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### SEMANTIC ANALYSIS OF "THE CALL OF THE WILD"

Annotation

This research conducts a semantic analysis of Jack London's *The Call of the Wild*, examining its themes, character progression, and narrative techniques. By utilizing computational linguistic methods, we aim to reveal linguistic patterns that highlight the conflict between civilization and instinct, offering insights into the text's deeper meanings. Our findings enhance the understanding of how semantics influence reader engagement with the novel.

**Key words:** Semantic, analysis, text selection, methodology, literature review, analytical techniques, lexical analysis, sentimental analysis.

### СЕМАНТИЧЕСКИЙ АНАЛИЗ «ЗОВА ДИКОЙ»

Аннотация

В этом исследовании проводится семантический анализ романа Джека Лондона «Зов предков», изучая его темы, развитие персонажей и методы повествования. Используя компьютерные лингвистические методы, мы стремимся выявить лингвистические закономерности, которые подчеркивают конфликт между цивилизацией и инстинктами, предлагая понимание более глубокого смысла текста. Наши результаты улучшают понимание того, как семантика влияет на взаимодействие читателя с романом.

**Ключевые слова:** Семантика, анализ, подбор текста, методология, обзор литературы, аналитические приемы, лексический анализ, сентиментальный анализ.

### “YOVOYILIK CHAQIRIG‘I” ASARINING SEMANTIK TAHLILI

Annotatsiya

Ushbu tadqiqot Jek Londonning "Yovvoyilik chaqiruvi" asarining semantik tahlilini o'tkazadi, uning mavzulari, xarakterning rivojlanishi va hikoya qilish usullarini o'rganadi. Tahlil lingvistik usullaridan foydalangan holda, biz sivilizatsiya va instinkt o'rtasidagi ziddiyatni ta'kidlaydigan, matnning chuqur ma'nolari haqida tushuncha beradigan lingvistik shakllarni ochib berishni maqsad qilganmiz. Bizning topilmalarimiz semantikaning o'quvchining asarga bo'lgan qiziqishiga qanday ta'sir qilishini tushunishni kuchaytiradi.

**Kalit so'zlar:** Semantik, tahlil, matn tanlash, metodologiya, adabiyotlarni ko'rib chiqish, analitik usullar, leksik tahlil, sentimental tahlil.

**Introduction.** Semantic analysis has become an essential aspect of literary studies, offering a framework for scholars to quantitatively investigate the meanings and themes embedded within texts. As literature increasingly intertwines with technology, the ability to dissect and understand the linguistic elements of a narrative has opened new avenues for interpretation. Jack London's *The Call of the Wild* stands as a pivotal example of this intersection, presenting a rich tapestry of themes such as the conflict between civilization and primal instincts, the nature of survival, and the search for identity in a rapidly changing world.

Set against the backdrop of the Klondike Gold Rush, London's novel follows the transformation of Buck, a domesticated dog, as he is thrust into the harsh realities of the wilderness. This narrative not only reflects the historical context of the late 19th century but also delves into universal themes that resonate with readers across generations. By applying semantic analysis, this study seeks to uncover the deeper layers of meaning within the text, examining how linguistic choices contribute to character development and thematic cohesion. Previous research has underscored the significance of semantics in literary interpretation, emphasizing its role in shaping reader engagement and understanding (Jurafsky & Martin, 2019). This analysis aims to build on this foundation, employing both qualitative and quantitative methods to offer a comprehensive examination of *The Call of the Wild*.

In this exploration, we will investigate how the semantics of language reflect Buck's journey from a sheltered existence to one of raw survival, revealing insights into the human condition and our relationship with nature. The study is structured to include a literature review, methodology, in-depth semantic analysis,

discussion of findings, and a conclusion that encapsulates the broader implications of this research.

**Literature Review.** The realm of semantic analysis has grown with the development of computational linguistics. Key contributions include:

Jurafsky and Martin (2019), who provide an overview of natural language processing (NLP) techniques relevant to literary analysis, emphasizing semantics' role in narrative understanding.

Baroni and Lenci (2010), who discuss the significance of distributional semantics in capturing contextual meanings of words within literature.

Meyer (2020), highlighting how machine learning can enhance the analysis of narrative structures, revealing deeper insights into literary texts.

These foundational studies provide a basis for exploring how semantic analysis can illuminate the complexities of *The Call of the Wild*.

**Methodology.** This study employs a mixed-methods approach that integrates qualitative and quantitative analyses to conduct a comprehensive semantic analysis of Jack London's *The Call of the Wild*. The methodology is designed to provide a multifaceted understanding of the text, combining computational tools with traditional literary analysis to explore themes, character development, and narrative structure.

#### 3.1 Text Selection and Preparation

The first step in our methodology involved selecting the text for analysis. *The Call of the Wild* was chosen due to its rich thematic content and character complexity. The text was extracted in a clean format, ensuring that it was free from extraneous

elements such as annotations or footnotes that could interfere with analysis.

To focus our examination, key passages were identified, particularly from the opening and concluding chapters. These sections were chosen to analyze Buck's transformation and the thematic evolution throughout the novel. The text was then processed to create a corpus suitable for computational analysis.

### 3.2 Tools and Software

The analysis utilized several advanced computational linguistic tools:

**Natural Language Toolkit (NLTK):** This Python library was employed for a variety of tasks, including tokenization, part-of-speech tagging, and sentiment analysis. NLTK facilitated the breakdown of the text into manageable units for deeper examination.

**Spacy:** Another Python library used for its efficient entity recognition and syntactic parsing capabilities. Spacy allowed for the identification of named entities, which helped in analyzing the relationships between characters and their environments.

**Topic Modeling Software (e.g., Gensim):** This tool was used to implement latent Dirichlet allocation (LDA), a method that identifies themes by clustering words into topics based on their co-occurrence in the text. This approach provided insight into the recurrent themes present in Buck's journey.

### 3.3 Analytical Techniques

#### 3.3.1 Lexical Analysis

Lexical analysis was performed to examine the frequency and distribution of specific words and phrases throughout the text. This analysis helped in identifying the shifts in Buck's vocabulary as he transitions from a domesticated life to one governed by survival instincts. By comparing word frequency lists, we could observe significant changes in Buck's language, illustrating his evolving identity.

#### 3.3.2 Sentiment Analysis

Sentiment analysis was conducted to assess the emotional tone of selected passages. This technique involved categorizing segments of the text into positive, negative, or neutral sentiments. By analyzing the sentiment associated with Buck's experiences, we gained insights into how language reflects his internal struggles and transformations. This analysis was informed by established sentiment dictionaries, which provided a framework for categorization.

#### 3.3.3 Topic Modeling

Using topic modeling techniques, we identified the central themes of the novel by analyzing word clusters. This method revealed how certain topics—such as survival, instinct, and the natural world—emerge and evolve throughout the narrative. The results were visualized using coherence scores and word clouds, enabling us to interpret the prominence of different themes within the text.

#### 3.3.4 Discourse Analysis

In addition to computational techniques, qualitative discourse analysis was employed to examine the narrative structure and character interactions. This involved a close reading of selected passages to understand how London uses dialogue and descriptive language to convey character development and thematic depth. The interplay between Buck and other characters was scrutinized to highlight the novel's exploration of social hierarchy and the instinctual drive for survival.

### 3.4 Integration of Findings

The findings from the computational analyses were integrated with insights gained from qualitative discourse analysis to provide a comprehensive understanding of the text. By triangulating data from various methods, we aimed to construct a holistic view of how language and semantics contribute to the themes and character dynamics in *The Call of the Wild*.

This multi-faceted methodology not only enables a detailed exploration of Jack London's narrative but also serves as a model for applying semantic analysis to other literary works. The combination of computational and qualitative approaches allows for a richer interpretation of texts, fostering deeper

engagement with the complexities of literary language and meaning.

### Semantic Analysis of "The Call of the Wild"

#### Character Development

The semantic analysis uncovers distinct linguistic patterns in Buck's character transformation. Initially depicted as a domesticated animal, Buck's language conveys confusion and fear as he adapts to the wild. Selected passages demonstrate his internal struggle, revealing a transition in vocabulary from domesticity to survival-oriented language. This observation supports Woods (2018), who argues that language is essential in illustrating character growth.

#### Thematic Cohesion

Topic modeling identifies recurring themes in the novel, such as instinct, survival, and the allure of nature. For example, terminology associated with the wilderness becomes increasingly prevalent in later chapters, emphasizing Buck's connection to his primal instincts. This thematic progression aligns with Barker's (2021) view that London's narrative underscores the tension between civilization and innate instincts.

#### Language and Nature

The contrast between human civilization and the natural environment is clearly illustrated through the semantic choices made throughout the text. Descriptive passages regarding the wild are rich and evocative, while scenes depicting civilization feature stark, utilitarian language. This contrast enhances the reader's comprehension of Buck's struggle and echoes Smith's (2019) assertion that language plays a crucial role in thematic exploration.

**Discussion.** The findings from this semantic analysis underscore the idea that language and semantics are vital for grasping the narrative of *The Call of the Wild*. The results highlight how London's linguistic choices reflect the novel's themes, enriching the reader's experience. Nonetheless, limitations exist in computational analyses, especially in capturing nuanced cultural and emotional contexts (Gunning, 2019). This suggests the need for a balanced approach that fuses qualitative insights with quantitative data.

**Conclusion.** This study has demonstrated the profound impact of semantic analysis in revealing the complexities embedded within Jack London's *The Call of the Wild*. By systematically examining the linguistic patterns, character development, and thematic elements of the novel, we have uncovered significant insights that enhance our understanding of London's narrative techniques. The analysis illustrates how Buck's transformation from a domesticated pet to a creature of the wild is intricately tied to the language used throughout the text, emphasizing the tension between civilization and instinct that is central to the story.

The findings highlight the critical role of semantics in shaping not only the reader's engagement but also the emotional depth of the narrative. By tracing the evolution of language associated with Buck, we gain a clearer perspective on the universal themes of survival, identity, and the intrinsic connection between humans and nature. This research aligns with existing literature that emphasizes the importance of language in literary analysis, further establishing semantic analysis as a valuable tool in understanding literary texts.

Furthermore, this study opens the door for future research to explore other literary works through the lens of semantic analysis, particularly in examining how language shapes thematic elements and character arcs. The insights garnered from *The Call of the Wild* can be applied to various texts, enriching the discourse on the relationship between language and literature. As we continue to explore the intersection of technology and literary studies, the potential for deeper insights into narrative structures and meanings remains vast and promising. Ultimately, this research not only deepens our appreciation for Jack London's work but also underscores the ongoing relevance of semantic analysis in literary scholarship.

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