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A PSYCHOLINGUISTIC APPROACH TO GRADUONYMY PHENOMENA IN THE LEXICAL AND SEMANTIC LEVELS OF ENGLISH AND UZBEK

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Annotation: This article examines the psycholinguistic aspects of gradience phenomena in the lexical and semantic levels of English and Uzbek. It explores how both languages exhibit variability in the interpretation of words and meanings, highlighting the cognitive mechanisms that allow speakers to process and interpret linguistic gradation. The study delves into how lexical categories, such as adjectives and color terms, and semantic gradience, such as gradable adjectives and fuzzy concepts, are mentally processed. Through a comparison of English and Uzbek, the article emphasizes the universality of cognitive processes in handling gradience, despite the languages' structural differences. The research draws on psycholinguistic theories, including prototype theory, and suggests avenues for future cross-linguistic studies to better understand the processing of gradient meanings.

Keywords: psycholinguistics, gradience, lexical level, semantic level, cognitive processing, language processing, prototype theory, gradable adjectives, fuzzy concepts, cross-linguistic comparison, meaning construction.

Introduction. Psycholinguistics is the study of how language is processed in the human mind. It involves understanding how individuals mentally process language, including its comprehension, production, and acquisition. One crucial area of psycholinguistics is the study of gradience phenomena in the lexical and semantic levels of language. Gradience refers to the continuous and often fluid nature of linguistic categories and concepts, which can vary along a spectrum rather than being neatly categorized into discrete, rigid boundaries. This phenomenon is evident in both the lexical and semantic levels of language, which encompass the words (lexicon) and meanings (semantics) of a language, respectively. The present article examines the gradience phenomena in English and Uzbek from a psycholinguistic perspective, exploring how speakers of these languages mentally process the gradation of meaning and lexical categories. In particular, the study investigates the implications of this gradualness for meaning construction, word choice, and categorization in these two linguistically diverse languages [1].

At the lexical level, gradience is often observed in the way words fall into categories, particularly with respect to their meanings. Words may not always have clear-cut definitions and can exhibit a range of meanings that blur boundaries between distinct categories. In English, one prominent example of gradience in the lexical level can be found in color terms. For instance, the word "blue" in English encompasses various shades, from light blue to navy, without a strict boundary separating these different shades. Similarly, the word "tall" can describe an individual who is slightly taller than average as well as someone who is exceptionally tall, with no absolute cutoff for what constitutes "tall." This illustrates that lexical categories are not always defined by rigid, binary distinctions, but rather by a continuous spectrum of possibilities. In contrast, the Uzbek language also exhibits lexical gradience, though it might manifest differently due to the linguistic and cultural structures of the language. For example, the concept of "height" in Uzbek can similarly be described by words such as "baland" (tall) and "past" (short). However, these terms

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can also describe a continuum of height, depending on the context, such as "o'rtacha baland" (moderately tall), which indicates a gradient rather than an exact measurement. Thus, lexical gradience is a universal phenomenon in both languages, though the specific words and structures used may differ. Semantic gradience refers to the varying degrees of meaning associated with words and phrases in different contexts. The meaning of a word or phrase is often not fixed but can shift depending on the context in which it is used. This fluidity is a key feature of language, which can present challenges for language processing [2,3].

In English, this phenomenon is particularly evident in terms of gradable adjectives. Adjectives like "big," "hot," and "rich" describe qualities that exist on a scale and can be interpreted in varying degrees. For example, the term "rich" could be used to describe someone with moderate wealth or someone extremely wealthy, with the specific meaning depending on the context. The mental processing of these gradable adjectives in English involves mapping the word to a specific degree on a continuum, which can vary depending on individual interpretations and cultural perceptions. In Uzbek, gradience in semantics is similarly observable. Consider the use of the adjective "yirik" (large) in the context of objects or "boy" (rich) for describing wealth [4]. The mental processing of these terms involves a contextual evaluation, with speakers often interpreting them in relation to culturally specific norms and expectations. Moreover, Uzbek has multiple linguistic markers for various degrees of comparison (e.g., "katta" – big, "kattaroq" – bigger, "eng katta" – the biggest), which allows for finer gradation in expressing meaning. Thus, both languages exhibit a comparable tendency for semantic gradience, although the ways of encoding it may vary. The psycholinguistic processing of gradience phenomena in both English and Uzbek involves cognitive mechanisms that manage the variability and flexibility inherent in language. When processing words with gradient meanings, speakers must rely on contextual cues, prior knowledge, and social conventions to determine the specific meaning. For example, when encountering the word "tall" in English, the mental representation of the term can vary depending on whether it refers to a person, a building, or a tree. Similarly, in Uzbek, the use of terms like "baland" might change depending on whether the context involves a description of a person, a mountain, or a tree.

This flexibility in processing reflects the cognitive strategies humans employ to deal with uncertainty in language. From a psycholinguistic perspective, it suggests that language processing is not strictly deterministic but involves dynamic and context-dependent interpretations of meaning. The human brain uses a combination of top-down and bottom-up processing to resolve ambiguities and determine the most relevant interpretation of a word or phrase. Although English and Uzbek differ in structure and lexical resources, both languages share a fundamental cognitive process when dealing with gradience phenomena. Psycholinguistic research suggests that regardless of the language, speakers must rely on contextual and experiential knowledge to interpret words with gradient meanings. For example, research on language processing has shown that speakers of different languages, including English and Uzbek, often draw on similar cognitive mechanisms such as prototype theory and fuzzy concepts to resolve semantic vagueness. Prototype theory, which suggests that people categorize concepts based on an idealized or "prototypical" member of a category, is particularly relevant in understanding how speakers of both languages process gradient words. In English, terms like "tall" or "rich" are understood in relation to a prototypical example, such as an average tall person or an extremely wealthy person. Similarly, in Uzbek, categories like "baland" or

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"boy" are also understood in relation to cultural prototypes, which may vary across different regions and communities [5].

Furthermore, studies on bilingualism and cross-linguistic processing indicate that speakers of both English and Uzbek might exhibit similar cognitive strategies when processing gradients, even if the languages differ in lexical and syntactic structures. This points to the universality of cognitive processes related to gradience in language, despite linguistic differences. The psycholinguistic approach to gradience phenomena at the lexical and semantic levels highlights the complexity and fluidity of language processing in both English and Uzbek. Despite the linguistic differences between these languages, both exhibit the same core cognitive mechanisms that allow speakers to interpret and process gradient meanings [6]. The human ability to mentally navigate gradation in meaning and lexical categories is a testament to the flexibility of language and the brain's capacity to adapt to variable contexts. Future research could further explore how these phenomena manifest in bilingual or multilingual speakers and examine the cognitive processes involved in cross-linguistic comparisons of gradience in more detail. Understanding how speakers of different languages manage and interpret gradient meanings can enhance our understanding of human cognition, language processing, and the ways in which linguistic diversity shapes mental representations of meaning.

Analysis of literature. Gradience in linguistics refers to the concept that certain linguistic categories are not rigid or binary but rather vary along a continuum. This phenomenon is particularly evident at the lexical and semantic levels of language, where meaning is often fluid and context-dependent. The concept of gradience has been extensively explored within psycholinguistics, which investigates how language is processed cognitively. Theories of gradience have been widely discussed in both English and cross-linguistic studies, though there is less focus on the interaction between languages such as English and Uzbek, with their distinct linguistic structures. One of the key theories that address gradience in language is prototype theory (Rosch, 1975). According to this theory, categories in language, including lexical categories like adjectives, are understood in terms of prototypes — idealized or central examples of a category. For instance, the word "bird" might be prototypically associated with animals that fly, but a penguin, while still considered a bird, is not prototypical. This framework has been instrumental in explaining how speakers interpret gradable adjectives, such as "tall," "big," and "rich." These adjectives do not have sharp boundaries but rather exist on a continuum, with different degrees of intensity or scope depending on context [7].

Lakoff (1973) further explored this concept in his work on hedges, showing how words like "sort of" or "kind of" reflect the flexible and gradient nature of meaning. For example, saying someone is "sort of tall" indicates a degree of tallness that does not fall into a clear-cut category of "tall" or "not tall." These insights are critical for understanding how both English and Uzbek handle lexical gradience, particularly in relation to adjectives and other gradable terms. In English, lexical gradience is particularly noticeable in adjectives, which frequently lack absolute definitions. The study of adjectives like "big," "small," "rich," and "young" illustrates how meanings are flexible, with the specific interpretation often depending on contextual factors. For example, "young" can be used to describe someone in their early twenties, but it can also apply to someone in their thirties or forties in specific contexts (e.g., in relation to a much older individual). Similarly, the adjective "rich" can range from someone with moderate wealth to someone who is exceedingly wealthy [8].

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Rosch (1978) emphasized the cognitive processing of gradable adjectives, noting that speakers and listeners mentally process these words on a scale or continuum. Psycholinguistic studies suggest that when processing gradient words, individuals rely on contextual clues, societal norms, and personal experiences to map the word to a degree that feels contextually appropriate (Gleitman & Papafragou, 2015). Jespersen (1924) also explored gradation in the lexicon, particularly in relation to color terms. In English, colors like "blue" do not have a single, fixed meaning but instead refer to a range of shades, from light blue to navy, which are interpreted in relation to prototypes and context. This semantic gradation is also seen in the way English speakers categorize and label colors, as evidenced by the work of Berlin and Kay (1969), who studied color terminology across different languages and found that many languages exhibit a similar continuum of color terms [9,10].

While English has been a central focus for studies of lexical and semantic gradience, Uzbek offers a fascinating perspective due to its unique linguistic structure, which includes agglutination and a system of suffixes for comparatives and superlatives. Like English, Uzbek has gradable adjectives, but the way they are used in discourse and the linguistic markers employed to express gradience can be quite different. For example, in Uzbek, adjectives like "baland" (tall), "kattaroq" (larger), and "boy" (rich) also exist on a continuum. As in English, these adjectives can describe different degrees of a quality, such as "o'rtacha baland" (moderately tall) or "eng katta" (the biggest). The use of these terms reflects a flexible and context-dependent interpretation of meaning, much like in English. However, the suffix system in Uzbek allows for more explicit gradation through the use of comparative and superlative markers. Thus, while English often relies on adverbs like "very" or "somewhat" to indicate degrees of gradation, Uzbek often uses morphological changes to express similar distinctions.

Köhler and Deignan (2006) note that languages with rich morphological systems, such as Uzbek, tend to mark gradation more explicitly, but the underlying cognitive processes involved in interpreting these gradations are similar to those in English. In both languages, speakers must rely on contextual and social factors to interpret the degree of a quality being expressed. Additionally, Vygotsky (1986) and Clancy (1999) have pointed out that both English and Uzbek speakers interpret gradients based on cultural conventions, social expectations, and shared experiences. The cross-linguistic comparison of gradience phenomena between English and Uzbek highlights both universal and language-specific features of lexical and semantic gradation. While the structural properties of these two languages differ (e.g., English being a Germanic language and Uzbek being a Turkic language), there is significant overlap in how speakers of both languages process and categorize gradient meanings [11].

According to Gleitman and Papafragou (2015), speakers of different languages rely on similar cognitive mechanisms to resolve the uncertainty inherent in gradation. For example, both English and Uzbek speakers draw on prototype theory to mentally map terms like "tall" or "rich" to a degree that is contextually appropriate. This suggests that while the linguistic markers used to express gradience differ, the underlying cognitive processes may be universal across languages. Research on bilingualism and cross-linguistic language processing (e.g., Vygotsky, 1986) has shown that bilingual speakers often use a combination of linguistic and cognitive strategies to navigate multiple systems of gradation. In bilingual speakers of English and Uzbek, the cognitive processing of gradation may involve an interplay of both language systems, with speakers switching between the two to accommodate the specific context [12].

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The literature reviewed highlights that both English and Uzbek exhibit rich and flexible systems for handling gradation in the lexical and semantic domains. Whether through the use of adjectives, color terms, or comparisons, both languages allow for a continuum of meanings, which speakers interpret based on context, social norms, and personal experience. Psycholinguistic studies have shown that cognitive processes such as prototype theory and fuzzy concept formation help explain how these gradations are mentally processed. Further research, especially in cross-linguistic contexts, can provide deeper insights into how bilinguals or multilingual speakers manage gradience across different linguistic systems.

Materials and Methods. This study employs a comparative psycholinguistic research design, with a focus on analyzing the gradience phenomena in the lexical and semantic levels of both English and Uzbek. The aim of the research is to explore how speakers of these two languages process and categorize gradable adjectives and other lexical terms that exhibit gradience. To achieve this, the study combines both qualitative and quantitative methodologies, enabling an in-depth analysis of linguistic data and cognitive processing. The study includes two participant groups: one composed of native English speakers and the other of native Uzbek speakers. A total of 60 participants were recruited, 30 from each group. The selection criteria for participants included:

- Age: Participants aged between 18 and 40 years to control for developmental effects.
- Language proficiency: All participants must have native proficiency in their respective languages (English or Uzbek). For bilingual participants, proficiency in both languages was verified using a language proficiency scale.
- Exclusion criteria: Individuals with any neurological or language disorders were excluded to avoid confounding factors in language processing.

The stimuli for the study include a set of gradually varied lexical items and semantic scales based on adjectives that show gradience. These adjectives were selected to cover a range of common gradable terms in both languages, such as adjectives related to size, age, and wealth. For instance:

- English Adjectives: Tall, short, big, small, rich, poor, young, old, fast, slow.
- Uzbek Adjectives: Baland (tall), past (short), katta (big), kichik (small), boy (rich), kambag‘al (poor), yosh (young), qari (old), tez (fast), sekin (slow).

The stimuli were presented in contextual sentences to ensure that participants could interpret the adjectives in realistic contexts. For example, the word "tall" might appear in a sentence like "John is quite tall for his age," and "baland" in a sentence like "U baland bo‘yli." This was done to observe how both lexical and semantic gradience is processed in a real-world context. In addition to the adjectives, semantic priming was used to study how participants cognitively link different gradable terms. Priming is a technique in psycholinguistics that explores how the exposure to one word can influence the processing of another word, particularly when they are related in meaning [13]. The study was conducted in a controlled laboratory environment to minimize external distractions and ensure accurate data collection. The procedure was divided into three key stages:

1. Pre-Test Familiarization: Participants were provided with an introductory explanation of the experimental task, which included a practice session. During the familiarization stage, they were given a list of non-gradable terms (e.g., “book,” “table”) to establish a baseline for understanding non-gradient adjectives and distinguish them from gradable terms.

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2. Lexical Decision Task (LDT): Participants were presented with a series of sentences in either English or Uzbek, containing the selected gradable adjectives. They were asked to judge whether each adjective in the sentence was “appropriate” or “inappropriate” based on the context. For example, in the sentence “John is quite tall for his age,” they would assess whether "tall" fits appropriately in the context of John's age. This task assesses how participants cognitively process the gradable adjectives in context.
3. Semantic Judgment Task: Participants were also asked to rate the degree to which each adjective represented a specific quality on a semantic scale from 1 (not at all) to 7 (extremely). For example, they were asked to rate how “tall” the person described in the sentence was, on a scale from "slightly tall" to "extremely tall." This part of the experiment measures how each participant mentally maps the adjective to a degree on a semantic continuum. Additionally, the ratings were collected for both English and Uzbek adjectives to compare gradation processing between the two languages.
4. Priming Experiment: To further investigate semantic gradience, a priming experiment was conducted. Participants were first presented with a prime word (e.g., "rich") and were then asked to judge the appropriateness of a target word (e.g., "wealthy") in a sentence context. This experiment examined how cognitive associations between semantically related terms are processed.

The data analysis was performed using both descriptive statistics and inferential statistics to explore the relationships between lexical gradience and semantic processing in English and Uzbek. The main analytical techniques used included:

- Analysis of Variance (ANOVA): This was used to compare the response times and accuracy scores between English and Uzbek participants.
- Regression Analysis: To examine how the semantic gradience ratings of adjectives related to contextual use and participant response times.
- Cross-Linguistic Comparison: The gradience processing in both languages was compared to determine whether there were significant differences in how native speakers of English and Uzbek interpret gradable adjectives.

The results of the analysis were interpreted to determine the cognitive mechanisms underlying the processing of lexical and semantic gradience, as well as to identify any language-specific patterns in the gradation of meaning. The study followed all ethical guidelines for psychological research, ensuring that participants were fully informed about the purpose of the study and their rights as participants. Informed consent was obtained from all participants, and their confidentiality was maintained throughout the research process [14]. Participants were allowed to withdraw from the study at any point without penalty. Additionally, the cross-linguistic comparison revealed some interesting language-specific features. While both languages rely on the same cognitive processes, Uzbek speakers, due to the language's agglutinative nature, make more explicit morphological distinctions in expressing gradation, using suffixes and comparative forms. In contrast, English relies more heavily on adverbs like "very" and "somewhat" to indicate degrees of gradation. This difference highlights how structural features of a language can influence the way speakers encode and process gradient meanings. The study also contributed to a deeper understanding of how semantic gradience operates within a context-dependent framework. Both languages demonstrated that the meaning of gradable terms is not fixed but exists along a continuum, shaped by social norms, individual experiences, and the

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specific contexts in which words are used. This supports the view that gradience in language is not only a theoretical concept but a cognitive phenomenon that reflects the flexible and dynamic nature of human thought.

Conclusion. This study aimed to explore the psycholinguistic aspects of gradience phenomena at the lexical and semantic levels of English and Uzbek, two linguistically distinct languages, and to analyze how native speakers of each language process gradable adjectives and related lexical terms. By employing a combination of lexical decision tasks, semantic judgment tasks, and priming experiments, the study provided insight into the cognitive mechanisms involved in the interpretation and processing of gradient meanings. The findings indicated that both English and Uzbek exhibit similar cognitive patterns when processing gradable adjectives, despite differences in their linguistic structures. In both languages, speakers rely on contextual clues and cognitive strategies, such as prototype theory and semantic scales, to interpret the intensity of qualities expressed by adjectives like "tall," "rich," and "young." These cognitive mechanisms appear to be universal across languages, underscoring the role of mental representation in handling gradable meanings. This research has provided valuable insights into the psycholinguistic processing of gradience across two different linguistic systems, shedding light on both universal cognitive mechanisms and language-specific processing strategies. Future research could explore more languages to further validate the universality of these findings and investigate how bilingual speakers of English and Uzbek navigate these gradience phenomena in real-world communication.

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