THE EVOLUTION OF BINOMINAL SYNTACTIC THEORIES: FROM TRADITIONAL PHRASE STRUCTURE TO FUNCTIONAL AND COGNITIVE PERSPECTIVES

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Abstract. *This article explores the historical and theoretical development of binominal constructions — linguistic structures where two nouns or noun phrases are linked within a single constituent. While early generative grammar struggled to reconcile these structures with standard X-bar theory, subsequent decades have seen a shift toward more nuanced analyses. The study adopts a diachronic literature review methodology, tracing the evolution of binominal theories from the early "Small Clause" analyses of the 1980s to the "Predicate Inversion" models proposed in the 1990s and early 2000s. Furthermore, we examine the recent shift toward functional and constructionist approaches, which prioritize the pragmatic and evaluative functions of binominals over purely formal syntactic constraints. Our analysis reveals that the development of these theories mirrors a broader transition in linguistics: moving from rigid, hierarchical structures toward more flexible, multidimensional models that account for lexicalization and metaphor. The results of this review indicate that while a unified theory of binominality remains elusive, the integration of cognitive linguistics provides the most robust framework for explaining the "non-canonical" behavior of these phrases. This paper concludes by identifying remaining gaps in the research, particularly regarding cross-linguistic variations in binominal typology.*

Keywords: *binominal constructions, syntax, predicate inversion, generative grammar, cognitive linguistics, phrase structure, grammaticalization, noun phrases.*

Introduction

The structural organization of the noun phrase has long been a cornerstone of generative inquiry. However, few structures have challenged the universality of X-bar theory as persistently as the Qualitative Binominal Noun Phrase (QBNP). Typically exemplified by constructions such as *a jewel of a city* or *that idiot of a doctor*, the QBNP consists of two nouns (N_1+N_2) mediated by a functional element, usually the preposition "of" in English or "de" in Romance languages. The primary theoretical problem posed by binominality lies in the determination of the syntactic head. In a standard extended projection of a noun, the first noun is expected to be the head; yet, in QBNPs, N_1 functions as an attributive or evaluative predicate, while N_2 retains the referential properties of the phrase [2] (Abney, 1987). For instance, in "a gem of a book", the speaker is referring to a "book", not a "gem". This "mismatch" between semantic headedness and syntactic position has led to a proliferation of competing models over the last four decades.

Early generative accounts treated these structures as simple PPs (Prepositional Phrases), but this failed to explain the obligatory presence of the indefinite article before N_2 and the strict constraints on definiteness [6]. The 1990s marked a shift toward Predicate Inversion theories, most notably championed by Den Dikken (1995, 2006). Under this view, the QBNP is derived from an underlying "Small Clause" structure where N_1 starts as a predicate and moves to a higher

functional position, with the particle “of” acting as a “nominal copula [4]. However, as linguistic theory moved toward the Minimalist Program and later into Cognitive Grammar, the focus shifted. Researchers began to question whether a purely hierarchical derivation could capture the idiomatic and expressive nature of binominals. Modern functionalist perspectives suggest that binominality is not merely a syntactic mutation but a grammaticalized strategy for expressing speaker attitude [1,5].

This article aims to synthesize these developments. We will first examine the formalist attempts to “tame” the binominal through movement rules, followed by an analysis of how functional and cognitive paradigms have broadened the scope of the debate to include pragmatics and metaphor. By tracing this trajectory, we demonstrate how the study of binominality has served as a catalyst for rethinking the very nature of the Noun Phrase in modern linguistics.

Methods

The present study employs a qualitative meta-analytical approach to trace the evolution of binominal theories. Given the theoretical nature of the topic, the research methodology is divided into three primary stages:

1. Theoretical Sampling and Corpus Selection

To ensure a comprehensive overview, we selected key linguistic frameworks spanning four decades (1980–2024). The primary “data” for this study consists of seminal works in Generative Grammar (e.g., Chomsky, 1995; Kayne, 1994), Functional Grammar (e.g., Halliday, 2004), and Cognitive Linguistics (e.g., Langacker, 2008).

2. Comparative Syntactic Analysis

The core of the methodology involves a comparative analysis of how different theories handle the “Head-Complement” relation in QBNPs. We used a standardized set of “diagnostic” examples, such as:

1. A gem of a book (Qualitative)
2. A mountain of a man (Metaphorical)
3. That disaster of a concert (Evaluative)

Each theory was tested against its ability to explain three syntactic phenomena: agreement (number/gender), article repetition, and extraposition.

3. Diachronic Mapping

Finally, we applied a diachronic mapping technique to visualize the shift from structuralist models (focusing on the tree architecture) to constructionist models (focusing on the idiomatic nature of the phrase). This allows for a clear identification of “theoretical pivots” where the academic consensus shifted significantly.

Results

The evolution of linguistic thought regarding binominal constructions can be categorized into three distinct theoretical shifts: the early configurational period, the predicate inversion era, and the modern constructionist turn. Our analysis of these periods reveals a progressive movement toward recognizing the lexical-semantic complexity of N_1. In the late 1980s and early 1990s, the primary challenge was to fit QBNPs (Qualitative Binominal Noun Phrases) into the rigid structure of X-bar theory. Early researchers, such as Moro (1991) and Hoekstra (1988), proposed that the relation between N_1 (*gem*) and N_2 (*book*) is fundamentally that of a “Small Clause” (SC). According to this view, the two nouns are not in a simple head-complement relationship. Instead, they form a underlying propositional unit where N_1 acts as a predicate of N_2. Kayne (1994) further refined this by arguing that the particle “of” is not a true preposition but a functional

"complementizer-like" element that surfaces to support the relationship between the two nouns within the DP (Determiner Phrase). This period established that N_1 is not a standard modifier but carries "predicative weight".

The most significant theoretical breakthrough occurred with the introduction of Predicate Inversion (PI). Den Dikken (1995, 2006) argued that in a phrase like "a jewel of a city", the predicate (N_1) undergoes a syntactic movement, jumping over the subject (N_2). Our review of this era shows that the particle "of" serves as a Relator or Linker. This linker is necessary to "license" the movement of the predicate to a higher position (the Specifier of a Functional Projection). This theory successfully explained why N_1 always precedes N_2 and why the construction feels "inverted" compared to a standard NP like *a beautiful city*. However, critics like Bennis et al. (1998) pointed out that this purely syntactic movement model struggled to account for the semi-idiomatic nature of many binominals, where N_1 loses its literal meaning (e.g., *a hell of a time*).

The latest stage in the development of binominal theories (2010–2024) is characterized by a shift toward Construction Grammar (CxG) and Functionalism. Researchers such as Traugott (2008) and Jackendoff (2007) argue that binominals are better understood as "templates" or "constructions" rather than products of live syntactic movement. Our analysis identifies three key findings in modern research:

1. Lexicalization: N_1 often undergoes "de-semantization", where it stops being a noun and starts behaving like an intensifier or a quantifier (e.g., *a mountain of evidence*).

2. Subjectivity: The binominal structure is increasingly viewed as a tool for expressive morphology. As noted by Vangsnes (2008), the choice of a binominal over a standard adjective-noun pair (e.g., *that disaster of a meeting** vs. *that disastrous meeting*) serves to highlight the speaker's emotional stance.

3. Cross-linguistic Variation: Recent studies in typology (e.g., Matushansky, 2019) show that while the "linker" "of" is common in English, other languages use different strategies (case-marking, juxtaposition), suggesting that "binominality" is a functional category that manifests differently across languages.

Discussion

The transition from early configurational models to modern constructionist perspectives on binominality represents a fundamental shift in how linguists perceive the internal architecture of the Noun Phrase. Our analysis of the theoretical trajectory highlights several critical points of contention and progress. The most persistent issue in binominal theory remains the "Headedness Paradox". Traditional accounts (e.g., Chomsky, 1995) prioritize the first noun (N_1) as the syntactic head due to its position and agreement features. However, as our results indicate, the semantic weight almost always resides in N_2.

The Predicate Inversion model was a revolutionary attempt to bridge this gap by suggesting that N_1 is a "displaced" predicate. Yet, as we discussed, this formal solution often fails to account for the lexicalization seen in phrases like *a hell of a party*. In such cases, *hell* has lost its status as a noun entirely, functioning instead as a degree modifier or intensifier. This suggests that the development of binominal theory is moving away from purely structural "tree-building" toward a model that incorporates grammaticalization scales (Hopper & Traugott, 2003).

A significant takeaway from the recent literature (e.g., Aarts, 1998; Vangsnes, 2008) is that binominality is not just a syntactic "accident" but a functional choice. Why would a speaker say *that disaster of a meeting* instead of *that disastrous meeting*? The discussion in modern linguistics suggests that the binominal structure allows for a higher degree of subjectivity. By placing the

evaluative noun (*disaster*) in the N_1 position, the speaker foregrounds their emotional response. This supports the Construction Grammar view (Goldberg, 2006) that certain syntactic patterns are stored in the mental lexicon as holistic "form-meaning pairs" specifically designed for expressive functions.

Despite the advancements made by Matushansky (2019) and others in cross-linguistic analysis, a "Universal Theory of Binominality" is still missing. Most existing theories are heavily biased toward Germanic and Romance languages. Future research needs to investigate how languages with complex case systems (e.g., Slavic or Finno-Ugric) handle qualitative predication within the DP without the use of a "linker" like "of". Furthermore, the rise of Computational Linguistics and large-scale corpora presents an opportunity to test these theories. While traditional generative grammar relies on native speaker intuition, corpus-based studies can reveal the actual frequency and productivity of binominal templates in real-world usage, potentially validating the constructionist shift we have observed.

Conclusion

The development of linguistic theories regarding binominality serves as a microcosm of the broader evolution in modern syntactic theory. As this article has demonstrated, the transition from rigid X-bar configurations to dynamic Predicate Inversion models and, finally, to Constructionist paradigms, reflects a growing recognition of the interface between syntax, semantics, and pragmatics. Our review concludes that while formalist accounts have successfully mapped the internal movement of the Noun Phrase, they often overlook the "expressive" function that drives the use of binominals like *a gem of a book* or *that devil of a man*. The most robust future for binominal research lies in a hybrid approach: one that maintains the structural rigor of the Minimalist Program while incorporating the cognitive insights of Construction Grammar. Ultimately, the binominal construction is more than a syntactic anomaly; it is a sophisticated linguistic tool that allows speakers to merge reference and evaluation into a single, cohesive unit. As we move further into the 21st century, cross-linguistic and corpus-based studies will be essential in determining whether these "double-headed" structures are a universal feature of human language or a specialized product of specific grammatical traditions.

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