

Syntaxeme And Conceptual Analysis Of Nuclear Predicative 1 Components In English And Uzbek Languages

 Asadova Gavhar Teshabayevna

Doctorate student, Samarkand state institute of foreign languages, Samarkand, Uzbekistan

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Abstract: This article investigates the syntactic-semantic and cognitive characteristics of sentences containing bivalent homogeneous nuclear predicate 1 (HNP1) components, based on English and Uzbek language materials. The aim is to identify the features of syntaxeme expression by HNP1 components and analyze their conceptual foundations. The problem lies in the lack of a unified approach to analyzing the deep and surface structure of sentences and the need to determine the cognitive basis of syntaxemes. The study employs syntaxeme analysis, transformational grammar, conceptual integration, and metaphorical approaches as its methodology. Sentences are dissected into syntaxemes, revealing substantive, agentive, negative, objective, qualitative, and identificational syntaxemes expressed by HNP1 components. The results highlight isomorphic and allomorphic features of HNP1 in both languages: Uzbek emphasizes emotional and metaphorical conceptualization, while English focuses on static states and individual actions. In conclusion, the research enhances understanding of the interplay between linguistics and cognitive sciences, paving the way for broader multilingual analyses.

Keywords: Homogeneous nuclear predicative 1, bivalent components, transformational grammar, cognitive characteristics, syntaxeme, syntactic-semantic features, conceptual integration, metaphor.

Introduction: In analyzing the surface and deep structures of sentences, we observe that linguists' opinions are not unanimous. For instance, many linguists attempt to analyze sentence structure based on the syntactic-semantic framework outlined in N.Chomsky's "Transformational Grammar." In this approach, a specific sentence form is considered the surface structure, while its transformation into interrogative or negative forms is interpreted as the deep structure (Chomsky, 2002). Such analyses focus on the formal aspects of sentences, limiting themselves to dissecting them into immediate constituents. This situation fails to provide researchers with accurate guidance, as it leads to confusions such as one sentence having a surface structure but lacking a deep one, or another having a deep structure but no surface one. Scholars in syntax such as O. Usmonov, R. Asadov, and O. Kalandarov emphasize that every sentence possesses both surface and deep structures (Usmonov,

1990, p. 26; Asadov, 2018, p. 92; Kalandarov, 2019, p. 16). Based on this, the surface structure encompasses the mutual syntactic relations among syntactic units in the sentence's external composition, as well as differential syntactic features, whereas the deep structure involves determining the semantics of syntactic units at the syntactic level. L.Talmy includes grammatical constructions, syntactic structures, and complex complement structures in the external syntactic structure (Talmy, 2000, p. 24). The author notes that the internal structure of a sentence possesses a certain degree of abstract conceptual content (Talmy, 2000, p. 29).

Referring to cognitive structures provides a novel approach to polysemy, another classic problem in semantics. Traditionally, if a word has multiple meanings, each usage is assumed to differ distinctly. The cognitive approach, however, does not require distinguishing polysemy unless necessary (Rudakova,

2004, p. 13). The cognitive approach explains the unique features of the content plane structure of lexical units through the non-linear nature of cognitive structures, which necessitates special "packaging" in their linguistic expression. The transition from a non-linear structure to a linear representation always involves only a small portion of the cognitive structure being explicitly expressed, while other parts remain implicit. The internal form of a lexical unit, i.e., the characteristic denoting its nomination method, influences its original meaning. This is related to the nomination method being reflected to some extent in the knowledge structure underlying the linguistic expression. Accordingly, from the perspective of cognitive semantics, a complete semantic characterization of a linguistic phenomenon requires accounting not only for the objective properties of the described situation but also for its perceptual features, the presence of relevant knowledge, intentions, the salience of specific units, the choice of perspective, and attention to particular episodes.

METHODS

This study employs a contrastive analysis of English and Uzbek sentences, focusing on the syntactic-semantic and cognitive properties of homogeneous nuclear predicative 1 (HNP1) components. The methodology includes syntaxeme analysis, transformation methods, and cognitive interpretation based on conceptual integration theory and metaphorical conceptualization.

Examples from English literary sources and Uzbek texts are selected to illustrate bivalent elements in HNP1 positions. Syntactic units are dissected into categorical (e.g., substantivity, processuality, qualificativeness) and non-categorical signs (e.g., agentive, object, terminative).

Transformation techniques are applied to reveal underlying semantic roles, such as nominalization or object-subject shifts. For instance, sentences are transformed to confirm object or locative syntaxemes.

Cognitive analysis draws on theories from Festinger (2018), Kuziev (2021), Lakoff & Johnson (2004), Kubryakova (2004), Demyankov (2005), Nurmonov (2007), and Deci & Ryan (2011) to interpret conceptualizations like dissonance, integration, metaphors, and intrinsic motivation.

Syntaxeme models are constructed for each example, denoting linkages (e.g., nuclear predicative,

subordinative) and categorical, non-categorical signs (e.g., SbAg ↔ PrAc). Isomorphic and allomorphic aspects between languages are identified through comparative analysis.

RESULTS

Bivalent elements functioning as the homogeneous nuclear predicative 1 (HNP1) component primarily reflect substantivity from categorical differential syntactic-semantic signs and can express agentive, agentive negative, objective, substantivity laden with qualificativeness, and identificational syntaxemes from non-categorical signs:

1. Neither I nor he could understand she-wolf's actions (JLWF, 21)
2. Either you or I must speak to Mr. Rochester (ShBJE, 102).
3. Catherine and Heathcliff wandered over the moors alone (EBWH, 64)

In these sentences, the components in the position of HNP1 – Neither I nor he (1), Either you or I (2), Catherine and Heathcliff (3) – as bivalent syntactic units, realize stative-laden negative (1) connected to could understand, and agentive (2, 3) syntaxemes connected to must speak and wandered, based on substantivity (Sb). The syntactic units in the position of NP2 – could understand (1) expresses processual stative, must speak (2) – processual actional modal, and wandered (3) – processual actional syntaxemes.

Thus, the substantival agentive syntaxeme connects with the processual actional syntaxeme, and the stative-laden substantival syntaxeme with the processual stative syntaxeme via nuclear predicative connection. Additionally, when the substantival syntaxeme occurs in HNP1, it can denote negative (Ng) syntaxeme via disjunctive connectors neither ... nor, or elective (El - selective) syntaxeme when linked by either ... or.

The analyzed sentences contain non-nuclear subordinate (ÑD) components based on subordinative connection: actions (1), to Mr. Rochester (2) as substantival object (Ob), she-wolf's (1) – substantival possessive (Ps), over the moors (3) – substantival locative (Lc), and alone (3) – qualitative (Qlf) manner (Mn) syntaxemes. The syntaxeme composition of these sentences can be explained through the following models:

(1) Neither I nor he could understand she-wolf's actions:

SbStNg . SbStNg . PrSt . SbPs . SbOb;

(2) Either you or I must speak to Mr. Rochester:

SbAgEl . SbAgEl . PrAcMd . SbOb;

(3) *Catherine and Heathcliff wandered over the moors alone:*

SbAg . SbAg . PrAc . SbLc . QlfMn.

The cognitive properties of the syntaxeme-analyzed sentences can be revealed as follows: In the first sentence, the Neither ... nor connector expresses negation, cognitively indicating that the two subjects (I and he) equally fail to understand the she-wolf's actions. This creates cognitive dissonance in the negation process (Festinger, 2018, p. 56), as the subjects experience their incomprehension to the same degree, conceptualizing it as a shared experience. In the second sentence, the Either ... or connector denotes choice, cognitively presenting alternative scenarios. The choice between subjects (you and I) reflects the decision-making process, interpreted as a cognitive choice model (Kuziev, 2021, p. 102), where only one subject can act. In the third sentence, the HNP1 components (Catherine and Heathcliff) denote joint action, cognitively indicating collaboration and a common goal, while alone emphasizes their isolation from the external world, expressing isolation and uniqueness as a conceptual metaphor (Lakoff & Johnson, 2004, p. 61).

Syntactic units in HNP1 can also denote substantial qualificativeness-laden syntaxemes, as seen in the

(4) *The air and the earth were still:* SbQlt . SbQlt . QlfQlf

Cognitively, still describes a state of tranquility and immobility, personifying the static state of nature. This situation demonstrates metaphorical conceptualization linking natural elements (The air and the earth) with human attributes (Kubryakova, 2004, p. 262).

When considering the paradigmatic series of substantival syntaxeme, components in HNP1 can also manifest identificational syntaxeme:

5) *The man and the boy were strangers:* Sbld1 . Sbld1 . QlfQlt . Sbld2

The identificational syntaxeme denotes the mutual unfamiliarity of subjects (the man and the boy). Cognitively, this conceptualizes social distance and lack of acquaintance, emphasizing mutual disconnection.

The following syntaxemes in HNP1 function connect with the following syntaxemes in NP2 function: SbAg ↔ PrAc, SbAgNg ↔ PrAc, SbObAg ↔ PrAcDr, SbQlt ↔ QlfQlt, Sbld1 ↔ Sbld2.

In Uzbek, the syntaxemes expressed by syntactic units in HNP1 function are examined through the analysis of

following example:

4. The air and the earth were still (CMCR, 183).

The components in homogeneous nuclear predicative 1 position The air and the earth denote qualificativeness-laden substantial syntaxeme. This is because the syntactic units in nuclear predicative 2 position were still evoke qualificativeness from categorical signs and qualitiveness from non-categorical signs, which is attributed to The air and the earth components. Consequently, the qualificativeness-laden substantial syntaxeme is connected with the qualificative qualitative syntaxeme via nuclear predicative relation. The primary reason is that this sentence corresponds to transformation-nominalization:

4) The air and the earth were still → the still air ... → the still earth.

Thus, the syntactic units in HNP1 The air and the earth manifest qualificativeness-laden substantial syntaxeme. The sentence's syntaxeme model is as follows:

5. The man and the boy were strangers (CMCR, 56).

In the sentence, elements in HNP1 The man and the boy are mutually coordinative and connect with were ... strangers via nuclear predicative linkage. Since were strangers expresses substantival identificational syntaxeme, the components in homogeneous nuclear predicative 1 are considered substantival identificational syntaxemes. Their syntaxeme model is as follows:

the following examples:

1. Bu oilaning burung'i imtiyoz va sharafi ham bitdi (AQM, 11).

2. Uning ko'zlarida nafaqat sevgi, balki alam ham, hasrat ham, kulgusi ham, yig'isi ham birdek mujassam edi (AQO', 112).

3. Ko'chadan birinchi qavatda mehmonxona, maktabxona va mashxona edi (AQM, 24)

4. Uning ketidan Mahmud va Mansurlar ham

chopishdilar (AQM, 29).

5. Bu odamning yashashi, kurashishi va o'zini fido qilishi shunchalik tabiiy edi ... (AQO', 149).

In the first sentence, the syntactic units in HNP1 function imtiyoz va sharafi express terminative (Trm) manner (Mn) syntaxeme based on their linkage to bitdi ("ended"[1]) component within substantivity. Additionally, these units realize object (Ob) syntaxeme, which can be revealed through transformation method as follows:

1) Bu oilaning burung'i imtiyoz va sharafi ham bitdi → bu oilaning burung'i imtiyoz va sharafi tugatildi → ular

(1) Bu oilaning burung'i imtiyoz va sharafi ham bitdi:

QlfDm . SbPss . QlfTm . SbObTrmMn . SbObTrmMn . Ad . PrAcDr.

Cognitively, it reflects the decline of social status and values. Through transformation (imtiyoz va sharafi tugatildi), these elements, viewable as objects, are conceptualized as passive subjects of loss. The ham connector emphasizes the extensiveness of the loss.

In the second sentence, the HNP1 consists of five lexemes linked by the connector – ham. In this example, kulgusi and yig'isi as action-denoting nouns express processuality from categorical signs, while alam, hasrat, and sevgi express substantivity. These elements collectively have existentiality (Ex - existence) as their non-categorical sign due to connection to mujassam edi component. They reveal the character's complex emotions in describing the internal psychological state.

From a cognitive perspective, this sentence presents multiple emotions (sevgi – love, alam – pain, hasrat – regret, kulgi – laughter, yig'i – crying) expressed by

2) Uning ko'zlarida nafaqat sevgi, balki alam ham, hasrat ham, kulgusi ham, yig'isi ham

birdek mujassam edi – SbPss . SbLc . SbEx . SbExSt . SbExSt . SbAc . SbAc . QlfDg . QlfEx

In the third sentence, substantival locative (Lc) syntaxemes in HNP1 are coordinated with existential syntaxeme, but through transformation method, HNP1 components can be shifted to HNP2 function, dropping the locative case marker in ND locative syntaxeme and transferring it to NP1 function:

3) Ko'chadan birinchi qavatda mehmonxona, maktabxona va mashqxonada edi → Ko'chadan birinchi

(3) Ko'chadan birinchi qavatda mehmonxona, maktabxona va mashqxonada edi – SbLcAb .

QlfQun . SbLcAd . SbLc . SbLc . SbLc . Ex

HNP1 components denote spatial existence, cognitively conceptualizing location and functionality. Through transformation (birinchi qavat mehmonxona,

bu oilaning burung'i imtiyozi va sharafini ham bitirishdi (tugatishdi - author).

From the transformation derivative, it is evident that imtiyoz va sharafi elements serve as the object of the bitdi component. The bitdi unit in NP2 function reflects actional and directive non-categorical signs based on processuality. The subordinate parts in the sentence bu as qualificative (Qlf) demonstrative (Dm), oilaning as substantival possessive (Pss), burung'i as qualificative temporal (Tm), ham as additive (Ad) syntaxemes. The sentence's syntaxeme model is as follows:

HNP1 components as equally embodied, denoting the simultaneous existence of typically conflicting emotions. For instance, love and pain are usually not felt concurrently, but the sentence states they are equally embodied. This complexity, according to conceptual integration theory (Demyankov, 2005, p. 87; Nurmonov, 2007, p. 28), signifies the blending of distinct emotions and the creation of a new integration. For example, the reader understands love and pain separately, but their equal presence in the sentence creates a new meaning for how they interconnect and appear in the same state. The ko'zlarida element denoting the locus of HNP1 syntaxemes is conceptualized as a container for storing or accessing emotions based on conceptual metaphor, aligning with the "eyes are the window to the soul" metaphor.

The syntaxeme model of this sentence appears as follows:

qavat mehmonxona, maktabxona va mashqxonada edi.

Thus, the locative form of qavatda element requires mehmonxona, maktabxona, and mashqxonada components to function as subjects, confirming that in the given sentence, bivalent syntactic units are in HNP1 function. The syntaxemes expressed by the components are manifested in the following model:

(

maktabxona va mashqxonada edi), the shift of locative elements to subject function indicates the conceptualization of space as an active subject,

reflecting personification of space.

4. Uning ketidan Mahmud va Mansurlar ham chopishdilar (AQM, 29)

HNP1: Mahmud va Mansurlar – substantival agentive collective (SbAgCl). NP2: chopishdilar – processual actional (PrAc). ŃD: uning ketidan – substantival locative (SbLc), ham – additive (Ad).

HNP1 components (Mahmud and Mansurlar) denote collaborative action, cognitively indicating social solidarity and a common objective. The connector ham emphasizes the group's joint action, conceptualizing collective behavior.

5. Bu odamning yashashi, kurashishi va o'zini fido qilishi shunchalik tabiiy edi ... (AQO', 149).

HNP1: yashashi, kurashishi, o'zini fido qilishi – substantival actional (SbAc). NP2: tabiiy edi – qualificative qualitative (QlfQlf). ŃD: bu odamning – substantival possessive (SbPss), shunchalik – qualificative degree (QlfDg).

HNP1 components denote various aspects of human activity (yashashi – living, kurashishi – struggling, o'zini fido qilishi – self-sacrifice), cognitively conceptualizing life cycle and purposefulness. Tabiiy edi (were natural) indicates that these actions are based on intrinsic motivation (Deci & Ryan, 2011, p. 203), metaphorically expressing the organic nature of human behaviors.

DISCUSSION

The analysis of examples in English and Uzbek reveals isomorphic and allomorphic aspects in the syntactic-semantic and cognitive properties of HNP1 components.

In both languages, HNP1 components express substantival, agentive, qualitative, and identificational syntaxemes. For example, Catherine and Heathcliff in English and Mahmud va Mansurlar in Uzbek reflect agentive syntaxeme, cognitively indicating collaboration and common purpose.

Connectors (neither ... nor, either ... or in English; nafaqat ... balki, ham in Uzbek) impart negation, selection, or additivity meanings to syntaxemes, cognitively reflecting decision-making or integration processes.

In both languages, the transformation method serves as a key tool in determining the semantic role of HNP1 components (the air and the earth were still → the still air, in Uzbek imtiyoz va sharafi bitdi → tugatildi).

In English, HNP1 components often express stative or modal syntaxemes (could understand, must speak), while in Uzbek, actional and terminative syntaxemes (bitdi, chopishdilar) predominate. This indicates emphasis on action completion in Uzbek, cognitively

reflecting result-orientedness.

Uzbek examples are richer in emotional and metaphorical conceptualization (ko'zlarida ... mujassam edi), showing the expressive style of Uzbek. In English, metaphorical analysis focuses more on static states (were still) or social distance (were strangers).

In Uzbek, locative syntaxemes (ko'chadan birinchi qavatda) serve to conceptualize space as an active subject, while in English, locative elements (over the moors) emphasize action direction more.

Cognitively, Uzbek examples pay more attention to the integration of complex emotions and social values, while English emphasizes individual actions and static states. This demonstrates cultural and stylistic differences in the cognitive models of the two languages.

This article contributes to the study of language's complex structure by analyzing the syntactic-semantic and cognitive properties of homogeneous nuclear predicative 1 (HNP1) components. Based on examples from English and Uzbek, it was determined that HNP1 components express substantival, agentive, qualitative, and identificational syntaxemes, with their cognitive foundations clarified through transformational grammar and conceptual integration. The research aids in deeper understanding of the interconnection between linguistics and cognitive sciences and provides opportunities for expanding multilingual analyses in the future.

[1] See: the second meaning of bitmoq – Uzbek Explanatory Dictionary / Compiled by A. Madvaliev et al. – Tashkent: Uzbekistan National Encyclopedia, 2006. – Vol. 1. – P. 52.

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