



## Scientific discourse through the lens of the internal form of the term

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**Abstract.** Discourse is a dynamic linguistic phenomenon that occupies an intermediate position between language and speech, and its study through the lens of the internal form of the term allows for the revelation of its semantic motivation and cognitive foundations. The research aimed to investigate the functioning of terms in scientific discourse and to analyse the importance of their internal form for precise interpretation and communication. The methodological framework included descriptive, analytical, component, definitional, comparative, contextual and discourse analysis. It was revealed that a great number of terms show clear evidence of internal form indicators. The internal form is substantiated to function as a cognitive mechanism, connecting linguistic form and conceptual content. Statistical analysis confirmed that the majority of terms possess at least partial motivation, either morphological, semantic, or metaphorical. The analysis noted that metaphors play a crucial role, extending common physical experiences into abstract

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economic reasoning. It was further revealed that metaphors showcase the internal form as a link between empirical experience and theoretical abstraction. The cross-linguistic comparison showed that English-Ukrainian term pairs display full or partial motivation equivalence. It was identified that the internal form also preserves conceptual precision by anchoring the term to its original semantic motivation, which is particularly vital in written discourse. The findings confirmed that the internal form of a term is an active component in meaning construction and a mental schema that mediates between an abstract concept and its linguistic expression. Its cognitive, communicative, and epistemological functions were studied. The research concluded that preserving the internal form in translation and adhering to terminological standards is vital for maintaining semantic accuracy and international consistency in scientific communication

**Keywords:** linguistic expression; terminology; cognitive motivation; semantic accuracy; conceptual content; motivational equivalence; metaphor

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## Introduction

Discourse holds a key position in modern linguistics, extending beyond mere linguistic forms to encompass purposeful social action that bridges language, thought, and communication, integrating non-verbal elements and reflecting pragmatic, sociocultural and cognitive factors. The relevance of this study lies in its approach to scientific discourse through the internal form of the term, which is essential for understanding the semantic motivation and cognitive structure of specialised language units. This perspective is important for ensuring the accuracy and conceptual clarity necessary in scientific communication, particularly in interdisciplinary research and translation. Despite the dynamic evolution of discourse studies from text-centric analysis to a complex communicative and social phenomenon, a unified understanding of its essence and typology, particularly in scientific contexts, remains elusive, leading to conceptual ambiguity in classifying terminological systems.

Analysis of recent studies and publications (2019-2025) demonstrated a pronounced growing interest in the intersection of discourse research and terminology. In the theoretical domain of discourse studies, scholars continue to refine the field's foundations: P. Cap (2019) characterised discourse studies as

a trans-disciplinary project rooted in two philosophical bases: social constructionism and linguistics and identified a gradual evolution toward models that consolidate social theory and linguistic analysis as well. The scholar discussed recent cognitive-pragmalinguistic models, such as Discourse Space Theory, Critical Metaphor Analysis and the Legitimation-Proximation Model, noting that these new theories represent a consolidation of the social-theoretical and linguistic bases. O. Gryshchenko (2024) emphasised that discourse functions as communication, dialogue and interaction between participants, involving both linguistic and extralinguistic factors.

In the specialised domain of terminology and scholarly language, contemporary research focuses on quantifying language barriers and defining precision. L. Li *et al.* (2022) developed an interpretable approach for measuring scholarly jargon, defining it as discipline-specific word types and senses. Their study highlighted the “gatekeeping effect” of specialised language, which, while facilitating in-group communication, can hinder understanding for out-groups. They demonstrated that jargon is nearly always negatively correlated with interdisciplinary impact. L. Shanaieva-Tsybmal & N. Yamyach (2023) investigated the enhancement

of professional communication in public administration by counteracting the increasing informality trend through the strategic study of phraseological units and metaphors in foreign language learning. They argued that metaphors serve as cognitive tools that, when used correctly, provide precision, conciseness and cultural authenticity, conveying complex ideas and potentially mitigating conflict.

Complementary research explored the cognitive dimension of terminological phenomena. R. Rehak (2023) specifically addressed the complexity within Artificial Intelligence discourse, noting the pervasive lack of clarity and standardisation in terminology. Author's central conclusion characterised this ambiguity as a "language labyrinth", underscoring how conceptual inconsistency impedes effective communication and shared understanding within the field. However, author's work focused primarily on the consequence of the problem – the resulting confusion – without deeply exploring the remedy offered by analysing a term's cognitive or structural properties, such as its internal form. In contrast, O. Lysychenko & K. Melko (2025) investigated the structural models and evolution of terms in Ukrainian IT discourse, concentrating on the dynamics of linguistic adaptation. Their key finding was the demonstration that translated Ukrainian equivalents of English verbs can actively serve as a source for further terminological derivation through semantic expansion. This highlights a critical mechanism of how specialised vocabulary expands and adapts under cross-linguistic influence, offering insights into the process of creating new terms. Nevertheless, this study focused on structural derivation and linguistic change and did not extensively analyse the role of the internal form in making these new or derived terms inherently more comprehensible or semantically motivated for the user.

The convergence of these two works reveals the primary justification for the current research. While R. Rehak (2023) established the

difficulty of a "conceptual labyrinth" and O. Lysychenko & K. Melko (2025) detailed a mechanism of structural expansion, neither study sufficiently explored the internal form of the term as the fundamental cognitive link between a term's structure and its precise interpretation. The need to directly connect the analysis of a term's internal form to the goal of achieving conceptual clarity and accuracy in scientific discourse represents the crucial gap that this study aims to fill. Eastern European linguistics has made significant contributions to explaining the notion of discourse as a form of communicative activity that ties together speech, thought and social action. As F. Batsevych (2004) defined it, discourse is "a type of communicative activity, an interactive phenomenon, a flow of speech that occurs within a specific channel of communication and is regulated by the strategies and tactics of the participants".

The present study set out to examine how terms operate within scientific discourse and to analyse the significance of their internal form for accurate interpretation and clear communication. The main objectives encompassed recognising the semantic and cognitive motivation of selected terms, examining their definitional structure and defining the degree of transparency between the inner form and the conceptual content. Academic papers from the field of economics have been analysed, as this area is currently characterised by significant conceptual renewal and active terminological borrowing.

## **Materials and Methods**

The materials selected for this study included a specialised corpus of texts from the field of economic sciences, which was chosen due to its current characteristics of significant conceptual renewal and active terminological borrowing. The approach is fundamentally rooted in the understanding that studying the term's internal form requires a blend of linguistic, cognitive, and communicative methods. The

internal form refers to the semantic motivation or the underlying figurative meaning of the term's component morphemes, connecting the literal structure of the term to the specialised concept it denotes. Terminology was classified into three categories based on the clarity of this connection: transparent, semi-transparent and opaque terms.

The methodological foundation was based on the works of O. Tsaruk (2016), P. Cap (2019) and L. Li *et al.* (2022). Further theoretical perspectives were informed by the research of N. Suzen *et al.* (2020). Additional grounding was found in the studies by O. Lysychenko & K. Melko (2025), S. Albota (2024), and T.A. van Dijk (2017). Further insights were drawn from M.V. Tomakhiv (2015), I. Synysia (2021) and O. Stadnichenko *et al.* (2024). The research was additionally supported by the works of S. Shepitko (2010) and R. Rehak (2023). The framework incorporated the findings of I.A. Kolesnikova (2009), H.V. Holubova (2022) and M. Holianych (2008). Finally, the methodology was informed by the studies of K. Hokhman (2018), O. Gryshchenko (2024) and F. Batsevych (2004). The specialised nature of the corpus was consistent with general findings that scientific discourse is highly saturated with specialised vocabulary, affirming the term's role as the main carrier of professional knowledge and the primary tool for conveying specialised information.

The source base was meticulously compiled to ensure specificity and representativeness within the field of Economics. The corpus comprised over 1,500 terminological units that were deemed sufficient because the selection process aimed for semantic saturation. The extraction of the linguistic material was conducted using a selective sampling method, which involved a combination of automated and manual processing. The initial extraction was semi-automated, utilising AntConc to generate word frequency lists and N-gram concordances. This assisted in quickly identifying

high-frequency noun phrases, which form the structural core of most terminology.

A terminological unit was identified based on its function as a name for a specialised concept within the field of economics, requiring a definitional context that distinguished it from general language use. This included nouns and noun phrases, adjective-noun constructions, verbs and verb phrases. The boundaries of a terminological unit were determined based on the minimum required set of lexical items needed to fully realise the specialised. The initial automated lists were subject to manual verification and selection to ensure each included unit met the strict criterion of specialised conceptual reference. Descriptive and analytical methods were applied for the inventory and characterisation of terms, enabling the identification and classification of the terms found in the selected corpus. The descriptive method was used for collecting and systematising information regarding the problem of term definition. It was combined with structural and classification approaches to identify and describe the main structural models of term formation. The analytic method involved studying the linguistic means employed and determining the place of terminological vocabulary in the overall lexicon.

Component and definitional analysis were utilised to determine the internal form and semantic motivation of each term. This qualitative analysis was necessary because, as attested in terminology theory, terminology leans heavily on the structure and metaphorical power of common vocabulary. The method of definitional analysis relied on the principle of using dictionary definitions as a reliable source for identifying thematic concepts. Definitions were regarded as “mini-knowledge-representations”, explaining the location of a concept in the specialised domain's conceptual structure. Their analysis determined the meaning of terms, along with linguistic characteristics such as part of speech, gender, or frequency. Component analysis was used to investigate

the lexical content and semantic structure. In this approach, term meanings were examined through the sequential comparison of terms grouped into one lexical microsystem based on a specific integral semantic feature.

The comparative method was employed to reveal semantic shifts and cross-linguistic equivalences between English and Ukrainian economic terms. The comparison of terms across languages was essential for terminological translation, especially for harmonising national terminologies. Determining equivalence relied on a detailed dual analysis of both knowledge structures and their linguistic representations. Contextual and discourse analysis were used to study the functioning of terms in the structure of scientific discourse and to trace their pragmatic roles. Contextual analysis was applied to describe the influence of the immediate environment on the understanding of terms. Terminology analysis within text involved treating terms as pivots (term pivot) to identify their lexical and predicative links with other units in a corpus. Local linguistic context was vital for term disambiguation and subsequent conceptual modelling.

The research was performed in three main stages: compilation of the corpus, extraction and analysis of terminological units based on structure, motivation, and internal form, and utilisation of findings to draw conclusions regarding terms' roles in creating cohesive scientific discourse. Following extraction and verification, term density was calculated by dividing the total number of terminological units in each text by the overall word count. Word counts were obtained using AntConc, and term lists were verified against economic glossaries to exclude non-specialised vocabulary. The resulting percentages represent the proportion of terms relative to total words in each genre, enabling quantitative comparison across research articles, textbooks, and methodological guides.

In addition to frequency, terms were categorised according to transparency of their

internal form using a three-tiered scale. Fully transparent terms clearly reflect their conceptual meaning and can be interpreted without additional context. Semi-transparent terms partially convey meaning and require domain knowledge. Opaque terms do not reveal meaning through internal form and rely entirely on convention. Classification was based on morphological composition and semantic motivation, independently assessed by two researchers with disagreements resolved through discussion, ensuring consistent and replicable assignment linking quantitative term usage with qualitative cognitive and linguistic analysis.

## **Results and Discussion**

The concept of internal form in terminology has long attracted scholarly attention, tracing back to Aristotle, who posited that names do not exist inherently in nature but acquire meaning when they become symbolic representations (Aristotle, 1963; Matthews, 1997). Even seemingly inarticulate sounds, such as those produced by animals, may convey meaning, illustrating that linguistic signs are not entirely arbitrary. Contemporary research in specialised language has extended this idea, suggesting that while general vocabulary may sometimes lack clear motivation, professional terms are generally cognitively grounded. Terminological units are not randomly assigned; rather, they emerge from a deliberate conceptual necessity. This principle applies even to borrowed terms: for example, many English-origin terms in economic discourse, such as soft currency, maintain their semantic motivation in Ukrainian equivalents, reflecting both structural and conceptual inheritance from the source language. Consequently, internal form can be regarded as a fundamental characteristic of professional vocabulary, linking linguistic expression with conceptual structure.

Previous research examined the patterns, cognitive functions, and cross-linguistic

correspondences of internal form in economic terminology. Based on analyses of English and Ukrainian economic texts, scholars identified morphological, semantic, and conventionalised types of motivation and highlighted the important role of metaphor in conceptual structuring. Earlier studies also addressed the extent to which internal form was preserved in translation and discussed its influence on the precision of scientific discourse. These findings contributed to a broader understanding of internal form as a mnemonic and epistemological component of terminology. Building on these typologies, researchers have also distinguished degrees of transparency that determine how clearly the internal form of a term reveals its underlying concept.

Transparent terms preserve internal form fully and directly or metaphorically convey the specialised concept without requiring extensive domain knowledge for initial comprehension (e.g., liquidity trap – which metaphorically evokes a situation in which money is “trapped” due to low interest rates). Semi-transparent terms provide only partial motivation: their constituent morphemes offer a general hint, while full interpretation requires professional knowledge or familiarity with the definitional context (e.g., hidden unemployment, where “unemployment” is clear but “hidden” demands understanding of statistical measurement and reporting practices). In contrast, opaque terms lack an accessible internal form: the meaning of the term is arbitrary from the perspective of its surface structure and must be learned entirely through convention (e.g., Giffen good, named after economist Robert Giffen, whose surname provides no semantic cue to the economic paradox described by the term). This classification complements existing motivational frameworks by illustrating how terminological transparency shapes ease of conceptual access.

The significance of internal form in terminology has been emphasised since classical philosophy. Aristotle (1963) noted that names

do not inherently exist in nature but acquire meaning when they function as symbols; even non-verbal sounds, such as animal calls, can convey information. In modern studies, the question of whether all professional terms possess internal form remains debated. Specialised terms are rarely arbitrary: each term exhibits some degree of cognitive motivation. This applies even to borrowed terms: for example, many English-origin terms in economic discourse, particularly those formed morphologically, retain motivation in Ukrainian equivalents. Soft currency, for instance, illustrates how the internal form is inherited from the source language, reflecting both structure and meaning. These observations support the view that internal form is a pervasive characteristic of terminological systems, linking linguistic expression with conceptual content.

Furthermore, the analysis revealed that terms with strong metaphorical motivation tend to appear in argumentative or explanatory contexts, whereas morphologically transparent terms prevail in definitional statements. This observation is supported by adopting quantitative metrics developed by scholars such as N. Suzen *et al.* (2020), who utilised Relative Information Gain to determine the science-specific meaning and importance of a word, and L. Li *et al.* (2022), who employed normalised pointwise mutual information to measure scholarly jargon. Comparative analysis is further confirmed as a valuable tool by O. Lysychnenko & K. Melko (2025), who demonstrated its utility for identifying structural transformations in terminological units.

A corpus analysis of 1,500 terminological units revealed that 72% of terms display indicators of internal form. Among these, 48% are morphologically or etymologically motivated, while 24% exhibit semantic or metaphorical motivation. The remaining 28% are conventionalised or opaque, with their meaning accessible only through convention rather than word structure. Morphologically motivated terms,

such as microeconomics or underemployment, demonstrate the productivity and transparency characteristic of scientific vocabulary. Semantic motivations often involve metaphoric or metonymic transfer, as in “bubble economy” or “invisible hand”, reflecting the extension of concrete

experience into abstract economic reasoning. Borrowed terms, such as “soft currency”, highlight the donor-language motivation, while conventionalised terms like “bond” or “stock” illustrate opaque forms whose internal structure no longer transparently conveys meaning (Table 1).

**Table 1.** Types of motivation in economic terms

Type of Motivation	Number of Terms	Percentage	Example
Morphological (affixation, compounding)	720	48	microeconomics, underemployment
Semantic (metaphoric, metonymic)	360	24	bubble economy, invisible hand
Borrowed/Loan translation	270	18	soft currency, trade-off
Conventionalised (opaque)	150	10	bond, stock

**Source:** compiled by the authors

The findings suggest that motivation in terminology functions as a cognitive mechanism connecting linguistic form with conceptual understanding. Internal form serves not only as a mnemonic device but also as a reflection of the cognitive models underlying economic reasoning. Metaphorical structures in terminology contribute significantly to conceptual coherence. Terms such as “market elasticity”, “financial bubble”, or “liquidity trap” extend tangible experiences to abstract economic phenomena, linking perception and cognition. According to G. Lakoff & M. Johnson (1980), metaphor is not merely rhetorical but a fundamental cognitive mechanism. In the compiled corpus, 24% of terms rely on metaphorical transfer. For instance, “liquidity” originally denotes a physical property of substances but in economics signifies the ease of converting assets into cash. Similarly, “economic depression” borrows from the physical sense of

downward motion to represent a decline in economic activity. These examples demonstrated that internal form preserves traces of embodied cognition even within highly abstract domains.

Cross-linguistic comparison reveals that internal form is not always maintained in translation. Among English-Ukrainian term pairs, 63% retain full or partial motivational equivalence, while 37% exhibit semantic shifts or neutralisation (Table 2). Translation strategies such as calquing preserve conceptual metaphors (floating exchange rate – плаваючий валютний курс; *plavayuchyi valiutnyi kurs*), whereas partial borrowings may reduce motivational transparency (hedging – хеджування; *khedzhuvannia*). Some terms, like bond – облігація (*obligatsiya*), enrich imagery in Ukrainian, while others lose structural motivation, reflecting differences in metaphorical and conceptual frameworks across languages.

**Table 2.** Cross-linguistic motivation correspondence

Motivation Equivalence	Percentage	Example
Full equivalence	41	floating exchange rate – плаваючий валютний курс ( <i>plavayuchyi valiutnyi kurs</i> )
Partial equivalence	22	hedging – хеджування ( <i>khedzhuvannia</i> )
Neutralisation	37	leverage – фінансовий важіль ( <i>finansovyi vazhil</i> )

**Source:** compiled by the authors

Precision is crucial in scientific communication. It was shown that 95% of terms in written discourse are used consistently, compared to 83% in spoken contexts. In lectures or seminars, near-synonyms or paraphrases occasionally replace exact terms, risking terminological ambiguity. For example, “costs” and “expenses” may be interchanged orally, whereas written texts demand strict differentiation. Thus, internal form ensures conceptual precision by anchoring

terms to their semantic motivation. Term frequency analysis indicates variation across genres (Table 3). Research articles display higher terminological density (30%), reflecting focused argumentation and data presentation, whereas textbooks and methodological guides show lower density (21-24%) due to explanatory content. These patterns align with previous observations that terminological saturation correlates with scientific abstraction and specialisation.

**Table 3.** Term density across genres

Genre	Average Words per Text	Number of Terms	Term Density (%)
Research article	5,000	1,500	30
Textbook chapter	7,000	1,700	24
Methodological guide	4,500	950	21

**Source:** compiled by the authors

Comparing the present findings with previous linguistic and cognitive research reveals both significant parallels and novel insights. Earlier studies estimated that approximately 30-40% of vocabulary in scientific discourse consists of specialised terminological units. This estimation aligns closely with corpus-based findings, which indicate an average terminological density of 31.8% across English and Ukrainian economic texts. While these figures suggest continuity in terminological usage patterns, the analytical scope was extended by not only quantifying the frequency of terminological units but also examining the nature of their internal form and the types of motivation underlying these terms. Unlike the descriptive and typological studies of the 20<sup>th</sup> century, which mainly catalogued terms without exploring their pragmatic or functional roles, the current research incorporates discourse analysis to examine how the internal form shapes the communicative structure of scientific texts. It was revealed that terms with strong metaphorical motivation, such as liquidity trap or financial bubble, frequently appear in argumentative, explanatory, or illustrative contexts. These

metaphorically motivated terms serve as cognitive bridges, mapping abstract economic concepts onto more concrete or familiar experiential domains, thereby facilitating comprehension and reasoning. On the other hand, morphologically transparent terms, such as “microeconomics” or “underemployment”, are most prevalent in definitional, descriptive, or formal statement contexts, where terminological precision and clarity are paramount. This functional stratification demonstrates that the type of motivation is closely linked to the discourse function of a term, reflecting the communicative purpose and context in which it occurs.

The study further identified a gradient of motivation transparency within economic terminology, revealing how cognitive salience and linguistic form interact. Using a three-tiered scale, terms were categorised as fully transparent, semi-transparent, or opaque. Fully transparent terms, such as “microloan” or “inflationary spiral”, possess clear morphological or semantic motivation, allowing their meaning to be readily inferred from form. Semi-transparent terms, for example “credit crunch” or “liquidity trap”, retain partial motivation, often

requiring contextual knowledge or cognitive mapping to be fully understood. Opaque terms, such as “bond” or “derivative”, no longer display overt internal motivation and rely instead on convention, definition, or domain-specific expertise for comprehension.

Statistical analysis has shown that 43% of terms fall into the fully transparent category, 29% into the semi-transparent category, and 28% into the opaque category. This distribution indicates that, despite high specialisation, scientific discourse maintains a substantial cognitive connection with general language. Terminology is not an isolated or self-contained system; rather, it draws heavily on familiar linguistic structures and metaphorical frameworks to facilitate understanding. Morphological and metaphorical features provide the scaffolding that links abstract concepts to tangible representations, while opaque terms often emerge from historical development or borrowing processes, reflecting the evolution of knowledge within the discipline.

Understanding the internal form has important practical implications for terminological standardisation, particularly in multilingual and international contexts. International bodies, increasingly recognise the need for motivation-based equivalence to preserve semantic integrity across languages. This perspective is supported by evidence demonstrating that terminological stability is higher when internal form and cognitive motivation are preserved during translation. For instance, the Ukrainian calque “плаваючий валютний курс” (*plavayuchy valiutnyi kurs*) fully reproduces the conceptual metaphor of instability inherent in “floating exchange rate”, ensuring equivalence at both linguistic and cognitive levels. In contrast, partial borrowings, such as “хеджування” (*khedzhuvannia*) from “hedging”, reduce interpretative clarity and may require supplementary explanation to achieve conceptual transparency. Maintaining

motivation in cross-linguistic transfer not only facilitates comprehension but also strengthens the epistemological function of terminology as a vehicle for precise scientific reasoning.

Beyond practical considerations, the analysis revealed that internal form functions as a dynamic interface between thought and language. This aligns with theories in cognitive linguistics, particularly the concepts of frames and conceptual metaphor (Lakoff & Johnson, 1980). Each term embodies a conceptual frame that encapsulates knowledge structures and logical relationships within a field, allowing abstract concepts to be encoded in language. Morphologically transparent and metaphorically motivated terms exemplify this interaction, enabling cognitive processing and recall. The findings further support the hypothesis that terminological motivation is a universal phenomenon, though it is variably realised depending on the stage of conceptual development, degree of borrowing, and language-specific cognitive patterns. Such a perspective aligns with the works of R. Temmerman (2000), who emphasised the dynamic, context-dependent nature of terminology. Motivation serves as a cognitive anchor, connecting terms to mental models, historical usage, and cultural conceptualisation, thereby making scientific vocabulary both efficient and comprehensible. While the present study provided a comprehensive statistical, qualitative, and cross-linguistic analysis, certain limitations remain. The corpus was restricted to English and Ukrainian economic texts, which may not fully represent other languages, fields, or cultural contexts. Additionally, the study relies on manual analysis of motivation, which, despite being rigorous, may be complemented by computational tools to scale the investigation.

## **Conclusions**

Discourse represents a dynamic form of linguistic activity operating within social and

cognitive contexts, and scientific discourse, in particular, stands out for its organisation, terminological precision, and functional coherence. Analysis of a corpus demonstrated that the internal form of a term is central to preserving conceptual integrity. Statistical findings indicate that the majority of terms possess some degree of motivation – morphological, semantic, or metaphorical. Morphologically motivated terms, such as “microeconomics” or “underemployment”, demonstrate transparency and productivity, while semantically and metaphorically motivated terms, like “bubble economy” or “liquidity trap”, reveal the role of conceptual metaphor in structuring abstract concepts.

Comparative analysis of English-Ukrainian term pairs showed that 63% of terms retain full or partial motivational equivalence, while 37% exhibit semantic shifts or neutralisation. Terms such as floating exchange rate – плаваючий валютний курс (*plavayuchyĭ valiutnyi kurs*) preserve metaphorical and morphological cues, whereas others, like hedging – хеджування (*khedzhuvannia*), show reduced transparency. These patterns highlight that motivation varies across languages and disciplines, reflecting both universal cognitive processes and culture-specific conceptualisations.

The internal form contributes to multiple dimensions of scientific discourse. Cognitively, it links abstract notions to mental representations, facilitating comprehension and retention. Communicatively, it supports mutual understanding among specialists through transparent and logically motivated terminology. Epistemologically, it serves as a vehicle for conceptualisation, reflecting the historical

development of disciplinary knowledge. The coexistence of morphological and metaphorical motivation demonstrates the dual nature of scientific language, combining systematic regularity with creative elaboration.

Furthermore, corpus-based analyses indicated higher terminological density in research articles (30%) compared to textbooks and methodological guides (21-24%), suggesting that terminological saturation correlates with abstraction and argumentation. Consistency of term usage was also observed, with 95% of terms in written discourse appearing consistently versus 83% in spoken contexts. These quantitative results support the conclusion that internal form and cognitive motivation are crucial for coherent and precise scientific communication. Future research should expand to additional disciplines and languages, employing corpus-based, computational, and psycholinguistic methods to quantify the cognitive and communicative effects of internal form and motivation. Understanding these dynamics promises to deepen insight into the interplay between language, cognition, and scientific reasoning, demonstrating that terminology is not arbitrary but a reflection of conceptual sophistication in specialised fields.

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**Анотація.** Дискурс є динамічним лінгвістичним феноменом, що займає проміжне місце між мовою та мовленням, і його вивчення через призму внутрішньої форми терміна дозволяє розкрити його семантичну мотивацію та когнітивні основи. Дослідження мало на меті дослідити функціонування термінів у науковому дискурсі та проаналізувати важливість їх внутрішньої форми для точного тлумачення та комунікації. Методологічна база включала описовий, аналітичний, компонентний, дефініційний, порівняльний, контекстуальний та дискурсивний аналіз. Було виявлено, що значна кількість термінів має чіткі ознаки внутрішньої форми як когнітивного механізму, що поєднує мовну форму та концептуальний зміст. Статистичний аналіз підтвердив, що більшість термінів мають принаймні часткову мотивацію, морфологічну, семантичну або метафоричну. Аналіз показав, що метафори відіграють вирішальну роль, поширюючи загальні фізичні враження на абстрактне економічне мислення. Було також виявлено, що метафори демонструють внутрішню форму як зв'язок між емпіричним досвідом та теоретичною абстракцією. Міжмовне порівняння виявило, що пари термінів англійської та української мов демонструють повну або часткову мотиваційну еквівалентність. Було встановлено, що внутрішня форма також зберігає концептуальну точність, прив'язуючи термін до його первісної семантичної мотивації, що є особливо важливим у письмовому дискурсі. Результати дослідження підтвердили, що внутрішня форма терміну є активним компонентом у побудові значення та ментальною схемою, яка пов'язує абстрактне поняття з його лінгвістичним вираженням. Були досліджені когнітивні, комунікативні та епістемологічні функції внутрішньої форми. Дослідження довело, що збереження внутрішньої форми в перекладі та дотримання термінологічних стандартів є надзвичайно важливим для підтримання семантичної точності та узгодженості наукового спілкування на міжнародному рівні.

**Ключові слова:** лінгвістичне вираження; термінологія; когнітивна мотивація; семантична точність; концептуальний зміст; метафора