Semantic Evolution of Color Perception Vocabulary in English and Uzbek

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Annotation *This article examines the diachronic evolution of color perception vocabulary in English and Uzbek, two linguistically and culturally distinct languages. By tracing historical shifts and expansions in color terminology, we reveal how each language developed its set of basic color terms and extended meanings. We explore cultural and anthropological dimensions – for instance, how English and Uzbek communities imbue colors with symbolism (white for purity, black for mourning, etc.) – and how such associations influence linguistic structure. The study also analyzes metaphorical usages (e.g., blue for sadness in English, oq yo'l "white path" for a blessed journey in Uzbek), etymologies of color terms (such as orange from the fruit in English, or jigarrang "liver-colored" for brown in Uzbek), and the functional roles of color terms in discourse. The findings underscore that while English and Uzbek followed universal patterns in color-term development, each language's color lexicon evolved under unique cultural influences.*

Keywords *Color semantics, diachronic linguistics, English language, Uzbek language, cultural linguistics, metaphor, etymology, anthropological linguistics*

Историко-сравнительный анализ эволюции перцептивной лексики в английском и узбекском языках

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Аннотация *В статье рассматривается диахроническая эволюция лексики цветового восприятия в английском и узбекском языках, принадлежащих к разным языковым семьям и культурам. Прослеживая исторические изменения и расширение цветовой терминологии, мы показываем, как каждый язык сформировал свой набор базовых цветовых терминов и производных значений. Особое внимание уделяется культурным и антропологическим аспектам – например, тому, как англоязычное и узбекоязычное сообщества наделяют цвета символическими значениями (белый – чистота, черный – траур и др.) – и влиянию этих ассоциаций на языковую структуру. В исследовании также анализируется метафорическое употребление цветов (например, blue – печаль в английском, oq yo'l «белая дорога» – благословенный путь в узбекском), этимология цветообозначений (таких как orange от названия фрукта в английском или jigarrang «печеночный цвет» для обозначения коричневого в узбекском) и функциональная роль цветовой лексики в речи. Результаты подчеркивают, что, несмотря на следование универсальным моделям развития*

цветовой терминологии, цветовая лексика каждого языка эволюционировала под влиянием уникальных культурных факторов.

Ключевые слова *Цветовая семантика, диахроническая лингвистика, английский язык, узбекский язык, лингвокультурология, метафора, этимология, антропологическая лингвистика*

Ingliz va o‘zbek tillarida perseptiv leksikaning evolyutsiyasi bo‘yicha tarixiy-qiyosiy tahlil

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Annotatsiya *Ushbu maqolada ingliz va o‘zbek tillarida rang idrokiga oid lug‘at tarkibining tarixiy (diaxron) rivojlanishi tahlil qilinadi. Tarixiy davrlarda rang atamalarining o‘zgarishi va kengayishini kuzatish orqali har bir til asosiy rang nomlari tizimini qanday shakllantirgani va ularning ma’nolarini kengaytirganini ko‘rsatamiz. Shuningdek, madaniy va antropologik o‘lchamlarga e’tibor qaratiladi – masalan, ingliz va o‘zbek jamiyatlarida ranglar ramziy ma’no kasb etishi (oq – poklik, qora – motam va hokazo) – va bunday bog‘lanishlarning til tuzilishiga ta’siri. Tadqiqot shuningdek rang so‘zlarining metaforik qo‘llanilishini (masalan, ingliz tilida blue – g‘am, o‘zbek tilida oq yo‘l – omad tilash ma’nosida), rang atamalarining etimologiyasini (masalan, ingliz tilida orange meva nomidan, o‘zbek tilida jigarrang – jigarning rangi ma’nosida) hamda rang terminlarining nutqdagi funksional vazifalarini tahlil qiladi. Natijalar shuni ko‘rsatadiki, ingliz va o‘zbek tillari rang nomlarini shakllantirishda umumiy universal qonuniyatlarga bo‘ysungan bo‘lsa-da, har bir tilning ranglar lug‘ati o‘ziga xos madaniy ta’sirlar ostida taraqqiy etgan.*

Kalit so‘zlar *Rang semantikasi, diaxron tilshunoslik, ingliz tili, o‘zbek tili, lingvokulturologiya, metafora, etimologiya, antropologik tilshunoslik*

Introduction

Color terminology is a fundamental component of language and thought, mediating between visual perception and cultural experience. The study of color terms has long been a focal point in linguistic anthropology and cognitive linguistics, notably since Berlin and Kay’s seminal work *Basic Color Terms: Their Universality and Evolution* (1969). One striking finding is that languages tend to develop color vocabulary in a common sequence: if a language has only three basic color terms, they denote black, white, and red; with additional terms, green or yellow emerges next, then blue, and so forth. Languages like English, which have a full palette of basic color names, and Uzbek, a Turkic language with rich cultural influences, both exemplify this universal pattern while also reflecting unique historical paths.

This article provides a narrative comparative analysis of how English and Uzbek color vocabularies evolved over time (diachronic development), and how cultural and anthropological factors have shaped the semantics of color in each language. We examine etymology and historical shifts in meaning – for example, how English *orange* arose from a fruit name, or how Uzbek *binafsha* (purple) was borrowed from Persian. We also explore linguistic structures like metaphor and idiom: both languages use color terms figuratively to express emotions and social meanings (e.g., *seeing red* in anger, or Uzbek *qora kun* "black day" for tragedy). By drawing on research from both Western and Uzbek scholars – including works published in Uzbekistan's *Lingvospektr* journal – we aim to illuminate the interplay between color, language, and culture in these two linguistic traditions.

Diachronic Evolution of Color Terms in English

English color terminology has expanded over many centuries, absorbing influences from various languages and cultures. Old English (spoken until the 12th century) had a limited set of basic color words, largely inherited from Proto-Germanic. Terms for *white* (*hwīt* in Old English) and *black* (*blæc* or *sweart*) are ancient and derive from Proto-Indo-European roots meaning "bright, shining" and "burned" respectively. The word *red* (*rēad* in Old English) likewise comes from a deep Proto-Indo-European root (*reudh-*), which is why cognates like German *rot* and French *rouge* sound similar. Words for *yellow* (*geolu* in Old English) and *green* (*grēne*) also date back to Proto-Indo-European origins associated with shining light (*ghel-*) and growing plants, respectively. By the medieval period, English had at least six basic color terms (black, white, red, yellow, green, and *blue*) – a stage consistent with Berlin & Kay's hierarchy. Notably, the term *blue* in English was a relative latecomer; Old English used words like *hǣwen* or descriptive phrases, and after the Norman Conquest the French word *bleu* (Modern English *blue*) entered common usage. The delayed prominence of *blue* is reflected in historical texts – famously, Homer's ancient Greek described the sea as "wine-dark" rather than naming it blue, hinting at how some cultures lacked a distinct term for that hue.

As English absorbed influences and expanded its lexicon, new color terms emerged. The word *brown* comes from Old English *brún*, originally meaning a dark or dusky hue (sometimes overlapping with red or black). In Middle English, additional terms were adopted or coined to cover gaps in the spectrum. *Orange* is a classic example: English speakers had no single word for the color orange until the fruit *orange* was imported and its name (from Sanskrit *nāraṅga* via Persian/Arabic and French) was applied to the color in the 16th century. Before that, people described orange things as "yellow-red" (*geoluhread* in Old English). Similarly, *purple* comes from Latin *purpura* (Greek *porphura*), the dye obtained from shellfish in antiquity; the term entered Old English as *purpul*, referring originally to the royal purples worn by nobility. *Grey* (Old English *grǣg*) remained a stable term through the ages, while *pink* and *violet* were later additions: *violet* was borrowed from French (ultimately Latin *viola*, the violet flower), and *pink* was adopted in the 17th century from the name of a flower (the pinks of the genus *Dianthus*). The etymological patchwork of English color terms – Germanic roots for basic hues and French/Latin borrowings for others – reflects the layered history of English. By the modern era, English has eleven basic color terms (black, white, red, green, yellow, blue, brown, orange, pink, purple, gray), each with a distinct lexical status and rich set of shades and derivatives. This full set places English in the highest stage (Stage VII) of color terminology complexity.

Diachronic Evolution of Color Terms in Uzbek

The Uzbek language, belonging to the Turkic family, inherited a core set of color terms from Proto-Turkic and subsequently incorporated new terms through cultural contact. Early Turkic languages had basic color words paralleling many universal categories: e.g., *oq* (white), *qora* (black), *qizil* (red), *sariq* (yellow), *yaşil* (green), and *ko'k* (blue). These native Uzbek terms remain the primary words for basic colors today and show Turkic roots – for instance, *oq* and *qora* correspond to Old Turkic *ak* and *qara*, and *qizil* (red) is found across Turkic languages. Historically, Uzbek was heavily influenced by Persian and Arabic during the medieval period (Chagatai literature era), which enriched its color vocabulary. Classical literature often featured Persian color words alongside Turkic ones: for example, *surx* (from Persian *surkh*, red) and *sabz* (Persian for green) appeared in poetic contexts, and the Arabic loan *siyoh* was sometimes used for black. One striking case is the term *axzar* (from Arabic *akhḍar*, green) noted in older Uzbek texts, illustrating how multilingual heritage contributed synonyms or nuanced alternatives for basic colors. Over time, however, the everyday Uzbek lexicon favored the Turkic set (oq, qora, qizil, etc.), while Persian/Arabic variants became markers of poetic or formal style.

In the 19th–20th centuries, Russian influence (during the Tsarist and Soviet periods) introduced additional color terms and concepts. Some Russian color words entered colloquial Uzbek, especially in urban settings or technical contexts – for instance, *rozoviy* (from Russian *rozovyi*, pink) came into use alongside the existing term *pushti*. (*Pushti*, meaning pink, itself was borrowed from Persian). Likewise, the Russian *fioletoviy* (violet/purple) was known, though Uzbek had *binafsha* from Persian *banafsha* (violet flower) for purple. In modern Uzbek, the basic color inventory has expanded to cover eleven categories, analogous to English. A recent study identifies 11 basic color terms in Uzbek: *oq* (white), *qora* (black), *qizil* (red), *yashil* (green), *sariq* (yellow), *ko'k* (blue), *jigarrang* (brown), *binafsha* (purple), *pushti* (pink), *kulrang* (gray), and *to'q sariq* (orange). Notably, some of these are compound or derived forms: *jigarrang* literally means "liver-color" (jigar = liver, rang = color) referring to brown, *kulrang* means "ash-color" for gray, and *to'q sariq* means "dark yellow" for orange. The inclusion of such terms indicates that Uzbek has reached the same Stage VII of color terminology as English, even if a few terms are structurally two words. Indeed, Uzbek linguists confirm that Uzbek now possesses a full spectrum of basic color lexemes, aligning with the universal developmental sequence. This development was fueled by both internal word-formation (e.g., *qizg'ish* for "reddish" from *qizil*) and external borrowing (e.g., *binafsha* from Persian, *kulrang* partly from Russian "kul" for ash). Through centuries of contact with Persian, Arabic, and Russian cultures, Uzbek's color vocabulary grew from a Turkic core to a richly layered system. Each addition carried new semantic nuances, reflecting historical shifts in trade (introducing new dyes and pigments), technology, and cultural life in Central Asia.

Cultural and Anthropological Dimensions of Color Semantics

Color terms in both English and Uzbek are deeply embedded in cultural context and carry significance far beyond mere description of visual hues. Cultural values, traditions, and even religious beliefs influence how colors are perceived and what they symbolize in each society. In English (broadly reflecting Western culture), *white* is associated with purity and innocence (brides wear white dresses to symbolize virginity or new beginnings), while *black* often signifies death, mourning, or evil (e.g., the custom of wearing black to funerals, the metaphor "black magic" for dark sorcery). *Red* can denote both positive and negative concepts: it often stands for passion, love, or courage (red

roses, hearts, "red-blooded"), but also danger and alarm (red flags, stop lights, "code red"). *Green* in English has strong ties to nature and freshness (environmentalism is symbolized by green), yet it also embodies envy and inexperience ("green with envy," "a greenhorn"). *Blue* in Western symbolism tends to represent calm and sadness (the idiom "feeling blue" for melancholy), and *purple* historically signifies royalty and luxury (due to the rarity of purple dye). These associations demonstrate how English color vocabulary is intertwined with centuries of cultural connotation and metaphor.

Uzbek culture, while having some universal overlaps (white for purity, black for sorrow), showcases its own distinctive color symbolism shaped by local tradition and Islamic heritage. Ethnolinguistic studies by Uzbek scholars (including contributors to *Lingvospektr*) highlight that in Uzbek: **oq** (white) symbolizes purity, goodness and new beginnings, and it is prominently featured in rites of passage – for example, Uzbek brides traditionally wear white, and offering someone *oq yo'l* ("white road") is a way to wish them a blessed, fortunate journey. **Qora** (black) is associated with mourning, misfortune and evil; people wear black at funerals, and phrases like *qora kun* ("black day") signify tragic times. **Qizil** (red) in Uzbek denotes vitality and life but also danger and urgency; it appears in the national flag's design and traditional textiles as a vibrant life-affirming color, yet a warning sign might be called *qizil signal* just as a red light means stop. **Yashil** (green) carries strong sacred meaning due to Islam – green is considered the color of Islam and paradise, representing prosperity and nature's abundance. This is evident in the Uzbek phrase *yashil bayroq* (green flag) symbolizing Islamic identity, and the reverence for green in artistic motifs. **Sariq** (yellow) is linked to sunlight, gold, and the harvest; in Uzbek folklore yellow fields of wheat symbolize wealth and plenty. One Uzbek idiom says someone's face "turned yellow" (*yuzi sariq bo'ldi*) to indicate illness, much as in English a "yellow" complexion indicates sickness – a likely universal physiological association.

Anthropologically, these color meanings are influenced by each culture's environment and history. Uzbekistan's agrarian life and bright natural dyes (e.g., from flowers, plants) meant that colors like green and yellow were readily appreciated and named with positive connotations (green for fertile land, yellow for ripe grains). The prevalence of blue in textiles depended on trade (lapis lazuli and indigo dye were prized – the word *ko'k* also means "sky" and by extension "blue"). In contrast, English-speaking cultures in Northern Europe had abundant green landscapes (hence a clear word for green early on) but encountered vibrant orange dyes later, which explains why *orange* as a concept arrived late via trade. Religious and political history also play a role: English use of *orange* vs. *green* carries historical resonance in contexts like Irish history (Orange Order vs. Irish green), while in Uzbek, *red* carried Soviet ideological meanings in the 20th century (the word *qizil* was associated with the Red Army or communism). Even so, many color meanings are shared cross-culturally or have analogues – an insight supported by comparative linguistics research. For instance, as Djalilova and Khamidova (2025) observe, Uzbek color idioms encapsulate social status and emotions much like English ones do. Both languages ultimately use color as a social and psychological language, encoding worldview into color terms (a concept sometimes called the "color picture of the world" in linguistic studies).

Metaphor, Etymology, and Functional Use of Color Terms

Color terms are highly productive in metaphorical expressions and idioms, allowing speakers to convey abstract ideas vividly. In English, everyday speech abounds with such metaphors: *to see red* means to become very angry, *to feel blue* means to be sad, and *green*

with envy denotes jealousy. A person can be *green* (inexperienced), tell a *white lie* (harmless lie), or have a *black heart* (evil nature). These expressions illustrate how English uses color lexicon to map human emotions and moral qualities onto the color spectrum. Many of these metaphors draw on intuitive cultural associations (e.g., red with the heat of anger or danger, green with naiveté or the sickly look of jealousy, white with innocence). Over time, some color terms even shifted meaning through metaphorical extension—*gray* can describe an unremarkable personality or moral ambiguity (a "gray area"), and *blue* can signify obscenity (as in "blue joke") in certain contexts due to an old association of blue with ribald content. The flexibility of color words in discourse makes them tools for rich imagery and nuance.

Uzbek also employs color metaphors extensively, reflecting its own cultural context. We have mentioned **oq ko'ngil**, literally "white heart," which is an Uzbek way to describe someone as pure-hearted or kind. Here, *white* aligns with goodness and sincerity, much as in English. Another common phrase is **yurakda qora tun**, "a black night in the heart," used to describe deep sorrow or grief. The darkness of night (qora tun) inside one's heart poignantly conveys despair. **Qora niyat** ("black intention") means evil intent, while **oq yo'l** ("white road") is a warm send-off wish, meaning "may your journey be blessed". Interestingly, **yashil** (green) in Uzbek can imply youth or rawness – for example, a phrase like "yashil edi" might be used to say someone was green (young and inexperienced), which parallels the English metaphor of a "green" newbie. In Uzbek proverbs and folk expressions, colors also link to social status and moral lessons: a *qora kiyim* (black clothing) may symbolize humility or mourning depending on context, and *oq rizq* ("white sustenance") can imply honest livelihood. Uzbek linguists have documented more than ten semantic types of color terms in Uzbek, each category carrying special features and connotations in phraseology. For example, Djalilova & Khamidova (2025) analyze how *white, black, red, green,* and *blue* appear in Uzbek idioms to represent everything from emotional states to religious symbols. Their study underlines that color semantics in Uzbek phraseology is key to understanding the national mentality and cultural traditions.

Etymology provides additional insight into how metaphor and meaning are intertwined. In Uzbek, many secondary color terms are transparently compound words that reveal a metaphor or comparison: we noted *jigarrang* (brown) literally means "liver-colored," likening the color to that of liver tissue. This metaphorical naming is similar to how English uses *liver* chestnut to describe a horse color, or how English "orange" came from the fruit – naming a color by a typical object of that color. Another Uzbek example is *olovrang* ("fire-colored") to mean bright orange-red, or *qumrang* ("ash color") as a variant of *kulrang* for gray – these illustrate a tendency to define colors by elements of nature. English too has older compounds like *sky-blue*, *rose-red*, *ash-gray*, though many have become standard single words or fallen out of use as independent terms. Moreover, Uzbek employs reduplication and affixation for nuanced shades: e.g., *qizg'ish* (reddish, somewhat red) is formed from *qizil* + suffix, and *ko'm-ko'k* means a deep/intense blue (doubling *ko'k*). English parallels this with the "-ish" suffix (reddish, greenish) and phrases like "deep blue," but Uzbek's morphological productivity is notably high in everyday color expression.

Functionally, color terms in discourse serve to classify and to evoke. In both languages, they are basic adjectives for visual description ("blue sky," "oq uy" for "white house"), but their extended uses enrich storytelling, poetry, journalism, and other discourse. For instance, an Uzbek storyteller might describe a villain as having a "qora yurak" (black heart) to

immediately convey evil nature without further explanation, relying on shared cultural understanding of the color symbolism. In English, calling something a "gray area" in an academic paper succinctly signals an unresolved ambiguity. Color terms also often carry emotional weight in literature and media: English authors famously use "green light" in *The Great Gatsby* as a symbol of hope, while Uzbek poets might use *qizil gul* (red flower) to symbolize youthful love or beauty. In everyday interactions, color words can function indexically – e.g. "red alert" signals urgency in English, and *yashil chiroq* ("green light") is understood in Uzbek (often due to international traffic light norms) as permission to go. Through idioms, proverbs, and set phrases, color vocabulary becomes a vehicle for cultural values. As one linguist notes, studying color terms offers a "key element reflecting the mentality" of a people, since each metaphor or customary usage encapsulates a piece of collective experience. In short, beyond their primary role of naming hues, color words in English and Uzbek operate in multiple semantic fields – descriptive, emotive, symbolic – thereby playing functional roles in communication that reflect both universal human cognition and culturally specific worldviews.

Conclusion

The evolution of color perception vocabulary in English and Uzbek reveals a fascinating interplay of universal patterns and unique cultural trajectories. Both languages progressed through similar stages in acquiring basic color terms, confirming the broader theory that human languages tend to develop color names in a common order. English and Uzbek each now possess eleven basic color terms, covering the same spectrum of black, white, red, green, yellow, blue, brown, orange, pink, purple, and gray. This completion of the color spectrum in their lexicons reflects parallel responses to human communicative needs: as societies encounter new colors in their material or cultural environment (through technological dyes, new objects, or intercultural contact), their languages find ways to name them.

Yet, the journey to this outcome was shaped by distinct historical forces. English, as a Germanic language deeply influenced by Norman French and global exploration, drew color terms from multiple sources – from ancient Proto-Indo-European roots (*white, black, red, green, yellow*) to medieval French loans (*blue, brown*) and early modern imports (*orange, pink, violet* from fruits and flowers). Uzbek, as a Turkic tongue at the crossroads of the Silk Road, incorporated Persian and Arabic color terms into its literary register and later assimilated Russian contributions, all the while preserving its Turkic core. The result is that each language's color vocabulary is a palimpsest of its history: one can read trade, migration, and cultural exchange in the very names of colors (be it the Sanskrit trail of *orange* or the Persian origin of *binafsha*).

Culturally, color terms have become repositories of meaning beyond the visual spectrum. English and Uzbek speakers alike imbue colors with symbolic and emotional significance rooted in their respective traditions. These associations surface in metaphors and idioms that, when compared, provide insights into both shared human experiences and culture-specific values. For example, both languages link white to purity and black to negative forces, suggesting a common cognitive metaphor of light vs. darkness; however, Uzbek's link of green to sacred Islam or English's use of blue for sadness highlight particular cultural histories and artistic conventions. Such differences underscore the anthropological truth that language and culture co-evolve: the semantic realm of color is as much a cultural construct as it is a reflection of optical reality.

In examining metaphors and discourse functions, we see that color terms help structure narratives and convey connotations efficiently. Uzbek folk expressions with color, as

documented by local scholars, encapsulate community morals and social norms in a vivid way. English, with its global usage, has exported many of its color idioms into international contexts (e.g., "black market," "green energy"), showing how deeply entrenched these terms are in expressing complex ideas. Both languages demonstrate that as basic as color words might appear, their semantic evolution involves continuous layering of new meanings through metaphor, borrowing, and adaptation to social change. Modern influences – globalization, media, technology – continue to introduce nuances (for instance, English speakers now casually speak of "RGB" values, and Uzbek youth might use a Russian or English color term for a novel shade in fashion).

In conclusion, the color vocabularies of English and Uzbek exemplify the dynamic nature of language: grounded in universal human perception, yet diversified by history, culture, and cognition. By studying their semantic evolution side by side, we not only trace how people name the colors of the rainbow, but also gain a spectrum of insights into how people describe and make sense of their world. The words for color, it turns out, are a prism through which linguists and anthropologists can observe the refracted light of culture, thought, and history in language. Future research may build on this comparative approach – for instance, by looking at how bilingualism (English-Uzbek speakers) navigates color concepts, or how emerging cultural trends (such as global design or the digital age) might further enrich or shift the color terminology in both tongues. Such inquiries will continue to highlight the significance of color semantics as a vibrant field at the intersection of language, mind, and culture.

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