

## **THE DISTRIBUTION OF TERMS WITHIN VARIOUS SCIENTIFIC DOMAINS**

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**Abstract:** The advancement of modern science depends heavily on a shared and precise vocabulary. A recent article highlights that a core objective for contemporary terminology is to clarify and define fundamental terms within various scientific domains, including linguistics. This practice ensures a term's meaning is explicit, establishing a clear link to the specific phenomenon it describes. This terminological clarity is vital for: **Fostering shared understanding:** Researchers can communicate effectively when they operate from the same linguistic foundation. **Enhancing communication:** Explicit terminology improves the precision and effectiveness of scientific exchange. **Advancing knowledge:** Strong, well-defined links between terms and concepts facilitate the development and evolution of scientific understanding. Ultimately, the article advocates for a concerted, focused effort to refine, standardize, and clarify scientific terminology to propel scientific progress forward.

**Key words:** term, selection, text, thinking, form, process, tool, science, scientist, communication.

Effective scientific communication relies fundamentally on clear and precise terminology. Ambiguity and multiple meanings within professional discourse can significantly impede the progress of knowledge and foster misunderstandings among researchers. A recent article emphasizes the need to differentiate between a term's **denotative aspect** (its link to the reality it represents) and its **significative aspect** (its link to the specific scientific concepts it conveys).

The article identifies four key issues that undermine terminological clarity:

- **Polysemy:** The existence of multiple word meanings, which context alone may fail to clarify, resulting in confusion during discussions.
- **Substitution of Meanings:** The accidental or unintended replacement of one meaning with another, which can distort communication and intended meaning.
- **Vagueness:** A lack of clearly defined boundaries for a term, leading to varied interpretations and general misunderstandings.
- **Non-Terminality:** The use of certain words as terms despite lacking a definitive or fixed meaning, which complicates their effective usage in a precise scientific context.

Terms are usually called single words or phrases that name concepts and objects of some specialized field. The problem of automatic selection of terminological phrases is studied from the point of view of numerous applications - the creation of terminological dictionaries based on text corpora, automatic indexing of texts for information retrieval systems, categorization of texts and their thematic structuring, translation of texts from one language to another, extraction of knowledge from text sources. Characteristic of the term extraction software developed in this case is the consideration of only nominative terminology and a limited number of syntactic samples of nominal terms, the use of superficial syntactic analysis (as a rule, without relying on

the dictionary of the problem area) together with taking into account the frequency of occurrence of the allocated units [1. P.979, 2, P.145].

The main specific feature of the language from a lexical point of view is the widespread use of terminology.

First of all, the concept of “term” should be defined. However, the difficulty is that it is very difficult to give a clear definition, since there is currently no generally accepted definition of this concept. One of the reasons is that the term is the object of a number of sciences, each of which seeks to highlight the characteristics of the term from its own point of view.

In modern linguistic literature, the concept of a term is usually defined by semantic features, depending on the meaning, or function, of the corresponding linguistic units. Terminological vocabulary usually includes “special words, limited by their special purpose” [8, p. 80].

In linguistics, there are many different attempts to define terms. We present here only two definitions of terms that reflect and synthesize, in our opinion, different arguments regarding this, which complement each other [5, P.690]. Под термином традиционно понимается слово (словосочетание), означающее понятие специальной области знания или деятельности [5, С.690].

Terms can have different structures. According to the number of components, word terms or single-word terms are distinguished, less often called monolexic terms, which can also include complex terms formed by adding stems and having a continuous or hyphenated spelling; phrase terms, or compound, multicomponent terms.

L.V. Shcherba characterized compound terms as combinations of words that have structural and semantic unity and represent a dismembered terminated nomination [5, P.690]. The criterion for considering a phrase as one nominative terminological unit is its use to name one concept.

We find a close understanding of the term in the works of V. M. Ovcharenko, who defines this concept as “a semantically integral linguistic unit, the meaning of which is not derived directly from the meanings of the components combined according to the corresponding structural-semantic model” [6, p. 143-144], as a synthetic phrase, the meaning of which “is not derived directly from the meanings of the components and consists in the correlation of the entire formation as a whole with the expressed concept” [10, p. 94]. With this understanding of the term, a necessary condition for the articulation of a phrase is considered to be “repetition of its components, their ability to retain a given meaning when combined with other signs or sets of signs [6, p. 148].

The definition of the term proposed by V. M. Ovcharenko, in principle, does not raise objections. However, in our opinion, the author understands the “semantic integrity of a linguistic unit” too narrowly, denoting a special concept. In his opinion, phrases such as electric motor are not terms on the grounds that an adjective serving as a definition supposedly retains the same meaning when combined with other nouns, for example, in the phrase electrical energy, and, therefore, I don’t have semantic integrity [6, p. 146-147].

Compound terms are subject to another very significant grammatical (syntactic) requirement, namely, the presence of subordinating connections between the components of the phrase. Not every substantive term is considered a compound term. a phrase denoting a special concept, but only one that is formed on the basis of subordinate connections. In other words, “composite terms are a special type of subordinating phrases” [2, p. 9].

Taking into account the provisions discussed above, it seems to us that the definition of the term given by S.V. Grinev is exhaustive, in which he characterizes the term “as a nominative special lexical unit (word or phrase) of a special language, accepted for the exact name of special concepts” [10, P. 691].

Due to the active study of various terminologies, many definitions of the concept “term” have appeared. A considerable part of definitions is based on semantic features. At the same time, two trends in characterizing the term are outlined. According to the first, it is a separate word “with a strictly defined meaning” [10, P.691]; “a word that corresponds to one precisely defined concept from the field of science, technology, art” [10, P.692].

The difficult question of identifying words in a stream of connected speech, i.e. the boundaries between a word and a phrase, on the one hand, and a word and a morpheme, on the other, interested many scientists. This problem received the most complete coverage in Soviet literature in the works of prof. A.I. Smirnitsky. As the main criterion A.I. Smirnitsky put forward the integral form of a word, opposed to the separately formed form of a phrase.

The integral design of a word should be understood as the presence of a common grammatical design for all elements that make up the word.

The separate design of a phrase, on the contrary, suggests that each component has a separate grammatical design [11, P.2].

The essence of the difference between the integral form of a word and the separate form of a phrase A.I. Smirnitsky shows by comparing the word shipwreck shipwreck, consisting of identical root elements, and the phrase (the) wreck of the ship. It is quite obvious that, without differing significantly in meaning, these formations are fundamentally different in their relation to the grammatical structure, i.e. differently decorated. In the word, grammatical design is carried out once ship-wrecks, in a phrase as many times as there are components in it: (the) wreck of (the) ships or (the) wrecks of (the) ships [11, P.3].

Suggested by A.P. The Smirnitsky criterion, according to its author, should be suitable for words of any language. In reality, although it is fully applicable to words of the Russian language, it does not always justify itself in relation to English words, due to the poverty of this language in morphological means. The criterion turns out to be unsuitable, for example, if we compare such formations as snowstorm and snow mountain, where the first elements are equally devoid of morphological design both in the word and in the phrase. Thus, a characteristic and important problem for the English language arises about the nature of formations such as: stone wall, speech sound, train track, street lamp, lunch room, coal mine, radio station. This problem is called the stone wall problem and is discussed in detail in chapters six and seven [11, P.3].

Consequently, we adopt a more comprehensive approach to term selection. Beyond identifying problem-oriented terminology, it is essential to extract terminological phrases from the general scientific lexicon. The primary objective of this selection process is twofold: to ensure terminological consistency and rectify stylistic inaccuracies in general scientific usage, and to 'compress' multi-word expressions into unified units. This reduction of lexical complexity significantly streamlines subsequent syntactic analysis by minimizing structural multivariance.

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