

## SYSTEMIC LEXICAL RELATIONSHIPS IN ENGLISH AND UZBEK IDEOGRAPHIC DICTIONARIES

*Bekmurodova Maftuna Jumanazar qizi*

*Teacher at the Department of English Teaching Methodology*

*№2, Uzbekistan State World Language University*

*e-mail: maftunabekmurodova52@gmail.com*

+998931041993

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**Kalit soʻzlar:** leksik birliklarning sistem bogʻliqligi, ideografik lugʻatlar, ingliz va oʻzbek leksikografiyasi, semantik maydon nazariyasi, tematik guruhlash, lugʻaviy tuzilma, ikki tilli lugʻat tuzish

**Ключевые слова:** системные лексические отношения, идеографические словари, английская и узбекская лексикография, теория семантического поля, тематическая группировка, лексическая структура, составление двуязычных словарей

**Abstract:** This article explores the representation of systemic relationships among lexical units in English and Uzbek ideographic dictionaries. It analyzes how semantic fields and thematic groupings are structured to reflect the internal logic of the lexicon in both languages. The paper highlights the typological and methodological differences between English and Uzbek approaches to ideographic classification, examining their implications for cross-linguistic lexicographic practice. The study also identifies opportunities for enhancing ideographic dictionary quality by incorporating corpus data, semantic networks, and modern lexicographic technologies.

**Annotatsiya:** Mazkur maqolada ingliz va oʻzbek ideografik lugʻatlarida leksik birliklar oʻrtasidagi sistem bogʻliqlikning ifodalanishi tahlil qilinadi. Leksik birliklar semantik maydonlar va tematik guruhlash asosida qanday tizimlashtirilishi oʻrganiladi hamda bu tizimlarning har ikkala tildagi lugʻaviy tuzilishdagi oʻrni yoritiladi. Shuningdek, maqolada ingliz va oʻzbek ideografik tasniflash yondashuvlaridagi tipologik hamda metodologik farqlar koʻrib chiqilib, ularning ikki tilli leksikografiyadagi ahamiyati baholanadi. Tadqiqotda korpus maʼlumotlari, semantik tarmoqlar va zamonaviy texnologiyalar asosida lugʻat sifatini oshirish imkoniyatlari ham aniqlanadi.

**Аннотация:** В данной статье рассматривается выражение системных лексических связей в англоязычных и узбекоязычных идеографических словарях. Анализируется структура

тематических группировок и семантических полей, отражающих внутреннюю организацию лексической системы обоих языков. Особое внимание уделяется типологическим и методологическим различиям в подходах к идеографической классификации в английском и узбекском лексикографическом опыте. Также выявлены перспективы повышения качества идеографических словарей за счёт использования корпусных данных, семантических сетей и современных лексикографических технологий.

## Introduction

Systemic lexical relationships refer to the network of meaning connections that hold a language's vocabulary together. These include paradigmatic relations words that can substitute for each other, such as synonyms and antonyms and syntagmatic relations words that co-occur in phrases or collocations. Lexicographers long ago noted that grouping words by meaning can reveal these networks. The concept of a semantic field – a set of related lexemes clustered around a shared concept – is foundational. In an ideographic - thematic dictionary, words are organized by these fields: for example, all motion verbs: to walk, run, jump... may be listed under the general concept “movement.” This contrasts with ordinary alphabetical dictionaries, which treat each headword independently.

Ideographic dictionaries aim to make explicit the internal architecture of a lexicon. By arranging entries thematically, they uncover semantic relationships and support deeper understanding of word meanings. Maxkamova and I define an ideographic dictionary as one that “groups words not alphabetically but according to thematic domains or conceptual categories,” using broad fields like nature, human, action, emotion as organizers. Such treatment highlights how words share concepts or contrast with each other. It also serves practical purposes: thematic dictionaries aid language learning, translation, and stylistic variation by displaying synonyms, antonyms, and related terms side by side.

In this article, we explore how English and Uzbek lexicography implement these ideas. We first outline the principles of systemic lexical relationships and semantic fields. We then examine English ideographic resources notably Roget's Thesaurus and modern semantic databases and Uzbek equivalents thematic and terminological dictionaries, wordnets and so on. We focus on differences in approach: for example, English compilers often use hierarchical semantic classifications, while Uzbek tradition tends toward contextual grouping and explanatory depth. We also discuss implications for dictionary design and cross-linguistic lexicography, such as how to structure semantic fields and reconcile culture-specific concepts.

## Systemic Lexical Relationships and Semantic Fields

In structural semantics, the vocabulary of a language is viewed as an interconnected system. Key types of relationships include:

1. Synonymy and Antonymy: words with the same or opposite meanings (e.g. big–large, hot–cold).
2. Hyponymy/Hypernymy: hierarchy of terms (e.g. rose is a hyponym of flower).

3. Meronymy: part - whole relations (e.g. wheel is part of car).
4. Collocation/Syntagmatic association: words that frequently co-occur (heavy rain, strong coffee).
5. Morphological derivation: words sharing a root (e.g. teach, teacher, teaching) often show semantic links.

Together, these relations form semantic fields or lexical fields. A semantic field is “an internal domain of meaning within a language, encompassing a group of words organized around a shared concept”. For example, the concept “emotion” might yield a field containing happy, sad, anxious, joyful, etc. Within a field, words are paradigmatically related (interchangeable in certain contexts) and also connected syntagmatically they may co-occur with related verbs or adjectives.

Ideographic dictionaries are built on these ideas. They provide thematic blocks or tables of words united by a conceptual domain. As we explain, ideographic resources “organize words and expressions into thematic groups based on semantic proximity,” revealing hidden semantic links and supporting contextual understanding. For example, in a semantic field like movement, an ideographic dictionary will list words like walk, run, jump, slide, gallop together. In this way, a user sees at a glance that these verbs share the concept of motion, and may also find near-synonyms or contrasts among them.

Because ideographic dictionaries foreground concepts, they highlight horizontal paradigmatic and vertical syntagmatic relations. The “classificatory” function is often emphasized: words are logically grouped by field. The “cognitive” role is also key: by reflecting conceptual structures of thought, these dictionaries help users grasp how lexical knowledge is organized in the mind. In short, systemic relations – synonymy, hierarchy, association – become explicit. As one author notes, a thesaurus - a type of ideographic dictionary “systematically presents numerous synonyms and antonyms,” but ideographic dictionaries can extend this by mapping meanings of ideas in multiple dimensions.

### English Ideographic Dictionaries

In English lexicography, the classic ideographic dictionary is Roget’s Thesaurus of English Words and Phrases first published 1852. Roget’s arranges English vocabulary by concept and was “recognized by world linguists as the first ideographic dictionary”. Its structure is highly semantic: it divides words into large classes such as Abstract Relations, Matter, Intellect, Volition, Affection and then into further subclasses. Within each conceptual group, words are listed by part of speech: nouns, verbs, etc. reflecting a “structural semantic principle”. For example, Roget’s entry for content is a diagram where nouns: contentment, satisfaction, verbs: satisfy, gratify, adjectives: satisfied, contented, and adverbs are each given in a numbered series, showing their semantic proximity. Antonyms are often paired as noted in earlier editions, antonyms were placed side-by-side, and synonyms are grouped in context e.g. happiness with joy, pleasure, bliss.

Modern English lexicography continues this tradition with digital semantic databases. For instance, the Historical Thesaurus of English Oxford organizes nearly every English word in an

onomasiological (concept-based) hierarchy from Old English to today. Similarly, WordNet (Miller 1995) is a computational lexicon where words are connected in synonym sets - synsets with marked relations (hypernym, hyponym, antonym). These tools emphasize explicit hierarchies and equivalence relations. In Roget's and its successors, the primary relationships shown are hierarchical or equivalent synonymic ones. The thesaurus "groups words based on shared meaning or topic," making semantic structure overt. Collocational syntagmatic relations are less focal, though many modern thesauri include example phrases to hint at usage.

English thematic dictionaries tailored for learners or specialists follow similar patterns. Studies note that English thematic dictionaries often use hierarchical classification schemes, treating broad categories down to specific domains. For example, a health-themed dictionary might first categorize by medical specialty, then list relevant terms alphabetically within each area. This reflects a long-standing analytic tradition: English being less inflected relies on explicit classification and usage contexts. Phrasal verb dictionaries, visual thematic dictionaries, and specialized thesauri all tend to present words along conceptual lines.

One practical difference noted in research is that English lexicographers assume some standardization of terminology in scientific fields. English idiomatic expressions are abundant, and specialized dictionaries may list them, but often there is an expectation of direct equivalence or straightforward explanation in English. Thus, English ideographic resources focus on organizing the lexicon into fields and showing prototypical synonyms/antonyms within each.

#### Uzbek Ideographic and Thematic Lexicography

Uzbek lexicography has its own approach. Historically, Uzbek has not had a Roget's-style general thesaurus, but it does have thematic and terminological dictionaries. For example, in 1975 Uzbek scholars compiled a Russian - Uzbek thematic dictionary that divided vocabulary into 16 major categories e.g. Earth, Sky, Society, etc.. Ruziyev reports that in Uzbek lexicography, dictionaries can be classified by how the vocabulary is given: alphabetical, thematic, or cellular (network) types. A thematic (ideographic) Uzbek dictionary lists words by subject area, typically grouping first by part of speech and then by subtopics. The 1975 volume by Tikhonov et al. "Russko-Uzbek Tematichesky Slovar" is often cited: it organized 4860 Russian headwords (with Uzbek equivalents) into conceptual fields. Although this was bilingual, it reflects a systematic Uzbek understanding of semantic fields.

More recent work by Uzbek linguists and lexicographers has emphasized the lexical system and semantic fields. Isломov (2018) describes efforts in Uzbek linguistics since the 1970s to study the lexicon as a structured system of semantic groups. Sabirova's research, as cited by Xoliyorova, shows in detail how Uzbek semantics are layered and how synonymy, antonymy, and hyponymy operate in context. Xoliyorova herself argues for creating an electronic Uzbek thesaurus that systematically reflects Uzbek semantic fields and word relationships. She notes that such a resource would "clearly indicate the interrelationships between words" and support the formation of new terms. In her view, an Uzbek thesaurus should display hierarchical, equivalent, and associative relationships among lexemes, just as international standards ISO define a terminological thesaurus.

A key theme in Uzbek sources is that contextual grouping and cultural factors often shape how fields are defined. Alisherova and Sodikova find that while English thematic dictionaries use strict hierarchies, Uzbek works tend toward contextual or pragmatic grouping: words are often clustered by usage scenarios rather than rigid taxonomies. They also observe that Uzbek dictionaries frequently include extended definitions or explanatory notes to compensate for gaps where there is no exact Uzbek equivalent of an English concept. For example, English idioms are paraphrased in Uzbek thematic entries rather than translated literally, and whole semantic nuances (often culture-specific) are explained. This reflects the Uzbek tradition of careful definition: Uzbek dictionaries, especially learner's or bilingual ones, may present a concept with several Uzbek synonyms and a descriptive note.

Additionally, Uzbek lexical entries often reflect morphological relationships. In some Uzbek glossaries (e.g. Guerin's Uzbek-English glossary), headwords appear with their derived forms and compounds in one semantic table. This practice underlines Uzbek's agglutinative nature: many related words share a root, and grouping them together helps convey meaning. Although not every Uzbek dictionary is ideographic, Uzbek lexicography increasingly considers lexical families and derivations as part of systemic organization.

#### Cross-Linguistic Comparison

Comparing English and Uzbek approaches reveals both common ground and divergence. Both systems recognize that semantic fields structure the lexicon, and both use thematic grouping to some extent. However, the methods of grouping differ: English leans more on hierarchical categorization, while Uzbek often emphasizes contextual or pragmatic grouping. Alisherova and Sodikova's comparative study explicitly notes this contrast. English thematic dictionaries use a systematic hierarchy, whereas Uzbek dictionaries favor grouping by usage context.

As a result, some systemic relationships are foregrounded differently. In English ideographic dictionaries, hierarchical relations hypernyms/hyponyms and synonym clusters are explicitly charted. For example, a field like fruit in an English semantic dictionary will list fruit as the head and then enumerate various subtypes apple, orange, banana in the same structure. Uzbek thematic groupings might treat those words similarly, but because Uzbek morphology and syntax differ, the arrangement may focus more on how the words are used in phrases or on illustrative examples. Uzbek sources also highlight that cultural concepts play a larger role: certain semantic fields (e.g. family relationships, social customs) may be subdivided or defined with attention to Uzbek norms.

Translation between the two systems poses challenges. Cultural or lexical gaps mean that an English semantic field may not map neatly onto Uzbek. Alisherova and Sodikova note that translating culture-bound terms is difficult; English idioms often lack direct Uzbek parallels. Therefore, Uzbek ideographic dictionaries might not only list Uzbek words, but also explain foreign concepts in Uzbek terms, or note multiple meanings. Bilingual thematic dictionaries (English-Uzbek) need to handle these disparities: the structuring of semantic fields in one language may require flexible or expanded categories in the other.

Despite differences, both traditions value the same ultimate goal: to facilitate conceptual understanding of the lexicon. Xoliyorova explicitly states that treating an Uzbek thesaurus both as a terminological dictionary and an ideographic dictionary improves understanding of a language's conceptual structure. This insight is cross-linguistic: a well-designed dictionary whether English or Uzbek should make clear how words interrelate in meaning, so that learners and speakers form a coherent lexical map.

### Implications for Dictionary Design

The comparison above has practical lexicographic implications. First, designers of ideographic dictionaries should incorporate multiple types of relations. English models emphasize taxonomy and synonymy, but Uzbek experience shows value in contextual and associative information. For instance, an English thematic dictionary might benefit from including usage notes or cultural context (as Uzbek dictionaries do), while an Uzbek dictionary could employ clearer hierarchical markers for educational clarity. Dictionary entries should highlight synonyms, antonyms, and hypernyms in ways accessible to users – possibly through nested subcategories or linked tables.

Second, semantic field selection and granularity must suit each language. Broad fields (e.g. nature, society) are useful starting points, but further division should reflect linguistic reality. English may use universally recognized divisions (colors, emotions, artifacts), whereas Uzbek dictionaries might introduce fields rooted in local culture or grammar. Indeed, Xoliyorova argues for identifying unique semantic fields in Uzbek and tailoring the dictionary's structure accordingly. Bilingual dictionary-makers must map these fields carefully: where Uzbek has a nuanced category (e.g. solar terms, kinship), the English side should explain or cross-list equivalent concepts.

Third, digital tools and corpora can aid this process. As noted, English has wordnets and historical thesauri that automatically compute semantic relations. Similar resources like the UZWordNet are emerging for Uzbek. These can inform field creation by showing clusters of related words in usage. Moreover, hyperlinked electronic dictionaries can blend alphabetical and thematic access: users might see an alphabetical entry with a link to its semantic field or cluster (a “cellular” view). This hybrid design combines the strengths of both approaches.

Finally, educational application is key. Both languages' lexicographers see ideographic dictionaries as tools for learners and translators. An ideal English Uzbek dictionary might have a thematic appendix or digital interface where users can navigate concepts in either language. For example, an Uzbek speaker could select the field “Food” and see both Uzbek and English terms organized conceptually; conversely, an English learner could see Uzbek equivalents by field. Such cross-linguistic conceptual maps could bridge the systemic differences we identified.

### Conclusion

Ideographic dictionaries embody systemic relationships by structuring vocabulary around meaning. In English lexicography, this has traditionally meant rigid semantic taxonomies (as in Roget's Thesaurus) and explicit listing of synonyms and antonyms. In Uzbek lexicography,

practitioners tend to group words more flexibly by context and to provide detailed explanations, reflecting the language's typology and cultural specificity. Both approaches recognize semantic fields as organizing principles. Understanding these differences is crucial: dictionary designers should blend hierarchical and contextual methods, ensure semantic fields reflect each language's reality, and facilitate cross-language concept alignment. For lexicographers and educators, the lesson is that semantic field structuring and lexical networks must be adapted to the language and user needs. An English and Uzbek ideographic dictionary, for instance, will succeed only if it accounts for the richer synonym clusters of English and the explanatory demands of Uzbek. Overall, emphasizing systemic lexical relations – through synonyms, hierarchies, and thematic grouping – yields richer dictionaries. As Uzbek scholars have argued, viewing thesauri and thematic dictionaries as tools to reveal a language's conceptual architecture leads to deeper understanding. Future lexicography (especially in Uzbek) will likely continue to integrate computational methods and cultural insights to realize this ideal.

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