

Linguistic Interpretation of Terminological Neologisms

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Abstract: This article investigates the linguistic nature of terminological neologisms, exploring the mechanisms behind their formation, semantic development, and functional incorporation into specialized discourse. Drawing on terminological theory, cognitive semantics, and corpus linguistics, the study puts forward a multi-dimensional analytical framework to explain the dynamic processes through which neologisms gain terminological standing within scientific and professional communities.

Keywords: Terminological neologisms, neology, word-formation, semantic borrowing, specialized discourse, terminologization, cognitive semantics.

Introduction: Expanding scientific knowledge, rapid technological change, and the growth of interdisciplinary research have together created a sustained need for new terminological units that can accurately designate emerging concepts, processes, and phenomena. Terminological neologisms arise within specialized domains and progressively take on the functional and semantic characteristics of established terms, placing them at the center of contemporary linguistic inquiry. Their study illuminates the dynamic relationship between language, cognition, and the social organization of knowledge [6]. Investigating terminological neologisms goes beyond lexicographic work; it raises fundamental theoretical questions about the nature of meaning, the boundaries of specialized discourse, and the cognitive mechanisms through which conceptual innovation becomes linguistically encoded.

The accelerating pace of scientific and technological development has made this line of inquiry increasingly relevant, since established terminological systems regularly fail to keep pace with the conceptual demands of emerging fields [4]. Disciplines such as digital technology, biotechnology, artificial intelligence,

and cognitive science have each generated substantial lexical subsystems composed of neologisms that have either displaced older designations or introduced entirely new distinctions into specialized vocabulary. Compounding this situation, the global reach of English as the dominant medium of international scientific communication has intensified cross-linguistic processes of terminological borrowing, calquing, and hybridization, raising important questions about the linguistic and cultural dimensions of neologism formation [9].

The present research pursues three main goals: to analyze the principal mechanisms through which terminological neologisms form in English, to examine the processes by which they undergo terminologization and enter specialized discourse systems, and to develop an integrative theoretical framework for interpreting terminological neologisms that considers their formal, semantic, cognitive, and functional properties.

LITERATURE REVIEW

Algeo [1] made a significant early contribution to the linguistic study of neologisms by establishing a foundational typology that separates formal

neologisms from semantic ones. Formal neologisms introduce new lexical forms, while semantic neologisms assign new meanings to existing forms. This distinction proved especially useful for terminological analysis because it drew attention to the variety of mechanisms through which specialized vocabulary grows and emphasized the importance of separating surface-level formal change from deeper processes of semantic reinterpretation and conceptual reorganization.

Cabré [3] reshaped the theoretical understanding of terminological neologisms through her communicative theory of terminology. Rather than treating terms as self-contained linguistic objects, she argued that they simultaneously carry lexical, cognitive, and communicative dimensions. A terminological neologism, within this view, is defined not simply by its formal novelty but by its functional role in a specialized communicative situation, where it fills a gap left by an absent or inadequate designation in the existing terminological inventory. This reframing shifted analytical attention from static description toward the dynamic study of terminological processes, allowing researchers to examine more precisely how neologisms emerge, circulate, and stabilize within professional discourse communities.

Langacker [7] developed a cognitive semantic approach to lexical innovation that later researchers applied to terminological analysis. This perspective holds that neologism formation reflects underlying conceptual structures and cognitive schemas rather than purely formal combinatorial operations. Terminological neologisms are therefore not arbitrary inventions but motivated constructions that encode conceptual mappings, metaphorical extensions, and prototype-based categorizations. The cognitive basis of terminological neologism formation becomes particularly clear in cases of metaphorical terminologization, where concepts drawn from everyday life are systematically extended to name specialized phenomena, as seen in the widespread use of spatial, architectural, and biological metaphors throughout computer science terminology [7].

Sager [9] approached terminological neologism formation from a sociolinguistic and terminological planning perspective, foregrounding the role of expert communities, standardization bodies, and institutional

practices in shaping how new terminological units emerge and become established. He identified a tension between neologisms that arise spontaneously in natural expert discourse and those that are deliberately constructed in planned terminological contexts, a distinction with direct implications for understanding the pragmatic conditions under which new terms gain legitimacy and currency. His analysis made clear that community ratification, institutional endorsement, and discursive entrenchment, rather than formal or semantic properties alone, determine whether a neologism succeeds within a specialized field [9].

Bauer [2] offered a comprehensive account of English word-formation processes that remains an essential reference for morphological analysis of terminological neologisms. His systematic treatment of compounding, derivation, conversion, blending, clipping, and acronym formation identified the formal strategies through which new lexical units are built from existing morphological resources. Applied to terminological neologisms, this framework allows researchers to characterize the formal strategies favored in different disciplinary domains, revealing patterns shaped both by the structural resources of English and by the communicative demands of specialized discourse [2].

Renouf [8] demonstrated through corpus-linguistic research that identifying, describing, and tracking neologisms requires large-scale empirical analysis rather than reliance on introspective or dictionary-based approaches. Corpus data allows researchers to document the emergence of neologisms in authentic specialist texts, trace their diachronic stabilization, and examine the collocational and distributional patterns that signal progressive terminologization. This empirical orientation has become central to contemporary research on terminological neologisms, providing a methodologically grounded basis for claims about frequency, contextual distribution, and semantic behavior [8].

METHODOLOGY

This study adopts an integrative multi-method approach that brings together terminological theory, cognitive semantics, morphological analysis, and corpus-assisted discourse examination. Morpho-semantic analysis is used to characterize neologism

formation strategies, cognitive semantic analysis addresses conceptual metaphor and metaphor in terminological extension, and functional-pragmatic analysis examines how neologisms become integrated into specialized discourse. The theoretical framework draws on Cabré's communicative theory of terminology [3], Langacker's cognitive grammar [7], and Bauer's morphological theory [2] to build a comprehensive analytical apparatus applicable across multiple levels of description.

DISCUSSION AND RESULTS

A full linguistic interpretation of terminological neologisms requires attention to their formal, semantic, cognitive, and functional dimensions simultaneously, since each level reveals distinct aspects of the processes through which lexical innovations achieve terminological standing. At the formal level, neologism formation in English draws on a relatively limited set of word-formation mechanisms, among them compounding, affixation, conversion, blending, clipping, and acronym formation. The productivity of each mechanism differs across disciplinary domains in ways that reflect both domain-specific communicative needs and the structural possibilities available within the English morphological system [2].

Compounding stands out as one of the most productive formal strategies in scientific and technological domains, where the need to name complex, multi-component concepts is especially pressing. Compound terminological neologisms such as machine learning, neural network, gene editing, and nanotechnology illustrate how compounding can encode rich conceptual content within formally transparent, compositionally interpretable units [4]. That said, formal transparency does not guarantee semantic transparency; the relationship between compound constituents is often underspecified at the surface level and must be recovered through domain-specific conceptual knowledge, which complicates purely compositional accounts of how compound meanings are constructed.

Affixation, encompassing both prefixation and suffixation, provides another highly productive pathway for terminological neologism formation. It allows existing terminological bases to be extended systematically through morphological operators with

defined semantic content [2]. The abundance of contemporary English terminological neologisms built on prefixes such as cyber-, bio-, nano-, meta-, and hyper- reflects the capacity of prefixation to generate coherent terminological families organized around shared conceptual domains. Suffixes such as -ization, -ics, -ome, and -ology serve to construct neologisms designating processes, disciplines, systemic totalities, and fields of inquiry respectively. The systematic nature of affixation-based formation sets it apart from more idiosyncratic processes like blending and clipping and contributes to the internal coherence and learnability of specialized terminological inventories [3].

At the semantic level, terminological neologism formation consistently involves meaning construction processes that engage cognitive mechanisms of categorization, metaphorical extension, and metonymic transfer. Metaphorical terminologization, through which source-domain concepts are mapped onto target-domain phenomena by way of structural analogies, operates across virtually every specialized field [7]. The conceptual metaphors underlying terminological neologisms such as viral marketing, cloud computing, blockchain, memory leak, and phishing reveal that terminological innovation is cognitively motivated, drawing on pre-existing conceptual structures to make novel phenomena accessible and memorable both to specialists and to wider audiences.

Terminologization, understood as the progressive transformation of a lexical innovation into a fully integrated terminological unit, follows a complex trajectory of semantic, functional, and social change through which the neologism moves from peripheral to central status within a domain's terminological system [3]. In early stages, a terminological neologism typically displays semantic instability and tends to appear either in quotation marks or accompanied by explicit definitional glosses that signal its non-established status. As the item circulates more widely through specialist publications, conference proceedings, and professional exchanges, its semantic boundaries stabilize, its distributional patterns narrow, and the metalinguistic hedging and definition that initially surrounded it gradually disappears [8]. Corpus-based diachronic analysis can document this trajectory empirically, providing systematic evidence of how

terminologization unfolds over time.

Beyond semantic and formal stabilization, full functional integration requires a terminological neologism to develop systematic relations with other units within the domain's conceptual architecture. A fully terminologized neologism participates in hierarchical relations of hyponymy and hyperonymy, associative relations of semantic co-occurrence, and syntactic relations of collocation that together embed it within the relational structure of the terminological system [9]. Examining these relational patterns through corpus-linguistic methods offers important evidence for assessing how far terminologization has progressed and for distinguishing genuine terminological neologisms from ephemeral lexical coinages that never achieve systemic integration.

At the cross-linguistic level, terminological neologism formation in contemporary English scientific discourse involves borrowing, calquing, and hybridization that reflect the linguistically and culturally diverse origins of modern scientific knowledge [6]. Neoclassical compounding from Greek and Latin sources continues to generate productive terminological neologisms, while more recent borrowings from non-classical languages mirror the expanding geographic scope of scientific production. The persistent tension between borrowed terminological neologisms, which tend to carry connotations of international scientific authority, and vernacular formations, which favor accessibility and cultural integration, remains a central challenge for terminological planning and standardization efforts in many national scientific communities.

CONCLUSION

Terminological neologisms represent a privileged site where formal morphological processes, cognitive semantic mechanisms, functional discourse integration, and social community dynamics converge. The integrative framework developed in this study, combining terminological theory, cognitive semantics, morphological analysis, and corpus-based discourse examination, offers a comprehensive basis for describing and explaining how lexical innovations become terminological units in English specialized discourse. The analysis shows that terminological neologisms are systematically motivated constructions reflecting the conceptual, communicative, and social

requirements of the communities that produce and use them, rather than arbitrary or incidental additions to specialist vocabulary. Future work should pursue large-scale corpus-based diachronic studies of neologism emergence and stabilization across diverse disciplinary domains, while also addressing the underexplored dimensions of multimodal and digital terminological innovation that are reshaping specialized communication in the contemporary period.

REFERENCES

1. Algeo J. Fifty years among the new words: A dictionary of neologisms. – Cambridge: Cambridge University Press, 1991. – P. 257.
2. Bauer L. English word-formation. – Cambridge: Cambridge University Press, 1983. – P. 311.
3. Cabré M. Terminology: Theory, methods and applications. – Amsterdam: John Benjamins, 1999. – P. 247.
4. Crystal D. Language and the internet. – Cambridge: Cambridge University Press, 2001. – P. 272.
5. Halliday M. A. K. An introduction to functional grammar. – London: Edward Arnold, 1994. – P. 179.
6. Hyland K. Academic discourse: English in a global context. – London: Continuum, 2009. – P. 256.
7. Langacker R. W. Foundations of cognitive grammar. – Stanford: Stanford University Press, 1987. – P. 516.
8. Renouf A. Corpus development // Looking up: An account of the COBUILD project / Ed. by J. Sinclair. – London: Collins, 1987. – P. 1-40.
9. Sager J. C. A practical course in terminology processing. – Amsterdam: John Benjamins, 1990. – P. 254.
10. Wierzbicka A. Cross-cultural pragmatics: The semantics of human interaction. – Berlin: Mouton de Gruyter, 1991. – P. 502.