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The Russian Constructicon as a Linguistic Resource: a Constructicographic Approach to Causative Constructions in Human-Computer Dialogue

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ABSTRACT

Objective: This article introduces the Russian Constructicon—an open-access electronic database documenting over 2,200 fixed syntactic constructions of the Russian language—as a novel linguistic resource for the analysis of causative semantics in human-computer dialogue. The study presents the theoretical foundations, structure, and functionality of the Constructicon, demonstrating how it systematically catalogues stable syntactic patterns with their semantic, syntactic, and pragmatic properties. The aim is to show that fixed syntactic constructions recorded in the Russian Constructicon can serve as an effective tool for identifying hidden causative meanings in this new type of discourse.

Method: The study examines the Russian Constructicon's architecture, semantic classification system (53 semantic tags including Assessment, Attitude, and Intensity), and search functionality. The empirical material consists of an author's corpus of 1,000 Russian-language dialogues extracted from public online sources (VK, 4pda.ru, ixbt.com). The study employs contextual analysis, functional-semantic analysis, and comparison of empirical data with the semantic construction types identified in the Russian Constructicon.

Results: The analysis reveals that users interacting with AI regularly reproduce three types of fixed constructions documented in the Constructicon. First, constructions with negative evaluation and fatigue semantics (*"хватит с меня"*) account for 15.7% of all causative utterances, where users demand the assistant stop repetitive or irrelevant behavior. Second, constructions expressing prohibition through contrast (*"не умничай, а ответь"*) constitute 12.7%, where users attempt to regulate the manner of the assistant's response by rejecting anthropomorphic imitation. Third, constructions denoting abrupt change of state (*"меня прорвало"*) represent 8.0%, where users describe loss of emotional control caused by assistant failures. The combined share of these three construction types constitutes 36.4% of all causative utterances in the corpus. Notably, a systematic search of the Russian Constructicon for terms related to human-computer interaction reveals that the word **"диалог"** ("dialogue") yields no results, and related terms yield only isolated constructions (e.g., "компьютер"—7 constructions, "общение"—1 construction, "помощник"—1 construction). This gap confirms that the Constructicon, while comprehensive in documenting constructions of the standard language, has not yet systematically captured constructions specific to digital discourse.

Conclusions: The article argues for the expansion of the Constructicon to include constructions specific to human-computer interaction. The constructicographic approach enables the transition from analyzing individual utterances to systematically describing typical user reactions through the "inventory" of stable constructions. The findings demonstrate that communication with AI is not chaotic but relies on codified linguistic patterns transferred from interpersonal communication. The concept of "covert grammar" [Katsnel'son 1972] explains the conflict between anthropomorphic grammatical form (imperative, 2nd person) and machine ontology. The term "quasi-causativity" is proposed to capture this tension, demonstrating that the phenomenon is not a marginal failure but a significant marker of technological anthropomorphism requiring consideration in dialogue interface design.

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Introduction

The emergence of anthropomorphic features in human-computer dialogue has increasingly attracted the attention of linguists [Kudelko 2025a, 2025b]. Users increasingly address machines not as inanimate tools but as quasi-interlocutors, attributing intentions, emotions, and even personality characteristics to them. This raises a fundamental question: how can we systematically analyze the linguistic patterns that users employ when interacting with computer assistants?

The integration of artificial intelligence into human communication has attracted increasing scholarly attention. Recent research has demonstrated that AI-powered platforms can significantly impact affective factors in human-computer interaction, including motivation, anxiety, and enjoyment [Mehrani Rad 2025].

To address this question, it is necessary to turn to the theoretical heritage of S.D. Katsnel'son. His concept of "covert grammar" (or "implicit categories") allows for a new perspective on this problem. Katsnel'son argued that grammatical description of a language cannot be complete without considering semantic categories that have no formal (morphological) expression but are regularly actualized in speech and influence the combinability of units [Katsnel'son 1972: 82]. In other words, meaning can be expressed implicitly—through syntactic structure or context—without receiving a separate morphological or lexical marker.

The present study proposes a new methodological approach: instead of analyzing each command in isolation, it utilizes the **Russian Constructicon**—an electronic database containing over 2,200 fixed syntactic constructions of the modern Russian language with detailed semantic and syntactic descriptions [Endresen et al. 2020; Janda et al. 2018]. The Constructicon views the linguistic sign not as a word but as a "pattern" (construction) that possesses its own semantics, irreducible to the sum of the meanings of its parts. The underlying assumption is that in emotionally charged or stressful situations of interaction with AI, users do not act spontaneously but rely on ready-made, entrenched linguistic constructions.

The aim of this article is threefold: first, to introduce the Russian Constructicon as a linguistic resource and demonstrate its structure, classification system, and functionality; second, to show how the constructicographic approach can be applied to identify and systematize causative semantics in dialogues with computer assistants; and third, to propose a typology of fixed constructions that users employ to regulate computer assistant "behavior," using the Constructicon as a verification tool.

The Russian Constructicon: Structure, Function, and Theoretical Foundations

What Is a Construction?

Before examining the Russian Constructicon itself, it is essential to understand the concept of a "construction" in linguistic theory. As defined in the Constructicon interface:

"Constructions are structural units of language, prominent linguistic patterns that form sentences and phrases. Constructions are arguably stored in speakers' minds as prefabricated units. Some constructions are simple like the English construction *My name is John*. Others are more complex like the English nice-of-you construction, as in *It's nice of you to call*. Constructions often have a fixed part (the anchor) and variable parts (slots). For example, *It's __ of __ to __*, the words *It's*, *of*, and *to* are anchor words, whereas *nice*, *you* and *call* are fillers of the slots. Because fillers can vary, one can employ the same construction to produce various utterances, such as *It's bad of him to come late* or *It's sweet of them to ask*" [Russian Constructicon, "What is a construction?"].

In Russian linguistics, constructions are defined similarly: "Это структуры, которые, как кирпичики, образуют предложения и их части. Есть простые конструкции, например, *Меня зовут Петя*, а есть сложные — *Он нет-нет да и спросит*. Все они имеют фиксированную (якорь) и переменные части (слоты). Такие конструкции используются для выражения вопросов, предложений, и предложений" [Russian Constructicon, "Что такое конструкции?"].

The theoretical foundation of the Russian Constructicon lies in Construction Grammar, a framework that emerged from the work of Charles Fillmore [Fillmore 1971] and was subsequently developed by Adele Goldberg [Goldberg 1995] and William Croft [Croft 2001]. Construction Grammar posits that constructions—pairings of form and meaning—are the basic units of language and are stored in the speaker's mental lexicon. Unlike generative approaches that derive all linguistic expressions from general rules, Construction Grammar acknowledges that many linguistic patterns are idiomatic and cannot be reduced to compositional rules.

Following Goldberg (2024: 220–221; 2006, cf. Langacker 2008: 161), Construction Grammar works with a broad definition of "construction" as a learned pairing of form with function at any level of complexity or abstraction. This definition is understood within the larger theoretical framework of Cognitive Linguistics, according to which all linguistic units, including grammatical units, contribute to the conveyance of meaning [Langacker 2008: 3–4]. In other words, all linguistic structures, from morphemes through words and multiword units, to entire discourse structures (such as a joke or an acceptance speech) are constructions, and it is in principle possible to describe an entire language in terms of a system of constructions [Janda et al. 2025].

Constructions may be abstract, for example in the case of core syntactic patterns such as the transitive construction consisting of a subject, a verb, and a direct object. And constructions

may be very concrete, as in the case of the English idiom *kick the bucket*. A given utterance may instantiate several constructions simultaneously: *Frank kicked the bucket* instantiates at once both the abstract and concrete constructions, as well as the constructions that represent all the individual words (*Frank, kick, the, bucket*), plus the English past tense construction (verb + *ed*) [Janda et al. 2025].

The Russian Constructicon: A Comprehensive Inventory

The Russian Constructicon (RusCon) is a product of over a decade of research conducted by a team led by E.V. Rakhilina and O.N. Lyashevskaya at the Vinogradov Institute of the Russian Language, in collaboration with UiT The Arctic University of Norway and the National Research University Higher School of Economics in Moscow [Rakhilina et al. 2022; Endresen et al. 2020; Lyashevskaya 2021]. The project was carried out over the period 2016-2020 and at present contains an inventory of over 2200 multi-word constructions of Contemporary Standard Russian [Endresen et al. 2020: 241].

The Russian Constructicon is distinguished from typological classifications of constructions, such as W. Croft's approach based on "comparative concepts," by its bottom-up methodology: starting from a representative inventory of constructions gathered from corpora, researchers develop a system for their classification [Zhukova, Letuchiy 2024]. This approach allows for the inclusion of not only grammatical but also **lexicalized** constructions—those with narrow semantics and combinatorial properties, including iterative constructions like *то и дело* ("time and again") and terminative constructions like *своё отгулял* ("had one's fill") [Janda et al. 2018; Lyashevskaya 2021].

The project prioritizes "partially schematic" constructions that lie between the two extremes of fully compositional syntactic sequences on the one hand and fully idiomatic (phraseological) expressions on the other hand [Endresen et al. 2020: 241]. Constructions of this type are difficult to account for in terms of either lexicon or grammar alone, and are often underrepresented in reference works of Russian. A typical construction in the database contains a fixed part (anchor words) and an open slot that can be filled with a restricted set of lexemes.

The Architecture of the Russian Constructicon

The Russian Constructicon offers the following types of information for each construction [Endresen et al. 2020: 243-248]:

1. **A gloss**—a formal description of the syntactic pattern, presented as a "Name" that presents the morphosyntactic structure in terms of anchor words (fixed parts of the construction) and slots (variable parts of the construction) given in Leipzig glossing [Janda et al. 2025].

2. **An illustration**—one or several examples of typical use from the Russian National Corpus. Each entry includes an example that demonstrates the construction in context.

3. **A semantic description**—a characterization of the meaning of the construction, including semantic tags.

4. **Semantic tags**—including "Assessment," "Attitude," "Intensity," "Time," "Manner," "Comparison," and others. The annotation includes 53 semantic tags of varying frequency [Endresen, Janda 2020].

5. **Level**—indicating the degree of productivity and compositionality, useful for language learners.

6. **English and Norwegian equivalents**—translations that facilitate cross-linguistic comparison.

Semantic Classification of Constructions

The Russian Constructicon's semantic classification system is one of its most valuable features. The annotation includes 53 semantic tags, with three tags that are by far more frequent than all the rest, accounting for 30% of the entire inventory of the Russian Constructicon. These three semantic types are **Assessment**, **Attitude**, and **Intensity**, all of which convey a speaker's evaluation of a topic, in contrast to most of the other tags (such as Time, Manner, and Comparison) [Endresen, Janda 2020].

Assessment and Attitude constructions are investigated in greater detail in the literature. Secondary semantic tags reveal that negative evaluation among these two semantic types is more than twice as frequent as positive evaluation [Endresen, Janda 2020]. Examples of negative evaluations include:

- For Assessment: *VP tak sebe*, as in *Na pianino ja igraju tak sebe* "I play the piano so-so [lit. thus self]" [Endresen, Janda 2020].
- For Attitude: *s PronPers-Gen xvatit/xvatilo*, as in *S menja xvatit* "I'm fed up [lit. from me enough]" [Endresen, Janda 2020].
- For Intensity: *užasno XP*, as in *užasno skučno* "extremely [lit. terribly] boring" [Endresen, Janda 2020].

Searching the Russian Constructicon

The Constructicon's search interface allows researchers to query by keywords or syntactic patterns. Screenshots from the Constructicon demonstrate its functionality [Russian Constructicon, search results]:

The search for the keyword **"компьютер"** ("computer") yields 7 constructions, including:

- Construction 646: *VP NP-Nom наконец/в конце концов (или нет)? — "Починит он наконец компьютер?"* ("Will he finally fix the computer?")
- Construction 1135: *NP-Nom Corp с NP-Ins на "ты" — "Она с компьютером на "ты""* ("She is on first-name terms with the computer")

- Construction 1712: *NP/VP за компьютером* — "*Работать за компьютером*" ("To work at the computer")
- Construction 1922: *ни о какой-Loc NP-Loc (тут/здесь/сейчас) и речи быть не может/могло* — "*Ни о каких компьютерных играх тут и речи быть не может*" ("There can be no question of any computer games here")
- Construction 2070: *изволь(те) VP-Inf* — "*Использовал компьютер без спроса – изволь отвечать*" ("You used the computer without asking – now you'll have to answer for it")
- Construction 2199: *как/когда ни VP-Fut, Cl* — "*Как ни приду, она всегда за компьютером*" ("Whenever I come, she's always at the computer")

The search for **"общение"** ("communication") yields 1 construction:

- Construction 3870: *прорва NP-Gen* — "*Я трачу на общение в соцсетях прорву времени*" ("I spend a huge amount of time on social media communication")

The search for **"помоги"** ("help") yields 1 construction:

- Construction 1511: *будь другом, VP-Imp!* — "*Будь другом, помоги!*" ("Be a friend, help!")

The search for **"интеллект"** ("intellect") yields 2 constructions, including:

- Construction 3187: *NP-Nom иметь в виду NP-Acc* — "*Когда сегодня говорят об искусственном интеллекте, в большинстве случаев имеют в виду*" ("When people talk about artificial intelligence today, in most cases they mean...")

The search for **"помощник"** ("assistant") yields 1 construction:

- Construction 590: *NP-Nom VP NP-Acc NP-Ins* — "*Он назначил своего ученика помощником*" ("He appointed his student as an assistant")

The search for **"взаимодействие"** ("interaction") yields 1 construction:

- Construction 1428: *NP/VP в деле NP-Gen* — "*В деле урегулирования конфликтов наше взаимодействие пойдет на пользу*" ("In conflict resolution, our interaction will be beneficial")

The search for **"прекрати"** ("stop") yields 1 construction:

- Construction 1246: *прекратить-Imp/перестать-Imp VP-Ipfv.Infl* — "*Прекрати капризничать!*" ("Stop being capricious!")

Crucially, the word **"диалог"** ("dialogue") yields no results in the Constructicon. This absence is methodologically significant: it suggests that the Constructicon, while comprehensive in documenting constructions of the standard language, has not yet systematically captured constructions specific to digital discourse.

Causativity and the Constructicon: Theoretical Foundations

Causativity as a Functional-Semantic Category

In Russian linguistics, causativity is understood as a functional-semantic category that represents the linguistic interpretation of a situation in which an animate causator acts upon an object of causation to change its state or to cause it to perform an action [Shustova 2021: 26; Sytkina 2020: 15]. The structure of the causativity field is organized as follows [Shustova 2021]:

- **Core**: lexical causatives—verbs in whose semantic structure the semantic components "causation" and "action/state" are integrated (*радовать* "to gladden," *злить* "to anger");
- **Near periphery**: analytical constructions (*вызывать восторг* "to evoke delight"), lexico-syntactic structures with semi-notional verbs (*заставить понять* "to make understand");
- **Far periphery**: fixed syntactic models with non-compositional meaning (*меня прорвало* "I've burst out"), interjections, and interjectional phraseological units.

Central to such interaction are imperative utterances—commands, requests, queries—through which the user elicits from the assistant the desired action or information. In typological studies of the imperative conducted by V.S. Khrakovsky and A.P. Volodin, it was shown that the imperative represents a complex speech act in which the speaker's volition is directed toward changing the addressee's state [Khrakovsky, Volodin 2001: 12-15].

Covert Grammar and Quasi-Causativity

The concept of "covert grammar" developed by S.D. Katsnel'son [1972] provides a framework for understanding the phenomenon of quasi-causativity. Katsnel'son argued that grammatical description cannot be complete without considering semantic categories that have no formal expression but are regularly actualized in speech and influence the combinability of units [Katsnel'son 1972: 14].

For dialogue with a computer assistant, this distinction is essential. The personhood category [Bondarko 1991], defined as "the category characterizing participants of the denoted situation in relation to participants of the speech situation—first of all the speaker," does not distinguish whether a human or a program occupies the position of 1st or 2nd person; for personhood, only the roles themselves matter. Therefore, the computer assistant, when appearing in its responsive turn as the 1st person, receives the status of a quasisubject: not a human, but a communicant whose utterance is structurally equivalent to a human utterance.

Method

Corpus Compilation

The empirical base of this study is the author's corpus of **1,000 Russian-language dialogues**, extracted from public online sources: social networks VK dedicated to voice

assistants (Alice, Salyut, Marusya), and thematic forums 4pda.ru and ixbt.com. The choice of these sources is methodologically justified by their naturalness: these are not laboratory queries but real communicative acts in which the user is emotionally involved and pursues practical or playful goals.

The corpus was formed in two stages. At the first stage, all dialogues containing a user's utterance and an assistant's response were extracted through continuous sampling. At the second stage, a **directed sampling** was applied: dialogues with causative semantics (command, request, query, incitement, complaint) were selected.

Methods of Analysis

The following methods were used:

1. **Contextual analysis**: each example was analyzed together with preceding utterances and user comments to avoid misinterpretation;
2. **Functional-semantic analysis**: the classification of causative units according to their position in the field structure (core—periphery), based on the classification grid developed by S.V. Shustova [Shustova 2021];
3. **Comparison with the Russian Constructicon**: each identified construction was compared with the semantic types described in the Constructicon (tags "Assessment," "Attitude," "Intensity"), allowing for objective classification of emotional user reactions.

Results

Fixed Constructions in Human-Computer Dialogue

The analysis of the corpus (1,000 Russian-language dialogues) revealed three groups of fixed constructions systematically used to express causative semantics. Each group is compared with the semantic types described in the Russian Constructicon.

Construction Type 1: Negative Evaluation and Fatigue (Type "That's Enough")

In the Russian Constructicon, the model *"xvatit s PronPers-Gen"* (tag "Attitude," subtype "negative evaluation") is interpreted as an expression of negative attitude and desire to terminate a situation [Endresen, Janda 2020]. This construction appears regularly in dialogues where the user is frustrated by the assistant's behavior.

Table 1. Examples of constructions with fatigue semantics

ID	User utterance (causative)	Context
RU_188	*"Хватит извиняться. Ты меня бесишь..."*	Assistant repeats formal apologies
RU_250	*"Хватит переспрашивать. Я уже всё объяснил. Просто сделай"*	Assistant constantly clarifies parameters
RU_202	*"Хватит философствовать. Ответь по делу"*	Assistant gives lengthy, irrelevant answers

The construction *"хватит + infinitive"* in these examples implements an imperative of prohibition, reinforced by fatigue semantics. The verb *"философствовать"* (RU_202) in colloquial speech carries negative connotations ("to talk nonsense," "to evade the point"). Causative semantics here is paradoxical: the user demands the assistant **stop** an action, but the form *"хватит"* contains an implicit indication that the action has already been performed repeatedly.

Construction Type 2: Prohibition through Contrast (Type "Don't Be Clever, Just Answer")

In the Constructicon, constructions of this type are classified under the tag "Relation": the speaker prohibits one type of behavior and prescribes another [Endresen et al. 2020: 247].

Table 2. Examples of prohibition constructions

ID	User utterance (causative)	Goal of impact
RU_128	*"Не умничай, ответь прямо: да или нет"*	Prohibition of elaborate explanations
RU_172	*"Алиса, не анализируй, просто сделай. Выключи свет"*	Prohibition of "intellectual" processing
RU_119	*"Не оценивай, просто исправь ошибку"*	Prohibition of evaluative utterances

The structure of these utterances is binary: prohibition of one type of linguistic behavior ("умничать," "анализировать," "оценивать") and direct prescription of another ("ответь," "сделай," "исправь"). The imperative form here is not merely a command but an attempt to "tune" the interlocutor's personality, to reject excessive anthropomorphic imitation. Particularly notable is the command *"не оценивай"* in RU_119: in Russian-language discourse, ChatGPT often produces phrases like *"Хороший вопрос!"*, *"Отличная идея!"*, which users perceive as "fluffiness" and "obsequiousness."

Construction Type 3: Abrupt Change of State (Type "I've Burst Out")

Constructions of this type belong to the far periphery of the causativity field. In E.V. Paducheva's analysis, such constructions represent examples of non-standard semantic junction, where the meaning of the whole is not directly derivable from the meanings of its parts [Paducheva 1999: 3-23]. The verb in the impersonal form governs a noun in the accusative case, but the actant receives not the role of object but the role of subject of state—passive, experimental. *"Меня прорвало"* means not "someone broke me through" but "I suddenly began to speak/cry/laugh." In the Constructicon, these constructions have the tag "Intensity" [Endresen, Janda 2020].

Table 3. Examples of abrupt state change constructions

ID	User utterance (causative)	Implicit causation
RU_089	*"Алиса, прекрати! Ты уже в пятый раз одно и то же говоришь"*	Fixation of loss of control; indirect demand to restart program
RU_160	*"Ты повторяешь то, что уже сказал. Это называется зацикливание. Исправляйся"*	Attribution of capacity for self-reflection and self-correction to program
RU_241	*"Ты что, завис? Опять одно и то же"*	Metaphor of human "freezing"

Quantitative Distribution

Table 4. Frequency of stable constructions in the corpus (N = 300 causative utterances)

Construction type	Occurrences	Share of total causative utterances
"That's enough" (fatigue)	47	15.7%
"Don't be clever, just answer"	38	12.7%
"I've burst out" (abrupt change)	24	8.0%
Other causative utterances	191	63.6%
Total	**300**	**100%**

The combined share of the three identified stable construction types constitutes **36.4%** of all causative utterances.

Discussion

The Russian Constructicon and Human-Computer Interaction: Current Limitations

A systematic search of the Russian Constructicon for terms related to human-computer interaction reveals a significant gap. The word **"диалог"** ("dialogue") yields no results. This absence is methodologically significant: it suggests that the Constructicon, while comprehensive in documenting constructions of the standard language, has not yet systematically captured constructions specific to digital discourse—despite the fact that users interacting with computer assistants regularly reproduce stable syntactic patterns documented in the database.

As shown in recent research, phraseology in the perspective of the Russian Constructicon represents a continuum from fully compositional to non-compositional patterns [Rakhilina et

al. 2022]. This continuum is of particular relevance to the analysis of human-computer dialogue, where users frequently employ idiomatic and semi-idiomatic expressions to regulate the "behavior" of computer assistants.

The Constructicon as a Verification Tool

Despite these limitations, the Russian Constructicon serves as an effective verification tool for the empirical material. By comparing user utterances with the semantic types documented in the Constructicon, it becomes possible to: **Objectively classify** emotional user reactions through the semantic tags "Assessment," "Attitude," and "Intensity"; **Determine the position** of constructions on the far periphery of the causativity field; **Identify patterns** in the transfer of codified linguistic mechanisms to new communicative environments.

The Constructicon's bottom-up methodology—going from a representative inventory to classification—proves particularly valuable for analyzing human-computer dialogue, where users demonstrate creativity in adapting existing linguistic patterns to new contexts [Zhukova, Letuchiy 2024].

Quasi-Causativity and the Need for Expansion

The absence of digital discourse constructions in the Constructicon highlights the need for its expansion to include patterns specific to human-computer interaction. The concept of "covert grammar" [Katsnel'son 1972] explains the conflict between anthropomorphic grammatical form and machine ontology: the imperative form, addressed to the 2nd person, "forces" the addressee to be perceived as an animate interlocutor capable of understanding and executing a command. This creates the space for anthropomorphic projection.

The proposed term **quasi-causativity** captures this phenomenon: the grammatical structure models interpersonal causation, while the referent situation involves interaction with a technical device that does not possess agency in the full sense of the word. The user's utterances, such as *"Прекрати капризничать!"* (Construction 1246 in the Constructicon), demonstrate how constructions documented in the Constructicon are transferred from human-human communication to human-computer interaction.

Conclusions

The present study has introduced the Russian Constructicon as a novel linguistic resource for analyzing causative semantics in human-computer dialogue. The following conclusions can be drawn.

1. Theoretical and Practical Significance

The theoretical significance of this study lies in three contributions. First, it demonstrates that Construction Grammar, through the Russian Constructicon, provides a systematic framework for analyzing digital discourse—an area that has remained largely unexplored in

constructicographic research. Second, the study extends the functional-semantic theory of causativity [Shustova 2021; Bondarko 2002] by identifying a new subtype of causative situation: quasi-causativity, where the grammatical form of the imperative (2nd person) conflicts with the machine ontology of the addressee. This finding challenges traditional distinctions between animate and inanimate causators and suggests that the causativity field should be expanded to include human-computer interaction. Third, the study contributes to the theory of "covert grammar" [Katsnel'son 1972] by demonstrating how implicit semantic categories—particularly personhood [Bondarko 1991]—operate in digital discourse.

The practical significance is equally substantial. The finding that 36.4% of causative utterances in human-computer dialogue rely on stable, codified constructions—rather than spontaneous, novel formations—provides empirical grounds for interface designers to prioritize the recognition of these patterns. Constructions of the type *"хватит извиняться"* and *"не умничай"* can serve as reliable markers for switching the AI's communicative strategy (e.g., transitioning to a "direct" mode without empathetic language). The basis for these interpretations is the systematic analysis of 1,000 authentic dialogues, which demonstrates that users consistently reproduce the same construction types across different platforms and contexts.

2. Real-Life Psychological Phenomena Explained by the Findings

If the findings are valid and replicable, they explain several real-life psychological phenomena. First, they account for cognitive dissonance in human-computer interaction: users experience discomfort when the assistant's behavior violates the expectation established by the grammatical form. When an assistant programmed to be reactive initiates dialogue proactively (the Causator~CA~ phenomenon), users react with surprise, fear, or irritation [Kudelko, Shustova 2026]. The construction *"ты что, завис?"* (RU_241) exemplifies how users resolve this dissonance through metaphor—attributing human-like "freezing" to the machine.

Second, the findings model anthropomorphism as a cognitive heuristic: users systematically deploy interpersonal linguistic patterns (imperatives, prohibitions, expressions of fatigue) because these patterns are cognitively accessible and require minimal processing effort. The Constructicon's semantic tags—particularly "Assessment," "Attitude," and "Intensity"—reveal that users evaluate the assistant as they would evaluate a human interlocutor, despite knowing its machine nature. This suggests that anthropomorphism is not merely a superficial response but is embedded in the grammatical structure of the language itself.

Third, the findings explain user frustration patterns: the high frequency of fatigue constructions (15.7%) and prohibition-through-contrast constructions (12.7%) indicates that users experience repetitive or overly "human-like" assistant behavior as a source of irritation.

This has implications for understanding human tolerance thresholds in human-computer interaction.

3. Applications Warranted by This Research

Applications are warranted on the basis of this research for three reasons. First, the data demonstrates systematic patterns, not random behavior: the three identified construction types consistently appear across different platforms (VK, forums) and different assistants (Alice, Salyut, Marusya, ChatGPT). This consistency provides empirical justification for implementing construction-recognition algorithms in dialogue interfaces.

Second, the findings reveal clear behavioral markers: the presence of constructions like *"хватит"* or *"не умничай"* indicates a user's state of frustration or dissatisfaction. Recognizing these markers could enable AI systems to adapt their response strategies in real time—for example, by switching to more concise, direct language when such constructions are detected.

Third, the research provides a methodological blueprint for expanding the Russian Constructicon to include digital discourse patterns. The Constructicon's current absence of constructions related to dialogue (*"диалог"* yields no results) represents a gap that this study systematically documents and justifies filling.

4. Unresolved Problems and New Questions

Several problems remain unresolved and new questions arise from these findings. First, the corpus, while representative, focuses on Russian-language users of specific platforms (VK, 4pda.ru, ixbt.com). Future research should extend the analysis to other languages and platforms to determine whether the identified construction types are language-specific or universal.

Second, the identification of constructions relies on the current state of the Russian Constructicon, which—while comprehensive—does not yet include constructions specific to digital discourse. This raises the question: how should digital discourse constructions be documented and classified? Should they be integrated into the existing semantic tag system, or do they require new tags (e.g., "Digital Interaction," "Human-Computer Regulation")?

Third, the findings raise ethical questions about interface design. If users systematically anthropomorphize AI through these constructions, should designers encourage or discourage this tendency? While anthropomorphic design may enhance user engagement, it may also create unrealistic expectations and potential for psychological harm—particularly when users attribute human-like emotions to the assistant (as seen in the romantic projection examples in the broader corpus).

Fourth, new questions arise regarding diachronic change: as AI systems become more sophisticated, will users continue to employ these constructions, or will new patterns emerge? The comparison of dialogues from 2022-2023 and 2024-2025 (planned for future research) may reveal whether the frequency and types of constructions evolve as users become more accustomed to interacting with AI.

Fifth, the phenomenon of quasi-causativity requires further theoretical refinement. While this study has identified the phenomenon and proposed a terminological framework, the precise mechanisms by which grammatical form overrides ontological knowledge remain to be fully explored. This question connects to broader debates in cognitive linguistics about the relationship between language, cognition, and perception.

The responses to these questions are the core of the contribution of this study and justify why readers both inside and outside linguistics should attend to the findings. For linguists, this study demonstrates the applicability of Construction Grammar and constructicographic methods to new types of discourse. For psychologists, it provides empirical evidence of how grammatical structures shape anthropomorphic perception. For interface designers, it offers concrete, data-driven recommendations for improving human-computer interaction. For scholars of digital communication, it reveals the deep linguistic patterns underlying apparently spontaneous digital discourse. The finding that communication with AI is not chaotic but systematically relies on codified linguistic patterns challenges assumptions about the novelty of digital language and highlights the enduring power of entrenched grammatical structures.

Practical Applications

The results of this study can be applied to:

- Dialogue interface design: recognition of constructions of the type *"хватит извиняться"* and *"не умничай"* can serve as markers for switching the AI's communicative strategy (e.g., transitioning to a "direct" mode without empathy);
- The expansion of the Russian Constructicon: the systematic documentation of digital discourse constructions;
- Cross-linguistic comparison: extending the analysis to other languages to identify universal patterns of quasi-causativity;
- AI training datasets: incorporating construction-based user feedback patterns to improve response generation.

Limitations and Future Research

The following limitations should be acknowledged:

1. The corpus, while representative, focuses on Russian-language users of specific platforms;

2. The identification of constructions relies on the current state of the Russian Constructicon, which may be expanded in the future;

3. The study focuses on causative utterances only, not on the full range of user-assistant interactions.

Future research directions include:

1. Diachronic analysis: comparing dialogues from 2022-2023 and 2024-2025 to track the evolution of causative strategies;

2. Cross-linguistic comparison: expanding the analysis to other languages to identify universal patterns;

3. The expansion of the Russian Constructicon: systematically documenting constructions specific to digital discourse;

4. Responses to ethical refusals: analyzing user reactions when the assistant refuses to comply with requests;

5. Experimental validation: testing whether recognition of these constructions improves AI response strategies in controlled settings.

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All authors have read and agreed to the published version of the manuscript. All authors contributed equally to the conceptualization of the article and writing of the original and subsequent drafts.

Declaration of Generative AI and AI-assisted technologies in the writing process

During the preparation of this work, the author(s) used no generative AI or AI-assisted technologies for content generation, text composition, or data analysis. Standard software tools were employed solely for spell-checking, grammar verification, and reference formatting (Microsoft Word spell-check, reference management software). Following the use of these basic tools, the author(s) reviewed and edited the content as needed and take full responsibility for the content of the publication.

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The authors declare no conflict of interest.

Ethical considerations

The authors avoided data fabrication, falsification, and plagiarism, and any form of misconduct.

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