

## FUNCTIONAL CHARACTERISTICS OF DERIVATIONAL AFFIXES IN UZBEK AND ENGLISH: A COMPARATIVE MORPHOLOGICAL ANALYSIS

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**Abstract.** Derivational affixes play a pivotal role in the expansion and flexibility of vocabulary in natural languages. This study presents a comparative analysis of the functional characteristics of derivational affixes in Uzbek, a Turkic agglutinative language, and English, a Germanic analytic language. Using a descriptive-analytical methodology grounded in morphological theory and corpus linguistics, this article explores how affixation processes differ structurally and semantically. The research emphasizes productivity, semantic transparency, and functional categories involved in derivation. Findings suggest that Uzbek primarily relies on predictable suffixation patterns with high semantic clarity, whereas English exhibits a wider range of affix types with greater variability in meaning and grammatical behavior. These results contribute to typological linguistics and support pedagogical applications in bilingual morphology instruction and computational linguistics.

**Key words.** derivational morphology, affixation, Uzbek, English, word formation, language typology, agglutinative, analytic language.

**Introduction.** Morphology, the branch of linguistics concerned with word structure, distinguishes between inflectional and derivational processes. Inflection modifies grammatical features of a word (tense, number, case) without altering its core meaning or word class. Derivation, on the other hand, creates new lexical items by changing the meaning and often the grammatical category of the base word.

In languages such as Uzbek and English, derivational morphology functions as a key mechanism for enriching the lexicon and adapting to expressive needs.

Uzbek, a Turkic language with agglutinative features, builds words predominantly through the linear addition of suffixes. English, while primarily analytic in structure, combines affixes of both native and borrowed origins, creating a more morphologically complex derivational system.

This study aims to:

Compare the morphological structures of derivational affixation in Uzbek and English;

Analyze productivity, semantic transparency, and functional transformation;

Explore implications for language learning, translation, and computational parsing.

**Methods.** Corpus Design and Data Collection. A bilingual comparative corpus was compiled, consisting of 1,000 derivationally formed words – 500 from Uzbek and 500 from English. Uzbek data were drawn from:

The National Corpus of the Uzbek Language;

The online dictionary Lugatlar.uz;

Official Uzbek media and educational sources;

Academic works on Uzbek morphology.

English data were sourced from:

The British National Corpus (BNC);

Lexical databases such as WordNet and Oxford English Dictionary;

Academic publications on English morphology.

The dataset included derivations across nouns, verbs, adjectives, and adverbs, representing a wide range of affix functions and complexities. Analytical Procedure.

Each word was analyzed for:

Affix type (prefix vs. suffix);

Grammatical transformation (e.g., noun → adjective);

Semantic transparency:

High: yozuvchi (writer), happiness

Medium: qahramonlik (heroism), editorial

Low: bilimdon (scholar), resentment

Productivity: frequency and flexibility across lexical roots;

Affixal behavior: morphological constraints, recursion, and allomorphy.

Common Uzbek affixes analyzed: -chi: o‘qituvchi, haydovchi (agentive), -lik: do‘stlik, insonlik (abstract), -dor: ilm-dor, g‘azabdor (possessive), -siz: ilmsiz,

mehrsiz (negation), -li: uyli, ilmlik (attributive), Common English affixes: -er: teacher, driver, -ion: creation, decision, -ness: kindness, happiness, un-, re-, dis-, pre- (prefixes).

Two morphologists reviewed and validated categorization for reliability, reaching over 90% agreement.

**Results.** Structural Differences. Uzbek derivation is purely suffixal. It exhibits a fixed order of affixes and conforms to vowel harmony: kitob (book) → kitobchi (book-related person), toza (clean) → tozalamoq (to clean) → tozalovchi (cleaner)

English uses both suffixes and prefixes, allowing recursive affixation:

happy → unhappy → unhappiness, nation → national → nationalize → nationalization.

Semantic Transparency. Uzbek shows high transparency:

bilmoq (to know) → bilim (knowledge) → bilimdon (knowledgeable person).

English includes both transparent and opaque derivations:

write → writer (transparent), resent → resentment (opaque), understand → not transparently linked to stand

Grammatical Class Changes. In Uzbek:

Verb → Noun: o‘rganmoq → o‘rganuvchi, Adjective → Noun: yaxshi → yaxshilik, In English: Verb → Noun: decide → decision.

Adjective → Noun: happy → happiness, Noun → Adjective: beauty → beautiful.

**Discussion.** Typological Implications. Uzbek's suffix-based structure aligns with agglutinative typology—each suffix adds one meaning, predictably.

For example: o‘rganmoq → o‘rgatuvchi (teacher), mehribon → mehribonlik (kindness)

English, due to its fusional and analytic features, shows irregularity.

For instance: permit (noun) vs. permit (verb) changes pronunciation; electric → electricity (phonological shift).

Cognitive and Learning Aspects. Uzbek's transparency eases acquisition:

yigit → yigitlik, ilm → ilmi. Learners can intuitively parse meaning based on affix recognition. English learners face challenges with irregularity and etymological drift: conceive → conception, receive → reception (shared suffix, differing semantics).

Applied Linguistics and Translation. In pedagogy:

English learners of Uzbek benefit from suffixal regularity;

Uzbek learners of English must study opaque affixation and prefix behavior.

In translation: Empowerment → qudrat berish or qudratlantirish, Scholarship → stipendiya, not derivationally transparent. In computational linguistics: Uzbek is well-suited to rule-based models (e.g., kitobxonlikdan → kitob, -xon, -lik, -dan). English requires data-driven models to manage variation and irregularity.

**Conclusion.** This study reveals deep structural and functional contrasts between Uzbek and English derivational affixation:

Uzbek is regular, semantically transparent, suffix-only, and highly productive;

English is irregular, uses both suffixes and prefixes, and often semantically opaque. These differences affect: Language acquisition and teaching: Uzbek learners need more exposure to English prefixation and semantic irregularity. Translation strategies: Literal equivalence often fails across languages with such divergent morphologies. Natural Language Processing (NLP): Uzbek favors rule-based analyzers; English needs hybrid AI-driven approaches.

Future research should explore: Regional/dialectal variations in Uzbek affixation (-voy, -bek, -garchi); Psycholinguistic processing in bilinguals using derivational cues; Cross-language affix acquisition patterns in multilingual speakers.

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