

**SCTMG 2020****International Scientific Conference «Social and Cultural Transformations in the  
Context of Modern Globalism»****AN INTEGRATED APPROACH TO THE STUDY OF SEMANTICS  
OF PROPER NAMES**

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***Abstract***

The article demonstrates the possibilities of a comprehensive study of the semantics of proper names according to the methodology developed by the Russian scientific theoretical and linguistic school in Voronezh and tested in numerous works. As an example, the results of a comprehensive semasiological study of the toponym “Grozny” are presented. Using the methodology for the unification of lexicographic definitions and the methods of psycholinguistic associative experiments, based on the principle of multiplicity (non-uniqueness) of the description of mental units and the principle of complementarity of semantic descriptions. The integrated lexicographic sememe (ILS) and the psycholinguistic sememe (PLS) of this understand. Corresponding dictionary entries are given, their structure is described. The brightness indices of these ILS and PLS are calculated, allowing to clarify their brightness in the composition of the corresponding seeds. A comparative analysis was carried out (as part of the third stage of the study), as a result of which seeds were found (a) present in both ILS and PLS (b) present in ILS and absent in PLS (c) absent in ILS, but present in PLS. Option (a) revealed ILS semes relevant to the linguistic consciousness of native speakers of the Russian language in the city of Grozny. Option (b) – ILS semes that are not relevant for the linguistic consciousness of native speakers of the Russian language in the city of Grozny; option (c) – seeds that are not present in ILS, but which are still relevant to the linguistic consciousness of native speakers of the Russian in Grozny.

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**Keywords:** Semantics, toponyms, psycholinguistic experiment, integrated lexicographic, psycholinguistic semema.



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## 1. Introduction

One of the key theoretical and methodological problems in modern linguistics is the problem of semantics of proper names (Akhmetzyanova, 2010, Denisova, 2015).

In the studies of some scientists, “proper names do not contain either a concept or a meaning. They are only a distinguishing sign” (Galkina-Fedoruk, 1956, p. 29).

According to another concept, proper names have a meaning, but there is no connection with the concept:

A common property of proper names is that, in relation to the class of things, they have their own meaning in the naming, and only do not express any concepts ... Proper names they matter (otherwise why would they exist in the language?), but the meaning of proper names is exhausted by their nominative function, their relation to the thing called (more precisely: the class of things). (Reformatsky, 1996, p. 21)

Finally, in the framework of the third concept, proper names have both meaning and concept (Espersen, 1958).

The results of our psycholinguistic experiments show that the use of experimental methods for the study of proper names allows us to obtain new data on their semantics (Makhaev, Sternin, & Ibragimov, 2019; Makhaev et al., 2019).

For example, in the process of semantic interpretation of experimental data (verbal associative reactions), semes are revealed that are not represented in explanatory dictionaries, but that have a high degree of relevance for linguistic consciousness.

There are also cases where the semantic components that are part of lexicographic definitions are absolutely not relevant for linguistic consciousness or are located on its periphery.

## 2. Problem Statement

This article proposes a comprehensive approach to solving the problem of semantics of proper names, including a comprehensive analysis of lexicographic definitions, verbal associative reactions obtained from experiments, their semantic interpretation, the formulation of an integrated (lexicographic and psycholinguistic) seed and their further comparative analysis.

The need for an integrated approach in semantic research is due to the presence of the phenomenon of plurality (non-uniqueness) of metalanguage descriptions of mental units.

The fact is that the same semantic units (meanings, semantic components) receive “different descriptions in a natural metalanguage, that is, they can be described by different researchers in different language formulations,“ in different words” (Sternin & Rudakova, 2017, p. 47), which determines the formulation of the principle of plurality (non-uniqueness) of metalanguage descriptions of mental units.

The principle of plurality (non-uniqueness) of metalanguage descriptions of mental units leads to the realization of the need to formulate another principle – the principle of complementarity of semantic descriptions, according to which “for the most objective and meaningful description of the content of mental units, the results of the description obtained from different sources should be compared and integrated, different methods” (Sternin & Rudakova, 2017, p. 64).

Based on the principles of plurality (non-uniqueness) and complementarity of semantic descriptions, an integrated approach includes three stages of research.

As part of the first stage, a methodology is used to unify lexicographic definitions, aimed at the most complete lexicographic description of a family of proper names based on existing explanatory dictionaries of a particular language.

As a result of using the methodology for the unification of lexicographic definitions (which also includes the procedure for semantic interpretation of lexicographically identified sem), an integrated lexicographic semme (ILS) is formulated when “all semantic components identified by different dictionaries are included in the described value, and a single connected definition of the meaning is formulated” (Sternin & Rudakova, 2017).

In the second stage of the study, psycholinguistic experimental methods are used – a free associative experiment, a directed associative experiment, a perceptual experiment, etc.

As a result of the application of experimental methods based on the semantic interpretation of verbal associative reactions (and the integration of associative fields, if there are several), a psycholinguistic seme (PLS) is formulated, which is a value that is relevant to the language consciousness of native speakers.

In the framework of the third stage, a comparative analysis of ILS and PLS of proper names is carried out, which allows to identify semes that are not presented in explanatory dictionaries, but relevant for linguistic consciousness, or, conversely, are presented in explanatory dictionaries, but are completely irrelevant for linguistic consciousness or having a low degree of relevance for him.

### **3. Research Questions**

The subject of this article is the semantics of proper names (for example, the toponym "Grozny").

### **4. Purpose of the Study**

The purpose of this article is to demonstrate the possibilities of an integrated approach to the analysis of semantics of proper names developed by the Russian scientific theoretical and linguistic school in Voronezh and tested in numerous studies (Makhaev, Sternin, & Ibragimov, 2019; Makhaev et al., 2019; Sternin & Rudakova, 2017 and others) (for example, the toponym "Grozny").

### **5. Research Methods**

In order to formulate the ILS toponym “Grozny” in the first stage of the study, 7 dictionaries were analyzed: “Dictionary of modern geographical names” (Dictionary of modern geographical names, 2006), “Geographical names of the world: Toponymic dictionary” (Pospelov, 2002), “Big Encyclopedic electronic dictionary (Big Encyclopedic Electronic Dictionary, 2010), Toponymic Dictionary of the Caucasus (2011), Historical and Toponymic DICTIONARY L RUSSIA” (Pospelov, 1999), “A Brief Toponymic Dictionary” (Nikonov, 1966).

In order to formulate the PLS of the “Grozny” toponym in the second stage of the study, in 2018 in Grozny, psycholinguistic associative experiments were conducted – non-chain free (to obtain “free” reactions) and chain directed (to obtain “directed” reactions).

The experiments were carried out in writing in lecture halls. The test subjects — students of Grozny’s higher educational institutions in the amount of 100 people — on the instructions of the instructor, filled out experimental forms containing the following instruction: “Answer with any word that comes to your mind when you hear this word.” Further, after the question, a list of 10 incentives-toponyms was given in alphabetical order, including the toponym “Grozny”. This instruction was formulated to obtain “free” associative reactions.

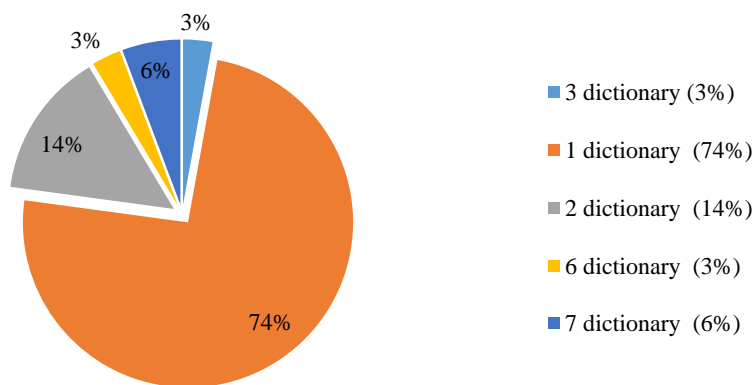
To obtain directed associative reactions for each toponym stimulus, questions were formulated such as “S – what is famous, famous for?”, “S, where is it located”.

The time for filling out the forms was not limited.

Then, in the third stage of the study, ILS and PLS were compared.

## 6. Findings

According to the results of unification of lexicographic definitions (semantic interpretation of sem), 34 semes were identified, of which 2 are presented in all 7 dictionaries analyzed, 1 in 6 dictionaries, 1 in 3 dictionaries, 5 in 2 dictionaries, 26 in only 1 dictionary (figure 1).



**Figure 01.** Number of seeds in the analyzed dictionaries

The structure of a dictionary article with ILS has the following elements: the headword (in bold), the number of dictionaries analyzed (the number in brackets, in bold), a connected definition, in which integral and then differential semes are indicated with their brightness index (in brackets).

The brightness index of sem (BIS), identified during the analysis of lexicographic definitions, is calculated by the formula:

$$BIS = \frac{C_{em}}{C_I}$$

where  $C_{em}$  – the number of seme updates in the definitions of the analyzed dictionaries

CJI – the total number of analyzed dictionaries

Obsolete sema in italics.

An abbreviated version of the ILS of the toponym “Grozny” is given (with semes whose brightness index is not lower than 0.42)

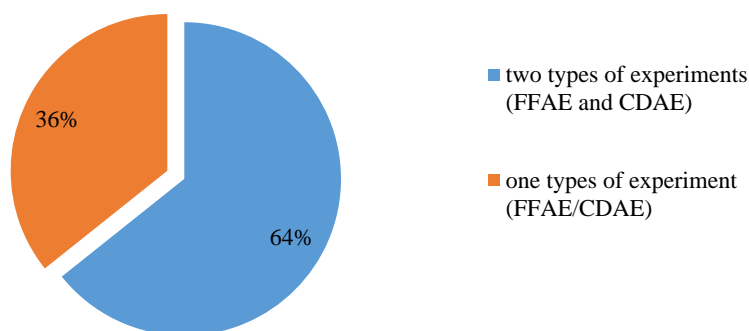
**Grozny (7)** – a city (1) in the Russian Federation (0.28), the capital of the Chechen Republic (0.85), the center of the Terek region (0.14); the name of the city in the Chechen language is “Selzha-Gala” (“Sunzhenskaya Fortress”) (0.14); the city is located on both banks of the river. Sunzha (0.28), in the Alkhanchurt valley (0.14), with a population of 387.5 thousand inhabitants in 1992, 185.8 thousand inhabitants in 1996, 223 thousand inhabitants in 2002 (0, 42);

According to the results of psycholinguistic experiments, 278 verbal associative reactions (Rg) were obtained, of which 96 were single (R1) and 140 different (RDiff); failure rate (R0) – 36. Unprocessed reactions – 1 (illegible handwriting) (Table 1).

**Table 01.** Data on experiments in the city of Grozny

	<b>A fancy-free Associative Experiment (FFAE)</b>	<b>Chain Directed Associative Experiment (CDAE)</b>	<b>Total</b>
R <sub>g</sub>	92	186	278
R <sub>0</sub>	8	28	36
R <sub>1</sub>	38	58	96
R <sub>Diff</sub>	55	85	140

As a result of the integration and semantic interpretation of the associative reactions, semes were identified (figure 02) and formulated by PLS.



**Figure 02.** The number of seeds identified by the results of experiments in Grozny

As can be seen in the diagram, 64% of the total set of identified seeds was obtained by processing the results of two types of experiments at once – FFAE and CDAE, while 36% – by processing the results of only one type (FFAE or CDAE) (Maklakova & Sternin, 2013).

The structure of a dictionary entry with PLS has the following elements: a headword (in bold), the number of test subjects in the experiments whose verbal associative reactions were subjected to semantic interpretation (the number indicated in parentheses), a connected definition, which first gives integral,

then differential sems with indicating their brightness index (BIS – in brackets); the number of irrelevant sem equal to the number of failures.

BIS, identified experimentally, is calculated by the formula:

$$BIS = \frac{n}{N}$$

where  $n$  – the number of subjects who updated this in experiments

$N$  – total number of subjects

An abbreviated version of the PLS of the Grozny toponym is given.

**Grozny** 100 – a city (0.01) in the south (0.01) and north (0.01) of the Russian Federation (0.12), the North (0.05) Caucasus (0.02), the capital (0.13) Chechen Republic (0.68), located on both banks of the river. Sunzha (0.02), a former fortress (0.02), hostilities took place in the city (0.04), it was restored after hostilities (0.07), it is known by Kadyrov (0.14), mosques (0.14) ), in particular, the Mosque to them. Akhmad Kadyrov (0.31), its history (0.02), towers (0.01), mountains (0.01), sights (0.01), modesty of girls (0.01), the city has a complex of high-rise Grozny-City buildings (0.07), universities (0.04), parks (0.04), the State Memorial Museum of Akhmat-Hadji Kadyrov (0.03), Chechen State Drama Theater named after H. Nuradilov (0 , 01), the city is building a multi-functional high-rise complex "Akhmat Tower" (0.01), a heroic city (0.06) ... Irrelevant – 36.

At the next (final) stage of the study, two types of meanings — ILS and PLS — are compared in order to identify ILS-relevant and irrelevant for language consciousness, as well as ILS-relevant, but not represented in ILS.

The results of the comparative analysis are presented in the corresponding tables (table 1, table 2, table 3). Semes are located in the tables in the "sema" columns from the most frequency to the least frequency (according to INS). Comparison of INS was performed in two “sections”: 1) with support for semes in ILS 2) with support for nuclear semes in PLS.

**Table 02.** Comparison of INS in ILS and PLS with reliance on nuclear semes in ILS

Sema	ILS	PLS
	BIS	BIS
City	1	0.01
Founded in 1818 as the fortress of Grozny	1	0.02
Capital of the Chechen Republic	0.85	0.13
With a population of 387.5 thousand inhabitants in 1992, 185.8 thousand inhabitants in 1996, 223 thousand inhabitants in 2002.	0.42	–
Located on both banks of the Sunzha River	0.28	0.02
It was destroyed during the hostilities of 1994-1996, 1999-2000.	0.28	–
Oil production center	0.28	–
There is a railway station in the city	0.28	–
In the Russian Federation	0.28	0.12
Industry	0.14	–
There are theaters	0.14	0.01
There are universities	0.14	0.04
There are museums	0.14	0.03

**Table 03.** Comparison of BIS in ILS and PLS with reliance on nuclear semes in PLS

Sema	PLS	ULS
	BIS	BIS
In the Chechen Republic	0.68	–
Famous for the mosque named after Akhmat Kadyrov ("Heart of Chechnya")	0.31	–
Famous for mosques	0.14	–
Known by Kadyrov	0.14	–
The capital of the Chechen Republic	0.13	0.85
In the Russian Federation	0.12	0.28

From these tables, there are three options for grouping this: (a) present in both ILS and PLS (b) present in ILS and absent in PLS (c) absent in ILS, but present in PLS

Option (a) allows the identification of ILS semes relevant to the linguistic consciousness of native speakers. Option (b) – ILS, not relevant to the linguistic consciousness of native speakers; option (c) – semes that are not present in ILS, but which are still relevant to the linguistic consciousness of native speakers (located in the core of PLS).

Option (a) is presented, for example, by the Semi “capital of the Chechen Republic”, “in the Russian Federation”, which testifies to their high degree of relevance for the linguistic consciousness of native speakers of the Russian language in the city of Grozny.

The integral seme “city” is located on the extreme periphery in PLS, and in ILS it has BIS = 1, which indicates a low degree of its relevance for the linguistic consciousness of native speakers of the Russian language in the city of Grozny. I also have a low degree of relevance for such semes as "founded in 1818 as the Grozny fortress" (with BIS in ULZ = 1), "located on both banks of the river. Sunzha "(BIS in ULZ = 0.28), etc.

Additional information on the degrees of relevance of this ILS for the linguistic consciousness of native speakers of the Russian language in the city of Grozny is also obtained when considering cases of option (b).

Option (c) is represented by the Semes “In the Chechen Republic”, “known by mosques”, “known by Kadyrov”, which were not indicated in lexicographical definitions, but nevertheless are relevant to different degrees for the linguistic consciousness of native speakers of the Russian language in the city of Grozny.

Information about Russian speakers in the city of Grozny that are irrelevant for linguistic consciousness. We obtain ILS when considering all three options. So, such seeds as “with a population of ...” (BIS in ILS = 0.42) and “was destroyed during the hostilities 1994-1996, 1999-2000” (BIS seeds in ILS = 0.28) are irrelevant.

## 7. Conclusion

In this article, it was shown that during seismological research of proper names it is necessary to consider such phenomena as the multiplicity (non-uniqueness) of the description of mental units, the complementarity of semantic descriptions, which are expressed by the corresponding theoretical principles. All this necessitates an integrated approach to the research of semantics of proper names.

The article demonstrated the methodology of a comprehensive study of the semantics of proper names, which includes three stages. The result of the analysis in the first stage is the formulation of ILS. The result of the analysis in the second stage is the formulation of the PLS. In the framework of the third stage, data (a), (b), (c) were obtained.

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