Grammaticalization of Morphological Changes Manifested in Finite Single-word Lexical Verbs in Shahmukhi Punjabi

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Abstract

Punjabi exhibits a rich linguistic landscape characterized by agglutinative and fusional features. This linguistic complexity has led many scholars, including Tehseen et al. (2023) and Jamshaid & Akhtar (2022), to emphasize the significance of morphological distinctions within Punjabi, surpassing even its syntactic variations. The primary objective of this study is to undertake an extensive morphological analysis of finite single-word lexical verbs in Shamukhi Punjabi. Drawing from our preliminary findings, two key hypotheses were formulated. First, we postulated that the notion of verbal finiteness plays a pivotal role in categorizing Punjabi verbs. Second, we hypothesized that morphological intricacies linked to progressive and perfective aspects, voice, gender, and number systems manifest within the domain of finite single-word lexical verbs. To achieve these research objectives, we employed a corpus of modest proportions, encompassing one hundred thousand words from Shahmukhi Punjabi. This study operates within the framework of inflectionally regular verbs, allowing us to identify recurring morphological structures within finite single-word verbs and their sub-systems. Our findings offer compelling evidence that Punjabi verbs can indeed be categorized based on finiteness, while also highlighting the diverse inflections that characterize finite single-word verbs concerning number, gender, aspect, and voice systems. This research not only holds promise for the preservation and enrichment of the Punjabi language but also contributes significantly to our understanding of the intricate linguistic structures embedded within Shahmukhi Punjabi.

Keywords: Morpheme-based morphology, word-based morphology, inflectionally regular verbs, inflectionally irregular verbs, thematically regular verbs, thematically irregular verbs

1. Introduction

In the last five hundred years, about half of the languages spoken throughout the world have vanished (Skutnabb-Kangas & Harmon, 2018). In 2100, at least fifty percent of languages spoken all over the world are quite likely to be extinct or severely endangered. The most endangered languages are indigenous. Skutnabb-Kangas and Harmon (2018) further state that most endangered languages would disappear except those indigenous languages which have official status or a large number of speakers. In Pakistan, Punjabi is widely spoken, with around one-third of the population using it, and 75.23% population of Punjab speaks Punjabi (Pakistan Bureau of Statistics, 2017). Nevertheless, many studies (Yasin et al., 2020; Haidar et al., 2021; Abbas et al., 2016; Sultan et al., 2023; Nadeem el., 2023) point to the severe endangerment of the Punjabi language because of its less usage among the young generation, specifically in the official vicinity. One of the possible ways to cope with the endangerment of the Punjabi language, as pointed out by Crystal (2003), is to digitally document Punjabi. The digital documentation of Shahmukhi Punjabi is quite useful in familiarizing the young generation with this language. In this way, one of the most effective ways to enhance the understanding of young Punjabi speakers is to expose

them to the linguistic features of their native language. For the Punjabi speakers, very little work was done to linguistically acquaint them with their native language. The present research is a serious effort to morphologically explore the inflectional systems of Punjabi verbs. The reason to select the morphological analysis of Punjabi verbs is its agglutinative nature. It means that many distinctive changes take place at the morphological level in contrast to its syntactic level. For example, verbal systems (, that is, finiteness, number, gender, voice, causativeness, and aspects) are generally realized via inflections, not by the syntactical structures. Thus, the primary purpose of the present research is to morphologically describe the finite single-word verbs in the Shahmukhi Punjabi language.

In the academic research community, very few studies (for instance, Khalique et al., 2021; Gupta, 2014; Singh et al., 2022) have been conducted to research the morphological structures of different Pakistani indigenous languages. The researchers found a serious research dearth in the analysis of the verbs of Shahamukhi Punjabi. Despite the research scarcity in this field, the above-mentioned studies generally seemed to be prescriptive in their nature. The reason is that they followed the grammatical rules of prescriptive Punjabi grammar (e.g., Shah, 2015) in categorizing different systems of verbs. These previous studies did not use any corpus to confirm whether the grammatical rules retrieved from the prescriptive grammar are applicable to the Punjabi language or not. These gaps, on the one hand, indicate that the findings of the previous studies are not reliable and, on the other hand, motivated the researchers to conduct the study in this field.

After the preliminary analysis of the Punjabi language, two hypotheses were formulated. The first is that the finiteness system impacts the classification of Punjabi verbs, and, secondly, the varied morphological changes in gender, number, aspect, and voice systems are manifested in in the morphological structures of single-word finite verbs. The hypotheses were further confirmed by conducting a corpus-based study to enhance the reliability and validity of the study. After the identification of morphological patterns of Punjabi verbs, the researchers focused on the morphological description of the single-word finite verbs in the Shahmukhi Punjabi language in order to comprehensively analyze the finite single-word verbs. Based on the hypotheses, this study established two main objectives:

1. To morphologically describe the patterns of the finite single-word verbs in Shahmukhi Punjabi
2. To specify the morphological changes manifested in the finite single-word verbs according to gender, number, progressive and perfective aspects, and voice systems

Before ending the introduction section of the study, two linguistic terminologies often utilized in the analysis section require some clarification, i.e., tense and time. Tense is a grammatical terminology "that is realized morphologically on verbs" (Downing, 2015, p.353). However, if past, present, and future times are grammaticalized via auxiliaries, the category, "Time", has been used for verbs (, e.g., present time, past time, and future time) in this research.

The upcoming sections of the research contain a literature review, research methodology, and analysis section. The literature review first presents a historical, sociolinguistic, and typological background of Punjabi. After reviewing different studies conducted for Shahmukhi Punjabi, the reasons for the selection of the morphological framework have been given. Subsequently, the researchers state the research questions and hypothesis and the study's methodology. The final section presents and discusses the results obtained from the analysis of the corpus.

2. Literature Review

Punjabi belongs to the outer circle of the Indo-Aryan language and is the 10th most widely used language throughout the world with 150 million Punjabi speakers worldwide (Noor, et al., 2015; Simons & Fennig, 2017). Its speakers also live in the Punjab regions of both Pakistan and India. The major dialects of Punjabi are two, viz., Eastern Punjabi spoken by people mostly living in India and Western Punjabi spoken by people generally living in Pakistan (Sharma & Aarti, 2011; Narang, et al., 2013; Kaur, et al., 2010). However, this dialectical division is more specifically geographical and political one (Language Resource Center, 2017; Yule et al., 2013). In Pakistan, the Punjabi speakers are 80.5 million, meaning that 44.15% of Pakistanis speak the Punjabi language (Pakistan Bureau of Statistics, 2017). It is, therefore, the most widely spoken first language in Pakistan. Punjabi uses two types of scripts for writing. The Shahmukhi script is used in Pakistan, and it follows the Perso-Arabic script. In India, the Ghurmukhi script, based on the Hindi script, is utilized (Virk, et al., 2011; Malik, 2006; Lehal & Saini, 2011). The script of Shahmukhi Punjabi starts from right to left and adopts the Nastalique style of Persian and Arabic. The shape of letters used in Shahmukhi Punjabi is the context-sensitive, meaning that their inflections change according to their position in the sentence. Because large sections of the Punjabi populace use Punjabi, it contains multiple dialects due to geographical variations.

Based on sociolinguistic variations, colloquial Punjabi language is further subsumed into three groups: the Majhi dialect mostly used in the Punjabi literature, the Dogri dialect spoken in the North of Punjab, and the gradually changing dialects known as Lahnda (Campbell, 1991). The Punjabi dialects as mentioned by Shackle (1970) can also be categorized into four main groups, namely, the Eastern dialects, the Western dialects, Majhi, and Dogri. However, Temple (1883) asserts that Punjabi is classified into four major dialects: Majhi, Multani, Potohari, and Pahari. The other important dialect of Punjabi is Shahpuri which is derived from Shahpur, the district of Punjab, and is now spoken Sargodha, Bhakkar, Mianwali, Dera Ghazi Khan, Chakwal, Attock, Mandi Bahauddin, Jhang, and various parts of Dera Ismail Khan, Faisalabad, Chiniot, and Bahawalpur district including Dera Chanpeer Shah and Khushab (John, 2009). As far as the present study is concerned, Majhi was selected for the morphological description of Punjabi verbs. The reasons behind the selection of Majhi are twofold. Firstly, Majhi is the standard dialect of Shamukhi Punjabi, i.e., Majhi pointed out by Shackle (1970) and majorly used in Punjabi literature. Secondly, the online availability of written material related to Majhi is very helpful for the researchers of the present study to construct a corpus.

After going through the historical and sociolinguistic background of Punjabi, the next step is to understand its morphological typology. Punjabi is highly agglutinative and fusional (Sharma & Aarti, 2011). As mentioned by Lieber (2009), languages are divided into four sub-types: agglutinative languages, fusional languages, analytic languages, and polysynthetic languages. Agglutinative languages are, according to Song (2001, 2010) and Booij (2007), sub-types of synthetic languages based on the higher morpheme-to-word ratio. In comparison to isolating or analytic languages, which divide concepts into their words, synthetic languages segment words into separate morphemes, and each morpheme indicates a particular meaning. The terminology, "agglutinative" for Punjabi is used because of its higher usage of agglutination. The Punjabi words consist of multiple morphemes concatenated together in such a way that individual word stems and affixes can be separated and identified as a specific derivational or inflectional morpheme. The agglutinative nature of Punjabi was analyzed by Gupta (2014) who identified 38 inflectional suffixes attached to the Punjabi verb roots to realize thirty-eight different morphological and syntactic features although the researchers of the study identified 60 inflections used with Punjabi

verbs. In addition to agglutinative characteristics, Shahmukhi Punjabi also shows fusional features because many Punjabi verbs consisting of a single morpheme simultaneously represent gender and number systems. Thus, it is reasonable to assume that the highly complex agglutination and fusion of Punjabi, in contrast to analytical languages such as English, indicates the morphological enrichment of the Punjabi language.

Despite the facts mentioned about Shahmukhi Punjabi, Yasin et al. (2020) and Haidar et al. (2021) confirm that the young generation, especially in urban areas of Pakistan, feel reluctant to speak the Punjabi language. Even, they are neither interested in preserving their native language nor as fluent as their parents. Most people do not use Punjabi as a medium of instruction in their academic institutes and are least interested in transforming their native language for their children. The present situation is most likely to indicate the endangerment of Shahmukhi Punjabi because the health of a language is, according to Romaine (2018), determined by its usage of the young generation. Languages become endangered if the parents or other caretakers do not transfer them to the next generation. According to UNESCO's Linguistic Vitality and Endangerment (LVE) parameter, Shahmukhi Punjabi can be considered severely endangered as it is mostly spoken by the older generation and not used by the younger generation (Akhtar et al., 2018, 2022; Gillani & Mahmood, 2014). This linguistic scarcity also undermines the cognitive process of speakers as indicated by the Sapir-Whorf hypothesis (Crystal, 2010). The outer world is perceived by one's mind which is mostly controlled by the language of that speaker. Instead of considering a language as a passive tool, it creates perceptions of speakers about the outer world and, consequently, constructs social realities for them. It can be deduced that the endangerment of Punjabi not only damages the linguistic identity of the speakers but also their cognitive abilities. To revitalize the Punjabi language, the digital documentation of indigenous languages as mentioned by Crystal (2003) is one of the substantial steps. This research not only facilitates the digital documentation of Shahmukhi Punjabi but also offers a comprehensive morphological analysis of Punjabi verbs, which can be incorporated into educational textbooks for enhanced learning experiences.

Although very few studies were published to digitally document Shahmukhi Punjabi, a small section of researchers attempted to systematically analyze various linguistic features of the Shahmukhi Punjabi language The studies (, e.g., Aktar al., 2019; Tehseen et al., 2023; Arslan et al., 2019; Hashmi et al., 2019; Hasan et al., 2015; Lehal & Saini, 2011) tried to develop the word net of formal and semantic relations among the Punjabi content words. The other section of the studies (Arsalan et al., 2023; Noor et al., 2019, 2021) analyzed the morphological features of Punjabi nouns. The next section of studies (, e.g., Mangrio et al., 2020; Noor et al., 2015) classified the lexical items of Shahmukhi Punjabi according to their morphological variations. In regard to word formation, the studies (Jamshaid & Akhtar, 2021a, 2021b, 2022) explored the semantic and pragmatic relations formed through the formation of exocentric compound words. The following studies (Habib et al., 2015, 2021; Chohan & García, 2019, 2022; Chohan et al., 2018; Farooq & Mahmood, 2018; Arslan & Mahmood, 2021; Mahmood et al., 2015) examined the phonemic variations of Shahmukhi Punjabi. Syntactically, the following studies (, e.g., Ahmed et al., 2023; Ahmed, 2023) investigated the syntactic structures of Punjabi sentences. Finally, a few studies (, e.g., Khan el., 2023; Saleem el., 2023; Shahid el al., 2023; Tanzeem et al., 2022) explored the pragmatic and discoursal features of Shahmukhi Punjabi.

Based on the morphological frameworks, the studies regarding the morphological analysis of the Punjabi language can be divided into two categories. Firstly, the studies (, e.g., Ashraf et al., 2022; Butt, 2016; Khalique et al., 2021; Gupta, 2014; Singh et al., 2022) used the morpheme-based

morphology (, i.e., also known as the item and arrangement model) for the analysis of the Punjabi verbs, whereas Ansari and Mangrio (2019) used word and paradigmatic approach (WP approach) based on the word-based morphology for the analysis of Urdu verbs. Pointing to the limitation of morpheme-based morphology, Ansari and Mangrio (2019) argued that word-based morphology concentrates on the word forms, not the different parts of words. The WP approach considers morpheme non-existent, which focuses on the stem modifications used to highlight similar morphological patterns. According to the morphological patterns, words are further subsumed. However, Mathews (1991) contends that words should be ordered according to their grammatical features determined by their endings because words provide a more solid and stable focus for grammatical features rather than the morphological components themselves. The WP approach asserts that words are the parts of lexicons, not the affixes.

In contrast to the word-based morphology, the researchers utilized the morpheme-based morphology for analyzing the finite single-word verbs in Shahmukhi Punjabi. The reason is that the present research is corpus-based. In other words, the corpus was used to support the hypotheses. During the analysis of the Punjabi verbs, the researchers assessed that the inflectional morphology plays a vital role in the construction of verbal systems. Thus, the inflectional morphology becomes more pertinent in the description of the Punjabi verbs. Secondly, the different morphological patterns are widely used in the verbal systems of most Punjabi verbs. The progressive and perfective aspects, and voice systems show singular/plural masculine and singular/plural feminine variations which are determined by the inflectional patterns. The prevalence of similar patterns can be used to classify the verbs on the basis of their inflectional changes. In response to the above claim, the categorization of words in regard to their grammatical categories is most likely to be appropriate for English where the verbal system is not associated with gender, number specifically the past/future sentence. However, the Punjabi language contains both fusional and agglutinative features. In this way, the inflectional endings of the Punjabi verbs determine the verbal systems. The distinction of words based on the morphological analysis becomes more crucial. Thirdly, if the affixes are not part of the lexicon, it means that the inflectional changes should not affect the verbal systems. In actuality, the inflectional differences make gender systems, tense, and number systems. For instance, according to Downing (2015), tenses are formed on the basis of morphological changes. Therefore, English has two tenses: present and past tense. If we ignore the morphological change, then the identification of tenses will be finished according to linguistic rules. Based on the above rebuttals, it is reasonable to assume that the morpheme-based morphology analyzes the Punjabi language more closely in comparison to the word-based morphology.

To sum up, the above morpheme-based studies (, e.g., Ashraf et al., 2022; Singh et al., 2022) are inclined to prescriptivism because they follow a traditional view of finiteness that the Punjabi language has three types of verbs, viz., present, past, and future tenses. The second drawback of the above studies is that they did not classify the Punjabi verbs based on their formation. To fill these gaps, the present study has followed the linguistic criteria of verb finiteness and, then, classify the verbs according to single and multi-word verbs. These two objectives of the study have been supported by the corpus, meaning that the descriptive nature of the present research makes a substantial step towards the formulation of a corpus-based Shahmukhi Punjabi grammar. Finally, the morphological description of the finite verbs will provide the linguistic community with deep insights into the Punjabi language but this study will prove a strong step to protect Shahmukhi

Punjabi from severe endangerment by making Punjabi more understandable to the young generation.

3. Methodology Section

3.1. Research Questions:

The aim of the present research is to morphologically describe the finite single-word verbs in the Punjabi language, specifically in Shamukhi Punjabi. The morphological description of finite single-word verbs is a systematic inquiry to see whether the verbs in the Punjabi language can be morphologically classified into sub-categories or not. In this regard, the researchers seek to answer to following basic research questions:

RQ No.1: What are the possible morphological classifications of the finite single-word verbs in the Shamukhi Punjabi Language?

RQ No.2: How do changes in gender, number, aspect, and voice systems manifest in the morphological structures of finite single-word verbs?

Based on the above research questions, two hypotheses can be established. Firstly, finiteness affects the categorization of the verbs in the Shamukhi Punjabi language. Secondly, in comparison to the English language, the different morphological structures of finite single-word verbs in Punjabi cause morphological changes in gender, number, aspect, and voice systems. Because the second research question is, primarily, an exploratory one, the possible null hypothesis is that morphological changes in finite single-word verbs will not take place according to gender, number, aspect, and voice systems.

3.2. The Research Design of the Current Research

In this research, the chosen research design is the Exploratory—Confirmatory approach, selected from the continuum proposed by Fred and Perry (2011), which intersects the dimensions of Basic—Applied and Qualitative—Quantitative. While some prior studies, like Butt et al. (2021), have analyzed the morphological structures of Punjabi verbs, this research aims to provide a systematic description of finite, single-word Shamukhi Punjabi verbs, which appears to be a novel undertaking. The motivation for adopting the Exploratory-Confirmatory research design is rooted in its two-phase approach. During the exploratory phase, researchers gain insights to develop well-informed hypotheses and research questions. In the subsequent confirmatory phase, these hypotheses are rigorously tested with robust methods. This method ensures that the research is firmly grounded in data and theory, resulting in credible and reliable results. Therefore, based on the initial data analysis, certain hypotheses were formulated. To validate these hypotheses, this study further examines the morphological description of finite single-word verbs in line with modern linguistic morphological rules. Consequently, this research aligns more closely with the confirmatory end of the research continuum, as illustrated below:

Figure 1

The Research Design of the Current Study

Exploratory ←————————→ Confirmatory

3.3. Data and Sampling of the Study

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Depending on the research questions and research design, the current study utilized homogenous purposive sampling. The homogenous purposive sampling is used to select the participants sharing the relevant experience to the study (Dörnyei, 2007, p. 128). This sampling strategy proves valuable in recognizing shared patterns among participants with similar traits. It directly aligns with the research's primary objective: to identify recurrent morphological patterns in Shamukhi Punjabi's finite single-word verbs.

Using the above sampling strategy, the researchers retrieved a sample of one hundred thousand words of Punjabi stories from an online website named Rvel.org (http://www.rvel.org/). There are two primary justifications for choosing this website. Firstly, it offers a wealth of data, including Punjabi news, columns, poetry, and stories. Secondly, the stories on the website are authored by Punjabi writers themselves. This approach provides researchers with the chance to gather stories composed by native Punjabi speakers, as opposed to relying on machine translations.

3.4. Analytical Framework:

The study utilized Schooneveld's (1962) classificatory framework of English verbs as the analytical framework for the sampling analysis process. Schooneveld (1962, p. 1) divided the morphological description of English verbs into four categories, viz., thematically regular verbs, thematically irregular verbs, inflectionally morphological regular verbs, and inflectionally morphological irregular verbs.

3.5. Thematically Regular and Irregular verbs

Thematically regular verbs are a category of verbs where the stem remains consistent across their various forms. In simpler terms, the stem of thematically regular verbs doesn't change in different grammatical categories. For example, verbs like "put," "show," "pass," and "praise" fall into this category.

3.6. Thematically Irregular verbs

Thematic irregular verbs are characterized by the usage of multiple stem alternations in their various verb forms. For instance, verbs like "sing," "break," and "come" exhibit this feature.

3.7. Inflectionally Regular Verbs:

Inflectionally regular verbs follow a consistent pattern in their inflection, meaning they don't use suffixes in various verb forms. This pattern includes present simple verbs, past participles, past simple verbs, and present participles. Examples of such verbs include "live" and "wait."

3.8. Inflectionally Irregular verbs

Inflectionally irregular verbs are verbs that undergo inflectional changes that don't fit the typical pattern of five verbal forms, which includes suffixless verbs, present simple verbs, past participles, past simple verbs, and present participles. Examples of these irregular verbs are "beat," "bet," and "sweat."

This study primarily centers on inflectional morphological verbs, encompassing both finite and non-finite verbal inflections. However, the research confines its analysis to finite single-word verbs in Shamukhi Punjabi. This limitation arises from the generally regular structures observed in the Punjabi verb system. Through the analysis, it became evident that the majority of Punjabi verbs

adhere to regular structures, with irregular verbs being the exception. Consequently, the study's concentration is on inflectionally morphological regular verbs within the Punjabi language.

3.9. Analytical Procedure:

The process of sampling analysis involved several sequential steps:
1. Initially, a story was randomly chosen from the website (specifically, Rvel.org), and Punjabi verb examples were collected.
2. These Punjabi verb examples served as the foundation for identifying recurring morphological structures in verbs.
3. Two primary hypotheses were then formulated, addressing the division of Punjabi verbs based on finiteness and the influence of verbal systems on verb morphology.
4. In order to validate these hypotheses, a corpus comprising one hundred thousand words was constructed.
5. Given the substantial variety of morphological structures in Punjabi verbs, the researchers opted to concentrate their analysis on finite single verbs. This choice allowed for a comprehensive and in-depth investigation.

3. Analysis and Discussion Sections

The present research focuses on morphologically describing finite single-word verbs, with specific emphasis on the inflectionally morphological regular verbs. Inflectionally regular verbs point to those verbs which show the inflections used in suffixless verbs (, i.e., infinitive verbs), present simple tense, past participles, and past simple tense. (Juilland & Macris, 1973). This definition of inflectionally regular verbs exhibits the morphological patterns of verbs in the English language. The following table exemplifies the patterns of past and future tenses in Punjabi, and the primary auxiliaries were bolded:

Table 1

Examples of Present Time, Past Tenses and Future Tenses

Root Words	Present Time	Past Tense	Future Tense
ودھ (wadh: Move)	اوہ ہمیشہ گل اگے ودھیندا اے Ouh hamesha gall agey vadhinda ae He always prolongs the matters.	گل اگے ودھی Gal agay wadhi The matter proceeded.	توں ودھینگی Tun wadhen gi. You will proceed
دس (dass: Tell)	اوہ گل مینوں دسدا اے Oh gal mainu dassda ae He tells me the thing.	میں گل دسی Main gal dassi I told the thing.	توں دسینگی Tun dasengi You will tell

As illustrated in the above table, Punjabi lexical verbs (, i.e., ودھیندا, دسدا) need primary auxiliaries (, e.g., اے /ae) to show the present time. On the other hand, the English verbs (prolongs, tells) used in the translation of Punjabi verbs have to undergo morphological variations, and they do not use any primary auxiliary to mark the present tense. For making the past tense, lexical verbs of both

Punjabi and English (proceeded /ودھی , told /دسی) take verbal inflections (, e.g., ی /i,). The lexical verbs in Punjabi (will proceed /ودھینگی , will tell / دسینگی) use inflections (گی/gi) for expressing the future tense such as, whereas the English verbal system has to take the modal verb (, i.e., will) to specify the future time. The afore-mentioned examples indicate that the tense system of Shahmukhi Punjabi differs from the English tense system, viz., the present and past tenses. The reason is that, according to Downing (2015), English takes verbal inflections to mark the present and past tense (, e.g., He always prolongs the matters.). Based on the criteria adopted by Downing (2015), the Punjabi language has two tensed forms of verbs, i.e., the past and future tenses. In the analysis of the Punjabi corpus as exemplified above, the verbal inflections are only observed in the verbs used to mark the past and future tenses.

The inflectionally regular verbs in Punjabi can be divided into two broad categories: single-word verbs and multi-word verbs. The primary focus of this research is the morphological description of finite single-word verbs. Therefore, the analysis section explains the inflectionally morphological description of single-word verbs in Punjabi verbs. The single-word verbs based on their morphological structures are further subsumed into finite and non-finite single-word verbs. Finite verbs, according to Downing (2015), are tense-based verbs that have to undergo morphological changes in order to indicate a tense. The non-finite verbs are not tense-based verbs, meaning that these verbs do not adopt morphological inflections to represent the tense. However, the present, past, and future time in the non-finite verbs is indicated via using auxiliaries. The non-finite verbs, thus, include non-finite time verbs, participles, infinitives, and causatives. Regardless of the finiteness of single verbs, the analysis section also provides insights regarding the inflectional changes faced by single-word verbs due to systems of number, gender, aspects, and voice.

a. Types of Finite Single-word Verbs

The finite verbs in the Punjabi Language are the past and future tense. The finite verbs show the past tense by using the following affixes (, e.g., ی /i /, ا /a/ , ے /e/) with the lexical verbs, and the future finite verbs use the following affixes (, e.g., انگا / Anga, انگی / Angi, انگے /Angay, انگیاں / Angia). The following table provides the examples of the past and future tense:

Table 2
Examples of the Past and Future Tense

Root Words	Past Tense	Future Tense
ودھ (wadh: Move)	گل اگے ودھی Gal agay wadhi The matter proceeded.	توں ودھینگی Tun wadhen gi. You will proceed
دس (dass: Tell)	میں گل دسی Main gal dassi I told the thing.	توں دسینگی Tun dasengi You will tell

لکھ (Likh: Write)	میں کہانی لکھی Main kahani likhi I wrote story	توں لکھینگی Tun likhen gi You will write

As mentioned in the above table, the affixes (ی /i/) and (ینگی /anhge) are used with lexical verbs (ودھ / wadh , دس /dass , لکھ /likh) to make the past and future tense, respectively.

b.   Number and Gender Systems of Finite Single Verbs

As far as number and gender systems are concerned, the suffixes (ی /i/, ے /e/, اں /ian/, ا /a/) and (, e.g., انگا / anga, انگی /angi, انگے / ange, انگیاں / angiyan, ینگا / yenga, ینگی /yengi) are, respectively, used to form the past and future tense. The (ا /a/, ی /i/) show singularity. The affix (ا/a/) with lexical verbs refers to singular masculinity, and the other affix (ی /i/) points to singular femininity. For making a plurality of finite verbs, affixes (e.g., ے /e/, اں /ian/) are attached to lexical verbs. The attachment of an affix (ے /e/) with finite lexical verbs depicts plural masculinity, and the affix (اں /ian/) with finite lexical verbs constructs plural femininity. The following illustrates the examples of genders and numbers in the past tense:

Table 3
Examples of Gender and Number Systems in the Past Tense

Tenses	Gender & Number Systems	ودھ (wadh: Move)	دس (dass: Tell)	لکھ (Likh: Write)
Past	Singular Masculine (یا/)	میں اگّے ودھیا Mai agay wadhya I moved forward.	میں انہوں اپنا دکھ دسیا Mai ano apna dukh Dasyha I told him my sorrow	میں اک خط لکھیا Mai ak khath likhya I wrote a letter
	Plural Masculine (ے)	اسی اگّے ودھے. Isi aage vadhe We moved forward.	اسی دکھ دسے Isi dukh dase We told him our sorrows	اسی خط لکھے Isi khat likhe We wrote letters.
	Singular Feminine (ی)	گل اگّے ودھی Gal agay wadhi The matter proceeded	میں گل دسی Main gal dassi I told the thing.	میں کہانی لکھی Main kahani likhi I wrote story
	Plural Feminine (یاں/اں)	گلاں اگّے ودھیاں Galia agay wadhiya The matters proceded	اسی کہانیاں دسیاں Ahsi khaniya likhya	اسی کہانیاں لکھیاں Asi Kahaniya Likhya

				We wrote stories

In the future tense, the affix (ينگا / yenga) is used to show singular masculinity, and the affix (ينگی / yengi) points to the singular femininity. Similarly, the affixes (انگياں /angiyan) and (انگے / ange) are attached to lexical verbs to formulate the plural femininity and plural masculinity, respectively. The following table presents the number and gender systems of future single-word verbs:

Table 4
Examples of Number and Gender Systems of Future Single-word Verbs

Tenses	Gender & Number Systems	ودھ (wadh: Move)	دس (dass: Tell)	لکھ (Likh: Write)
Future	Singular Masculine (انگا) (ينگا / yenga)	میں اگے ودھانگا Main agay wadhanga I shall proceed	میں دسانگا Main dasan ga I shall tell	میں لکھانگا Main likhanga I shall write
	Plural Masculine (انگے)	اسی اگے ودھانگے Asi agay wadhangay We shall proceed	اسی دسانگے Asi dassan gay We shall tell	سی لکھانگے Asi likhangay We shall write.
	Singular Feminine (ينگی)	توں ودھینگی Tun wadhen gi. You will proceed	توں دسینگی Tun dasengi You will tell	توں لکھینگی Tun likhen gi You will write
	Plural Feminine (انگياں)	اسی اگے ودھانگياں Asi agay wadhangian We shall proceed اسی دسانگياں	اسی دسانگياں Asi dasangian We shall tell	اسی لکھانگياں Asi likhan gian We shall write

c. Impacts of the Object on the Gender and Number Systems of Past Single Verbs

During the analysis of single verbs, it was observed that the gender and number systems are not only associated with the subject of the clause, but the object of the clause sometimes affects the gender and number systems. If the object is feminine, the finite single verbs take the feminine inflectional markers in the past tense. The following table gives examples of inflectional changes according to the gender system of the object and the highlighted words in the sentences are objects of the respective clauses:

Tenses	Gender & Number Systems	دس (dass: Tell)	لکھ (Likh: Write)
Past	Singular Feminine (ی)	احمد نے **گل** دسی Ahmad nay gal dassi Ahmad told a thing.	احمد نے **کہانی** لکھی Ahmad nay khahani likhi Ahmad wrote a story.
	Plural Feminine (یاں/اں)	احمد تے علی نے **کہانیاں** دسیاں Ahmad ur Ali na khaniya dassiya Ahmad and Ali told stories	احمد تے علی نے **کہانیاں** لکھیاں Ahmad ur Ali nay Khaniya Likhya Ahmad and Ali Ali wrote stories.
Tenses	**Gender & Number Systems**	دس **(dass: Tell)**	لکھ **(Likh: Write)**
Past	Singular Feminine (ی)	احمد نے **گل** دسی Ahmad nay gal dassi Ahmad told a thing.	احمد نے **کہانی** لکھی Ahmad nay khahani likhi Ahmad wrote a story.
	Plural Feminine (یاں/اں)	احمد تے علی نے **کہانیاں** دسیاں Ahmad ur Ali na khaniya dassiya Ahmad and Ali told stories	احمد تے علی نے **کہانیاں** لکھیاں Ahmad ur Ali nay Khaniya Likhya Ahmad and Ali Ali wrote stories.

Table 5

Examples of Inflectional Changes According to a Gender System of the Object

d.   Inflectional Changes in Future Tense According to Personal Pronouns

In the finite future tense, single-word verbs have to adopt different affixes according to the types of personal pronouns. The affixes (انگا / anga) and (انگی/ angi) are, respectively, used to make singular masculine and feminine verbs which are mostly used with a first-person singular subject. Similarly, the affixes (انگے/ ange) and (انگیاں/ angiyan) are attached to lexical verbs to form plural masculine and feminine verbs with first person plural subject. In the second person, the same affixes inflected for the third person singular are used to make masculine and feminine genders. Concerning third person subject, the affixes (ینگا/ yenga) and (ینگی / yengi) inflect for the lexical verbs to construct singular masculine and feminine verbs. The affixes (نگے/naga) and (نگیاں/nagia) are used to form plural masculine and feminine verbs. The following table elaborates the examples of future singular verbs with regard to personal pronouns:

Table 6

Examples of Future Single-word Verbs According to Personal Pronouns

Personal Pronoun	Genders	ودھ (wadh: Move)	دس (dass: Tell)	لکھ (Likh: Write)
First person Singular	Masculine (انگا)	میں اگے ودھانگا Main agay wadhanga I shall proceed	میں دسانگا Main dasan ga I shall tell	میں لکھانگا Main likhanga I shall write
	Feminine نگی	میں اگے ودھانگی Main agay wadhangi I shall proceed	میں دسانگی Main dasan gi I shall tell	میں لکھانگی Main likhangi I shall write
	Masculine انگے	اسی اگے ودھانگے Asi agay wadhangay	اسی دسانگے Asi dassan gay	اسی لکھانگے Asi likhangay

First person plural		We shall proceed	We shall tell	We shall write.
	Feminine انگیاں	اسی اگے ودھانگیاں Asi agay wadhangian We shall proceed	اسی دسانگیاں Asi dasangian We shall tell	اسی لکھانگیاں Asi likhan gian We shall write
Second person Singular	Masculine ینگا	توں اگے ودھینگا Tun agay wadhenga You will proceed	توں دسینگا Tun dassangia You will tell	You will tell توں لکھینگا Tun likhen ga You will write
	Feminine ینگی	توں ودھینگی Tun wadhen gi. You will proceed.	توں دسینگی Tun dasengi You will tell	توں لکھینگی Tun likhen gi You will write
Third person Singular	Masculine ینگا	اوہ اگے ودھینگا Tun agay wadhenga He will proceed	اوہ دسینگا Tun dassangia He will tell	اوہ لکھینگا Tun likhen ga He will write
	Feminine ینگی	اوہ ودھینگی Tun wadhen gi. She will proceed.	اوہ دسینگی Tun dasengi She will tell	اوہ لکھینگی Tun likhen gi She will write
Third person plural	Masculine نگے	اوہ ودھنگے Tusi wadho gay You will proceed	اوہ دسنگے Tusi dasso gay You will tell.	اوہ لکھنگے Tusi likho gay You will write
	Feminine نگیاں	اوہ ودھنگیاں Tusi wadhogian You will proceed	اوہ دسنگیاں Tusi dasso gian You will tell	اوہ لکھنگیاں Tusi likho gian You will write

e. Aspect and Passive Systems of Finite Single-word Verbs

Although the progressive and perfective aspects and voice systems are not morphologically linked to finite single-word verbs, the following sections respond to the second research question. The second research question focuses on the changes of progressive and perfective aspects and voice systems depicted in the morphological structures of finite single-word verbs. Similar to the finite single-word verbs, the progressive and perfective aspects and voice systems of finite single verbs also take gender and number markers.

i. A Progressive Aspect System in the Finite Single-Verbs

For making progressive aspects, the markers (رہیا/rea) and (رئی / rei) are used to show singular masculinity and femininity in both past and future tenses, respectively. The other markers (رئے /rae) and (رہیاں /raihya) are utilized to indicate plural masculinity and femininity. The following table exemplifies the progressive aspects in the past tense:

Table 7

Examples of Progressive Aspects in the Past Tense

Tenses	Gender & Number Systems	ودھ (wadh: Move)	دس (dass: Tell)	لکھ (Likh: Write)
Past	Singular Masculine (رہیا/ rea)	میں اگّے ودھدا رہیا Mai agay wadha rea I was moving forward.	میں اینوں اپنا دکھ دسدا رہیا Mai ano apna dukh Dasda rea I was telling him my sorrow.	میں اک خط لکھدا رہیا Mai ak khath likhda rea I was writing a letter
	Plural Masculine (رئے/ rae)	. اسی اگّے ودھدے رئے Asi agay wadhdy rae We were moving forward.	اسی دکھ دسدے رئے Asi dukh dasda rae We were telling sorrows	اسی خط لکھدے رئے Asi khath likhda rae
	Singular Feminine (رہی / raei)	گل اگّے ودھدی رئی Gal agay wadhi raei The matter was proceeding.	میں گل دسدی رئی Main gal dasdi raei I was telling the matter.	میں کہانی لکھدی رئی Main kahdi raei I was writing story.
	Plural Feminine (رہیاں / raeiya)	گلاں اگّے ودھد یاں رہیاں Galia agay wadhiya raeiya The matters were proceeding.	اسی کہانی دسد یاں رہیاں Ahsi khaniya dasdiaya raeiya We were writing stories.	اسی کہانی لکھدیاں رہیاں Asi Kahaniya likhdiya raeiya We were writing stories.

In the future tense, the progressive markers (رہیا ہوئیگا /rea howainga) and (رئی ہوئیگی / raei howainge) are employed to form singular masculinity and femininity. Similarly, the progressive markers (رئےہونگے /rae howaingay) and (رہیاں ہونگئیاں / raeiya howaingia) are used to make singular masculinity and femininity. The following table exemplifies the progressive aspects of the finite future single-word verbs:
Table 8

Examples of the Progressive Aspects of the Finite Future Single-word Verbs

ii. Perfective Aspect in the Finite-Single Verbs

The perfective aspects of finite-single verbs convert them into non-finite single-word verbs as mentioned below:

Tenses	Gender & Number Systems	ودھ (wadh: Move)	دس (dass: Tell)	لکھ (Likh: Write)
Future	Singular Masculine (رہا ہوئیگا/rea howainga)	اوہ اگے ودھدا رہا ہوئیگا Uha agay wadha rea howainga He will proceed	اوہ دسدا رہا ہوئیگا Uha dasda rea howainga He will tell	اوہ لکھدا رہا ہوئیگا Uha likhda rea howainga He will write
	Plural Masculine رہےہونگے /rae howaingay)	اوہ اگے ودھدے رہےہونگے Uha agay wadha rea Howaingay They will proceed	اوہ دسدے رہےہونگے Uha dasda rea howaingay They will tell	اوہ لکھدے رہےہونگے Uha likhda rea Howaingay They will write.
	Singular Feminine (رہی ہوئیگی) / raei howainge))	اوہ ودھدی رہی ہوئیگی Uha agay wadhdi raei howainge She will proceed.	اوہ دسدی رہی ہوئیگی Uha dasdi raei howainge She will tell	اوہ لکھدی رہی ہوئیگی Uha likhdi raei howainge She will write

Table 9
Conversion of Past Tense into Past Perfect Tense

Past Tense	Past Perfect Tense
احمد نے **گل** دسی Ahmad nay gal dassi Ahmad told a thing.	احمد نے **کہانی** لکھی سی Ahmad nay khahani likhi sea Ahmad had written a story.
احمد تے علی نے **کہانیاں** دسیاں Ahmad ur Ali na khaniya dassiya Ahmad and Ali told stories	احمد تے علی نے **کہانیاں** لکھیاں سن Ahmad ur Ali nay Khaniya Likhya sun Ahmad and Ali had written stories.

As indicated in the above table, the word "dassi" in the following sentence "Ahmad nay gal dassi" shows finite past tense because the root word of, "dassi" is "Dass" which has to undergo the morphological change for making the past verb "dassi". On the other hand, the perfective construction of the past tense takes an extra auxiliary "Sea", which covert the finite-single word verbs into the non-finite single verbs. In the progressive aspects, the markers "(ریا/rea), (رئی / rei, (رئے/rae), and (ریاں /raihya) are used to indicate the progressive aspect of finite single-word verbs, but the separate auxiliary as required in the perfective aspect are not used for making the progressive constructions. Therefore, it can be ascertained that the perfective aspects are not found in finite single-word verbs.

f.   Passivization of Finite Single-word Verbs

In the finite single-word verbs, the passivization system requires a separate auxiliary as observed above in the perfective aspects. The following table provides some examples of passivized finite single-word verbs:

Table 10
Passivized Examples of Finite Single-word Verbs

Past Tense	Passivized Past Tense
احمد نے **گل** دسی Ahmad nay gal dassi Ahmad told a thing.	**گل دسی** جاندی سی Gal Dassi Jandi Sea A thing was told.
احمد تے علی نے **کہانیاں** دسیاں Ahmad ur Ali na khaniya dassiya Ahmad and Ali told stories	**کہانیاں** لکھیاں جاندیاں سن Khaniya Likhia jandia sun The stories were written.

The examples constructions single verbs separate (سی/Sea, سن /) of passive of finite show that the auxiliaries sun) are used with the passive operators (, e.g., جاندی /Jandi, جاندیاں/ jandia). With the passive operators, the auxiliaries are used to show non-tensed time. Therefore, it is reasonable to assume that the passive construction of finite single-word verbs is possible in the Shamukhi Punjabi language.

4. Conclusion

Based on the initial findings, the researchers formulated two primary hypotheses. Firstly, they postulated that finite single-word verbs in Shahmukhi Punjabi can be categorized into two broad groups: finite and non-finite single-word verbs. Secondly, they hypothesized that the morphological alterations in finite single-word verbs are driven by the number, gender, aspect, and voice systems. Subsequently, an exploratory-confirmatory research approach was employed to analyze a corpus of Punjabi finite single-word verbs. This analysis revealed overarching morphological patterns responsible for inflectional changes in the root words. These morphological variations were primarily associated with finite single-word verbs and their interplay with various verbal systems, including number, gender, tense, aspect, and voice systems.

The research findings provided insights into the presence of past and future tenses within Punjabi verbs. The morphological inflections were observed to modify lexical verbs to convey these temporal distinctions. To indicate the present tense, auxiliary verbs were employed in conjunction with the lexical verbs. Moreover, not only finite single-word verbs but also the progressive aspect and voice systems of past and future tenses exhibited inflections related to number and gender systems.

While the research yielded valuable insights, it also revealed two areas for further investigation. Future research endeavors should, first and foremost, encompass the morphological description of multi-word verbs in the Shahmukhi Punjabi language. Additionally, the present study employed a qualitative approach to explore the morphological aspects of finite single-word verbs, warranting further validation through a comprehensive and representative corpus. Ultimately, the research outcomes have initiated a trend of corpus-based linguistic analysis of the Shahmukhi Punjabi language, shedding light on the intricate morphological changes occurring at the linguistic level for the benefit of the national and international linguistic community.

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