

THE EVOLUTION OF TERMINOLOGY: ORIGINS AND ADVANCEMENTS IN WESTERN CONTEXTS

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Abstract

In the first half of the 20th century, the burgeoning wave of scientific and technological innovations underscored the imperative of efficient scientific communication. Within the rapidly expanding frontiers of scientific disciplines, the process of naming newly discovered concepts emerged as a cornerstone directly influencing language. While the creation and utilization of terminology has perennially held significance in the scientific realm, the 20th century ushered in a new era marked by the globalization of knowledge through the expansive reach of communication technologies.

In response to this transformative backdrop, institutions and specialized fields dedicated to the study of terminology emerged, effectively orchestrating terminological activities across multiple languages. This study conducts a comprehensive exploration into the contextual factors that precipitated the establishment of terminology as a distinct field of study, critically examining its contemporary state from a multifaceted perspective.

Through a meticulous survey of historical trajectories and a discerning analysis of the impact of technology on global scientific communication, this article presents a comprehensive understanding of the formation and the current status of terminology studies. It underscores the pivotal role of terminology in facilitating precision and clarity in specialized discourse and ultimately fostering efficient communication in the dynamic landscape of 20th-century science.

Keywords: term, terminology, lexicology, linguistics, Terminology in the 20th century.

1. Introduction

Throughout the course of human history, the bifurcation of practical pursuits and subsequently scientific domains has resulted in the genesis of distinct lexicons exclusive to each field, accessible only to practitioners possessing specialized expertise. The inception and maturation of the discipline dedicated to the study of terms, namely terminology, however, do not trace their roots to antiquity.

Terminology assumed the status of an autonomous scientific discipline in the 1870s, primarily finding resonance within the purview of translation studies during the subsequent decades. The post-World War II era marked a pivotal juncture, witnessing the elevation of translation to a global echelon. This epoch coincided with a notable upswing in international interactions and agreements, synergistically fostering an environment conducive to the evolution of terminology. Entities such as the United Nations, European Union, and similar international cooperation institutions established translation centers, thereby expediting the momentum of terminological development. The crucible of substantial terminological endeavors during this period lay notably in France and Canada [6, p.233-239].

A diachronic scrutiny of terminology's developmental trajectory reveals a methodical delineation into several discernible stages. The annals of terminological evolution bear witness to epochal shifts and technological leaps, paralleled by analogous societal and industrial advancements, collectively impelling progress in the domain [2, p.59-76].

Particularly, the burgeoned activities in the sphere of data processing have engendered novel conceptuali-

zations within the purview of terminology. The expeditious proliferation of written communication in the virtual realm precipitated the application of information processing modalities, notably manifested in electronic dictionaries, across multifarious realms of human activity [2, p.59-76].

2. Unveiling the Origins of Terminology Research in the Western World

The inaugural contribution to the discourse on terminology within the Western intellectual tradition is credited to Plato, whose inaugural treatment of terminological matters occurred in his work, "Cratylus." Extending from antiquity through the 16th century, adherents of Stoic philosophy, Augustine Averley, Anslem Canterbury, as well as scholars from Indian and Arab traditions, perpetually engaged in scholarly pursuits concerning terminology. The conceptualization of a nascent scientific domain delineating the processes of nomenclature and the requisite methodologies materialized subsequent to the Renaissance [3, p.11].

A methodical exploration commences with France, a pivotal locus in the evolutionary trajectory of terminology. Researchers within this domain accentuate the pivotal role of dictionaries for pedagogical and instructional objectives. Thus, during the 17th and 18th centuries in France, an enlightened individual was cultivated through the judicious inclusion of scientific and technical terms within dictionaries [2, p.60].

The 17th century heralded a transformative epoch marked by rapid advancements in scientific domains, instigating the broadening of the purview of the scientific discipline dedicated to the examination of terms. Notably, within the realm of botanical science during this epoch, Andrea Kesalpini formulated a comprehensive normative framework for categorizing observed

flora, deeming it imperative to categorize them into distinct classes [4, p.13].

Subsequent to Kesalpini, Antoni Furetier, in his 1690 opus titled "Dictionnaire Universel," not only recognized but delved into the critical import of defining and organizing scientific terms. Furetier's scholarly inquiries transcended the confines of lexicology, extending into the specialized domain of terminology [4, p.12].

During the 18th and 19th centuries, specialists accorded terminology the status of an incontrovertible science. Notably, two eminent figures of this epoch, Denis Diderot and Jean Leron D'alambert, collaborated on the seminal work titled "Encyclopedie." This oeuvre, presented in an alphabetical format, stands as a watershed in the domain of terminology, arguably constituting the earliest terminological dictionary. Beyond the mere recognition or comprehension of words, this work accentuates their meanings and conveys pertinent information [2, p.60]. Such endeavors serve as tangible evidence of the scholarly investigation into scientific terms during this period. Comparable contributions, including Samuel Johnson's English dictionary, played a pivotal role in catalyzing the crystallization of terminology as a distinct scientific field. Subsequently, the surge in innovations, inventions, and discoveries within the realms of science and technology underscored an imperative necessity for precise and standardized terminologies [4, p.12-13].

As alluded to earlier, the 18th and 19th centuries witnessed the preeminence of terminology predominantly within disciplines such as botany, philosophy, and chemistry. The fabric of this field was woven by scholars operating across diverse scientific domains who actively engaged in the compilation of encyclopedic works. Noteworthy transitions occurred in the 20th century as engineers joined the cadre of scientists. Their inclusion was deemed imperative for maintaining conceptual coherence in nomenclature, particularly with regard to the names assigned to scientific innovations in the burgeoning domains of science and technology.

3. Exploring Key Trajectories in 20th Century Terminology Studies

The genesis and contemporary vitality of modern terminology science have been significantly shaped by various intellectual currents, distinctly classified by theorists into four categories: linguistics, translation, planning, and creation. The linguistic paradigm, in particular, has played a pivotal role in the evolution of terminology, with three notable schools emerging as foundational forces: the Vienna School, the Prague School, and the Moscow School. These influential schools have been instrumental in delineating and consolidating terminology as an autonomous scientific discipline [2, p.64].

In the early 20th century, the burgeoning need for a scientific and technological foundation in Germany catalyzed a surge in research focused on the technical language employed by engineers. This interdisciplinary initiative attracted a cadre of specialists, including linguists, philosophers, and standardizers. Among them, the Austrian engineer Ögen Wüster, in his doctoral thesis titled "International Language Exchanges in the Field of Engineering, Especially Electrical Engineering," played a seminal role and is now widely acknowledged as the progenitor of modern terminology. His

work is currently esteemed as a seminal contribution to the field [1, p.35].

Upon entering this domain, Wüster initially encountered skepticism from certain academic quarters, dismissing his work due to his non-linguistic background. However, subsequent events revealed the unwarranted nature of these criticisms. Moreover, the trajectory of terminological activities globally shifted to incorporate not just linguists but also domain experts in the terminology creation process.

In 1935, at the behest of the Academy of Sciences of the USSR, Wüster's dissertation underwent translation into Russian, resulting in its publication. This event stirred considerable interest within the Russian scientific community, reshaping perceptions among Russian researchers and fostering close ties between Wüster, researchers, and terminologists within the USSR [1, p.47].

Wüster's seminal work, as articulated in the aforementioned book, constitutes a comprehensive examination of terminology's role as a medium for relationship formation. The treatise delves into nuanced issues such as the essence of concepts, inter-concept relationships, characteristics of concepts, definitions of concepts, term formation, standardization of concepts and terms, and the internationalization of concepts and terms [1, p.47].

In 1926, through the persistent endeavors of Wüster, the scientific committee ISA 37 (International Federation of National Standards Federation) was initiated, focusing on the development of terminology and principles governing terminological processes. Despite a hiatus during the Second World War, Wüster's concerted efforts led to the committee's reinstatement in subsequent years.

Wüster, a seminal figure associated with the Vienna School and credited with its establishment, initially concentrated on the scientific dimensions of term processing and standardization during the nascent phase of this field. However, by the 1970s, his intellectual successors introduced a set of principles known as the General Theory of Terminology, comprising five key tenets:

- 1) The initiation of terminology work commences with the conceptual framework, with the primary objective of demarcating clear and precise boundaries between concepts.

- 2) Each concept exists within a broader conceptual network, amenable to exploration through inherent properties, delineating distinct boundaries and frameworks for concepts.

- 3) The definition of each term serves the purpose of situating it within the overarching conceptual network.

- 4) A reciprocal relationship exists between each concept and its corresponding term, embodying the principles of singularity and singularity.

- 5) Within the science of terminology, heightened emphasis is placed on the dimensions of simultaneity [5, p.79].

The enumerated principles epitomize the onomasiological foundations of the Viennese school, signifying an approach that commences by establishing the concept before seeking its nomenclature. Presently, contemporary methodologies scrutinize terms as linguistic units, adopting a semantical perspective that

considers the expression of a concept after the enunciation of the term.

In the contemporary linguistic landscape, terminology is undergoing dynamic development on two distinct fronts: intra-lingually, whereby it evolves from within the inherent lexicon of a language, and inter-lingually, marked by the assimilation of terms from foreign linguistic sources. Notably, throughout the 20th and 21st centuries, terminology has emerged as a foundational catalyst for the facilitation of dependable and efficient communication within specialized domains.

The intrinsic evolution of terminology, primarily driven by the organic growth of language, reveals an intricate tapestry of lexical expansion and refinement. In this intra-lingual dimension, terminology delineates and refines the specialized lexicon of a language to meet the precise communicative needs of various domains, rendering linguistic constructs that are tailored to convey nuanced and complex ideas. In doing so, it navigates the intricate intersections of linguistic morphology, syntax, and semantics to craft terms that serve as efficacious tools for disciplinary discourse.

In parallel, the inter-lingual facet of terminology emerges as a significant modality, characterized by the assimilation of foreign terminology into the linguistic framework of a given language. This process is often necessitated by the inexorable march of globalization and the proliferation of international collaboration, as fields of knowledge and expertise transcend linguistic and geographical boundaries. Consequently, this dimension of terminology encapsulates the intricate dynamics of borrowing, adaptation, and integration of terms from diverse linguistic origins, accentuating the complex interplay between language contact, bilingualism, and sociolinguistic variables.

In the contemporary epoch, terminology's pivotal role in fostering reliable and efficient communication within specialized domains cannot be overstated. As society traverses an increasingly complex and interconnected landscape, terminology stands as a linchpin in ensuring precision and clarity in discourse. Its capacity to encapsulate nuanced meanings, maintain consistency, and accommodate the exigencies of diverse fields underscores its significance as a unifying force in the intricate tapestry of linguistic communication. Furthermore, the recognition of terminology as a conduit for cross-disciplinary dialogue underscores its evolving role as a critical factor in promoting the seamless exchange of ideas, knowledge dissemination, and the advancement of specialized fields.

4. Terminology

Terminology, etymologically rooted in the Latin "terminus," signifying "term," and the Greek "logos," denoting "concept" or "teaching," constitutes a specialized discipline focused on the study, management, and generation of terms. The emergence of terminology as a scientific domain is intrinsically linked to the exigencies arising during the developmental epoch of science and technology. The foundational tasks within terminology encompass the rectification of terms in adherence to grammatical conventions, the accommodation of borrowed terms within linguistic norms, and the innovation of novel terms through harnessing the inherent capacities of language [7, p.192].

The nomenclature "terminology" first surfaced in scholarly discourse during the initial half of the 18th century, credited to the German professor Christian

Gottfried Schütz, who introduced the term "terminologie." A notable instance of its application transpired in 1801 when Sebastian Mercier employed it somewhat controversially in a French publication [4, p.5].

An overarching inquiry into the nature of terminology scrutinizes its historical evolution, providing insights into its conceptualization as a scientific field. The term's formal adoption occurred in the latter half of the 18th century. Anchored in the comprehensive exploration of term origin, developmental trajectories, utilization patterns, and standardization procedures, terminology endeavors to furnish precision and clarity to the lexicon of various specialized domains [4, p.15].

The impetus for the genesis of terminology can be ascribed to the rapid advancements in science and technology during the 18th and 19th centuries. These transformative developments necessitated the cultivation of distinct scientific realms, each engendering its proprietary terminology. In response to this proliferation of linguistic innovations and cross-language transfers, the imperative arose to institute a scientific discipline—terminology—to regulate and manage this dynamic process effectively. At its core, terminology is concerned with the meticulous formulation of terms, or the assimilation of borrowed terms into a linguistic milieu, ensuring that concepts germane to a given scientific domain attain precision and comprehensibility.

When elucidating the concept of terminology, a comprehensive characterization within a generalized context can be proffered, framing it as a scientific discipline integral to the methodical investigation and regulation of terms. A more nuanced explication, as furnished by the International Terminology Association, posits terminology as a specialized field delving into the examination and application of symbols and linguistic signifiers requisite for nuanced communication within domains necessitating specialized knowledge. Crucially aligned with linguistics, specifically within the expansive purview of semantics and pragmatism, terminology emerges as an interdisciplinary domain. This characterization stems from its assimilation of concepts from diverse scientific realms, including semiotics, information theory, and classification, along with the application of methodologies rooted in these scientific arenas.

The purview of terminology extends to the scrutiny of the definition, organization, and utilization of words across varied scientific domains. While its historical trajectory primarily entailed the lexical examination of specific languages, contemporary terminology, from an applied standpoint, exhibits a close association with syntax and phonology. Moreover, its proximity to lexicology is pronounced, and it strategically incorporates methodologies from communication studies and technology in its applied dimensions [3].

The precise delineation provided by the International Terminology Association presents a lucid and comprehensible exposition of terminology, elucidating its operational domains and spheres. Functioning as a logical manifestation of the nomenclatural processes pertaining to diverse objects and concepts, terminology assumes a pivotal role within the matrix of social communication, interlingual relations, translation, and documentation. Its intricate interconnections with an array of domains, as underscored by its affiliations with se-

miotics, information theory, and classification, underscore the expansive and integrative approach inherent to the field of terminology [8, p.385-389].

Helmut Felber articulates a comprehensive tripartite delineation to explicate the multifaceted nature of terminology:

1) Interdisciplinary Nature: Terminology constitutes an interdisciplinary domain of scientific inquiry, engaging with conceptual frameworks and diverse modes of representing concepts, including terms and symbols.

2) Conceptual System Declaration: It serves as an assemblage of terms delineating a system of concepts germane to a specialized domain of scientific knowledge.

3) Systematic Conceptual Documentation: It encompasses works wherein the system of concepts inherent to a given subject domain finds expression through the utilization of terms [2, p.5].

An attentive examination of the elucidations offered by Felber culminates in the recognition that terms wield a distinctive linguistic function across all scientific and professional domains. Serving as a linchpin for communication amongst specialists, terms emerge as a pivotal factor fostering precision and efficiency in the communication fabric of scientific specialists. Emanating from these definitions, it becomes evident that terminology, operating as an interdisciplinary scientific field, straddles both applied and research-oriented dimensions. Inextricably linked to the broader science of linguistics by shared etymological roots, terminology establishes intricate affiliations with multiple branches within the linguistic realm.

Terminology, as an interdisciplinary science within the linguistic domain, scrutinizes the inherent logical nexus between conceptualization and the objects they represent. This encompasses an in-depth exploration of the intricate processes governing the ascription of names to concepts, the methodical systematization of specialized professional nomenclature, and their application across diverse fields. Consequently, the central tenet of terminology resides in the systematic organization of technical knowledge and concepts, establishing it as a pivotal responsibility within the terminological discipline.

Theoretically, the prospect exists to design a comprehensive conceptual framework encapsulating the entirety of a specific field. However, practical constraints dictate a focused examination of only a subset of a given domain. This pragmatic approach ensures the construction of a thoroughly systematic, controlled, and evaluable structure at the conceptual level. Consequently, the conceptual framework imparts constructive knowledge, albeit within a delimited domain, with a primary emphasis on augmenting information coverage within that specific area.

In light of the foregoing, it becomes apparent that a conceptual framework ought to integrate related subspecialties within a unified structure, establishing interrelations between them. This imperative stems from the need to forge cohesive ties amongst the diverse facets of a particular field, fostering a holistic and interconnected terminological landscape.

Terminology, as a multifaceted and interdisciplinary scientific pursuit, engages in a profound exploration of the intricate and logical linkages that underlie the conceptualization of notions and their real-world referents. It delves into the intricate process of assigning names to these notions, meticulously orchestrates the systematic categorization of specialized nomenclature intrinsic to various professional domains, and scrutinizes their versatile applications across an array of fields. Consequently, the science of terminology assumes a pivotal responsibility in the systematic structuring of technical knowledge and concepts.

In a theoretical realm, the tantalizing prospect arises of constructing an all-encompassing conceptual framework, one that encapsulates the entirety of a specific domain. Nevertheless, practical exigencies dictate a more focused inquiry, confining the study to a delimited portion of the field that permits the establishment of a rigorously systematic, controllable, and assessable conceptual structure. Consequently, the system of concepts imparts a form of constructive knowledge, albeit within a narrower ambit of the broader landscape. Its primary mission is to enhance informational coverage within a specialized context.

It is evident from the preceding discourse that the system of concepts must function as an integrative force, uniting various subspecialties within a coherent and shared framework. The overarching aim is to foster meaningful interrelations, thereby facilitating a holistic and nuanced understanding within the realm of terminological inquiry. In this unity of purpose, the science of terminology achieves a transformative role, propelling a comprehensive and interconnected terminological landscape, bearing testament to the criticality of its endeavors in facilitating precision and clarity in specialized discourse.

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