A study of psycholinguistic meanings of the toponym "Vladikavkaz" (through linguistic associative experiments)

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Abstract. The study reveals ways to identify and describe the psycholinguistic meanings of lexical units (on the example of the toponym "Vladikavkaz"). Psycholinguistic meaning is one of the types of meanings along with the traditional type of meaning such as lexicographic meaning. The lexicographic meaning consists of a small set of logically meaningful features that reflect described phenomenon. The lexicographic meaning is presented in classical explanatory dictionaries. It is formulated on the basis of the principle of reductionism (minimization of features included in the meaning). The psycholinguistic meaning is the meaning in the minds of native speakers. This type of meaning is presented in psycholinguistic dictionaries. The psycholinguistic meaning can be identified by various methods. An effective method for identifying and describing psycholinguistic meanings is a psycholinguistic experiment, in particular, an associative experiment that involves native speakers. Associative experiments were carried out by the Russian Voronezh theoretical and linguistic school in the Russian Federation. The subjects were native Russian speakers in the North Caucasus and Voronezh. Toponyms of the Russian language were used as stimulus materials – "Derbent", "Dagestan", "Moscow", "St. Petersburg", etc. The experiments identified a lot of associative reactions, the distribution of which made it possible to construct associative fields. The semantic interpretation of associative fields revealed the psycholinguistic meanings of toponyms. This article presents the results of semantic interpretation of associative reactions to the stimulus "Vladikavkaz", obtained in the experiments. The associative fields of the toponym are described. The semantic components of the toponym are identified. The psycholinguistic meaning of the toponym "Vladikavkaz" is formulated in two regional variants.

Keywords: psycholinguistic meaning, toponym, associative field, associative experiment

1 Introduction

The proper name is an object of scientific research. The importance of proper names in human life has been emphasized in many studies. For example, the Ashanti people have a tradition of naming children based on the day of the week. Boys who were born on Monday will be quiet and balanced, and on Wednesday – aggressive.

The main function of the proper name is the designation of single objects of the real or imaginary world.

The nominative function of proper names is anthropocentric. “Everything that exists in the world and arises in person’s fantasies receives a name only because it matters to the person, turns out to be at the center of his affairs, interests, and dreams” [1].

At the present stage of development of linguistics, the anthropometric approach to the study of linguistic phenomena is key. In the world there is only a person with a language, a person speaking to another person, and language belongs to the person [2].

Pavelenis claims that the person is not a passive referent of linguistic statements; he is an active interpreter, a carrier of conceptual systems that allow him to learn and understand the language, the world, and also to communicate with other people [3]. Thus, the semantics of any language has an anthropological dimension.

Proper names have national and cultural connotations. This was shown in the experiments by Yugra State University and the Peoples' Friendship University of Russia [4], which were carried out in the Khanty-Mansiysk Autonomous Okrug – Yugra. They considered the experiment as one of the ways to determine the perception of proper names by various peoples. The subjects – first-, second- and third-year students at the Yugra State University wrote down the first associations that came to mind for the stimulus-hydronym "Manya" (Manya is the river in the Khanty-

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Mansiysk Autonomous District) within one minute. The number of reactions was not limited. The experiment involved citizens of the Russian Federation for whom Russian is the native language (72 people), as well as citizens of the Russian Federation for whom Russian is not the native language (49 people) – these are representatives of the Khanty and Mansi peoples.

The experiment showed that the associative reactions of Russians are fundamentally different from that of the Khanty and Mansi peoples.

The Khanty and Mansi chose the syntagmatic type of association. The first association to the stimulus "Manya" was the hydronym (Manya – river) or oikonym (80 % of all associative reactions).

For Russian participants, the formal sound similarities of the onym-stimulus and its associations account for 72 % of the single (peripheral) “my, name, mantle, lightning, mania” (5 %) on a sliding scale up to “semolina” (5 reactions – 7 %) through the transformation of the anthroponym "Masha (Manya, Manka)" (13 units – 19 %) to the center of the field represented by a significant number of associations with the word "maniac" (29 reactions – 41 %)

Dorzhieva argues that unlike appellative vocabulary, proper names have a weakly expressed conceptuality. This prompts scientists to search for methods for analyzing the semantics of proper names, one of which is linguistic associative experiments. Association as a psychological reaction is the most appropriate tool to detect and arrange the semantic content of toponyms. “Association is a point of intersection of three fields: objective reality, consciousness and language” [5].

Dorzhieva studied the semantics of proper names based on the concept by Superanskaya, according to which names contain three types of information: a) linguistic information – information about the linguistic matter of a proper name); b) speech information – information about the relationships of names with objects and attitudes of speakers towards them; c) encyclopedic information – information about the referent that the speaker has even if he has never seen this referent. All these types of information are included in the associative background of proper names, which is knowledge about names, their referents and fragments fixed in the minds of native speakers.

Dorzhieva refers associative reactions to stimuli-toponyms "toponymic associations". Toponymic associations are the reactions of native speakers to toponyms included in a certain toponymic system.

Dorzhieva conducted an associative experiment using the chain method, when the number of associative reactions to one stimulus is not limited.

The experiment involved 455 subjects of both sexes aged 15–70. The subjects were residents of the capital of the Republic of Buryatia Ulan-Ude and residents of some regions of Buryatia.

The stimulus material was selected based on the survey of 100 respondents and consisted of toponyms such as Kyakhta (79 out of 100 people indicated), Ulan-Ude (62 out of 100 people), Selenga (77 out of 100) and Baikal (61 out of 100 people).

The reaction processing procedure included two stages. First, by ranking the reactions in order of frequency, reactions that represent an associative norm of perception (reactions that appeared at least thrice) were identified. The associative reactions were then divided into semantic groups, and the closest concepts were combined into clusters.

The largest number of reactions was received for the hydronym "Baikal" – 1325 reactions (26.3 %). The conceptual association "lake" became the most frequent reaction; it was contained in 450 questionnaires (98 %). Encyclopedic reactions ranked second, which indicated the purity of water and nature (134 reactions or 10.1 %), freshness of water (112 reactions or 8.5 %), depth of water (100 reactions or 7.5 %), dimensions (57 reactions or 4.3 %).

Dorzhieva identified the following clusters of the associative field of the hydronym "Baikal": 'depth', 'antiquity', 'water purity', 'UNESCO heritage', 'tourism', 'the eighth wonder of the world', 'Buryatia', 'Buryat culture', etc.

Emotionally colored reactions (3 % of the number of reactions) were also divided into clusters: 'sacred', 'mystery', 'greatness', 'beauty of the lake', 'admiration', 'awe', 'happiness'.

Dorzhieva identified intertextual associations for the Baikal stimulus associated with legends and traditions, poems, songs about Baikal (“father”, “old man”, “Angara's bride”). Dorzhieva believes that "the associative experiment confirmed the connection between the meaning of toponyms and the cognitive structures which indicates the presence of significative semantics in toponyms."

Experimental studies of proper names were also conducted by [6]. She aimed to identify the connotative components of political anthroponyms that have been formed under the influence of political, economic and socio-cultural factors in Russian society since the end of the 20th century. To identify the connotative potential of political anthroponyms, she used the method of free associative experiment (at the first stage), the method of synonymous replacement (at the second stage) and the method of supplementing the statement (at the third stage). The method of synonymous replacement involves the replacement of words with synonyms. The experimental method of addition implies that the experimenter presents the subject with a deformed text (i.e., a text with missing words or phrases). The task of the participant is to restore this text. This technique is based on the principle of redundancy of a speech message, which allows the recipient to understand oral and written speech even in the presence of structural and semantic defects.

Incentives were the names of Soviet political leaders (LENIN, STALIN, GORBACHEV, etc.), the names of politicians in the transition period (CHERNOMIRDIN, CHUBAIS, KHAKAMADA, etc.), the names of contemporary foreign and Russian politicians (TRUMP, MERKEL, ZHIRINOVSKY, ZYUGANOV etc.), names associated with political scandals (MONICA LEWINSKY, EDWARD SNOWDEN, etc.) (a total of 37 names).

The experiment involved 120 subjects aged 18–50, who represented various Russian cities (Moscow, Volgograd, St. Petersburg, etc.). The Russian language was native for all subjects.

At the first stage, the subjects were asked to name the first word that came to mind after reading the stimulus words.

The associative reactions were divided into associative series, within which thematic groups were identified: 1) denotative generic reactions; 2) emotional-evaluative reactions; 3) associative reactions related to famous politicians; 4) associative reactions to certain events associated with the name; individual-personal associations.

For example, an associative series of the denotative reference to the name-stimulus MERKEL – a German politician; within this series, the following thematic groups were identified: a) head / leader of Germany (the number in brackets is the percentage of subjects who identified this associate): chancellor (16), chancellor of Germany (8), leader of Germany (2), leader (1), etc.; b) female politician: female chancellor (3), political Frau of Germany (1), female politician of Germany (1), etc.

At the second stage, the subjects replaced proper names with appellatives. Names in a figurative sense have been identified in various contexts of the post-Soviet period from the media over the past 10–15 years.

At the third stage, Vrublevskaya asked her subjects to complete the sentences in which certain names were omitted.

Proper names are not semantically empty and have a peculiar meaning [5]. Proper names carry “conceptual content, the microcomponents of which are formed under the influence of reality [7].

We also agree with Nikonov who believes that toponyms have three types of meaning: pre-toponymic (etymology), toponymic (designation of objects) and post-toponymic – associations with the name of an object.

Dorzhieva claims that three aspects of meaning of proper names determine three different approaches to the study of semantics, one of which is associative, within which post-toponymic meanings are studied [8].

2 Problem Statement

The associative linguistic experiment is the most commonly used method in experimental studies of the semantics of proper names.

However, many researchers limit themselves to the analysis of primary experimental data – associative verbal reactions. They build associative fields of proper names, distribute reactions to classes, identify the field core and periphery.

Our scientific linguistic school applies the methods of semantic interpretation of associative fields, which allows us to reveal the meanings of proper names in the minds of native speakers. We call these meanings psycholinguistic.

This article is a continuation of a series of articles published in 2019–2022 [8, 9]. They were devoted to the ways, methods and principles of describing the psycholinguistic meanings of toponyms ("Moscow", "Dagestan", etc.).

In this article, we continue presenting results of our experimental studies of the semantics of toponyms.

3 Research Questions

The subject of this study is the psycholinguistic meaning of the toponym "Vladikavkaz".

4 Purpose of the Study

The study aims to identify and describe psycholinguistic meanings (based on the psycholinguistic experiments).

5 Research Methods

Psycholinguistic experiments were conducted in the North Caucasus.

The subjects were 300 students of Grozny Petroleum Technical University, the Chechen State University and the Chechen Pedagogical University.

The subjects received forms with three experimental tasks.

First, the subjects were required to name the first word that came to mind after reading a stimulus word (using the free association method). In total, 10 stimulus words were used (“Dagestan”, “Moscow”, St. Petersburg, etc.), among which was the toponym “Vladikavkaz”.

Second, the subjects answer the question what they know about the geographical objects designated by these stimulus words. Third, they had to answer the question where they are located.

In the second and third tasks, the directed associative experiment with an ongoing reaction was used (i.e., in contrast to the first task, the number of reactions was not limited). The time was not limited.

In most cases, the subjects filled out the forms within 10–15 minutes.

There was only one criterion for the correct performance of tasks: any verbal reaction to each stimulus in accordance with the formulated tasks.

6 Findings

Based on the results of the experiments, associative fields were built for each toponym.

The structure of the dictionary entry: 1) stimulus ("Vladikavkaz"); 2) the number of subjects in the experiment; 3) associative reactions; 4) the frequency of associative reactions; 5) refusals – the lack of verbal reactions; 6) unprocessed reactions – reactions that were not processed for various reasons (for example, due to fuzzy handwriting).

The associative field of the toponym "Vladikavkaz" (associative reactions with a frequency of at least 11 are given).

Vladikavkaz 300 – mountains 38, Ossetia 23, Ossetian pies 22, Caucasus 16, Beslan 14, hospital 14, Alania 11 ...

Refusals – 33

Raw reactions – 1

The associative field of the toponym "Vladikavkaz" based on the results of the second task (associative reactions with a frequency of at least 11 are given).

Vladikavkaz – what is famous for? 300 – Ossetian pies 15, Mukhtarov Mosque 11 ...

Refusals – 87

Raw reactions – 3

The associative field of the toponym "Vladikavkaz" based on the results of the third task – (associations with a frequency of at least 11 are given).

Where is Vladikavkaz? 300 – in Ossetia 26, in Russia 21, in the south of Russia 19, in North Ossetia 19, in the Caucasus 16, the North Caucasus 16, in the North Caucasus 15, in the central part of the North Caucasus 12, in the Russian Federation 11, North Ossetia-Alania 11

Rejections – 53

Raw reactions – 2

At the next stage, the semantic components were identified by the method of semantic interpretation of associative fields, from which the definition of the toponym "Vladikavkaz" was formulated.

All the semantic components were distributed by core and periphery, depending on their brightness indice, calculated by the formula r/N, where r is the number of actualizations of the semantic components, and N is the total number of subjects. The brightness indices of the semantic components are indicated after each semantic component.

The semantic components of the denotative type (table 1), the connotative type (table 2) and the metalinguistic type (table 3) were distributed. The core includes components with brightness indices of 0.12 and higher; in the periphery there are components with brightness indices of 0.11–0.04.

Table 1. Distribution of the denotative semantic components by core and periphery

Language consciousness	Core	Periphery
grz	in North Ossetia-Alania 0.37 in the Russian Federation 0.25 Ossetian pies 0.20 mountains 0.19 in the Caucasus 0.12	located on both banks of the Terek River 0.07 in the North Caucasus 0.07 hospitals 0, 07 monuments 0.05 city of military glory 0.05 capital 0.05 within the North Caucasus Federal District 0.04 Mosque of Mukhtarov 0.04 medicine 0.04 city 0.03

Definitions formulated from the semantic components of the core and periphery are given.

Vladikavkaz 300 – city 0.03 in North Ossetia-Alania 0.37 located on both banks of the Terek River 0.07 in the north 0.07 Caucasus 0.12 within the North Caucasus Federal District 0.04 of the Russian Federation 0.25 famous for Ossetian pies 0.20, mountains 0.19, hospitals 0.07, monuments 0.05, medicine 0.04, Mukhtarov mosque 0.04, city of military glory 0.05 and capital 0.05;

Approve 0.06.

Table 2. Distribution of the connotative semantic components by core and periphery

Language consciousness	Core	Periphery
grz	-	good 0.02 beautiful 0.01 uninteresting 0.003 hospitable 0.003 friendly 0.003 favorite 0.003

Table 3. Distribution of the metalinguistic semantic components by core and periphery

Language consciousness	Core	Periphery
grz	–	The city is called "Vladik" 0.01 Residents call Dzaudzhykhau "the village Dzauga" 0.003 The name of the city comes from "to own the Caucasus" 0.01 The word has the root "Caucasus" 0.003

7 Conclusion

Thus, the psycholinguistic experiments helped identified the psycholinguistic meanings of the toponym "Vladikavkaz".

Associative toponym fields (three fields) consisting of reactions ordered in descending order were built.

The semantic interpretation of the associative fields was carried out, and the semantic components of the meaning were identified; the brightness of each of them was determined and distributed over the core and periphery.

The psycholinguistic meanings of the toponym were identified from these semantic components.

The data obtained make it possible to understand the significance of certain semantic features for linguistic consciousness.

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