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THE COGNITIVE DIMENSIONS OF ENGLISH SYNTAX: INSIGHTS FROM COGNITIVE PHILOLOGY

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Abstract. *This article explores the intersection of English syntax and cognitive philology, aiming to understand how cognitive processes influence sentence construction and interpretation. Drawing on theories from cognitive linguistics and psycholinguistics, this study examines how mental representations, processing constraints, and neural mechanisms shape English syntax. It argues that syntax is a formal system of rules and a reflection of cognitive patterns rooted in human perception and interaction with the world.*

Keywords: *syntax, textual analysis, linguistic phenomena, cognitive abilities, practical applications, comprehension*

Introduction.

Syntax, traditionally defined as the arrangement of words and phrases to create well-formed sentences, has been a core focus of English language philology for centuries. While structuralist and generative approaches emphasize rule-based systems, recent developments in cognitive philology have brought attention to the mental processes that underlie language use. As defined by Mellet (2016), cognitive philology investigates texts as products of human cognition, aligning philological analysis with cognitive science, neuroscience, and psychology. Within this interdisciplinary framework, English syntax is analyzed not only as a system of grammar but also as an artifact of cognitive function.

Cognitive Philology

Cognitive philology integrates textual analysis with empirical findings from the cognitive sciences. According to Aureli et al. (2020), this field examines how memory, attention, and perception contribute to the structure and meaning of texts. In contrast to traditional philology, which is primarily historical and descriptive, cognitive philology is explanatory, seeking to understand the mental mechanisms responsible for linguistic phenomena. It draws on psycholinguistics, neuropsychology, and artificial intelligence to interpret texts as expressions of cognitive activity (Langacker, 2023a).

Cognitive Linguistics and Syntax

Cognitive linguistics, as pioneered by Langacker (1987), asserts that linguistic structures are motivated by general cognitive abilities such as categorization, analogy, and

perspective-taking. Syntax, under this model, emerges from conceptual structure rather than existing as an autonomous grammatical module. For instance, the prominence of Subject-Verb-Object (SVO) order in English is cognitively grounded in the prototypical agent-action-patient schema (Evans & Green, 2006). Therefore, syntactic constructions are seen as reflecting the way humans conceptualize events.

Psycholinguistic Perspectives

Psycholinguistics studies how language is processed in the brain, offering insight into the cognitive basis of syntax. Experimental studies have demonstrated that syntactic parsing occurs incrementally and is influenced by working memory and attention (Traxler, 2012). Garden path sentences, such as “The horse raced past the barn fell,” illustrate how initial syntactic assumptions can lead to reanalysis, a process that reveals the cognitive limitations of real-time sentence processing.

Cognitive Mechanisms in English Syntax

Language production and comprehension rely on mental representations of syntactic structures. When a speaker forms a sentence like “The boy kicked the ball,” they mentally represent an action involving an agent (boy), an action (kicked), and a patient (ball). These representations align with cognitive schemas derived from embodied experience (Lakoff, 1987). The syntactic form, therefore, is not arbitrary but grounded in a mental model of the world.

Processing Constraints

English syntax is shaped by cognitive constraints such as working memory capacity and processing speed. One example is the principle of minimal attachment, where the parser prefers the simplest syntactic structure available (Frazier & Fodor, 1978). This explains why syntactically ambiguous sentences often lead to misinterpretation. Similarly, the preference for canonical word order (SVO) reflects the brain’s inclination toward predictability and ease of processing (MacDonald et al., 1994).

Neural Mechanisms

Advances in neuroimaging have identified specific brain regions involved in syntactic processing. The left inferior frontal gyrus (Broca’s area) plays a crucial role in syntactic construction and syntactic ambiguity resolution (Friederici, 2011). These findings confirm that syntax is not merely a learned system but is neurally instantiated. The neurological basis for syntax supports the cognitive philological view that language structure is a manifestation of mental architecture.

Cognitive Dimensions of English Syntactic Structures

English word order is not just grammatical but reflects the cognitive prominence of sentence elements. Subjects usually precede verbs and objects because agents are more

salient in cognitive representations (Bock & Warren, 1985). Passive constructions, which reverse this order (e.g., “The ball was kicked by the boy”), demand more cognitive effort due to their deviation from the expected agent-first structure.

Sentence Complexity and Working Memory

Complex syntactic structures, such as embedded clauses or long-distance dependencies, increase processing difficulty. Studies have shown that such constructions strain working memory, especially in second-language learners (King & Just, 1991). This is a vital consideration in both theoretical linguistics and applied fields like language teaching.

Syntactic Ambiguity and Contextual Disambiguation

English syntax often allows multiple interpretations, and disambiguation depends heavily on context. For instance, the sentence “I saw the man with the telescope” is structurally ambiguous. Research shows that listeners use contextual and pragmatic cues to resolve such ambiguities, demonstrating the dynamic interaction between syntax and cognition (Altmann & Steedman, 1988).

Implications for Language Learning and Philological Analysis

Understanding the cognitive foundations of syntax has significant implications for language pedagogy. Teachers can design curricula that align with processing preferences, such as emphasizing canonical structures before introducing complex or marked ones. Moreover, cognitive philology encourages scholars to reanalyze historical changes in syntax not merely as grammatical evolution but as shifts in the cognitive strategies of language users (Bybee & Hopper, 2001).

This cognitive reorientation also benefits corpus analysis, where variation in syntax can be interpreted through models of mental effort and processing constraints, offering a deeper understanding of both historical and contemporary usage.

Conclusion

The study of English syntax through the framework of cognitive philology reveals that syntax is more than a formal grammatical system—it is an outcome of mental processes. By incorporating insights from cognitive linguistics, psycholinguistics, and neuroscience, researchers can better understand how the brain organizes and interprets syntactic structures. This interdisciplinary approach not only enriches our theoretical understanding of syntax but also has practical applications in language teaching and historical philology.

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