

Semasiological Characteristics of Botanical Terms (Phytonyms)

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Abstract

This article provides a comprehensive semasiological analysis of botanical terms (phytonyms) through a comparative study of the Uzbek and English languages. Grounded in the cognitive communication theory of Eduardo Benot and Karl Reisig's historical semasiological concept, the research explores the subjective nature of meaning, linguistic lacunae, and interpretation mechanisms in specialized terminology. By applying componential (seme) analysis based on M. Mirtojiyev's scientific framework, the study reveals how differential semes—such as color, shape, and function—drive the nomination process in both languages. Furthermore, through transterminological analysis and polysemy examination, the paper demonstrates the dialectical relationship between mental concepts and lexical units, highlighting how semantic narrowing and broadening serve as primary drivers for term formation.

Keywords: Semasiology, phytonyms, botanical terminology, componential analysis, differential seme, cognitive linguistics, subjective semantics, semantic narrowing, Uzbek language, English language.

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1. Introduction

The Spanish linguist and politician Eduardo Benot highlights one of the most complex problems in linguistics—subjective meaning and misunderstanding in communication—by stating:

"When a person speaks to me, he speaks not with his own ideas, but with mine. His words represent to him certain transformations, concepts, and ideas expressed through a specific set of symbols. For me, however, they represent fewer elements: he sees the connection between words through those symbols, while I seem to lack those links in the chain. Thus, although it appears that this person is presenting his own ideas to me, he is actually doing nothing more than combining my ideas in an absurd way" [1].

Here, Benot figuratively explains the subjective meaning

problem—the most subtle point of cognitive linguistics and communication theory. That is, he illustrates that misunderstanding between the speaker and the listener stems from the mismatch of their cognitive knowledge systems. In his view, communication is not merely a process of transferring information, but a process of re-awakening existing concepts in the listener's mind. To understand this, we can focus on the following three key aspects:

1. The Problem of Interpretation: The speaker speaks based on a "chain" or logical connection in their mind, but the listener reconstructs this chain solely through their own experience and knowledge.

2. Cognitive Lacunae: The "missing links" mentioned by Benot represent the listener's lack of complete knowledge regarding the context intended by the speaker.

3. Subjective Semantics: For each individual, a single word can carry different emotional and logical loads.

According to E. Benot, he was referring precisely to the disruption in these processes: the speaker encodes their idea (encoding), but the listener decodes it based on their own background (decoding), resulting in a completely different interpretation (interpretation). More specifically, according to Benot's logic, communication is not an exchange of information, but a collision of interpretations.

If we look at a brief historical overview of this science, which considers the description of meaning as its primary subject, we can easily trace the evolution of meaning that the discipline itself underwent. Before the term "semantics" became widespread and globally recognized by the linguistic community, this field was initially named "semasiology" as a scientific description of language. Indeed, in the first half of the 19th century (around 1825), the Latin scholar and philologist Reisig gave independent status to the theory of meaning by describing the foundations of the doctrine of meanings, or as he called it, Semasiology. This science was dedicated to studying meaning and the principles underlying its development.

In the first part of his work titled "Principles of the Development of Meaning," his historical-comparative concept of semasiology mainly relied on three stylistic devices of classical rhetoric: metaphor, metonymy, and functional transfer (analogy). The second part complements the work by focusing on the principles of word selection according to their meaning. In this second part, he pays special attention not to synonymy as a mere dictionary of synonyms, but to the doctrine that studies the fundamental laws of synonymy [2]. As Reisig noted, it is no exaggeration to say that metaphor and metonymy serve as the primary "engine" in term formation.

- **Metaphor:** For example, Arslonquyruq (botanical name: Leonurus, literally "lion's tail") or Sigirquyruq ("cow's tail"). If we consider comparing the shape of a plant part to an animal organ as a metaphorical transfer,

- **Metonymy:** In analyzing cotton plant (g'o'za) and raw cotton (paxta), we often encounter the phrase "paxta ekdik" ("we planted cotton"). Here, the plant itself is intended, expressing the whole by naming a part (pars pro toto).

Furthermore, according to Reisig, if synonymy is not just a list of words but a "principle of choosing the right word," then multiple names for a single plant can also exist in botanical terminology. For instance, phytonyms such as makkajo'xori – makka – so'ta (corn/maize) emerge based on linguistic economy and regional preferences.

Botanical terms (phytonyms) constitute one of the oldest strata of language. Their semantic structure is often constructed around denotative semes (the primary naming concept of the object) and differential semes (shape, smell, color, medicinal properties). Semasiology is the branch of linguistics that studies word meaning and the laws of its change. Analyzing the relationship between Uzbek and English semasiology through botanical terms allows us to realize how similar yet unique the linguistic worldviews (linguistic pictures of the world) of both languages are. Below, we examine this analysis through several scientific perspectives:

Componential Analysis (Seme Analysis) refers to breaking down a word's meaning into its smallest components. We can imagine this method as splitting chemical elements into atoms. For instance, considering the differential color seme:

Term (Uzbek)	Term (English)	Semantic & Cognitive Analysis
Lavlagi / Qizilcha	Beetroot	In some Uzbek dialects, it is called " <i>qizilcha</i> " (emphasizing red color). In English, the color seme is not activated; instead, emphasis is placed on the shape and function seme (<i>beetroot</i>), pointing to its edible root part.

Term (Uzbek)	Term (English)	Semantic & Cognitive Analysis
Oq qayin	Silver birch	In Uzbek, the phytonym formed under the influence of the tree bark's color (<i>oq</i> = white). In English, it is <i>silver birch</i> . In both languages, nomination relies on the tree's most characteristic feature—bark color. However, there is a minor difference in color perception (coloristic semantics). The British climate is often foggy and humid; in such an environment, white bark glimmers with a metallic, grayish-silver sheen. Hence, it is perceived as "silver" rather than "white" in English. Generally, color perception can shift to related shades due to sunlight reflection or shiny texture (white–silver, green–blue).
Qo'ng'iroq gul	Bluebell	In Uzbek, the color seme is absent (focusing on shape: "bell flower"), whereas in English (<i>bluebell</i>), both color and shape semes are expressed. However, in certain regions of Uzbekistan, the color of this flower is associated with a deep violet ("ink") color.

Apart from color semes, componential analysis also includes types based on shape and functional analogy. Any complex plant name can be decomposed into simple concepts. Comparing English and Uzbek using this approach helps determine which feature a culture prioritizes: Uzbek speakers often emphasize shape, while English speakers frequently focus on function/analogy.

In his textbook "Semasiology of the Uzbek Language" [3], M. Mirtojiyev interprets word meaning not as a simple concept, but as a complex structure consisting of a set of semes. By distinguishing between the nominative, denotative, and connotative meanings of a word, the author reveals the internal development laws of language. Mirtojiyev's research demonstrates that the meaning of a term is bounded by its domain of use. For example:

- **Paxta (Cotton):** In everyday language, it refers

to the plant or metaphorically to flattery (*laganbardorlik*); in agriculture, it has undergone semantic expansion as a technical crop that produces fiber.

Mirtojiyev pays special attention to polysemy in his work, explaining the derivation of secondary meanings. Drawing upon Mirtojiyev's analysis, it is essential to emphasize the polysemantic nature of terms in botany. For instance:

- **Tut (Mulberry):** Tree species (primary meaning) $\rightarrow$ Fruit (derived meaning via metonymy) $\rightarrow$ Wood (raw material meaning).

Transterminological Analysis refers to the transformation of an ordinary word into a scientific term. In semasiology, the transition of a word from daily communication into scientific fields—that is, its specification—is called semantic narrowing. The word

"g'o'za" in colloquial Uzbek can refer to any seed-bearing cotton plant, but in agronomy, it serves as a strict scientific term referring exclusively to the genus *Gossypium hirsutum*. Similarly, the English word "corn" originally meant "grain" in general (wheat, barley) in British English, but narrowed its meaning in American English to refer strictly to "maize."

When analyzing English and Uzbek phytonyms semasiologically, we observe a shared logic in how humanity names plants. In both languages, shape, color, taste, and function serve as the primary nominative features. Mirtojiyev's seme analysis method allows us to illuminate the internal structure of these terms at an international scholarly standard.

In Mirtojiyev's textbook, one of the fundamental issues of semasiology—types of word meaning, or more precisely, the relationship between lexemic and conceptual meanings—is analyzed as follows:

"The plant's respiratory organ is expressed both by the lexical meaning of the word barg (leaf) and yaproq (blade/leaf). However, the word barg applies to all plants, whereas yaproq is used only in relation to large trees. That is, the lexical meaning of yaproq is narrower than the concept itself... This becomes clearly visible in relation to concepts. The cognitive development in the mind continuously creates a mismatch between concept and lexical meaning. This is a dialectical law" [4].

Based on the above analysis, we can extend the discussion in the dissertation as follows:

- **"Giyoh" (herb/botanical plant) vs. "O't" (grass/weed):** Both terms represent the general concept of non-woody stem plants. However, "o't" can be applied to all soft-stemmed plants (begona o't – weed, ko'k o't – green grass), whereas "giyoh" is predominantly used for plants with medicinal or sacred properties (shifobaxsh giyohlar – medicinal herbs). The meaning of "giyoh" is narrower than the general concept because we do not call every grass a "giyoh". Here, the connotative (stylistic/expressive) seme narrows the boundary of lexical meaning, distancing it from the general concept.

- **"Novda" (twig/shoot) vs. "Shox" (branch):** The underlying concept of hard parts growing from a tree is one, but its expression in language varies. "Novda" denotes a young, flexible, and thin part of a plant, while "shox" refers to a thickened, lignified part. The dialectical law in this situation shows that "novda" covers

only the "young" and "flexible" stage of the concept. As the tree grows and the shoot turns into wood, even though the concept remains unchanged (it is still a part of the tree), the lexical unit is forced to switch to "shox".

- **"Urug'" (seed) vs. "Chigit" (cottonseed):** These terms primarily express the concept of plant reproduction. "Urug'" is a universal term applicable to all plants (bodring urug'i – cucumber seed, olma urug'i – apple seed), whereas "chigit" applies exclusively to the cotton plant (g'o'za). The lexical meaning of "chigit" is significantly narrower than the concept of "urug'". If we were to call corn seed "chigit", the lexico-semantic system would be disrupted. This demonstrates that lexical choices are the result of an ongoing "struggle" between mental concepts and linguistic possibilities.

From these analyses, it is evident that if we take the plant organ as a concept and barg or yaproq as its linguistic labels, the difference between them manifests in two ways:

1. The word meaning covers only a specific quantitative portion of the concept.
2. Additional qualitative, expressive, or stylistic connotations are loaded onto the word.

Thus, in dialectical linguistics, the narrowing or broadening of meanings serves as the main "ENGINE" driving the emergence of new terms.

References

1. Benot, E. (1889). *Arquitectura de las lenguas*, p. 340.
2. Reisig, C. C. (1839). *Vorlesungen über lateinische Sprachwissenschaft (Principles of the Development of Meaning)*, Antal, pp. 286–307. (For a brief summary of his concept, see: Baldinger, K., 1956, pp. 148–149).
3. Mirtojiyev, M. (2010). *O'zbek tili semasiologiyasi [Semasiology of the Uzbek Language]*. Tashkent: Mumtoz so'z, pp. 1–283.
4. Mirtojiyev, M. (2010). *O'zbek tili semasiologiyasi [Semasiology of the Uzbek Language]*. Tashkent: Mumtoz so'z, p. 37.