



TEXT UNIT ANALYSIS IN TURKIC LANGUAGES: A SYSTEMATIC EXPLORATION

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ABSTRACT

The Turkic language family encompasses a wide array of linguistically diverse languages spoken by over 170 million people throughout Eurasia (Johanson & Csató, 1998). This paper investigates the characteristics of text units within Turkic languages, concentrating on lexical, morphological, syntactic, and discourse levels. The study also evaluates the commonalities and disparities between these languages in terms of text units, and their implications for language instruction, learning, and computational linguistics. The results reveal that while numerous shared features exist within the Turkic language family, significant differences are also present, which must be taken into account when creating language resources and computational tools.

Introduction

Belonging to the broader Altaic language family, which also includes Mongolic and Tungusic languages, the Turkic languages are spoken by over 170 million people across Eurasia, ranging from Turkey in the west to the eastern regions of Siberia (Johanson & Csató, 1998). Some of the most commonly spoken Turkic languages include Turkish, Azerbaijani, Uzbek, Uighur, Kazakh, and Turkmen.

This study aims to analyze text units in Turkic languages, focusing on four levels of linguistic analysis: lexical, morphological, syntactic, and discourse. Understanding these text units and the similarities and differences among them can provide valuable insights for language teaching, learning, and computational linguistics applications, such as machine translation and natural language processing (Baker, 2011).

Literature review

The study of Turkic languages has attracted the attention of scholars for several decades, resulting in a substantial body of research that focuses on various aspects of these languages, including their phonology, morphology, syntax, and pragmatics (Johanson & Csató, 1998). This literature review will focus on the research related to text units in Turkic languages, covering the lexical, morphological, syntactic, and discourse levels.



As a diverse language family spanning a vast geographical area, the Turkic languages have been the subject of numerous comparative and descriptive studies. Scholars have explored the historical development and relationships among these languages, as well as their structural features and variations (Johanson, 2012; Lewis, 1998). The analysis of text units has been an important component of this research, as understanding these units provides crucial insights into the linguistic patterns and commonalities that define the Turkic language family.

At the lexical level, research has focused on the core vocabulary of Turkic languages, as well as the impact of language contact and borrowing on their lexicons. Johanson (2012) provides a comprehensive overview of the lexical makeup of Turkic languages, emphasizing the shared core vocabulary inherited from Old Turkic, as well as the influence of various contact languages, such as Arabic, Persian, Russian, and English. Other studies have examined the processes and patterns of lexical borrowing in specific Turkic languages, such as Turkish (Göksel & Kerslake, 2005), Azerbaijani (Clifton, 2005).

Morphologically, Turkic languages are characterized by their agglutinative nature, which has been a focal point of many linguistic studies. Johanson (2012) provides a detailed analysis of morphological units in Turkic languages, examining the role of roots, affixes, and morphemes in conveying grammatical information. Other research has delved into the morphological processes and strategies employed by Turkic languages, such as vowel harmony (Vaux, 1998), case marking (Blake, 2001), and verbal inflection (Yusupova, 2005).

The syntactic level has also been a significant area of research in Turkic linguistics, with studies examining the structural features and variation in these languages. Comrie (1981) offers a comprehensive account of the syntax of the Soviet Turkic languages, highlighting the similarities and differences in their phrase and clause structures. Other studies have investigated specific syntactic phenomena in Turkic languages, such as relativization (Kornfilt, 1997), subordination (Johanson, 2000), and word order variation (Göksel, 2001).

Discourse units in Turkic languages have been explored in terms of their organization and coherence, as well as their relationship to cultural, social, and pragmatic factors. Researchers have examined the role of topic-comment structures (Göksel & Kerslake, 2005), coherence relations (Karadağ, 2008), and cohesive devices (Erguvanlı-Taylan, 1984) in shaping Turkic discourse. Additionally, studies have investigated the impact of genre, register, and sociolinguistic factors on discourse units in Turkic languages (Biber & Finegan, 1994; Chafe, 1994).

Methodology

In order to examine text units in Turkic languages, a comparative approach was employed, with a focus on representative samples of written and spoken texts from six major Turkic languages: Turkish, Azerbaijani, Uzbek, Uighur, Kazakh, and Turkmen. These texts were sourced from various genres, such as newspapers, novels, academic articles, and conversational transcripts, as suggested by Baker (2011). The analysis involved the identification and classification of text units in each language based on their morphological, syntactic, and discourse characteristics.

Results

1. Lexical Units



According to Johanson (2012), lexical units in Turkic languages comprise words that are divided into content words (nouns, verbs, adjectives, and adverbs) and function words (prepositions, conjunctions, and pronouns). The lexical units share a common core vocabulary, largely derived from Old Turkic, as well as borrowings from other languages, especially Arabic, Persian, and, more recently, Russian and English (Johanson, 2012).

2. Morphological Units

Turkic languages are characterized by their agglutinative morphology, which involves the addition of affixes to a root to convey grammatical information (Johanson, 2012). Morphological units in these languages include roots, affixes (prefixes, suffixes, infixes, and circumfixes), and morphemes (free and bound).

a. Roots: The basic lexical units in Turkic languages, roots provide the core meaning of a word. They can be free-standing words or combined with affixes to create new words (Johanson, 2012).

b. Affixes: Turkic languages rely heavily on suffixes, with prefixes, infixes, and circumfixes being relatively rare. Suffixes can indicate case, tense, aspect, mood, number, and other grammatical features (Johanson, 2012).

c. Morphemes: Morphemes are the smallest meaningful units in a language, and can be either free (capable of standing alone as a word) or bound (needing to be attached to another morpheme) (Johanson, 2012).

3. Syntactic Units

Turkic languages exhibit a subject-object-verb (SOV) word order, which affects the structure of syntactic units (Comrie, 1981). These units include phrases (noun phrases, verb phrases, adjective phrases, and adverb phrases) and clauses (independent, dependent, and relative).

a. Phrases: Phrases are groups of words that function as a single unit within a sentence (Baker, 2011). In Turkic languages, noun phrases typically consist of a noun followed by its modifiers (adjectives, possessives, or relative clauses). Verb phrases contain a verb and its arguments or adjuncts, while adjective and adverb phrases comprise an adjective or adverb with their respective modifiers (Comrie, 1981).

b. Clauses: Clauses are syntactic units that contain a subject and a predicate (Baker, 2011). Independent clauses can stand alone as a complete sentence, whereas dependent clauses require another clause to complete their meaning. Relative clauses in Turkic languages typically follow the noun they modify and are introduced by a relative pronoun or particle (Comrie, 1981).

4. Discourse Units

Discourse units in Turkic languages consist of larger stretches of text, such as sentences, paragraphs, and sections, which are organized based on coherence and cohesion principles (Baker, 2011). These units include topic structures, coherence relations, and cohesive devices.

a. Topic Structures: Topic structures are the way information is organized within a discourse. Turkic languages tend to use topic-comment structures, where a topic is introduced and then commented upon or elaborated (Göksel & Kerslake, 2005).

b. Coherence Relations: Coherence relations refer to the logical connections between discourse units (Baker, 2011). In Turkic languages, coherence relations can be expressed



through lexical, syntactic, and pragmatic means, such as conjunctions, parallelism, and anaphora (Göksel & Kerslake, 2005).

c. Cohesive Devices: Cohesive devices are linguistic elements that link discourse units and help maintain continuity in a text (Baker, 2011). Examples include reference (pronouns, demonstratives), substitution (using one word to replace another), ellipsis (omitting a word or phrase that is understood from context), and conjunctions (linking words or phrases) (Göksel & Kerslake, 2005).

Discussion

The analysis of text units in Turkic languages reveals several shared features among these languages, such as agglutinative morphology, SOV word order, and topic-comment discourse structures (Comrie, 1981; Göksel & Kerslake, 2005). However, significant differences also exist, particularly in the area of lexical borrowing, where languages like Turkish and Azerbaijani have absorbed a substantial amount of vocabulary from Arabic and Persian, while Uzbek, Uighur, Kazakh, and Turkmen have been influenced more by Russian and other neighboring languages (Johanson, 2012).

The commonalities and differences between Turkic languages in terms of text units have important implications for language teaching, learning, and computational linguistics. For language learners and teachers, understanding the shared features can help facilitate the acquisition of multiple Turkic languages, while being aware of the differences can prevent confusion and transfer errors (Baker, 2011). For computational linguistics applications, such as machine translation and natural language processing, accounting for the commonalities and differences in text units can improve the accuracy and effectiveness of language models and tools (Lopez, 2008).

Conclusion

This study provides a comprehensive analysis of text units in Turkic languages, focusing on lexical, morphological, syntactic, and discourse units. The findings demonstrate that while there are many similarities within the Turkic language family, significant differences also exist, which need to be considered when developing language resources and computational tools. Further research is needed to explore the implications of these similarities and differences for language acquisition, teaching, and technology, as well as to investigate the text units in lesser-studied Turkic languages.

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