
Semantic aspects of epistemic modality and the linguistic expression of reliability criterion

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Annotation *As modern linguistics transitions from formal and substantial stages to an anthropocentric one, systematic approaches and contemporary methodological principles emphasize the necessity to describe linguistic units like grammatical modality and develop precise theoretical conclusions regarding their linguistic nature. Specifically, modality and closely associated evaluative aspects reflect the anthropocentric features of language, portraying the complex and continually changing human worldview. This article investigates the linguistic and semantic foundations, expression features, and relevance of epistemic modality as one of the subjective types of modality. The research highlights that the epistemic type of modality remains relatively underexplored, and its semantic essence lacks unanimous interpretation, thereby enhancing the topicality and scientific significance of this issue. Epistemic modality is analyzed as a linguistic category employed by humans to evaluate the reliability or uncertainty of events and phenomena. The primary aim of this article is to examine epistemic modality through the criterion of reliability, which expresses the speaker's subjective attitudes toward statement content using semantic categories such as probability, certainty, and doubt.*

Keywords *Modality, epistemic modality, subjective modality, reliability scale, probability, doubt, uncertainty*

Семантические аспекты эпистемической модальности и языковое выражение критерия достоверности

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Аннотация *Переход современной лингвистики от формального и субстанционального этапов к антропоцентрическому обуславливает необходимость системного подхода и применения современных методологических принципов при изучении языковых единиц, таких как грамматическая модальность, и разработке конкретных теоретических выводов об их лингвистической природе. В частности, категория модальности и тесно связанная с ней оценочность отражают антропоцентрические характеристики языка, демонстрируя сложную и динамичную картину человеческого мира. В статье рассматриваются лингвистические и семантические основы, особенности выражения и актуальность одного из субъективных типов модальности – эпистемической модальности. Исследование показывает, что эпистемический тип модальности сравнительно мало изучен, а его семантическая сущность до сих пор не получила однозначной интерпретации, что дополнительно подчеркивает*

актуальность и научную значимость темы. Эпистемическая модальность анализируется как категория, используемая человеком для оценки степени достоверности или недостоверности событий и фактов. Цель статьи – проанализировать эпистемическую модальность на основе критерия достоверности, выражающей субъективное отношение говорящего через такие семантические категории, как вероятность, уверенность и сомнение.

Ключевые слова *Модальность, эпистемическая модальность, субъективная модальность, шкала достоверности, вероятность, сомнение*

Epistemik modallikning semantik jihatlar va ishonchlilik kategoriyasining lingvistik ifodalanishi

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Annotatsiya *Bugungi kunda zamonaviy tilshunoslik formal va substantsial bosqichlardan antropotsentrik bosqichga o'tib borar ekan, tizimli yondashuv va zamonaviy metodologik tamoyillarga asoslangan holda, ilmiy tadqiqotlarning markazida grammatik modallik kabi til birliklarini tavsiflash hamda ushbu birliklarning lisoniy tabiati haqida aniq nazariy xulosalar ishlab chiqish vazifasi turibdi. Bu esa zamonaviy ilmiy izlanishlarning asosiy yo'nalishlaridan birini tashkil etmoqda. Xususan, modallik kategoriyasi va u bilan uzviy bog'liq bo'lgan baholash xususiyati tilning antropotsentrik xususiyatlaridan bo'lib, inson olamining o'ta murakkab, doimiy o'zgaruvchan manzarasini aks ettiradi. Mazkur maqolada modallik kategoriyasining subyektiv tabiatini aks ettiruvchi turlaridan biri epistemik modallikning lingvistik va semantik asoslari, uning ifodalanish xususiyatlari hamda dolzarbligi masalalari o'rganiladi. Olib borilgan tadqiqot natijalaridan shunisi ayon bo'ldiki, modallikning aynan epistemik turi nisbatan keng o'rganilmaganligi sababli, uning semantik mohiyati xususida hali hanuz yakdil xulosaga kelinmagan. Bu esa mavzuning dolzarbligini hamda epistemik modallikning ilmiy ahamiyatini yanada oshiradi. Epistemik modallik insonning dunyoni anglash jarayonida voqea-hodisalarning ishonchli yoki ishonchsizligini baholashga xizmat qiluvchi modallik kategoriyasi sifatida tahlil qilinadi. Mazkur maqolaning maqsadi aynan epistemik modallikni so'zlovchining bayonot mazmuniga nisbatan subyektiv munosabatini ehtimollik, ishonch, shubha singari kategoriyalar orqali ifodalovchi semantik kategoriya sifatida ishonchlilik mezoni asosida tahlil etishdan iborat.*

Kalit so'zlar *Modallik, epistemik modallik, subyektiv modallik, ishonchlilik shkalasi, ehtimollik, ishonchsizlik, shubha*

Introduction

Modality, as a crucial component of the semantic structure of any utterance, has been

actively studied for several decades. Arising from human verbal interaction, modality constitutes one of the oldest grammatical

categories and remains a dynamic element in language development. Despite numerous comprehensive analyses and scholarly investigations dedicated to the theory of modality, issues such as the boundaries of the modality category and the classification of modal meanings remain subjects of ongoing debate.

Modality serves as a fundamental semantic category, mediating between language and external reality, thus shaping the communicative potential of speech. S. S. Vaulina emphasizes that, despite over sixty years of extensive linguistic research on the semantic scope of modality and its expressive mechanisms, modality continues to hold a central place within linguistic studies. Vaulina identifies three key dimensions essential to understanding modality as a natural language category, defining its nature, and guiding further research directions: firstly, modality is a primary linguistic category manifesting differently across various linguistic systems; secondly, its semantic content and expressive forms evolve historically; and thirdly, in European languages, it covers the core structure of speech (Vaulina, 2013).

The foundational contributions of academician V. V. Vinogradov have been particularly influential in forming a general theory of linguistic modality. Vinogradov interpreted modality as a universal linguistic category, demonstrating that it manifests uniquely in languages with different structures. He distinguished between objective modality (OM), which expresses the speaker's relationship to reality, encompassing reality/non-reality, possibility/impossibility, and necessity, and subjective modality (SM), which involves the speaker's personal beliefs, feelings, and logical reasoning processes. Objective modality typically refers to judgments based on external evidence or factual observation, independent of personal emotions or subjective experiences. For example, the statement *"The tea appears warm"* reflects an objective modality, based on

external observation rather than personal feelings. In contrast, subjective modality involves the speaker's personal perspective and internal convictions, exemplified by utterances such as *"I believe this to be true,"* where the modal verb explicitly conveys certainty from the speaker's subjective viewpoint (Beloedova, 2017).

Subjective modality is characterized by a broad semantic scope, often encompassing rational, emotional, aesthetic, ethical, quantitative, and logical evaluations, and is frequently recognized as secondary modality due to its extensive range compared to objective modality. S. O. Boymirzayeva's research within Uzbek linguistics further elaborates on the communicative-pragmatic features of modality, particularly emphasizing subjective modality's emotive, epistemic, deontological, and axiological subtypes. According to Boymirzayeva, epistemic modality involves multiple gradations of knowledge, each expressing distinct epistemic meanings. She particularly notes the co-expression of reliability (certainty) alongside possibility and necessity within epistemic modality (Boymirzayeva, 2009).

This study specifically focuses on epistemic modality, emphasizing the speaker's or writer's stance regarding the reliability of communicated information. Epistemic modality markers function linguistically as explicit indicators clarifying the truthfulness of propositions. Thus, epistemic modality encapsulates the speaker's confidence level in the accuracy of stated facts or events. In this context, modality not only conveys factual accuracy but also significantly supports communicative intentions and speaker engagement. Therefore, epistemic modality is considered here as reflecting the speaker's degree of belief or trust in the truthfulness of the information presented, reinforcing modality's essential role in effective linguistic communication.

Main part

In the process of comprehending the world, humans encounter information ranging from verifiable, objectively true facts to deeply personal, subjective experiences whose veracity is known only to the individual (Panchenko, 2010). When discussing the epistemic world of an individual, it is crucial to analyze their epistemic state, defined as a mental representation reflecting a particular aspect of reality. This cognitive model emerges from processing sensory perceptions and combines logical reasoning with emotional and imagery-based components. Each epistemic state is unique, primarily characterized by the cognitive relation the subject establishes with the information, i.e., the modality the subject assigns to the knowledge – whether it is logical or epistemic. These modalities are expressed in logic through states such as “true,” “false,” “possible,” “impossible,” “probable,” “certain,” or “uncertain”. Determining a specific modality also involves assessing the reliability of the information source (as judged by the subject), influenced by psychological and cultural factors (Yurovitskaya, 2005).

Evaluating the reliability of expressed propositions is directly linked to epistemic modality. The semantics of reliability and epistemic modality reflect the speaker's knowledge and their relationship to information from the standpoint of certainty. The theory of epistemic semantics or epistemic modality, a constituent of subjective modality, relates on one hand to certainty, definitiveness, and confidence, and on the other to uncertainty, doubt, and insecurity. Epistemic modality became a significant focus in philosophy, logic, and linguistics in the latter half of the twentieth century. It is inherently subjective and includes semantic nuances such as doubt, hesitation, confidence, determination, and hope (Samoylova, 2003).

Furthermore, epistemic modality linguistically evaluates the presence, existence, or probability of a state or event. Broadly defined, epistemic modality indicates the

speaker's degree of confidence in the proposition, which can vary from uncertainty to certainty. In academic discourse, epistemic modality functions to demonstrate the speaker's cautious stance and their level of confidence in the presented knowledge.

Several linguistic studies describe epistemic modality as a linguistic expression evaluating the likelihood of a situation's existence or truthfulness within the context of “possible worlds”. Epistemic modality, therefore, involves linguistically indicating whether a particular situation is true or false in past, present, or future contexts. Scholars such as M. Halliday, J. Bybee, R. Perkins, U. Pagluica, and E. Weiner define epistemic modality primarily through the concept of probability. Bybee, Perkins, and Pagluica propose three levels of probability: possibility, probability, and certainty. They argue epistemic modality is utilized when a speaker has reasons to believe a statement is true. Rubin analyzed epistemic modality through linguistic markers representing absolute, high, moderate, low certainty, or uncertainty, describing modality as a spectrum ranging from doubt and confusion to absolute certainty. Rubin also emphasizes that epistemic modality markers help identify whether information is primary or secondary (Rubin, 2007).

Lyons divides modality into epistemic and deontic types. While epistemic modality concerns knowledge, belief, inference, or opinion, deontic modality pertains to the necessity or possibility of actions undertaken by the speaker, linked to moral obligations, permissions, or acceptable behaviors rooted in social, cultural, or ethical norms. Additionally, scholars distinguish epistemic, deontological, and dynamic modality. Dynamic modality relates to internal abilities, needs, or external circumstances influencing the subject's actions. Palmer similarly categorizes modality into dynamic, deontic, and epistemic types, with epistemic modality marking the subject's stance on truthfulness, whereas deontic and

dynamic modality alter the event or state described.

Examples illustrating these distinctions include:

- Dynamic modality: "I can go for a walk today."
- Deontic modality: "You must go for a walk today."
- Epistemic modality: "I might go for a walk today."

Other researchers, such as Wesson et al., employ alternative terms like "external" and "internal" modality to approximate epistemic and root modality, respectively. This binary classification aims to consolidate non-epistemic usages into a comprehensive "root modality" category to reduce ambiguities arising from distinctions between deontic and dynamic modalities (Rubin, 1997).

L. Hoyer defines epistemic modality as linguistic tools indicating the reliability level of transmitted information and clarifying the proposition's truth value. Thus, epistemic modality reflects the speaker's confidence level based on available evidence. Linguistic expressions of epistemic modality span a range from doubt to certainty, and linguists have proposed various classification schemes. Initially, epistemic expressions were categorized as hedges (restrictive expressions) or boosters (intensifying expressions). More complex schemes, such as Huddleston and Pullum's four-tiered model and Rubin's five-tiered classification (absolute, high, medium, low certainty, and doubt), have also been proposed. Rubin's classification places absolute certainty at the top, marking 100% confidence or total absence of uncertainty.

However, the tripartite classification of epistemic markers – strong, medium, and weak – has gained wide acceptance among linguists. Illustrative examples using modal verbs clearly demonstrate these distinctions:

- Weak epistemic modality: "John might be in his office by now."
- Medium epistemic modality: "John is probably in his office by now."

- Strong epistemic modality: "John will be in his office by now."

Although debates persist regarding whether epistemic modality markers should be continuous or categorical, there is general consensus on at least three clearly defined points within the confidence-to-doubt continuum: certainty, probability, and possibility. These categories enable speakers or writers to express varying degrees of confidence in the truth or falsehood of propositions, supporting nuanced communication and clarity in academic discourse (Byalyk, 2022).

Addressing the issue of evaluating the reliability of epistemic statements, linguists have encountered the necessity of describing the internal structure of epistemic modality. One notable classification is offered by V.M. Shvets, who divides epistemic modality into reliability, unreliability, and problematic reliability categories.

- Reliability: "I know/believe that P."
- Unreliability: "I know/believe that not-P."
- Problematic reliability: "I do not know/believe whether P or not-P."

Problematic reliability itself is further classified into:

1. Presumed reliability: "I do not know/believe whether P or not-P, but assume P."
2. Presumed unreliability: "I do not know/believe whether P or not-P, but assume not-P."
3. Epistemic possibility: "I do not know/believe whether P or not-P, and consider both possible" (Panchenko, 2010).

The assessment of reliability in these categories depends on the speaker's epistemic state and knowledge base. Commonly, epistemic modality is classified into absolute certainty, ordinary certainty, and problematic certainty. Absolute certainty expresses unequivocal belief in a statement's validity, frequently articulated through modal

expressions or introductory words (e.g., undoubtedly, indeed).

Example:

- *"Indeed, after death, both rich and poor end up in the same place."*
- *"Undoubtedly, witnesses observed the event."*

Problematic certainty, often characterized by negative emotional assessments such as doubt, hesitation, or uncertainty, reflects varying degrees of subjective assurance. It denotes the speaker's incomplete confidence, often conveyed through speculative language or expressions of doubt.

Example:

- *"I am unsure; I have my suspicions."*

In contemporary linguistics, reliability within epistemic modality is frequently depicted using a scale. A widely accepted model places ordinary certainty at the center, problematic certainty on the left, and absolute certainty on the right:

- 10% (Uncertainty): *"I have no confidence in the truth of his statement."*
- 50% (Moderate certainty): *"He might come home today."*
- 100% (Absolute certainty): *"The sun will undoubtedly rise tomorrow."*

Another proposed scale demonstrates shifts between certainty and uncertainty:

- Certainty: 100% → 1%
- Uncertainty: 1% → 100%

The scales of reliability and uncertainty presented in this diagram reflect the semantic nature of trust, indicating that a decrease in the level of reliability corresponds to a shift towards uncertainty. At 100%, absolute reliability indicates unquestionable truthfulness, free from any doubt or hesitation. This reliability gradually decreases, transitioning through equal likelihood at 50%, down to minimal certainty at 1%. The segment beginning at 1% represents minimal uncertainty and extends towards absolute uncertainty at 100%, illustrating complete doubt and absence of trust in the proposition.

Doubt originates from negative certainty, the lowest confidence regarding the truthfulness or realization of an expected event. In this region, negative pragmatic modality dominates, encompassing emotions such as doubt, hopelessness, and despair.

Doubt or uncertainty, represented at the lower end of the epistemic scale, constitutes an integral part of human life, influencing individuals' epistemic and emotional states. Every individual's cognitive and mental activity aims to comprehend fragments of reality and establish personal attitudes toward them. Doubt serves as an essential component of knowledge acquisition and intellectual processes, functioning as a driving force behind scientific, domestic, artistic, philosophical, and cognitive activities.

Defined as subjective uncertainty experienced when evaluating one's decisions, beliefs, or opinions, doubt opposes certainty within decision-making contexts. The concept of doubt holds substantial significance in human thought and culture, existing broadly across languages and cultures. Typically, doubt indicates limitations in knowledge, uncertainty, and ambiguity, playing a critical role in individual decision-making processes. This continuum indicates how declining levels of certainty transition into uncertainty, emphasizing the subjective nature of epistemic evaluations. Doubt, a central element of this spectrum, significantly influences decision-making and reflects the subject's cognitive and emotional state, highlighting its foundational role in human cognition and culture (Samoylova, 2003).

Conclusion

In summary, our study has examined modality as a universal, functional-semantic category intended to express the speaker's relation to the truthfulness of reported information and various subjective evaluative capabilities. Thus, we support the perspective dividing this category into objective and subjective types. Analysis of views on epistemic modality reveals that there is still no universally

accepted definition, underscoring the relevance and importance of ongoing research in this area. Some linguists interpret epistemic modality through the speaker's commitment to the truthfulness of the statement, others connect it with the notion of reliability, while still others view it within the framework of probability. A review of theoretical literature demonstrates that epistemic modality encompasses meanings such as certainty, uncertainty, doubt, assumption, reliability, probability, possibility, and necessity. Consequently, epistemic modality is understood as the speaker's assessment of the reliability of the proposition, evaluating the likelihood of its truthfulness. Depending on

how the speaker assesses this probability, epistemic modality can take the form of epistemic necessity or epistemic possibility. Addressing the challenge of determining the reliability of epistemic statements, linguists recognize the necessity of distinguishing the internal structure of epistemic modality. According to widely accepted classifications, epistemic modality is categorized into ordinary, problematic, and absolute certainty, typically expressed through modal words and phrases. Expressions of absolute certainty indicate the speaker's unequivocal confidence in overcoming previous doubts or reaffirming prior statements.

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