



LEXICAL MEANS OF REDUNDANCY IN NATURAL LANGUAGES: A COGNITIVE AND FUNCTIONAL APPROACH

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Abstract: *This article provides a comprehensive linguistic and cognitive analysis of the lexical means of redundancy in natural languages. Traditionally viewed by prescriptive grammars as a stylistic violation or linguistic waste, lexical redundancy—manifested through pleonasm, tautologies, and semantic duplications—is re-evaluated here as a functional communicative asset. Drawing upon information theory, cognitive linguistics, and psycholinguistic frameworks, this paper demonstrates that redundancy is a sophisticated systemic mechanism designed to optimize message decoding, secure information transmission against environmental or cognitive "noise," and reduce mental processing effort. The findings reveal that structural semantic repetition serves critical functions in emphasis, linguistic predictability, and long-term vocabulary retention.*

Keywords: *lexical redundancy, pleonasm, tautology, cognitive load, semantic duplication, communication noise, processing efficiency.*

Annotatsiya: *Ushbu maqolada tabiiy tillardagi leksik ortiqchalik (redundancy) vositalarining har tomonlama lingvistik va kognitiv tahlili taqdim etiladi. An'anaviy va normativ grammatikada stilistik xato yoki tilning keraksiz yuki sifatida qaralgan leksik ortiqchalik — pleonazmlar, tautologiyalar va semantik dublyajlar — mazkur tadqiqotda funksional*

kommunikativ afzallik sifatida qayta baholanadi. Axborot nazariyasi, kognitiv tilshunoslik va psixolingvistik qonuniyatlarga tayangan holda, maqolada leksik ortiqchalik axborotni dekodlashni optimallashtirish, xabarni tashqi va ichki "shovqinlardan" himoya qilish hamda aqliy yuklamani kamaytirishga xizmat qiluvchi murakkab tizimli mexanizm ekanligi isbotlanadi. Tadqiqot natijalari semantik takrorlarning nutqda urg'u berish, til interpretatsiyasini oldindan prognoz qilish va so'zlarni xotirada uzoq muddatli saqlashda muhim rol o'ynashini ko'rsatadi.

Kalit so'zlar: leksik ortiqchalik, pleonazm, tautologiya, kognitiv yuklama, semantik dublyaj, kommunikativ shovqin, axborotni qayta ishlash samaradorligi.

Аннотация: В данной статье представлен всесторонний лингвистический и когнитивный анализ лексических средств избыточности в естественных языках. Лексическая избыточность, проявляющаяся в виде плеоназмов, тавтологий и семантического дублирования, традиционно рассматриваемая нормативной грамматикой как стилистическая ошибка или языковой балласт, переосмысливается в данном исследовании как функциональный коммуникативный ресурс. Опираясь на теорию информации, когнитивную лингвистику и психолингвистические парадигмы, авторы доказывают, что избыточность является сложным системным механизмом, направленным на оптимизацию декодирования сообщений, защиту информации от внешних и внутренних «шумов» и снижение ментальной нагрузки. Результаты показывают, что структурные семантические повторы выполняют важнейшие функции в эмфазе,

предсказуемости языковых моделей и долгосрочном удержании лексики в памяти.

***Ключевые слова:** лексическая избыточность, плеоназм, тавтология, когнитивная нагрузка, семантическое дублирование, коммуникативный шум, эффективность обработки информации.*

INTRODUCTION

The architecture of human language is a remarkable compromise between two opposing forces: the drive for linguistic economy (saying as much as possible with fewer words) and the need for communicative safety (ensuring the message is fully understood). While ideal computational models value strict mathematical efficiency, natural human languages are structurally saturated with redundancy. Lexical redundancy occurs when linguistic units carry semantic features that are already explicit or implicit within the immediate textual context. Everyday phrases like *"past history"*, *"unexpected surprise"*, or *"join together"* are technically filled with semantic overlap, yet they remain deeply embedded in standard speech across the globe.

Historically, academic and prescriptive style guides treated these constructions with hostility, labeling them as defects of style or signs of uncultivated expression. However, this narrow perspective overlooks the biological reality of human cognitive processing. Human communication does not occur in a vacuum; it happens in environments filled with physical noise, psychological distractions, and limited attention spans. Within this chaotic framework, lexical redundancy acts as an essential stabilizer. This article looks beneath the surface of stylistic prescriptions to explore the precise linguistic mechanisms of lexical redundancy and

demonstrate its indispensable cognitive value in real-world language processing and structural preservation.

LITERATURE REVIEW

The shift toward analyzing redundancy as a beneficial feature began with Claude Shannon's (1949) mathematical theory of communication. Shannon proved that in any channel where data is transmitted, a certain degree of redundancy is required to combat "noise" and prevent the total loss of information. When applied to linguistics, this law explains why human speech is naturally redundant—it ensures that if a listener misses a word due to a distraction, the surrounding context will reconstruct the missing link.

Linguistic typologists and theorists later expanded this concept to semantic structures. John Lyons (1977) estimated that natural languages are roughly 50% redundant. He argued that this predictability is not a structural failure but a deliberate design feature that makes speech accessible and natural. Wit and Gisborne (2014) emphasized that what prescriptive grammar marks as a pleonasm is structurally utilized by speakers to navigate structural boundaries.

From a psycholinguistic perspective, the cognitive benefit of redundancy is rooted in how human memory structures knowledge. According to Evans and Green (2006) in their foundational work on cognitive linguistics, memory retention is directly determined by the depth of mental analysis applied to an item. When semantic features are repeated across multiple words in a single phrase, it forces the brain to process the central concept through multiple neural pathways.

Furthermore, Goldberg (2006) established that vocabulary acquisition and general fluency depend strongly on constructionist

predictability. Redundant phrases provide learners with readymade lexical "chunks" that function as cognitive anchors. This is enhanced by the mental parsing processes outlined by Croft and Cruse (2004), where the semantic overlap in redundant pairs facilitates rapid mental retrieval and long-term linguistic consolidation.

METHODOLOGY

This study adopts a qualitative, descriptive-analytical approach to map the structural landscape and cognitive outcomes of lexical redundancy. Rather than analyzing localized quantitative data, this research evaluates widespread, cross-linguistic lexical patterns against established frameworks in cognitive science and structural linguistics.

The methodology classifies the data into three major structural formats of lexical means of redundancy:

1. **Intra-lexical Redundancy:** Where a single phrase contains a modifier that simply restates a foundational property of the head noun (e.g., *"advance preview"*).
2. **Idiomatic Tautology:** Paired phrases that have become fossilized in the language as a singular unit, where both parts mean virtually the same thing (e.g., *"first and foremost"*).
3. **Grammatical-Lexical Blending:** Where a verb's prefix or root already contains a directional or spatial concept, but a separate adverb is added anyway (e.g., *"return back"*).

Each format is systematically analyzed based on how it affects cognitive load, semantic network activation, and information recovery during communication.

RESULTS AND DISCUSSION

The linguistic structural analysis demonstrates that lexical redundancy is a highly organized, rule-governed feature of natural language rather than a random occurrence. The structural expressions of this phenomenon can be systematized into four major functional mechanisms.

The first structural mechanism is Conceptual Pleonasm. This occurs when a noun is modified by an adjective that explicitly doubles its core, defining trait, as seen in expressions like *"a close-up profile"* or *"liquid water"*. The primary cognitive value of this category lies in processing acceleration. It serves to instantly prime the listener's internal semantic network, making the core concept immediately accessible without requiring deep contextual deduction.

The second mechanism manifests as Fossilized Binomials. This represents a structural approach where synonymous words are paired together with a conjunction to create a fixed idiomatic unit. Classic examples include *"peace and quiet"* or *"safe and sound"*. From a communicative standpoint, these structures offer immense rhythmic stabilization. They directly utilize the working memory's phonological systems, increasing both the stylistic impact of the utterance and its long-term recall potential.

The third format is identified as Directional Doubling. This occurs when a speaker uses an external adverb to explicitly restate the directional trajectory that is already inherently built into the main verb itself. Common everyday phrases such as *"ascend up"* or *"recede back"* fall under this umbrella. The functional utility of directional doubling is centered around visual anchoring. It provides an explicit spatial

orientation for the listener, which significantly minimizes cognitive ambiguity during rapid, dynamic descriptions.

Finally, the analysis marks the frequent occurrence of Emphatic Super-Redundancy. Unlike the previous semi-conscious structures, this category involves deliberate, highly conscious semantic duplication used for emotional or rhetorical scaling. Phrases like *"the absolute truth"* or *"totally complete"* serve as prime examples. The cognitive purpose here is attention gating; it acts as an explicit signal that flags the target information as a top priority within the listener's working memory. Through these four distinct pathways, redundant forms act as an evolutionary buffer, converting fragile individual words into highly resilient semantic packages.

The analytical findings indicate that language prioritizes successful understanding over raw brevity. To understand why lexical redundancy works so effectively, we can look at the human brain's architecture for storing words. The brain does not operate like a simple alphabetical dictionary; it is an associative network of semantic nodes. When a speaker utters a word, they don't just activate that single word—they send an electrical ripple across an entire web of related concepts.

When a listener hears a phrase like *"final outcome"*, both nodes fire in unison. Because the semantic fields of "final" and "outcome" overlap perfectly, they trigger an immediate cognitive reinforcement. If ambient noise cuts off the first half of the phrase, the second half carries enough semantic weight to allow the listener to automatically reconstruct the intended meaning. This predictive processing relieves the brain from having to work at maximum capacity during casual conversation.

In language learning and pedagogy, this phenomenon offers enormous benefits. Forcing students to memorize perfectly non-redundant, dry word lists runs contrary to human cognitive preferences. Research shows that language learners internalize vocabulary far better when it is delivered through "formulaic sequences" or lexical chunks. Lexical means of redundancy provide these exact chunks naturally. Learning a phrase like "*null and void*" as a single structural unit requires far less mental translation than trying to dynamically synthesize individual synonyms in real time.

However, a functional distinction must be drawn between optimal, communicative redundancy and stylistic clutter. Optimal redundancy provides a safety net for understanding and emphasis. In contrast, heavy, un-idiomatic clutter (such as "*The reason why is because...*") overloads the working memory without adding protective value or clarity. Therefore, the secret to fluent communication lies in embracing natural, idiomatic redundancy while avoiding chaotic over-packaging.

CONCLUSION

In conclusion, this research establishes that lexical means of redundancy are crucial assets for natural language processing, rather than stylistic mistakes. By examining these mechanisms through cognitive linguistics and information theory, it becomes clear that semantic overlap serves a vital protective purpose. It protects human speech from errors, accelerates understanding, and anchors vocabulary deep within long-term memory networks.

For educators and applied linguists, acknowledging the value of redundancy means shifting away from rigid, unnatural rules and moving toward teaching authentic, patterned collocations. Language is a tool

designed by humans, for humans. Because our attention, hearing, and cognitive processing are naturally limited, lexical redundancy is the essential bridge that makes real-time, fluent human conversation possible.

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