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The many faces of “*možno*” in Russian and across Slavic

Corpus investigation of constructions with the modal *možno*

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Preface

This dissertation is submitted in partial fulfilment of the prerequisites for the degree of *Philosophae Doctor* at UiT The Arctic University of Norway. The research presented in this dissertation was carried out at the Cognitive Linguistics: Empirical Approaches to Russian (CLEAR), UiT The Arctic University of Norway, under the supervision of professor Laura Alexis Janda and professor Tore Nessel.

This dissertation comprises three peer-reviewed articles, which are preceded by a general introduction that interconnects the articles and provides background information and rationale for the research. Article 1 and Article 3 are published, Article 2 is under submission. I am the sole author of all the articles included in the dissertation.

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Abstract

Modality encompasses various dimensions, including semantics, syntax, pragmatics, and discourse. Traditionally, research on modality in a specific language has focused either on examining broad domains, such as possibility or necessity, encompassing all linguistic means that constitute them, or on studying the most grammaticalized modal words. This dissertation explores the properties of the Russian modal word *možno* ‘be possible’ using a combination of cognitive linguistics and Construction Grammar approaches. By integrating this framework, I aim to provide a more comprehensive understanding of the multifaceted nature and interaction of various (extra-)linguistic factors associated with *možno* in Russian.

The dissertation pursues three core objectives: (i) to investigate the semantic, syntactic and pragmatic properties of *možno* in different linguistic contexts synchronically and diachronically, (ii) to present the constructional network, considering interactions of *možno* with other elements within the same construction, and (iii) to offer a contrastive analysis of linguistic strategies for expressing requests in Russian and other Slavic languages.

The thesis consists of three articles and a general introduction. The introduction discusses the results based on previous findings and relevant theories in the light of new corpus data. I also present network of constructions with *možno* as an anchor in Russian in the introductory chapter.

The first article focuses on the ongoing language change, where the Russian impersonal modal word *možno* ‘be possible’ takes a personal clause as its complement instead of the Experiencer in the Dative case and the infinitival clause in a speech act of request. The second article explores how requests are encoded in six Slavic languages, namely, Belarusian, Bulgarian, Czech, Polish, Serbian, and Ukrainian compared to Russian. I present networks of constructions, taking into consideration factors such as modality type (possibility, necessity), information structure, and politeness strategy. The third article aims at clarifying the semantic contribution of the future copula in constructions with *možno*, and at the same time seeks to identify contextual factors that motivate the choice between constructions with and without the future copula.

The findings in the articles have implications for several areas of research, including cognitive approaches to modality, Construction Grammar, and the comparative analysis of constructional patterns in Slavic languages.

Sammendrag

Modalitet omfatter ulike dimensjoner, inkludert semantikk, syntaks, pragmatikk og diskurs. Tradisjonelt har forskning om modalitet i et bestemt språk fokusert enten på å undersøke brede områder, som mulighet eller nødvendighet og de språklige virkemidler som brukes til å uttrykke disse betydningene, eller på å studere de mest grammatikaliserte modale ordene i språket. Denne avhandlingen utforsker egenskapene til det russiske modale ordet *можно* 'mulig' ved hjelp av en kombinasjon av kognitive og konstruksjonsgrammatiske tilnærminger. Ved å integrere disse rammeverkene har jeg som mål å gi en mer omfattende forståelse av den mangefasetterte naturen til *можно* og samspillet mellom ulike (ekstra-)lingvistiske faktorer knyttet til dette modale ordet i russisk.

Avhandlingen forfølger tre hovedmål: (i) å undersøke de semantiske, syntaktiske og pragmatiske egenskapene til *можно* i ulike språklige kontekster synkront og diakront, (ii) å presentere det konstruksjonsnettverk med fokus på samspillet mellom *можно* og andre elementer innenfor samme konstruksjon, og (iii) å presentere en kontrastiv analyse av lingvistiske strategier for å uttrykke forespørsler på russisk og andre slaviske språk.

Avhandlingen består av tre artikler og et innledningskapittel («kappa»). Kappa diskuterer resultatene basert på tidligere funn og relevante teorier i lys av nye korpusdata. I kappa presenterer jeg også nettverket av russiske konstruksjoner med *можно* som «anker».

Den første artikkelen fokuserer på en pågående språkendring i russisk der det upersonlige modale ordet *можно* 'mulig' tar en personlig setning som sitt komplement istedenfor den tradisjonelle konstruksjonen der forespørsler uttrykkes med infinitiv og «logisk subjekt» («Experiencer») i dativ. Den andre artikkelen utforsker hvordan forespørsler uttrykkes på seks slaviske språk, nemlig belarusisk, bulgarsk, tsjekkisk, polsk, serbisk og ukrainsk sammenlignet med russisk. Jeg presenterer et nettverk av konstruksjoner som inkluderer faktorer som modalitetstype (mulighet, nødvendighet), informasjonsstruktur og høflighetsstrategi. Den tredje artikkelen har som mål å avklare det semantiske bidraget til kopula i fremtid i konstruksjoner med *можно*, og samtidig forsøker jeg å identifisere kontekstuelle faktorer som motiverer valget mellom konstruksjoner med og uten kopula.

Funnene i artiklene har implikasjoner for flere forskningsområder, inkludert kognitive tilnærminger til modalitet, konstruksjonsgrammatikk, og den sammenlignende analysen av konstruksjonsmønstre i slaviske språk.

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List of abbreviations

ADV	Adverb
CDAT	Covert Dative
COMP	Comparative
DAT	Dative
FUT	Future
GICR	the General Internet Corpus of Russian
INF	Infinitive
IPFV	Imperfective
NOM	Nominative
PFV	Perfective
PL	Plural
PST	Past
RNC	the Russian National Corpus
SG	Singular
SUBJ	Subjunctive
TAM	Tense-Aspect-Mood
TAME	Tense-Aspect-Mood-Evidentiality
VFIN	Finite verb form

List of articles

Article 1

Zhamaletdinova, E. (2022). The trajectory of the “*Možno ja X?*” construction: variation in speech acts of request in contemporary Russian. *Russian Linguistics*, 46(2), 133-164. DOI: <https://doi.org/10.1007/s11185-022-09265-6>

Article 2

Zhamaletdinova, E. under submission. How to request in Slavic? A corpus-based study of requesting constructions in six Slavic languages.

Article 3

Zhamaletdinova, E. (2023). When Modality and Tense Meet. The Future Marker *budet* ‘will’ in Impersonal Constructions with the Modal Adverb *možno* ‘be possible’, *Scando-Slavica*, 69:2, 200-218, DOI: 10.1080/00806765.2023.2271900

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Note on transliteration and glosses

In the Introductory Chapter, Article 1 and Article 2, examples from Slavic languages written in the Cyrillic script, namely Russian, Belarusian and Ukrainian, are transliterated in accordance with scientific (“scholarly”) transliteration system. In Article 3, transliteration follows the guidelines provided by the *Scando-Slavica* journal.

Chapter 1 General introduction

This is an article-based dissertation that focuses on the exploration of constructions involving the Russian modal word *можно* ‘be possible’. There are two parts of the dissertation. The first part is the introductory chapter, that outlines the theoretical groundwork, research aims, objectives, and methods I used. The second part consists of three articles: two of them are published in the peer-reviewed journals, and the third article is under submission. It is worth emphasizing at the outset that the dissertation is not a single narrative but a collection of interconnected research topics. The overarching theme of this dissertation is variation in the use of constructions with the modal word *можно* as an anchor in Russian. There is a necessary overlap and repetition of some parts, particularly in the introductory chapter, as this enables me to establish the foundation for each research area and to introduce my research to the audience of each article and to the audience of this dissertation.

The aim of this project is twofold: first, to explore variation across construction types sharing the same fixed element (anchor), namely, the modal word *можно*, and second, to examine microvariation of a specific construction type, namely, constructions used for making requests, across Slavic languages. To address these aims, four research questions were formulated:

Q1: How diverse are constructions with the modal word *можно* as an anchor element? This question focuses on exploring semantic and syntactic diversity in constructions with *можно*.

Q2: How does a cognitive and constructionist approach to modal words contribute to unraveling the inherent multiple meanings of modal words, i.e. polysemy?

Q3: Is the construction a suitable unit for cross-linguistic comparison, i.e., does the comparison of constructions yield meaningful results in the broader context of cross-linguistic comparison?

The fourth research question emerged in the course of my work on the dissertation work, and pertains to methodology:

Q4: What type of corpus data can offer comprehensive insights into phenomena related to research on spoken discourse?

These research questions are addressed in three articles and the Introductory chapter as follows:

Question number	Addressed by
Q1	Article 1, Chapter 3
Q2	Article 3, Chapter 3, Chapter 4
Q3	Article 2, Chapter 5
Q4	Article 2, Chapter 5

Altogether, this study discusses questions about the appropriate level of granularity essential for investigating constructions. Through the examination of constructions with *možno* as an anchor from various perspectives within Russian, and a comparative analysis of requests across Slavic languages, the research reflects on the optimal level of detail necessary for a comprehensive understanding of the concept of construction.

The introductory chapter is structured as follows: Chapter 2 sets the stage for the analysis by introducing the fundamental concepts of cognitive linguistics and Construction Grammar. Following this introduction, the chapter proceeds to review various approaches to modality and the fundamental concepts that are relevant to this study. Chapter 3 presents a corpus-based study of *možno*, offering insights into its contemporary usage and presents a network of constructions with *možno*. Chapter 4 begins by illustrating how construction types are visualized using Langacker's schema of time and potency. I then delve into the relationship between tense and mood in modal constructions with and without a future copula, specifically focusing on the application of the No Synonymy (No Equivalence) principle to my data. In Chapter 5, I discuss how requests are expressed in six Slavic languages, namely, Belarusian, Ukrainian, Serbian, Bulgarian, Czech, and Polish, by examining translation equivalents of the Russian conventionally indirect request constructions. Chapter 6 provides the rationale and methodology employed in the thesis. In Chapter 7, I summarize the content of the three articles and elaborate on my research contribution. Finally, in Chapter 8 I summarize the key findings, and outline potential avenues for future research.

Chapter 2 Theoretical groundwork

2.1 Theoretical standpoint: Cognitive Grammar and Construction Grammar

The research questions in this dissertation revolve around topics related to the polysemy of the modal word *možno* ‘be possible’, language variation, diachronic change, interaction with neighboring categories, and comparison of conventionally indirect requests with *možno* with constructions encoding the same meaning in other Slavic languages. None of these questions could have been addressed by looking at modal *možno* in isolation, i.e., without consideration of a wider context that includes construction types, how interlocutors perceive and assess the situation they are talking about, and other pragmatic factors. The theoretical framework adopted in this dissertation is rooted in cognitive linguistics and Construction Grammar approaches to language (Langacker 1987, 1999, 2008; Goldberg 1995, 2006; Croft 2001). There are several schools of Construction Grammar, such as Cognitive Construction Grammar (Goldberg 1995, 2006; Boas 2013), Berkley Construction Grammar (Fillmore and Kay 1993; Fillmore 2013), Sign-Based Construction Grammar (Sag 2010, 2012; Michaelis 2013); Fluid Construction Grammar (Steels 2013) etc., which share the fundamental principles of cognitive grammar, while they vary in methodology and analysis. I will not elaborate on the differences between these approaches¹ in this dissertation. Henceforth, I will use the approach proposed by Goldberg (1995; 2006).

Following Goldberg’s (2006: 18) claim that language is “constructions all the way down”, I primarily examine the properties of constructions with the modal *možno* as an anchor word (fixed element) in the Russian language, as in example (1)².

REQUEST

- (1) *Bella vzjala podarok, krepko prižala k sebe i sprosila: – Pap, možno ja otkroju posle vystupenija? — Xorošo, milaja, èto že tvoj podarok, (...).*
‘Bella took the present, hugged it tightly, and asked: – Dad, can I open it after the performance? – Sure, dear, it is a gift for you, (...).’
[A. Romašin. *Žizn’ ne večna // «Dal’nij Vostok»*. 2019]

A construction is defined as a “learned pairing [of] form with semantic meaning or discourse function including morphemes or words, idioms, partially lexically filled and fully general phrase patterns” (Goldberg 2006: 5). Constructions can be encoded and retained in cognitive processing even if they exhibit predictability and regularity, and “patterns are also stored if they are sufficiently frequent, even when they are fully regular instances of other constructions and thus predictable” (Goldberg 2006: 64).

¹ The most up-to-date overview of approaches to Construction Grammar can be found in Ungerer and Hartmann (2023).

² All the numbered examples in the introductory chapter are taken from the Russian National Corpus (RNC, ruscorpora.ru). Cyrillic is transliterated according to the scientific (“scholarly”) system. English translational equivalents aim to resemble the original utterance both structurally and semantically as closely as possible, sometimes at the expense of literary quality. Examples are followed by the metadata about the source of examples in square brackets.

Examples (2) and (3) demonstrate two other constructions in which *možno* is used as an anchor word. The construction *možno* + INF in (2) describes a circus as a place where people can have positive, uplifting experiences. That is, external circumstances –in this case, being at the circus rather than waiting in line at the airport– create the possibility of experiencing pleasure and joy. At the same time, the construction *kak* + *možno* + ADV.COMP in (3) describes to what extent someone’s posture must be straight. More precisely, in (3) the speaker wants the hearer to maintain a straight posture to the maximum extent that is feasible in the given situation. The lexical meaning of *možno* is present to some degree in both constructions; however, it is much less pronounced in example (3), in which the construction *kak* + *možno* + ADV.COMP, in fact, functions as a superlative form of the quality named in the utterance.

EXTERNAL POSSIBILITY

- (2) *Cirk — èto zdorovo, èto nailučšee mesto, gde možno polučit’ pozitivnyj zarjad!*
 ‘The circus is great, it is the best place where it is possible to get a positive boost!’

[Forum: Poxod v cirk. 2010]

INTENSITY

- (3) *Starajsja deržat’ korpus kak možno prjamee.*
 ‘Try to keep your body as straight as possible.’

[Potjanemsja vlast’! // «Daša». 2004]

Both construction and cognitive grammar approaches are usage-based and share the assumption that cognitive processes (basic cognitive abilities), conceptual structures and embodied experiences play a crucial role in shaping language. The symbolic nature of grammar predetermines that every utterance has a content, i.e., lexical content, and a particular construal, i.e., how individuals mentally structure and interpret their experience, as described by Langacker (1999). All utterances in real language are connected to the context in which they are used, or “grounded”, meaning that there is an indication of the speech event, its participants (speaker and hearer), their interaction, and the immediate circumstances such as time and place (Langacker 2008).

Grounding is subjectively construed. Nominal grounding directs the interlocutor’s attention to the discourse referent by use of, for example, demonstrative pronouns such as *ètot* and *èta* ‘this’, *tot* and *ta* ‘that’. Clausal grounding is about how the speaker perceives reality at the moment of speech. In other words, grounding is a way to describe how things and actions denoted by the lexemes in an utterance relate to the speech situation. For English, Langacker (2008) distinguishes tense and modals as the core grounding elements. In this dissertation Russian modals, in particular constructions with the modal *možno* ‘be possible’, are considered to be grounding elements.

In example (4) *požalujsta, možno, ja, on, vy* and *podarit’* are lexical units. The grounding elements involve the use of the perfective form *podarju* ‘I will give’ which locates the situation of giving a gift in the non-past (present or immediate future), *on*

‘he’ in the Accusative indicates what will be given as a present, dative of *vy* ‘you’ indicates the potential recipient, and the interrogative structure together with the modal word *možno* ‘be possible’ indicates the future-oriented possibility of carrying out an action. *Požalujsta* serves as a politeness marker, indicating that the interlocutors most likely differ in social status with a low level of intimacy or friendship. However, this division of labor between elements is rather arbitrary. *Podarju*, for instance, indicates not only the temporal location of the situation but also specifies the Agent as the first-person singular, i.e., the speaker or *ja*. *Možno* as well indicates temporal and modal meanings, and additionally signals that this is a polite request. Altogether the expression means that the speaker is politely requesting permission to give some object as a present to their interlocutor, or that the speaker exerts some kind of force tending toward the occurrence of giving a present.

(4) *Požalujsta, možno ja ego vam podarju?*

‘Please, may I give it to you?’

[V. Godovanec. Miniatjury // «Dal’nij Vostok». 2019]

Adopting the construction as the primary unit of analysis fosters a more flexible perspective on the meaning conveyed by utterances and gives a wholistic account rather than focusing on questions of redundancy that are evoked when the semantic properties of each element are examined in isolation.

An in-depth systematic analysis of constructions with *možno* in Russian, presented in Chapter 3, Article 1, and Article 3, offers insights into the modality domain and its neighboring semantic categories in the Russian language. Article 2 addresses the question of microvariation in requests across Slavic languages, demonstrating that closely related languages employ different strategies for encoding pragmatically similar situations.

2.2 Modality and neighboring categories

2.2.1 Modality across various approaches

Modality is a complex notion. Given the extensive body of literature available on the topic of modality, this dissertation does not aim to provide an exhaustive overview of modality, or an overview of all existing terminology related to modality. Instead, in this section, I will reference fundamental works used as a basis for the analysis presented within this study, and I will briefly outline how my findings relate to and extend the current understanding of modality. I will also introduce and explain the terms that are used in this study.

A difficulty with the term “modality” and other terms that belong to the semantic domain of modality is that quite often linguists use the same term with different meanings or apply different labels to the same concept. It is challenging to establish clear boundaries between modality and closely related domains of tense, aspect, and

evidentiality. Moreover, modal markers are often polysemous. Nuyts (2016: 32) proposes a narrow definition of modality as “one semantic subfield of the wider domain of qualificational categories, which stands next to domains such as time and aspect.” By “qualificational categories” Nuyts (2016:32) refers to the semantic domain that includes time, aspect, types of modality, etc. In this dissertation, the use of the term modality is narrower and treats necessity and possibility as paradigmatic variants of modality’s semantic zone following the framework proposed by van der Auwera and Plungian (1998).

Each utterance represents our interpretation of the world around us. Although speakers may believe their statements to be true and objective, all statements are to some extent subjective and may not hold the same truth across interlocutors. Something is true relative to beliefs, knowledge and/or experience. *Možno* is a modal word that expresses possibility, consequently constructions with *možno* primarily express modal meanings of possibility as in (5).

EXTERNAL POSSIBILITY

- (5) — *Vot ty vse vremja igraeš’, no ved’ komp’juter ne tol’ko dlja ètogo, pravda?*
 — *Nu, — skazal on ostorožno. — Na nem možno pisat’, sčitat’, risovat’...*
 ‘You are always playing, but a computer is not just for that, right? – Well, – he said cautiously. – With it you can write, calculate, draw...’
 [E. Pavlova. *Vmeste my ètu propast’ odoleem!* // «Daša». 2004]

The concepts of modality and mood³ have been extensively studied by numerous linguists for a long time: from Greek and Latin antiquity to the present, see van der Auwera and Aguilar (2016) for an overview. I am going to take into account only the most recent studies starting from Palmer (1986). However, even within this narrower time frame there is vast literature on the subject.

To study constructions that express modal meanings, one must establish limits within the area of focus. There are several approaches to doing so. One way is to align the research with established frameworks, such as the generative/formal syntactic approach (for an overview see Høye (2005), and Axel-Tober and Gergel (2016)); the cognitive and construction approach (for an overview see Nuyts (2006); Mortelmans (2010) and Boogaart and Fortuin (2016)); the functional approach (for an overview see Aijmer (2016)), and the typological approach (for an overview see de Haan (2006)). As mentioned above, I adopt the cognitive and construction approach to modality, however there are differences between scholars even within this approach. I will elaborate on these differences in Section 2.3.2.

In terms of the form-meaning relationship, we can recognize two groups of researchers. Some researchers begin by studying overtly marked modality, whether it involves mood, evidential affixes, or constructions with modal words, e.g., Perkins (1983), Sweetser (1982) *inter alia*. Others start by defining the conceptual domain of

³ The notion of mood and its relation to modality is discussed in Section 2.2.2. Modality and neighboring categories.

modality and then delve into the elements which constitute this domain, see Bondarko (1990), Bybee et al. (1994), and Padučeva (2016). However, it is difficult not to speculate that the initial organization of the conceptual domain is based on the linguistic inventory for modality in the language (or languages) upon which a given linguist bases their research. It should be noted that there is no hard line between these two approaches, and in the most recent studies language data is often intertwined with general theoretical postulates. Nevertheless, both approaches yield equally valuable outcomes, albeit serving different purposes.

This dissertation belongs to the first group. I adopt a form to meaning analysis: the analysis of linguistic data is presented in three separate articles and in Chapter 3, whereas the theoretical assumptions and generalizations drawn from this analysis are formulated in the introductory chapter.

An overview of how the modality domain is structured in the works of various linguists can be frequently found in studies of modal meanings. Modality has been investigated across the parameters of space and time:

ACROSS SPACE

- Language-specific studies of modality and mood (e.g., English by Lyons (1977); Sweetser (1982); Coates (1983); Perkins (1983); Depraetere and Reed (2006)), Russian by Švedova et al. (1980); Bondarko (1990) and Padučeva (2016) *inter alia*.)
- typological studies of modality and mood (Palmer (1986, 2001); Hengeveld (2004); Bybee et al. (1994); van der Auwera and Plungian (1998); typological within Slavic languages (Russian, Polish, Serbian/Croatian and Old Church Slavonic) by Hansen (2001); Besters-Diligers et al. (2009)).

ACROSS TIME

- diachronic studies, e.g., Hansen (2004), Traugott (2011).

My research embraces both dimensions. In Chapter 3, Article 1 and Article 3, I explore the diachronic and synchronic properties of constructions with *možno* in Russian language, whereas I compare request formula across Slavic languages using requests with Russian *možno* as a filter in Article 2.

Methodologically studies of modality are based on introspection combined with elicitation of certain examples or examples from literary works and grammars, e.g., Palmer (1986, 2001); Bondarko (1990) or corpus-based, e.g., Coates (1983); Padučeva (2016). I follow the latter group, analyzing data retrieved from several corpora; for more information on methodology see Chapter 6.

2.2.2 Modality and neighboring categories

Mood and modality are terms that often go hand in hand. In this dissertation, following the distinction made in Bybee and Fleischman (1995: 2): I refer to mood as a “formally grammaticalized category of the verb which has a modal function” and to

modality as a semantic domain that encompasses, but is not limited to possibility, necessity, and epistemic meanings.

Russian has both mood and modality systems. The subjunctive mood, which is often used to express hypothetical or non-real situations, is usually formed by the indicative past form of the verb combined with the particle *b(y)* ‘whether’. Modal elements in Russian can combine with constructions that express subjunctive mood, as in example (6). *Možno* is a modal word that expresses the possibility of performing an action, and past indicative *bylo* together with the particle *by* ‘whether’ are subjunctive markers. The resultant semantics is ‘it could have been possible to tell’.

(6) *Dolgo možno bylo by rasskazyvat’ o poxoždenijax Nesčastnoj Rozy. No na ètom poka vse.*

One could go on for a long time about the misadventures of Unfortunate Rose.
But that is all for now.

[V. Karpov, T. Meščerjakova. Ob avtomatizacii netvorčeskix literaturnyx processov // «Informacionnye texnologii». 2004]

While mood has been often associated with the opposition of realis and irrealis, the relationship between mood and (ir)realis is far more intricate due to the ambiguity of the latter. Mithun (1999: 173) states that “The realis portrays situations as actualized, as having occurred or actually occurring, knowable through direct perception. The irrealis portrays situations as purely within the realm of thought, knowable only through imagination.”

On the one hand, the (ir)realis distinction is widely used to describe grammatical systems of languages where realis/irrealis is grammatically marked, e.g., the Papuan language Amele (Roberts 1990: 371-375). On the other hand, Bybee et al. (1994) find the use of realis/irrealis as a universal semantic notion problematic. By consistently applying the concept of (ir)reality, for instance, the negative imperative should be considered belonging to realis, while the positive imperative belongs to irrealis, which contradicts to the traditional definition of mood. De Haan (2012) also points out that the interpretation of realis and irrealis varies significantly from study to study.

According to Palmer (2001) the opposition of realis and irrealis is an integral part of the system of mood. The use of the terms realis and irrealis aligns with Indicative and Subjunctive mood. Utterances without modal words are considered realis modality, while utterances with modal words are considered irrealis. Palmer (2001) points out that there is no clear boundary between mood and modality, since languages can exhibit characteristics of both.

In this dissertation, I do not use the terms realis/irrealis due to their inherent ambiguity. Instead, I use the notion of mood as manifested by the opposition of Subjunctive and Indicative.

Modality often intersects with various concepts, including politeness, evidentiality, volition, and desire. These semantic nuances are seldom expressed exclusively through constructions involving modal expressions. Other elements, such as the illocutionary type of the utterance (question, statement, exclamation), word order, interactions with other linguistic domains like tense and aspect, as well as intonation and gestures, also contribute to shaping the resulting semantics. The illustration of how these semantic domains interact with modality is illustrated by the analysis of requests with *možno* in Article 1 and Chapter 5. The analysis of microvariation in requests across Slavic languages is presented in Article 2. The interaction of temporal markers and modal word *možno* is presented in Article 3 and Chapter 4.

2.3 Typological and cognitive approaches to modality

In this section, I am going to focus on five approaches proposed by

- Palmer (1986; 2001);
- Bybee et al. (1994);
- van der Auwera and Plungian (1998);
- Talmy (1988, 2000);
- Langacker (1991, 2008).

The first three approaches belong to the typological branch of scholarship on modality, while Talmy and Langacker are cognitive linguists. Typology aims at categorizing diverse languages into types or groups based on shared features. For a long time, typology was considered “theory neutral”, belonging neither to generative, formal or cognitive approaches (Croft 2016). However, typologically oriented works that will be discussed further in this section share the main postulates of cognitive linguistics: typology is usage-based and often deals with analysis of semantic categories. Semantic maps provide insights into the semantic organization and the ways in which meanings are related or contrasted, see Croft (2016) and Traugott (2016). For instance, the semantic map of modality proposed by van der Auwera and Plungian (1998) is a representation of a language-universal conceptual space of modality in which modal meanings are linked, while elements that constitute that space are language-specific. In this dissertation modal constructions with *možno* are approached from both language-internal, i.e., properties of constructions in Russian, and language-external, i.e., comparative (cross-linguistic) perspectives. Therefore, my findings are relevant for both typology and cognitive linguistics.

2.3.1 Typological approaches to modality

The interpretation of modality in many typologically oriented works on modality can be traced back to the ideas developed by Palmer (1986), who was the first linguist who systematically studied modality from a typological perspective. Palmer treats modality as a semantic category and emphasizes that modality is a valid cross-linguistic category.

In Palmer's classification of modal meanings (1986), the first division line is drawn between epistemic and deontic modal meanings. The opposition of deontic vs. epistemic meanings came to modality from formal logic (von Wright 1951). Epistemic modality expresses the speaker's attitude towards a proposition, while deontic modality includes possibility and necessity meanings. Palmer (1986) also indicates that this division of the modality domain is based on well-studied European languages and might not be universal:

there are other languages in which the speaker may indicate the strength of his commitment to what he is saying, not in terms of possibility and necessity but in terms of what kind of evidence he has.

Palmer (1986: 20)

Another important topic addressed by Palmer (1986) is the status of speech acts within modality. Palmer argues that the distinction between sentence types in terms of declaratives, imperatives, and interrogatives does not capture all the semantic differences among the utterances with modal elements. He argues that the existence of indirect speech acts, which formally appear as declaratives but denote commands or questions, provides a strong rationale to distinguish utterance types: statements, questions, and commands. Utterance types should be taken into consideration as a parameter that helps to distinguish modality types.

In Palmer (2001), a significantly revised version of Palmer (1986), modality is divided into propositional modality that embraces epistemic and evidential meanings, and event modality that includes deontic and dynamic modality, see Table 1. Evidential modality is the assessment of a proposition based on evidence, whereas epistemic modality is the speaker's evaluation of the factual status of a proposition. The difference between deontic and dynamic modality is the source of conditioning factors, both external and internal. Mood, future, and negation are considered to be categories contiguous to modality. In Table 1, I summarize Palmer's categorization of modality meanings and neighboring categories, and position Russian modal anchor *можно* in this taxonomy.

Modality			
Propositional		Event	
Epistemic <i>можно</i>	Evidential	Dynamic (internal ability and willingness)	Deontic (external obligation and permission) <i>можно</i>
Neighboring categories			
Mood ⁴			
Future			
Negation			

Table 1. Modality types and neighboring categories according to Palmer (1986; 2001).

⁴ Palmer (2001: 217-222) mentions separately the Russian Subjunctive that is formed by the particle *b(y)* 'whether' and the past form of the verb, as an example of the relation between past tense and the modal meaning of unreality.

Ideas proposed by Palmer (1986; 2001) resonate with how van der Auwera and Plungian (1998) structure the semantic domain of modality. The principal difference is that van der Auwera and Plungian (1998) categorize modality into distinct types, representing possibility and necessity as paradigmatic variants of modality, see Table 2. Both possibility and necessity can be either epistemic or non-epistemic. Non-epistemic meanings can be participant internal or participant external. Van der Auwera and Plungian’s term “participant-internal” corresponds to Palmer’s term “dynamic”. The term “participant-external” roughly corresponds to “deontic”, though the deontic subdomain, according to van der Auwera and Plungian, also includes non-deontic meanings. As for evidentiality, van der Auwera and Plungian consider it a separate semantic category. However, they note that inferential evidentiality –a sub type of evidentiality that expresses evidence based upon reasoning– is included in the notion of epistemic necessity.

Modality							
Epistemic		Non-epistemic					
Possibility (Uncertainty) <i>možno</i>	Necessity (Probability)	Participant internal		Participant external			
	Inferential evidentiality	Possibility (Ability, Capacity)	Necessity (Need)	Possibility		Necessity	
				Non- deontic <i>možno</i>	Deontic (Permission) <i>možno</i>	Non- deontic	Deontic (Obligation)
Neighboring categories							
Mood Volition Non-inferential evidentiality							

Table 2. Modality types and neighboring categories adopted from van der Auwera and Plungian (1998).

In Table 2 I summarize the classification of modal meanings and neighboring categories put forth by van der Auwera and Plungian (1998), and locate the position the modal anchor *možno* within this framework.

In this dissertation, I adopt the view on modality proposed by van der Auwera and Plungian. Their classification provides the necessary level of detail for a comprehensive analysis. Furthermore, the use of semantic labels from their typologically-oriented study allows me to draw meaningful comparisons across various languages.

Bybee et al. (1994:176-225) introduce their own set of terms for modality, see Table 3. In angle brackets I provide van der Auwera and Plungian’s (1998) terms that correspond to terms by Bybee et al. (1994). Bybee et al. (1994) state that the main focus of their study on modality lies in grammatical meanings, their origins, and mechanisms of change. Similar to previously discussed classifications of modality, Bybee and colleagues distinguish epistemic meanings. Inferred certainty is

evidentiality in Palmer’s terms. The other two types of modality are agent-oriented and speaker-oriented.

Modality								
Epistemic	<i>možno</i>	<Non-epistemic>						
		<table border="1"> <thead> <tr> <th>Agent-oriented</th> <th>Speaker-oriented</th> </tr> </thead> <tbody> <tr> <td> <participant-internal> <participant-external> </td> <td> <participant-external> </td> </tr> <tr> <td> <ul style="list-style-type: none"> • Obligation: strong or weak • Necessity • Ability: Root possibility or Permission → <i>možno</i> • Desire • Intention • Willingness • Directives </td> <td> <ul style="list-style-type: none"> • Mands (commands, demands, requests, entreaties) → <i>možno</i> • Warnings → <i>možno</i> • Exhortations • Recommendations </td> </tr> </tbody> </table>	Agent-oriented	Speaker-oriented	<participant-internal> <participant-external>	<participant-external>	<ul style="list-style-type: none"> • Obligation: strong or weak • Necessity • Ability: Root possibility or Permission → <i>možno</i> • Desire • Intention • Willingness • Directives 	<ul style="list-style-type: none"> • Mands (commands, demands, requests, entreaties) → <i>možno</i> • Warnings → <i>možno</i> • Exhortations • Recommendations
Agent-oriented	Speaker-oriented							
<participant-internal> <participant-external>	<participant-external>							
<ul style="list-style-type: none"> • Obligation: strong or weak • Necessity • Ability: Root possibility or Permission → <i>možno</i> • Desire • Intention • Willingness • Directives 	<ul style="list-style-type: none"> • Mands (commands, demands, requests, entreaties) → <i>možno</i> • Warnings → <i>možno</i> • Exhortations • Recommendations 							
<ul style="list-style-type: none"> • Possibility • Probability • Inferred certainty • Counter-factual 								
<Neighboring categories>								
Subordinating moods								
<ul style="list-style-type: none"> • Complement clauses • Concessives • Purpose clauses 								

Table 3. Modality types and neighboring categories according to Bybee et al. (1994). Terms taken from the classification by van der Auwera and Plungian (1998) that correspond to the notions in the current taxonomy are shown in angle brackets <...>.

Agent-oriented modality involves describing conditions (both internal and external) that impact the Agent’s abilities to carry out the action specified in the main predicate. Bybee et al. (1994: 177) illustrate obligation – one of the semantic notions in the domain of agent-oriented modality – with an example taken from Coates (1983: 35) “*All students must obtain the consent of Dean of the faculty concerned before entering the examination.*”

Situations in which the speaker gives a command or grants permission are considered to be speaker-oriented modality. An example of speaker-oriented modality is directive sentence “*You can start the revels now*” cited from (Coates 1983: 88). Agent-oriented modality and speaker-oriented modality include both participant-internal and participant-external meanings.

Bybee et al. (1994) include subordinating moods as a separate category. Since I do not present evidence on modals in subordinating clauses in this dissertation, I do not discuss this notion further.

Typologically oriented classifications provide a solid research foundation for the comparative study of modality across languages, as they are grounded in semantics as opposed to purely formal properties of modal expressions. The structure of the domain of modality and corresponding terms proposed by van der Auwera and Plungian (1998) serve as the theoretical basis for this dissertation⁵.

2.3.2 Cognitive approaches to modality

It is necessary to apply a more fine-grained semantic analysis to capture the conceptual underpinnings of semantic nuances within the subfield of possibility and its relation to other linguistic categories within Russian. I argue that a cognitive linguistics approach to modality yields better results for analyzing elements within a single language, particularly the polysemy of modals and their interaction with future markers. In the following, I describe two approaches to modality within cognitive linguistics, namely modals as a force-dynamic category (Talmy 1988; 2000)⁶ and modals as grounding elements (Langacker 1991; 2008).

Talmy's Force Dynamics Model (2000) is a cognitive linguistic framework developed to explain how entities interact in relation to forces. This model focuses on the interplay of various forces involved in different types of events. These encompass the exertion of force, resistance to such exertion, overcoming of resistance, blockage of force, removal of blockage, and more. Force Dynamics (FD) plays a structuring role across multiple language levels.

Talmy states that FD “uniquely characterizes the grammatical category of modals”, examining how concepts of force and dynamics influence the expression of possibility, necessity, permission, and epistemic modal notions in language. The model proposes that modality is rooted in the underlying physical and conceptual forces that humans perceive. The concepts of Agonist and Antagonist are central to comprehending the interplay of forces within Talmy's model. These concepts extend beyond physical motion events into various domains, including modality. These terms characterize the dynamic relationships between different elements within an action or event.

The Agonist serves as the primary force or entity initiating and driving an action or event. It acts as the active agent exerting effort to bring about a specific change or result, often associated with the main Subject or Agent of a sentence. Conversely, the Antagonist represents the opposing force or entity that counters the actions of the Agonist. The Antagonist introduces obstacles or resistance that the Agonist must overcome to achieve the desired outcome. The Antagonist can be an animate or inanimate entity hindering the motion or action initiated by the Agonist.

⁵ In the Russian Constructicon, an open-access searchable database of Russian constructions (<https://constructicon.github.io/russian/>), the structure of the modality domain is also based on the representation of modality proposed by van der Auwera and Plungian (1998) with minor adjustments, see Mordashova (2023).

⁶ Talmy (2000) is a revised and extended version of an article published in 1988. In the following sections, I will refer only to the newer version, i.e., Talmy (2000).

Talmy distinguishes between “core or deontic” modal meanings and epistemic meanings. Core modals are straightforwardly analyzed with the application of FD, while epistemic modals are considered peripheral. Talmy argues that epistemic modal meanings pertain to reasoning processes about the content of a proposition and could also be analyzed in terms of FD, although this approach requires further elaboration.

Langacker (1991; 2008) also relies on the concept of force (or potency) in his description of modality. Langacker’s perspective on modality, initially developed on English data, offers a framework that can be extrapolated to various languages. Langacker’s approach operates on the fundamental principles of general cognitive abilities, allowing a broader understanding of modality beyond language-specific boundaries.

English modals on a par with tense are considered as grounding predications. Modals exert a certain kind of potency or force⁷ that can prompt the execution of an action. Langacker supports the traditional distinction between epistemic and root (non-epistemic) modality, and provides following definitions:

A modal is regarded as epistemic, when its sole import is to indicate the likelihood of the designated process. In a root modal, there is additionally some conception of potency directed toward the realization of that process, i.e., some notion of obligation, permission, desire, ability, etc.

Langacker (1991: 272)

Thus, root modality in Langacker’s terms encompasses notions of participant-internal and participant external possibility and necessity in van der Auwera and Plungian’s (1998) approach. Root modality is directed at effecting or influencing the grounded process. The source of potency directs its force towards the target. It is important to note that the source of potency can coincide with the speaker and the target with the hearer, although this is not always the case. The source of potency can stem from sources external to the speaker, such as societal and ethical norms, or from another authority, see example (7). The target can be the speaker herself or individuals not directly engaged in the conversation.

In example (7) the construction with *možno* expresses root possibility (external possibility). The source of the force is external to the speaker: the existence of medical protocol ensures that under the specific circumstances (immediate consultation with the doctor after a panic attack) it is possible to treat the patient without use of medication. The target is any patient who meets the conditions described above.

EXTERNAL POSSIBILITY

(7) *Esli čelovek perežil neskol’ko paničeskix atak i obratilsja za pomošč’ju k psixoterapevtu, emu možno pomoč’ bystro i bez ispol’zovanija medikamentov.*

⁷ Langacker (2008) uses the terms force and potency interchangeably.

‘If a person has experienced several panic attacks and has sought help from a psychotherapist, they can be assisted quickly and without the use of medication.’

[Jaltonskaja A. Trevožnye rasstrojstva. Otkuda beretsja trevoga, kak otličit’ osmotritel’nost’ ot rasstrojstva i čto obščego u bojazni publičnyx vystuplenij i ipoxondrii. 2018]

Epistemic potency is more abstract and refers to the speaker’s assessment of the likelihood of a situation. Figure 1 taken from Langacker (2008: 306) schematically represents the speaker’s evolving conception of reality. This schema partially overlaps with the schema provided for the representation of time in language (Langacker 2008: 301). Comparison of these two schemas is discussed in detail in Section 4. In this section I zoom in on the schema presented for modal meanings.

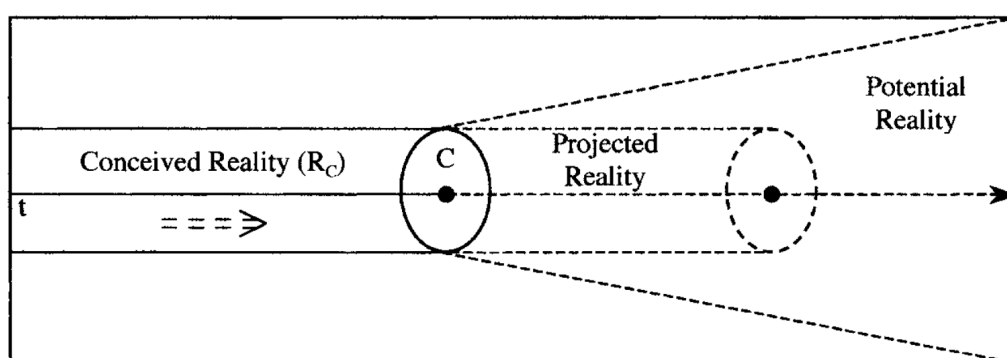


Figure 1. Representation of epistemic modality: speaker’s evolving conception of reality, where C stands for conceptualizer in Langacker (2008).

In Figure 1, the elements symbolize how a Conceptualizer (C) interprets modal utterances and conceptualizes reality. The “Conceived reality” section of the cylinder represents what conceptualizer, often the speaker, views as known, real and established knowledge (past). The central circle with the dot and the letter “C” inside is what is perceived by conceptualizer at present. The “Projected reality” section of the cylinder denotes the most probable anticipated development of the situation according to the conceptualizer. Conversely, the “Potential reality” is a less likely scenario according to the conceptualizer.

In example (8) the speaker expresses a strong opinion about self-deprecation using the concept of epistemic potency. The sentence expresses the speaker’s astonishment and disbelief at the possibility of someone speaking in such manner about themselves. The knowledge that some people speak about themselves in a self-deprecatory way is a part of the speakers experience. This understanding is a part of their Conceived reality. The clause with construction *kak + možno + INF?*⁸ challenges the possibility of such behavior, i.e., conveys the speaker’s assessment of the given scenario as highly unlikely. *Kak + možno + INF?* shapes a Projected reality of the speaker in such a way that there will be people who never belittle themselves.

⁸ It should be noted that the status of this construction as a question plays an important role in this construction and, in fact, is a constructional element, see Chapter 3.

EPISTEMIC

- (8) *Samoe strašnoe — èto unižat' sebja, govorit', čto ja ničto po sravneniju s rabočim ili komsomol'cem. **Kak možno tak govorit' i prodolža' žit' i rabotat'?***
'The scariest thing is to belittle oneself, saying that I am nothing compared to a worker or a Komsomol member. How can one speak like that and continue to live and work?'

[Ju. Oleša. Reč' na I Vsesojuznom s''ezde sovetskix pisatelej. 1934]

While the distinction between epistemic and root modality is acknowledged, it is important to note that these meanings often blur and overlap. Moreover, a single modal can serve both root modal and epistemic functions in various constructions. Constructions with *možno* denote meanings which originate in the notion of possibility and tend to denote root modal meanings, however certain constructions with *možno* demonstrate features closer to epistemic meanings.

Altogether, the application of a typological and cognitive approach to the analysis of Russian constructions with modal words as anchor elements, specifically the modal word *možno*, yields the best results, since this approach allows us to consider most of the semantic nuances within Russian and to compare modal meanings across languages.

2.4 Modality in the Russian scholarly tradition and research based on Russian data

In most parts of this dissertation, I delve into semantic analysis of Russian constructions with *možno*, so in this section I provide a succinct overview of the most important research on modality based on Russian language data. Few comprehensive studies specifically focus on Russian modality. I present ideas discussed in the Russian Academy Grammar by Švedova et al. (1980), in *Theory of Functional Grammar (Teorija funkcional'noj grammatiki: Temporal'nost', modal'nost')* edited by Bondarko (1990) and in a corpus-based analysis of modality by Padučeva (2016).

Unlike the modal verb *moč* and its perfective counterpart *smoč*, which have received considerable attention (Choi 1994; Janda 2018), *možno* is typically discussed alongside other impersonal modals such as *nado* 'have to', *nužno* 'have to' and *nel'zja* 'is not allowed'. Researchers usually focus on either the aspect and modal meaning interactions (Divjak 2009; Lyashevskaya et al. 2016), or the broader description of modality in Russian (Padučeva 2016), including comparative studies with other Slavic languages (Hansen 2001; Besters-Diligers et al. 2009). Additionally, since constructions with *možno* are frequently used for making requests, *možno* is also included in studies that examine politeness strategies in Russian (Mills 1992; Dubinina and Malamud 2017).

In prescriptive Russian grammar such as Švedova et al. (1980), modality is categorized in two types. The first type is objective modality (*ob''ektivnaja modal'nost'*), which encompasses temporal and real or unreal meanings, also referred to as syntactic moods

(*naklonenija*), see Table 4. Objective modal meanings that indicate reality (or temporal definiteness) constitute the Indicative mood (Present and non-past forms: Past and Future). Objective modal meanings that signify unreality (or temporal indefiniteness) comprise the Irrealis mood, which includes Subjunctive, Conditional, Optative, and Imperative moods (Švedova et al. 1980). In other words, the term objective modality corresponds to the term mood in van der Auwera and Plungian’s approach (1998).

The second type is subjective modality (*sub’ektivnaja modal’nost’*), which expresses the speaker’s attitude towards a proposition (Švedova et al. 1980: 214). Subjective modality corresponds to the term modality used by, e.g., Bybee and Fleischman (1995) and van der Auwera and Plungian (1998). A summary of the taxonomy proposed by Švedova et al. (1980) is presented in Table 4.

Modality	
<Epistemic>	<Non-epistemic>
Subjective modality <i>(Sub’ektivnaja modal’nost’ / Субъективная модальность)</i>	
<Neighboring categories>	
<Mood>	Objective modality <i>(Ob’ektivnaja modal’nost’ / Объективная модальность)</i>
	<i>možno</i>

Table 4. Modality types and neighboring categories according to Švedova et al. (1980). Terms taken from the classification by van der Auwera and Plungian (1998) that correspond to the notions in the current taxonomy are shown in angle brackets <...>.

Bondarko (1990) differentiate between two subdomains of modality, along with the category of mood. While the authors refrain from using explicit labels, they offer semantic descriptions for each category. The first subdomain corresponds to the epistemic meaning of modality and denotes the speaker’s evaluation of the degree of certainty in the truthfulness of the proposition. The second subdomain corresponds to non-epistemic modality and denotes the evaluation of the proposition in terms of possibility, necessity, or desirability. A separate chapter is devoted to possibility (Beljaeva 1990). Beljaeva distinguishes internal and external possibility. External possibility can be deontic (constructions with *možno*) or non-deontic (constructions with *moč* ‘can, be able’). Internal possibility can be acquired (constructions with verbs such as *moč* ‘can, be able’ and *umet’* ‘be able’) or inherent (constructions with words such as *sposoben, v sostojanii* ‘capable’).

Mood is defined as the evaluation of a proposition in terms of reality/unreality by the speaker. Mood is represented by Subjunctive, Indicative, Hypothetical etc. The neighboring categories encompass illocutionary modality (communicative goal), qualitative and emotional assessment of the proposition, among others. Altogether, the structure of the modality domain proposed by Bondarko coincides with van der Auwera and Plungian’s framework.

Padučeva (2016) introduces a corpus-based approach to modality, building upon the terminology used in Švedova et al. (1980), see Table 5. Padučeva distinguishes between Subjective or Directive modality, which represents the speaker’s attitude towards a proposition, and Objective modality, which expresses the speaker’s communicative goal. Subjective modality comprises possibility and necessity. In addition, Padučeva identifies Illocutionary modality, which expresses the speaker’s communicative goal as in Bondarko (1990).

Modality	
<Epistemic modality>	<Non-epistemic modality>
Subjective / Directive (<i>Субъективная модальность</i>)	
Possibility	<i>можно</i> Necessity
<Mood> Objective modality (<i>Объективная модальность</i>)	
Illocutionary	
Neighboring categories	
Evidentiality	
Negation	
Evaluation, assessment	

Table 5. Modality types and neighboring categories according to Padučeva (2016). Terms taken from the classification by van der Auwera and Plungian (1998) that correspond to the notions in the current taxonomy are shown in angle brackets <...>.

To sum up, these three frameworks collectively approach modality by categorizing it into distinct semantic types. While the Russian Academy Grammar focuses on modality and mood distinctions, Bondarko (1990) propose semantic domains that align with the classification proposed by van der Auwera and Plugian (1998). Padučeva’s corpus-based analysis extends the framework, considering the speaker’s communicative intentions as a separate semantic category (Illocutionary modality) within the modality domain. In all these approaches, meanings of the modal word *можно* are only sporadically and inconsistently mentioned in various places, predominantly through illustrative examples. Sometimes the semantics of *можно* is interpreted in isolation, while in other cases it is explored together with other linguistic elements. For instance, Švedova et al. (1980) considers *можно* to be an interrogative particle in requests that follow the syntactic pattern “*можно* NOM INF?”.

In summary, in this Chapter I presented various approaches to modality, identified the key concepts crucial to this dissertation, and surveyed existing scholarship on modality in Russian with particular focus on *можно*. The typological perspective, rooted in grammatical structures, supplies researchers with a rich repertoire of semantic meanings, accumulated from multiple languages. Cognitive grammar explains these nuanced semantics in relation to general cognitive abilities. Furthermore, adopting the construction as the unit of analysis proves helpful in disambiguating polysemy that is

traditionally ascribed to modal words. Each meaning tends to correspond to a specific constructional type, offering a clearer delineation of various modal meanings. Overall, these approaches collectively contribute to a comprehensive view of the modality domain.

Chapter 3 Constructions with the modal *možno* as an anchor

In this Chapter, I analyze 500 sentences containing the modal word *možno*, extracted from the Russian National Corpus (RNC, ruscorpora.ru). This analysis provides context for the research questions addressed in the articles comprising the second part of this dissertation. The analysis follows the principles of Construction Grammar, i.e., *možno* is considered to be an anchor word within the set of constructions it is used in. I will establish the constructional types in which *možno* occurs, examine their properties, and show how the meanings are interrelated.

This is a qualitative analysis of the properties of constructions with *možno*. Statistical modelling of the data is not possible due to the rather small number of examples examined, however the trends can be extrapolated to the larger body of the data in the RNC, and possibly to the entire Russian language. First, I will briefly discuss the syntactic classification of constructions with modals provided in the Russian Academy Grammar (Švedova et al. 1980). Then, I will present the analysis of my data. Requests in Russian are the central topic of Article 1 and Chapter 5. Constructions with the future copula *budet* are discussed in more detail in Article 3 and Chapter 4. The remaining constructions are described and illustrated by example(s) from my dataset in this chapter.

Možno ‘be possible’ can be used in various constructions. Different approaches to defining a construction result in various classifications of these constructions. In Švedova et al. (1980), sentences with modal words are syntactically categorized into seven types, as presented in Table 6.

Realis (<i>Sintaksičeskij indikativ</i>)										
Indicative	IPFV		PFV							
Past	<i>možno</i> can	<i>bylo</i> be.PST.3SG	<i>delat'</i> make.INF.IPFV	<i>možno</i> can	<i>bylo</i> be.PST.3SG	<i>sdelat'</i> make.INF.PFV				
Non-past without copula	<i>možno</i> can	<i>delat'</i> make.INF.IPFV		<i>možno</i> can	<i>sdelat'</i> make.INF.PFV					
Non-past with copula (Future)	<i>možno</i> can	<i>budet</i> be.FUT.3SG	<i>delat'</i> make.INF.IPFV	<i>možno</i> can	<i>budet</i> be.FUT.3SG	<i>sdelat'</i> make.INF.PFV				
Irrealis (<i>Sintaksičeskije irreal'nye naklonenija</i>)										
Subjunctive	<i>(Soslagaatel'noe)</i>									
	<i>možno</i> can	<i>bylo</i> be.PST.3SG	<i>by</i> SUBJ	<i>delat'</i> make.INF.IPFV	<i>možno</i> can	<i>by</i> SUBJ	<i>sdelat'</i> make.INF.PFV			
Conditional	<i>(Uslovnoe)</i>									
	<i>esli</i> if	<i>by</i> SUBJ	<i>možno</i> can	<i>(bylo)</i> be.PST.3SG	<i>delat'</i> make.INF.IPFV	<i>esli</i> can	<i>by</i> SUBJ	<i>možno</i> can	<i>(bylo)</i> be.PST.3SG	<i>sdelat'</i> make.INF.PFV
Optative	<i>(Želatel'noe)</i>									
	<i>esli (xot')</i> if (though)	<i>by</i> SUBJ	<i>možno</i> can	<i>bylo</i> be.PST.3SG	<i>delat'</i> make.INF.IPFV	<i>esli (xot')</i> if (though)	<i>by</i> SUBJ	<i>možno</i> can	<i>bylo</i> be.PST.3SG	<i>sdelat'</i> make.INF.PFV
Jussive	<i>(Pobuditel'noe)</i>									
	<i>pust'</i> let	<i>možno</i> can	<i>budet</i> be.FUT.3SG	<i>delat'</i> make.INF.IPFV	<i>pust'</i> let	<i>možno</i> can	<i>budet</i> be.FUT.3SG	<i>sdelat'</i> make.INF.PFV		

Table 6. Syntactic paradigm of the modal *možno*, in which the infinitive (*s)delat'* 'make' represents all verbs that may occur in this construction.

However, relying solely on syntactic patterns is not sufficient for categorizing modal meanings. For instance, non-past syntactic patterns can convey a variety of meanings such as external possibility, impossibility, request, and permission, depending on the specific speech act in which the construction with *možno* is employed. Moreover, for instance, the jussive forms with *možno* mentioned at the bottom of the table sound unnatural to me as a native speaker of Russian. This intuition is supported by a simple corpus search in the RNC: a query for “‘pust’ 1-1 možno 1-1 byt’ fut 1-1 inf”⁹ returns no examples¹⁰. Therefore, while the syntactic classification provided by Švedova et al. (1980) may serve as a good starting point, other factors such as sentence type (declarative, interrogative, exclamative), construction pattern (with inclusion of elements other than *možno* and tense/mood markers), word order, and semantic analysis of the broader context should be considered for a more refined classification of constructions involving *možno*.

In Modern Russian, the suppletive pair of modal adverbs *možno* ‘be possible’ and *nel’zja* ‘be impossible’ are used to express participant-external and deontic modal values (Plungian and van der Auwera, 1998). However, investigating the semantics of an isolated element in a language does not promise fruitful results. In this section, I will aim to present the network of constructions with the modal word *možno* in Contemporary Russian, taking into consideration various factors such as the sentence type, aspect of the infinitive, word order (information structure), verb class, etc. that contribute to the resultant meaning of each construction type.

My analysis of examples retrieved from the RNC shows that the Russian modal word *možno* can be used in various constructions with semantics of possibility, request, permission, epistemic, intensity, etc. Syntactically these constructions tend to follow the pattern: modal word + infinitive (393 examples; 81,8 %). Two important remarks should be made. First, the word order can vary depending on the information structure of the utterance. In some cases, the word order is the sole factor motivating the identification of a construction, e.g., if a certain verb precedes *možno* as in *žit’ možno* ‘(I) can live with it’. Second, in certain types of constructions the Experiencer tends to be elided (Grillborzer 2019) or substituted by a Subject in the Nominative case (Zhamaletdinova 2022).

3.1 Analysis of 500 examples from the RNC

The data was extracted from the Main corpus of the Russian National Corpus (RNC, ruscorpora.ru). The Main corpus consists of annotated Russian written texts spanning from the middle of the 18th century to the present. The query consisted of the single word *možno* without specification of a time period. The search returned 361 755 examples. 5000 examples were downloaded in the .xlsx format, pseudorandomized, and then the first 500 examples were extracted for the analysis. The dataset is available

⁹ 1-1 stands for the interval between words.

¹⁰ It is possible to find examples with “‘pust’ možno budet INF” on Google, however it is difficult to estimate how frequent they are, since there is a lot of repetition of the sources already on the first pages.

at TROLLing – Tromsø Repository of Language and Linguistics at <https://doi.org/10.18710/WTRTKK>. I manually annotated the data according to the following parameters:

- Semantics: external possibility, external impossibility, request, permission, epistemic (evaluation), intensity
- Construction formula: 19 construction types
- Person:
 - 494 sentences without overt expression of the Subject/Experiencer;
 - six sentences with overt expression of the Subject/Experiencer.
- Presence or absence of the infinitive:
 - 448 sentences with an overtly expressed verb form;
 - 52 sentences without an overtly expressed verb form;
- Aspect:
 - 312 examples with perfective verb forms;
 - 137 examples with imperfective verb forms;
 - 52 without overtly expressed verb forms;
- Speech act:
 - 425 declarative sentences;
 - 45 interrogative sentences;
 - 10 exclamative sentences;
 - 20 exclamative/interrogative sentences, all of them express epistemic meaning.

For instance, for examples (9) and (10) with the construction *razve + možno + (INF)* the annotation is as follows, see Table 7.

(9) *V razgar ssory oni s Ljudoj poprobovali bylo vmešat'sja: "Nu čto vy, rebjatki, razve tak možno? Davajte spokojno pogovorim!"*

‘In the midst of the argument, they attempted to intervene with Luda: “Come on, guys, is this really how it should be? Let's talk calmly!”’

[I. Murav'eva. Meščanin vo dvorjanstve. 1994]

(10) — *Čudak ty! Razve takoe sravnit' možno. My, podi-ko, ne za den'gi da i ne čužie, a svoj brat masterovoj.*

‘You are a weirdo! How can you even compare something like that? After all, we are not doing it for money, and he is not a stranger but our own brother, a skilled craftsman.’

[P. Bažov. Širokoe plečo. 1948]

	Formula	Semantics	Speech act	Person	Infinitive	Aspect
(9)	<i>razve + možno</i>	epistemic	interrogative / exclamative	IMPRS	NA	NA
(10)	<i>razve + možno + INF</i>	epistemic	declarative / exclamative	IMPRS	сравнить	pfv

Table 7. Examples of annotation of *razve možno* constructions. IMPRS stands for examples that do not have overt expression of the Subject or Experiencer. NA (Not Applicable) stands for examples that do not have overt expression of the infinitive.

The overall distribution of constructions with *možno* in my data set is presented in Table 8. A construction type is a more general construction schema, which can be represented in a language by various instantiations. Elements in brackets can be present or omitted within a construction without affecting the construction's meaning. The presence or absence of the infinitive is a crucial factor for distinguishing construction types. Moreover, constructions that allow variation in overtly expressing the infinitive tend to express the infinitive explicitly. Out of 429 sentences that express external impossibility and epistemic meaning, only 8 (2%) do not overtly express the infinitive. The infinitive serves as a slot in both types of constructions. Instantiations are linguistic realizations of the construction types in my data.

Construction type	Instantiations	Speech act	# of examples (%)	Instantiation's semantics
EXTERNAL (IM)POSSIBILITY			407 (81,4%)	
1. <i>možno</i> + INF	<i>možno</i> + INF	Declarative (294) Interrogative (6) Exclamative (8)	308 (61,6%)	External possibility
	<i>možno</i> + <i>ne</i> + INF	Declarative	2 (0,4%)	External possibility
	<i>možno</i> + <i>bylo</i> + INF	Declarative	47 (9,4%)	External possibility
	<i>možno</i> + <i>bylo</i> + <i>ne</i> + INF	Declarative	1 (0,2%)	External possibility
	<i>možno</i> + <i>bylo</i> + <i>by</i> + INF	Declarative	20 (4%)	External possibility
	<i>možno</i> + <i>bylo</i> + <i>by</i>	Declarative	1 (0,2%)	External possibility
	<i>možno</i> + <i>budet</i> + INF	Declarative	9 (1,8%)	External possibility
	<i>možno</i> + <i>by</i> + INF	Declarative	5 (1%)	External possibility
2. <i>ne</i> + <i>možno</i> + INF	<i>ne</i> + <i>možno</i> + INF	Declarative	2 (0,4%)	External impossibility
3. <i>možno</i> + <i>li</i> + INF	<i>možno</i> + <i>li</i> + <i>ne</i> + INF	Interrogative	1 (0,2%)	External impossibility
	<i>možno</i> + <i>li</i> + INF	Interrogative Declarative	5 (1%) 1 (0,2%)	External possibility
4. <i>možno</i>	<i>možno</i>	Declarative	5 (1%)	External possibility
REQUEST			32 (6,2%)	
5. <i>možno</i> + <i>li</i> + INF	<i>možno</i> + <i>li</i> + INF	Interrogative	7 (1,4%)	Request
	<i>ne</i> + <i>možno</i> + <i>l'</i> + INF	Interrogative	1 (0,2%)	Request
6. <i>možno</i> + INF	<i>možno</i> + INF	Interrogative	11 (2%)	Request
	<i>možno</i> + <i>budet</i> + INF	Interrogative	1 (0,2%)	Request
7. <i>možno</i>	<i>možno</i>	Interrogative	6 (1,2%)	Request
	<i>možno</i> + DAT	Interrogative	1 (0,2%)	Request
8. <i>možno</i> + NOM + VFIN	<i>možno</i> + NOM + VFIN	Interrogative	4 (0,8%)	Request

9. <i>esli možno</i>	<i>esli + možno</i>	Declarative	1 (0,2%)	Request
PERMISSION			15 (3%)	
10. <i>možno</i>	<i>možno</i>	Declarative	8 (1,6%)	Permission
11. <i>možno + INF</i>	<i>možno + INF</i>	Declarative	3 (0,6%)	Permission
	<i>možno + ne + INF</i>	Declarative	4 (0,8%)	Permission
EPISTEMIC			22 (4,6%)	
12. <i>kak + možno + INF</i>	<i>kak + možno + INF</i>	Interrogative / exclamative	4 (0,8%)	Epistemic
	<i>kak + že + možno</i>	Interrogative / exclamative	2 (0,4%)	Epistemic
	<i>kak + že + možno + INF</i>	Interrogative / exclamative	1 (0,2%)	Epistemic
	<i>kak + možno</i>	Interrogative / exclamative	1 (0,2%)	Epistemic
13. <i>neuželi + možno + INF</i>	<i>neuželi + možno</i>	Interrogative / exclamative	1 (0,2%)	Epistemic
	<i>neuželi + možno + INF</i>	Interrogative / exclamative	1 (0,2%)	Epistemic
14. <i>razve + možno + INF</i>	<i>razve + možno</i>	Interrogative / exclamative	1 (0,2%)	Epistemic
	<i>razve + možno + INF</i>	Interrogative / exclamative	4 (0,8%)	Epistemic
	<i>razve + ž + možno</i>	Interrogative / exclamative	1 (0,2%)	Epistemic
15. <i>skol'ko + možno + INF</i>	<i>skol'ko + možno + INF</i>	Interrogative / exclamative	1 (0,2%)	Epistemic
16. <i>možno + li + INF</i>	<i>možno + li + eto</i>	Interrogative / exclamative	1 (0,2%)	Epistemic
	<i>možno + li + INF</i>	Interrogative / exclamative	4 (0,8%)	Epistemic
INTENSITY			24 (4,8%)	
17. <i>kak + možno + ADV.COMP</i>	<i>kak + možno + ADV.COMP</i>	Declarative	19 (3,8%)	Comparative
18. <i>gde + možno</i>	<i>gde + tol'ko + možno</i>	Declarative	1 (0,2%)	Superlative
	<i>vsjudu + gde + možno</i>	Declarative	1 (0,2%)	Superlative
19. <i>čto + možno</i>	<i>IMP + čto + možno</i>	Imperative-hortative	1 (0,2%)	Superlative
	<i>vse + čto + možno</i>	Declarative	1 (0,2%)	Superlative
	<i>vse + čto + bylo + možno</i>	Declarative	1 (0,2%)	Superlative
Total			500 (100%)	

Table 8. The distribution of constructions with *možno* in my database. Elements in brackets can be present or omitted within a construction without modifying its meaning.

If we look at the formal representation of the constructions, we see that the Experiencer or Subject are omitted, except for four constructions of the *možno* + NOM + VFIN type and two constructions with the overtly expressed Experiencer, namely *možno* + DAT and *ne* + *možno* + DAT + INF. This tendency to use infinitival constructions with modal words, such as *nado* ‘have to’ and *možno* among others, with non-overtly expressed Experiencers was described in a corpus-based study by Grillborzer (2019). However, the absence of overt marking of the Subject or Experiencer does not necessarily make a construction semantically impersonal. For example, requests by their nature cannot be impersonal. The requester is always interested in unambiguous reference to the requestee, since the requester will benefit if the requestee complies with her wishes/request. However, the ways in which the requester can indicate the requestee are not limited to purely overt linguistic expression. Another strategy for spoken discourse is, for example, the use of gestures or body movement, as in (11).

- (11) *Tanja pridvinulas’*. *Položila glavu emu na plečo, sprošila: – Možno? Tebe ne mešacet? – Možno, – skazal on.*
 ‘Tanya moved closer. She rested her head on his shoulder and asked: – Is it okay? Do I bother you? – It's fine, – he replied.’

[Ju. Trifonov. Obmen. 1969]

In example (11) Tanya moves closer to the speaker and rests her head on his shoulder, accompanying these movements with a one-word request *Možno?* With this single word she refers to the non-verbal aspect (content) of their communicative situation, namely “Is it okay with you that I sit this close and with my head on your shoulder?”.

Another important remark is that the order in which elements can appear within a construction is relatively flexible. Moreover, various elements such as the particles *ne* or *že* can be inserted between *možno* and the infinitive without significantly altering the overall semantics of the construction. The semantic difference can usually be explained by what the speaker considers to be the theme (given information) and the rheme (new information). There are instances where word order plays an important role and leads to a shift in the meaning, in particular in discourse formulae, cf. *možno žit’* and *žit’ možno*. I explore such cases toward the end of this section.

An infinitive can be under negation, as in (12), in which the speaker points that there is a possibility of not noticing the first symptoms of an illness among children who do not speak yet.

- (12) *Ne propustite pervye signaly, svidetel’stvujuščie o načale zaboľevanija. Ix možno vovremja ne zametit’ (a značit, upustit’ dragocennoe vremja dlja lečenija), esli rebenok ešče ne govorit.*
 ‘Don't miss the first signs indicating the onset of an illness. You might not notice them in time (which means missing valuable time for treatment) if the child is not yet speaking.’

[I. Rjazanova. Otit // «Zdorov’e», 1999]

Negation can occur in constructions with *možno* in any tense and can be accompanied by interrogative particles. Importantly, the negation of the infinitive does not change the modality type or syntactic properties of the construction. Therefore, the negative particle *ne* ‘not’ preceding the infinitive is not reflected in the construction pattern.

The overall distribution of construction types is illustrated in Figure 2. The majority of constructions convey the modal meaning of external possibility (82%). The remainder are almost evenly distributed among request (6%), intensity (5%), epistemic (4%) and permission (3%) construction types. The lower percentages of request and permission can be explained by the fact that these construction types are more typical for spoken discourse, and as a result, they appear less frequently in written discourse.

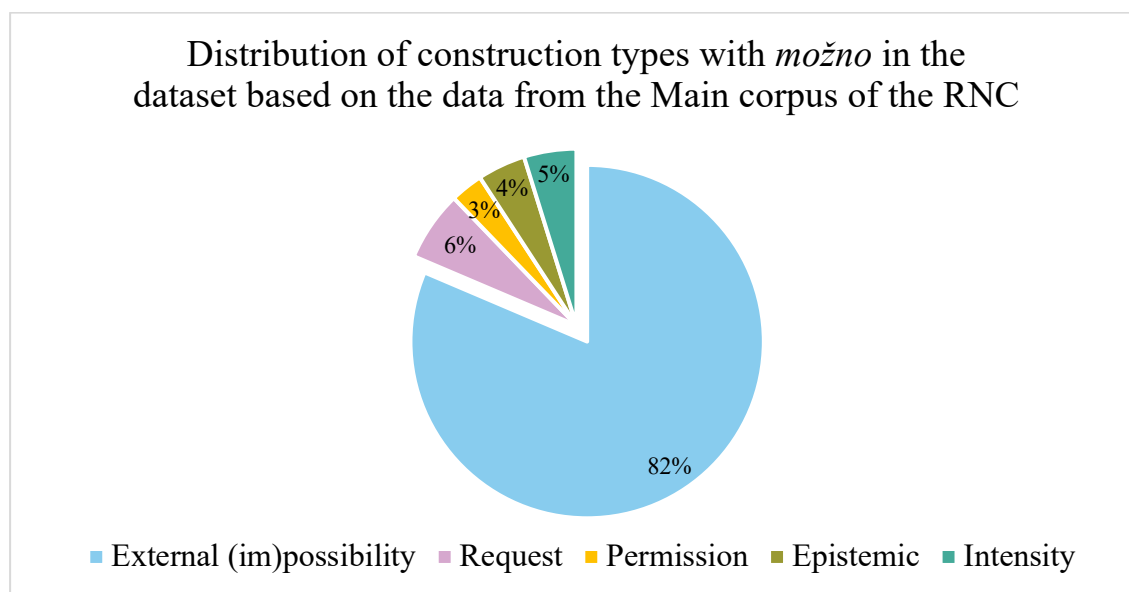


Figure 2. Distribution of construction types with the anchor word *možno* across my dataset.

3.1.1 External (im)possibility

This is the largest group in my dataset, and it is comprised of 4 construction types with semantics of external possibility, such as in (13). Examples in the group external (im)possibility are mostly declaratives (387 sentences, 95%). I will describe each construction type separately in this section.

- (13) *Bylo ne tjaželo, a xolodno. Zdes' prokladnaja voda. I esli medlenno plyt', možno sil'no zamerznut'.*

‘It wasn’t difficult, but it was cold. Water is icy here. If you swim slowly, you can get very cold.’

[A. Min’kov. Ju. Kudinov, čempion Evropy-2002 v plavanii na otkrytoj vode: «Menja prosto trjaslo» // «Izvestija». 2002]

In example (13), the speaker states that if an individual swims slowly in water with a low temperature, there is a possibility of getting very cold. This possibility is

determined by external, objective factors. In cognitive terms, we can describe cold water and slow swimming as external forces, which impact the participant in a manner that leads them to feel cold. To avoid this, the participant needs to exert more effort to mitigate the effects of the cold water (swim faster).

CONSTRUCTION TYPE 1: *možno* + INF

Instantiations for external impossibility can be further condensed into the following two patterns, see Table 9. The elements in parentheses can be overtly expressed or omitted. The presence of these elements does not change the core semantics of the construction type, but the elements place the situation either in the past or future or convey the information that it is possible not to carry out the action denoted by the infinitive. In some cases, the infinitive itself can be omitted by the speaker to avoid unnecessary repetition.

	Instantiations in my data
CONSTRUCTION TYPE 1: <i>možno</i> + INF	<i>možno</i> + (<i>bylo</i> / <i>budet</i>) + (<i>ne</i>) + INF
	<i>možno</i> + <i>bylo</i> + <i>by</i> + (INF)

Table 9. Condensed instantiations of construction type 1 within the domain of external possibility. The arbitrary elements of instantiations are given in parentheses.

Constructions denoting external possibility can be in the past, present, or future, as in (14), (15), and (16) respectively. It should be noted that the semantics of constructions with the future copula *budet* ‘will’ is more complex compared to the straightforward expression of possibility in the past. A comprehensive analysis of constructions with the future copula is presented in the Article 3.

- (14) *Kupit’ ix možno bylo tol’ko na černom rynke.*
 ‘One could buy them only on the black market.’
 [S. Dovlatov. Čemodan. 1986]
- (15) *A u Fetisyča uroki byli sdelany, možno i v školu otpravljat’sja.*
 ‘Fetisyč has done the homework, so now he can go to school.’
 [B. Ekimov. Fetisyč // «Novyj Mir». 1996]
- (16) *Daj-ka, dumaju, sperva na original vzgljanu, a tam, gljadiš’, i sravnit’ možno budet, esli zainteresujus’.*
 ‘Let me I think, first take a look at the original, and then, perhaps, I will be able to compare them if I get interested.’
 [Forum: 17 mgnovenij vesny. 2005-2010.]

The construction *možno* + INF is compatible with the subjunctive construction which consists of the past form of the verb *byt’* and the particle *by*, as in (17). Together, these constructions are used to denote hypothetical situations that could have happened but did not.

- (17) *Esli by ne zelenye ošmet’ja na lice, možno, naverno, bylo by uvidet’, kak ščeki porozovali, glaza-to už točno zasverkali, kuda ustalost’ delas’...*

‘If it was not for the green clumps on the face, one could probably have seen how the cheeks turned pink, and the eyes definitely sparkled, where did the fatigue go...’

[A. Mardan’. Tajna na troix // «Dal’nij Vostok». 2019]

In example (17) the green clumps of dirt on the face obstruct the speaker’s ability to see the change in the color of the cheeks. However, despite this, the speaker speculates that the cheeks were likely turning pink.

CONSTRUCTION TYPE 2: *ne* + *možno* + INF

In my dataset, this construction type is represented by two examples that express external impossibility, see (18) and (19). Both examples originate from the second half of the 18th century. This is not surprising, because in contemporary Russian a more common and idiomatic way to express impossibility (prohibition) is reserved for another modal word: *nel’zja* ‘not allowed’.

(18) *Ved’ Sof’juškino nedvižimoe imenie nam k sebe pridvinut’ ne možno.*
‘Indeed, it is impossible for us to move Sofyushkin’s real estate closer to us.’
[D. Fonvizin. Nedorosl’. 1782]

(19) *Ja starajus’ byt’ pisatelem, esli tol’ko kogda-nibud’ mne onoe udastsja, i vse moe želanie osnovano na ètom; i kak sie ešče pervyj moj trud, to ne osmelilsja ja prinjat’ sja za važnuju materiju, potomu što vdruk ne možno mne byt’ obo vsem svedušču, a so vremenem, možet byt’, i poluču sie sčastie, što nazovut menja sočinitelem; (...).*
‘I strive to be a writer, if I could someday succeed in it, and all my desire is based on this; and as this is still my first endeavor, I did not dare to tackle an important subject, because suddenly I may not be knowledgeable about everything, and with time, perhaps, I will achieve this happiness that they will call me a writer; (...)’
[M. Čulkov. Peresmešnik, ili Slavenskie skazki. 1766-1768]

However, it is worth noting that the construction *ne možno* can be used in contemporary Russian as an ironic reply to a request with *možno*, as in (20). Example (20) is not part of my dataset; it was obtained through an additional search in the RNC.

(20) — *A če ja s Konovalenko-to? Možno mne s Demičevym? — Ne možno. Ne na kurort priexal.*
‘— Why am I with Konovalenko? Can I be with Demichev? — Not possible. You are not at the resort.’
[S. Samsonov. Nogi. 2006]

In this example, the second speaker does not allow the first one to work in a pair with Demichev instead of Konovalenko as requester wants. The use of the construction *ne možno* in the speaker’s response emphasizes that the speaker perceives this request as

childish and non-serious. This is why the speaker replies almost sarcastically with the *ne možno* construction.

CONSTRUCTION TYPE 3: *možno* + *li* + INF

The interrogative particle *li* ‘whether’ is used in both direct and indirect questions, as shown in (21) and (22). In (21), Valka is checking whether there exists a possibility to move. In (22) the speaker questions whether the possibility of not waking up exists.

- (21) *Val’ka tixo pokačivalas’, proverjaja, možno li sdvinut’sja s mesta (...)*
‘Valka swayed gently, checking if it was possible to move (...)’
[L. Petruševskaja. Malen’kaja volšebnica // «Oktjabr’». 1996]
- (22) *I nakonec, samye glavnye straxi, svjazannye s narkozom. Možno li ne prosnut’sja?*
‘And finally, the most significant fears associated with anesthesia. Can it happen that you do not wake up?’
[E. Kol’cova. Narkoz: straxi i real’nost’ // «100% zdorov’ja». 2002]

CONSTRUCTION TYPE 4: *možno*

In my dataset the *možno* construction is used to express three distinct meanings: external possibility, request and permission. The primary distinguishing factor among these meanings is the context / type of discourse in which they appear. Requests and permissions are used in spoken discourse, typically in dialogues. In contrast, when the *možno* construction is used to indicate external possibility, it is observed in written discourse, which lacks direct interaction or dialogue between participants. First, I provide examples for external possibility construction type, and then in Section 3.1.2. I refer reader to requests and permissions.

The examples of the *možno* construction in my data which express external possibility and permission are used in declarative utterances, whereas the examples indicating request are used in interrogative sentences. Example (23) is an excerpt from a longer reflection about a murder. The author speculates that if the suspect does not quickly realize what is going on, there is a possibility to press all the charges against him and send him to jail. Example (24) is syntactically different from (23). In the first clause the author uses the *možno* + INF construction *možno otdat* ‘is possible to give’ and then omits the verb *otdat* ‘give’ in the following clause. While it would have been grammatically correct to repeat the *možno* + INF construction, doing so would have been a stylistically poor decision.

- (23) *Esli on bystro ne pojmet, čto proizošlo, to ego možno i za rešetku.*
‘If he does not quickly understand what has happened, then he can end up behind bars.’
[Ju. Dombrovskij. Obez’jana prixodit za svoim čerepom. Prolog. 1943-1958]

- (24) *Možno, kak obično, odat' den'gi vuzam, a možno samim ljudjam v vide GIFO (gosudarstvennyx imennyx finansovyx objazatel'stv), social'nyx stipendij, kreditov, usilivaja častnyj spros, podkreplennyj gosden'gami.*

'You can, as usual, give money to universities, or you can provide it directly to individuals in the form of GIFOs (Government Individualized Financial Obligations), social scholarships, loans, thereby boosting private demand supported by government funds.'

[I. Mel'nikova. Škola vyživanija // «Itogi». 2003]

3.1.2 Request and Permission

REQUEST	
	Instantiations in my data
CONSTRUCTION TYPE 5: <i>možno</i> + <i>li</i> + INF	(<i>ne</i>) + <i>možno</i> + <i>li/l'</i> + INF
CONSTRUCTION TYPE 6: <i>možno</i> + INF	<i>možno</i> + (<i>budet</i>) + INF
CONSTRUCTION TYPE 7: <i>možno</i>	<i>možno</i> + (DAT)
CONSTRUCTION TYPE 8: <i>možno</i> + NOM + VFIN	<i>možno</i> + NOM + VFIN
CONSTRUCTION TYPE 9: <i>esli možno</i>	<i>esli</i> + <i>možno</i>

Table 10. Condensed instantiations of construction types 5-9 within the domain of request. The arbitrary elements of instantiations are given in parentheses.

In my dataset, all constructions with modal *možno* used for requesting, with the exception of the *esli možno* construction, are used in interrogative utterances. It is important to note that permission and request are pragmatically closely related speech acts, since permission is one of the potential responses to a request. Requests with *možno* are requests in which the speaker usually asks the hearer to grant the speaker permission to carry out an action or to acquire specific information. Sometimes the speaker can also request permission on behalf of someone else, although such cases are relatively infrequent. In response to these requests, the hearer can either grant or refuse the permission. In other words, permission is a reaction to a request. Given this connection between request and permission, I will examine these two types together.

Request with competing constructions *možno* + NOM + VFIN, as in (25), and *možno* + (DAT) + INF, as in (26) are examined in Article 1. In that article I demonstrate that the *možno* + NOM + VFIN construction is gradually replacing the construction with the infinitive.

- (25) *Možno, ja im pokažu, gde pjatyj «A»? – skazal ja, obnaglev ot straxa.*
 'Can I show them where the fifth "A" is? – I said, overcoming my fear.'
 [F. Iskander. Trinadcatyj podvig Gerakla. 1966]
- (26) *Valečka, možno tol'ko odno slovo sprositi'?*
 'Valechka, can I ask a quick question?'
 [I. Grekova. Letom v gorode. 1962]

The remainder of the constructions, namely *možno + li + INF*, as in (27), *možno*, as in (28) and *esli možno*, as in (29), are discussed in Article 3, which compares requests across Slavic languages.

- (27) *Ispytuemyj M.: ris. 1 – rannee utro ili pozdnij večer, štil’; ris. 2 – tot že štil’, no bliže k beregu, ptica; ris. 3 – (možno li perevoračivat’ risunok?*

‘Participant M: Picture 1 – early morning or late evening, calm; Picture 2 – the same calm, but closer to the shore, a bird; Picture 3 – (Is it possible to turn the picture?)’

[E. Krupnik. Èksperimental’noe issledovanie mexanizmov celostnogo vosprijatija // «Voprosy psixologii». 2003]

- (28) *Ganka podoždal i postučal pal’cem o kosjak. — Da, da, — otvetili emu iz komnaty. — Možno? — sprosil Ganka, ostorožno otdergivaja polog.*

‘Ganka waited for a moment and tapped his finger against the doorframe. — Yes, yes, — came a reply from inside the room. — May I? — Ganka asked, carefully pulling back the curtain.’

[Ju. Dombrovskij. Obez’jana prixodit za svojim čerepom, čast’ 3. 1943-1958]

- (29) *Svoeručnye zapiski moi prošu vas vozvratit’ mne teper’ že, esli možno (...).*

‘I kindly request that you return my handwritten notes to me right now, if possible (...).’

[N. Durova. Pis’ma A. S. Puškinu. 1835-1836]

There is also one request, see (30), with the *ne + možno + l’ + INF* construction, which comes from the same play as examples (18) and (19), that express external impossibility, and belongs to the second half of the 18th century. Typically, the use of negation downtones the expectations of fulfillment of request (see Trosborg 1995: 209-221). However, as mentioned above, *ne + možno + INF* is an outdated construction; in contemporary Russian the same meaning is conveyed by the *nel’zja + li + INF* construction.

- (30) *Ne možno l’, djadjuška, najti takoe sredstvo, čtob mne nikto na svete zla ne poželal?*

‘Can’t you find a way, dear uncle, so that no one in the world would wish me harm?’

[D. Fonvizin. Nedorosl’. 1782]

PERMISSION	
	Instantiations in my data
CONSTRUCTION TYPE 10: <i>možno</i>	<i>možno</i>
CONSTRUCTION TYPE 11: <i>možno + INF</i>	<i>možno + (ne) + INF</i>

Table 11. Condensed instantiations of construction types 10 and 11 within the domain of permission. The arbitrary elements of instantiations are given in parentheses.

When the *možno* and *možno + INF* constructions function as permissive constructions, they are used either as an “echo reply” to the request which contains the modal word

možno, as in (31), or as an independent reply to a request, as in (32), from a conversation between a patient after an operation and a surgeon.

- (31) *Ešče v mašine, kogda exali moskovskimi ulicami v universitet, professor govoril Ivanu: Počemu neprememno nado učit'. Rasskaži, kak ty obo vsem ètom dumaješ', — polučitsja pro žizn'. — Možno, Njura tože vystupit? — poprosil Ivan. — **Možno**. — Net, ja ne budu, — vosprotivilas' Njura.*
'While still in the car, driving through Moscow's streets on their way to the university, the professor spoke to Ivan: – Why is it absolutely necessary to study? Tell me what do you think about this – it will be a conversation about life. – Can Nura also participate? – Ivan asked. – Yes, she can – the professor replied. – No, I will not, – Nura objected.'

[V. Šukšin. Pečki-lavočki. 1970-1972]

- (32) *Vzgljanula – èto byli trubki, rezinovyje, krasnyje, poxožie na červej. – Uberite ix, poprosila ja. – **Možno** uže snjat', esli oni mešajut. Vydernula.*
'She looked – there were tubes, rubber ones, red, resembling worms. – Remove them, – I asked. – You can remove them now if they are bothering you. She pulled them out.'

[I. Grekova. Perelom. 1987]

Example (33) is the inner dialogue of a soldier, which unfolds immediately after he was teased by other soldiers. The broader context is required to interpret the meaning of *možno* construction correctly. Prior to this internal reflection, the soldier, known for his temper and physical strength, was mocked by his comrades. He felt anger but quickly noticed that his comrades realized that they had crossed the line and fell silent, fearful that he could lose his temper and beat them up. In response to this situation, the soldier gives reasons to himself not to start a fight. Finally, he permits himself to avoid engaging in a fight, since the others have already acknowledged his authority and power.

- (33) *Ostal'nye tože zatknulis'. Menja zdes' znali. I ja sebja znal. I Rinat, staršina nebityj, pomnil, kak pytalsja zastavit' menja podmetat'. Čto ž, **možno ne povtorjat'sja**.*

'The rest of them fell silent too. They knew me here. And I knew myself. And Rinat, the unscathed elder, remembered how he had tried to make me sweep the floor. Well, there is no need to repeat [the fight].'

[V. Čigir. Marcell // «Dal'nij Vostok». 2019]

Another smaller semantic subgroup within the permission semantic domain is consent, which is illustrated by example (34). The key difference between consent and permission lies in the fact that permission is typically granted by the participant with more authority or power, whereas consent is mutual and occurs between participants with equal authority. In example (31) the professor, who organized a talk at the university for Nura's husband, grants Nura permission to also say a couple of words. In example (32) a patient is granted permission by her doctor to remove a device consisting of tubes to increase oxygen intake after surgery. In both examples, the

doctor and the professor have more authority or power compared to the other participants. In contrast, in example (34) Novikov and Getmanov are both officers sharing a train compartment. Therefore, when Getmanov invites Novikov to play a game of dominoes, Novikov consents, indicating agreement between equals, rather than permission.

- (34) *Getmanov v pižame, raskrytoj na beloј grudi, poluležal na divane. — Nu kak, zab'em kozla? Generalitet dal soglasie. — Čto ž, èto možno, — otvetil Novikov.*
 ‘Getmanov, in an unbuttoned pajama top, reclined on the bench. – So, shall we play dominoes? The officers gave their consent. – Well, let’s play, – replied Novikov.’

[V. Grossman. *Žizn' i sud'ba*, čast' 2. 1960]

3.1.3 Epistemic

Epistemic utterances are used to describe the speaker’s assessment of the likelihood (likely/unlikely, probable/improbable) of a situation described in the proposition. Epistemic constructions with the anchor modal *možno* in my dataset are found in either rhetorical questions or exclamations. Rhetorical utterances are the speaker’s reaction to a previously discussed state of affairs. Exclamative utterances express surprise, whereas interrogatives express disbelief by questioning the validity of the statement. A speaker poses a rhetorical question without expecting a direct genuine answer from their interlocutor(s). The main function of a rhetorical expression is to make a point or to emphasize a certain idea that has been previously uttered.

It is important to note that there is no clear boundary between exclamations and interrogatives in rhetorical utterances. Most often rhetorical utterances have characteristics of both, and the choice of punctuation marks can be misleading. The author chooses either a question mark or an exclamation mark depending on what meaning the author wants to emphasize.

The epistemic constructions with *možno* share a syntactic property with constructions denoting permission, as they always appear as a reaction to a previous utterance or to commonly shared knowledge.

EPISTEMIC	
	Instantiations in my data
CONSTRUCTION TYPE 12: <i>kak + možno + INF</i>	<i>kak + (že) + možno + (INF)</i>
CONSTRUCTION TYPE 13: <i>neuželi + možno + INF</i>	<i>neuželi + možno + (INF)</i>
CONSTRUCTION TYPE 14: <i>razve + možno + INF</i>	<i>razve + (ž) + možno + INF</i>
CONSTRUCTION TYPE 15: <i>skol'ko + možno + INF</i>	<i>skol'ko + možno + INF</i>
CONSTRUCTION TYPE 16: <i>možno + li + INF</i>	<i>možno + li + (INF)</i>

Table 12. Condensed instantiations of construction types 12-16 within the domain of epistemic possibility. The arbitrary elements of instantiations are given in parentheses.

Epistemic utterances with the modal *možno* are presented in my data in five construction types, see Table 12. These construction types involve various interrogative particles, namely particles *kak* ‘how’, *neuželi* ‘really’, *razve* ‘whether, indeed’, *skol’ko* ‘how much’ and *li* ‘whether’ in addition to the modal *možno* and the infinitive, see examples (35-39). The particle *že* ‘indeed’ can be inserted into any of these constructions, and usually serves to intensify the speaker’s disbelief or surprise.

- (35) *Kratko vypisyvaju, delaju sxemu ètoj glavy, kak by ja ee napisal. Priezžaju, čitaju emu. On načinaet kipjatit’sja: «Kak èto možno? Čto ty bereš’ za osnovu? Da ty duren’!» — i prinimaetsja diktovat’, ne daet mne bol’she vstrevat’.*
 ‘I write an outline, create a draft of the chapter, how I would write it. I come, read it to him. He starts to fume: “How is this possible? What are you basing this on? You are a fool!” and starts dictating, not letting me interrupt anymore.’
 [D. Granin. Zubr. 1987]
- (36) *Ja dlja tebjja vse sdelaju, Tolečka. Koxanyj moj... Žalet’ tebjja budu. A èti zaxomutali tebjja, prislugoj sdelali. Skol’ko možno čužogo rebenka rastit’?*
 ‘I will do anything for you, Tolechka. My beloved... I will miss you. Those people they turned you into their servant. For how long is it possible to raise someone else’s child?’
 [I. Levitas. Na gorax bal’zamičeskix // «Dal’nij Vostok». 2019]
- (37) *Neuželi možno bylo žit’, ne znaja o Grekove, Kolomejceve, Poljakove, o Klimove, o Batrakove, o borodatom Zubareve?*
 ‘Could one really live without knowing about Grekov, Kolomeyts, Polyakov, about Klimov, about Batrakov, about the bearded Zubarev?’
 [V. Grossman. Žizn’ i sud’ba, č. 1. 1960]
- (38) *V razgar ssory oni s Ljudoj poprobovali bylo vmešat’sja: «Nu čto vy, rebjatki, razve tak možno? Davajte spokojno pogovorim!»*
 ‘In the midst of their argument, they tried to intervene with Lyuda, saying, “Come on, guys, how can you argue like that? Let’s talk calmly!”’
 [I. Murav’eva. Meščanin vo dvorjanstve. 1994]
- (39) *Da čto ty zatejala-to, grexovodnica! Možno li èto! Podumala l’ ty!*
 ‘What are you plotting, wicked girl! It is impossible! Have you thought about what are you doing?’
 [A. Ostrovskij. Groza. 1860]

In all of the examples provided above, the speaker’s perception of reality is such that they view the action denoted by the infinitive (*rastit’* ‘grow’ in (36) and *žit’* ‘live’ in (37)) or implied by the preceding context (as in (35), (38) and (39)) as absolutely impossible or unacceptable. In (35), the speaker considers the quality of the drafted chapter as absolutely unacceptable, whereas in (36) the speaker is outraged by the idea that some people could take advantage of Tolechka by making him take care of their son for such a long time. In (37), the speaker believes that people who have never

heard of Grekov, Kolomeyts etc are essentially wasting their lives. In (38), the speaker is positively sure that people should not argue but rather talk calmly and constructively when they have disagreements. In (39) the speaker finds the behavior of her interlocutor imprudent and expresses her judgment about it.

The common aspect in the semantics of all the construction types mentioned above is non-conformity of the hearer's behavior/views with the mental image or expectation held by the speaker. However, there are also finer semantic differences among these constructions that can be attributed to the particles that constitute them.

Both interrogative particles *neuželi* and *razve* convey negative epistemic evaluation of the event, i.e., the speaker assesses the situation as improbable or unlikely to happen (Logvinova 2021). At the same time *skol'ko* and *kak* add their meaning to *možno*. *Skol'ko* profiles the temporal aspect of the situation, i.e., it is not that the situation described by the verb is impossible *per se*, but rather the speaker is exasperated by its duration. The *kak možno* construction's translation equivalent in English is 'how is it possible' that captures the meaning and the structure of the Russian original.

The more nuanced differences among particles *neuželi*, *razve*, and *kak* have been explored by Bulygina and Šmelev (1987) and Dobrovol'skij and Levontina (2014). While the topic is undoubtedly very interesting, I will not engage into more fine-grained semantic analysis of epistemic constructions. A comprehensive analysis would require additional data that focuses solely on epistemic constructions with *možno*.

The particle *li* narrows down the pool of potential answers to two alternatives: agreeing or disagreeing with the possibility of the situation that is discussed (Logvinova 2021). If we were to remove the particle *li* in the example (39), the “*Možno èto!*” utterance becomes more challenging to interpret. One possible interpretation is as granting permission to choose one out of two proposed scenarios: *možno èto (zadumat')* ‘One can plot (in) this (manner, but not in the other way). However, this interpretation lacks epistemic semantics.

Altogether these particles play a crucial role in conveying nuanced epistemic meanings. They allow the speaker to express more precisely the elements that evoke their doubt or disbelief. It should be noted that these particles are elements of the construction with the anchor modal *možno*, and the omission of the modal or the particle leads to significant changes in the meaning of utterances.

In summary, epistemic constructions form a continuum in which the construction types *možno + li + INF*, *neuželi + možno + INF* and *razve + (ž) + možno + INF* are more abstract in nature and assess the situation as unlikely in the speaker's conception of reality, suggesting doubt or improbability. On the other end of this continuum are the construction types *kak + (že) + možno + INF* and *skol'ko + možno + INF* with more specified semantics. They accentuate particular aspects, such as length or manner, which the speaker perceives as unlikely or impossible.

3.1.4 Intensity

INTENSITY: COMPARATIVE	
	Instantiations in my data
CONSTRUCTION TYPE 17: <i>kak + možno + ADV.COMP</i>	<i>kak + možno + ADV.COMP</i>

Table 13. Condensed instantiations of construction type 17 within the domain of intensity.

The construction types that belong to the intensity domain can be broadly classified into two groups: comparatives and superlatives. Comparatives in my data are represented by nineteen examples, whereas superlatives appear in five examples.

Iomdin (2019) argues that comparative constructions such as *kak + možno + ADV.COMP* tend to function as adverbs of manner, as in (40). The speaker is answering in the politest manner that he can manage in a given situation.

- (40) *Kak možno vežlivee ja vydavil iz sebja: (...).*
 ‘As politely as possible I managed to say (lit. squeezed out of myself): (..).’
 [S. Burlačenko. Sorvigolova // «Dal’nij Vostok». 2019]

Because they serve as adverbs of manner, these constructions do not have temporality in their semantics but are situated in the same temporal space as the clause they define. In example (40) the situation is located in the past. However, in example (41) *kak možno bystree* ‘as quickly as possible’ emphasizes the urgency of completing some action in the future. Interestingly, this construction serves as an adverb of manner for the construction with the modal of necessity *neobxodimo sdelat’* ‘have to be done’.

- (41) *Pričem sdelat’ èto neobxodimo kak možno bystree.*
 ‘At the same time, this have to be done as soon as possible.’
 [Častnyj slučaj // «Stolica». 1997]

The following adverbs are used in the *kak + možno + ADV.COMP* construction: *bol’she* ‘more’ (five examples), *časče* ‘more often’ (two examples), *bystrej* ‘more quickly’, *vežlivee* ‘more politely’ *dol’she* ‘longer’, *zaduševnee* ‘more sympathetically’, *krasnorečivej* ‘more eloquently’, *menee* ‘less’, *men’she* ‘less’, *polnee* ‘more completely’, *ravnodušnee i otvlečennej* ‘more indifferently and more distractedly’, *skoree* ‘more quickly’, *spokojnee* ‘more calmly’, and *ubeditel’nej* ‘more confidently’.

INTENSITY: SUPERLATIVE	
	Instantiations
CONSTRUCTION TYPE 18: <i>gde + možno</i>	<i>gde + (tol’ko) + možno</i>
CONSTRUCTION TYPE 19: <i>čto + možno</i>	IMP / vse + čto + (bylo) + možno

Table 14. Condensed instantiations of construction types 18 and 19 within the domain of intensity. The arbitrary elements of instantiations are given in parentheses.

Superlative constructions have a combination of anchors, namely adverb of place *gde* ‘where’, as in (42) and adverb *čto* ‘what’, as in (43).

- (42) *No vsjudu, **gde možno**, monegaski napominajut o svoej samobytnosti i gosudarstvennosti.*
 ‘But everywhere possible, the Monegasques remind of their uniqueness and statehood.’

[A. Karabaš. Tri dnja v Monako // «Domovoj». 2002]

- (43) *Messir, kljanus’, ja delal geroičeskie popytki spasti vse, **čto bylo možno**, i vot vse, čto udalos’ otstojat.’*
 ‘Sir, I swear, I made heroic attempts to save everything possible, and here is everything that I managed to defend.’

[M. Bulgakov. Master i Margarita, čast’ 2. 1929-1940]

In comparison with real superlatives, these constructions profile all the options that are feasible within the realm of possibility, rather than explicitly comparing options in terms of absolute superiority. The presence of *možno* creates an effect of hedging. This can be further illustrated by considering an extended version of this construction in (44). In example (44) the speaker amplifies the number of options by adding to the list places where it was forbidden to play football.

- (44) *Gde tol’ko my ne gonjali mjači! Na bulyžnyx mostovyx ulic (avtomobili togda byli redki), v kamennyx kolodcax leningradskix dvorov, na bul’varax i v skverax, v sadax, vezde... **gde tol’ko možno i nel’zja**.*
 ‘We played football everywhere! On cobblestone streets (cars were rare back then), in the paved courtyards of Leningrad, on boulevards and in the squares, in gardens, everywhere... where it was possible and impossible.’

[G. Žženov. Prožitoe. 2002]¹¹

3.1.5 Slot fillers

Another potential extension of the current classification involves a closer examination of the particular slot¹² fillers in constructions with *možno*. In my data, I identified only two slot fillers that significantly modify the semantics of constructions when compared with the presence of other slot fillers. In cases where these two fillers are present, these constructions could be potentially interpreted as separate constructional patterns.

The first slot filler that modifies the semantics of the construction is the verb *žit’* ‘live’. The semantics of *žit’ možno* is mostly idiomatic: ‘one can live with it, things could be worse’. The conditions described are worse than expected, yet still tolerable. In example (45) the speaker is telling a story about his life in a penal colony. Despite the challenging circumstances, he emphasizes positive experiences that he had there.

¹¹ Example (46) is not a part of my sample of 500 attestations of *možno*. It was additionally retrieved from the RNC.

¹² Slot is a variable part of construction.

However, since these positive aspects occurred during his time in jail, the overall situation can be only partially perceived as a pleasant experience.

(45) *Da, provel ja, Georgij Nikolaevič, v ètoj kolonii pjat' let nezametnyx (...) Vesny že u menja dressirovannye! V obščem, žil! Gazety, knigi, radio! Po vyxodnym kino! Žit' možno!*

‘I manipulated the scales, after all! In general, I lived! Newspapers, books, radio! Movies on weekends! One can live with it!’

[Ju. Dombrovskij. Fakul'tet nenužnyx veščej. Č. 2. 1978.]

The word order in which *žit'* precedes *možno* and the fact that this construction is used as an independent clause are essential for the correct interpretation. Compare with the *možno zit'* construction, in which the speaker literally talks about the possibility to live in some place or under certain circumstances.

The second relevant slot filler is the lexeme *skazat'*, which, when combined with *možno*, functions as a hedging or softening discourse marker. This combination is frequently used to introduce a description that might not be entirely accurate, as in (46). The person being described by the speaker has never actually lived in New York. However, through extensive reading and watching many movies about the city, this person almost feels as if he has been there.

(46) *Ty stol'ko čital o stritax i avenju Manxèttena, stol'ko videl foto, kino i tele, čto v tvoem voobraženii ètot gorod, možno skazat', postroen.*

‘You have read so much about the streets and avenues of Manhattan, seen so many photos, movies, and TV shows that, one might say, this city is constructed in your imagination.’

[V. Aksenov. Kruglye sutki non-stop // «Novyj Mir». 1976]

In this section I have outlined a potential direction for further examination of constructions with the modal word *možno* as an anchor. However, a separate study with a larger database is required to gain a comprehensive understanding of the contribution of slot fillers to the overall semantics of constructions.

3.2 Summary

In this chapter I presented an analysis of 500 attestations of *možno*. I identified 19 construction types, which I further categorized into five semantic clusters: external possibility, requests, permissions, epistemic, and intensity. Figure 3 visually represents these clusters and relations between them. The circles correspond to clusters; the size of circle corresponds to the approximate number of attestations. Arrows are used to illustrate the interconnections between the clusters. It should be noted that there are no clear-cut boundaries between elements and spaces, this is a semantic continuum with natural overlap between some of its elements.

The predominant construction type is external possibility, comprising utterances that denote that the circumstances beyond the speaker's control are such that they enable the speaker to perform an action or make a situation to happen. External possibility meanings can combine with a mood construction, specifically the Subjunctive mood. In that case, constructions denote hypothetical situations that could have happened but did not.

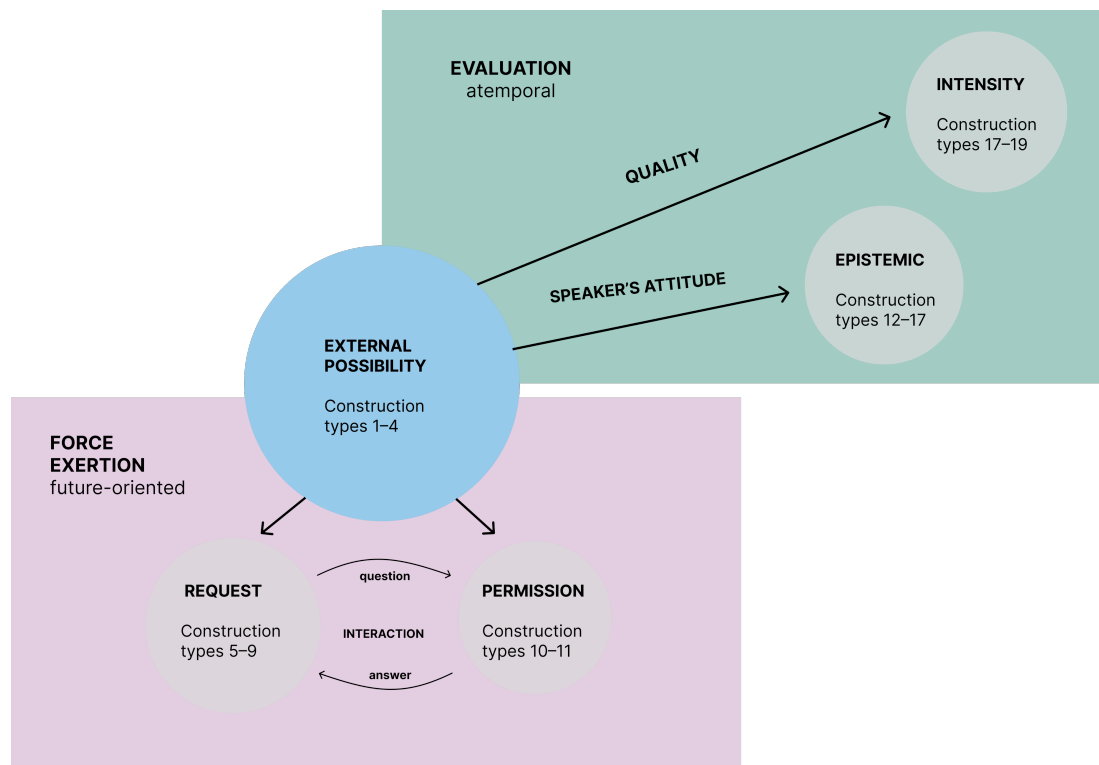


Figure 3. Representation of semantic clusters constituted by construction types with *možno* as an anchor.

The number of instantiations in the other four clusters are significantly lower compared to external possibility and are almost equally distributed across the remaining clusters. Two distinct semantic spaces emerge on the basis of the external impossibility cluster: evaluation and force exertion. Force exertion encompasses requests and permissions, while evaluation includes intensity and epistemic domains.

Request, permissions, and external possibility are clusters traditionally described as pertaining to root modality. Requests and permission place crucial emphasis on the concept of force: an imbalance of power is evident; and all interlocutors are aware of it. Thus, I delineate the force exertion semantic space that encompasses requests and permissions. Requests and permissions are future-oriented utterances, whereas external possibility meanings can refer to any point on the temporal axis – past, present, or future.

Intensity refers to the speaker's assessment of a characteristic or quality, whereas epistemic evaluation involves assessment of events in terms of their alignment with the speaker's beliefs. Both intensity and epistemic meanings are atemporal *per se* and share the temporal location of the clause they appear in.

The further the meaning strays from the external possibility, the more additional anchor words become an integral part of the construction, and the semantics of *možno* is more abstract in these constructions. Both epistemic and intensity meanings have two anchors, e.g., *razve + možno*, *kak + možno*, *gde + možno*.

It should be noted that due to the methodological limitations of this study, constructional elements such as intonation, slot fillers and non-verbal signals were not examined in detail. However, future consideration of these parameters may provide meaningful insights into the more nuanced understanding of constructions with modal words as their anchors.

Regarding polysemy, the analysis presented in this chapter facilitates the disambiguation of certain cases by considering elements, such as type of speech act (e.g., the declarative *možno* construction expresses possibility and permission, whereas interrogative *možno* construction expresses requests), and discourse type (spoken vs. written) as constructional units. However, the polysemy still remains to certain extent. Polysemy is further discussed in the next chapter.

Chapter 4 Tense-Aspect-Mood and the No Synonymy Principle

4.1 Tense-Aspect-Mood

Language is a multifaceted system that extends beyond individual words or isolated utterances. It encompasses various interconnected systems of elements, including intonation and gestures. Utterances, even those consisting of a single word, are intricately woven into the discourse by the speaker, forming complex relationships at multiple levels. As linguists, we are naturally constrained by the need to study specific aspects of a given construction at a given time. In this chapter, I will focus on the Tense-Aspect-Mood relation and explore existing approaches while maintaining a particular focus on their connection to constructions involving the Russian modal word *možno*.

Tense-Aspect-Mood (TAM) refers to the interplay between three linguistic domains (Bybee et al. 1994; Bybee and Dahl 1989; Dahl 1985, 2000, 2013). Tense deals with the grammatical marking of time, Aspect focuses on the “different way of viewing the internal temporal constituency of a situation” (Comrie 1976: 3) or, in other words on the nature of how events unfold, and Mood pertains to the expression of modality, including grammatical mood, possibility, necessity, volition, epistemic meanings, and sometimes evidentiality. Since Russian constructions with *možno* are not used for encoding evidentiality, this grammatical category will not be further examined in this dissertation.

Bybee argues that TAM categories emerge through repeated usage and become conventionalized over time: “grammar is the cognitive organization of one’s experience with language” (Bybee 2006: 711). Dahl (1985) explores both diachronic and synchronic aspects of TAM, i.e., how grammatical markers evolve and acquire temporal, aspectual, and modal meanings over time. In this chapter I will zoom in on synchronic aspects of tense and modality interactions in constructions with the modal *možno* as an anchor that are relevant for the data presented in this dissertation.

I will not engage in discussion of the relations between modal and aspectual meanings, but rather refer readers to studies by Divjak (2009, 2011); Šmelev and Zaliznjak (2006); Padučeva (2008), who extensively explored modality and aspect interactions in Slavic (Russian and Polish in particular). For Russian, Divjak (2009) claims that the choice of aspect is motivated not by modality type, but by a State of Affairs Applicability variable (specific vs. generic). Since my data does not provide insights on whether aspect is a factor that predicts the choice of modal meaning in constructions with *možno*, I will focus on exploration of the interactions of tense and modality.

4.2 Tense and Modality

Temporal information is typically conveyed by verb tenses, adverbs, time expressions, and contextual cues in a sentence. Modal verbs, although not inherently temporal,

contribute to the overall temporal meaning when combined with these elements. *Možno* per se does not directly indicate the future tense. *Možno* is used with the future copula of *byt* 'be' to express possibility for future actions.

Depraetere (2012) discusses how temporal information is conveyed in sentences with modal verbs denoting root and epistemic possibility in English and hypothesizes that this methodology can be extrapolated to the necessity meanings. The main methodological advances in their research are that it is essential to distinguish the temporal location of the modal situation, i.e., the tense in which modal element is used, and the residue, i.e., the proposition that represents a particular situation. In example (47) *možno* indicates a modal situation of external possibility, and *kupit* with its arguments constitutes the residue.

- (47) *Kupit' šampanskoe v ètot čas možno bylo tol'ko za gorodom.*
'At this hour you could buy champagne only outside the city.'
[V. Aksenov. Pora, moj drug, pora. 1963]

Modal situations can be located in past (as in 47), present (as in 48) or future (as in 49) (Depraetere 2009; Verhulst 2009). The relation between the modal situation and the residue is usually formulated in terms of anteriority, simultaneity, and posterity. In example (47) the relationship between the modal situation and the residue are of either simultaneity or posteriority, and both the modal and the infinitive are located in the past.

In example (48) the relation between the modal situation and the residue is of simultaneity, and both elements appear to be situated in the present. However, while the starting point for banks to work with the organization is the moment of speech, the end point for this cooperation is not determined. Therefore, since there are no temporal markers that delimit the temporal space, example (48) can be interpreted as possibility in the future.

- (48) *Rekomendovat' bankam, čto s ètoj organizaciej, členom SNS, možno rabotat', možno ej doverjat'.*
'To recommend to banks that they can work with this organization, a member of the SNS, and trust it.'
[M. Pesin. Soedinitel'nyj sojuz // «Birža pljus svoj dom. 2002]

In example (49) both the modal situation and the residue are clearly located in the future. Notably, there is a future temporal marker in the preceding context: *kogda zakončitsja zima* 'when winter is over'. In Article 3 I present evidence that the construction with a copula has a tendency to appear together with future temporal markers (70 % of attestations in that sample).

- (49) *Vozmožno, xoteli podoždat', kogda zakončitsja zima i interes obščestva k ètoj teme neskol'ko oxladeet, i togda mnogie ščekotlivye popravki možno budet prinjat' bez osobogo šuma.*

‘Perhaps you wanted to wait until winter is over and the public interest in this topic cools down a bit, and then many sensitive amendments can be adopted without much noise.’

[I. Pylaev. *Političeskij kapremont // «Eženedel’nyj žurnal»*. 2003]

A combination of the *možno* + INF construction with the Subjunctive mood is realized in two contexts: independent clause and subordinate clause in conditionals. In example (50) the construction *možno* + INF is combined with the Subjunctive mood and is used as an independent clause. This sentence expresses a suggestion to use the upcoming summit as a platform for clarification of certain approaches. Therefore, example (50) conveys the meaning that there is a possibility in the future to carry out an action, however compared to example (52) the possibility is less certain.

(50) *Dlja projasnenija ètix podxodov možno bylo by ispol’zovat’ predstojaščij 24 ijunja s. g. sammit liderov «Global’nogo Kompakta».*

‘To clarify these approaches, one could use the upcoming summit of the leaders of the Global Compact on June 24 of this year.’

[«Diplomatičeskij vestnik». 2004]

In example (51) the *možno* + INF construction together with the Subjunctive mood is used in a conditional sentence, and refers to an unrealized possibility in the past. In this case the modal situation belongs to non-reality, and is located in the past.

(51) *Vyraženie ego smuglogo s svincovym otlivom lica, osobenno ego blednyx губ, **možno bylo by nazvat’ počti svirepym, esli b ono ne bylo tak spokojno-zadumčivo.***

‘The expression on his bronzed with a bluish tint face, especially his pale lips could almost be called fierce if it weren't so calmly contemplative.’

[I. Turgenev. *Pevcy*. 1850]

To sum up, there are at least three constructional patterns that express possibility meanings located in the future: *možno* + INF, *možno + budet* + INF, and *možno + bylo + by* + INF.

In Section 2.3.2 in Chapter 2, I have discussed Langackers’ schema for epistemic modality. Figure 1 is repeated here as Figure 4 for the readers’ convenience. In Figure 4, the Conceptualizer is at C, which is also the present moment. Based on what C knows about the past in Conceived Reality, C can project various possible future scenarios up to a certain point. However, this projection is somewhat uncertain, as signaled by the dashed lines, and at some point Potential Reality is quite wide and vague. Figure 5 is the schema proposed for Tense. Figure 5 emphasizes the fact that C has access only to a segment of Reality, and that everything beyond Immediate Reality is to some extent uncertain. If we compare the two schemas, we can see that the schema for epistemic modality is in essence an extended version of the tense schema.

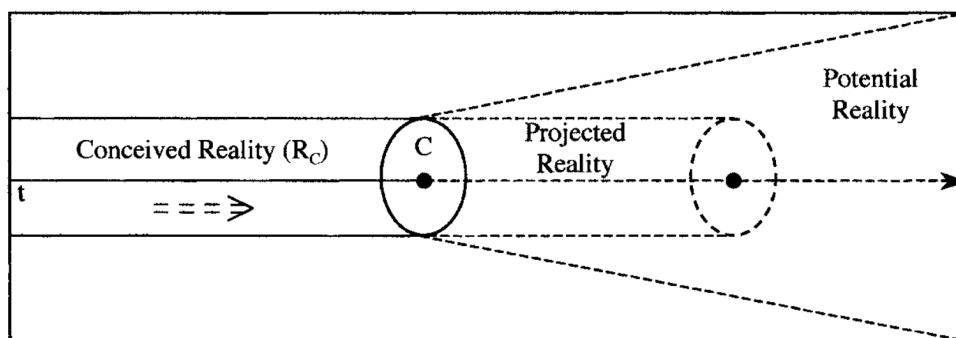


Figure 4. Representation of epistemic modality: speaker's evolving conception of reality, where C stands for conceptualizer in Langacker (2008).

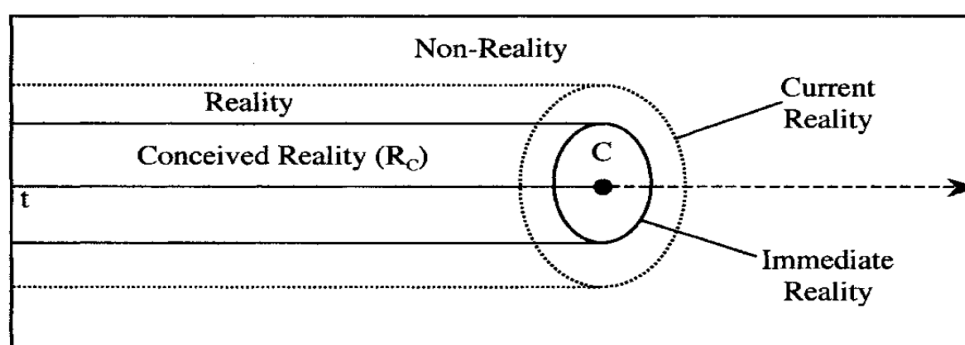


Figure 5. Representation of tense in Langacker (2008).

I have adapted Langacker's schemes for epistemic modality and tense in order to represent the portions of Reality and Non-Reality that are relevant for the interpretation of *možno* constructions. The Conceived Reality of the past corresponds to expressions with *možno + bylo + INF*, since these always refer to situations that were possible in the past. The *možno + bylo + by + INF* construction is located in Non-Reality when combined with an if-clause, but otherwise in Potential Reality. At Immediate Reality we find the *možno + INF* construction, which can also appear in Potential Reality. Projected Reality is the realm of the *možno + budet + INF* construction when accompanied by a temporal marker. Otherwise, *možno + budet + INF* inhabits Potential Reality together with *možno + INF* and *možno + bylo + by + INF*.

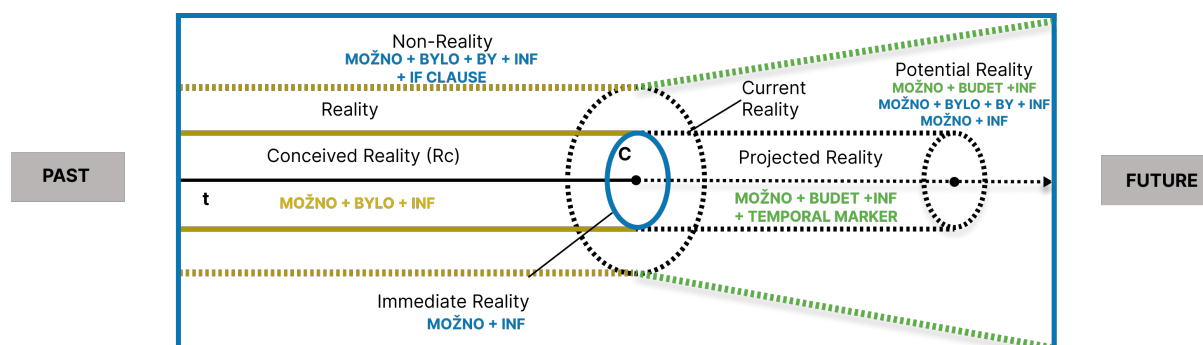


Figure 6. Adaptation of Langacker's model of epistemic modality and tense for constructions with the modal word *možno* as an anchor.

Figure 6 demonstrates how various instantiations of construction *možno* + INF that denote future or irreal events are distributed.

4.3 No Synonymy in the light of constructions with *možno*

In Article 2, I explore the temporal location of the modal situation and residue in constructions with the modal word *možno* and the future copula *budet* in detail. While in the article I discuss the semantic differences and propose factors that help to disambiguate constructions with and without the copula, in this section I discuss the rivalry between these constructions in the light of the No Synonymy Principle. In this chapter I synthesize the findings from Article 2 and Chapter 3 and discuss them from the perspective of the No Synonymy Principle.

The No Synonymy Principle was introduced by Goldberg:

If two constructions are syntactically distinct, they must be semantically or pragmatically distinct [...]. Pragmatic aspects of constructions involve particulars of information structure, including topic and focus, and additionally stylistic aspects of the construction such as register [...].

Corollary A: If two constructions are syntactically distinct and S(emantically)-synonymous, then they must not be P(ragmatically)-synonymous.

Corollary B: If two constructions are syntactically distinct and P-synonymous, then they must not be S-synonymous.

(Goldberg 1995, 67).

The No Synonymy Principle has been an object of criticism in the past ten years (Herbst 2014; Uhrig 2015; Laporte 2021, Leclercq and Morin 2023). The ultimate consensus is that the principle holds true with certain adjustments for the relationship between semantics and pragmatics. Leclercq and Morin (2023) suggest that it is necessary to specify what is meant by pragmatic vs. social meaning. They regard as pragmatic meanings conventional implicatures, speech acts, and attitudes. Social meaning includes the speaker's background and the socio-cultural context of communication. Additionally, Leclercq and Morin (2023) propose to refer to this principle as the principle of no equivalence, since the term synonymy is often associated with truth-conditional meaning.

The implication of these two Construction Grammar approaches is the following: more information has to be considered as inherent constructional properties in order to differentiate among constructions that previously have been considered synonymous.

The findings in my studies provide partial support for the No Synonymy Principle. Two syntactically distinct constructions, namely *možno* + INF and *možno* + *budet* + INF, exhibit semantic and pragmatic overlap; both constructions can be used to denote possibility in the future, as illustrated in examples (48) and (49).

However, at the same time they demonstrate distinct distributional profiles: constructions without the future copula are significantly more frequent, whereas constructions with the future copula tend to co-occur with future temporal markers. A plausible explanation for the semantic overlap could be attributed to pragmatic factors, which were not considered in my analysis due to methodological limitations. However, the examination of this hypothesis is a matter that I will leave for future research.

My survey of the interaction of *možno* with tense and mood shows that the presence of temporal markers, subjunctive markers, and if-clauses can play important role in the semantics of constructions. These additional elements are arguably just as important as *možno* itself in determining the semantics of expressions. I also find that what appears at first glance to be a construction might actually turn out to be two or more constructions differentiated by context.

Chapter 5 Requests in Slavic languages

The first two articles in this dissertation are devoted to the examination of variation in a particular type of request in the Russian language and to microvariation of requesting strategies in six Slavic languages. In this chapter, I discuss pragmatic factors that motivate the choice of request formula, relations between politeness and (in)directness, and outline most common trends in the expression of conventionally indirect requests in Belarusian, Ukrainian, Bulgarian, Serbian, Czech and Polish.

5.1 Conventionally indirect requests in Russian

Requests are a fundamental aspect of social interaction. Requests come in multiple forms and contexts: people request favors, assistance, information and various other things. The ways of expressing requests are many and varied, and they differ from language to language, from culture to culture and from time to time.

According to Searle (1969), the illocutionary purpose of a request is to prompt the hearer to act, assuming they are capable of carrying out the requested task. Brown and Levinson (1987) and Blum-Kulka et al. (1989) categorize request strategies in three types: direct, conventionally indirect, and non-conventionally indirect.

According to the speech act theorists, direct requests are explicit and to the point, often taking the form of imperatives. On the other hand, conventionally indirect requests employ polite expressions like questions with modal words or conditionals, along with hedging elements such as the use of *please* or other lexical modifiers. Non-conventionally indirect requests, however, are less predictable and heavily rely on strategies specific to a particular culture or language. In this dissertation, I focus on conventionally indirect requests.

In these approaches (Brown and Levinson 1987; Blum-Kulka et al. 1989) the level of directness is directly associated with the concept of politeness. The evidence I present in my articles challenges this link. It should be noted at the beginning that in this dissertation politeness is understood primarily as a linguistic phenomenon, i.e., I focus on the linguistic constructions that convey polite meanings. This approach differs from the discursive approach, in which politeness is a context-dependent and dynamic phenomenon that evolves in the process of communication (Culpeper 2011).

Let us now turn to the pragmatic factors that motivate the choice of the request formula. I will give examples from Russian in this section. A request is a future-oriented speech act. Searle (1969) proposes a set of rules that must be followed in order to perform a request; see the first two columns of Table 15 (adapted from Searle 1969: 66). The speaker may request various things. In this study I will focus on a specific type of request, namely a request for permission to carry out an action. Such requests deviate slightly from the general schema proposed by Searle (1969). I propose the conditions that must be met to perform a speech act of request for permission to

carry out an action in the third column of Table 15 and illustrate them in the fourth column.

Adapted from Searle 1969		Proposed in this dissertation	
Propositional content	Future act A of H	Request of S for permission of H to carry out an action A	Example
Preparatory:	<i>1. H is able to do A. S believes H is able to do A.</i>	1.1. S wants to do A. H controls A. S believes that H controls A. 1.2. H is able to give permission to do A, S believes H is able to give permission to do A.	1.1. Sara wants to take a piece of cake at the party where Sara is a guest. Hanne is a hostess. Sara believes that Hanne controls the cake. 1.2. Hanne is able to permit Sara to take a piece of cake. Sara believes Hanne is able to give permission to take a piece of cake.
	<i>2. It is not obvious to both S and H that H will do A in the normal course of events of his own accord.</i>	2. It is not obvious to both S and H that H will give permission to do A in the normal course of events of his own accord.	2. It is not obvious to both Sara and Hanne that Hanne will give permission to take a piece of cake in the normal course of events of her own accord.
Sincerity:	<i>S wants H to do A.</i>	S wants H to give permission to do A.	Sara wants Hanne to give her permission to take a piece of cake.
Essential:	<i>Counts as an attempt to get H to do A.</i>	Counts as an attempt to get H to give permission to do A.	Counts as an attempt to get Hanne to give permission to Sara to take a piece of cake.

Table 15. The conditions that must be met to perform a speech act of request, where A = speech act or illocutionary act, S = speaker/Sara, H = hearer/Hanne.

Requests are face-threatening illocutionary acts. According to Brown and Levinson's Politeness theory (1978: 311) "face" is the public self-image that every member wants to claim for himself". "Face" can be both positive and negative. Negative face is "the basic claim to territories, personal preserves, rights to non-distraction – i.e., to freedom of action and freedom from imposition". Positive face is "the positive consistent self-image or "personality" (crucially including the desire that this self-image be appreciated and approved of) claimed by interactants". In order to maintain their faces, speakers may use positive or negative politeness strategies. Positive politeness strategies are aimed at keeping the connection with other interlocutors and highlighting friendliness, e.g., attending to the hearer's interests, exaggerating sympathy with the hearer, making offers, jokes, etc. Negative politeness strategies are used by interlocutors to avoid the imposition of their will or desires on each other, e.g., be direct, minimize the size of imposition on the hearer, impersonalize the speaker and the hearer, apologize etc.

Requests by their nature are intended to threaten the hearer's negative face because "the speaker tries to exercise power or direct control over the intentional behavior of the hearer" (Trosborg 1995: 188). At the same time the speaker loses positive face by imposing her will over the hearer. The speaker may lose negative face herself, as "the hearer may choose to refuse to comply with her wishes". Requests for permission to carry out an action are peculiar because as a pre-condition the speaker admits that the hearer has more power and controls the whole situation (see preparatory conditions in column 3 in Table 15). When Sara wants to have a piece of Hanne's cake, she tries to make Hanne comply with her desire. However, Hanne can refuse to give her the cake, so Sara might end up being humiliated. Thus, to maintain successful communication it is crucial for the speaker to minimize risks of losing face not only for the hearer but for herself as well.

One strategy to formulate polite requests is to use conventionally indirect requests. The speaker's goal is to obtain permission from the hearer, so the speaker is interested in mitigating her request in order to keep the hearer's face intact. The default way to formulate a conventionally indirect request to carry out an action in Russian is by making a question that begins with the impersonal modal word *можно* followed by the Experiencer marked in the Dative (52), as opposed to a direct request with an imperative in (53). In example (52) the speaker reduces the potential unpleasant effects for the hearer by implementing an impersonal modal word and thus demonstrating that the speaker accepts the fact that the hearer controls the situation, and consequently that the speaker will accept any decision made by hearer. Conversely, in (53) the speaker directly confronts the hearer's negative face. The speaker orders the hearer to give her the chocolate and by doing so she is violating the hearer's freedom of action.

(52) *Možno mne vzjat' pirožnoe?*

'Is it okay for me to take a pastry?'

[B. Okudžava. Uprazdnennyj teatr. 1989-1993]

(53) ... *daj, mne šokolad, nu daj mne šokolad!*

'Give me chocolate, give me chocolate!'

[Fizičeskoe nakazanie: «za» i «protiv» (forum). 2007.01.05]

So, in (52) the speaker minimizes the risk by using the impersonal modal construction and putting the speaker in an oblique case, thereby making the speaker as inactive as possible and veiling the speaker's desire. Thus, the speaker is more prepared to be rejected. However, simultaneously the speaker presumes responsibility on the part of the hearer. The speaker accepts that the hearer totally controls the situation. If the hearer will refuse to comply with the speaker's wishes, she will substantially compromise her positive face. Consequently, the hearer's freedom to act freely, i.e., to accept or to refuse according to her own will appears to be compromised. To avoid the violations mentioned above, an alternative request formula with a Subject in Nominative has developed in contemporary Russian as in (54).

(54) *Možno ja voz'mu eščë kusoček torta?*

'Is it okay if I take another piece of cake?'

[Kollekcija anekdotov: deti. 1970-2000]

In (54) the modal word mitigates the unpleasant effects for the hearer as it does in (52), but the personal construction recovers the speaker's own face: the speaker becomes more engaged in the situation and interested in a successful outcome. The hearer does not perceive the speaker as a vulnerable participant but as an equal participant.

According to the findings discussed in Article 1, requests are usually associated with the first person singular or plural, i.e., in requests the semantic subject is the speaker herself or a group of people that includes the speaker. Therefore, it becomes almost excessive to use additional linguistic resources to overtly express an Experiencer. This explains the fact that requests with the covert Dative appeared in the language almost simultaneously with request with the overt Dative and were used with the same frequency, as shown in Article 1. However, impersonal constructions with the covert Dative can also be used to provide information about a participant's abilities, as in (55). Thus, requests without any marking of a semantic Subject can be semantically ambiguous and can be variously interpreted as impersonal questions about the participant's abilities or as request to carry out an action as in (56). Almost 30% of my data in Article 1 are requests with covert expression of an Experiencer.

(55) *Zabetonirovannaja ploščadka ogorožena s trex storon nevysokim kirpičnym zaborom. Možno perelezt' čerez nego?*

'The concrete-coated area is fenced on three sides by a low brick fence. Is it possible to climb over the fence?'

[O. Novikova. Každjy ubival // «Sibirskie ogni», 2012]

(56) *Možno vzjat' vodički? — tixo sprašivaet mal'čik.*

Can I have some water? – the boy asks quietly.

[M. Traub. Ne vsja la vie. 2008]

Interestingly, with performatives (57) – (59) there is a strong tendency to elide a pronoun; *možno uznat'* in my dataset were used only with the elided Experiencer. By saying *možno uznat'* the speaker tries to find out some information by overriding the hearer's consent. Thus, by performing a request the speaker simultaneously imposes her will over the hearer, threatens the hearer's negative face and consequently damages the speaker's own face. To save face, the speaker elides the pronoun, making the request general instead of specific to herself.

(57) *Možno uznat' nazvanie banka i tarify dlja jur. lica?*

Can you find out for me the name of the bank and tariffs for legal entity?

[kollektivnyj. Forum: RKO dlja jurlic i IP v Moskve (2010-2011)]

(58) *Možno sprosit', kak vas zovut?*

May I ask your name?

[V. Prišvina. Nevidimyj grad (1962)]

(59) *Možno poprosit' stakan xolodnoj vody?!*

Can I ask for a glass of cold water?!

[S. Dovlatov. Zapovednik (1983)]

Another interesting observation relate to the *možno uznat'* construction comes from the study of requests in Slavic languages in Article 2. Requests translated into Russian using *možno uznat'* constructions were translated into other languages as direct questions, as seen in example (60) from Ukrainian data.

(60) *No možno uznat', otkuda, pod kuxonnoj dver'ju navoznye bomby?* (Russian)

A hto pidkynuv pid kuhonni dveri kakobomby? (Ukrainian)

'And who has left all these Dungbombs outside the kitchen door?'

[Rowlingova. Hpot-fenix]

In this section, I have proposed basic conditions that must be met to perform a speech act of request for permission to carry out an action and have reviewed the key concepts of politeness theory. I suggest that the speaker is prompted to use the construction *možno* + NOM to simultaneously maintain intact the faces of all the participants involved in a communication. On the one hand, by using *možno* + NOM the speaker secures her freedom to act according to her will. On the other hand, the construction with the agentive Subject reduces the hearer's responsibility for the further development of the situation.

5.2 Requests in six Slavic languages

In this section I sketch the realization of requests in six Slavic languages that I examined in Article 2. It is quite challenging to provide an exhaustive overview of requesting strategies for one language, let alone six. Therefore, I first review some patterns that these languages share, and then summarize core means of expressing conventionally indirect requests listed in the existing literature on requests in Belarusian, Ukrainian, Bulgarian, Serbian, Czech and Polish.

In the literature Ukrainian (Beznosa 2009), Russian (Ogiermann 2009), Bulgarian (Slavianova 2012), and Polish (Urbanik 2017) are portrayed as languages with strong preference for expressing requests directly, by imperative constructions in particular. While examining translational equivalents of Russian conventionally indirect requests with the modal word *možno* as an anchor (Article 2), I discovered that requests with imperatives, ranging from 2% to 5%, are found in all languages under scrutiny, as in (61) and (62).

(61) *Gospodine, vratite nam loptu!*

'Sir, return our ball!'

(Serbian)

(62) *Pokaż!* [Subtitles]
 (Polish)
 ‘Let me see!’

[Twain. Dobr TSawyer]

In example (61) the boys are playing football, and the ball escapes them. They casually ask a person passing by to kick the ball in their direction. In (62) the speaker asks the hearer to show her a specific object. Imperatives are not considered impolite and are used as neutral requesting constructions.

All six languages use modals of possibility to express conventionally indirect requests. Table 16 summarizes the modals listed in the literature. The detailed analysis of request strategies with modals of possibility as anchors presented in Article 2.

Languages	Modals of possibility	Reference
Belarusian	<i>moža</i> ‘maybe’ <i>možna</i> ‘be possible’	Dubitskaya (2010)
Ukrainian	<i>mabut</i> , <i>możliwo</i> , <i>napevno</i> ‘maybe’ <i>mogti</i> ‘can’ <i>možna</i> ‘be possible’	Beznosa (2009); Soljuk (2017)
Bulgarian	<i>moga</i> ‘be able, can’, <i>može li</i> ‘whether possible’	Slavianova (2012)
Serbian	<i>moći</i> ‘be able, can’	Čikara (2013)
Polish	<i>móc</i> ‘be able, can’ <i>možna</i> ‘be possible’	Sadowska (2012); Urbanik (2017)
Czech	<i>moci</i> ‘can’	Betsch (2003)

Table 16. Modals of possibility used in requests in six Slavic languages.

Apart from modals of possibility, various means are employed by the speaker to create metaphorical distance between the hearer and the request. One of these means is hedging with words meaning ‘please’ and the like, as in (63).

(63) *Dereku, prosím, pojd’ sem na chvíličku.* (Czech)
 ‘Derek please come here for a minute’

[Subtitles]

Another means is by pushing the request out into potential reality with subjunctive marking, as in (64).

(64) *Iskah samo da popitam dali bihte mi varnali knjigata.* (Bulgarian)
 ‘I just wanted to ask if you would return the book.’

[Rowlingova. Hpot_kamen]

A third mean is the addition a negation marker where the semantic value is not really negation, but instead the negation serves to attenuate the request, as in (65).

(65) *Nie zaprosisz mnie?*

(Polish)

‘Won't you invite me (to come in)?’

[Subtitles]

Furthermore, all three of these means can be combined. Beyond this, further comparison across the six languages devolves into a list of idiosyncrasies, and these are detailed in Article 2.

In summary, the Slavic languages examined in this study employ a variety of strategies to convey conventionally indirect requests. This includes a diverse range of syntactic structures, modal expressions, and lexical modifiers. In Article 2, I investigate translational equivalents of Russian requests with *możno* as an anchor, presenting evidence that constructions in corresponding languages belong to both direct and conventionally indirect request strategies. Importantly, the variation in these strategies does not suggest a reduction in politeness when requests are translated to other languages. This variation aligns with the discursive approach's claim that there is no straightforward association between politeness and (in)directness.

If we look at requests from the perspective of comparative constructional grammar (Croft 2022), it is important to view constructions as units for cross-linguistic comparison with caution. Constructions must be evaluated with various parameters in mind. These parameters include extralinguistic factors (socio-cultural context), intonational patterns, gestures, among others. Even the consideration of all these facets of construction may not necessarily yield satisfactory comparison results.

Chapter 6 Rationale and Methodology

The data selection and analysis in this dissertation align with principles of cognitive linguistics and Construction Grammar. Both cognitive linguistics and Construction Grammar are usage-based and bottom-up approaches (Langacker 1987: 46, 2008: 220; Goldberg 2006:45; Croft and Cruise 2004). Cognitive linguistics centers its research focus on the analysis of real-world language data produced by speakers and studies the “relationship between observed form and meaning” (Janda 2013: 2). Corpus analysis is one of many methods, such as introspection, experimental method etc., that is widely used in cognitive linguistics. The articles in this dissertation rely on corpora as a primary source of data collection:

- data from written corpus of the Russian language (Article 1, Article 3 and Chapter 2 in the Introductory part)
- data from spoken corpora of the Russian language (Article 1)
- data from a parallel multilingual corpus (Article 2)

In terms of data analysis, my research employs diverse quantitative and qualitative techniques:

- Logistic regression analysis (Article 1)
- Sankey diagram (Article 2)
- Error Conversion Ratio (ECR) (Article 3)
- Cognitive linguistic schemas (Article 3)

In section 7.1, I will offer a justification for the selection of corpora as a primary data source for my research and outline its advantages and limitations. Then, I will turn to the qualitative and quantitative methods in Section 7.2.

6.1 Corpora

Over the last few decades, corpus linguistics has gained increasing prominence as a linguistic methodology:

corpus linguistics is a whole system of methods and principles of how to apply corpora in language studies and teaching/learning, it certainly has a theoretical status.

(McEnery et al. 2006: 7f.).

Corpus linguistics encompasses both corpus-driven and corpus-based approaches (Gries 2010). The corpus-based approach employs corpus data to test pre-existing hypotheses, while the corpus-driven approach constructs theories by analyzing corpus data and asserts that the corpus itself should be the primary source of hypotheses about language (Tognini-Bonelli 2001: 65-100). The corpus-driven approach is closer to the Big Data paradigm. This dissertation adopts a corpus-based approach and treats a corpus as a collection of data points against which researchers can test their hypothesis.

Corpus-based research in cognitive linguistics in the realm of modality, or more precisely interaction of modality with neighboring semantic domains, can be exemplified by a number of studies, e.g., de Haan (2002); Divjak (2009, 2010); Lyashevskaya et al. (2017). Other relevant studies within the cognitive linguistics paradigm that adopt corpus methodology are Nessel and Makarova (2012); Fábregas and Janda (2019); Grondelaers, Geeraerts and Speelman (2008), to name a few.

Corpora can be categorized based on various parameters. In terms of language, corpora can be monolingual or multilingual (parallel). Regarding time, corpora are either diachronic or synchronous. Additionally, there are specialized corpora, such as learner corpora, multimedia corpora and more. The choice of a specific corpus depends on the research question. In this dissertation I use data from the monolingual Russian National Corpus (RNC, <http://ruscorpora.ru>) in Article 1 and Article 3. For Article 2, in which I compare requests with modals across Slavic languages, I employ data from the parallel corpus InterCorp that is a part of the Czech National Corpus (<http://www.korpus.cz/>).

6.1.1 Corpora of the Russian language

The RNC is not the only existing corpus of the Russian language, cf., Araneum Russicum Maximum compiled by Vladimir Benko in 2016, http://ucts.uniba.sk/aranea_about/russicum.html; the General Internet Corpus of Russian (GICR, <http://www.webcorpora.ru/en/>) etc. Both the Araneum Russicum Maximum and GICR are so-called large corpora, however representativeness and balance raise challenges when working with them (Benko and Zakharov, 2016).

The Araneum Russicum Maximum is a part of the Aranea family of web corpora and is the largest lemmatized and annotated web corpus with over 10 billion words (Benko and Zakharov, 2016). Texts in the corpus are downloaded from the web, which leads to difficulties with lemmatization and meta-tagging. Typically, only minimal information such as domain name, web page publication, and size of the document is available. The GICR is another «mega corpus» comprised of blogs, social media and news (Belikov et al. 2013). The GICR is better annotated, but is source specific, since the texts are extracted from three major collections, namely V Kontakte (ВКонтакте; 5 115 million words), Žurnal'nyj zal (Журнальный зал, 320 million words), and Živoj Žurnal (Живой Журнал, 15 987 million words) as for 2021 (<http://www.webcorpora.ru/%D0%BE-%D0%BA%D0%BE%D1%80%D0%BF%D1%83%D1%81%D0%B5>).

Compared to the RNC, both Araneum Russicum Maximum and GICR allow researchers to examine linguistic phenomena on a large scale, aligning such approach more closely with a Big Data approach. The qualitative interpretation of data was of great importance for this dissertation, which is why the RNC with its refined linguistic annotation was chosen as the most balanced and representative corpora.

The RNC is an open-access collection of several corpora. The total size of its corpora is more than 2 billion tokens. The Main corpus is a monolingual corpus with texts that represent the standard written Russian language. In addition to the Main corpus, the RNC includes historic, parallel, spoken, and media corpora, among others. The RNC offers a wide range of search options, allowing users to search for specific words, phrases, grammatical constructions etc. A portion of results can be downloaded in tabular format (.xlsx or .csv). The RNC is linguistically annotated with meta tagging, part-of-speech tagging, semantic annotation and syntactic parsing. Further I will briefly describe the Main and Spoken corpus of the RNC, which served as a data source for this dissertation.

The Main corpus of the RNC serves as the primary data source for most parts of this dissertation. The Main corpus consists of annotated written texts from the middle of 18th to the present day, representing various genres including fiction, journalism, forums and blogs, epistolary, liturgy, and science fiction *inter alia*. Per September 2023, the Main corpus contained 374 449 975 words in 131 488 documents. A portion (approximately 6 million words) of the Main corpus RNC is manually disambiguated (<https://ruscorpora.ru/en/corpus/main>, Savčuk 2009).

The spoken corpus of the RNC comprises recordings of public and spontaneous spoken Russian, as well as transcripts of Russian movies. It is searchable using lexical, morphological, semantic, and sociological (gender, age, job title) parameters. In terms of time coverage, the texts span from 1900 to 2020. As of September 2023, the sub corpus contains 13 963 131 words in 4 330 texts. The geographical coverage is diverse, with recordings made in cities such as Moscow, Saint Petersburg, Saratov, Taganrog etc.

(<https://ruscorpora.ru/corpus/spoken?search=CiAqFwoICAAQChgyIAogADIFZ3JzdGRACngBMgIICjoBATAB>, Grišina and Savčuk 2009).

In addition to the RNC, two corpora of spoken Russian, namely the Corpus of Russian Spoken Language (<http://russpeech.spbu.ru>) and Night dreams stories and other collections of spoken discourse (<http://spokencorpora.ru/>)¹³ are used as supplementary resources in this dissertation. Although they are significantly smaller compared to the spoken corpus of the RNC, these two corpora have more refined phonetic annotation. For instance, they allow users to search for information about pauses, information which is lacking in the spoken corpus of the RNC.

The Corpus of Russian Spoken Language is comprised of annotated audio recordings which belong to various genres: transcripts of recordings from radio broadcasts, readings of texts by native speakers, spontaneous monologs, and children's speech. All the recordings are transcribed, and the transcripts are available in both orthographic and phonetic transcription. Corpus size is more than 22 000 wordforms. The time span is from 1940 until the present (<http://russpeech.spbu.ru/project.htm>).

¹³ I refer to this corpus as to Stories about dreams and other corpora of Spoken Language in Article 1.

Night dreams stories and other collections of spoken discourse is a collection of corpora that includes Night dream stories (*Rasskazy o snovidenijax*), Siberian's stories about life (*Rasskazy sibirjakov o žizni*), Funny stories from life (*Vesělye istorii iz žizni*), and a group of sub corpora Stories about gifts and skiing (*Istorii o podarkax i katanii na lyžax*) in Russian, Armenian and Japanese languages. The Night dream stories is a corpus of children's speech (approximately 2 hours of recordings, 14 000 words), the Siberian stories about life is a corpus of stories told by adults from Novosibirsk (approximately 40 minutes of recordings, 5 000 words), and Funny stories about life is a corpus of stories told by adults about funny incidents that happened with them (approximately 1 hour and 10 minutes, 40 pairs of stories from adults in both written and spoken form; spoken part around 7 000 words, the written part – 10 000 words), see <http://spokencorpora.ru/showcorplist.py>. All of the recordings are transcribed and annotated (Kibrik and Podlesskaja 2009).

The RNC is a valuable instrument for testing linguistic hypotheses, but it also has its natural limitations. Written data lacks dynamic interaction and does not capture the full richness of spoken communication. Linguistic annotation lacks information on pragmatic and sociolinguistic factors. Metatextual tagging includes information on the creation date of texts, authors' year of birth and gender, genre, the place and date of publication, which is not enough for a pragmatically oriented analysis. To sum up, this corpus is a good starting point for pragmatic analysis, however a comprehensive pragmatic analysis may require a combination of methods, including experimental studies. The inclusion of experimental data could have provided even greater insight into the topic of variation in speech acts of requests with *možno* (Article 1).

6.1.2 Parallel corpora of Slavic (and other) languages

For Article 3 I use the synchronous parallel corpus InterCorp, which is a part of the Czech National Corpus <http://www.korpus.cz/> (<https://wiki.korpus.cz/doku.php/en:cnk:intercorp>). InterCorp is not limited to Slavic languages, and encompasses variety of languages, including Albanian, Arabic, Catalan, Danish, Hebrew, Hungarian, Portuguese, Turkish and more. The pivot language is Czech, which means that texts in Czech are aligned with one or more foreign language versions (Čermák, 2019). The corpus has language specific morphosyntactic annotation, and the description of each tag set is available at the search interface of a technical tool Kontext, see Machálek (2020). Queries are possible by CQL (Corpus Query Language) expression, by word form or phrase, and by lemma. The total size of InterCorp Release 14 published in January 2022 is 349 million words in the Core and 1 223 000 million words in the remaining collections (<https://wiki.korpus.cz/doku.php/en:cnk:intercorp:verze14>).

InterCorp is comprised of texts taken from seven different collections: Core, Syndicate, Pressurop, Acquis, Europarl, Bible and Subtitles, see Table 17. This composition makes it possible to compare how linguistic phenomena are distributed across various genres.

Collections in InterCorp	Texts in the collection
Core	Mostly fiction
Syndicate	Political commentaries published by Project Syndicate (https://www.project-syndicate.org/)
Presseurop	Political commentaries published by VoxEurop, formerly PressEurop (https://www.voxeurop.eu/)
Acquis	Collection of legal texts of the European Union from the Acquis Communautaire corpus (https://joint-research-centre.ec.europa.eu/language-technology-resources/jrc-acquis_en)
Europarl	Proceedings of the European Parliament from 2007 to 2011 from the Europarl Corpus (https://www.statmt.org/europarl/)
Subtitles	Film subtitles from the Open Subtitles database (https://www.opensubtitles.org/en/search/subs)
Bible	Translations of the Bible

Table 17. Collections in the parallel sub corpus of InterCorp.

The Core collection primarily comprises fiction and is manually aligned, while the remaining collections are automatically annotated. The data for this dissertation was extracted from the 14th release of InterCorp in 2022 (<https://wiki.korpus.cz/doku.php/en:cnk:intercorp:verze14>).

The other parallel corpora that contain a comparable selection of Slavic languages are ParaSol (A parallel corpus of Slavic and other languages, von Waldenfels 2011) and the parallel corpus of the RNC (ruscorpora.ru). ParaSol is available for registered users at <https://www.parasolcorpus.org/Ursynow/>. To the best of my knowledge, the last update of ParaSol was in 2014¹⁴. At that time, corpus contained translations of literary works into 31 languages, including 12 Slavic languages. The total size was approximately 27 million words. ParaSol was searchable exclusively by CQL.

The parallel corpus of the RNC has the similar query language and the annotation system as the Main corpus. While the parallel corpus is constantly being updated, as of September 2022 the Slavic data had significantly smaller representation compared to InterCorp. Consequently, the parallel corpus of the RNC returned few results with *možno* used in requests. Therefore, InterCorp has been chosen as the most suitable for comparison of requests across Slavic languages, since it is balanced, contains data for most languages in the Slavic family, and is well-annotated.

6.2 Quantitative and qualitative methods

Statistical modelling of data has been used by cognitive and construction grammarians for decades, see Janda (2013) for reference. This dissertation is no exception. I present the methods and tools that I use in this dissertation further in this section. The modelling of the data was performed in RStudio with the use of packages tidyverse, lme4, car, effects, vcd, rms, and sjPlot for Article 1, and packages dplyr, ggstankey, ggplot2, and stringr for Article 2. The use of R programming language in statistics

¹⁴ Currently there is a disclaimer that the corpus is under construction, see <http://www.parasolcorpus.org/>.

contributes to open science (Winter 2019), the code is easily sharable and reproducible. All my scripts and datasets are archived at TROLLing – Tromsø Repository of Language and Linguistics, see Section Research data management for more details.

6.2.1 Logistic regression analysis

Logistic regression “models the relationships between a categorical response variable with two or more possible values and one or more explanatory variables, or predictors” (Levshina 2015: 253). The use of logistic regression analysis is widely employed in cognitive linguistics, see Diessel (2008), Divjak (2010), Nessel and Janda (2023) *inter alia*. Logistic regression analysis is employed to statistically analyze patterns and relationships in the corpus data in Article 1. In particular, I examined factors that contribute to the choice between two constructions with *možno* in speech acts of request, namely *možno* + NOM + VFIN vs. *možno* + DAT + INF.

6.2.2 Error conversion ratio, Sankey diagram and Cognitive linguistic schemas

Techniques like the Sankey diagram and ECR measure offer visual and quantitative means to explore complex linguistic structures and relationships within the data.

The error conversion ratio (ECR) is used in Article 3 to estimate the proportion of good examples in my dataset based on a manual check of a random representative subset of the data. The measure is used for extrapolation, i.e., to make inferences about the entire dataset.

The application of cognitive linguistic schemas proposed by Langacker (1987) as part of the analysis facilitates the examination of how language reflects cognitive structures and conceptualization. This approach is fundamental to cognitive linguistics and provides insights into how language usage is rooted in human cognition.

I use an adaptation of the Sankey diagram in Article 2. The Sankey diagram is a visualization tool first used by Sankey (1896) in the field of mechanical engineering. However, Sankey diagrams have found their way in linguistic research, see Roeder (2017), Bubenhofer (2019), Kavaz et al. (2021) etc. The Sankey diagram is a type of chart that displays the flow of a quantity through a system (Schmidt 2008). Rectangles represent entities (start and end nodes), and arrows or arcs represent links where width is proportional to the relative size or importance of the flow. The Sankey diagram helps to visualize relationships and patterns, compare linguistic features across Slavic languages, revealing patterns of convergence or divergence.

To sum up, this section outlines the specific quantitative and qualitative methods and tools employed in the study. The section elaborates on two essential analytical approaches: logistic regression analysis and the use of visual techniques like Error Conversion Ratio (ECR), Sankey diagrams, and Cognitive Linguistic Schemas.

Chapter 7 Summary of the articles and research contribution

In this chapter I present a summary of the three articles and Chapter 3. The implications of these results are discussed in the next chapter. First, I provide an overview of each article with a brief discussion of the findings. Then I proceed to a description of how topics covered in these articles are interrelated. The articles are pieces of independent research. At the same time Article 1 “The trajectory of the “*Možno ja X*” construction: variation in speech acts of request in contemporary Russian” and Article 2 “How to request in Slavic languages: A corpus-based study of requesting constructions in six Slavic languages” both pertain to request strategies in Slavic languages, though they approach requests from different angles. Article 3 “When modality and tense meet? The future marker *budet* ‘will’ in impersonal constructions with the modal adverb *možno* ‘be possible’” is devoted to the examination of variation between constructions with and without the future copula.

7.1 Article 1: “The trajectory of the ‘*Možno ja X*’ construction: variation in speech acts of request in contemporary Russian”

The first article focuses on an ongoing language change in Contemporary Russian, where the modal word *možno* is increasingly used in a construction with the Subject in the Nominative case (*možno* + NOM) instead of the traditional construction with the Experiencer in the Dative case (*možno* + DAT). The data presented in this article were collected from the RNC (ruscorpora.ru) and manually annotated. The study reveals that although constructions with *možno* tend to be used without an overtly marked Experiencer, in requests these constructions are not semantically impersonal. Hearers can unambiguously establish who is making a request even when the Experiencer is not overtly expressed.

The article also covers the topic of the morphological status of *možno*; my analysis suggests that *možno* behaves as an adverb in both constructions. In requests with subjects in the Nominative case, *možno* was previously considered to be an interrogative particle. A constructional approach to the data makes it possible to circumvent discussions about the part of speech characteristics, especially considering the complexities of part of speech taxonomy (Lehmann 2013), which can vary across languages and pose challenges in cross-linguistic studies. In the article I propose a developmental scenario for the *možno* + NOM construction.

If we step back and take a broader perspective on the findings presented in this article, we discern a significant underlying trend. The tendency to omit the Experiencer appears to be motivated by rich extralinguistic context. In such situations, overt indexing to the speech participant becomes redundant. Speakers want to communicate their message efficiently, using minimal linguistic resources. This also explains the emergence of highly entrenched idiomatic constructions in which the single word *možno* is accompanied by body movements or gestures. These findings raise further questions about the significance of considering extralinguistic content as an equally important component (element) of a construction. Further experimental study is

needed to determine the influence of factors such as intonation and non-verbal signals, as well as the balance of control between the speaker and hearer.

7.2 Article 2: “How to request in Slavic? A corpus-based study of requesting constructions in six Slavic languages”

This article is a submitted manuscript that deals with microvariation in request strategies, based on data from six Slavic languages: Belarusian, Ukrainian, Bulgarian, Serbian, Czech, and Polish. The data presented in this study were collected from the parallel corpus InterCorp (<https://intercorp.korpus.cz/>). This is an exploratory qualitative study focused on how Russian conventionally indirect requests with the anchor word *možno* are realized in other Slavic languages. I commence by defining a request as an illocutionary act in which the speaker conveys to the hearer an action that the speaker wishes to perform and asks permission to carry out that action. This definition is informed primarily by research in pragmatics (Blum-Kulka et al. 1989).

Speech act theorists claim that there is a scalar relationship between the directness of a request and impoliteness, meaning that requests that are more direct (such as imperatives) are more impolite (Brown and Levinson 1987). However, these claims are not borne out by the facts of Slavic languages.

I observed fourteen requesting strategies across the six languages. Overall, constructions with possibility semantics predominate in this data. I find that the traditional subfamily classification of Slavic languages is not entirely supported by my data. Serbian data is fairly similar to the data from Czech and Polish, while Bulgarian is transitional between East and West Slavic. In addition to modal words, other anchor words from neighboring modalities such as desire, as well as lexical modifiers play an important role in the formulation of requests across Slavic.

Despite the fact that requests are most typical of spoken rather than written production, corpora are shown to be a valid source for data on requests. In particular, corpus data from movie subtitles provide ample attestations of requests. I visualize my findings using Sankey diagrams that make it possible to spot trends and similarities across languages.

7.3 Article 3: “When modality and tense Meet. The future marker *budet* ‘will’ in impersonal constructions with the modal adverb *možno* ‘be possible’”

In Article 3 I examined the contribution of the future copula in constructions with *možno* as an anchor. The data for this article was retrieved from the RNC (ruscorpora.ru). The future tense is used to denote modal meanings in Russian (Radbil’ 2011; Stojnova 2018), and this opens up the possibility of investigating the relationship between futurity and modality in Russian. I compared the temporal location of both the possibility and the action, and it turns out that in constructions without the future copula the meaning is ambiguous. Possibility is typically located in

the present, whereas the action is typically located in the future. In constructions with the future copula, both the possibility and the action are typically located in the future. I found that 70% of constructions with the future copula are accompanied by temporal markers of future time. I classified markers in three groups: specific time markers, sequential time markers, conditional clauses. I discovered that constructions without the future copula are thirty-four times more frequent than those with the copula. Constructions without the copula can express the following in relation to time: gnomic, present, and future. My findings are illustrated in terms of schemas adapted from Langacker (2008).

I also discussed the role of iconicity for the use of the future copula *budet* in constructions with *možno*. I propose that the inclusion of the future copula between the modal word and the verb signifies more than just the temporal placement of the event in the future. It also reflects the temporal gap between the speaker’s capacity to execute an action and the actual performance of that action.

7.4 Connections between the articles

Chapter 3 reports on a corpus study that encompasses all uses of Russian *možno*, thus providing a broader context for the more targeted research pursued in the three articles that make up this dissertation. Articles 1 and 2 focus on requests. Article 1 examines variations in constructions of request within Russian, whereas Article 2 examines typological variations in constructions of request across the three Slavic subfamilies. Article 3 continues the theme of variation, in this case specific to the interaction of modality and tense. Figure 7 visualizes the thematic connections that hold across the three articles.

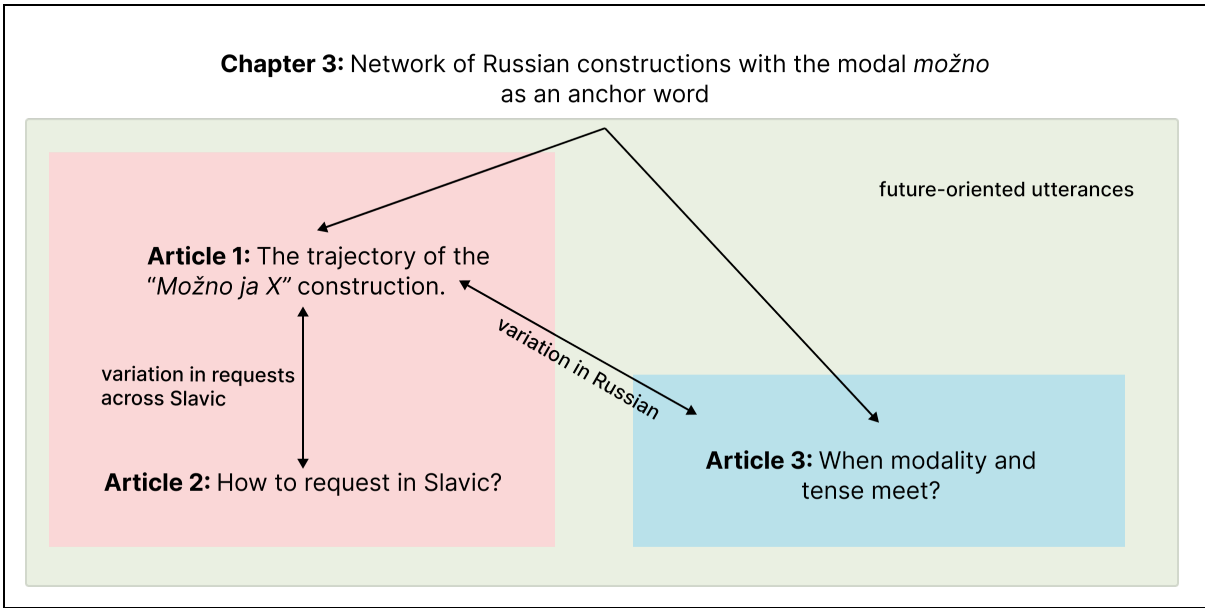


Figure 7. Connections between the articles in this dissertation.

Chapter 8 Dissertation summary

8.1 Research problem and major findings

In this dissertation I set out to investigate the variation across construction types with the anchor element *možno* ‘be possible’. Since the articles in this dissertation cover this central topic from different perspectives, I have used the introductory text to familiarize the reader with the key concepts of cognitive grammar, Construction Grammar, and typology relevant for this study (Chapter 2). I have presented a corpus-based study of 500 attestations with *možno* that serves as the foundational background for the research undertaken in the three articles comprising this dissertation (Chapter 3). Additionally, I have expanded discussion on the tense and time relations in constructions with anchor word *možno* (Chapter 4) and put forth a more nuanced definition of requests for permission to carry out an action (Chapter 5). Finally, I summarized the ways in which Slavic languages under scrutiny express requests (Chapter 5).

Both cognitive linguistics and Construction Grammar typically focus on more general cognitive patterns or general construction structures (such as ditransitive constructions, Goldberg 2006). This dissertation examined in detail the behavior of a specific anchor *možno* in the Russian language, which broadly fits into the modal word + infinitive pattern. The rationale behind this approach lies in the following: modal words are famous for being multifunctional and polysemous. Previous attempts to establish cues that disambiguate constructions have not yielded satisfactory results (e.g., see Lyashevskaya et al. 2017). I argue that modal meanings are intricately shaped through the interaction of several constructional elements that often escape our attention when research centers around more global trends. This inherent complexity of modals requires close examination of constructions at the micro-syntactic level. To prove this claim, I carried out a corpus-based study of 500 sentences with *možno* as an anchor in Chapter 3. This qualitative study made it possible for me to identify nineteen construction types. After that I organized groups of constructions into five clusters, namely external possibility, request, permission, epistemic and intensity. These clusters share a common semantic thread of external possibility, though to varying extents.

Constructions conveying intensity and epistemic meanings involve two anchors, and the concept of force dynamics is less pronounced in them. On the other hand, external possibility, permission, and request have a single anchor, and these clusters maintain evident force dynamic interpretation. Within constructions that express external possibility, constructions with the future copula stand out as particularly interesting. In many contexts these constructions are interchangeable with constructions without the future copula. I discovered factors that co-occur with the presence or absence of the copula in Article 2. A property that assimilates requests and permissions is that they belong to spoken discourse, i.e., both clusters comprise constructions that are units of interaction between the speaker and the hearer. Given that relatively limited attention has previously been given to request constructions with *možno*, I turned my attention

to deliberate exploration of requests in Russian (Article 1) and across Slavic (Article 2).

I opened up this dissertation by formulating four major research questions:

Q1: How diverse are constructions with the modal word *možno* as an anchor element? This question focuses on exploring semantic and syntactic diversity in constructions with *možno*.

Q2: How does a cognitive and constructionist approach to modal words contribute to unraveling the inherent multiple meanings of modal words, i.e., polysemy?

Q3: Is the construction a suitable unit for cross-linguistic comparison, i.e., does the comparison of constructions yield meaningful results in the broader context of cross-linguistic comparison?

Q4: What type of corpus data can offer comprehensive insights into phenomena related to research on spoken discourse?

I addressed these questions in corpus-based studies joined together under the umbrella of the cognitive-constructional framework. I addressed Q1 by offering a network of constructions with *možno* as an anchor in Chapter 3 and examining the Subject-Experiencer variation in request with *možno* in Article 1. To answer Q2, I reported the results of a study where I explore the contribution of the future copula to the semantic of constructions with *možno* (Article 3 and Chapter 4). For Q3, I report results of a comparative study of requesting strategies across Slavic languages using the Russian request construction with *možno* as an anchor as a filter (Article 2). Apart from proving that the construction is a suitable unit of comparison, these articles also propose a new methodological tool: Sankey diagrams were used to visualize the relations and patterns pertinent for comparison of linguistic features. Finally, I respond to the last question based on the results presented in Article 2, where I found ample data on requests in written corpora, especially movie subtitles.

8.2 Future research

The research presented in this dissertation has certain limitations, pointing toward potential directions for future investigations. First, it would be interesting to follow up the study on Subject-Experiencer variation with an experimental elicitation study with controlled socio-pragmatic factors of the interlocutors involved in the situation of a request (age, sex and social status of requester and requestee, parent – child communication, etc). These factors might shed light on what motivates the choice of constructions. Another direction is to conduct a survey with acceptability judgments across cohorts of various ages to test out the generational preference among native speakers for Nominative vs. Dative constructions.

Questions regarding requesting strategies across Slavic offer two potential directions for expansion. First, there is an opportunity to extend corpus-based investigations by incorporating new request types into the database. An alternative direction involves

implementing discourse analysis based on naturalistic data. This potential study requires the initial development and comprehensive pragmatic annotation of the database for each language under examination. This approach promises to offer a better understanding of how politeness is perceived by speakers of specific languages. Besides, this approach may make it possible to test the feasibility of establishing a direct link between linguistic expression and politeness.

Finally, when I examined the relation between modality and tense, I briefly discussed the parameter of iconicity. This leaves room for more detailed examination of this parameter. Intriguing as all the abovementioned questions are, I leave them for future research.

8.3 Conclusion

In this general introduction, I have presented three articles that are part of this dissertation. If we view the results from all three studies together, we see that constructions with *možno* exhibit a rich, diverse, and dynamic landscape. I have placed my findings within a larger context, discussing their implications and potential extensions. This dissertation offers a nuanced and comprehensive examination of constructions with *možno*, providing valuable contributions to the fields of syntax, pragmatics, cognitive linguistics and Construction Grammar, and cross-linguistic studies within the Slavic family of languages. The findings pave the way for future research and open avenues for exploring the dynamic nature of language and its various facets.

Article 1



The trajectory of the “*Možno ja X?*” construction: variation in speech acts of request in contemporary Russian

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Abstract

I explore the ongoing language change in which the impersonal modal word *možno* ‘can, be possible’ takes a personal clause (*možno* + NOM) as its complement instead of the Experiencer in the Dative case (*možno* + DAT) and the infinitival clause in the speech act of request in Contemporary Russian. The corpus-based evidence reveals that the construction *možno* + DAT is gradually being replaced by *možno* + NOM. I discuss various syntactic and pragmatic factors such as verb class, aspect, transitivity and politeness strategies that motivate the choice of a specific modal construction. Methods of statistical modelling, used to sort out the most significant factors contributing to the choice of construction, show that the most important factor is the date of creation of the text. I propose a scenario for the development of the *možno* + NOM construction. First, *možno* began to be used as a tag-question after both infinitive and personal clauses. The requester marked by the Dative has been steadily replaced by the more agentive Subject in the Nominative case. Then, by analogy with the *možno* + DAT construction, *možno* was placed at the beginning of the sentence and was reanalyzed as a constructional unit with the following structure: *možno* + FINITE CLAUSE, in which *možno* functions as a sentence adverb.

Аннотация

В статье рассматривается процесс языкового изменения, в рамках которого безличный модальный предикатив *можно* принимает в качестве синтаксического актанта финитную клаузу с субъектом, маркированным именительным падежом, (конструкция “*можно* + NOM”) вместо нефинитной клаузы с экспириенцером, маркированным дательным падежом (конструкция “*можно* + DAT”), в речевом акте просьбы в современном русском языке. На материале корпусных данных прослеживается постепенная замена конструкции “*можно* + DAT” на конструкцию “*можно* + NOM” носителями русского языка как в письменной, так и в устной речи. В статье рассматриваются различные синтаксические и прагматические факторы, которые мотивируют выбор конструкции: семантический класс глагола, аспект, транзитивность, стратегии вежливости. Методы статистического моделирования, использованные для определения наиболее значимых факторов, влияющих на выбор конструкции, показывают, что наиболее значимым

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фактором является год создания текста. В статье предложен сценарий появления конструкции “можно + NOM”: сначала предикатив *можно* использовался после финитных и нефинитных клауз в качестве вопросительного слова. В дальнейшем в нефинитных конструкциях адресант, маркированный дательным падежом, постепенно был заменен на более агентивный субъект, маркированный именительным падежом. Затем по аналогии с конструкцией “можно + DAT” предикат *можно* был помещен в начало предложения и вместе с следующей за ним финитной клаузой был переосмыслен как новая конструкция “можно + FINITE CLAUSE”, в которой *можно* выступает в роли синтаксического наречия.

Keywords Modal constructions · Request · Language change · Corpus · Russian

1 Introduction

Russian modal words or modals¹ denoting possibility and necessity form a syntactically heterogeneous class that includes the personal modal verb *moč'/'smoč'* ‘be able’, the personal adjectival predicate *dolžen* ‘must’, and impersonal adverbial predicates *možno* ‘can, may, be possible’, *nel'zja* ‘not allowed’, *nado/nužno* ‘have to’ etc. In these modal constructions, personal predicates require a Subject in the Nominative case, whereas impersonal predicates require an Experiencer in the Dative case. Modal words are matrix predicates, i.e., modal words can have at least one sentential complement. Typically, the sentential complement is an infinitive phrase.

Russian displays several possibilities for formulating a request. A request is an illocutionary act in which “a speaker (requester) conveys to a hearer (requestee) that he/she wants the requestee to perform an act which is for the benefit of the speaker” (Trosborg, 1995: 187). The speaker may request non-verbal goods or services, e.g., an object or an action, or verbal goods and services, e.g., information or permission to carry out an action.

This article offers an analysis of two syntactic variants of a construction with the modal adverb *možno* ‘can, may, be possible’, namely *možno* + DAT + INF, hereinafter “*možno* + DAT”, and *možno* + NOM + V.FIN,² hereinafter “*možno* + NOM”, which are used to formulate speech acts of request in contemporary Russian. While in the former construction *možno* is used with an Experiencer in the Dative case and an infinitive, in the latter *možno* lacks an Experiencer and instead takes a personal clause as a sentential complement. I will provide evidence that the construction with an Experiencer marked by Dative as in (1a) is gradually being replaced by *možno* + NOM as in (1b). In examples like (1b) *možno* functions as a sentence adverb, i.e., an adverb that modifies the content of the clause in which it occurs, see Ramat and Ricca (2011).

- (1) a. *Možno mne vzja-t' pirožn-oe?*
possible I.DAT take.PFV-INF pastry-ACC.SG

¹We use term modal in the same way as Besters-Dilger et al. (2009: 169) “modals as means of expression of modality, which have undergone a grammaticalization process; they express the basic notions of ‘necessity’ and ‘possibility’ and show syntactic properties of auxiliaries.”

²In this formula “v.FIN” stands for any finite verb form that agrees with the Subject in number, person and/or gender as opposed to the infinitive. “DAT” and “NOM” stand for any noun or pronoun in the Dative or in Nominative case respectively. This convention is used throughout the article.

‘Is it okay for me to take a pastry?’

[B. Okudžava. Uprazdnennyj teatr. 1989–1993]³

- b. *Možno ja voz'm-u eščë kusoček tort-a?*
 possible I.NOM take.PFV-PRS.1SG another piece.ACC.SG cake-GEN.SG
 ‘Is it okay if I take another piece of cake?’
 [Kollekcija anekdotov: deti. 1970–2000]

Following Goldberg (2006: 5), I define a construction as a “learned pairing [of] form with semantic meaning or discourse function including morphemes or words, idioms, partially lexically filled and fully general phrase patterns”. I am interested in variation in the linguistic expression of a requester (a semantic Subject), and henceforth I will term the options illustrated by (1a)–(1b) DAT–NOM variation. In this article, I define variation in a narrow sense as two or more possible grammatically acceptable ways to express the same meaning by a speaker of a given language.

I suggest that the request formula with a Subject in the Nominative has developed in Russian under the influence of both syntactic and pragmatic factors. First, *možno* demonstrates relative syntactic freedom: *možno* can appear unconnected to any surrounding syntax as in (2).

- (2) *Pokaza-v na grafinčik, sprosi-l otc-a: «Možno?»*
 point.PFV-PST.GER at decanter.ACC.SG ask.PFV-PST.M.SG father-ACC.SG possible
 ‘He asked his father pointing to the decanter: “**May I?**”’
 [A. Najman. Vse i každyj // «Oktjabr’». 2003]

In such examples the speaker asks permission by using the modal word *možno*, which refers to a situation that is indicated by non-verbal means. In example (2) the speaker communicates to the hearer that he wants to drink by merely pointing at the decanter. Thus, the DAT–NOM variation is facilitated and motivated by utterances in which the action desired by the speaker does not have an overt linguistic expression.

Second, requests for permission to carry out an action can be expressed by several modal constructions. The best-known constructions involve the two constructions with the modal adverb *možno* ‘can, may, be possible’ as in (1a) and (1b); a personal modal verb *moč’* ‘be able’ as in (3) and an impersonal modal adverb *nel’zja* ‘not allowed’ combined with the particle *li* ‘whether’ as in (4). Another way to formulate a request is to pose a direct question as in (5).

- (3) *Ja mog-u vzja-t’ u tebja èt-u fotografij-u?*
 I.NOM can.IPFV-PRS.1SG take.PFV-INF from you.GEN.SG this-F.ACC.SG photo-ACC.SG
 ‘**Can I take this photo from you?**’
 [I. Grošek. Restavracija obeda. 2000]
- (4) *Proš-u proščeni-j-a, no nel’zja li mne*
 ask.IPFV-PRS.1SG forgiveness-GEN.SG but impossible whether I.DAT
ugosti-t’-sja odn-oj iz vašix zamečatel’n-yx sigaret?
 treat.PFV-INF-REFL one-F.INSTR.SG from your wonderful-GEN.PL cigarette.GEN.PL
 ‘I apologize, but **can I help myself** to one of your wonderful cigarettes?’
 [A. Rubanov. Sažajte, i vyrastet. 2005]

³All examples in this article are cited from the Russian National Corpus (ruscorpora.com), and metadata is given in square brackets.

- (5) *Ja voz'm-u èt-ot snimok?*
 I.NOM take.PFV-PRS.1SG this-M.ACC.SG photo.ACC.SG
Can I take this picture?
 [V. Pronin. Banda 8. 2005]

Requests with the personal construction with the modal verb *moč'* 'be able' as in (3) and direct question as in (5) might support the ongoing DAT→NOM change. Speakers have access to all the resources that encode requests, so exposure to the personal constructions that are used for the same pragmatic purposes can be another factor contributing to the ongoing language change.

Third, a speech act of request is a face-threatening act in which the speaker "attempts to exercise power or direct control over the intentional behavior of the hearer" (Trosborg, 1995: 188). At the same time the speaker exposes herself to the risk of being embarrassed if the hearer refuses to comply with her wishes. By using an indirect request with an impersonal modal construction, the speaker mitigates her power over the hearer, but simultaneously the speaker makes herself more vulnerable. My hypothesis is that by using a personal form such as *možno* + NOM in a request for permission to carry out an action, the speaker secures her freedom to perform an action and desire to be respected by other members of the community.

I examine factors that are associated with the choice of construction, including any formal or pragmatic restrictions that would prompt a speaker to choose one of these constructions, taking into account external factors such as native speakers' personal preferences. I will provide evidence demonstrating that *možno* is changing its argument structure to accept a personal clause as a sentential complement (*možno* + NOM) instead of an infinitive phrase with an Experiencer in the Dative case (*možno* + DAT).

This is a corpus-based quantitative study. For the purposes of this article, I will use two datasets: one based on written texts from the Russian National Corpus, hereinafter the RNC, (main database) and the other based on data retrieved from the spoken subcorpus of the RNC (supplementary database). The data will be analyzed separately since the datasets cover different time periods.

The article is structured as follows. In Sect. 2, I provide a brief overview of background information about modals that are used in speech acts of request in Russian, focusing on the constructions *možno* + DAT and *možno* + NOM. In Sect. 3, I describe the main dataset, explaining how the data was obtained and annotated. The analysis of the data is presented in Sect. 4. The results of statistical modelling are explained in Sect. 5. Section 6 describes the supplementary spoken dataset and data analysis. Section 7 outlines background information on speech acts of request and politeness theory. In Sect. 8, I discuss the ongoing language change and propose a scenario for the development of the *možno* + NOM construction in terms of cognitive linguistics and constructionalization, see Traugott (2015). Section 9 summarizes the findings.

2 Prior scholarship on *možno* + DAT and *možno* + NOM

The origin of the word *možno* is obscure, however in the scholarly literature we find various alternative descriptions of how this word found its way into modern Russian. Kopečný and Havlová (1981) and Šanskij et al. (1961) claim that *možno* derived from an adjective *možnyj* 'possible' which in its turn was derived from the Proto-Slavic noun *moga* 'power'. According to Vaulina (1988) *možno* is first documented in the Russian language in the 15th century in "Gramota velikogo knjazja Vasilija Vasil'eviča pol'skomu i velikomu litovskomu knjazju

Kazimiru” (1449) in the negated form *nemožno*. Besters-Dilger (1997) considers this usage of *nemožno* a mistake or a Polish borrowing. In the middle of the 17th century the word *možno* appears in texts along with its derivational relatives *možnyj* ‘possible’ and *možnost* ‘possibility’ and steadily replaces the Old Slavic lexemes *močno* (*mošno*) and *moščno* that existed along with their negative counterparts *nemočno* (*nemošno*) and *nemoščno* since the 12th century and were used to express participant-external and deontic modal meanings.

Besters-Dilger (1997) treats *možno* as a contamination of the Russian modal words *močno*, *moščno*, *vozmožno* and the Polish impersonal modal word *možna*. Kochman (1975) denies any connection between the Old East Slavic lexemes and Russian *možno* and claims that *možno* is a lexeme that was directly borrowed from Polish into Russian. Besters-Dilger’s hypothesis is more convincing: it is most likely that *možno* was formed under the influence of Polish, but the presence of lexemes with almost the same meaning, morphology and functional load in the Old East Slavic language must have had an impact as well.

There existed at the same time another pair of modal words with similar semantics: *l’zja* ‘to have conditions or right to act in a certain way’ and *nel’zja* ‘not to have conditions to act in a certain way due to the external factors’. The usage of *nel’zja* significantly increased and *nel’zja* spreads to contexts where *nemožno* (*nemočno*, *nemošno* or *nemoščno*) appeared previously. Meanwhile *l’zja* was steadily replaced by *možno*. Thus, in Contemporary Standard Russian the paradigm was reduced to an opposition formed by two suppletive members, namely *možno* ‘possible’ and *nel’zja* ‘impossible’.

In summary, the modal word *možno* appeared relatively recently in Russian, with the very specific meaning ‘to have conditions to carry out an action’ taking the place of Old East Slavic lexemes that shared the same semantics but had different functional and stylistic distribution.

In contemporary Russian *možno* can express deontic or participant-external modal values according to the logical-based semantic map classification proposed by Van der Auwera and Plungian (1998). In this research I treat modality in a narrow way as an opposition of possibility and necessity. Deontic possibility is permission, while participant external possibility is defined as “circumstances that are external to participant engaged in the state of affairs and that make this state of affairs possible” (Van der Auwera & Plungian, 1998: 80).

Functionally *možno* can express possibility and permissibility. *Možno* per se is an impersonal modal word, i.e., it does not allow a Subject in the Nominative case and requires an Experiencer in Dative, as opposed to the personal modals (e.g., the verbs *moč*, *smoč* ‘be able’) that agree with their Subject. However, the Experiencer in the impersonal construction with *možno* can be overtly expressed, as in (6) or elided, as in (7).

(6) *Mne možno govori-t’ otkrovenno?*

I.DAT possible speak.IPFV-INF frankly

‘Is it okay if I speak frankly?’

[A. Obrazcov. Sad vetra. 1980–1995]

(7) *Možno govori-t’ otkrovenno?*

possible speak.IPFV-INF frankly

‘Is it okay if I speak frankly? You have strong nerves after all, don’t you?’

[G. Geršuni. Iz nedavnego prošlogo. 1908]

One of the attested properties of impersonal modals is that when they are used without an Experiencer, the possibility applies to every participant involved in the situation: “The possibility is universal – it could apply to anyone” (Timberlake, 2004: 382). If the speaker

wants to specify who can or cannot carry out an action, the speaker must overtly mark the Experiencer. A corpus study by Grillborzer (2019) demonstrates that overall constructions with the modal *možno* tend to be used with an elided (non-overt) Experiencer. The distribution in her dataset is as follows: 6 constructions with an Experiencer in the Dative case vs. 1790 constructions with an elided Experiencer. The same tendency is discovered for modals *nado* and *nel'zja*. Grillborzer (2019) suggests that modals *možno*, *nado* and *nel'zja* gravitate towards being used in impersonal constructions because the Russian language already has the modal verb *moč'* that is used in personal constructions.

However, when *možno* is used in requests it behaves differently. Example (7) shows that in requests *možno* can be used without an overt Experiencer yet possibility is applied to only one specific participant. In this article, I will call examples with the elided Experiencer, as in (7), modal constructions with covert Dative (*možno* + DAT) since the Dative Experiencer is unambiguously recoverable.⁴

Furthermore, the verb itself can be elided when a speaker requests an item (8).

- (8) *Možno mne posledn-ij kusoček?*
 possible I.DAT last-M.ACC.SG piece.ACC.SG
 'Is it okay if I have the last piece?'
 [Domašnj razgovor // Iz kolekcii NKRJA, 2005]

To the best of my knowledge, there is little previous scholarship on the DAT–NOM variation, see (1a) and (1b). Scholars have mostly focused on the properties of impersonal uses of *možno*. Beljaeva (1990: 123–140) provides examples exclusively with the *možno* + DAT construction. Padučeva (2016) lists examples with both constructions without any explanatory remarks. In the most recent corpus study on various modal meanings and their constructions, Lyashevskaya et al. (2017), in describing the annotation of their dataset, also mention in passing that *možno* can be used both with Nominative and Dative. Dubinina and Malamud (2017) made a study of how requests are formulated in Russian heritage language. As a baseline for their research, Dubinina and Malamud searched the spoken subcorpus of the RNC for various request formulas including requests with the modal *možno*. Such requests were treated by the authors as impersonal modal constructions, however the examples that are used in the article contain requests formulated mostly with *možno* + NOM.

Choi (1994: 178) treats *možno* as an impersonal modal adverb and argues that *možno* is the only modal word that can be used to formulate requests for permission to carry out an action. According to Choi (1994) *možno* is not interchangeable with *moč'* in the speech act of request.⁵ I will argue that requests can be formulated with the modal verb *moč'*, as in (9a), (9b) and (9c), as well as with *možno*, although the usage of *moč'* might be less frequent in such contexts.

- (9) a. – *Mog-u li ja voj-ti?*
 can.IPFV-PRS.1SG whether I.NOM enter.PFV-INF

⁴This decision might contradict the surface-oriented principles of Usage-based Construction Grammar, i.e., “no underlying levels of syntax or any phonologically empty elements are posited” (see Goldberg, 2003: 219). However, in examples like (7) the requester usually coincides with the speaker (*mne* ‘for me’) or includes the speaker as a member of a larger group (*nam* ‘for us’). Thus, pragmatically it would be incorrect to call such constructions underspecified, because even if the requester is not overtly marked, the hearer is able to unequivocally identify the requester.

⁵However, Choi (1994) does not present clear evidence why the use of *moč'* is atypical in the speech act of request.

‘–**May I enter?** – Come in, – answered Teplyj in surprise.’
[D. Lipskerov. Sorok let Čančžòè (1996)]

- b. *Ja mog-u vzja-t’ u tebja èt-u*
I.NOM can.IPFV-PRS.1SG take.PFV-PRS.1SG from you.GEN.SG this-F.ACC.SG
fotografij-u?
photo-ACC.SG
‘**Can I take** this photo from you?’
[I. Grošek. Restavracija obeda. 2000]

- c. – *Mog-u ja vzja-t’ ee v medsanbat?*
can.IPFV-PRS.1SG I.NOM take.PFV-INF she.ACC to medical.battalion.ACC.SG
‘– **Is it okay if I take** her to the medical battalion?’
[J. Bondarev. Bereg. 1975]

Švedova et al. (1980: 214) list *možno* among other impersonal modal words such as *nel’zja* ‘must not’, *nado/nužno/neobходимо* ‘have to’ etc. and mention that *možno* can be used with or without an Experiencer. In a footnote in a section about particles, Švedova et al. (1980: 388) admit that *možno* can also be considered to be an interrogative particle that, when combined with a future tense verb form, is used to formulate a request as illustrated by examples from literary works:

- (10) *Možno – ja dosk-i voz’m-u?*
possible I.NOM board-ACC.PL take.PFV-PRS.1SG
‘**Is it okay if I take** the wooden boards?’
(Platonov)

- (11) *Možno ja odno zamečani-e sdelay-u?*
possible I.NOM one comment-ACC.SG make.PFV-PRS.1SG
‘**Is it okay if I make** one comment?’
(Šukšin)

Hansen (2001: 170) also refers to *možno* when used in requests as a modal particle that expresses courtesy. Thus, both Švedova et al. (1980) and Hansen (2001) posit two homonymous modal words *možno*: one is a modal adverb *možno* with or without an Experiencer in the Dative case, and the other is an interrogative particle *možno* used with the Subject in the Nominative case. This decision might be convenient for the purposes of descriptive grammar; however, the term ‘‘particle’’ lacks accuracy. Particles are usually negatively defined as ‘‘the words left over when all the others have been assigned to syntactic categories’’ (Zwicky, 1985: 292). Zwicky (1985) suggests eliminating the word class of particles from the part of speech inventory across the languages of the world, because particles are semantically heterogeneous and syntactically diverse. Endresen et al. (2016) claim that the label particle as a part of speech is superfluous for Russian and provide as an alternative a conceptually motivated classification of nine lexemes previously classed as particles, reassigning them to other syntactic categories.⁶

⁶Although particles such as *razve* ‘really’ or *neuželi* ‘really’ that function as epistemic or evidential markers are not included in the analysis proposed in Endresen et al. (2016), the authors provide convincing evidence in favor of Zwicky’s claim that the label ‘particle’ should be removed from the inventory of parts of speech. In this article, we are following the direction set by Endresen et al. (2016) on further reclassification of particles

In agreement with Zwicky (1985) and Endresen et al. (2016), I claim that *možno* should be treated as a modal adverb regardless of the speech act it is used in. First, *možno* preserves its semantics ‘the possibility to do X’ in all contexts where it occurs. Besters-Dilger et al. (2009: 171) notes that “as modals are the result of grammaticalisation processes their morphology and syntax show traces of the part of speech they originally belonged to.” Therefore, the adverbial origin of *možno* can be reactivated in requests, i.e., *možno* transitions from a modal adverb to a modal sentence adverb, cf. lexicalization of *možet* ‘perhaps’ in Hansen (2010, 2016) (see Sect. 8 for more detail).

Second, Švedova et al. (1980) rely on the written form of language and might be misled by punctuation marks that artificially separate *možno* from other words in the utterance, while in the natural spoken discourse the speaker usually does not have to pause before or after *možno*. I will address this issue in more detail in Sect. 6.

In summary, it has been shown in this review that the impersonal modal word *možno* appeared in the Russian language approximately in the 16th century with the semantics ‘to have conditions to carry out an action’, a meaning that corresponds to the contemporary deontic and external modal readings. The paradigm of *možno* changed dramatically through a relatively short period of time: *možno* lost its negative counterpart *nemožno* and substituted *nemožno* by another impersonal modal word *nel’zja*. The original semantics determined the use of the construction *možno* + DAT in requests and permissions. However, the *možno* + NOM construction is mentioned in some studies but briefly so, and there remain aspects of this construction about which relatively little is known. At the same time Russian has direct questions and the personal construction *moč’* + (li) + INF that can be used in requests as well.

3 Data

For the purposes of this study, I created two datasets: one based on data in the entire old version of Russian National Corpus which includes texts from the 18th century until the present (main dataset) and the other based on the data in the spoken subcorpus of the RNC which consists of texts from the 20th century until 2016 (supplementary dataset). The data from the spoken corpus reflects how modal constructions are used in natural discourse, in situations when the speaker has less time to check grammatical (prescriptive) correctness compared to written discourse. Therefore, the speaker displays less control over her speech production and chooses the construction unconsciously. In order to perform statistical analysis, I will analyze the two datasets separately due to the lack of data for 18th – 20th century in the spoken subcorpus.

3.1 Main dataset (written corpus of the RNC)

Given that *možno* is polysemous and can appear at various positions in the sentence (at the beginning or at the end of the sentence, following or preceding the pronoun/noun, the pronoun itself can be elided etc.), I formulated seven specific queries with the modal word *možno*, main verb and its arguments in order to extract as many relevant examples as possible. These queries yielded 1681 occurrences of *možno* up to 10 words before a question mark. Second,

by analyzing properties of *možno* when it is used in requests. Further examination of the behavior of *razve*, *neuželi* and *možno* is beyond the scope of this paper.

Table 1 Search queries and clean numbers in the main dataset. Relative count (%) is given in brackets

Construction and corresponding query	Clean data
<i>možno</i> + DAT	
<i>možno</i> + PRON.DAT + INF	200 (21%)
možno 1-1 spro, dat 1-3 v 1-10 bques	
<i>možno</i> + INF	318 (33.4%)
možno first 1-1 v, inf 1-10 bques	
PRON.DAT + <i>možno</i> + INF	64 (6.7%)
spro, dat 1-3 možno 1-3 v 1-10 bques	
<i>možno</i> + NAME.DAT + INF	1 (0.1%)
možno 1-1 dat (famn persn patrn) 1-3 v 1-10 bques	
Subtotal	583 (61.2%)
<i>možno</i> + NOM	
<i>možno</i> + PRON.NOM + VERB	356 (37.4%)
možno 1-1 spro, nom 1-3 v 1-10 bques	
<i>možno</i> + VERB	11 (1.1%)
možno 1-1- -budet v sg, pl 1p,2p,3p 1-10 bques	
<i>možno</i> + NAME.NOM + VERB	3 (0.3%)
možno 1-1 nom (famn persn patrn) 1-3 v 1-10 bques	
Subtotal	370 (38.8%)
Total	953 (100%)

I manually removed all noise from the raw numbers and annotated the remaining sentences (clean data). As a result, I obtained 953 sentences for analysis. The entire database is publicly accessible from the Tromsø Repository of Language and Linguistics archive (TROLLing) at <https://doi.org/10.18710/JXBOQF>. The search queries and numbers for clean data for the main dataset are presented in Table 1.

Due to the fact that *možno* can express various modal meanings (deontic, external and internal possibility) there was considerable noise in the data: almost half of the examples (728 sentences) had to be excluded from the sample. In the majority of cases, sentences were flagged as noise because they were not conventional indirect requests. In the remainder of this section, I will briefly comment the two groups *možno* + DAT and *možno* + NOM mentioned in the Table 1, and illustrate each query with an example.

3.1.1 *Možno* + DAT

The pronoun or noun in the Dative case in the *možno* + DAT construction can follow the modal word *možno* as in (12), be elided as in (13) and (14), or precede the modal word as in (15) and (16).

možno + PRON.DAT + INF:

- (12) *Možno mne posmotre-t' material-y pervičn-ogo*
 possible I.DAT see.PFV-INF document-ACC.PL primary-M.GEN.SG
pokvartirn-ogo obxod-a?
 house.to.house-M.GEN.SG inspection-GEN.SG
 'Is it okay for me to see the primary apartment inspection documents?'
 [A. Marinina. Angely na l'du ne vyživajut. T. 1. 2014]

In this subgroup I did not exclude twenty-six sentences with a structure like in (13). Such examples were tagged as examples of the covert Dative case (*možno + CDAT*, where C stands for covert) because *vam* 'to you' does not code the Agent or Experiencer but codes the recipient, i.e., the person to whom the speaker wants to address a question.

- (13) *Možno vam zada-t' odin neskromn-yj vopros?*
 possible you.DAT ask.PFV-INF one.M.ACC.SG indelicate-M.ACC.SG question.ACC.SG
 'Is it okay if I ask you an awkward question?'
 [E. Suxov. Delu konec – sroku načalo. 2007]

možno + INF:

- (14) *Možno vzja-t' vodičk-i?*
 possible take.PFV-INF water-GEN.SG
 'Is it okay if I get some water?'
 [M. Traub. Ne vsja la vie. 2008]

PRON.DAT + možno + INF:

- (15) *Tak kak že, mne možno exa-t' v Tixvin?*
 thus how after.all I.DAT possible go.IPFV-INF to Tixvin.ACC.SG
 'So, is it okay if I go to Tikhvin?'
 [N. Gejnec. Arakčeev. 1898]

možno + NAME.DAT + INF:

- (16) *Doktor, kak vy polaga-ete, možno Trilli pogladi-t'*
 doctor.NOM.SG how you.NOM think.IPFV-PRS.2PL possible Trilli.DAT pet.PFV-INF
ët-u sobak-u?
 this-F.ACC.SG dog-ACC.SG
 'Doctor, do you think it is okay for Trilli to pet this dog?'
 [A. Kuprin. Belyj pudel'. 1903]

3.1.2 Možno + NOM

In contemporary standard Russian, the pronoun or noun in the Nominative case in the construction *možno + NOM* must follow the modal word *možno* (17), (18). Sometimes the Subject can be elided, but the person is still marked on the verb (19). I will refer to examples like (19) as to constructions with covert Nominative (*možno + CNOM*).

možno + PRON.NOM + VERB:

- (17) *A možno my voz'm-em sebe na pamjat' neskol'ko*
 but possible we.NOM take.PFV-PRS.1PL self.DAT for memory.ACC.SG several
štuč-ek?
 thing-GEN.PL
 'Is it okay if we take a few things as souvenirs?'
 [V. Postnikov. Priključenija Karandaša i Samodelkina na «Dryndolete». 1997]

možno + NAME.NOM + VERB:

- (18) *Možno, Galink-a pobude-t poka u vas?*
 possible Galinka-NOM stay.PFV-PRS.3SG until at you.GEN.PL
 'Is it okay, if Galinka stays with you for the time being?'
 [J. Žemojtelite. Aisty. 2002]

možno + VERB:

- (19) *Mam, možno, voz'm-u tvoj platok?*
 mom.VOC possible take.PFV-PRS.1SG your.M.ACC.SG scarf.ACC.SG
 'Mom, is it okay if I take your scarf?'
 [N. Mordjukova. Kazačka. 2005]

3.2 Annotation of data

The annotation of clean data includes both syntactic and semantic features (a–f) and meta-data for texts (h–j). The metadata reveals how the constructions are distributed through time in the dataset and, in principle, should reflect how the constructions are distributed across various genres, e.g., the *možno* + DAT construction is expected to be used in formal contexts, while *možno* + NOM would be typical for casual speech. The requests to carry out an action pragmatically are mostly tied to the speaker (first person singular or plural); however, the speaker might as well ask permission for another participant. Tense, aspect, transitivity, possibility of the infinitive or finite verb to have an argument in the Dative case and the semantic class of the predicate might trigger the choice of a more active semantic Subject, i.e., Agent in the Nominative, or a less actively involved Experiencer in the Dative.

Statistical analysis shows that the text creation date is the most important feature that predicts the choice of construction. Examination of text creation date makes it possible to determine when the *možno* + NOM construction appeared in language and how its frequency has changed since.

Punctuation marks to some extent signal whether the speaker interprets *možno* + NOM as a single construction or two constructions: one with the modal adverb *možno* and the other with a personal clause. However, punctuation rules are prescriptive and like other literary norms do not always reflect the present-day linguistic reality. Genre can also play role in the choice of construction: formal genres might prefer prescriptively correct *možno* + DAT construction.

- case of the semantic Subject (Nominative or Dative);
- person and number of the semantic Subject (first singular, first plural, second singular, second plural etc);
- tense (past, non-past and future);
- aspect (perfective, imperfective);

- e. transitivity;
- f. possibility of the infinitive or finite verb to have an argument in the Dative case;
- g. the semantic class of the predicate under modality (motion, speech, location etc.⁷);
- h. text's creation date;
- i. genre (fiction, journalism, etc);
- j. punctuation marks.

I will explore the relationship between the choice of *možno* + NOM or *možno* + DAT constructions and the features listed above. To achieve this, I will examine each factor separately and after that I will apply the statistical method logistic regression. All statistical analyses were carried out using R package {lme4}.

4 Analysis

4.1 Case and person of the semantic Subject

Most of the requests are formulated with the Subject or Experiencer in the first person singular (93.6%). The rest are distributed among the first-person plural (4.1%), the second person singular (0.8%) and the third person singular (1.2%) and plural (0.3%). The distribution of requests according to the semantic Subject's case, person and number is presented in Table 2.

The most semantically ambiguous examples compared to the other constructions are sentences with the covert Dative, i.e., without an overtly expressed Experiencer. The earliest constructions with covert Dative appeared in my dataset at the same time as the Dative constructions at the beginning of the 18th century, and since then the covert Dative constructions are somewhat more frequent in the language than the Dative (approx. in a ratio of 3:2).

Table 2 The distribution of requests according to the semantic Subject's case, person and number. Relative count (%) is given in brackets

Case	Person					Total
	1 st person, singular	1 st person, plural	2 nd person, singular	3 rd person, singular	3 rd person, plural	
Nominative	336 (35.3%)	18 (1.9%)	2 (0.2%)	2 (0.2%)	1 (0.1%)	359 (37.7%)
Covert nominative	11 (1.1%)	–	–	–	–	11 (1.1%)
Dative	216 (22.7%)	12 (1.3%)	–	9 (0.9%)	2 (0.2%)	239 (25.1%)
Covert dative	329 (34.5%)	9 (0.9%)	6 (0.6)	–	–	344 (36.1%)
Total	892 (93.6%)	39 (4.1%)	8 (0.8%)	11 (1.1%)	3 (0.3%)	953 (100%)

⁷In this article, I use the same semantic tags as assigned in the RNC. The verbs that have not been assigned a semantic tag in the RNC were manually classified by an external linguist. I would like to express my sincere gratitude to Galina Kustova, who generously agreed to class the remaining verbs in my dataset.

Usually, the modal word *možno* without an Experiencer is used in impersonal constructions, as in (20). In such examples *možno* + INF is not a request; the construction expresses the possibility of performing an action. Examples like (20) were excluded from the sample.

- (20) *Esli postara-t'-sja, moj-u žizn'-ø možno zna-ete kak*
 if try.PFV-INF-REFL my-F.ACC.SG life-ACC.SG possible know.IPFV-PRS.2PL how
rasskaza-t'?!?
 tell.PFV-INF
 'Can you imagine how my life story **can be told** if one tries hard enough?!'
 [K. Bukša. Zavod «Svoboda» // «Novyj mir». 2013]

However, when *možno* is used in requests, in most examples the context unambiguously determines which participant is expected to perform an action even if the Experiencer is not overtly expressed as in (21)⁸ or (22).

- (21) *Stuk v dver'. Zaxodi-t Vanj-a.*
 knock.NOM.SG on door-ACC.SG enter.IPFV-PRS.3SG Vanja-NOM
 – *Možno vzja-t' vodičk-i?* – *tixo sprašiva-et mal'čik.*
 possible take.PFV-INF water-GEN.SG quietly ask.IPFV-PRS.3SG boy.NOM.SG
 'A knock on the door. Vanja comes in. – **Is it okay if I get some water?** – The boy asks quietly.'
 [M. Traub. Ne vsja la vie. 2008]
- (22) *Možno prises-t' za vaš stolik? – Net, nel'zja, – procedi-l-a*
 possible sit.PFV-INF behind your table.ACC.SG no impossible say.PFV-PST-F.SG
skvoz' zub-y krasavic-a.
 through tooth-ACC.PL beautiful.woman-NOM.SG
 'Is it okay if I sit at your table? – No, you can't, – the beauty hissed through gritted teeth.'
 [E. Suxov. Delu konec – sroku načalo. 2007]

In example (21) a boy is thirsty, so he asks for permission to take a bottle of water from the refrigerator to quench his thirst. In example (22) a speaker wants to get to know an attractive woman and asks for permission to sit at her table. In requests concerning the first person singular and plural it is almost impossible for the hearer to misinterpret the modal construction even without an overtly present Experiencer. It is pragmatically unlikely that under circumstances as in (21) or (22) the speaker would wonder whether the possibility of performing an action exists in general. In other words, (21) and (22) cannot be understood as 'Is it possible for anyone to get some water?' and 'Is it possible for anyone in the restaurant to sit with you?' respectively. It is also unlikely to suggest that the speaker might be asking permission for other person, e.g., *Možno ej vzjat' vodički?* 'Can she get some water?'

I have only five examples in which it is difficult to say whether the speaker requests the hearer to carry out an action or wants to carry out an action himself as in (23) and (24). In (23) a surgeon asks his colleague whether it would be possible to give the corpse of the woman who he operated on to her relatives without an autopsy. It remains unclear whether his colleague, the hospital, or the speaker himself will do this. In (24) Evelina's son is playing with other children in the park and a gentleman asks to keep the noise down. It is not obvious

⁸Example (14) repeated here as (21) with an extended context for readers' convenience.

whether Evelina should ask children to be quiet or the speaker is requesting permission to tell the children off himself.

- (23) *I ničego ne smog-l-i sdelat'.*
and nothing not can.PFV-PST-3PL make.PFV-INF
Možno odat' bez vskrytij-a?
possible release.PFV-INF without autopsy-GEN.SG
'And we could not do anything. **Is it okay if I/ you/ the hospital release(s) the corpse without an autopsy?**'
[N. Amosov. Dnevnik. 1985]

- (24) *On podoše-l k Èvelin-e i sprosi-l:*
he.NOM come.PFV-M.PST.SG to Evelina-DAT and ask.PFV-PST.M.SG
– *Možn-o sdela-t' potiše? Mne bol'se, čem šest'desjat let.*
possible make.PFV-INF quieter I.DAT more than sixty year.GEN.PL
'He went up to Evelina and asked: — **Can I/you make them quiet?** I am more than sixty years old.'
[V. Mesjac. Lečenje èlektričestvom // «Ural». 2002]

Taken together these results suggest that there is a strong association between the speech act of request and the first person singular and plural regardless of the type of the construction used: *možno* + NOM, *možno* + DAT, *možno* + CNOM or *možno* + CDAT. However, requests with covert Dative sometimes require more linguistic and extralinguistic (e.g., gestures) support to be correctly interpreted by the hearer.

4.2 Tense, aspect and transitivity

A request is a future-oriented speech act, and, in addition to infinitive forms, there were only non-past perfective and periphrastic future verb forms in the database. Their distribution is as follows: 799 sentences are with perfective verbs (both finite and non-finite forms), 154 sentences are with imperfective verbs (both finite and non-finite forms). The information about tense and aspect of the lexical verb used in requests with *možno* is given in Table 3.

Table 3 Illustration of tense-aspect forms used in requests with *možno+skazat' /govorit'* 'say/tell', in which *skazat' /govorit'* represent all verbs in the dataset. Relative count (%) is given in brackets

Aspect-tense	<i>možno</i> + DAT		<i>možno</i> + NOM		Total
	Dative	Covert dative	Nominative	Covert nominative	
PFV	<i>mne skazat'</i> 189 (19.9%)	<i>skazat'</i> 312 (32.7%)	<i>ja skažu</i> 287 (30.1%)	<i>skažu</i> 11 (1.1%)	799 (83.8%)
IPFV	<i>mne govorit'</i> 50 (5.2%)	<i>govorit'</i> 32 (3.4%)	<i>ja budu govorit'</i> 72 (7.6%)	–	154 (16.2%)
Total	239 (25.1%)	344 (36.1%)	359 (37.7%)	11 (1.1%)	953 (100%)

Seventy-two of the sentences with imperfective verbs include imperfective future forms with an auxiliary verb *byt'* 'be' and an infinitive, see (25) and (26). *Možno* is used with a Subject marked in the Nominative case.

- (25) *Možno, my bud-em govori-t' pro sn-y, sumerk-i,*
possible we.NOM be.FUT-2PL talk.IPFV-INF about dream-ACC.PL twilight-ACC.PL
step'?
steppe.ACC.SG
'Is it okay if we talk about dreams, twilight, the steppe?'
[M. Rybakova. Dver' v komnatu Leona // «Zvezda». 2003]

- (26) *Možno, ja ne bud-u vyključa-t' svet?*
possible I.NOM no be.FUT-1SG turn.off.IPFV-INF light.ACC.SG
'Is it okay if I do not turn off the light?'
[T. Orlova. Lovuška dlja jaščeric // «Oktjabr'». 2003]

The remaining eighty-two sentences are distributed as follows: ten of them contain the future form *budet* (27); seventy-two of them do not have *budet* (28).

- (27) *Mne možno bud-et pomoga-t' im?*
I.DAT possible be.FUT-3SG help.IPFV-INF they.DAT
'Is it okay if I help them?'
[A. Zarin. Kazn'. 1902]
- (28) – *Tak kak že, mne možno exa-t' v Tixvin?*
thus how after.all I.DAT possible go.IPFV-INF to Tixvin.ACC.SG
'So, is it okay if I go to Tikhvin?'
[N. Gejnec. Arakčeev. 1898]

There are no examples in which *možno* combines with imperfective future forms with auxiliary verb *byt'* 'be' and Subject in the Nominative is elided (*možno + budu govorit'*) in my dataset, but such examples are grammatical and can be produced by speakers in spontaneous discourse.

I classed verbs in my database into transitive and intransitive in agreement with the classification used in the RNC. As a result, I obtained 376 examples with intransitive verbs and 577 examples with transitive verbs. I will use this data in the statistical analysis in Sect. 5.

4.3 The possibility of the infinitive or finite verb to have an argument in the Dative case

Following the distinction proposed by Choi (1994), I will refer to *možno* as a modal predicate that represents a modal situation and to a complement clause predicate (infinitive or finite verb form) as a dictal predicate that represents propositional content. The Dative case is used in Russian to mark an Experiencer and the Indirect Object of a sentence, i.e., the Recipient. There are 260 examples out of 953 in which a dictal verb takes the Dative to mark the Recipient in the dataset, see (29) and (30).

- (29) *A možno mne zada-t' vam vopros?*
but possible I.DAT ask.PFV-INF you.DAT question.ACC.SG

‘Is it okay if I ask you a question?’

[Č. Abdullaev. Misterija èpoxi zakata. 2007]

- (30) *Možno my tebe peredat-im neskol’ko dollar-ov čerez Èsfir’?*
 possible we.NOM you.DAT give.PFV-PRS.1PL several dollar-GEN.PL via
 Èsfir’?
 Èsfir’.ACC.SG
‘Is it okay if we give you a few dollars via Èsfir’?’
 [I. Efimov. Sud da delo // «Zvezda». 2001]

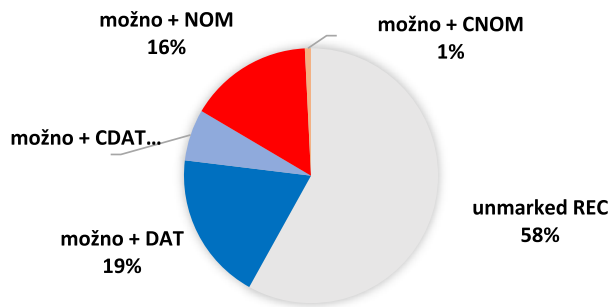
I did not take into account cases in which verbs, particularly verbs of motion, are followed by the preposition *k* ‘towards/to’ and the pronoun in the Dative, because those are arguments of place, not Recipients as in (31).

- (31) *A nam možno voj-ti tuda k nim?*
 and we.DAT possible enter.PFV-INF there to they.DAT
‘Is it okay if we go in there to see them?’
 [A. Pisemskij. Masony. 1880]

In 109 out of 260 sentences in the dataset the Recipient of a dictal situation is overtly marked, see Fig. 1. Among those examples there are forty-nine examples with *možno* + DAT as in (32), seventeen examples with *možno* + CDAT as in (33), forty-one examples with *možno* + NOM as in (34), and two examples with *možno* + CNOM as in (35).

- (32) *Možno mne Vam ešče napisa-t’ pro sbornik, esli L. N. da-st?*
 possible I.DAT you.DAT again write.PFV-INF about anthology.ACC.SG if L. N.
 give.PFV-PRS.3SG
‘Is it okay if I write to you about the anthology/story collection, if L. N. will give it to me?’
 [L. Avilova. Pis’ma A. P. Čexovu.1904]
- (33) *Možno ej postavi-t’ tuda vodičk-i?*
 possible she.DAT put.PFV-INF there water-GEN.SG
‘Is it okay if I put a glass of water in there for her?’
 [V. Skvorcov. Kanikuly vne zakona. 2001]
- (34) *Možno, ja pokaž-u emu jazyk?*
 possible I.NOM show.PFV-PRS.1SG he.DAT tongue.ACC.SG
‘Is it okay if I stick my tongue out at him?’
 [M. Gasparov. Zapisi i vypiski. 2001]
- (35) *Možno da-m vam svo-i koordinat-y?*
 possible give.PFV-PRS.1SG you.DAT self-F.ACC.PL coordinate-ACC.PL
‘Is it okay if I give you my contact information?’
 [D. Doncova. Mikstura ot kosglazija. 2003]

Fig. 1 Distribution of examples with an overtly marked and unmarked Recipient in the main dataset. REC stands for Recipient



The most interesting cases are the examples in which both the modal adverb and dictal verb have their arguments in the Dative case overtly marked as in (32). A sequence of two arguments in the Dative case makes a sentence difficult to interpret by the hearer. Only one such example was found in our data, see (32). The remaining examples tended to separate the Experiencer from the Recipient by the dictal verb as in (36) or by the modal and the dictal verb as in (37).

- (36) *A možno mne podari-t' vam èt-ot natjurmort?*
 and possible I.DAT give.PFV-INF you.DAT this- M.ACC. SG still.life.ACC.SG
 'Is it okay if I give you this still life as a gift?'
 [I. Pivovarova. Odnadždy Katja s Manečkoj. 1986]

- (37) *A mne možno skaza-t' vam dva slov-a, Vladimir Il'ič?*
 and I.DAT possible say.PFV-INF you.DAT two word-GEN.SG Vladimir Il'ič
 'Is it okay if I say two words to you, Vladimir Ilyich?'
 [M. Gor'kij. Mužik. 1899]

To sum up, the Recipient marked by Dative appears in both Dative and Nominative constructions. Apparently, speakers tend to avoid structures in which the Experiencer is directly followed by the Recipient in the Dative case as in (38), because such structures require an extra effort to be processed by the hearer. Otherwise, both arguments can be present in the same utterance.

4.4 The semantic class of the predicate under modality

There are 312 unique verbs in the dataset. 131 of them are attested in two or more sentences. For the purposes of this study, I used the semantic classification independently established and annotated by the RNC. However, 109 verbs remain unclassified in the RNC. To avoid bias in the data analysis, these verbs were independently manually classed by an external specialist. The verbs in the data I collected fall into twenty verb classes: creation, existence, change of state, contact, impact, light, location, location of body, mental, motion, motion of body, perception, phasal, physiological, possession, emotion, placement (put), sound, speech and miscellaneous. The miscellaneous verb class includes 39 words that were not classified in the RNC, nor by the external linguist.

The ten most frequent verbs are presented in Table 4. These verbs are distributed among seven different verb classes that can be divided into two groups: physical activities (motion, location of body, possession) and mental activities (speech, mental, existence and perception). Rows containing physical activities are highlighted in light grey.

Table 4 The ten most frequent verbs in the infinitive form in the main dataset and their verb classes

#	INF and translation	# of occurrences with IPM in brackets	Verb class	# with DAT	# with CDAT	# with NOM	# with CNOM
1	<i>vzjat</i> 'take'	48 (0.17)	possession	9	12	26	1
2	<i>pojti</i> 'go'	40 (0.14)	motion	14	2	24	–
3	<i>uznat</i> 'find out'	39 (0.14)	mental	–	39	–	–
4	<i>zadat</i> 'ask'	30 (0.11)	speech	13	12	5	–
5	<i>skazat</i> 'say'	23 (0.08)	speech	9	7	7	–
6	<i>sprosit</i> 'ask'	20 (0.07)	speech	4	15	1	–
7	<i>videt</i> 'see'	18 (0.06)	perception	3	15	–	–
8	<i>nazyvat</i> 'call by name'	18 (0.06)	speech	5	1	12	–
9	<i>prijti</i> 'come'	18 (0.06)	motion	7	1	10	–
10	<i>poprosit</i> 'request'	17 (0.06)	speech	–	14	3	–

As can be seen from Table 4, the verbs *uznat* 'find out', *videt* 'see' and *vojti* 'enter' are never used in the construction *možno* + NOM. On the one hand these constructions might be interpreted by the speakers as idiomatic expressions. For instance, *možno vojti* 'may I enter' in a spoken discourse tends to be reduced to the bare modal word *možno* with an interrogative intonation and a co-speech gesture like knocking. The construction *možno uznat* 'I wonder' is frequently used as a polite formula to pose an uncomfortable question. On the other hand, I would argue that constructions like *Možno ja uznaju* or *Možno ja vojdu* are grammatical and can be heard and seen in natural spoken or written discourse.⁹ Therefore, the results in Table 4 might not reflect the holistic picture due to the limited sample size and should be treated with caution.

Overall, the findings discussed in this subsection suggest that both constructions can be used with a variety of verb classes.

4.5 Text creation date and genre

The examples in my dataset are drawn from texts that can be broadly classified into six genres, namely fiction, journalism, forums and blogs, epistolary, liturgy/theology and science fiction. The main body of texts (95%) is distributed between fiction and journalism. The ratio of Nominative constructions to the Dative ones across these two genres is 2:3 the same as in the total dataset. Given that forums and blogs, epistolary, liturgy and science fiction are relatively rare in the database, I therefore collapsed those genres into one category, namely "Other". Moreover, the statistical analysis in Sect. 5 shows that genre did not play a role whereas text creation date is by far the most important factor.

The dataset contains texts from the 18th to the 21st century. The earliest attestation of *možno* + DAT was registered in the second half of 18th century, the earliest attestation of *možno* + NOM was registered in the first half of 20th century. Figure 2 shows an upward trend for Nominative constructions whereas the Dative constructions remained almost at the same rate during the 20th century and decreased significantly compared to the Nominative ones for the past 15 years.

⁹Examples with *možno (ja) uznaju* or *možno mne uznat* can be found in the GICR corpus (Belikov et al. (2013), <http://www.webcorpora.ru/>), e.g.: *Možno ja uznaju? – umoljajušče stala prosit' ja prepodavatelja* 'Is

Distribution of *možno* + DAT, *možno* + CDAT, *možno* + NOM and *možno* + CNOM

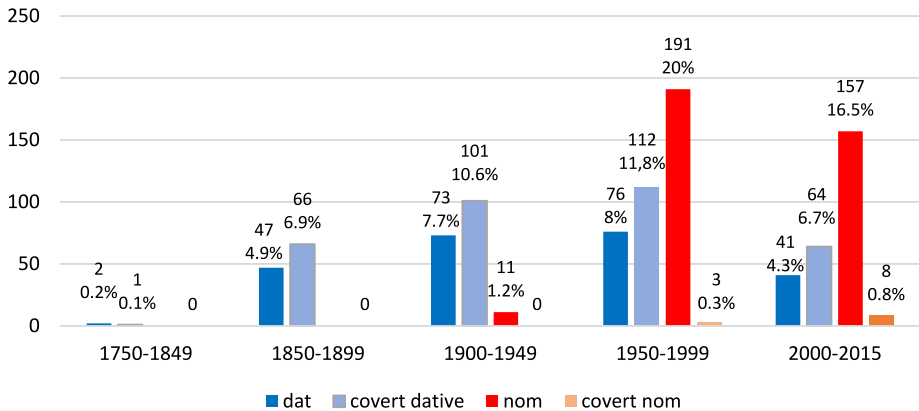


Fig. 2 Distribution of four constructions used in requests for permission to carry out an action: *možno* + DAT, *možno* + CDAT, *možno* + NOM and *možno* + CNOM across the main database

4.6 Punctuation marks

The Russian language has a strictly regulated system of punctuation rules. Punctuation is used to show the reader how the utterance should be interpreted and where to pause. The speaker must use a comma to separate two different clauses. The *možno* + DAT construction does not require any punctuation marks within it.

In contrast one can suggest that *možno* behaves as an independent elliptic modal clause when *možno* is used in the construction *možno* + NOM, therefore *možno* should be separated from the subject in the Nominative by a comma or another punctuation mark. However, the punctuation marks in my dataset are not consistent. There are 201 (54%) examples in which there is no comma following *možno* and 169 (46%) examples in which *možno* is separated from the personal clause by a comma or dash (one sentence). The speakers' uncertainty regarding punctuation marks indicates that some speakers interpret *možno* + NOM as a single construction (similar to *možno* + DAT).

To sum up, punctuation is a weak factor when it comes to tracking a language change. Punctuation rules are conservative and slow to change. Nevertheless, the absence of a comma in half of the examples in the dataset within the *možno* + NOM suggests that this construction is undergoing a language change in which the modal adverbial is being integrated into the clause.

5 Statistical modelling of factors contributing to the choice of construction

A logistic regression analysis was performed in order to sort out the influence of various factors contributing to the choice of Nominative versus Dative case in construction with

it okay if I check on him? – I began to plead the professor'; *A možno mne uznat' pro rabotu?* 'Is it okay if I ask about a job?'

Table 5 Semantic and syntactic control variables

Variable	Values			
FORM	<i>možno</i> + NOM <i>možno</i> + DAT			
CREATED	1841 1853 1857	1862 1863 1868	1869 1870 1871	1872 1873 etc.
VERBCLASS	Be:creat Be:exist Changest Contact	Impact Loc Loc:body Mental	Miscellaneous Move Move:body Perception	Physiological Possession Speech
ASP	IPFV PFV			
TRANS	Yes No			
DATGOV	Yes No			

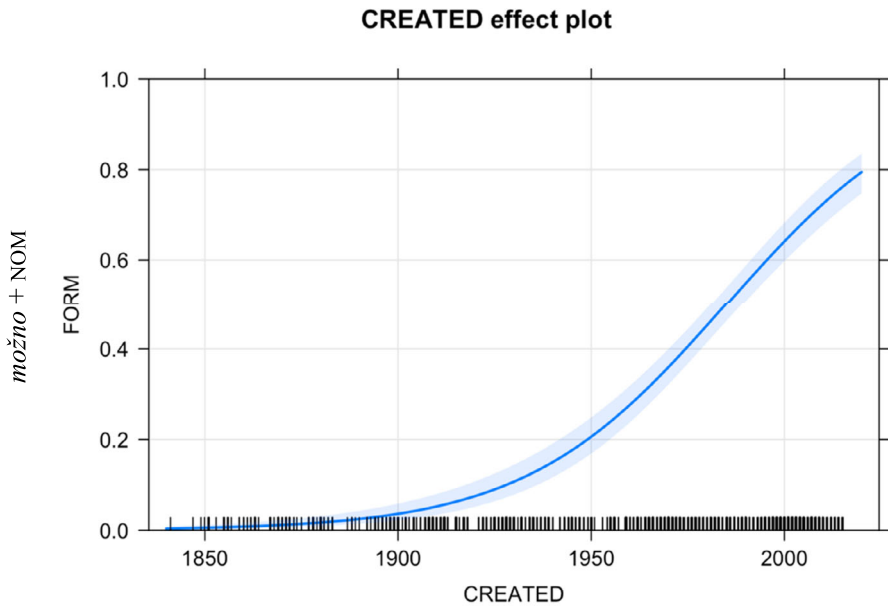
možno. First, because the construction *možno* + CNOM is very rare (eleven sentences in the dataset), that data does not support a meaningful statistical distinction of *možno* + CNOM vs. *možno* + NOM. Therefore, that data is aggregated with *možno* + NOM and consequently covert Dative was aggregated with Dative. In a fact this is a distinction between the construction with infinitive where the only way we can insert the argument is the argument in the Dative case as opposed to *možno* with a finite verb where the only option is the Nominative case.

Second, examples with the verb *byt* ‘be’ were merged with imperfective verbs (according to traditional recognition of this verb as imperfective), therefore aspect (ASP) was represented by the opposition imperfective (IPFV) – perfective (PFV). Third, verb classes (VERBCLASS) represented by less than ten verbs, namely emotion, light, phasal, placement (put) and sound, were added to the miscellaneous group. Fourth, in CREATED we removed one data point in 1751 that is all by itself ninety years earlier than any other datapoint. Since that point alone could not give us a reliable measure of the use of *možno* + NOM vs. *možno* + DAT. From 1841 onward we have fairly dense data. The remaining features: transitivity (TRANS) and possibility of the infinitive or finite form to have an argument in the Dative case (DATGOV) were not changed. The semantic and syntactic control variables are presented in Table 5.

We started with a statistical model of our maximal hypothesis according to the following formula $FORM \sim CREATED + ASP + DATGOV + TRANS + VERBCLASS$, meaning that the FORM is predicted according to the values of CREATED, ASP, DATGOV, TRANS and VERBCLASS. We then followed a “drop one” procedure to eliminate any non-significant factors. The statistical model showed that predictors ASP, TRANS, DATGOV and VERBCLASS are not statistically significant. For instance, for perfective verbs 61.4% are used within the dative construction and for imperfective verbs the proportion is almost identical: 59.8%. Similar distributions are observed for DATGOV and TRANS. The code that I used is available at TROLLing repository (<https://doi.org/10.18710/JXBOQF>).

Table 6 Results of logistic regression for $\text{FORM} \sim \text{CREATED}$, where *CI* stands for confidence interval

Predictors	FORM (<i>možno</i> + NOM)		<i>p</i>
	Log-Odds	CI	
(Intercept)	-76.61	-88.64 – -65.52	<0.001
CREATED	0.04	0.03 – 0.04	<0.001
Observations	952		

**Fig. 3** Predicted probability of getting *možno* + NOM construction (Color figure online)

The optimal model is $\text{FORM} \sim \text{CREATED}$, which yields the following results: for each year the log-odds of getting Subject in the Nominative increases by 0.04, see Table 6.

Then we created a plot of the effect of *CREATED* for analysis on predicted probability of use of the Nominative construction, see Fig. 3. The probability of use of the *možno* + NOM construction is plotted on the Y-axis, where 0.2 equals 20%, 0.4 equals 40%, 0.6 equals 60%, 0.8 equals 80% and 1 equals 100%, while the creation date is plotted on the X-axis. Data points are projected onto the X-axis and represented as thin lines creating a “rug”. The “Rug” represents the density of data for each year in the time span. The blue line in Fig. 3 shows the prediction, whereas the light blue area is the two-sided 95% confidence interval with upper and lower limits. The confidence interval indicates the most likely range of values associated with the form, i.e., with the probability of using the Nominative construction.

Overall, statistical modeling confirms that we are dealing with a linguistic change, since the only statistically significant factor that influences the choice of construction is the date of creation of the text, and we see a clear upward trend. The shape of the curve is consistent with the s-curve that is associated with language change, see Blythe and Croft (2012).

Table 7 Search queries and clean numbers in the supplementary dataset. Relative count (%) is given in brackets

#	Construction and corresponding query	Clean data
<i>možno</i> + DAT		
1.	<i>možno</i> + PRON.DAT + INF <i>možno</i> 1-1 spro, dat 1-10 bques	77 (15.3%)
2.	<i>možno</i> + INF <i>možno</i> first 1-1 v, inf 1-10 bques	53 (10.6%)
Subtotal	130 (25.9%)	
<i>možno</i> + NOM		
3.	<i>možno</i> + PRON.NOM + VERB <i>možno</i> 1-1 spro, nom 1-10 bques	366 (72.9%)
4.	<i>možno</i> + VERB <i>možno</i> 1-1- <i>-budet</i> v sg, pl 1p,2p,3p 1-10 bques	6 (1.2%)
Subtotal	372 (74.1%)	
Total	502 (100%)	

6 Data from the spoken subcorpus of the RNC

I created a supplementary dataset based on data in the spoken sub-corpus of the RNC in order to determine whether there are pauses that might indicate that *možno* + NOM is not a construction parallel to *možno* + DAT. The corpus consists of 12 113 491 words of transcripts of recorded public and non-public speech of various genres produced by speakers of various ages and backgrounds as well as film transcripts from 1900 through 2016.

I formulated four specific queries with *možno* + NOM and *možno* + DAT, these queries yielded 649 occurrences of *možno* up to ten words before a question mark. Second, I manually removed all noise from the raw numbers and annotated the remaining sentences (clean data). As a result, I obtained 502 sentences for analysis. The search queries and numbers for clean data are presented in Table 7.

Overall, I removed 147 irrelevant examples that were not requests. The annotation of the clean data was made in accordance with the annotation of the examples in the main dataset.

6.1 Analysis

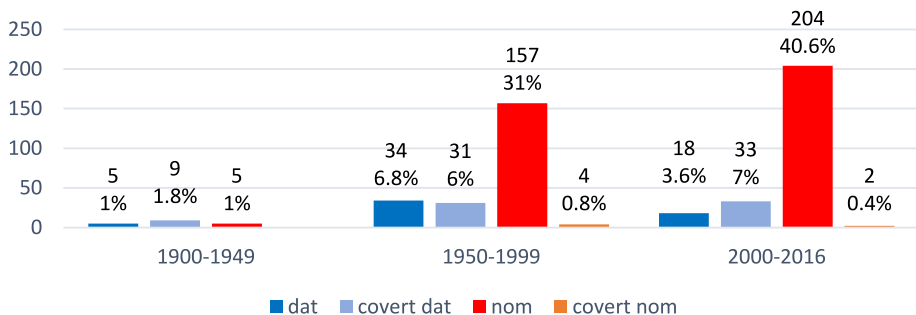
In this article I will not provide a detailed analysis of the data retrieved from the spoken subcorpus due to space limitations. However, I will provide a summary and highlight the most important findings.

The distribution of requests according to the case of the semantic Subject reflects the distribution of the data in the main dataset: *možno* is mostly used with the Subject in the Nominative or the Experiencer in the Dative in the first person singular (94%). 467 examples (93%) of dictal predicates were perfectives, followed by a small group of thirty imperfectives that included eighteen examples with periphrastic future forms (*budu govorit* 'I will talk'). The remaining five examples are used with the verb *byt* 'be'. 168 predicates are intransitive, whereas 334 verbs are transitive. 195 out of 502 dictal predicates can take an argument in the Dative case.

Table 8 Ten most frequent verbs in the infinitive form in the supplementary dataset and their verb classes

#	INF and translation	# of occurrences with IPM in brackets	Verb class	# with DAT	# with CDAT	# with NOM
1	<i>skazat'</i> 'say'	43 (3.55)	speech	9	—	34
2	<i>zadat'</i> 'ask'	28 (2.31)	speech	8	7	13
3	<i>vzjat'</i> 'take'	26 (2.14)	possession	4	2	20
4	<i>pojti</i> 'go'	15 (1.24)	motion	—	—	15
5	<i>dobavit'</i> 'add'	14 (1.16)	speech	3	—	11
6	<i>pocelovat'</i> 'kiss'	11 (0.91)	contact	—	—	11
7	<i>posmotret'</i> 'watch'	10 (0.83)	perception	—	3	7
8	<i>posidet'</i> 'sit'	10 (0.83)	location: body	1	1	8
9	<i>sprosit'</i> 'ask'	9 (0.74)	speech	—	2	7
10	<i>sest'</i> 'sit down'	8 (0.66)	location: body	1	—	7

Distribution of *možno* + DAT, *možno* + CDAT, *možno* + NOM and *možno* + CNOM

**Fig. 4** Distribution of four constructions used in requests for carry out an action: *možno* + DAT, *možno* + CDAT, *možno* + NOM across the supplementary database

The dictal predicates were classified into seventeen verb classes, namely creation, existence, change of state, contact, emotion, impact, location, location of body, mental, motion, motion of body, perception, phasal, physiological, possession, speech and miscellaneous. The ten most frequent verbs are given in Table 8. The verbs in rows highlighted in light grey coincide with the most frequent verbs in the main dataset (see Table 4).

The genres are distributed among film and theater transcripts (293 examples) and transcripts of public (154 examples) and non-public (55 examples) discussions. There are not many occurrences of both Dative and Nominative constructions during the first half of the 20th century. However, Fig. 4 shows that from 1950 to 1999 the use of *možno* + NOM is almost 2.5 times more frequent compared to the Dative constructions. At the beginning of the 21st century *možno* + NOM is used 4 times more frequently than the Dative constructions.

Texts in the spoken subcorpus are manually transcribed by native speakers. Usually, the slash mark signals that the speaker paused, or that the annotator expected that the speaker

should pause there. Only in 80 (22%) out of 372 examples *možno* is separated by slash when used in the *možno* + NOM or *možno* + CNOM construction, see (38).

- (38) *Možno / ja prosto fartuk-om vytr-u?*
 possible I.NOM simply apron-INSTR.SG wipe.off.PFV-PRS.1SG
 ‘Is it okay if / I just wipe it off with an apron?’
 [A. Učitel’, A. Smirnova. Dnevnik ego ženy. k/f. 2000]

The spoken subcorpus lacks information about the pause length or original recordings, so it is impossible to verify whether the speaker paused or not. In order to get more precise information, I searched for *možno* + NOM and *možno* + CNOM constructions in two corpora of spoken Russian that contain information about pause length, namely “Corpus of Russian Spoken Language” (<http://russpeech.spbu.ru>) and “Stories about dreams and other corpora of Spoken Language” (<http://spokencorpora.ru>). I found only three examples with *možno* + NOM, and none of them attested to any pauses that separate the modal word *možno* and a pronoun, see (39)–(41). The examples are given with a simplified version of annotation for the reader’s convenience.

- (39) *A /možno ja govori-t ... (1.21) ja \pokurj-u ... (0.62) \nu ... (0.64)*
 and possible I.NOM say.IPFV-PRS.3SG I.NOM smoke.PFV-PRS.1SG well
 ’’(0.42) \tak-oj kosjačok s \travk-oj?
 such-M.ACC.SG joint.ACC.SG with weed-INSTR.SG
 ‘Is it okay if I, he says, ... (1.21) smoke ... (0.62) \ well ... (0.64)’ ’(0.42) \ a joint
 with \ weed?’
 [Stories about dreams and other corpora of Spoken Speech]

- (40) *volontěrsk-om dviženi-i. (pause) možno ja (pause)*
 volunteer- N.LOC.SG movement-LOC.SG possible I.NOM
oxarakterizuj-u
 characterize.PFV-PRS.1SG
 ‘volunteer movement. pause. Is it okay if I (pause) characterize..?’
 [Corpus of Russian Spoken Speech]

- (41) *vo-pervyx, možno ja? (ansmbl) menja obvini-l-i v*
 first possible I.NOM I.ACC accuse.PFV-PST-3PL in
lukavstv-e.
 cheating-LOC.SG
 ‘First, may I? (talk together) I was accused of cheating.’
 [Corpus of Russian Spoken Speech]

The absence of a pause demonstrates that in these three examples *možno ja* is processed by speakers as a single unit parallel to the *možno* + DAT construction. However, due to the small number of examples I cannot extrapolate this assumption to all data.

Overall, the data from the spoken subcorpus confirms that the *možno* + NOM construction is much more frequent than the *možno* + DAT construction in the contemporary Russian language.

7 Speech act requests and politeness strategies

Let us now turn to the pragmatic factors that motivate the choice of the request formula. Requests are face-threatening illocutionary acts. According to Brown and Levinson’s Politeness theory (1978: 311) “‘face’ is the public self-image that every member wants to claim for himself”. “Face” can be both positive and negative. Negative face is “the basic claim to territories, personal preserves, rights to non-distraction – i.e., to freedom of action and freedom from imposition”. Positive face is “the positive consistent self-image or “personality” (crucially including the desire that this self-image be appreciated and approved of) claimed by interactants”.

Requests by their nature are intended to threaten the hearer’s negative face because “the speaker tries to exercise power or direct control over the intentional behavior of the hearer” (Trosborg, 1995: 188). At the same time the speaker loses positive face by imposing her will over the hearer. The speaker may lose a negative face herself, as “the hearer may choose to refuse to comply with her wishes”. Requests for permission to carry out an action are peculiar because as a pre-condition the speaker admits that the hearer has more power and controls the whole situation. Thus, to maintain successful communication it is crucial for the speaker to minimize the risks of losing face not only for the hearer but for herself as well.

One strategy to formulate polite requests is to use conventionally indirect requests. The speaker’s goal is to obtain permission from the hearer, so the speaker is interested in mitigating her request in order to keep the hearer’s face intact. The default way to formulate a conventionally indirect request to carry out an action in Russian is by making a question that begins with the impersonal modal word *možno*. The other ways of asking permission involve constructions with a personal modal verb *moč’* ‘be able’, as in (42); an impersonal modal adverb *nel’zja* ‘not allowed’ and the particle *li* ‘whether’ as in (43) and direct questions as in (44).

- (42) *Mog-u ja vzja-t’ vaš kodak?*
 can.IPVFV-PRS.1SG I.NOM take.PFV-INF your.M.ACC.SG Kodak.ACC
 ‘Is it okay if I take your Kodak?’
 [E. Nagrodskaja. Gnev Dionisa. 1910]

- (43) *U menja est’ russk-ij tramvaj vypusk-a 1911 god-a. Nel’zja li mne priobres-ti u Vas bolee sovremenn-yj?*
 at I.GEN be.PRS.3SG Russian-M.NOM.SG tram.NOM.SG release-GEN.SG 1911 year-GEN.SG impossible whether I.DAT buy.PFV-INF at you.GEN more modern- M.ACC.SG
 ‘I have a 1911 Russian tram. **Can I buy** a more modern one from you?’
 [E. Kovalenko. Kollekcioner! // «Pjatoe izmerenie». 2002]

- (44) *Ja voz’m-u morožen-oe?*
 I.NOM take.PFV-PRS.1SG ice.cream-ACC.SG
 ‘Is it okay if I take an ice-cream?’
 [M. Zosimkina. Ty prosneš’sja. Kniga pervaja. 2015]

Such requests are traditionally considered as polite requests as compared with direct requests formulated with an imperative form (45).

- (45) ...*daj*, *mne šokolad*, *nu daj mne*
 give.IPFV.IMP I.DAT chocolate.ACC.SG come.on give.IPFV.IMP I.DAT
šokolad!
 chocolate.ACC.SG
 ‘Give me chocolate, give me chocolate!’
 [Fizičeskoe nakazanie: «za» i «protiv» (forum). 2007.01.05]

Politeness is a complex phenomenon with many facets to be taken into consideration simultaneously. In everyday communication between family members the imperatives might sound most natural as polite requests, while requests with *nel'zja li* may sound ironic. However, I suggest that in less familiar context speakers might interpret direct questions as less polite than the requests that begin with modal words. Consequently, speakers will attempt to mitigate the impoliteness of direct questions by adding the modal word *možno* as a tag-question. However, it is pragmatically unwise to place *možno* at the final position in a clause, because the hearer could be already upset by the lack of politeness and could refuse to comply with the speakers wishes. Thus, it is advantageous to place *možno* in the initial position in order to provide the mitigation before the hearer might get annoyed by a request. Thus, by using *možno* + NOM the speaker secures her freedom to act according to her will. On the other hand, the construction with the agentive Subject reduces the hearer's responsibility for the further development of the situation. However, these claims need to be experimentally tested on a representative group of native speakers.

8 Development of the *možno* + NOM construction

My data demonstrates that the *možno* + NOM construction has become more frequent in contemporary Russian compared to the beginning of the 20th century, while the use of the *možno* + DAT construction has decreased. Language is a system of various forces that motivate the speaker's linguistic behavior. In the previous sections, I presented various pragmatic (politeness), semantic (the semantic class of the predicate under modality (motion, speech, location etc.) and syntactic (tense, aspect, transitivity, possibility of the infinitive or finite verb to have an argument in the Dative case) factors that provide a conducive environment for the expansion of a new request formula with the Subject in the Nominative case. In this section, I will discuss in detail a possible scenario of the development of the *možno* + NOM construction and I will hypothesize how the initial construction *možno* + DAT started to be replaced by the construction *možno* + NOM.

The pattern in which the Experiencer in the Dative case is replaced by the Subject in the Nominative case has been discussed in the linguistic literature (Haspelmath, 2001; Seržant, 2013; Grillborzer, 2019). Haspelmath (2001) discusses cases of non-canonical marking of agents in Standard Average European (SAE) languages. Haspelmath (2001) claims that the semantic Subject marked by the Dative case is one of the types of non-canonical marking on experiential predicates (often called “psychological” predicates, e.g., *nравит' sja* ‘like’). Haspelmath interprets modality predicates of possibility *may*, *can* as Experiential predicates as well. Haspelmath (2001: 60) claims that “while Dative Experiencers in modern SAE languages exhibit few (if any) behavioral Subject properties, it might well be that they will acquire some in the future. There is a well-established diachronic tendency for oblique experiencer arguments to acquire behavioral Subject properties, which has been described for various languages by Cole et al. (1980)”. In example (46) taken from Old English the verb *licodon* ‘like’ requires an Experiencer in the Dative case, whereas in modern English the verb *like* uses the Subject in the Nominative case.

- (46) *Pam wife þa word wel licodon.*
 [the.DAT woman.DAT those.NOM words.NOM well liked.3PL]
 ‘The woman (DAT) liked those words (NOM) well.’
 (Beowulf 639)

If *možno* directly followed the path proposed by Haspelmath, we would have expected the result to be a modal construction with *možno* in which the pronoun in the Nominative case precedes the modal word, i.e., PRON.NOM + *možno* + VERB. This could not be the case for two reasons. First, *možno* is a modal adverb, so it cannot have a Subject. Syntactically the Experiencer in the Dative case belongs to *možno* and a semantic subject in the Nominative belongs to the finite verb form (dical predicate). Second, in Haspelmath’s example the verb *like* does not have other dependent verb forms, whereas originally *možno* has an infinitive phrase as a sentential complement.

In natural spoken discourse the pronoun in the Nominative case can be used before *možno*. There are two examples in the spoken subcorpus of the RNC that reflect the pattern PRON.NOM + *možno* + VERB, see (47) and (48). Despite the word order, the Subject obviously belongs to the verbs *nal’ju* ‘I will pour’ and *skažu* ‘I will tell’.

- (47) [Š., muž, 42] *A ja možno poln-uju nal’ju?*
 and I.NOM possible full-F.ACC.SG pour.PFV-PRS.1SG
 [Š., muž, 42] ‘Is it okay if I pour it full?’
 [Razgovory vo vremja prazdnovanija dnja roždenija na ostrove na Volge // Iz kolekcii Saratovskogo universiteta. 2002]
- (48) [Tokarev E.V., muž, 40] *Ja ja možno skaž-u?*
 I.NOM I.NOM possible say.PFV-PRS.1SG
 [Tokarev E.V., muž, 40] ‘Is it okay if I tell?’
 [Dopros svitateľja zaščity Antipovoj na sudebnom zasedanii po delu G.P. Grabovogo // Internet. 2008]

At the same time the examples provided by Haspelmath are parallel to constructions with *možno* because the Experiencer in the Dative case and the subject in the Nominative case in the constructions with *možno* are referring to the same semantic Subject (a requester). The requester has all the semantic properties of a Subject, so potentially it can be marked not by the Dative case, but by Nominative as a canonical Subject. Based on that premise, I suggest that at some stage *možno* lost the Experiencer and began to be a part of a new construction combined with a personal clause.

Hansen (2010, 2016) examines the lexicalization pattern of the Russian modal verb *možet byt’* ‘perhaps’ into an epistemic sentence marker *možet* ‘perhaps’. Lexicalization is a “change whereby in certain linguistic contexts speakers use a syntactic construction or a word formation as a new contentful form with formal and semantic properties that are not completely derivable or predictable from the constituents of the construction or the word formation pattern. Over time, there may be further loss of internal constituency and the item may become more lexical” (Brinton & Traugott, 2005: 144). Hansen (2010, 2016) claims that modal infinitival *možet byt’* construction as in (49) was reanalyzed and, as a result, gave rise to a sentence adverb *možet* ‘perhaps’ as in (50).¹⁰

¹⁰Examples are cited from Hansen (2016: 273–274); COMP stands for complementizer, whereas COND stands for conditional.

- (49) *Mož-et by-t', čio eio problema ne fizičeskaja, a psixičeskaja.*
 can-3SG be-INF COMP this problem not physical but psychological
 'It is possible that this is not a physical, but a psychological problem.'
 (Russian National Corpus; <http://ruscorpora.ru>, accessed on 6 August 2013)
- (50) *Minutockoj by pris-š-l-i ran šě, to, mož-ě-t, zasta-l-i by doma.*
 minute COND come-PST-PL earlier then can-3SG meet-PST-PL COND at.home
 'Had you arrived one minute earlier, you might have found himat home.'
 (Russian National Corpus; <http://ruscorpora.ru>, accessed on 6 August 2013)

I suggest that *možno* has undergone a lexicalization process similar to *možet*, and as a result transitioned from a modal of possibility into a sentence (modal) adverb in the *možno* + NOM construction.

Možno appeared in the language as a modal that could have an Experiencer in the Dative case and an infinitival clause as its complements. At the same time, it could be used as an unconnected and independent *možno* in requests and permissions, as in (51).

- (51) – *Podoždi-te, – vmeša-l-a-s'* Lidija Timofeevna.
 wait.PFV-IMP.2PL intervene.PFV-PST-F.SG-REFL Lidija Timofeevna
 – *U menja koe-čto est'. Ona vernu-l-a-s' iz*
 at I.GEN something be.PRS.3SG she.NOM return-PST-F.SG-REFL from
kuxn-i s bol's-oj tarelk-oj v ruk-ax. – Apel'sin-y,
 kitchen-GEN.SG with big-F.INSTR.SG plate-INSTR.SG in hand-LOC.PL orange-NOM.PL
vostorženno protjanu-l-a Elena Nikolaevna. – Možno? – Konečno. Ja
 exuberantly stretch.PFV-PST-F.SG Elena Nikolaevna possible sure I.NOM
special'no dlja vas pokupa-l-a.
 specially for you.GEN buy.IPFV-PST-F.SG
 '– Wait a second, – intervened Lidija Timofeevna. – I have something here. She returned from the kitchen with a big plate in her hands. – Oranges, – whooped Elena Nikolaevna. – **May I?** – Of course. I have bought them specially for you.'
 [A. Gelasimov. Foks Malder poxož na svin'ju. 2001]

In example (51) Marina is at a dinner where the hostess serves oranges as a special treat for her guests, so Marina requests permission to take an orange by using the modal word *možno* because she knows that the hearer would understand what she requested. Moreover, the hearer anticipates that the speaker will be tempted by oranges as she says *Podoždite, (...) u menja koe-čto est'* 'Wait a second, I have something here' and brings plate with oranges into the room. Both the hearer and the speaker have enough knowledge about what the speaker may potentially request, so the speaker can covertly refer to the action which she wants to carry out by uttering just *možno* with interrogative intonation. Such examples when the action desired by the speaker does not have an overt linguistic expression open up space for activation of both *možno* + DAT and *možno* + NOM constructions. These utterances are typical of spoken language.

For the purposes of this study, I made an additional search in the written part of the RNC for sentences in which *možno* syntactically behaves as an independent clause or as a tag-question. In other words, I searched for sentences with unconnected *možno*. I looked for *možno* after any punctuation mark and before a question mark. This query returned 416 examples. I manually removed noise and annotated the remaining 353 examples, see Table 9. The first occurrences of unconnected use of *možno* in the RNC date from 1847.

Table 9 Search queries, raw numbers and clean numbers for the unconnected *možno*

Construction and corresponding query	Raw data	Clean data
<i>možno?</i>	416	353
<i>možno</i> bques, amark		

In some situations, the bare modal word *možno* can be used as a request formula with interrogative intonation as in (52). In such situations speakers often use various extralinguistic means, such as knocking, pointing or nodding to let the hearer know what they want to do. In general, speakers ask whether there are conditions that might stop speakers from carrying out an action.

- (52) *Čertyxa-ja-s’ ja koe-kak probra-l-sja po*
 curse.IPFV-GER-REFL I.NOM somehow made.way.PFV-PST.M.1SG-REFL down
koridor-u i postuča-l: — Alla Vladimirovna, možno?
 corridor-DAT.SG and knock.PFV-PST.M.1SG Alla Vladimirovna possible
 ‘Cursing, I somehow made my way down the corridor and knocked: — Alla Vladimirovna, **may I (enter)?**’
 [A. Volos. *Nedvižimost’* (2000) // «Novyj Mir», 2001]

258 examples in this sample are uses of *možno* in an independent clause. Even if *možno* is used as an independent clause, it still can be preceded by a personal or an infinitival clause. In ninety-five examples *možno* appears as a tag-question as in (53). As a tag-question *možno* can follow both a clause with a conjugated verb form or an infinitival one as in (53) and (54) respectively. Sixty-seven out of ninety-seven examples have a conjugated verb form in a clause that precedes *možno* as in (53).

- (53) *Tak ja bud-u za vami, možno?*
 so I.NOM be.FUT-1SG behind you.INSTR possible
 ‘So, **I’ll be next in line, may I?**’
 [I. Grekova. *Damskij master*. 1963]
- (54) *A podbi-t’ tebja nog-oj, kak mjač, možno?*
 and kick.PFV-INF you.ACC leg-INSTR.SG like ball.ACC.SG possible
 ‘**Is it okay if I kick** you like a ball?’
 [A. Volkov. *Likvidatory* // «Zvezda», 2001]

Examples like (53) and (54) have all the elements of a “prototypical” request, namely the modal word *možno* and an Experiencer in the Dative as in (54) or the Subject in the Nominative case as in (53).

I suggest that we are facing the constructionalization of the *možno* + NOM construction in Contemporary Russian. Traugott (2015: 56) claims that constructionalization occurs when:

“Some hearers (re)analyze the morphosyntactic form of constructs arising at Step c. When there have been morphosyntactic and semantic reanalyses that are shared across speakers and hearers in a social network, a new micro-construction or schema is added to the network, because a new conventional symbolic unit, and hence a new type node, has been created.”

My hypothesis is that examples with unconnected *možno* served as an intermediate stage in the development of the *možno* + NOM construction. First, speakers used *možno* as a tag-

question for requesting permission. As a tag-question *možno* does not require the Experiencer in the Dative and syntactically behaves like a sentence adverb. Later speakers analogically began to place *možno* at the beginning of the sentence as in other requests with modal words. At this stage *možno* was reanalyzed as a part of a finite clause. As a result, the new *možno* + NOM construction emerged in the language and began to compete with the synonymous *možno* + DAT construction.

9 Conclusions

In this article I discussed the DAT-NOM variation in a speech act of request in the contemporary Russian language. My contribution can be summarized as follows. First, data from corpora provides evidence that the *možno* + NOM construction is steadily taking the place of the *možno* + DAT construction in both written and spoken discourse.

Second, the analysis of corpus data demonstrates that *možno* takes the finite clause as its complement and that the use of *možno* + NOM construction is not restricted by syntactic, semantic or pragmatic factors. Third, methods of statistical modelling confirm that the most important factor is the text creation date, while other factors such as aspect, transitivity and semantic verb class of the dictal verb are insignificant. Fourth, I proposed a scenario for the development of the *možno* + NOM construction. *Možno* began to be used as a tag-question after both infinitive and personal clauses. Steadily the requester marked by the Dative has been replaced by the more agentive Subject in the Nominative case. Then, by analogy with other constructions that are used to ask permission to carry out an action, *možno* was placed at the beginning of the sentence, and was reanalyzed as constructional unit with the following structure *možno* + FINITE CLAUSE in which *možno* functions as a sentence adverb. As a result, in contemporary Russian *možno* + NOM functions as a default construction to formulate a request for permission to carry out an action.

Language change is a gradual process, and variation is an integral part of that process. We may expect that in the future the *možno* + DAT construction will disappear from the Russian language, however it is also possible that *možno* + DAT may never cease to be used, and remain a low-frequent alternative to the request formula *možno* + NOM.

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Data Availability Data will be available at TROLLing repository (<https://dataverse.no/dataverse/trolling>).

Code Availability Code will be available at TROLLing repository (<https://dataverse.no/dataverse/trolling>).

Declarations

Conflict of Interest/Competing interests The authors have no relevant financial or non-financial interests to disclose.

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Corpora

Corpus of Russian Spoken Language. <http://russpeech.spbu.ru>.

RNC – Russian National Corpus. <http://www.ruscorpora.ru>.

Stories about dreams and other corpora of Spoken Language. <http://spokencorpora.ru>.

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Article 2

How to request in Slavic? A corpus-based study of requesting constructions in six Slavic languages

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Abstract

This article presents the findings of a contrastive corpus-based study that investigates how requests to carry out an action are expressed in six Slavic languages: Belarusian, Ukrainian, Bulgarian, Serbian, Czech and Polish. The Russian conventionally indirect requests with the modal anchor word *можно* ‘possible’ serve as the point of departure for comparison. The examination of translational equivalents of Russian requests reveals that constructions with an anchor that expresses possibility constitute the core of requesting strategies in all languages under scrutiny. Both Belarusian and Ukrainian languages tend to use constructions with impersonal anchor modals; Serbian, Czech, and Polish tend to use constructions with personal anchor modals, whereas Bulgarian data is split between constructions with personal and impersonal anchor modals. There are nine additional construction types which include direct requests (declarative statements, questions and imperatives) and constructions with modals that express necessity, desire and meanings from semantic domains neighboring modality.

Key words: modal, request, Slavic, corpus, construction grammar

1. Introduction

Requests are a common speech phenomenon. A request is a directive speech act for which the illocutionary purpose is to get the hearer to do something when it is not obvious that the hearer will perform the action in the normal course of events (Searle, ch.2). The speaker usually assumes that the hearer is able to perform the action. Linguists (Brown and Levinson; Blum-Kulka et al.) tend to distinguish three different types of request strategies: direct, conventionally indirect, and non-conventionally indirect. Direct requests are explicit and straightforward (e.g., imperatives). Conventionally indirect requests make use of polite formulas (questions with modal words, conditionals), hedging (lexical modifiers such as *please*) and indirect language to mitigate the impact and make the request more socially acceptable. These formulas are based on cultural norms and vary from language to language. Non-conventionally indirect requests are less predictable and are strongly dependent on strategies commonly used in a certain culture or language.

In this article, I will present findings from a corpus-based study of how requests are expressed in Slavic languages with Russian conventionally indirect constructions as a filter. In this research, a construction is defined as a “learned pairing [of] form with semantic meaning or discourse function including morphemes or words, idioms, partially lexically filled and fully general phrase patterns” (Goldberg 5). In the Russian language, questions with the modal *можно* ‘possible’ as an anchor word are typically

used by speakers to request permission to carry out an action or to request information, e.g., *možno* + NOM as in (1) and *možno* + DAT as in (2).

(1) *Možno, ja zdes' sjadu, rjedom s tobój?* (Russian)
 'Is it okay if I sit down here, next to you?'

(2) *Xari, možno mne čto-to tebe skazat'?* [Dž. Roling. Garri Potter i uznik Azkabana]¹⁵ (Russian)
 'Harry, can I tell you something?'

[S. Lem. Solaris]

Modal adverbs with similar meanings exist in other Slavic languages: *možna* in Belarusian and Ukrainian, *možno* and *možna* in Polish, *možná(é)* in Czech, *može* in Bulgarian, *moguće* in Serbian. However, constructions with these adverbs are not typically used for requesting in these languages. In example (3) Belarusian, Ukrainian, and Bulgarian use the impersonal anchor word, Serbian employs the construction *je u redu* 'is okay', whereas Czech and Polish use the first-person singular form of modal verb *moci* and *móc* respectively. Using the Russian constructions with *možno* as the point of departure for comparison, I investigate how requests for permission to carry out an action are coded in six Slavic languages, namely Belarusian, Bulgarian, Czech, Polish, Serbian, and Ukrainian, see (3).

(3) *Možno vas nazyvat' na ty i papa?* (Russian)
Možna vas nazyvac' na ty i tata? (Belarusian)
Či možna vas zvati na ti j tato? (Ukrainian)
Može li da vi govora na «ti» i da vi kazvam «tatko»? (Bulgarian)
Je l' u redu ako te tako zovem? (Serbian)
Můžu ti tak říkat? (Czech)
Mogę tak na ciebie mówić? (Polish)
 'Is it okay to address to you as "you" and "Dad"?'

[V. Nabokov. Lolita]

Languages were chosen in order to represent each Slavic subfamily: East Slavic (Belarusian and Ukrainian), South Slavic (Bulgarian and Serbian) and West Slavic (Czech and Polish). The data was retrieved from the parallel corpus InterCorp (<https://intercorp.korpus.cz/>).

The primary purpose of this study is to establish the construction types used in six Slavic languages to express requests. While there exists a substantial body of scholarship devoted to analysis of requests and politeness strategies in individual Slavic languages, to the best of my knowledge, there is no comprehensive contrastive study available. Slavic languages demonstrate a varied inventory of constructions for

¹⁵ All numbered examples in this article are retrieved from InterCorp (<https://intercorp.korpus.cz/>). Cyrillic is transliterated according to the scientific ("scholarly") system. English translational equivalents aim to resemble the original utterance both structurally and semantically as closely as possible, sometimes at the expense of literary quality. Examples are followed by metadata about the source of examples in square brackets.

making requests, including conditionals, constructions with modal verbs of necessity such as *biva li* ‘ought to’ and *trjabva + da + INF* ‘must’ in Bulgarian; the modals *smět + INF* ‘to be allowed’ and *(ne)vadit + by + INF* ‘would not bother’ in Czech, and direct questions *inter alia*.

It is worth stating at the outset that this study outlines the inventory of constructions used for requesting in Slavic languages focusing on constructions with anchor words with semantics of possibility. The findings can serve for further investigation of behavior of specific constructions and for creation of an exhaustive database of requesting strategies across Slavic. First, I present networks of constructions used for requesting permission to carry out an action for each Slavic language separately, taking into consideration factors such as the modality type of construction (possibility, necessity), information structure, and politeness strategy.

Second, these findings allow me to group languages according to the prototypical means used to express requests, and to compare my results with traditional subfamily-based taxonomy. The Belarusian and Ukrainian languages tend to use a construction with the impersonal anchor word *možna* ‘possible’, whereas Serbian, Polish and Czech tend to use personal constructions with the anchor verbs *moći, móc* and *moć* ‘be able, can’ respectively. In my data, Bulgarian request strategies are split between personal constructions with the modal verb *moga* ‘can, be able to’ and impersonal constructions with *može* ‘be possible’. Additional constructions used for requesting are represented by nine types, see Section 4.4.

The article is structured as follows. Section 2 offers background information on speech acts of request in general, and in the Slavic languages under scrutiny in particular. In section 3, I describe my data source and methodology. The analysis of data for each language and inter-group variation is presented in Section 4. Section 5 presents the findings from cross-Slavic comparison of requesting strategies. Discussion of the findings, possibilities for future research, and conclusions are in Section 6.

2. State of the art

Speech acts have been traditionally studied primarily within pragmatics with focus on various aspects depending on the theoretical framework. Brown and Levinson studied speech acts within a linguistic politeness approach. Searle aim for a more general taxonomy of speech acts, and Blum-Kulka et al. examined cross-cultural pragmatics of specific speech acts of request and apology in Hebrew, Canadian French, Argentinian Spanish, Australian English and German. The pragmatic analysis comprises the speakers’ production of the meaning and hearers’ interpretation of that meaning in the given context. In this study I focus on the production of requests, i.e., I examine constructions that speakers use to convey requests.

Ariel (473) states “it takes both grammar and pragmatics, two quite different cognitive competencies, to explain natural language use and interpretation.” The Construction Grammar approach posits pragmatic information as an inherent part of a construction’s

semantics (Goldberg). The unit of analysis in this study is a construction that expresses a conventionally indirect speech act of request. Trosborg (1987) defines a request as an illocutionary act whereby a speaker (requester) conveys to a hearer (requestee) that she wants the requestee to perform an act which is for the benefit of the speaker. The act may be a request for verbal or non-verbal goods and services.

Requests are face-threatening illocutionary acts. According to Brown and Levinson's Politeness theory (311) "'face' is the public self-image that every member wants to claim for himself". One strategy to formulate polite requests is to use conventionally indirect requests. The speaker's goal is to obtain something or permission from the hearer, so the speaker is interested in mitigating her request in order to keep the hearer's face intact.

It is important to note that directly associating (im)politeness with (in)directness would be an oversimplification as emphasized by recent studies, see S. Mills, Ogiermann. Speakers can be both direct and polite. Some communicative scenarios are more entrenched and conventionalized than others. In the scholarly literature Slavic languages are portrayed as languages with strong preference for direct requests (Wierzbicka "Different cultures"; M. Mills; Lubecka; Larina), and the imperative constructions are interpreted as polite requests. Findings in the current study do not support a correlation between indirectness and politeness.

There are certain modifications of an utterance that a speaker can employ to intensify or mitigate illocutionary force. The use of subjunctive, modal auxiliaries, negation, overt conditionals, diminutives (specifically with imperatives), request markers/performatives (e.g., *prosimy* 'we are requesting' in Polish), suggestory formulae are most frequently listed in the literature (Blum-Kulka, House and Kasper; Trosborg; Urbanik). These modifications and request strategies are discussed in Section 4 and 5.

In this article, I do not undertake a detailed literature review, but instead engage the most significant sources on the topic of requests in Slavic. The academic literature on requests in Slavic languages can be broadly classified in three groups.

The first group comprises analysis of modal meanings in Slavic languages and includes both comparative studies, and studies of modals in individual Slavic languages. Comparative studies provide a comprehensive overview of the means of expression of possibility and necessity modal meanings in selected Slavic languages, see Hansen *Das slavische modalauxiliar*, Hansen "Modals and the boundaries" and Besters-Dilger et al. The research on modals in individual languages are either works devoted to the detailed description of both syntax and semantics of modals, see Padučeva on Russian; Hansen "A morpho-syntactic typology" on Serbian; Nebeská on Czech, or chapters in grammars devoted to the modal words and expressions, see Vihovanec' and Gorodens'ka on Ukrainian; Nicolova on Bulgarian; Naughton *An essential grammar* on Czech, and Sadowska on Polish.

The second group encompasses studies of politeness strategies in individual Slavic languages (e.g., M. Mills and Zemskaja on Russian; Panteleva on Bulgarian; Beznosa and Bolotnikova and Negrebec'ka on Ukrainian), and contrastive studies between Slavic and non-Slavic languages (mostly English and German), see Wierzbicka "Different cultures"; Obenbergerová; Dorodnych; Betsch; Ogiermann; Slavianova; Soljuk; Urbanik and Pijetlović. The contrastive studies provide insights on cross-cultural variation in realization of requests. Ogiermann (pp.189-94) also discusses the relationship between politeness and indirectness comparing Polish, Russian, German, and English data.

The third group are manuals for second language learners that cover various aspects of cross-cultural pragmatics, e.g., Lubecka, Formanovskaja, Naughton *Colloquial Czech*.

To sum up, although a vast volume of literature can be found on the topic of request in Slavic, various studies examine specific aspects relevant for their research questions. Notably, there has been no contrastive research on request strategies across Slavic languages.

3. Methodology and Data

Corpus-based studies are widely used in cognitive linguistics and typology, see de Haan; Lyashevskaya et al.; Fábregas and Janda; Bauer among others. According to Jucker et al. research in pragmatics typically is based on one of three empirical methodologies:

- 1) experimental pragmatics: collection of empirical data by various controlled elicitation tasks such as interviews;
- 2) observational pragmatics: analysis of observation data, such as field recordings;
- 3) corpus pragmatics: either uses the data retrieved from the existing corpora or creation of a corpus that satisfies the researcher's needs.

Experimental pragmatics might be expected to provide data that occurs in natural contexts. However, the researcher provides many prompts and sets out the scene for the informant to elicit the target data (Hill et al.; Blum-Kulka et al.). Observational pragmatics offers more naturalistic data, however the chances to get a sufficiently large, representative sample of target constructions is quite low.

This study adopts methodology proposed by corpus pragmatics. Although corpora by and large lack pragmatic annotation, they still offer valuable insights for the study of conventionally indirect speech acts by means of form to function searches. One of the functions of the Russian constructions with *можно* is polite requesting of permission to carry out an action or to obtain some information, see Choi; Hansen *Das slavische modalauxiliar* pp.168-71. Since the formal representation of core elements is well-described for Russian, I use these constructions as the point of departure for data collection.

The data was collected from the synchronous parallel corpus InterCorp (Release 14), that is a part of the Czech National Corpus (<http://www.korpus.cz/>). InterCorp consists of original texts and their translations. The decision to collect data from the parallel corpus InterCorp (Release 14) was based on the following factors. First, all six languages that were chosen in order to represent each Slavic language subfamily should be present in the corpus. Second, sufficient data for qualitative analysis for each language had to be available in the corpus. The chosen languages are well-represented in InterCorp, see Table 1. Although Czech and Polish sub corpora are significantly larger than, for instance, Belarusian or Bulgarian, the latter corpora also returned enough data for the analysis.

Language	Collections in InterCorp							Total
	Core	Syndicate	Presseurop	Acquis	Europarl	Subs	Bible	
Belarusian	6 094	0	0	0	0	0	0	6 094
Bulgarian	7 068	0	0	13 577	9 083	0	0	29 728
Czech	117 606	4 351	2 310	19 085	12 908	50 604	562	207 426
Polish	27 669	0	2 380	19 604	12 817	26 576	583	89 630
Russian	10 510	3 984	0	0	0	6 887	565	21 946
Serbian	12 014	0	0	0	0	20 727	0	32 741
Ukrainian	12 172	0	0	0	0	244	596	13 011

Table 1. The distribution of texts for Belarusian, Bulgarian, Czech, Croatian, Polish, Russian, Serbian and Ukrainian across collections in the parallel sub corpus of InterCorp. The corpus size is given in thousands of words.

InterCorp is comprised of texts taken from seven different collections, namely, Core, Syndicate, Presseurop, Acquis, Europarl, Subtitles (Subs) and Bible, see Table 1. The Core collection is comprised mostly of fiction, Syndicate and Presseurop of political commentaries, Acquis Communautaire of legal texts and Europarl of proceedings of the European Parliament from 2007 to 2011. The subtitle collection includes film subtitles and Bible is comprised of translations of the Bible (<https://wiki.korpus.cz/doku.php/en:cnk:intercorp:verze14>).

In order to explore requesting strategies in contemporary Slavic languages, I created a database comprised of translational equivalents of Russian request constructions with the modal *možno* in Belarusian, Bulgarian, Czech, Polish, Serbian, and Ukrainian. The query: [lemma="можно"][]{0,5}[tag="V.*"][]{0,10}[word="\?"] returned different results for each language pair, see Table 2 which lists numbers of examples returned. Frequency per million (ipm) is calculated for request constructions (clean data) in each language, to ensure comparability across the data samples. Noise (i.e., irrelevant

examples) was manually removed, and the clean data was manually annotated. The entire database is publicly accessible from the Tromsø Repository of Language and Linguistics archive at [link to be announced](#).

Slavic language subfamily	Language	Raw data	Clean data	Ipm for “clean data”
East				
	Belarusian	170	41	6,73
	Ukrainian	543	169	12,99
South				
Eastern	Bulgarian	318	74	2,49
Western	Serbian	1 857	667	20,37
West				
Czech-Slovak	Czech	4 256	1 504	7,25
Lechitic	Polish	2 512	881	9,83

Table 2. Query, raw data, clean data for each language. Ipm stands for frequency per million.

One could argue that written translation equivalents may not be ideal data for analysis of requests. However, this is only partially true. First, when requests are translated, the translator takes into consideration not only the formal structure of the source language but also the broader extralinguistic context of the situation. Factors such as age, sex, and social status of the interlocutors play a crucial role in the choice of corresponding linguistic structures. Second, one of the purposes of this study is to establish the inventory of request constructions which can serve as the foundation for future more in-depth analysis with the implementation of experimental methods.

The Core collection of InterCorp is manually aligned whereas the remainder is aligned automatically. This composition makes it possible to compare how request are distributed across various genres. Texts from the Subtitle collection of InterCorp return the best results for requests (see Table 3), since requests are typically found in spoken discourse. The ipm for request constructions are many times greater for the Subtitle collection, compared to Core collection.

Language	Core	Ipm in Core	Subtitles	Ipm in Subtitles	Bible	Ipm in Bible
Belarusian	41 (100%)	6,73	0		0	
Ukrainian	150 (88%)	12,32	18 (11%)	73,77	1 (1%)	1,68
Bulgarian	74 (100%)	2,49	0		0	
Serbian	94 (14%)	7,82	573 (86%)	27,65	0	

Czech	264 (17,5%)	2,24	1239 (82,4%)	24,48	1 (0,01%)	1,78
Polish	165 (18,7%)	5,96	715 (81,2%)	26,9	1 (0,01%)	1,72

Table 3. The distribution of clean data across collections for each language. Percentages are given in brackets.

3.1. Conventionally indirect requests: Russian as a departure point for comparison

The Russian construction with the modal word *можно* ‘possible’ is the starting point for data collection in this study, and therefore I describe its properties in this section. Although *можно* is an impersonal modal word *per se*, it would be incorrect to call requests in this study impersonal. Requests involve asking the hearer to allow the speaker to do something that is often for the benefit of the speaker (or sometimes a third party). Thus, even though the speaker chooses an impersonal modal word, the request remains personal in the sense that it contains a personal appeal to the hearer. One possible explanation for the choice of an impersonal modal word over a personal one is that impersonal constructions allow speakers sound more polite by distancing (“extracting”) themselves from the request.

Conventionally indirect requests with Russian *можно* are represented by five construction types in my data¹⁶:

- *Можно (li) DAT INF*
- *Можно (li) CDAT INF*
- *Можно NOM VFIN*
- *можно?*
- *если можно.*

First, there are requests formed by the modal word *можно*, with the Experiencer in the Dative case and an infinitive (*можно (li) DAT INF*), as in (4).

- (4) *Можно мне е́ще поспат’?* (Russian)
‘Can I sleep some more?’

[Subtitles. Ghosts of Mars]

Not all the elements have to be simultaneously overtly present in the construction. The infinitive can be omitted, if the context allows, i.e., if the interlocutors have enough background information to unambiguously interpret the request. Sometimes the question particle *ли* ‘whether’ can appear in the construction.

The second construction omits the Experiencer (*можно (li) CDAT INF*) as in (5). In the formula CDAT is an abbreviation for “covert dative”.

¹⁶ The word order within constructions is flexible and various elements can be inserted between elements of construction (e.g., particles like *же* ‘whether, indeed’, temporal markers like *завтра* ‘tomorrow’ etc.). The strings presented in this list are typical for Russian.

- (5) *Možno prisest'?* (Russian)
 'Is it okay to sit down?'
 [Bulgakov. Master i Margarita]

The third type is the construction with the modal word *možno*, the Subject in the Nominative case and a finite verb form (*možno* NOM VFIN), as in (6).

- (6) *Možno, ja zdes' sjadu, rjedom s toboj?* (Russian)
 'Is it okay if I sit down here, next to you?'
 [Dž. Roling. Garri Potter i uznik Azkabana]

The fourth type is the construction with unattached *možno*, as in (7) and the fifth type is the construction that follows pattern *esli možno* 'if possible', as in (8).

- (7) *Možno? – Proxodi.* (Russian)
 'May I? – Go ahead.'
 [Subtitles. Gomorra]

- (8) *I esli možno, položite sverxu bekona, ladno?* (Russian)
 'And if possible, put some bacon on top, okay?'
 [Subtitles. A good year]

Given that datasets for each language pair contain unequal numbers of examples, I will provide information on the distribution of constructions with Russian *možno* and equivalents for each parallel sub corpus in the following sections.

3.2. Limitations of the corpus-based study

This is a study of translational equivalents; therefore, the source language should be considered as a factor that can motivate the choice of construction made by the translator. Unfortunately, that is one of the factors that is hard to control in InterCorp. Some texts are directly translated from one Slavic language to another, for instance, *Solaris* by Lem is directly translated from Polish to other Slavic languages. However, there are cases when the source language is English (e.g., the *Harry Potter* series by J.K. Rowling) or another non-Slavic language. The InterCorp interface provides the possibility to manually extract the information on the source language for each example, which could have been done exclusively for relatively small Belarusian or Bulgarian datasets. However, for larger datasets, such as Czech or Polish, this manual extraction becomes unfeasible. As a result, I will leave consideration of the impact of the source language for future research.

Another natural limitation of this study is imposed by the process of data selection. This research is an exploratory study of request in Slavic languages, with a specific focus on one particular type of request, namely conventionally indirect request that involve *možno* as an anchor word. The Russian language has a richer repertoire of requesting constructions, however the constructions with *možno* are considered

prototypical. Further expansion of the database would be possible by making searches for the translational equivalents that I have obtained in this study, such as constructions with modals of necessity or desire.

4. How are requests expressed in Slavic?

In this section I present the requesting strategies detected in the six languages under the scrutiny. In sections 4.1–4.3, I describe request constructions with the modals of possibility that constitute the core of my data. The results for each language are illustrated with the use of Sankey diagrams. The Sankey diagram is a type of chart that displays the flow of a quantity through a system (Schmidt 82-83). Rectangles represent entities (start/input and end/output nodes), and arcs represent links where width is proportional to the relative size or importance of the flow. The Sankey diagram helps to visualize relationships and patterns, compare linguistic features across Slavic languages. In addition to the core construction types, I discuss further construction types that denote request in Slavic and hedging strategies in Section 4.4. These additional types are compressed in the “other” group on the Sankey diagrams. The languages are initially grouped according to their subfamily division. A summary of the findings and cross-Slavic comparison is provided in Section 5.

4.1. East Slavic: Belarusian and Ukrainian

The analysis of Belarusian and Ukrainian data reveals that core construction types for requests in both languages involve constructions with anchors *možna* ‘possible’ and *mahčy/mogti* ‘can’ that express possibility: 33 attestations (80%) for Belarusian and 140 attestations (83%) for Ukrainian, see Figure 1.

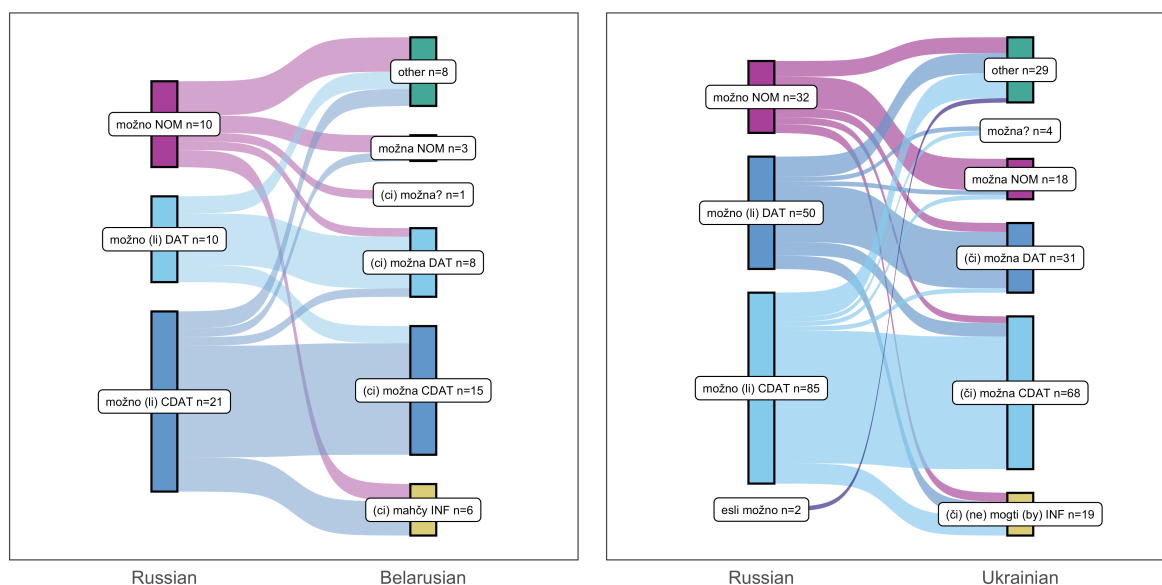


Figure 1. Distribution of constructions expressing request in the Belarusian and Ukrainian data.¹⁷ Non-obligatory elements of constructions are given in parentheses. The labels are explained in the text.

The Sankey diagrams in Figure 1 are organized in the following way. The input nodes on the left side show the set of request constructions in Russian, whereas the output nodes on the right side represent their translational equivalents in the corresponding Slavic language. The labels contain the name of construction type (e.g., *možno* + NOM) and the number of occurrences in my data (n=10). The same colors are used for structurally similar constructions, i.e., the purple color is used for constructions with the impersonal anchor modal and the clause with the Subject in the Nominative; light and dark blue for constructions with the impersonal anchor modal and the infinitive clause; yellow and olive for constructions with modal verbs, and aquamarine for other strategies¹⁸. The “other” strategies are discussed in Section 4.4. The arcs represent how the translations of Russian construction types are distributed in another Slavic language. The Sankey diagrams are organized in this way consistently throughout the article.

The flows on Sankey diagrams demonstrate that the core repertoire of request constructions for both Belarusian (80%) and Ukrainian is almost parallel to Russian. The five main construction types are:

IMPERSONAL ANCHOR: *možna* ‘possible’

- (i) *možna* NOM, in which the impersonal modal combines with a clause with the Subject in the Nominative case, as in (9);
- (ii) *(ci/či) možna* DAT, in which the impersonal modal takes the infinitive and the Experiencer in the Dative as its complement;
- (iii) *(ci/či) možna* CDAT, in which the impersonal modal takes the infinitive clause as its complement, as in (10);

¹⁷ Modelling of data was performed in RStudio with the use of packages *dplyr*, *ggsankey*, *ggplot2*, and *stringr*.

¹⁸ The colors are taken from the colorblind friendly Safe palette in the package *rcartocolor*.

- (iv) (ci) *možna?*, in which the modal word is used unattached to surrounding syntax;

PERSONAL ANCHOR: *mahčy* / *mogti* ‘can’

- (v) (ci) *mahčy* INF / (či) (*ne*) *mogti* (*by*) INF, in which a fully-fledged modal verb takes the infinitive clause as its complement, as in (11) and (12).

Constructions with the impersonal modals are more frequent, as in (9) and (10), however there are also a few attestations with the conjugated modal verb *mahčy* ‘be able, can’ in Belarusian, as in (11), and *mogti* ‘be able, can’ in Ukrainian, as in (12).

IMPERSONAL ANCHOR

- (9) ***Možna ja vidsunu tumbočku vid ližka?*** (Ukrainian)
 ‘Can I move the nightstand away from the bed?’
 [Kafka. Proces]
- (10) ***Možna hljanuc’?*** (Belarusian)
 ‘Can I take a look?’
 [Gaarder. Sofiin Svet]¹⁹

PERSONAL ANCHOR

- (11) ***Ci mahu ja ŭzjac’ setku?*** (Belarusian)
 Can I take the net?
 [Hemingway. Starec a mor]
- (12) ***Čy ne mig by ja podyvyty’ na kodeksy, jai vin iljustruvav?*** (Ukrainian)
 ‘Could I take a look at the works he illustrated?’
 [Eco. Jmeno ruze]

The interrogative particles *ci* and *či* ‘whether’ are parts of request constructions, however in some cases they can be omitted. In Belarusian the particle *ci* is presented in 8 out of 33 constructions with an anchor word with the meaning of possibility, as in (11), whereas in Ukrainian only in 28 out of 140 constructions, as in (12). Therefore, these particles are given in brackets as non-obligatory elements.

Thirteen out of nineteen constructions with the personal anchor in Ukrainian are in the Subjunctive (past form of *mogti* with particle *b(y)* ‘whether’). Eight of the Subjunctive clauses also include negative particle *ne* ‘not’, as in (12). The use of Subjunctive mood and negation in requests serves to soften the illocutionary force and minimize the speaker’s imposition on the hearer.

4.2. South Slavic: Bulgarian and Serbian

The core construction types for Bulgarian (65%) and Serbian (74%) comprise possibility constructions with modal verb *moga/moči* ‘be able, can’, impersonal *može* ‘may, possible’ for Bulgarian, and epistemic constructions for Serbian, see Figure 2.

¹⁹ The examples from (9) to (39) are structured as follows: the first line is the translational equivalent of the Russian request, the second line is translation to English. The Russian counterparts are omitted due to the space limitations.

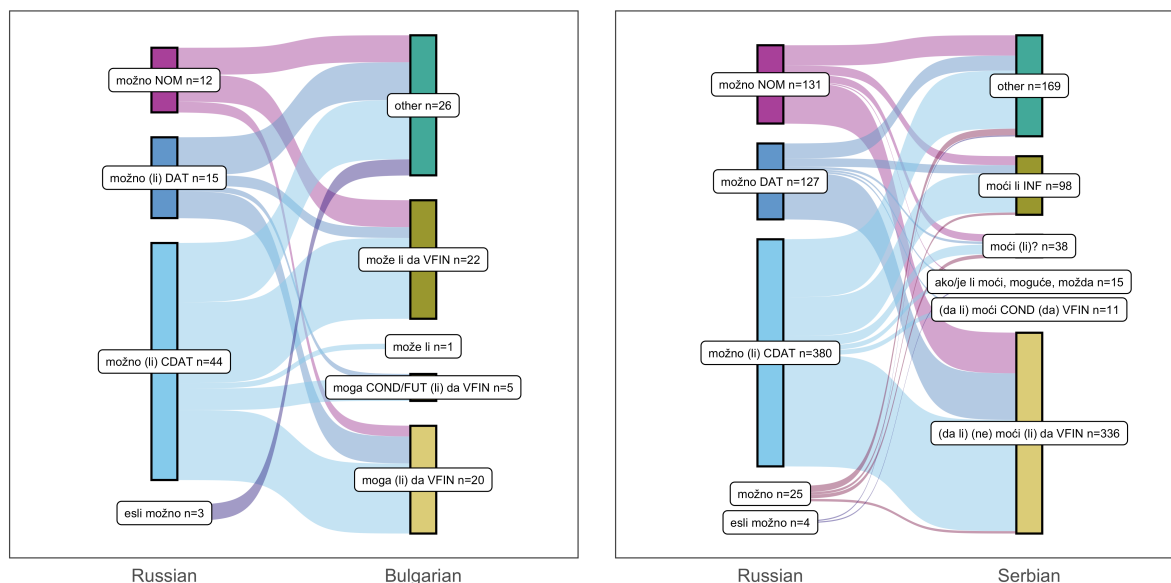


Figure 2. Distribution of constructions expressing request in the Bulgarian and Serbian data. Non-obligatory elements of constructions are given in parentheses. The labels are explained in the text.

The Bulgarian data shows that there are three main construction types that are used for formulating requests. One construction with the modal verb *moga* ‘can, be able’ as an anchor, namely *moga (li) da VFIN* and two with the impersonal modal: *može li da VFIN* and *može li*. The construction COND/FUT *moga (li) da VFIN* is a modification of the construction type *moga (li) da VFIN* in Subjunctive mood or Future tense. The particle *da* is the obligatory element (Luyfti 4-6) of constructions that connect the modal and the verb in the first-person singular form. The conjugated form of the verb *moga* ‘be able, can’ is used in the *moga (li) da VFIN* construction, as in (13), (14) and (15).

PERSONAL ANCHOR

- (13) *Moga li da sedna?* – *popita plaho malkijat princ.* (Bulgarian)
 ‘Can I sit down? – asked the Little Prince timidly.’
 [Saint Exupery. Malyprinc]
- (14) *Profesore, moga li da se vidja s profesor Dămbăldor?* (Bulgarian)
 ‘Professor, can I see Professor Dumbledore?’
 [Rowlingova. Hpot kamen]
- (15) *Madam Hooč? Može li Hari da si vzeme metlata?* (Bulgarian)
 ‘Madam Hooch? Can Harry take his broom?’
 [Rowlingova. Hpot vezen]

Formally the *može li da VFIN* construction is a combination of the third person singular form of the verb *moga*, particles *li* and *da* and the verb, as in (16) and (17). However, these examples differ from example (15). In (15) the speaker seeks permission to take the broom on Harry’s behalf. In contrast, in both (16) and (17), the speakers request permission and intend to carry out the action themselves. Therefore, I treat *može* as an impersonal anchor with the semantics ‘is it okay if’.

IMPERSONAL ANCHOR

- (16) *Može li da sedna tuk? – poiska Hari razrešenje.* (Bulgarian)
 ‘Is it okay if I sit here? – Harry asked for permission.’
 [Rowlingova. Hpot vezen]
- (17) *Može li pak da vidja stihotvorenieto? – popita Langdän.* (Bulgarian)
 ‘Is it okay if I see the poem again? – Langdon asked.’
 [Brown. Sifra]

The flows on the Sankey diagram indicate that there is no clear distributional pattern for Bulgarian translational equivalents. However, interestingly, almost the half of the examples for the Russian *možno* NOM construction are translated into Bulgarian not by constructions with the personal anchor, but by constructions with impersonal *može*.

In my data Serbian requests are expressed by constructions with the anchor modal verb *moći* ‘can, be possible’. There are two subtypes within this constructional pattern. The first type comprises constructions in which *moći* combines with the particle *li* and the infinitive, namely *moći li* INF, as in (18).

PERSONAL ANCHOR

- (18) *Mogu malo pomaziti mačkicu?* (Serbian)
 ‘Can I pet the kitten a little?’
 [Subtitles. Girl, Interrupted]

The second type are constructions in which the particle *da* is linking the modal and the first-person form of the verb, namely *(da li) (ne) moći li da* VFIN. This construction type can be also modified by the use of Subjunctive mood. In Serbian, like in Belarusian and Ukrainian, the request constructions can be preceded by a sentence initial interrogative particle, in this case *da* (nineteen attestations), see (19).

- (19) *Da li mogu da je zadržim?* (Serbian)
 ‘Can I keep her?’
 [Subtitles. The 6th Day]

Serbian data shows that constructions of Russian type *esli možno* ‘if possible’, as in (20), and constructions with epistemic modals, as in (21) are used for requesting.

- (20) *Pa proverila bi je sama, ako mogu?* (Serbian)
 ‘I would like to check on her myself, if that is okay?’
 [Subtitles.Spartacus: Blood and Sand]
- (21) *Je li može i ja da preskočim?* (Serbian)
 ‘Can I skip it too?’
 [Subtitles. Precious]

4.3. West Slavic: Czech and Polish

The core constructions in Czech (72%) and Polish (78%) are comprised by constructions with the personal verbs *moci* and *móc* ‘can, be able’, the impersonal modal *možna* ‘possible’ in Polish, and various epistemic words that belong to the possibility domain, see Figure 3. Since the *moci* INF and *(czy) (nie) móc* INF construction types are the most populated in the data, the flows on the Sankey diagram demonstrate that the majority of examples that are presented by various Russian construction types correspond to those two constructions with the personal constructions in Czech and Polish.

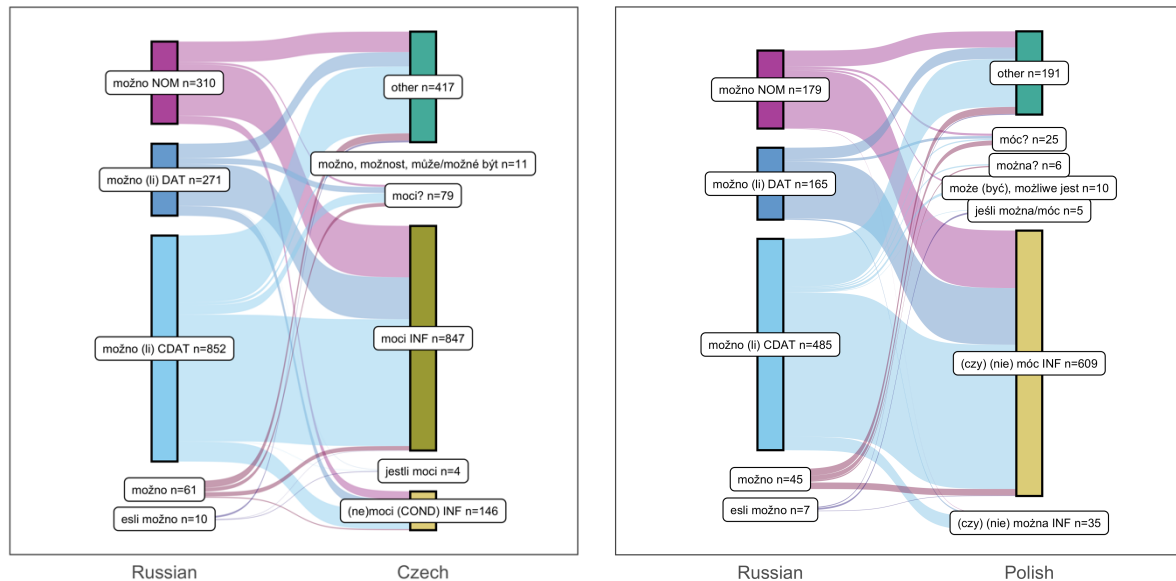


Figure 3. Distribution of constructions expressing request in the Czech and Polish data. Non-obligatory elements of constructions are given in parentheses. The labels are explained in the text.

The *moci* INF construction in Czech is used in the majority of requests (847 out of 1504 attestations). Negation is used in some examples together with the anchor *moci*, as in (22). Additionally, in 146 attestations *moci* is in the Subjunctive mood, see (23).

PERSONAL ANCHOR

(22) *Vladimíre Ivanoviči, nemůžeme to odmítnout?* (Czech)
 ‘Vladimir Ivanovich, can’t we refuse it?’
 [Subtitles. Kandagar]

(23) *Mohla bych tu zůstat na dnešní noc, bez večeře?* (Czech)
 ‘Could I stay here tonight without dinner?’
 [Subtitles. Lucia y el sexo]

Epistemic constructions are presented by constructions with the verb *být* ‘be’ and modal words *možné* ‘possible’, *možno* ‘possible’, *možnost* ‘possibility’, *může* ‘may’ and the construction *jestli moci*, ‘if possible’ as in (24).

- (24) *Je nějaká možnost jí zastihnout?* (Czech)
 ‘Is there any possibility to catch her?’
 [Subtitles. More than blue]

The Polish data shows that requests are primarily expressed by means of a construction with the personal modal verb *móc* that can occur together with the negative particle *nie* ‘not’, as in (25). In 142 out of 609 attestations the verb *móc* is accompanied by the interrogative particle *czy* ‘whether’, as in (26).

PERSONAL ANCHOR

- (25) *Nie możemy jechać z tobą?* (Polish)
 ‘Can we not go with you?’
 [Subtitles. Gifted Hands: The Ben Carson Story]

- (26) *Czy wciąż mogę cię pocałować?* (Polish)
 ‘Can I still kiss you?’
 [Subtitles. The Truth About Charlie]

Another way of formulating requests in Polish is by employing constructions with the impersonal anchor word *można*, as in (27). However, this strategy is used almost 17 times less frequent compared to the constructions with the personal modal.

PERSONAL ANCHOR

- (27) *Czy można go zobaczyć? – zapytał Pinokio.* (Polish)
 ‘Can I see him? – asked Pinocchio.’
 [Collodi. Pinokiova dobr]

Epistemic anchors such as *może* ‘maybe’, and *możliwe* ‘possible’ with the the verb *jest*, as in (28), are also used a request strategy.

- (28) *Może zagram parę piosenek za drinka?* (Polish)
 ‘Maybe I will play a few songs for a drink?’
 [Subtitles. Crossroads]

In this section I presented request strategies with anchor words denoting possibility. East Slavic languages tend to use constructions with impersonal modals as anchors, whereas South Slavic languages prefer personal modals as anchors. South Slavic languages are split: Serbian requesting strategies demonstrate preference for personal modals as anchors like West Slavic languages, whereas Bulgarian, with almost half of constructions with impersonal modals as anchors, gravitates towards East Slavic.

4.4. Additional Strategies

In this section I describe nine additional strategies observed in my data. These additional strategies constitute less than 35% of the data in each language under

consideration. First, I discuss three more general types; namely the use of declarative utterances, direct questions, and imperatives. Then I present the remainder of strategies, providing specific anchor words for each pattern. I illustrate each type with an example from one of the languages in the dataset.

Declarative utterances are found in all languages with the exception of Belarusian. The speaker boldly informs the hearer about her plans or intentions, as in (29). It is possible to speculate that, depending on the intonation pattern, (29) could be interpreted as a question. However, due to the lack of information on the intonational profile, I consider such examples as statements in this research.

- (29) *Todi ja perenočuju u Suzi Garper, mamo.* (Ukrainian)
 ‘Then I will overnight at Susie Harper’s, Mom.’
 [Twain-Dobr_Tsawyer]

Direct questions are present in all languages. The speaker directly asks the hearer whether the speaker to engage in some activity, as in (30).

- (30) *Vodim te na piće? – Ne, hvala.* (Serbian)
 ‘Shall I take you out for a drink? – No, thanks.’
 [Subtitles. Grande école]

Imperatives are used for requests in all languages in the database. Imperatives in English-based studies are traditionally considered as the maximum degree of imposition on the hearer. The speaker instructs or gives a direct order to the hearer, as in (31).

- (31) *Čakaj, adnu xvilinačku, – skazaŭ Vinja-Pyx, seŭ i raz ’vjarnuŭ stupak adnoj lapy.* (Belarusian)
 ‘Wait a moment, – said Winnie-the-Pooh, sat down, and unscrewed the lid with one paw.’
 [Milne. Pu]

To mitigate the illocutionary force of imperative speakers may use diminutives. Note the use of *xvilina-čku* ‘minute-diminutive’ instead of *xvilina* ‘minute’ in example (31). Another modification is the use of hortative constructions with lexemes *davaj* ‘let’ as in (32). The hortative construction implies less imposition on hearer’s freedoms, since *davaj*-constructions are inclusive offers to help to the hearer, rather than orders.

- (32) *Davaj, ja tabe dapamahu, – vetliva prapanavaŭ Pyx. Ęn z’ lehkatoj dacjahnuijsja da ljazhotki i pahrukaŭ ěju ũ dz’very.* (Belarusian)
 ‘Let me help you, – politely offered the Pooh. He easily reached for the handle and pushed the door open.’
 [Milne. Pu]

The anchor words for the remaining six strategies are given in Table 4.

Additional strategies	Language					
	Belarusian	Ukrainian	Bulgarian	Serbian	Czech	Polish
'beg'-question	–	<i>prošu</i> 'beg'	–	<i>moliti</i> 'beg'	–	<i>poprosić</i> 'beg, ask' <i>prosić</i> 'beg, ask'
'allow'-question	<i>dazvol'ce</i> 'allow, permit' <i>nel'ha</i> 'not allowed'	<i>dasi</i> 'let me' <i>dozvoliti</i> 'allow, permit'	<i>e razrešeno</i> 'is allowed, permitted' <i>pozvolite</i> 'allow, let, permit'	<i>dopustiti</i> 'allow' <i>smeti</i> 'be allowed'	<i>dovolit</i> 'allow, let' <i>nechat</i> 'allow, let' <i>smět</i> 'be allowed'	<i>niech</i> 'let' <i>pozwolić</i> 'allow' <i>wolno</i> 'be allowed'
Modal Desire	–	–	–	<i>hteti</i> 'want' <i>želeti</i> 'want'	<i>(ne)chtít</i> '(not) want'	<i>chcieć</i> 'want'
Modal Epistemic	<i>moža</i> 'maybe'	<i>nevze</i> 'really, indeed' <i>możliwo / może b</i> 'maybe'	<i>nali</i> 'right'	<i>možda</i> 'maybe'	<i>možnost</i> 'possibility' <i>může/možné být</i> 'maybe'	<i>chyba</i> 'perhaps' <i>prawdopodobnie</i> 'probably'
Modal Necessity	–	<i>treba</i> 'need'	<i>biva li</i> 'ought to, should' <i>trjabva</i> 'must'	<i>morati</i> 'have to' <i>trebati</i> 'must'	<i>mít</i> 'should' <i>muset</i> 'have to'	<i>(czy) mieć</i> 'should' <i>powinen</i> 'should, ought to'
Lexical Modifier	–	<i>jakščo ne secret</i> 'if not secret' <i>napevno</i> 'probably'	<i>ako ne</i> 'if don't mind' <i>ami imate li nešo protiv ako</i> 'indeed have anything against if' <i>šče mi uslužiš li</i> 'will you help me'	<i>u redu</i> 'OK, in order'	<i>dát se</i> 'be possible' <i>jestli nevadí</i> 'is it ok (if)' <i>lze</i> 'possible' <i>ne vadit</i> 'if it is not a problem' <i>prosím</i> 'please' <i>rad</i> 'gladly' <i>šlo by</i> 'would be possible'	<i>czy pasować ci</i> 'does it suit' <i>dać się</i> 'be possible' <i>dobrze</i> 'right' <i>jest jakaś szansa</i> 'is any chance'

Table 4. The anchor words and lexical modifiers used in the six additional requesting strategies in my data.

The 'beg'-question construction type is manifested by various anchors with the semantics of begging. These are performative statements in which speakers overtly express the content that follows the 'beg'-word in a request, see (33).

- (33) *Proszę mi je oddać - zażądała Luna lodowatym tonem (...).* (Polish)
'Please, give it back to me. – Luna demanded in a frosty tone.'

[J. Rowlingova. Harry Potter i zakon Feniksa]

Questions with words with meaning ‘allow’ are observed in all languages in my sample. The speaker literally asks permission to carry out an action, as in (34).

- (34) *Smím se dotknout vašeho obličej?* (Czech)
 ‘May I touch your face?’
 [Subtitles. Red Dragon]

Apart from the possibility modals discussed in Sections 4.2 and 4.3, modals that express desire, as in (35), necessity as in (36), or epistemic meanings as in (37) are used for requests. Modals of desire are not attested for Belarusian, Ukrainian and Bulgarian.

- (35) *Hoćeš li da te odvedem kod doktora?* (Serbian)
 ‘Do you want me to take you to the doctor?’
 [Subtitles. Extract]
- (36) *Biva li da vzema serkmeto?* (Bulgarian)
 ‘Is it okay to take the net?’
 [Hemingway. Starec a mor]
- (37) *Chyba wezmę kąpiel?* (Polish)
 ‘Maybe I will take a bath?’
 [Subtitle. Lonely Hearts]

Lexical modifiers are the least restrictive strategy, including both external clause modifiers such as Bulgarian *ami imate li nešo protiv ako* ‘indeed have anything against if’ in (38) and more grammaticalized constructions as Czech construction *šlo by* ‘would be possible’ in (39).

- (38) *Ami imate li nešto protiv — kaza Ford, — ako vi popitam v kakvo imenno se sastoi vašata rabota.* (Bulgarian)
 ‘Well, do you mind if I ask what exactly your job consists of?’
 [Adams. Restaurant na Vselenata]
- (39) *Mami, šlo by aspoň jednu neděli vynechat tuhle konverzaci?* (Czech)
 ‘Mom, could we skip this conversation at least one Sunday?’
 [Subtitle. Cassandra’s Dream]

Another way to hedge requests is by use of the word *please*. In my data the words with the meaning ‘please’ are present in all languages, and these words might appear in all requesting strategies that were discussed above.

5. Cross-Slavic Comparison of Constructions Used to Express Requests

In this section I summarize findings and provide comparison of requesting strategies for languages in my database. In total, I have identified fourteen requesting strategies, see Figure 4. To compare samples with varying numbers of data points, each

individual dataset was standardized as 100%. Then the proportion of requesting strategies was calculated separately for each language and added to the plot. The chart illustrates the variability in the repertoire of translational equivalents of Russian conventionally indirect requests across Slavic languages in the sample. Three major strategies are *'can' INF*, *'possible' NOM* and *'possible' DAT/CDAT*. The *'can' INF* strategy includes all constructions with personal anchor modal verbs that take the infinitival clause as complement. The anchor word in these constructions can be in Subjunctive mood, accompanied by interrogative particles, such as Polish *czy* or Ukrainian *чи* 'whether'.

The *'possible' NOM* strategy includes all construction types with the impersonal anchor modal that take a personal clause as complement. The *'possible' DAT/CDAT* strategy encompasses constructions with an impersonal modal word as an anchor that take an infinitival clause as a complement. The *'possible'?* and *'can'?* strategies are constructions with modal verbs and adverbs expressing possibility that are used unattached to surrounding syntax. The remaining strategies correspond to additional types presented in Section 4.4.

East Slavic languages predominantly use constructions with the impersonal modals as an anchor, whereas West Slavic languages and Serbian use the modal verb 'can, be able' as an anchor. Bulgarian occupies an intermediate position, with nearly 30% of requests coded by constructions with an impersonal anchor.

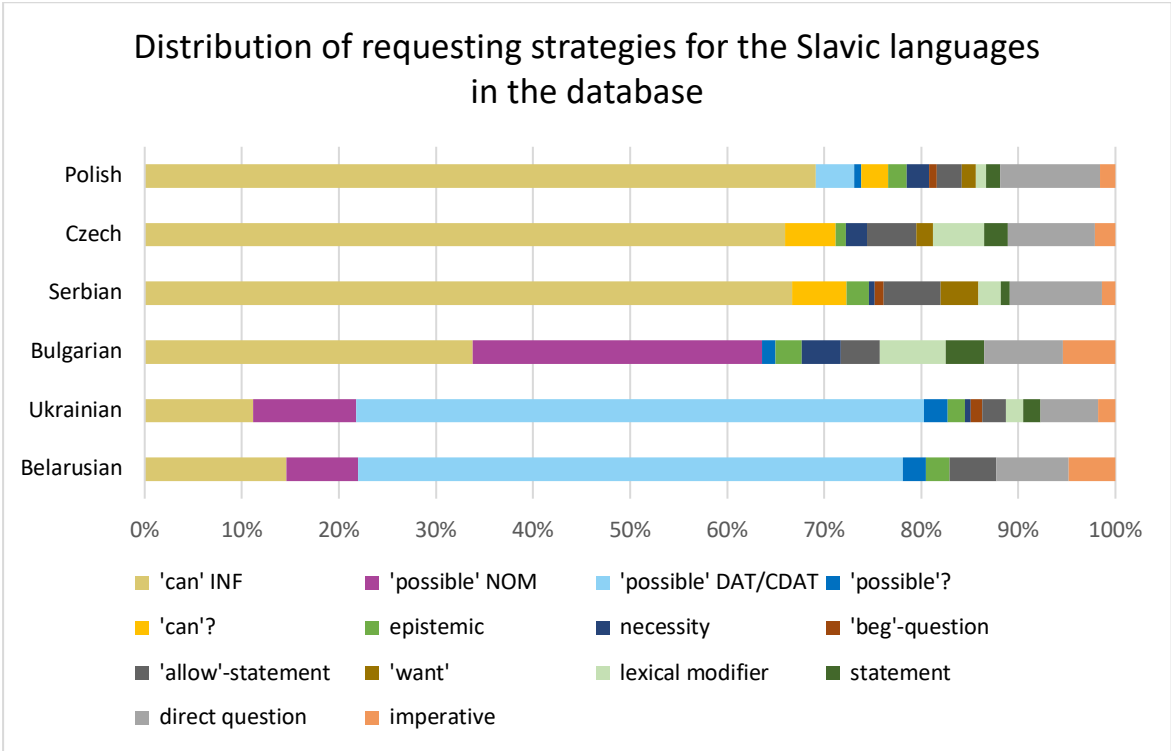


Figure 4. Distribution of request constructions for six Slavic languages in the dataset. Labels are explained in the text. The colors for core constructions with possibility anchors align with the colors used in Sankey diagrams.

Among the additional strategies, direct questions, ranging from 6% to 10% depending on the language, and imperatives, ranging from 2% to 5 %, are found in all languages under examination. In traditional speech act-oriented analysis, these request strategies are considered more direct, and consequently less polite and more impositive. However, in my data the use of direct questions or imperative does not automatically render requests less polite. These findings align with Ogiermann's (190) claim that "politeness does not reside within linguistic structures; every language has at its disposal a range of culture-specific routine formulae". The least frequent strategy are the performative utterances with 'beg' anchors accounting for approximately 1% in each data set.

In terms of the diversity of requesting strategies, Belarusian data exhibits eight strategies, Czech and Bulgarian each have ten, Serbian has eleven, Ukrainian has twelve, and Polish has thirteen. These findings are slightly surprising, considering Belarusian, Bulgarian, and Ukrainian have the smallest datasets. Therefore, one might have anticipated less variation in comparison to the relatively larger Serbian, Polish, and Czech samples. Moreover, Belarusian and Bulgarian lack data from the Subtitle collection which returned the most numerous results for requests for other languages.

6. Discussion and Conclusion

In this article I presented findings from a comparative corpus-based study of requesting strategies in six Slavic languages. The major questions addressed in the study are: 1) Which strategies do Slavic languages use to express conventionally indirect request? 2) What is the distribution of these strategies across Slavic? and 3) Is it possible to study speech acts of request using data from written corpora? In addition, I briefly discussed whether there is a correlation between politeness and directness.

The data from Belarusian, Ukrainian, Bulgarian, Serbian, Czech and Polish shows that there are overall fourteen requesting strategies, and these are discussed in detail in Section 4. Russian conventionally indirect requests with *možno* as a modal anchor were used as a filter, and the core strategies in the Slavic translational equivalents are comprised with constructions with anchors with possibility meanings. Additional strategies are more varied, including declarative utterances, imperatives, direct questions, and utterances with anchor words denoting necessity and desire *inter alia*, see Section 4.4.

The distribution of requesting strategies partially aligns with the subfamily grouping of Slavic languages. In particular, East Slavic and West Slavic languages show distinct patterns in expressing requests. East Slavic languages primarily express requests using constructions with impersonal modals as anchors, e.g., Belarusian *možna* 'possible', whereas West Slavic languages use personal verbs, e.g., Czech *moci* 'can, be able', as anchors. South Slavic languages are less coherent. Serbian encodes requests with constructions with the personal verb *moći* 'can, be able' as anchors, while Bulgarian tends to use constructions with the impersonal modal *može* 'possible' just as frequently as constructions with personal verb *moga* 'can, be able' as anchor.

As for methodology, although requests are most often encountered in spoken discourse, corpora prove to be a valid source for conducting a qualitative study of this speech act. The subtitle database in particular serves as a rich source for spoken data. However, in the future the data should be approached with caution due to the increasing use of AI-generated subtitles. The findings in this article are presented by use of Sankey diagrams, that facilitate comprehensive visualization of relationships and comparison of linguistic features across the Slavic languages.

Another observation is the complex relationship between (im)politeness and (in)directness. The data presented in this study supports the point of view that politeness is a fluid phenomenon, that is not exclusively dictated by semantics or syntax. Extralinguistic and cultural background determines whether an utterance is rendered as polite or not. However, this question needs further experimental testing. Certain factors such as intonation, impact of source language, use of gestures, and request perspective have been left out in this study due to methodological constraints and limitations in space (and time). However, the findings in this research open up promising avenues for further exploration, such as further expansion of the requesting strategies database, a study of wider extralinguistic context including discursive analysis and non-verbal cues, and an experimental study focused on evaluation of politeness levels of request strategies used by native speakers.

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Article 3

When Modality and Tense Meet. The Future Marker *budet* 'will' in Impersonal Constructions with the Modal Adverb *možno* 'be possible'¹

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ABSTRACT

This paper examines Russian impersonal constructions with the modal word *možno* 'can, be possible' with and without the future copula *budet* 'will be,' i.e., *možno* + *budet* + INF and *možno* + INF. My contribution can be summarized as follows. First, corpus-based evidence reveals that *možno* + INF constructions are vastly more frequent than constructions with copula. Second, the meaning of constructions without the future copula is more flexible: while the possibility is typically located in the present, the situation denoted by the infinitive may be located in the present or the future. Third, I show that the *možno* + INF construction is more ambiguous and can denote present, gnomic or future situations. Fourth, I identify a number of contextual factors that unambiguously locate the situation in the future. I demonstrate that such factors are more frequently used with the future copula, and thus motivate the choice between the two constructions. Finally, I illustrate the interpretations in a straightforward manner by means of schemas of the type used in cognitive linguistics.

KEYWORDS modality; possibility; future; corpus; Russian

1. Introduction

The future tense and its relation to mood and modality has preoccupied linguists for a long time (Chung and Timberlake 1985; Bybee et al. 1994; Arutjunova 2011; Radbil' 2011; Stojnova 2018). Russian modal constructions with the impersonal modal adverb *možno* 'be possible' express that a situation is possible in the past, present or future. Thus, Russian modal constructions offer an excellent testing ground for hypotheses about the interaction of

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tense and mood, since a modal word like *možno* ‘can, be possible’ may combine with a future form of the copula verb *byt’* ‘be’ as in (1) and (2)¹:

- (1) Korrektnye vyvody **možno budet sdelat’** na osnove
 can be.FUT.3SG make.INF.PFV
 itogov Global’nogo raunda.
 ‘Correct conclusions **can be drawn** based on the results of the Global Round.’
 (A. Kosarev. *Ĝesperanto meĝdunarodnyĝ sravnenij* // “Ĝkspert,” 2014)
- (2) Prognozy **možno budet delat’** tol’ko bliĝe k vesne.
 can be.FUT.3SG make.INF.IPFV
 ‘Forecasts **can only be made** closer to spring.’
 (S. Inkiĝinova. *Razguljalis’* // “Ĝkspert,” 2013)

However, examples where *možno* is used without the future copula have a very similar meaning as in (3) and (4):

- (3) Nu da ... koe-ĉto eŝĉe **možno sdelat’**. no, uvy, uĝe nemnogo ...
 can make.INF.PFV
 ‘Well, yes ... something else **can be done**. but, alas, not much ...’
 (Perepiska v icĝ meĝdu agd-ardin i Koljuĉij drug, 2008)
- (4) S tekstem, daĝe esli vy ego uĝe vyvesili, **možno delat’** vsĝ
 can make.INF.IPFV
 ĉto ugodno: redaktirovat’, perepisat’ zanovo, uniĉtoĝit’.
 ‘Even if you have already posted the text, you **can do** whatever you want: edit, rewrite, destroy.’
 (Zapis’ LiveJournal, 2004)

The present study aims at clarifying the semantic contribution of the future copula in constructions with *možno* ‘can, be possible,’ and at the same time seeks to identify contextual factors that motivate the choice between constructions with and without the future copula. My contribution can be summarized as follows. First, I show that the construction without future copula is vastly more frequent than the one with copula. Second, it is argued that *budet* ‘will be’ functions as a future tense marker that typically locates both the possibility (*možno* ‘can, be possible’) and the event denoted by the infinitive in the future. Third, the meaning of the construction without the future copula is more flexible; while the possibility is typically located in the present, the situation denoted by the infinitive may be located in the present or the future. Fourth, I identify a number of contextual factors that motivate the location of the infinitive situation in the future. Fifth, although these factors are shown to be compatible with both constructions, they are more frequently used with the future copula, and thus motivate the choice between the two constructions. Finally, I relate my findings to cognitive linguistics and show that my findings can be represented in this framework (Langacker 2008).

This is a corpus-based qualitative study where I will use data from the Russian National Corpus (www.ruscorpora.ru), hereinafter the RNC. I will

¹All numbered examples in this article are cited from the Russian National Corpus (www.ruscorpora.com). Examples are partially annotated using Leipzig morpheme-by-morpheme glossing. Metadata is given in brackets.

not engage in statistic modelling of the data, but I will provide quantitative analysis where it is relevant.

This article is structured as follows. Section 2 provides background information about modal constructions with *možno* ‘can, be possible’ and discusses various interpretations of future forms in the Russian language. In section 3, I describe the database, explaining how the data was obtained and annotated. Section 4 presents an analysis of the *možno* + *budet* + INF construction, whereas in Section 5 I provide an analysis of the *možno* + INF construction. Section 6 and 7 present contextual factors that motivate the choice of construction. In section 8, I discuss a case study with *zavtra* ‘tomorrow.’ Section 9 proposes a representation of tense and modality in Cognitive Grammar, before I offer some conclusions in Section 10.

2. The *možno* Constructions and Temporal Location

It has often been observed that Russian future verb forms can have modal and/or temporal readings (Arutjunova 2011; Radbil’ 2011; Stojnova 2018). In particular, Radbil’ (2011) argues that future forms in Russian can convey modal meanings, i.e., express the speaker’s attitude towards the certainty of the proposition, as in (5). However, according to Radbil’ (2011), future forms may also have purely temporal readings as in (6).

- (5) Zavtra ja pojdu v kino.
 Tomorrow I.NOM go.PFV.1SG in cinema
 ‘Tomorrow I will go to the cinema.’
- (6) Zavtra nastupit moj den’ roždenija.
 Tomorrow arrive.PFV.3SG my day.NOM.SG birth.GEN.SG
 ‘Tomorrow is my birthday.’

In example (5) the speaker expresses her absolute certainty that she will go to the cinema tomorrow regardless of the obstacles that stand in her way. Thus, the content can be paraphrased as ‘I am sure that tomorrow I will go to the cinema.’ In (6), on the other hand, the interpretation ‘I am sure that tomorrow is my birthday’ is redundant, as a birthday is a specific date, and it is impossible to change the time when the person was born. However, the difference between such utterances is quite subtle, and in many cases, it is not straightforward to determine whether a modal nuance is present or not. The situation is particularly complex in constructions with modal words such as *možno* ‘can, be possible’ or *nužno* ‘have to,’ since the speaker’s (un)certainty towards to what is asserted is already present in the modal word.

The modal adverb *možno* ‘can, be possible’² can express ability, possibility and permissibility. *Možno* is an impersonal modal, i.e., it does not allow a

²In this article, I will refer to *možno* as a modal adverb although in Russian scholarly tradition *možno* is called “modal predicative” or “modal predicate.” Both “predicate” and “predicative” are ambiguous terms. The predicative in English grammars corresponds to a linguistic item that follows a copula (*be, seem, appear* etc.). As for the predicate, it might correspond to a single verb or to a verb and other

subject in the Nominative case but combines with an Experiencer in the Dative. The experiencer in the impersonal construction with *možno* can be overtly expressed or omitted. Syntactically, *možno* functions as the head of the infinitival modal construction. Following Goldberg (2006, 5), I define a construction as a “learned pairing [of] form with semantic meaning or discourse function including morphemes or words, idioms, partially lexically filled and fully general phrase patterns.”

According to the logical-based semantic map classification proposed by van der Auwera and Plungian (1998) the modal adverb *možno* can express deontic (permission) or participant-external modal values. Participant-external modality can be described as “circumstances that are external to the participant engaged in the state of affairs and that make this state of affairs possible” (van der Auwera, Plungian 1998, 80).

Možno per se is atemporal. *Možno* implies that the action can be carried out; there may be restrictions, but they are not strong enough to prevent the event from taking place. Traditional grammars (Isačenko 1965; Švedova et al. 1980; Mathiassen 1996; Timberlake 2004) claim that in order to express past or future time reference, one must combine *možno* with the past tense form or future tense form of *byt'* ‘to be,’ as shown in Table 1.

Table 1. Indicative past and non-past paradigms of modal *možno* ‘can, be possible,’ in which infinitive (*s*)*delat'* ‘do’ represents all the verbs that may occur in this construction.

	Past			Non-Past					
				without copula			with copula		
IPFV	<i>možno</i> can	<i>bylo</i> be.PST.3SG	<i>delat'</i> make.INF.IPFV	<i>možno</i> can	<i>delat'</i> make.INF.IPFV	<i>možno</i> can	<i>budet</i> be.FUT.3SG	<i>delat'</i> make.INF.IPFV	
PFV	<i>možno</i> can	<i>bylo</i> be.PST.3SG	<i>sdelat'</i> make.INF.PFV	<i>možno</i> can	<i>sdelat'</i> make.INF.PFV	<i>možno</i> can	<i>budet</i> be.FUT.3SG	<i>sdelat'</i> make.INF.PFV	

The only way to express past reference is the construction with copula *bylo* ‘was’ as in (7a) and (7b).

- (7) a. *Ėto možno bylo delat' 10–20 let nazad.*
 can be.PST.3SG make.INF.IPFV
 ‘This **could have been done** 10–20 years ago.’
 (D. Tarasov. Globalizacija diktuet pravila mirovoj trgovli // “Metally Evrazii,” 2004)
- b. *Vsë, što možno bylo sdelat' ne tak, Sonja*
 can be.PST.3SG make.INF.PFV
 sdelala ne tak.
 ‘Everything that **could have been done** wrong, Sonya did wrong.’
 (T. Solomatina. Devjat' mesjacev, ili “Komediya ženskich položenij,” 2010)

While it is uncontroversial that the examples with the past tense copula situate the relevant situation in the past, the interpretation of the examples

items, e.g., a verb and auxiliary or phasal verb. *Možno* usually requires an infinitive to form a clause, therefore it might be confusing to refer to a modal without an infinitive as a predicate.

with no overt copula and a copula in the future is less straightforward. Examples (8a) and (8b) represent constructions with no overt copula, which are traditionally analyzed as present tense.

- (8) a. S tekstom, daže esli vy ego uže vyvesili, **možno delat'**
can make.INF.IPFV
 vsě čo ugodno: redaktirovat', perepisat' zanovo, uničtožit'.
 'Even if you have already posted the text, you can do whatever you want: edit, rewrite, destroy.'
 (Zapis' LiveJournal, 2004)
- b. Nu da. koe-čto ešče **možno sdelat'**. no, uvy, uže
can make.INF.PFV
 nemnogo ...
 'Well, yes. something else can be done. but, alas, not much ...'
 (Perepiska v icq meždu agd-ardin i Koljučij drug, 2008.01.16)³

Examples (9a) and (9b) with the future form of the copula are traditionally analyzed as future tense.

- (9) a. Sčitaj, ty priobretěš' ličnogo raba, s kotorym **možno budet**
can be.FUT.3SG.
delat' vsě, čo ugodno.
make.INF.IPFV
 'Think about it this way: you will get a personal slave with whom you can do
 whatever you want.'
 (A. Pajkes. Kanser // "Volga," 2014)
- b. Tol'ko v konce sezona **možno budet sdelat'**
can be.FUT.3SG. make.INF.PFV
 kakie-to obščie vyvody.
 'The general conclusions can be drawn only by the end of the season.'
 (Novosti sporta // "Russkij reporter" № 34 [212], 2011)

As shown by the examples above the modal word *can* can combine with a past copula *bylo* 'was' and the future copula *budet* 'will be.' Syntactically, copula functions as the head of construction, however the scope of the copula can modify time reference of both the modal meaning expressed by *možno* and the event expressed by the infinitive. In traditional analysis the absence of an overt copula is said to express present tense. However, Stojnova (2018) points out that the relation between forms with the past tense copula *bylo* 'was' and future tense copula *budet* 'will be' is asymmetrical. While the only way to express past reference is the construction with copula *bylo* 'was,' according to Stojnova future reference might be conveyed by constructions with perfective or imperfective infinitive with or without the future copula.

Stojnova (2018) gives examples with the modal *nužno* 'have to' and states that in sentences with clear future reference (with the adverb *zavtra* 'tomorrow') such as (10) and (11), the modal clause with and without copula will describe two different logic structures. In (10) the future, coded by *zavtra* 'tomorrow' and the copula *budet* 'will be,' affects both the modal *nužno*

³Examples (3) and (4) repeated here as (8a) and (8b) for readers' convenience.

‘have to’ and the situation described by the infinitive *echat* ‘to go.’ In other words, both the necessity and the trip to the factory are situated in future, according to Stojnova. In (11) Stojnova suggests that only the trip to Čeljabinsk is placed in the future, while the necessity expressed by *nužno* ‘have to’ belongs to the present.

- (10) Po doroge ja govorju drogalju, čto mne **zavtra** **nužno**
tomorrow have.to
budet **echat** na zavod.
be.FUT.3SG go.INF.PFV
‘On the way I tell the cab driver that **tomorrow** I **will have to go** to the factory.’
(P. A. Moiseenko, “Vospominanija starogo revoljucionera,” 1921–1923)
- (11) Kogda ja vypil, zakusil, M. N. soobščает, čto **Zavtra** **nužno**
tomorrow have.to
echat v Čeljabinsk k ispravniku.
go.INF.PFV
‘When I have eaten, M.N. reports that **tomorrow** I **will have to go** to Čeljabinsk in order to meet the police chief.’
(P. A. Moiseenko, “Vospominanija starogo revoljucionera,” 1921–1923)

While not all native speakers may share Stojnova’s intuitions, I will not discuss her analysis of *nužno*, but instead focus on constructions with *možno*. I suggest that the temporal marker *zavtra* ‘tomorrow’ affects both the possibility expressed by *možno* and the situation described by the infinitive, locating both *možno* and the infinitive in the future. I will address the contribution of *budet* in Sections 5–7, and explicitly consider the temporal adverbial *zavtra* ‘tomorrow’ in Section 8.

3. Data

Možno is polysemous and can appear in various positions in the sentence: at the beginning or at the end of the sentence, following or preceding the future marker. In order to investigate constructions with *možno* with and without the future copula I carried out four corpus searches in the RNC. These queries reflect the canonical word order with *možno* preceding the copula and the infinitive.⁴ The search queries with numbers for raw and clean data are presented in Table 2. These queries yielded a total of 166 534 occurrences. The data were downloaded from the RNC, pseudorandomized, and the first two hundred examples were manually annotated (“clean data”) for each construction type, namely *možno* + *budet* + INF.PFV, *možno* + *budet* + INF.IPFV, *možno* + INF.PFV and *možno* + INF.IPFV. Irrelevant examples were weeded out manually.⁵ In addition, I calculated the error conversion ratio (ECR) for each query. The ECR is a measure of accuracy that

⁴I also carried out separate searches for five different construction types with non-canonical word order. These queries returned only 133 examples for both perfective and imperfective infinitives. The scarcity of the data did not allow to draw any conclusion; therefore, I will not discuss them in the article.

⁵All of the data and annotations described in this article are publicly accessible from the Tromsø Repository of Language and Linguistics archive (TROLLing) at <https://doi.org/10.18710/MOJBKD>.

Table 2. The search queries, raw numbers, clean data and error conversion ratio (ECR) per query.

#	Query	Raw data	Clean data	ECR
1.	možno + INF.PFV možno 1–1 V, inf, pf	114 142	200	0,07
2.	možno + INF.IPFV možno 1–1 V, inf, ipf	47 650	200	0,03
3.	možno + budet + INF.PFV možno 1–1 byt' fut 1–1 V, inf, pf	3 341	200	0,02
4.	možno + budet + INF.IPFV možno 1–1 byt' fut 1–1 V, inf, ipf	1 401	200	0,04
	Totals	166 534	800	

allows to extrapolate the ratio to the raw data. The lower the ECR, the higher is the accuracy of the data.

Constructions without the future copula are less complex in terms of their structure, and as can be seen from the table, are approximately 34 times more frequent than constructions with the future copula. As shown in Table 2, my data includes examples with infinitives of both aspects. Interestingly, the proportion of constructions with perfective infinitives to constructions with imperfective infinitives is equal for constructions with and without *budet* 'will,' and is approximately 2.4:1. Thus, the perfective aspect is more than twice as frequent as the imperfective aspect, and this holds for constructions with and without a copula.

All examples in the dataset were annotated by the following semantic and syntactic features:

- a) modal function of *možno*;
- b) verb class of the infinitive;
- c) aspect of the infinitive;
- d) presence of temporal adverbials, conditional clauses, perfective verbs or gerunds, etc.

A priori, one might think that these factors would help us predict the choice between constructions with and without the future copula. However, with regard to the modal function in (a), my analysis did not reveal much variation. Most of the examples in the database (95%) denote external possibility, so this factor proved unhelpful as a predictor.

Concerning the verb class of the infinitive in (b), I followed the classification in the Russian National Corpus, which offered annotations of 203 out of 416 infinitives in my dataset. The remaining infinitives I annotated myself using the tags from the RNC. Unfortunately, no clear tendencies emerged from this classification. The verbs were unevenly distributed between 18 verb classes. 16 verb classes had less than 30 instances. It

appears that verb class of the infinitive does not help us predict the choice between constructions with and without future copula.

Aspect in (c) also turned out to be unhelpful as a predictor. Typically, linguists expect that the aspect of the infinitive can motivate the meaning of modal constructions in Russian (Choi 1999; Šmelev, Zaliznjak 2006; Divjak 2009). However, different researchers have come to contradictory conclusions. Choi (1999) and Šmelev, Zaliznjak (2006) claim that imperfective infinitives convey deontic readings, while perfective infinitives convey alethic (epistemic) readings. However, Divjak (2009) argues that imperfective infinitives convey deontic readings, whereas perfective infinitives convey participant-external readings. The analysis of my data does not indicate any correlation between the modality type and the aspect of the infinitive, and I will therefore not provide a detailed discussion of the relationship between aspect and modality.

We are then left with temporal adverbials and the other contextual clues mentioned in (d). These proved helpful as predictors, and I will therefore consider their impact in detail in sections 6–7 below.

4. The Meaning of *možno* without Future Copula

Možno + INF.PFV/IPFV can express gnomic ('universal truth') as in (12), present as in (13) or future situations as in (14). In (12) the speaker says that the same solution can be applied to different types of plants without pointing out a specific time when the action should take place. In example (13) the situation is such that a person can highlight the particular passages in the text at the moment of speech, i.e., in the present.

- (12) Ètot že sovet **možno** **primenit'** i k lukovičnym kul'turam.
 can apply.INF.PFV
 'The same advice **can be applied** to bulbous plants as well.'
 (Ideja! // "Sad svoimi rukami," 2003)
- (13) **Teper'**, esli govorit' bolee konkretno, **možno** **vydelit'**
 can highlight.INF.IPFV
 te samye otdel'nye mesta i formulirovki [...].
 'Now, more specifically, **I can highlight** those particular passages and formulations [...].'
 (M. Krongauz. Rodnaja reč' kak juridičeskaja problema // "Otečestvennye zapiski," 2003)

In (14) the hearer can try to act in a certain way in the future when the speaker will create special conditions facilitating the relevant action.

- (14) No **možno poprobovat'**. Ja daže special'no dlja ètogo sozdam
 can try.INF.PFV
 special'nye uslovija, vot smotrite [...].
 'But you **can try**. I will even create special conditions for this, look [...].'
 (E. Griškovec, "OdnovrEmEnno," 2004)

I used the label "future" for example (14); this is because the following sentence includes a perfective verb with future reference (*sozdam* 'I will

create'). Since this sentence describes conditions that must be in place before *možno poprobovat'* 'can try' takes place, it seems clear that *možno poprobovat'* also has future reference. This applies both to the possibility denoted by *možno* and the event denoted by the infinitive.

For gnomic examples such as (12) it is difficult to determine whether they involve present or future reference. Gnomic situations are essentially atemporal, so the action in question could take place both in the present and in the future, see (Janda 2004, 491). In other words, examples of this type are ambiguous unless they have contextual clues that locate them in the present or in the future.

In my dataset, there are ten rhetorical questions such as (15) that can be interpreted as gnomic situations. It should be noted that no such examples in the clean data were observed with the future copula.

- (15) [...], no **razve** **možno** **pozvolit'** **zadevat'**
 how can allow.INF.PFV hurt. INF.PFV
 NAŠICH ŽENŠČIN.
 '[...], but **how can we allow to hurt** OUR WOMEN.'
 (Kollektivnyj. Forum: Muščina v škole [Vzgljad na Muščinu v škole snaruži i iznutri], 2011)

As mentioned, contextual clues may help to locate the event in the present or in the future. Examples include temporal adverbials such as *segodnja* 'today' and *teper'* 'now' that clearly locate both *možno* and the infinitive in the present as in (16).

- (16) Vo vsjakom slučae imenno takie razgovory **segodnja** **možno**
 today can
uslyšat' v kuliarach Gosdumy.
 hear.INF.PFV
 'In any case, it is precisely such conversations that **can be heard today** in the State Duma's lobby.'
 (I. Pylaev, Vojna sryvaet posevnuju // "Eženedel'nyj žurnal," 2003)

However, examples with temporal adverbials are few and far between in constructions without the copula. In my dataset I have only nine examples with temporal adverbials that locate the situation in the present. The remainder of the examples lack explicit temporal markers except three examples containing if-clauses as in (17) and two examples containing the adverbial *togda* 'then' as in (18). Examples with if-clauses denote gnomic situations, whereas *togda* place the situation in the future.

- (17) Ėffekt **možno** **usilit'**, **esli** **podobrat'** k
 can enhance.INF.PFV if match. INF.PFV
 takoj modeli džemper s rukavami kontrastnogo cveta.
 'The effect **can be enhanced by matching** a jumper with sleeves in a contrasting color.'
 (Obnovit' garderob? Legko! Sočetanija, sozdajuščie stil' // "Daša," 2004)

- (18) **Tol'ko togda možno poverit'** v ser'ěžnost'
 just then can believe.INF.PFV
 načatoj Gryzlovym bor'by za pravoporjadok i čistotu kadrov.
 'Just then can one believe in the seriousness of the struggle for law and order and the purity of
 personnel that had been begun by Gryzlov.'
 (Oborotni pervoj volny // "Zavtra," 2003)

Examples (18) can be used with copula *budet* without any changes in its semantics. Therefore, I suggest that when *možno* + INF.PFV/IPFV is used with various future temporal expressions, it will denote future situations similar to the constructions with the future copula *budet*. I will address this question in Section 8.

Overall, my data suggest that *možno* without the copula can refer to both present and future events. Contextual clues such as temporal adverbials may disambiguate the construction. However, such contextual clues are relatively infrequent and therefore the majority of constructions without the copula are ambiguous with regard to time reference.

5. The Meaning of *možno* with Future Copula

The analysis of my data shows that constructions with the future copula *budet* 'will be' unambiguously locate both the possibility of carrying out an action and, consequently, the action itself in the future. In example (19) it is impossible to visit Ulja at the moment of speech, but it will be possible in the nearest future (*skoro* 'soon').

- (19) Dejstvitel'no, leteli dni [...]. Kazalos', včera byl fevral' i prazdnovali novosel'e,
 a segodnja ijun', i **skoro** **možno** **budet**
 soon.ADV can be.FUT.3SG
echat' v pustynju naveščat' Ulju.
 go.INF.PFV
 Indeed, the time has flown by [...]. It seemed that yesterday was February and we celebrated
 housewarming, and today is already June, and **soon** it **will be possible to go** to the desert to visit
 Ulja.
 (V. Michal'skij, "Dlja radosti nužny dvoe," 2005)

In the previous section we saw that contextual clues can disambiguate the temporal reference but such contextual clues are very rare for constructions without the future copula. In constructions *with* the copula, on the other hand, the situation is very different. Here the majority of examples (3/4) have explicit future reference such as *v 2013 godu* 'in 2013,' *skoro* 'soon,' *posle* 'after' etc., or future reference is implied by a conditional clause with a perfective non-past verb form. However, even if the sentence lacks such contextual clues, it still receives future interpretation as in (20).

- (20) Nalogi **možno** **budet** **oplatit'** čerez Internet.
 can be.FUT.3SG pay.INF.PFV
 'Taxes **can be paid** online.'
 (Nalogi možno budet oplatit' čerez Internet. // <http://www.rbcdaily.ru/2011/03/23/finance/562949979920489.shtml>, 2011)

Example (20) is the headline of a news article, from which it immediately becomes clear to the reader that it is impossible to pay taxes via the Internet yet, but that such a possibility will appear in the future. However, such examples are less frequent than examples in which the future copula and future temporal marker are simultaneously present. In the next section I will discuss the temporal adverbials and sequencing markers that involve future time reference.

6. Contextual Factors 1: Temporal Adverbials and Sequencing Markers That Denote a Point in Time

Constructions with the future copula have a tendency to appear in a sentence together with various temporal adverbials that help locating the situation in time. These temporal adverbials are of two types, which I will refer to as "specific" time markers and "sequencing" markers.

Specific time markers are mostly prepositional phrases such as *k vesne 2015* 'by spring 2015' and future temporal adverbials such as *skoro* 'soon,' *popozže* 'a bit later.' All these time markers locate the event after the moment of speech, that is in the future. More examples are given in Table 3. As shown

Table 3. Temporal adverbs and sequencing markers used with *možno* + *budet* + INF. Numbers in brackets show the number of examples in my dataset.

Contextual factor	Example
Specific time markers (123 examples)	<i>16 janvarja</i> 'on the 16 th of January' <i>bliže k vesne / k 2015</i> 'closer to spring / to 2015' <i>čerez X let</i> 'in X years' <i>eščě paru let i</i> 'a couple more years and' <i>popozže</i> 'a bit later' <i>s 2015</i> 'from 2015' <i>s tret'jej nedeli</i> 'from the third week' <i>skoro</i> 'soon' <i>teper'</i> 'now' <i>utrom</i> 'in the morning' <i>v 2013 / v janvare / v budušem / v dal'nejšem / v ponedel'nik</i> 'in 2013 / in January / in future / later on / on Monday' <i>zavtra</i> 'tomorrow' etc.
Sequencing time markers (83 example)	a) <i>posle X</i> 'after X'; <i>potom</i> 'afterwards'; <i>zatem</i> 'then'; <i>a tam</i> 'and then'; <i>prežde čem</i> 'before' (53 examples) b) preceding clause with non-past perfective future verb form with or without temporal adverb including when-clauses with the non-past verb form in the protasis (30 examples)

in the table, there is a total of 123 examples of this type in my dataset. Example (21) illustrates how the specific temporal markers work.

- (21) Programmnyj direktor NTV Aleksandr Nečaeв zajavil, čto **v** **2013**
 in 2013
godu **možno** **budet** **govorit'** "daže ne ob otdeľnych
 year.INSTR.SG can be.FUT.3SG talk.INF.IPFV
 izmenenijach setki, a v celom o značimych sđvigach v programmnoj politike kanala."
 'The program director of NTV, Alexander Nečaeв, said that **in 2013 it will be possible to talk** "not
 just about individual changes in the network, but about significant shifts in the channel's program
 policy in general."
 (V. Nesterov, Žarenym propachlo // "Ogonek," 2013)

As for sequencing markers they are temporal adjuncts such as *posle* 'after,' *zatem* 'after' etc. or when-clauses. The sequencing markers denote that there is an event that must take place in the future before the *možno* construction. By implication, the *možno* construction is therefore located in the future. A list of examples is provided in Table 3. Example (22) shows how the sequencing markers work.

- (22) **Posle** **opytnoj** **èkspluatacii,** vozmožno, proizojdët
 after expeimental.GEN.SG use.GEN.SG
 korrektirovka konstrukcii, **možno** **budet** **zadumyvatsja**
 Can be.FUT.3SG consider.INF.IPFV
 ob organizacii serijnogo proizvodstva "avtolokobilej."
 'After the trial, perhaps, the design will be adjusted, and it **will be possible to consider**
 launching of the serial production of "autolocomobiles."
 (D. Fedečkin. Znakomtes': "Avtomobil!" // "Ural'skij avtomobil"
 (Miass), 2004)

7. Contextual Factors 2: Conditional Constructions and Other Clues

The contextual clues discussed in the previous section are temporal in nature. However, conditional constructions can also locate a situation in the future. In my dataset I have conditional constructions with *esli* 'if' and *v slučae* 'in case of,' as shown in (23) and (24).

- (23) **Esli ètot process uspešno zaveršitsja,** **možno** **budet**
 can be.FUT.3SG
govorit' o moščnom èkonomičeskom partnerstve biznes-grupp,
 speak.INF.IPFV
 podnjavšichsja pri Borise El'cine.
 'If this process is successfully accomplished, it will be possible to talk about a powerful
 economic partnership between business groups that emerged under Boris Yeltsin's government.'
 (I. Gal'perin, Vlast' "delom" zanimaetsja // "Soveršenno sekretno," 2003)
- (24) Po ego slovam, **v** **slučae** **uspecha** **možno**
 in case success can
budet **uveličit'** količestvo sputnikov i takim obrazom
 be.FUT.3SG increase.INF.PFV
 rašširit' ochvat zemnoj poverchnosti.
 'According to him, **in the case of success it will be possible to increase** the number of
 satellites and thus expand the coverage of the earth's surface.'
 (D. Rudakova, Sputniki predkažut zemletrjasenija // <http://www.rbcdaily.ru/2011/03/23/cnews/562949979918859.shtml>, 2011)

In (23) the conditional clause contains the perfective verb *zaveršitsja* ‘will be accomplished,’ which unambiguously places the conditional clause in the future. Since the conditional clause specifies an event that must take place before the *možno* construction, it is clear that the *možno* construction has future reference. Similarly in example (24) the construction *v slučae uspecha* ‘in the case of success’ denotes a successful completion of an event in the future, that precedes the situation marked by the *možno* construction. In my dataset, a total of fifty-eight examples contained conditional clauses.

In addition to the contextual clues discussed above, my dataset contains 19 examples with other contextual clues. These clues involve questions with perfective infinitives like (25) and various elements in the wider context that locate the *možno* construction in the future. An example is provided in (26).

- (25) Ich **možno** **budet** **ugovorit’** **molčat’?**
 can be.FUT.3SG persuade.INF.PFV be.silent.INF.PFV
 ‘Can we persuade them to remain silent?’
 (S. Šikera. V izbor natury // “Volga,” 2014)

- (26) **Cel’** **issledovanija** — **polučit’** **test,** po
 aim.NOM.SG research.GEN.SG get.INF.PFV test.ACC.SG
 rezul’tatam kotorogo **Možno** **budet** **opredelit’**,
 can be.FUT.3SG determine.INF.PFV
 naskol’ko real’nyj pacient raschoditsja s “grafikom” svoego ideal’nogo zdorov’ja.
 ‘The aim of the study is to get a test, according to the results of which it will be possible to determine how much a real patient deviates from the “schedule” of his ideal health.’
 (E. Kudrjavceva, Čto s’est’ na zavtra // “Ogoněk,” 2014)

In (26) the main clause *cel’ issledovanija – polučit’ test* ‘the aim of the study is to get a test’ contains a perfective infinitive *polučit’* ‘obtain’ which signals that the test will be created in the future. Consequently, it will be possible to apply this test once the research will be completed.

As can be seen from data in Table 4, constructions with the future copula have a tendency to appear together with various contextual clues, whereas

Table 4. Contextual clues and their frequency in my dataset, “future” stands for time markers placing an event in the future, whereas “present” stands for time markers placing an event in the present.

		with future copula	without future copula
Specific time markers	present	–	9
	future	123	–
Sequential markers	present	–	2
	future	83	–
Conditional clauses	present	–	3
	future	58	–
Miscellaneous	present	–	–
	future	19	–
No contextual clues	present	–	386
	future	117	–
Total		400	400

constructions without the future copula are less likely to be accompanied by temporal, sequential or conditional markers.

8. Case Study: The Role of the Future Temporal Adverbial *zavtra* ‘tomorrow’ within Modal Constructions

As shown in the previous sections, the construction *možno* + INF.PFV/IPFV can be used to mark future events. The construction *možno* + *budet* + PFV/IPFV INF is used to mark future events as well, but at the same time this construction tends to be accompanied by future temporal adverbials. In order to get a better understanding of how the presence of a future temporal adverbial affects the semantics of the constructions, I decided to carry out a case study with the adverbial *zavtra* ‘tomorrow.’ I searched the RNC for examples in which constructions with and without the future copula combine with this temporal adverbial. The search queries, raw numbers and clean data are presented in Table 5. The following examples illustrate the use of *zavtra* with *možno* constructions.

- (27) [...] i **zavtra** že **možno** **uechat'**: nu, chot' v
 tomorrow can leave.INF.PFV
 Norvegiju, ili, naprotiv, ostat'sja na mesjac, na god, na dva v ètom čut' staromodnom, ujutnom pansionie [...].
 '[...] and **tomorrow it will be possible to leave**; well, at least to Norway, or, on the contrary, to stay for a month, for a year, for two in this slightly old-fashioned, cozy boarding house [...].'
 (G. V. Ivanov, "Peterburgskie zimy," 1928)
- (28) Andrej priedet, my vse uznaem, a **zavtra** **možno** **budet**
 tomorrow can be. FUT.3SG
uechat'.
 leave.INF.PFV
 'Andrey will come, we will find out everything, and **tomorrow it will be possible to leave.**'
 (A. B. Gol'denvejzer, "Vblizi Tolstogo," 1910)

As shown in Table 5, all constructions are compatible with *zavtra* which combine with perfective and imperfective infinitives with and without the

Table 5. The search queries, raw numbers and clean data for constructions with *zavtra* ‘tomorrow.’

#	Query	Raw data	Clean data
1.	zavtra + možno + INF.PFV zavtra 4 – -4 možno 1–1 V, inf, pf	88	43
2.	zavtra + možno + INF.IPFV zavtra 4 – -4 možno 1–1 V, inf, ipf	23	23
3.	zavtra + možno + budet + INF.PFV zavtra 4 – -4 možno 1–1 byt' fut 1–1 V, inf, pf	30	28
4.	zavtra + možno + budet + INF.IPFV zavtra 4 – -4 možno 1–1 byt' fut 1–1 V, inf, ipf	9	9
	Totals	150	103

future copula. The construction without the copula has more attestations with *zavtra* compared to the constructions with the copula. This is likely because the construction without copula is much more frequent in general, as mentioned in Section 3.

In constructions without the copula, *zavtra* forces a future reading. In sentences like (27) the event denoted by the infinitive is clearly located in the future. The possibility denoted by *možno* can pertain both to the present and to the future. In other words, (27) may mean that the possibility is already there while the trip will take place tomorrow, or that the possibility will arise tomorrow when the trip will also take place. The difference between these two scenarios is admittedly subtle. However, imagine a situation where a citizen in Russia wants to travel to Norway. Sentence (27) would be appropriate in a situation where the Russian citizen has her visa in hand today and plans to travel to Norway tomorrow. But the sentence is equally appropriate if the Russian citizen does not have a visa yet but will receive the visa the next day.

The construction with copula unambiguously places the situation in the future, even without *zavtra*. However, *zavtra* is often added in order to clarify exactly when the event will take place. Smith (2002, 68) points out that

there is a nonarbitrary relationship between meaning and the form or structure used to encode that meaning – i.e., that grammatical structure somehow reflects its function or what it designates (i.e., its meaning) (cf. Givón 1990, 966–976). Iconicity also encompasses the idea that linguistic forms “are frequently the way they are because, like diagrams, they resemble the conceptual structures they are used to convey” (Haiman 1985, 1).

I propose that iconicity is relevant for the use of *budet* in constructions with *možno*. I suggest that the presence of the future copula between the modal word and the verb reflects not only that the verb locates the event in the future but also reflects the temporal distance between the moment when the speaker can carry out an action and the moment when the speaker performs this action. In examples (29) and (30), that express almost the same semantics, the possibility (*možno*) and the action (*echat'*) are both located in the future. However, in (29) the possibility will be activated tomorrow (*zavtra*), whereas the action of leaving (*echat'*) can take place tomorrow or on some other day in the future. In (29) *zavtra* can be interpreted as a starting point on the temporal axis. On the other hand, in example (30) both the possibility of leaving and the actual leaving will happen tomorrow almost at the same time. In (30) *zavtra* is a unique time slot in which the action can be carried out.

Thus, the presence of the future copula between the modal word *možno* and the verb *echat'* seems to reflect the temporal distance between these

events. These can be analyzed as an example of iconicity since a longer time span corresponds to a longer string of words.

- (29) Avtomobil' naš našelsja. My postavili ego na ulice protiv gostinicy. **Zavtra**
 tomorrow
možno **budet** **echat'**.
 can be. FUT.3SG go.INF.PFV
 'Our car was found. We parked it in front of the hotel. **We can leave tomorrow.**'
 (N. Nosov, "Neznajka v Solnečnom gorode," 1958)

- (30) "Zavtra voskresen'e, **zavtra** **možno** **echat'** dal'se!" —
 tomorrow can go.INF.PFV
 uprjamo povtorjal on, otkazyvajas' pokinut' ukromnoe mesto.
 "Tomorrow is Sunday, tomorrow we can go on!" – he stubbornly repeated, refusing to leave the
 secluded place.'
 (V. Kargalov, "Kolumb Vostoka," 1978)

Iconicity might be a relevant factor, but the topic requires much more systematic review, that must be left for the future research.

9. The Representation in Cognitive Linguistics

In Cognitive linguistics we can represent the relations between form and meaning as schemas (Langacker 2008). In the following I show that three schemas are sufficient to summarize my findings about constructions with *možno*. Those schemas are depicted in Figures 1.1–1.3.

The analysis of examples from RNC confirms that both the modal *možno* and the infinitive can be located in the present or in the future depending on the construction they are used in. To represent that pattern, I divided the temporal space into two fields, namely the present and the future, see Figures 1.1–1.3. In these figures, the present includes gnomic situations, see Section 4. The present and future fields are separated by a dashed line. Each element of constructions discussed in this paper (the modal adverb *možno*, the future copula *budet*, infinitives and temporal markers) can be placed above the line, denoting a present event; below the line, denoting a future event, and on the line. When the element is situated on the line, this element might belong to the present or to the future depending on the context.

Figure 1.1 locates all the parts of the situation in the future: the future copula *budet* locates both the modal word and the infinitive in the future. In 75% of the examples, as shown in Section 7, the copula *budet* is used together with various future temporal markers, so the temporal markers are also located below the line.

The relationships between the modal *možno* and the infinitive within the construction *možno* + INF are more complex. Both the possibility encoded by

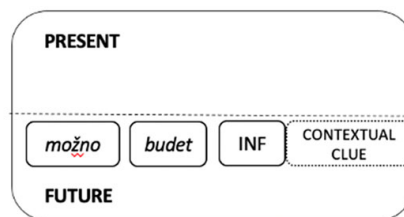


Figure 1.1. Schema for *možno budet* + INF + contextual clue

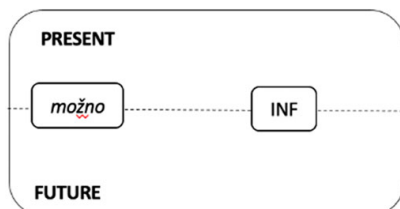


Figure 1.2. Schema for *možno* + INF

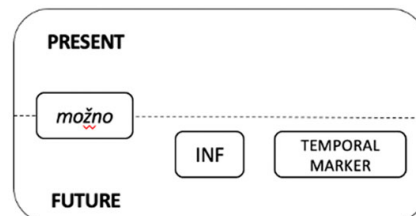


Figure 1.3. Schema for *možno* + INF + temporal marker

Figure 1. The schemas for modal constructions. The dashed horizontal line represents the boundary between present and future readings. A dashed rectangle indicates that the contextual clue can be omitted without changing the interpretation.

možno and the situation described by the infinitive can be located in the present or the future. Hence, the modal word and the infinitive are placed on the line in Figure 1.2.

Figure 1.3 demonstrates that *možno* + INF in combination with a temporal marker locates the infinitive in the future, however the possibility might belong to the future or to the present. In general, therefore, it seems that the speaker is prompted to use the future copula together with the temporal marker to avoid ambiguity and locate the situation in the future.

10. Conclusions

In this article, I have analyzed the constructions with *možno* with and without the future copula *budet* 'will be.' My findings can be summarized as follows. First, I have demonstrated that constructions without the future copula are 34 times more frequent than the constructions with the copula. Second, it has been shown that constructions with the copula have a tendency to combine with various contextual clues, namely temporal, sequential, conditional and other markers that unambiguously locate the situation in the future. Third, contextual clues are less frequent in constructions without the copula. Fourth, constructions with copula locate the situation in the future regardless of whether the contextual clues are present. Fifth, the construction without the future copula is more ambiguous and can denote present, gnomic or future situations. The addition of a temporal marker forces the interpretation whereby the event denoted by the infinitive takes

place in the future, while the possibility denoted by *možno* may be in the present or the future. Finally, the interpretations were illustrated in a straightforward manner by means of schemas of the type used in cognitive linguistics.

The present study opens up a number of avenues for future research. In particular, it would be interesting to investigate the contribution of aspect in the construction under scrutiny. Another open question concerns the interplay of iconicity and word order with the constructions with *možno* and the future copula. However, these and other questions must be left for future studies.

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Addenda

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Research data management

In line with FAIR principles, that emphasize data being Findable, Accessible, Interoperable, and Reusable, and in support of principles of Open Science, I have uploaded all the data that was analyzed in the dissertation, including its annotations and statistical analyses, to the TROLLing – Tromsø Repository of Language and Linguistics.

Replication data for Chapter 3 *Constructions with the modal možno as an anchor* in the general introduction is available at <https://doi.org/10.18710/WTRTKK>. This dataset comprises:

- a README file that provides essential information about the dataset's structure and instructions how to use it;
- one spreadsheet containing examples extracted from the Russian National Corpus (RNC).

Replication data for the article: *The trajectory of the “Možno ja X?” construction: Variation in speech acts of request in contemporary Russian* is available at <https://doi.org/10.18710/JXBOQF>. This dataset comprises:

- a README file that provides essential information about the dataset's structure and instructions how to use it;
- two spreadsheets containing examples extracted from the Russian National Corpus (RNC);
- two spreadsheets containing data from the RNC that was excluded from the analysis (noise);
- three files with data analysis, including a file with the data annotated for statistical analysis and a file with annotated code in R in both .pdf and .rmd formats;
- terms of use for the RNC.

Replication data for the article: *How to request in Slavic? A corpus-based study of requesting constructions in six Slavic languages* is available at <https://doi.org/10.18710/ZMJKJA>. This dataset comprises:

- a README file that provides essential information about the dataset's structure and instructions how to use it;
- six spreadsheets containing examples extracted from InterCorp;
- three files with data analysis, including a file with the data annotated for statistical analysis and a file with annotated code in R in both .pdf and .rmd formats.

Replication data for the article *When modality and tense meet. The future marker budet 'will' in impersonal constructions with the modal adverb možno 'be possible'* is available at <https://doi.org/10.18710/MOJBDK>. This dataset comprises:

- a README file that provides essential information about the dataset's structure and instructions how to use it;
- two spreadsheets containing examples extracted from the Russian National Corpus (RNC);
- terms of use for the RNC.

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