives, root, complex words): *замороженное мясо* .., *коньки* (1st, 2nd meaning.) ... *сани* .., *стеклообогреватель* ... In a similar fragment of “snow” concept, derivatives prevail over composites, root and syntactic signs: *белки, оттепель* .., *первопуток* .., *иглу* .., *нивальный пояс* ...In the German version of the periphery of the concepts of “ice” and “snow” composites the prevailing are: *der Eissturmvogel, der /das Eisbonbon ..; der Scheibenwischer, die Schneeeule* ... They are inferior to root lexemes, derivatives, complex characters (the concept of "snow"): *der Trog* (2nd meaning) .., *der Bremser* (2nd meaning) ..; *das Tor*[1] (3rd meaning) .., *der Abdruck*[2] (2nd meaning) .., *grüne Weihnachten* ... The Russian equally presents data on the periphery of both concepts in different nomination methods: *ледяные ноги* .., *гора* (2nd shade, 1st meaning) *.., залежка* (2nd meaning) ..; *принцип «снежного кома»* .., *ворота* (2nd meaning) *.., отпечаток* (1st meaning) *.., снежноягодник.* The indicated structural differences between the German and Russian microfields are not specific to the “solid water” subcategory, they are related to features system of German and Russian languages.

The “ice” concept demonstrates a greater number of discrepancies between German and Russian correspondent nominees within the microfield of other objects than the “snow" concept. Our analysis showed that the defining component of *Eis-* of German nuclear composites is more frequently used in comparison with similar Russian components (*лед-, льдо-, ледовый, ледяной, ледниковый*, etc.). Its meaning in Russian data is conveyed by new roots / bases that do not have a formally expressed subcategorical attribute and, therefore, refer to the center of the microfield: *der Eisboden* (core) – *мерзлая почва* (center), *der Eisschnellläufer* (core) – *конькобежец* (center), *der Eiskunstläufer* (core) – *фигурист* (center), *die Eissporthalle* (core) – *крытый каток* (center), *der Eiswarndienst* (core) – *зимняя техническая служба* (center), das Eis[2] (2nd meaning, core) – *мороженое* (center) … The same component in the structure of German peripheral composites demonstrates symbolism, acting as a prototype of white color, colorlessness, cold, northern environmental conditions, etc. The Russian language in designating the same phenomena, uses other root morphemes / bases; the resulting new lexemes go beyond the concept field and the entire subcategory “solid water”: *der Eisachat* – (*бесцветный агат*)*, die Eiswolle* – (*длинная глянцевитая шерсть*)*, der Eissalat* – (*салат кочанный*)*, der Eisapfel* – (*наливное яблоко*)*, das Eisblumenglas* – (*«морозко» узорчатое стекло*) ... The differences in the methods of nomination clearly explain the quantitative difference between the German and Russian nominees for the microfield of “ice” concept (as seen above).

Inter-level relations between German and Russian names of other objects of “snow” concept are less developed and are mainly represented by correlations between German formal signs with zero semantic connection and Russian signs outside the macrofield of the category: *снегирь* – (*der Gimpel* (1st

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meaning)), *die Schneeeule* – (*белая/полярная сова*), *der Schneeballstrauch* – (*калина*), *der Schnee* (2nd, 3rd meaning) – (*взбитый яичный белок, лекарство-наркотик*) …

Nominees of other objects of the concepts “ice” and “snow” are closely related to specific areas of human activity, still they are common lexemes (according to the dictionaries used). An indication of stylistically limited usage is found by a small group of names: *der Eistanz* (sport), *das Eisbeil* (mountain-climbing), *das Urstromtal* (geol.).., *ледниковый период* (hist.), *ледосброс* (hydraulic), *бобслей* (sports); *das Schneebällchen* (cooking), das Tor[1] (3rd meaning., ski).., *нивальный пояс* (geo.), м*алик* (hunt.). We regard this fact as an indirect evidence of the gradual introduction of special terms into the minds and everyday life of ordinary German and Russian speakers. Adding to industrial vocabulary, microfields also contain other types of stylistically colored tokens: *der Eismonat / Eismond* (obsolete.), *der Eisriese* (elev.), *der Rodel*[2] (Bayern.), *das Eisbein* (2nd meaning, coll., Switzerl.) ..; *градина* (coll.), *ростепель* (coll.), *залежка* (2nd meaning, regional) ..; *das Schneegebirge* (elev.), *der Firn* (b, Switzerl.), *der Schneeschuh* (1st meaning, obs.), *die Rutschbahn* (2nd meaning, coll.); *подснежник* (2nd meaning., coll.), *дворник* (2nd meaning, dec.), *завируха* (regional), *ростепель* (coll.) …

As a result of the comparison of the German and Russian nominees of other objects of the concepts of “ice” and “snow”, we revealed full and partial matches and discrepancies in their internal form. We observe the similarity of the motivational attribute in the following pairs of items: *ледовый дворец – der Eispalast* (1st meaning), *льдозавод – das Eiswerk*, *ранние заморозки – der Frühfrost* ..; *der Schneemesser – снегомер*, *die Schneelandschaft – снежный ландшафт*, *die Schneeblindheit – снежная слепота* ... Examples of discrepancies are pairs: *die Eishaut – ледовая обшивка*, *der Eisbrecher* (1st meaning) – *ледокол* ..; *der Schneeschuh* (2nd meaning) – *снегоступы*, *das Schneeglöckchen – подснежник* (1st meaning) …

The internal form of the nominees reflects a specific national way of perceiving reality. The German and Russian designations *der Eismonat / Eismond, die Kaltzeit / die Warmzeit, weiße Weihnachten, der Schneemonat* and *снежная крупа*, *снежница* (1st, 2nd meanings), *клюшка, первопуток, малик*, etc. Not typical for the German language is also the Russian nominee *кошка* (4th meaning), transmitting the derivative value of the device in the form of metal teeth attached to shoes for climbing on poles, in vertical places, for walking on ice, etc. (compare German *der Eisnagel*). The German names for May frosts, *die Eisheiligen* and *die Eismänner* (3rd meaning.), appeal, on the one hand, to Catholic saints, and on the other, to the image of a person delivering ice (see 2nd meaning), which also makes them national specific characters. The historical and cultural phenomenon both in the minds and language of the Germans is the ironic name of the Hitler’s medal for participating in the winter campaign of 1941-1942 on the Eastern Front *der Eisbeinorden*. The motive for this nomination was the numerous cases of frostbite of Wehrmacht soldiers due to the extremely low temperatures in Russia in the winter of 1941-1942.

The natural and geographical living conditions of the German and Russian peoples led to the different nominative elaboration of some fragments of the subcategory “solid water”. So, the Russian language has, according to our data, a large number of names of the natural phenomenon of "blizzard". Russian words convey the intensity of the manifestation of a blizzard, its place of action, etc. *вьюга, пурга, буран, буря, метель, метелица* (1st meaning, coll.)*, завируха* (regional)*.* The equivalents of the

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"Russian blizzard" in German, according to dictionaries, are the lexemes *der Schneesturm, das Schneegestöber, das Gestöber*.

7. Conclusion

The analysis of German and Russian nominees of other objects of the concepts "snow" and "ice" allows us to confirm the presence of various intercategorial ties in them. Ice and snow are important elements in describing objects and phenomena of the world. Moreover, they are necessary for the emergence and further existence of a number of objects and their nominees. A quantitative analysis of the material shows that the function of intercategorial interaction is more characteristic to the concept "ice" than to the concept "snow". The concept "ice" thus demonstrates wider intercategorial links in both German and Russian.

Features of the perception and usage of objects led to structural differences between the corresponding microfields of concepts. The concept "ice" has a more developed core and center in the microfield of other objects, "snow", on the contrary, has a more vivid periphery. The basis of microfields is a substantive nomination. The German version is characterized by a predominance of compounds, in Russian data they correspond primarily to syntactic constructions. In general, there is a variety of word-formation methods of nomination, however, in Russian material this diversity is more balanced than in German.

In the microfields of other objects of "ice" concept, to a lesser extent of "snow" concept, inter-level relations between German and Russian correspondences of the core, center and periphery are found. Correlations between nuclear and perinuclear signs are the most frequent. They are due to differences in the methods of nomination in German and Russian (cf. German. *Eis-* and Russian *мерз-, кат-, зим-* etc.). A number of German peripheral characters of both concepts have Russian correspondences outside the nominative and functional field of the subcategory.

Nominees of microfields are mainly common language nominations, still many come from thematically restricted areas of human knowledge – technology, geology, sports, medicine, etc. Separate lexemes / meanings are qualified in the dictionaries as obsolete, dialect, colloquial, high-flown, etc.

A comparative analysis of German and Russian microfields revealed identical conceptual perception of objects related to ice and snow. We also found examples of coincidences and discrepancies in internal form of signs, various degrees of nominative development of individual conceptual and linguistic fragments, as well as unique names due to the historical development, natural and geographical conditions of life of the German and Russian peoples.

References

Babushkin, A. P., & Sternin, I. A. (2018). *Kognitivnaya lingvistika i semasiologiya* [Cognitive linguistics and semasiology]. Ritm. [in Russ].

Bol'shaya rossijskaya enzyklopediya [Great Russian encyclopedia]. (n.d.). Retrieved November 11, 2019, from https://bigenc.ru

Bol'shoi nemetzko-russkij i russko-nemetzkij slovar' [German-Russian and Russian-German Dictionary]. (n.d.). In *Slovari i enziklopedii na Akademike [*Dictionaries and encyclopedias on Academician]. Retrieved November 9, 2019, from https://dic.academic.ru/contents.nsf/ger_rus/

Bondarko, A. V. (2017). Glagolnyye kategorii v sisteme funktzional'noj grammatiki [Verbal categories in the system of functional grammar]. Dom JaSK/Jazyki slavyanskoj kultury. [in Russ].

Dornseiff, F. (2004). Der deutsche Wortschatz nach Sachgruppen [The German vocabulary by subject groups]. W. de Gruyter.

Duden. Onlinewörterbuch. [Duden. Online dictionary] (n.d.). Retrieved November 3, 2019, from https://www.duden.de/suchen/dudenonline

Fellin, W. (2013). Einführung in Eis-, Schnee- und Lawinenmechanik [Introduction to ice, snow and avalanche mechanics]. Springer-Verlag.

Khasanova, D. M., & Morkovkin, V. V. (2000). *Tematicheskij slovar' russkogo jazyka* [Thematic dictionary of the Russian language]. Russkij jazyk.

Kompleksnyj uchebnyj slovar': leksicheskaja osnova russkogo jazyka [Complex training dictionary: lexical basis of the Russian language] (2004). Ed. Morkovkin, V. V. AST & Astrel' & Transitkniga.

Mikhailov, V. N., & Dobrolyubov, S. A. (2017). Gidrologiya: uchebnik dlja vuzov [Hydrology: coursebook]. Direkt-Media.

Russkij semanticheskij slovar' [Russian semantic dictionary] (1998). Ed. Shvedova, N.Yu. Azbukovnik.

Slovar' russkogo jazyka [Dictionary of the Russian language]. (n.d.). Ed. Evgeneva, A.P. In *Fundamental'naya elektronnaya biblioteka [Fundamental Electronic Library]*. Retrieved November 2, 2019, from http://feb-web.ru/feb/mas/mas-abc/search.asp

Sternin, I. A. (2016). *Teoreticheskiye i prikladnye problemy jazykoznaniya: izbrannye paboty [Theoretical and applied problems of linguistics: chosen works]*. Direkt-Media.

Tarlanov, Z. K. (2019). *Metody lingvisticheskogo analiza [Methods of linguistic analysis]*. Jurajt.

Wetterlexikon des DWD. (n.d.). Retrieved November 15, 2019, from https://www.dwd.de/DE/service/lexikon/lexikon_node.html