

“Threat” in Russian – A Linguistic Perspective

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Abstract

The present study explores a frequent concept in modern media discourse, namely “threat”, based on a corpus analysis of the two Russian nouns *groza* and *ugroza* from 1800 to 2020. We show that the two words share a network of submeanings, but that they have different centers of gravity in the network. We identify four submeanings and suggest that the distribution of the two words has changed over time. In present-day Russian, *groza* is dominant in the meaning ‘thunderstorm’, while *ugroza* describes a wide variety of threats. Our analysis of origins of threats and affected entities has also revealed a diachronic development, whereby origins of threat change from concrete physical threats via military threats to more generalized dangers, such as nuclear and environmental disasters, diseases, and terrorism, while entities affected by these threats undergo a change from concrete persons via communities and states to the entire planet.

Keywords: threat, Russian, radial category, metaphor, metonymy, language change

1. Introduction

“Threat” is a concept that occurs frequently in mass media in our time. Governments in many countries issue reports assessing various threats to society, and these reports are frequently discussed in the media.¹ Also in everyday parlance, threats are ubiquitous; an example is so-called SWOT analyses (strengths, weaknesses, opportunities, and threats), a type of risk assessment that virtually all companies and organizations carry out from time to time. But what exactly is a ‘threat’? This question receives little attention in modern media discourse. From a linguistic point of view, Russian is particularly interesting, since it has two words for ‘threat’:²

- (1) *Vižu teper’ syna Simeonova: na **ugrozy** otvečaet **grozoju!*** (Vel’tman 1843)
‘I now see Simeonov’s son: he responds to threats by means of a threat.’

Here, both *ugroza* and *groza* are glossed as ‘threat’. In what follows, we present a corpus-based investigation of the meanings and use of the two words, as well as the relationship

¹ See for instance, the “National threat assessment” issued by the Norwegian Police Security Service (PST, <file:///Users/tne000/Downloads/globalassets/artikler/trusselvurderinger/nasjonalt-trusselvurdering-2021-ntv-2021-final-web-1802-1.pdf>) and the corresponding Swedish document issued by the National Center for Terrorist Threat Assessment (<https://www.sakerhetspolisen.se/download/18.f2735ce171767402ba3eb/1600433792019/NCT-one-year-assessment-2020.pdf>). The Russian government publishes their strategy for national security: *O strategii nacional’noj bezopasnosti Rossijskoj federacii* (<http://www.kremlin.ru/acts/bank/40391>).

² All numbered examples in this article are from the Russian National Corpus available at www.ruscorpora.ru. Examples are given in transliterated orthography. We provide the name of the author for examples from fiction and the name of the periodical for examples from non-fiction. For all examples, the year when it was created is included. The nouns under scrutiny are boldfaced in each example.

between them. We limit ourselves to the analysis of these two lexical items, although Russian also has a number of grammatical constructions and other linguistic means to convey threats.³

Our contribution can be summarized as follows. First, we suggest that the uses of the two words can be divided into four broad classes. Second, we show that the distribution of the two words has changed over time. While *ugroza* becomes more widespread in what we call “generalized uses”, *groza* loses ground over time, but stabilizes in two niches. The semantic changes involve two mechanisms: metaphor and metonymy. A third finding is that the origins of threats undergo a change from concrete physical threats via military threats to a number of more generalized origins, such as nuclear and ecological disasters, diseases, terrorism, ecology, etc. Fourth, the entities affected by threats change from concrete persons via communities and states to the whole planet.

After a brief discussion of data and method in section 2, we discuss concrete threats in section 3, before we turn to metonymical and metaphorical meanings in sections 4 through 6. Section 7 presents a radial category network, while a discussion of origins and affected entities is provided in section 8. Our contribution is summarized in section 9.

2. Data and method

In order to shed light on the distribution of *groza* and *ugroza*, we have put together a database with examples of usages of both words from the Russian National Corpus⁴. The dataset covers the period from 1700 to 2020 and consists of 4858 examples, where 2335 are examples of *groza* and 2523 of *ugroza*. For 1700-1800 we collected all attested examples, while for later periods, which in the corpus are represented with a larger number of texts, we extracted a random sample of 500 examples for each 50-year period. All search results were exported and then merged into one Excel spreadsheet. Irrelevant examples (e.g., where *groza* is a proper name) and doublets were manually removed. The data was later tagged for the following properties: case and number of *groza/ugroza* as well as meaning in each context. The following submeanings were identified: physical threat, metaphorical uses, meteorological meaning, and personification. An overview of the distribution of the four submeanings is offered in section 7 (Table 1). **A larger database might have given an even clearer picture of the use of *groza/ugroza* in the Russian language. However, our dataset is large enough to reveal robust tendencies that can be considered hypotheses for future research.**

The database enables us to see which submeanings in each given time period were dominant for *groza* and *ugroza*, as well as observe changes over time. While most of the submeanings are attested for both words under scrutiny in all time periods, we see that the situation varies over time. The major findings are that the meteorological meaning of ‘thunderstorm’ takes over for *groza* and accounts for the majority of later examples, while for *ugroza* we observe an increase of metaphorical uses. These findings are discussed in detail in sections 3-7.

3. Concrete threats

Major dictionaries of modern Russian identify the primary meaning of *ugroza* as the “promise to cause” (*obeščanie pričinit'*) a negative result for someone. Ožegov and Švedova (2006) describe the negative result as *vred, zlo* ‘harm, evil’, while Ušakov (1935-1940) and Evgen'eva

³ Notably, the Russian Constructicon (an online database over Russian grammatical constructions, <https://constructicon.github.io/russian/>) uses “threat” as a semantic tag. Letučij (2007), who refers to Mel'čuk (1987), has coined the term *ugrozativ* for linguistic means that conveys threats.

⁴ Corpus searches were performed in December 2020. The dataset is available at: LINK TO BE ADDED.

(1999) use the words *zlo* ‘evil’ and *neprijatnost* ‘unpleasantness, trouble’. These descriptions match what we find in our data. *Ugroza* may be used about a situation where a person conveys the intention to harm another person, as in the following example, where someone intends to use physical violence in order to get information:

- (2) No ni bit'e, ni **ugrozy** ne vykolotili iz nego ni odnogo slova. (Uspenskij 1871)
‘However, neither beating nor threats squeezed a single word out of him.’

The intention may be conveyed through words or gestures, or a combination of the two. In the following example, pointing at the victim with a toy pistol is used to convey the threat:

- (3) Eë položenie osložnilos' srazu že tem, čto odin iz chuliganov vynul iz karmana igrušečnyj detskij pistolet i napravil v život Ljubovi Vasil'evne. Ona ètu **ugrozu** prinjala kak real'nuju i ispugalas'. (*Vstreča* 2004)
‘Her position suddenly became more difficult as one of the hooligans took a toy pistol out of his pocket and pointed it at Ljubov' Vasilievna's stomach. She thought this threat was real and was scared.’

Is *groza* used in this meaning? Neither Ožegov and Švedova (2006), nor Evegen'eva (1999) include this meaning in their definitions of *groza*, but Ušakov (1935-1940) mentions *surovov, ustraščajuščee obraščenie, ostrastka* ‘austere, frightening address, warning’ as a possible meaning in colloquial Russian. Our dataset contains numerous examples of this type:

- (4) Èto budet legko emu sdelat' s pomošč'ju sily, **grozy** i deneg. (Lažečnikov 1835)
‘That is going to be easy for him to do by means of force, threat and money.’

Here, we are dealing with a situation where someone is trying to achieve a goal through violence, threat and money. In this example, *groza* could be replaced by *ugroza* without any semantic shift.⁵ Note that the example is from 1835; in present-day Russian *ugroza* would sound more natural. We will return to the diachronic development in section 7, but first we need to introduce the other meanings of *ugroza* and *groza* that are attested in our data. In section 7, we will also discuss the number of examples attested for each submeaning.

4. Personification: metonymy and metaphor

A meaning of *groza* that is prominent in dictionaries involves personification. For instance, Evegen'eva (1999) states that *groza* can be used about somebody or something that *vnušajet strach i navodit užas* ‘inspires awe and fear’, and Ušakov (1935-1940) and Ožegov and Švedova (2006) include similar descriptions of *groza*. Here is a relevant example from our dataset:

- (5) On ved' **groza** našego dvora. Porazitel'nyj paren' ètot Miška. (Mariengof 1956)
(lit.) ‘As you know, he is the threat of our court yard. Astonishing guy, this Miška.’

Here, *groza* is not used about the threat itself, but rather about a person who is considered threatening. In other words, we observe a semantic extension from the threat itself to the person who conveys the threat – an example of a metonymic shift. Radden and Kövecses

⁵ Notice, however, that substitution with *ugroza* in (4) would require the plural form of the word. It seems that *groza* in the plural is only used in the meteorological sense of ‘thunderstorm’, to which we return in section 5. *Ugroza*, on the other hand, can be used in the plural to describe separate expressions of threat. We are indebted to an anonymous referee for pointing this out.

(1999:21) define metonymy as “a cognitive process in which one conceptual entity, the vehicle, provides mental access to another conceptual entity, the target, within the same cognitive model.” In our case, the person is the target and the action of conveying a threat is the vehicle. The target and the vehicle are in the same “cognitive model” in the sense that a contiguity relation exists between the person and the action the person carries out (see Peirsman and Geeraerts 2006).

A related use is attested in the following example:

(6) Sej grad, **groza** i trepet dlja vselennoj, velič'ja pamjatnik nadmennyj, upal! (Dmitriev 1869, who cites a poem by A.F. Merzljakov from 1801)

‘This city, a threat and awe for the whole universe, the insolent monument of greatness, has fallen!’

Although this example is not about a person, it is nevertheless similar to personification, since we observe a metonymic shift from the threatening behavior to the origin of the threat, in this case the city of Babylon. At the same time, the example is metaphorical. We use “metaphor” as this term is used in cognitive linguistics, i.e., about a “cross-domain mapping in the conceptual system” (Lakoff 1987). While metonymy involves relations inside one domain (e.g., between a threat as an action and a person conveying the threat), metaphor is about relations between different domains. In our case, we are dealing with the domains of interactions between persons on the one hand, and between cities and states on the other. The city of Babylon, which is a collection of people, is described as if it were a threatening person.

Although examples like (6) are *similar to personifications*, in our study we have only tagged examples as personifications if the subject is a human being. While the personified meaning is widely attested for *groza*, this meaning is not characteristic of *ugroza*. In our dataset, we have only one relevant attestation of *ugroza*:

(7) Petr javljalsja večnoj **ugrozoj** učastnikam perevorota. (Šiškov 1934)

‘Petr was forever a threat to the participants in the coup.’

In the same way as in (5), we are dealing with a situation where the word *ugroza* is used about a person (the emperor Petr III) who is felt to present a threat.⁶ We therefore observe the same metonymic shift from the action of conveying a threat to the person who is associated with the threat. In this example, *ugroza* may be substituted by *groza* without a change in the meaning. Notice that in (7) *ugroza* combines with a noun in the dative (*ugroza učastnikam*). *Groza*, on the other hand, when used in the personification submeaning typically combines with a genitive noun, e.g., *groza našego dvora* in (5). In our dataset, we have a total of 148 examples with *groza* in the personification submeaning. Of these, 97 involve a noun in the genitive as in (5), while 23 have the preposition *dlja* followed by a genitive noun as in (6). Of

⁶ An anonymous referee comments that *groza* would be infelicitous in example (7), because *groza* requires non-referential NP adjuncts. According to the referee, *groza ljubych zagovorščikov* ‘threat to any conspirators’ is better than *groza učastnikov perevorota* ‘threat to the participants in the coup’. While this seems to be a tendency, the Russian National Corpus does contain counterexamples, suggesting that at least some language users accept *groza* with referential NPs. A case in point is the following example, where a concrete ice hockey team feels threatened by their coach: *Charlamov vytiral slezy, Tret'jak iskrenne veril, što k nim prišla govorjaščaja sobaka, groza sbornoj trener Tarasov počti sjusjukal: “Psina, nu skaži ešče slovečko”*. ‘Charlamov wiped his tears, Tret'jak sincerely believed that a speaking dog had arrived, Tarasov, a threat to the national team, talked to the dog like to a baby: “doggie, say another word”.’ (*Izvestija* 2001)

the remaining 28 examples, which involve miscellaneous constructions, only one involves an accompanying noun in the dative case.

5. Meteorology: from threat to thunderstorm

The primary meaning of *groza* that is mentioned in major dictionaries relates to meteorology: ‘thunderstorm’ (Ušakov 1935-1940, Evgen’eva 1999, and Ožegov and Švedova 2006). This sets Russian apart from many other Slavic languages.⁷ Here is an example from our dataset:

- (8) S večera prošel nebol’šoj dožd’ s **groz**oj. (P.E. Čechov, 1896)
‘Since last night a small rainstorm with thunder passed.’

Comparing the meteorological meaning to the meaning of concrete threats, we suggest that both metaphor and metonymy are relevant. The two relevant domains are interactions between persons on the one hand, and weather on the other. Simply put, a thunderstorm is a kind of weather that is felt to be dangerous and scary – in other words, threatening.⁸

At the same time, we argue that metonymy is relevant. In the previous section about personification, we observed a semantic shift from the action of threatening somebody to the origin of the threat, the person who conveys the threat. In a similar way, a thunderstorm is arguably the origin of the meteorological “threat”, viz. the actual thunder and lightning.

We have no attestations of *ugroza* in the meteorological meaning, and this meaning is also not mentioned for *ugroza* in major dictionaries (Ušakov 1935-1940, Evgen’eva 1999, and Ožegov and Švedova 2006).

6. Generalized uses

In addition to the meanings described in the previous sections, *groza* is attested in a more generalized use:

- (9) Pribežal Bulgarin i govorit, čto nado mnoj sobiraetsja **groza**. (Greč, 1849)
(lit.) ‘Bulgarin came and told me that a threat is emerging over my head.’

We use “generalized” about all examples in our database that do not fall under the three uses described in the previous sections.⁹ In all the “generalized” threats, a state of affairs represents a potential danger. In this sense, the “generalized” uses are more abstract than the types of threat discussed earlier in the article. In example (9), a threat is described as emerging above the person in question, as if it were a thunderstorm. Arguably, we are dealing with a metaphorical extension from the meteorological meaning explored in the previous section. The use of the verb *sobirat’sja* ‘gather, emerge’ in (9) supports the metaphor, since this is a verb that is compatible with thunderstorms.

Here is a more recent example with *groza* in the generalized use:

⁷ For instance, the cognates in Czech (*hrůza*), Slovak (*hrôza*), and Polish (*groza*) are not used in the meteorological sense. For ‘thunderstorm’, Czech uses *bouřka*, Slovak *búrka*, and Polish *burza*. A more detailed investigation of the relevant words across the Slavic languages is beyond the scope of the present study.

⁸ The fact that a meteorological term for bad weather is used metaphorically is not surprising. Other examples include *burja* ‘storm’ and *štor* ‘storm’. However, since these words are not directly relevant for the concept of “threat”, we will not discuss them in the present study.

⁹ Notice that the examples in our study are classified on the basis of the sentence itself in its immediate context. In examples of “generalized threats” like (9), it is possible that the extended context could provide insights about the specific properties of the threat. However, since our study is a quantitative investigation of a large dataset, it was not possible to analyze extended contexts for each individual example.

- (10) Na dvore buševali **grozy** graždanskoj vojny, banditizma, NĚPa. (Šklovskij 1984)
'In the outside world the threats of civil war, racketeering, and the New Economic Policy were raging.'

In this example, the danger of civil war and other social disasters is described metaphorically as a thunderstorm. Note that the verb *buševat'* 'rage, roar' is typically used about storms, thus strengthening the metaphorical connection with the meteorological domain. Both (9) and (10) are examples of generalized uses that involve metaphorical links to the meteorological domain.

While *groza* is well attested in general uses, such uses are even more characteristic of *ugroza*, which is frequently used in examples of the following type:

- (11) Sčitaete li vy NATO voennoj **ugrozoj** dlja Rossii? (Baranec 1999)
'Do you consider NATO a military threat for Russia?'

Our database contains a large number of examples describing a wide range of threats:

- (12) Alëna poka bez soznanija, no **ugrozy** žizni net. (Antipin 2011)
'Alëna is still unconscious, but her condition is not life-threatening.'

Here, a potentially dangerous medical condition is referred to as a threat. In such examples, the meaning of *ugroza* is very close to that of *opasnost'* 'danger'. This is reflected in dictionaries, where our "generalized use" is described as *vozmožnaja opasnost'* 'possible danger' (Ožegov and Švedova 2006) or *vozmožnost', opasnost' kakogo-l dejstvija* 'possibility, danger of some action' (Evgen'eva 1999), or *opasnost', vozmožnost' vznikovenija čego-n. neprijatnogo, tjažkogo* 'danger, possibility of the emergence of something unpleasant or difficult'.

It is instructive to compare the examples with *groza* and *ugroza* in generalized uses. As shown in (9) and (10) *groza* is used about metaphorical thunderstorms. This is a typical pattern; in our database, we have numerous examples where *groza* occurs in constructions normally used about thunderstorms, such as the verbs *razrazit'sja* 'break out', *sgustit'sja* 'gather', *predveščat'* 'betoken' and the noun *tuča* 'raincloud'. Similar metaphors are not attested for *ugroza*, which makes sense, since *ugroza* is not used about literal rainstorms either. Thus, within the "generalized" subcategory *groza* and *ugroza* behave differently. What makes it meaningful to use the term "generalized" for both words, however, is the fact that they both occur in contexts where their meaning is close to 'danger', even though the metaphors involved are not the same for the two words.

7. Category network: diachrony and radial category profiling

In the preceding sections, we have identified four submeanings. In Figure 1, the submeanings are visualized as a radial category, i.e., a network of subcategories (submeanings) structured around a central member, the prototype (Lakoff 1987). We suggest that "concrete threat" is the prototype of the category, since this is the member that all other members bear a relation to (Lakoff 1987: 379, Langacker 2007: 434).¹⁰ In cognitive linguistics, it has been pointed out that the prototype tends to be a concrete, physical meaning (see, e.g., Guilquin 2006: 180). As

¹⁰ The notion of "prototype" has received a number of slightly different definitions in cognitive linguistics (see, e.g., Rosch 1973 and 1975, Lewandowska-Tomaszczyk 2007, Geeraerts 2006/1989). Detailed discussion of all these definitions is beyond the scope of the present study.

mentioned, we have selected “concrete threat” as the prototype, although the meteorological submeaning can also be described as “physical” insofar as a thunderstorm is a tangible experience. However, the meteorological submeaning bears fewer relations to the remaining submeanings. It is also worth mentioning that diachronically the meteorological submeaning is a later development from the “concrete threat”. The meteorological submeaning is not attested across Slavic but is known in East Slavic as early as in *The Primary Chronicle* (Sreznevskij 1893).

In Figure 1, we have placed the prototypical subcategory in the middle. The prototype is related to the other submeanings through metaphor and/or metonymy, as argued in the previous sections. The relationships are represented as dashed lines in the figure. We have also included a relation between “meteorology” and “generalized”, since as argued in section 6, we have examples where a generalized threat is portrayed as a metaphorical thunderstorm. We do not exclude the possibility of direct links between “person” and “meteorology” and between “person” and “generalized”. However, our dataset does not contain examples that would motivate such relations, and we have therefore not connected these subcategories by means of dashed lines in the figure.

In addition to showing the subcategories and the relations among them, Figure 1 also visualizes the distribution of *groza* and *ugroza* across the four submeanings. *Groza* is represented as horizontal lines, while vertical lines are used for the submeanings where *ugroza* is attested. As shown, *groza* is found in all four submeanings, whereas *ugroza* is attested in three of them.

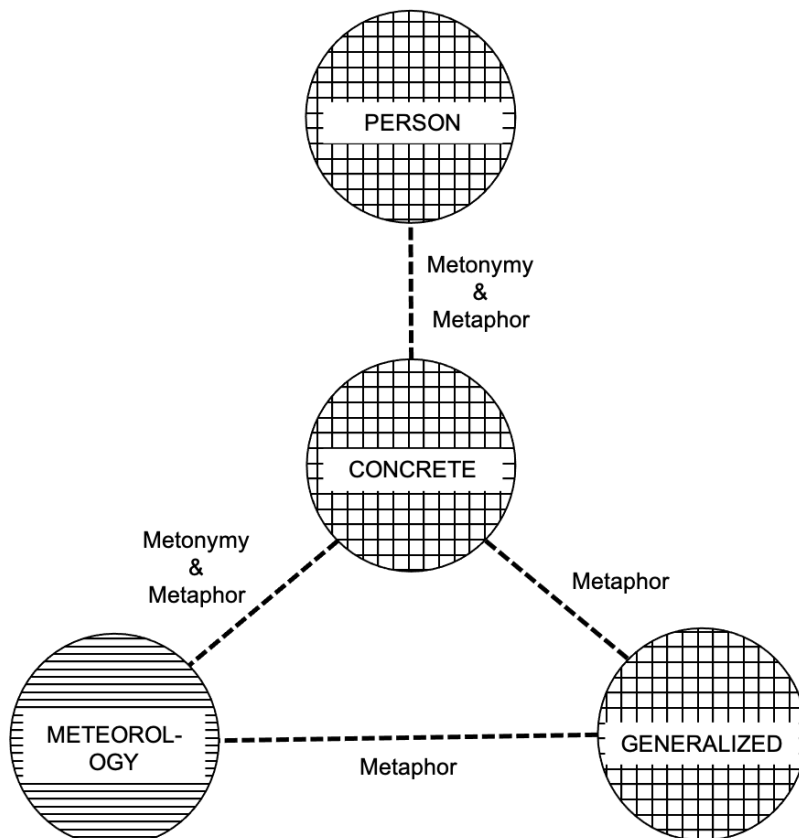


Figure 1: Radial category network for *groza* (horizontal lines) and *ugroza* (vertical lines)

Although Figure 1 offers a good representation of the distribution of the two Russian words for ‘threat’, the figure does not reflect the fact that the two words have different type frequencies for each subcategory. In the “person” subcategory, for instance, we have marked

both *groza* and *ugroza* as possible, although as mentioned in section 4, we have only one single attestation of *ugroza* for this subcategory in our database.

The type frequencies of the two words across the four subcategories have changed over time, as shown in Table 1 and Figure 2.¹¹ For both words, the concrete submeaning gradually reduces its proportion of examples. However, the decline is more pronounced for *groza*, where the concrete submeaning becomes marginalized already in the 1800s and is nearly absent from the second half of the twentieth century. For *groza*, meteorology is relatively stable as a dominant submeaning, while personification is stable on a lower level. *Ugroza* is dominated by the concrete submeaning in the beginning, but gradually includes more examples of the generalized submeaning. Stated differently, *groza* establishes itself in the meteorology and personification submeanings that are not characteristic of *ugroza*, whereas *ugroza* becomes the word for concrete and generalized threats. Notably, in the twenty-first century generalized uses account for approximately 70% of all examples with *ugroza*. In the twenty-first century, the two words have almost reached complementary distribution. The only submeaning where both words are used in our time is generalized, but even here *ugroza* is more frequent than *groza*.

	Concrete		Personification		Meteorology		Generalized	
	<i>groza</i>	<i>ugroza</i>	<i>groza</i>	<i>ugroza</i>	<i>groza</i>	<i>ugroza</i>	<i>groza</i>	<i>ugroza</i>
1800_1849	27	434	39	0	258	0	137	10
1850_1899	76	1424	86	0	900	0	334	67
1900_1949	64	2392	177	8	2228	0	531	1446
1950_1999	8	843	308	0	1578	0	650	2541
2000_2020	3	414	257	0	914	0	857	5057

Table 1: Distribution of *groza* and *ugroza* for four submeanings over time (extrapolated numbers from 1850)

¹¹ In order to facilitate comparison across time periods, the raw numbers from our database were extrapolated in the following way. Our random samples consist of approximately 500 examples for each word in each time period. We have compared the number of examples from the samples to the total number of attestations of *groza* and *ugroza* in each period and estimated the number of relevant examples in the whole corpus for that period. This extrapolation was carried out for all periods after 1850. For the earlier periods, we analyzed all attestations of *groza* and *ugroza*. The basis for the extrapolation can be seen from the following table:

	<i>groza</i>		<i>ugroza</i>	
	TotalRNC	Our dataset (% from total)	TotalRNC	Our dataset (% from total)
1700_1749	5	5 (100%)	3	3 (100%)
1750_1799	53	53 (100%)	86	86 (100%)
1800_1849	461	461 (100%)	444	444 (100%)
1850_1899	1658	480 (29%)	1510	492 (33%)
1900_1949	3180	453 (14%)	3861	499 (13%)
1950_1999	2090	484 (23%)	4212	499 (12%)
2000_2020	1155	399 (35%)	6849	499 (7%)

We have used this extrapolation method throughout the article. Since the numbers for 1700-1799 are low and do not provide enough data for comparison, they are not included in the tables and figures elsewhere in this article.

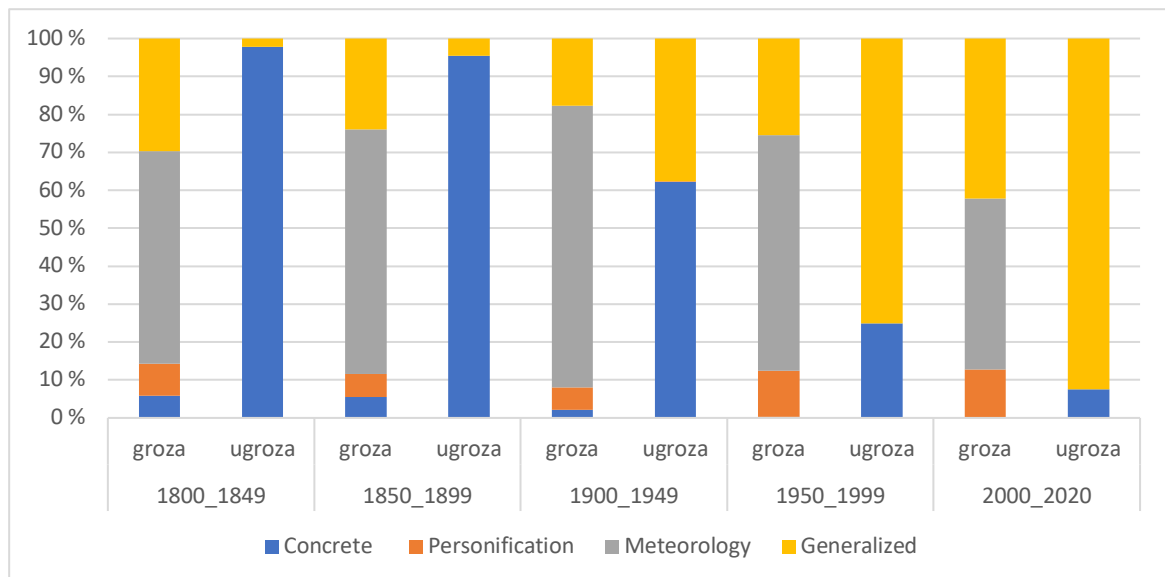


Figure 2: Distribution of *groza* and *ugroza* for four submeanings over time (extrapolated numbers from 1850)

Figure 3 offers a summary of the distribution of *groza* and *ugroza* in the twenty-first century. In the left portion of the figure, we have represented the current network for *groza*, while *ugroza* is visualized to the right. As shown, *ugroza* is only attested in three subcategories. The shading shows the degree to which a certain subcategory is attested for the relevant words. The darker the shading, the stronger the subcategory is in present-day Russian. For *groza*, meteorology represents the center of gravity, while person is also well attested. The center of gravity for *ugroza* is the generalized submeaning, but concrete is also well attested. Taken together, the two radial category networks in Figure 3 illustrate the nearly complementary distribution in present-day Russian. These representations are inspired by Endresen et al. (2011), who analyze the relative distribution of the two aspectual prefixes *vy-* and *iz-* in terms of what they call “radial category profiling”.

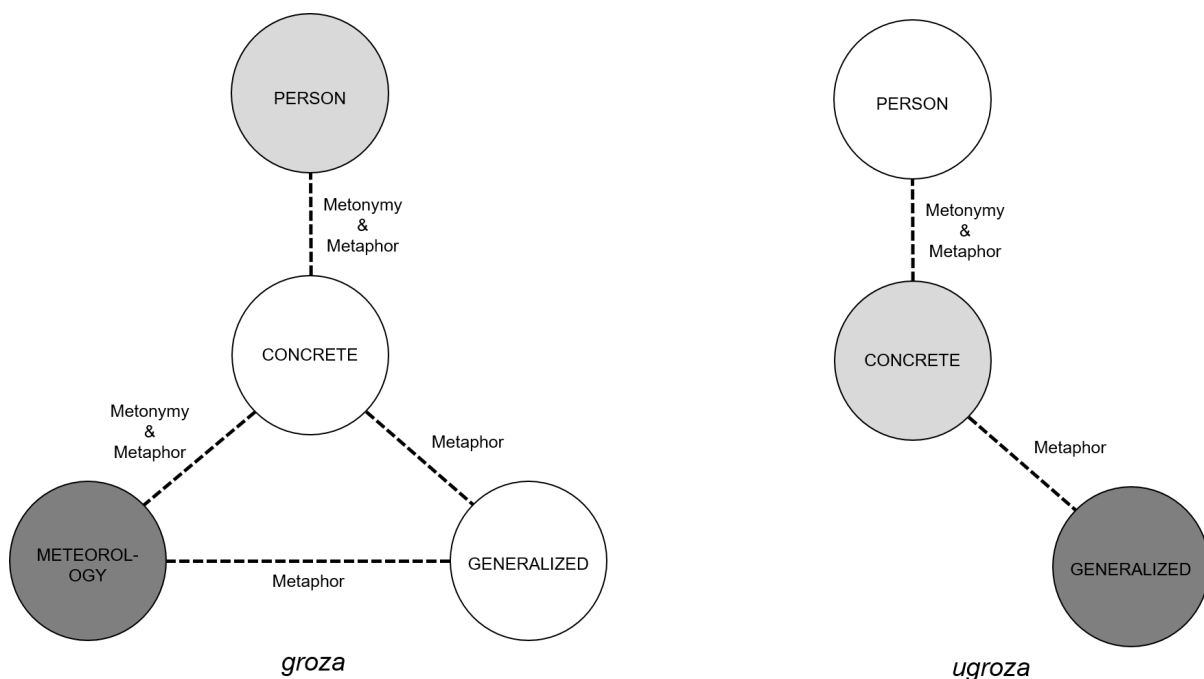


Figure 3: Radial category networks for *groza* (left) and *ugroza* (right) in the twenty-first century. The darkness of the shading reflects the degree to which a certain subcategory is attested for the relevant words.

8. Generalized uses: origins of threat and affected entities

In the following, we will focus on *ugroza* in the generalized submeaning, which, as we have seen, is a prominent subcategory in present-day Russian. This is also the most complex submeaning, where we observe a wide variety of origins of threats and affected entities. We use “origin” about the entity that presents the threat, while “affected entity” is used about the target of the threat. Consider the following example:

- (13) Elena Nikolaevna, neredko prichoditsja slyšat' razgovory specialistov nasčet rannego obrazovanija, kotoroe jakoby predstavljaet **ugrozu** dlja neokrepšego detskogo organizma. (*Professional* 1998)

‘Elena Nikolaevna, one often has to listen to conversations of specialists about early education, which allegedly presents a threat to immature children’s organism.’

Here, the origin of the threat is early education, while the affected entity is the sensitive organism of a child. In our dataset, origins and affected entities come from a number of domains. In the next example, volcanic activity is the origin and people the affected entity:

- (14) Odnako pri vsëm ètom nel’zja zabylvat’: vulkany, kak i prežde, opasny ljudjam. Vo mnogich rajonach zemnogo šara ljudi postojanno živut pod **ugrozoj** podzemnoj katastrofy. (*Mezencev* 1991)

‘However, in all of this we should still not forget this: volcanos, as always, are dangerous to people. In many areas of the globe people live under the constant threat of a subterranean disaster.’

For the analysis of our dataset, we distinguish between 15 different types of origin, as shown in Table 2. The table illustrates that threats are heterogeneous. They range from individuals (“persons”) as in (15) to what we refer to as “geopolitical units” (cities, regions, countries) as in (16).

- (15) Sudom ustanovleno, čto – real’noj **ugrozy** obšč’estvennoj bezopasnosti so storony podsudimych ne bylo.

‘The court has ruled that the accused posed no real threat to civil security.’

- (16) Vtoroj put’ realen, esli vozniknet **ugroza** nezavisimosti Èstonii so storony Rossii.

‘The second alternative is realistic in case of a threat for Estonia’s independence from Russia.’

The origins in (15-16) are concrete entities of different sizes, but events of various kinds also present threats (e.g., *zabastovka* ‘strike’, *zakrytie* ‘closing (about an institution)’). We single out “conflict” (e.g., *nacional’naja rozn* ‘ethnic conflict’) as a particular subcategory of events. “Military forces” (e.g., *vojsko* ‘troops’, *krasnye* ‘red army’) are entities, while “military operations” (e.g. *šturm* ‘attack’, *voennaja intervencija* ‘military intervention’) are events. Many origins of threats concern societal challenges: “economic conditions” (e.g. *kapitalizm* ‘capitalism’, *sokrašč’enie federal’nych garantij* ‘reduction of federal guarantees’), “political forces” (e.g., *oppozicija* ‘opposition’, *bol’ševiki* ‘bolsheviks’) and “terrorism and crime” (e.g. *korrupcija* ‘corruption’, *oborot narkotikov* ‘drug trade’, *terrorizm* ‘terrorism’). The category “health problems and death” sometimes relate to individuals, but may also be a societal challenge (as in the case of a pandemic). Our category “human-induced issue” encompasses

things like *rasprostranenie jadernogo oružija* ‘spread of nuclear weapons’ and *pesticidy* ‘poisonous chemicals’ (used in agriculture), while *opolzni* ‘landslides’ and *zamorozki* ‘freezing weather’ are examples of “natural forces” in our classification. In addition, we have included a category “miscellaneous”.

	1800–1849	1850–1899	1900–1949	1950–1999	2000–2020
Conflict			8	8	71
Economic condition			31		128
Emotional condition		3	23	8	29
Eradication			8	50	86
Event		12	92	283	557
Geopolitical unit		3		69	100
Health problem and death	1	15	23	83	128
Human-induced issue				67	157
Military force	2		85	42	57
Military operation		3	230	158	214
Miscellaneous	5	24	15	75	143
Natural force	1			67	100
People		3	54	17	57
Political force		3	54	17	57
Terrorism and crime				8	257
Total	10	63	592	1008	2228

Table 2: Distribution of origins of threats over time for ugroza (extrapolated numbers from 1850)

A number of different classifications of the origins in our material are conceivable, but the classification in Table 2 is sufficient to illustrate the wide variety of entities and events that can be regarded as threats. Clearly, “threat” is a very heterogeneous concept. In addition, the classification enables us to highlight differences over time. Although we have few examples for the two first periods (1800–1849 and 1850–1899), the visualization in Figure 4 shows that the origins fall into more clearly defined categories over time; while “miscellaneous” covers a large proportion of examples in the 19th century, this category becomes smaller in the 20th and 21st centuries. Among the categories that are absent in the earlier periods but become important later are “conflict”, “terrorism and crime” and “human-induced issues”. Unsurprisingly, the category “military operation” is most important in the first part of the 20th century, because of the revolution and following civil war and the two world wars.

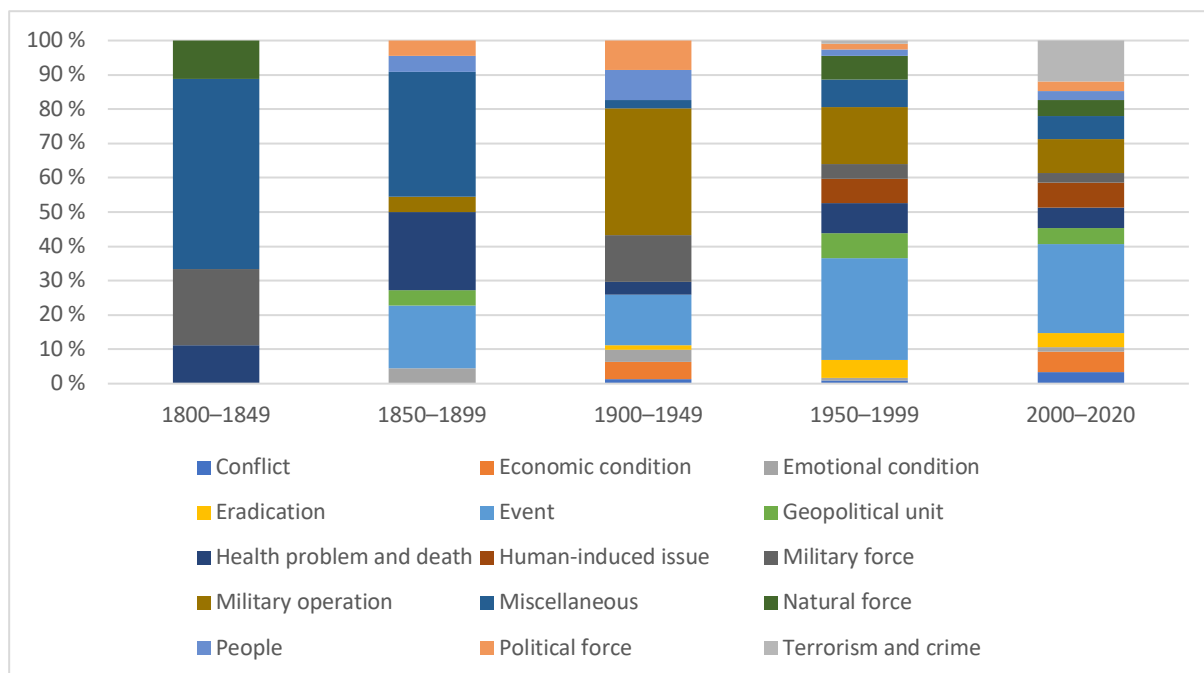


Figure 4: Distribution of origins of threats over time (extrapolated numbers from 1850)

We now turn to affected entities, which the relevant threats are directed towards. As shown in Table 3, we distinguish between thirteen categories, which to some extent overlap with the categories for origins of threat discussed above. For origins, we suggested the category “health problem and death”. The corresponding category for affected entities is “health and life”, since it is life and not death that is threatened. Likewise, instead of “natural force”, which can be the origin of a threat, we use “nature” as the category for affected entities, since many aspects of nature are vulnerable and can be under threat. Here is an example where the nature at Lake Baikal is threatened by a human-induced issue (paper production):

- (17) Sleduet otmetit', čto v našej pečati pojavljalis' zajavlenija [...] ob **ugroze** Bajkalu v svjazi s rabotoj raspoložennogo na ego beregu celljuloznogo zavoda. (Fedorov 1971)
 'It is worth pointing out that in our press there have been appearing claims concerning the threat to Lake Baikal coming from the lakeside papermill.'

Other categories that are only relevant for affected entities are “institution” (e.g., *russskij teatr* ‘Russian theatre’, *kompanija* ‘company’), “life condition” (e.g., *svoboda i blagodat* ‘freedom and bliss’, *blagopolučie ličnosti i sem’ji* ‘wellbeing of the personality and the family’), “political and societal system” (e.g., *demokratija* ‘democracy’, *režim* ‘regime’, *zapadnye politiki* ‘western politicians’) and “world” (e.g., *mir* ‘world’, *čelovečestvo* ‘humanity’).

	1800–1849	1850–1899	1900–1949	1950–1999	2000–2020
Economic condition	1		15		100
Emotional condition			8		14
Event				16	43
Geopolitical unit	1	9	146	250	557
Health and life				16	214
Institution				8	114
Life conditions			23	16	100

Military force			146	58	57
Miscellaneous		3	46	75	228
Nature				50	86
People	8	51	131	358	300
Political and societal system			69	75	243
World			8	83	171
Total	10	63	592	1008	2228

Table 3: Distribution of entities affected by threats over time (extrapolated numbers from 1850)

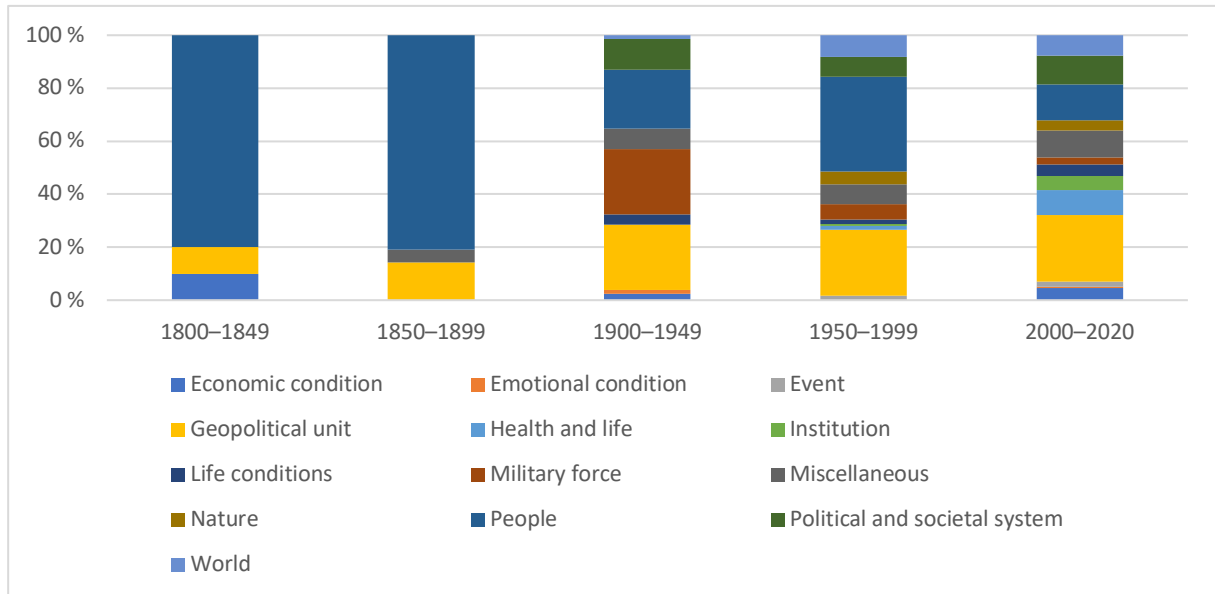


Figure 5: Distribution of entities affected by threats over time (extrapolated numbers from 1850)

The development for affected entities is similar to that of origins, insofar as the number of categories increase over time and the affected entities fall into more clearly defined categories for the latest periods. In addition, we see a change from small and concrete entities (e.g., individual people) to larger ones:

- (18) Tak zabastovka [...] javilas' **ugrozoj** samomu francuzskomu buržuaznomu političeskemu režimu. (Ignat'ev 1947-1953)
 'This way the strike has presented a threat to the French bourgeois political regime itself.'
- (19) Ja soveršenno ne ubežden v tom, čto Bagdad predstavljajet soboj **ugrozu** miru i neobchodimo načinat' voennye dejstvija. (Soveršenno sekretno 2003)
 'I am not at all convinced that Baghdad represents a threat for the world and that it would be necessary to start military operations.'

In (18), the affected entity is a societal system, while in (19) the entire world is under threat.

9. Constructions and collocations

In order to investigate the combinations of *ugroza* and *groza* with other words, we decided to use *Collocations, Colligations, Corpora* (CoCoCo), an electronic resource that facilitates extraction of collocations, i.e., combinations of words that occur together more frequently than one would expect from their overall corpus frequencies (Kopotev et al. 2015).¹² CoCoCo

¹² CoCoCo is freely available at <https://cococo.cosyco.ru/>.

can be applied to a selection of corpora; we chose the Taiga corpus, a five billion word web corpus that contains enough attestations of *ugroza* and *groza* to make reliable comparison of the two words possible.¹³ We will focus on combinations with nouns, verbs and adjectives immediately preceding or following the words for threats.¹⁴

In CoCoCo, only *ugroza* has collocations involving a postposed noun in the genitive, which expresses the origin of the threat. The full list of postposed genitive nouns in Table 4 shows that most of the words are compatible with “generalized” uses, insofar as they represent natural forces (e.g., *navodnenie* ‘flood’), political forces (e.g., *separatizm* ‘separatism’, *sankcija* ‘sanction’) or terrorism and crime (e.g., *terakt* ‘terrorist attack’, *terror* ‘terror’, *terrorizm* ‘terrorism’). The only word on the list that is likely used for concrete threats is *ubijstvo* ‘murder’. In general, the data in the table lends support to our analysis of *ugroza* as the main word for generalized threats in modern Russian.

<i>napadenie</i> ‘attack’	<i>raspad</i> ‘collapse’	<i>terakt</i> ‘terrorist attack’	<i>vtorzenie</i> ‘invasion’
<i>navodnenie</i> ‘flood’	<i>rasprostranenie</i> ‘spread’	<i>terror</i> ‘terror’	<i>vvedenie</i> ‘introduction’
<i>obrušenje</i> ‘collapse’	<i>razrušenje</i> ‘destruction’	<i>terrorizm</i> ‘terrorism’	<i>vzryv</i> ‘explosion’
<i>podtoplenie</i> ‘flood’	<i>sankcija</i> ‘sanction’	<i>ubijstvo</i> ‘murder’	<i>zatoplenie</i> ‘flood’
<i>primenenie</i> ‘application’	<i>separatizm</i> ‘separatism’	<i>uničtoženie</i> ‘annihilation’	

Table 4: Collocations with *ugroza* and nouns in the genitive

Table 5 provides an overview of collocations with *groza* and an immediately preposed or postposed verb, for which *groza* serves as the grammatical subject. As shown, verbs referring to the sound of thunder are widespread, e.g., *buševat’* ‘roar’, *gremet’* ‘growl’, *gromychat’* ‘growl’, and *utichnut’* ‘quieten’. Another large group is verbs that can be used about the beginning or ending of a thunderstorm, e.g., *načat’sja* ‘begin’, *razrazit’sja* ‘break out’, *zarjadit’* ‘settle in’, *udarit’* ‘hit’, *končit’sja* ‘end’, and *minovat’* ‘blow over’. A number of verbs are also used about thunderstorms approaching and disappearing: *prijti* ‘arrive’, *nadvigat’sja* ‘roll in’, *približat’sja* ‘approach’, *projti* ‘pass’, *ujti* ‘go away’, and *zastat’* ‘take with surprise’. The collocations with these verbs corroborate our finding that ‘thunderstorm’ is the most prominent meaning of *groza*. However, we hasten to add that the verbs in question may also be used metaphorically about generalized threats and dangers. CoCoCo does not provide information about the meanings in which the collocations are used.

<i>buševat’</i> ‘roar’	<i>načat’sja</i> ‘begin’	<i>prjatat’sja</i> ‘hide’	<i>utichnut’</i> ‘quiten’
<i>byt’</i> ‘be’	<i>načinat’sja</i> ‘begin’	<i>projti</i> ‘pass’	<i>uchodit’</i> ‘leave’
<i>gremet’</i> ‘growl’	<i>nadvigat’sja</i> ‘approach’	<i>razrazit’sja</i> ‘break out’	<i>zakončit’sja</i> ‘end’
<i>gromychat’</i> ‘growl’	<i>nagrjanut’</i> ‘break out’	<i>stat’</i> ‘become’	<i>zaprygat’</i> ‘start jumping’
<i>grjanut’</i> ‘burst’	<i>navisnut’</i> ‘hang over’	<i>udarit’</i> ‘hit’	<i>zarjadit’</i> ‘settle in’
<i>končit’sja</i> ‘finish’	<i>približat’sja</i> ‘approach’	<i>ujti</i> ‘leave’	<i>zastat’</i> ‘take with surprise’
<i>minovat’</i> ‘pass’	<i>prijti</i> ‘arrive’		

Table 5: Collocations with *groza* and preposed or postposed verb

The list of verbs that form collocations with *ugroza* in Table 6 lends support to our analysis of *ugroza* as the main word for generalized threats in contemporary Russian, since the list is dominated by generic verbs of existence (e.g., *byt’* ‘be’ and *suščestvovat’* ‘exist’) and coming

¹³ The Taiga corpus is freely available at https://tatianashavrina.github.io/taiga_site/.

¹⁴ Notice that the collocations we describe in this section sometimes involve syntactic constructions that support certain metonymical or metaphorical readings. For instance, the use of *groza/ugroza* as the syntactic subject of verbs of hanging (e.g., *viset’*) supports a metaphorical understanding of a threat as a dangerous object hanging over a person. However, a detailed investigation of the relationship between metaphor and metonymy on the one hand and syntactic constructions on the other is beyond the scope of the present study.

into existence (e.g., *vozniknut* ‘emerge’, *pojavit’sja* ‘appear’). In addition, we notice verbs for hanging (*navisat* ‘hang over’, *navisnut* ‘hang over’, *viset* ‘hang’) that may be used metaphorically about threats. The two verbs *zvučat* ‘sound’ and *podejstvovat* ‘have an effect’ are most likely used about concrete threats.

<i>byt</i> ‘be’	<i>navisnut</i> ‘hang over’	<i>razvjazat</i> ‘release’	<i>voznikat</i> ‘emerge’
<i>ischodit</i> ‘originate’	<i>okazat’sja</i> ‘turn out’	<i>sochranjat’sja</i> ‘remain’	<i>vozniknut</i> ‘emerge’
<i>lišit’sja</i> ‘lose’	<i>pojavit’sja</i> ‘appear’	<i>sozdat’sja</i> ‘emerge’	<i>zaključat’sja</i> ‘consist of’
<i>minovat</i> ‘pass’	<i>podejstvovat</i> ‘take effect’	<i>suščestvovat</i> ‘exist’	<i>zvučat</i> ‘sound’
<i>navisat</i> ‘hang over’	<i>poterjat</i> ‘lose’	<i>viset</i> ‘hang’	

Table 6: Collocations with *ugroza* and preposed or postposed verb

It is worth mentioning that there is some overlap between the verbs in Tables 5 and 6. This applies to verbs of hanging (*navisnut* ‘hang over’), as well as verbs of existence (*byt* ‘be’) and passing (*minovat* ‘pass’). This is not unexpected, since our analysis in section 7 has shown that the radial networks of *ugroza* and *groza* show some overlap.

The lists of collocations with adjectives in Tables 7 and 8 illustrate the different centers of gravity in the radial networks for *ugroza* and *groza*. For *groza*, most adjectives are used about thunderstorms (e.g., *vesennij* ‘spring’, *gromkij* ‘loud’, *letnij* ‘summer’), but the table also contains some that are compatible with generalized threats, such as *vnezapnyj* ‘sudden’, *sil’nyj* ‘strong’, and *vozmožnyj* ‘possible’. We find that *ugroza* collocates with generic adjectives like *javnyj* ‘evident’, *potencial’nyj* ‘potential’, *real’nyj* ‘real’ and *vnešnij* ‘foreign’ that are relevant for generalized threats. In addition, we have the more specific *terrorističeskij* ‘terrorist’ and *smertel’nyj* ‘deadly’.

<i>gromkij</i> ‘loud’	<i>nastojaščij</i> ‘real’	<i>velikij</i> ‘great’
<i>ijul’skij</i> ‘July’	<i>obyčnyj</i> ‘usual’	<i>vesennij</i> ‘spring’
<i>ijun’skij</i> ‘June’	<i>poslednij</i> ‘last’	<i>vešnij</i> ‘spring’
<i>letnij</i> ‘summer’	<i>sil’nyj</i> ‘strong’	<i>vnezapnyj</i> ‘sudden’
<i>ljuboj</i> ‘any’	<i>sil’nejšij</i> ‘strongest’	<i>vozmožnyj</i> ‘possible’
<i>Majskij</i> ‘may’		

Table 7: Collocations with *groza* and preposed or postposed adjective

<i>bol’šoj</i> ‘large’	<i>podobnyj</i> ‘such’	<i>skrytyj</i> ‘concealed’
<i>javnyj</i> ‘distinct’	<i>postojannyj</i> ‘constant’	<i>smertel’nyj</i> ‘deadly’
<i>kakoj-to</i> ‘some’	<i>potencialnyj</i> ‘potential’	<i>terrorističeskij</i> ‘terrorist’
<i>nastojaščij</i> ‘real’	<i>prjamoj</i> ‘direct’	<i>vnešnij</i> ‘foreign’
<i>neposredstvennyj</i> ‘immediate’	<i>real’nyj</i> ‘real’	<i>vtorostepennyj</i> ‘secondary’
<i>ogromnyj</i> ‘huge’	<i>ser’ëznyj</i> ‘serious’	<i>vysokij</i> ‘high’
<i>pervyj</i> ‘first’		

Table 8: Collocations with *ugroza* and preposed or postposed adjective

To summarize, the collocations we have explored in this section lend support to the analysis we have presented in the previous sections. The collocations reveal a certain degree of overlap between *ugroza* and *groza*, but at the same time indicate differences between the two words. The most striking difference is that only *ugroza* has collocations with a postposed noun in the genitive. This, we suggest, shows the similarity between *ugroza*, which is frequently used about generalized threats, and nouns such as *opasnost* ‘danger’ and *risk* ‘risk’. *Opasnost* and *risk* combine with genitive nouns that specify the origin or type of the threatening situation, as in *opasnost’ vzryva* ‘danger of explosion’ and *risk obrušenija* ‘risk of collapsing’.

10. Concluding remarks

Our corpus analysis has demonstrated that the two Russian words for ‘threat’, *groza* and *ugroza*, are used in four different meanings, which we have referred to as (a) “concrete threat”, (b) “personification”, (c) “meteorology”, and (d) “generalized uses”. The four meanings are shown to constitute a radial category network, where the subcategories are interrelated via metaphor and metonymy. While *groza* is attested in all four submeanings, *ugroza* is not used about thunderstorms (meteorology), and it is marginal in the personification subcategory. In this sense, the two words have different centers of gravity in the radial category network.

We have furthermore shown that over time the distribution of the two words has changed. *Ugroza* is taking over more and more, and in particular becomes more widely used in the generalized category. The use of *groza*, on the other hand, becomes more restricted over time, although the word has carved out two niches for itself, namely “meteorology” and “personification”. We also see a clear diachronic development with regard to the origins and entities affected by threats. The origins undergo change from concrete physical threats via military threats to a number of more generalized origins, such as “conflict”, “terrorism and crime” and “human-induced issues”, such as the spread of nuclear weapons and the use of poisonous chemicals in agriculture. For affected entities, we see a diachronic development from concrete persons via communities and states to the entire world that can be subjected to threats in our time.

Additional support for our findings comes from an analysis of collocations, based on the CoCoCo digital resource. The collocations show that *ugroza* and *groza* overlap, but at the same time the collocations emphasize some differences between the two words for threat.

Our study of *ugroza* and *groza* shows that detailed analysis of corpus data may shed new light not only on the semantic differences between near synonyms, but also on their development over time. Combined with concepts like “radial category network” from cognitive linguistics, corpus studies provide valuable tools for diachronic analysis of lexical semantics.

In addition to presenting a comprehensive analysis of the Russian nouns for ‘threat’, the present study illustrates how corpus linguistics can facilitate a deeper understanding of concepts that are characteristic of contemporary media discourse. While the proposed analysis focuses on two nouns, it would be interesting to expand the analysis to morphologically related adjectives and verbs, as well as a more detailed investigation of grammatical constructions. It would also be valuable to carry out similar analyses for other languages, both within and outside the Slavic group. However, these issues will be left for future research.

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