

Quantitative Study of the Ethnic Creation Epic Hnewo Teyy from the Perspective of the Chinese National Community

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Abstract: Under the perspective of the community of the Chinese nation, this paper employs Quantitative Linguistics to analyze the word frequency, animal vocabulary, plant vocabulary, ethnic names, and formulaic expressions in the Yi epic Hnewo teyy. The aim is to reveal the sense of community for the Chinese nation and formulaic characteristics presented in the epic through lexical and sentence-level studies. The analysis results indicate: 1) Word frequency statistics and lexical clustering results show the epic Hnewo teyy has distinct colloquial features; 2) The high-frequency word distribution of Hnewo teyy conforms to Zipf's law; 3) Hnewo teyy displays rich formulaic characteristics in its narration, while also creating a harmonious scene of coexistence among all things. These complex elements naturally and smoothly blend together in the epic, highlighting the unique charm of Yi epics.

Keywords: Sense of National Community, Quantitative Linguistics, Formulaic characteristics, Hnewo Teyy.

1. Introduction

The Community of the Chinese nation is a unity formed by people of all ethnic groups in China through long-term historical development. It is politically united, culturally inclusive, economically interdependent, and emotionally close, creating an inseparable community. This community is based on shared historical conditions, common value pursuits, a shared material foundation, common identity, and a shared spiritual home. National epics, as a precious cultural heritage, embody the history, traditions, values, and spirit of a nation or region. They convey human wisdom, emotions, and beliefs through stories, poetry, and music, symbolizing national identity and cohesion. Therefore,

exploring the characteristics of national epics against the backdrop of national community consciousness holds significant historical, cultural, and social meaning.

The Yi people, an ancient ethnic group, have contributed a rich cultural heritage to the Chinese national family. Yi folklore is diverse and rich in content, including poetry, myths, legends, fairy tales, fables, proverbs, and riddles, mostly existing as oral literature. The Yi epic poetry includes works like Hnewo teyy, "Mamutei," "The Ancestral Foundation of Axi," "Southwest Yi Chronicles," "Hai Diegu," "Meige," "Cham," "My Cousin," "Mother's Daughter," "Ashima," "A Pair of Rainbows," and "Escape to Sweet Land," with a recorded total of 17 Yi epics. Hnewo teyy, translated as the book of history, reflects the cosmology, worldview, and social views of ancient Yi people. Hnewo teyy, "Meige," "Cham," and "The Ancestral Foundation of Axi" are hailed as the four great creation epics of the Yi. This epic consists of 13 chapters, including "The Evolution of Heaven and Earth," "The Creation," "Aoshu Bu," "The Twelve Branches of Xuezi," "Calling the Sun and Moon," "Summoning the Unique Sun and Moon," "Shi Er Etu," "The Flood Overwhelms the World," "The Land of the Zhi," "The Transformation of Hehousai," "The Ancient Transformation of Housai," and "The Song of Qu Nie." The various vocabularies in these chapters not only describe the plot and drive the narrative but also imply rich textual content and cultural attributes. The Yi mythological epic Hnewo teyy, circulated in the Liangshan of Sichuan, is a vivid reflection of the ancient Yi people's life and struggles, mirroring their thoughts, emotions, and spirit. It narrates the creation of the world and the origin of humanity, serving as a precious historical document and a beautiful literary work. Through magical imagination and poetic language, it portrays a broad depiction

of ancient Yi social life, reflecting the majestic spirit and unyielding will of primitive humanity to conquer nature and expressing the pursuit of a happy life. Hnewo teyy is a treasure of Chinese civilization, perfected over generations of Yi people's recitations[1].

Since the reform and opening up, academic research on Yi language, literature, and culture has flourished, mostly of an introspective and qualitative methods. However, compared to studies of other national epics, research on Yi epics remains limited, with insufficiently diverse methods. This raises the question: must research on Yi epics remain constrained? The author believes it is necessary to integrate contemporary national community concepts and introduce scientific, quantitative methods to further explore the linguistic features and thematic consciousness of this cultural treasure.

2. Literature Review

As we mentioned earlier, previous studies on national epics primarily used qualitative methods, lacking support from scientific linguistic data. Modern linguistic research focuses on examining real language data, aligning well with the methods of Quantitative Linguistics. Quantitative Linguistics, a young yet ancient discipline, was marked by the publication of George Kingsley Zipf's "The Psycho-Biology of Language: An Introduction to Dynamic Philology" in 1935[2]. This discipline uses real language materials and precise mathematical methods to explore language structures and development rules, thereby explaining linguistic phenomena. Its precise, authentic, and dynamic characteristics have attracted international quantitative linguists. Foreign scholars Popescu and Altmann studied 54 poems by Slovak poet Eva Bachletova, concluding that "the greater the Gini coefficient, the lower the lexical richness of the text." Popescu and others used linguistic research indicators to examine the descriptive and active features of Romanian poetry texts through Latin part-of-speech parameters[2]. However, due to various influences, quantitative linguists have focused on the languages of Germany and Eastern Europe, making quantitative studies of Chinese languages rare. In China, few scholars have used this scientific method to explore intrinsic language patterns. Recognizing this issue,

domestic scholar Haitao Liu formed a Quantitative Linguistics team, achieving fruitful results over the past fifteen years. Zipf's law is the cornerstone of Quantitative Linguistics[3]. Therefore, domestic scholars Liu Pan used modern Chinese poetry as research material to investigate word frequency distribution and verify the "natural" nature of poetry texts using Zipf's law, exploring connections and differences with classical Chinese poetry[4]. Wei Lu studied common adverbial words, confirming the rule that nouns are the most prevalent word class in a language and concluding that high-frequency adverbs are usually shorter[5]. Huang Jiang used quantitative methods to compare the lexical styles of Jin Yong and Gu Long's martial arts novels, emphasizing the need to distinguish narrative and dialogue styles in novel texts. Dora and Zhaxijia deconstructed various elements of the epic "Huo Ling" from the Gesar epic from a lexical quantitative perspective, discovering its rich vocabulary and unique story structure, reflecting the life scenes and thinking patterns of a nation[6]. Zhang and Liu conducted a quantitative comparative study of Northwestern Chinese poetry "Hua'er," Chinese poetry, and English poetry, finding "Hua'er" most closely resembling Chinese folk song texts, followed by modern poetry, with translations closest to English folk songs, demonstrating fidelity and variation in folk song translation[2]. Long conducted a quantitative study of the linguistic features of Miao ancient songs, verifying that the Miao language Google text highly conforms to Zipf's law, with its narrative more similar to modern near-verse poems and tending toward folk song characteristics. Bao and Wuyunga's statistics on the number of verb meanings in the "Mongolian Dictionary" and a multilayer annotated corpus revealed an inverse relationship between the number of meanings and words in modern Mongolian verbs, featuring "long-tail distribution" characteristics[7]. Li and Xing examined the distribution of common and uncommon words in student compositions across different grades, seeking new measurement parameters for written expression vocabulary development in Chinese[8]. Xia and Sun explored issues of Chinese word length and polysemy in synergetic linguistics, using the "British National Corpus" as a basis to study the

relationship between English word length and lexical meaning, validating related theoretical hypotheses and mathematical models. The statistical results of adverbial folk songs also highlighted the interdisciplinary paradigm of qualitative and quantitative folk song research[9]. Zhang and Liu used quantitative method to study the text features of the Chinese folk song "Hua'er" (an ancient folk ballad from Northwest China), examining its word frequency distribution using Zipf's law to verify the "intrinsic formulaic mechanism" of the text[2]. Jiang, based on corpus and quantitative linguistic methods, analyzed the quantitative characteristics of human-translated and machine-translated language structures, comparing them in terms of translation style and quality. Scholars Zhang and Liu focused on the lexical, syntactic, and semantic features of folk songs from nine provinces in the Yellow River Basin within the perspective of the national community, finding that these songs exhibit a mixed word order type with dominant words preceding and following, and lexical and semantic thematic consistency reflecting intrinsic ties to the national community[10]. These results collectively prove the feasibility and scientific nature of this research method.

In February 2022, Hnewo teyy was included in Sichuan's list of representative intangible cultural heritage protection units, reaffirming the value of Chinese minority literary culture. Therefore, this paper selects Hnewo teyy as the research subject, exploring its linguistic features from a lexical level and discussing the national community consciousness and formulaic characteristics of epic expression.

3. Corpus Sources and Methodology

Table 1 shows the basic information of the corpus, Hnewo teyy.

Table 1. Basic information on the corpus

Type	Token	STTR
2768	7679	50.81%

This paper constructs a Hnewo teyy corpus based on Feng Yuanwei's 2016 Chinese translation, using tools such as Antconc, Segment, WordSmith, and Altman Fitter for processing and analysis. Hnewo teyy consists of 13 chapters, which serve as the text for exploring its word frequency distribution and testing its conformity to Zipf's law using the

Altman Fitter. Additionally, the paper statistically analyzes and examines vocabulary related to animal terms, plant terms, ethnic names, and formulaic expressions to deconstruct story elements and explore the community consciousness they embody. The basic information of the corpus is shown in Table 1.

Vocabulary, as the most fundamental unit of sentence construction, plays a crucial role in language application. The relationship between vocabulary, sentences, and articles is akin to points, lines, and surfaces[11]. Therefore, a quantitative study of the vocabulary in the Hnewo teyy epic helps us examine the historical characteristics of its vocabulary. This study primarily treats Hnewo teyy as a closed corpus, conducting word frequency and frequency statistics based on vocabulary categories to comprehensively analyze the overall vocabulary of the Yi epic Hnewo teyy. It is important to note that quantitative research is a method aimed at revealing the rules and features of language through numerical analysis of the corpus. Su points out that quantitative research, also known as quantitative analysis, recognizes the rules and characteristics of language through numerical reflection of the corpus[12]. Tang believes that in scientific research, the process of conducting quantitative analysis is known as quantitative research." Tang Yuming asserts that the quantitative method involves statistically analyzing random language phenomena to reveal underlying rules through quantification forms like frequency[13].

Therefore, the quantitative analysis of vocabulary is essentially quantitative research on vocabulary. Consequently, we first perform a word frequency statistical analysis on this corpus.

4. Findings and Discussions

In the statistical analysis of the Hnewo teyy text, the epic comprises a total of 2,102 lines and 14,316 characters. Among these, there are 677 verbs, 2,955 nouns, 189 adjectives, 55 adverbs, and 353 function and other words. These account for 32.7%, 45.4%, 10.3%, 2.3%, and 9.3% of the total vocabulary in the corpus, respectively.

4.1 Frequency of the Vocabulary of Hnewo Teyy

The top 30 high-frequency words in the epic are ranked as shown in Table 2.

Table 2. Frequency table of vocabulary words in the top 30 order of Hnewo teyy

Rank	Frequency Count	Frequency%	Chinese pinyin
1	161	2.1	de
2	130	1.69	zài
3	90	1.17	le
4	82	1.02	lái
5	78	0.94	zhù
6	72	0.89	a
7	68	0.87	qù
8	67	0.78	yě
9	60	0.78	dào
10	59	0.77	shì
11	53	0.69	dìfāng
12	52	0.68	bù
13	48	0.63	wǒ
14	44	0.57	zuò
15	41	0.53	zī
16	40	0.52	yòu
17	39	0.51	dì
18	38	0.49	shàng
19	38	0.48	zhè
20	37	0.46	zhàn
21	35	0.46	shuō
22	31	0.40	yào
23	31	0.40	bèi
24	31	0.40	búyuàn
25	30	0.39	hòu
26	30	0.39	yào
27	30	0.39	zhǐ
28	29	0.38	zhōng
29	29	0.38	búshì
30	29	0.35	dà

Based on Table 2, the following observations can be made:

Firstly, among the top 30 most frequent words in Hnewo teyy, monosyllabic words dominate, accounting for 90% of the frequency, while disyllabic words account for only 10%. This aligns with Zipf's principle of least effort. The three disyllabic words are "dìfāng" (place), "búshì" (not), and "búyuàn" (unwilling).

Secondly, the word with the highest frequency in the 13 stories is "de," with a probability value Pr of about 0.021, which is less than 0.1, consistent with Zipf's later findings.

Thirdly, the high-frequency words in the text are mostly function words, with monosyllabic words predominating, and adjectives being the

least common. This is related to the nature of Hnewo teyy, which, while not a musical piece, is chanted. Chanting texts often emphasize rhythm and cadence, requiring controlled syllable count and harmonious tones. Function words help adjust the rhythm and flow, enhancing the overall melody. They serve as connectors in sentences, maintaining structure without disrupting musicality.

While adjectives enrich descriptions, excessive use can complicate sentences and disrupt the flow. In chanting, concise expression highlights emotion and imagery, resulting in more function words and fewer adjectives. This demonstrates the colloquial nature of Hnewo teyy.

Similarly, many poems in the ancient Chinese anthology "The Book of Songs" use colloquial language with strong rhythm, suitable for chanting. "Chu Ci" also incorporates colloquial expressions in its lyrical poems. Folk tales like "The Legend of the White Snake" and "Mu Guiying Battles Hongzhou," often performed orally, vividly convey local customs and emotions, enhancing cultural identity and recognition.

Hnewo teyy, like these esteemed cultural works, shares a similar oral tradition. Through this method, the Yi people preserve their cultural traits while integrating elements from other branches, exemplifying cultural exchange within the Chinese nation. This inclusive and vibrant Chinese culture has thus emerged over millennia.

4.2 Results of the Clustering of Hnewo Teyy and Hua'er

The author mentions that Hnewo teyy exhibits distinct colloquial characteristics. To further validate this conclusion, a clustering experiment was conducted using noun, verb, and pronoun frequencies as clustering indicators, comparing the epic with "Hua'er," a folk song from Northwest China. Zhang and Liu (2017) found that using nouns, adverbs, and pronouns as clustering indicators showed that May Fourth new poetry has folk and colloquial features. Therefore, this study adopts a similar approach to gain deeper insights.

Table 3 presents the frequency of nouns, verbs, and pronouns in the Yi epic and Hua'er. Figure 1 shows the results obtained from hierarchical clustering using SPSS 27.0 based on the data

in Table 3.

Table 3. Frequency of nouns, verbs and pronouns in Hnewo teyy and Hua'er

Title	N.	V.	Pron.	StN.	StV.	Stpron.
Epic1	42	45	2	29	27	5
Epic2	30	14	0	24	29	0
Epic3	151	164	8	27	21	7
Epic4	66	42	0	19	22	0
Epic5	146	197	14	23	23	4
Epic6	143	171	7	24	29	9
Epic7	58	85	3	25	27	5
Epic8	51	71	2	21	24	3
Epic9	25	61	0	18	23	0
Epic10	154	236	29	26	23	8
Epic11	417	478	37	26	28	5
Epic12	173	247	9	21	29	6
Epic13	373	455	104	29	35	23
Hua'er1	10	5	1	32	16	3
Hua'er2	7	7	1	23	23	3
Hua'er3	7	7	0	26	26	0
Hua'er4	8	6	1	25	19	3
Hua'er5	7	8	2	22	25	6
Hua'er6	7	7	0	21	21	0
Hua'er7	6	8	5	19	26	16
Hua'er8	13	4	0	43	13	0
Hua'er9	9	8	2	32	29	7
Hua'er10	9	6	1	28	19	3

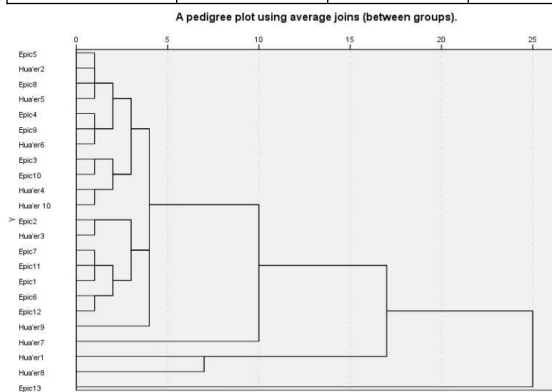


Figure 1: The results of cluster analysis using frequency of occurrence of nouns, verbs and pronouns in Hnewo teyy

From Figure 1, using nouns, verbs, and pronouns as clustering indicators for a systematic clustering experiment on the texts of Hnewo teyy and "Hua'er," the results show that Hnewo teyy and "Hua'er" are intermingled. Although "Hua'er" typically consists of four lines per song, the line length in Hnewo teyy closely aligns with the rhythm of each line in "Hua'er," both being structured with frequent end rhymes. Their text forms and word counts are relatively fixed. Both folk songs and epics are crucial

components of oral literature, spreading among people through oral transmission. This oral characteristic grants them a degree of fluidity and variability in form. Both emphasize rhythm and cadence, employing rhyme, rhythm, and repetition to enhance musicality and memorability, making them easier to sing and remember. They cover a wide range of social life, historical legends, and love stories, reflecting people's lives and emotions.

Based on this, the clustering results using nouns, verbs, and pronouns as indicators demonstrate that the Yi epic Hnewo teyy indeed possesses colloquial characteristics.

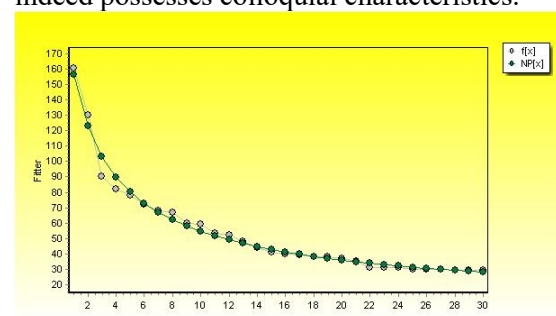


Figure 2: Zipf's law fit for high-frequency words in Hnewo teyy

Using Zipf's law formula ($y = ax^{-b}$) to fit the rank-frequency data of the top 30 high-frequency words in the corpus, the results are shown in Figure 2. The horizontal axis represents word rank, and the vertical axis represents word frequency. The gray curve shows the actual statistical data, while the green curve represents the power law fit. The goodness-of-fit indicator ($R^2 = 0.9501$), indicating a very good fit. This demonstrates that the word frequency distribution of the 13 stories in Hnewo teyy conforms to Zipf's law, further validating the universal characteristics of human language.

4.3 The Living Environment in the Story of

Table 4. Frequency of all animal words in the Hnewo teyy

Rank	Animal words	Frequency	Rank	Animal words	Frequency
1	people	69	20	fish	6
2	chicken	41	21	rabbit	6
3	cattle	35	22	monkey	6
4	dragon	35	23	bird	6
5	sheep	33	24	roebuck	6
6	horse	29	25	toad	6
7	pig	26	26	turtle dove	5
8	hawk	22	27	wild goose	
9	snake	18	28	magpie	4
10	bird	18	29	spider	4
11	tiger	16	30	fly	3
12	rat	10	31	grasshopper	3
13	bee	10	32	squirrel	2
14	crow	10	33	nightingale	2
15	dog	8	34	lion	2
16	frog	8	35	Yan	1
17	ant	7	36	cat	1
18	deer	7	37	cuckoo	1
19	bear	6	38	cicada	1

Based on Table 4:

Firstly, the stories in Hnewo teyy feature a rich variety of animals. A search for the word "person" reveals a frequency of 69, indicating that the true witnesses and narrators of historical stories are humans, who use language and writing. Humans possess the ability to think abstractly and create, weaving complex and emotionally rich stories. This creative thinking enables diverse narrative styles and literary forms, making humans the primary narrators and important characters in historical storytelling. This explains why "person" ranks first in Table 4.

Secondly, aside from people the words with the highest frequency are chicken and cattle.

Hnewo teyy

In the stories of Hnewo teyy, animal and plant names appear a total of 1,079 times. Animal-related vocabulary appears 482 times, while plant and natural landscape vocabulary appears 597 times. These frequently occurring words help outline the ancient Yi people's natural and living environment.

4.3.1 Animal category

In the 13 Hnewo teyy stories, there are 38 animal-related words, appearing 482 times in total. Among them, 16 words appear more than 8 times. Words that appear only once include yan, cat, cuckoo, and cicada.

The complete list of animal-related words is shown in Table 4.

In Yi culture, chickens are often seen as symbols of good fortune, prosperity, and are sometimes given protective and guiding roles in folklore. In ancient Chinese stories like "Wen Ji Qi Wu" and "Jin Ji Du Li," chickens play important roles. They are seen as heralds of dawn, symbolizing the start of a new day. The crowing of a rooster is considered a sign of good luck and hope. In ancient times, chickens were believed to ward off evil spirits and disasters. Offering chickens was a way to pray for peace and happiness, making them symbols of good fortune.

In Yi culture, oxen symbolize hard work, perseverance, and prosperity. They reflect the Yi people's respect for and reliance on nature,

embodying a harmonious relationship between humans and animals. In Chinese culture, oxen often symbolize diligence, resilience, and wealth. Idioms like "Niu Dao Xiao Shi" and "Niu Qi Chong Tian" convey a spirit of striving. In ancient Chinese stories, Lü Dongbin, one of the Eight Immortals, is said to have transformed into an ox to help poor farmers, teaching them the value of hard work and promoting agricultural civilization. This story emphasizes the importance of diligence and harmony with nature.

The frequency of animal-related words in Hnewo teyy depicts a scene of harmonious coexistence between humans and animals. Similar to how the "Shan Hai Jing" details mythical animals and beasts like dragons, phoenixes, and qilins, which are not only mythical heroes or protectors but also symbols of various strengths and virtues. People believe that their relationship with these

mythical creatures affects their fate, reflecting an awareness of human-nature unity.

Thus, animals are not only part of nature but also symbols of cultural identity[14]. Through reverence and depiction of animals, cultural consciousness and a sense of belonging are enhanced, emphasizing the emotional connection between humans and nature.

In conclusion, the analysis of animal word frequency in Hnewo teyy shows that these animals often carry similar symbolic meanings across cultures. For example, dragons symbolize strength and good fortune in Chinese culture and are also considered sacred in Yi stories. Such symbolic meanings link common values across different cultures, reflecting the interaction and integration of various ethnicities in terms of lifestyle and culture, highlighting that the Chinese nation is fundamentally a community.

Table 5. Frequency of all landscape words in the Hnewo teyy

Rank	Frequency	landscape words	Rank	Frequency	landscape words
1	117	sky	11	14	river
2	94	mountain	12	13	flower
3	64	water	13	13	star
4	50	tree	14	12	sun
5	45	day	15	12	pine
6	41	earth	16	10	wind
7	40	grass	17	8	rain
8	30	month	18	6	thunder
9	28	earth	19	5	fruit
10	19	cloud	20	3	sea

4.3.2 Natural landscape category

In the author's analysis, the category of words related to natural landscapes in Hnewo teyy is smaller compared to animal vocabulary. However, the total frequency of words in the natural landscape category is much higher than that of animal vocabulary. Across 13 stories, natural landscape words appear in 20 categories, with a total frequency reaching 597 times. The author has compiled the frequency and rank of each natural landscape word, as shown in Table 5.

From Table 5, it can be seen that natural landscape words such as sky, mountain, water, tree, sun moon, earth, and cloud dominate, ranking in the top 10 of this category with a frequency of no less than 20 times. According to Hnewo teyy, at the beginning of time, the world was shrouded in void. There were no towering trees, no lush grasslands, the rivers

were silent, and the mountains appeared barren and dull. This desolate natural environment starkly contrasted with the Yi ancestors' deep yearning for a better life.

In such an environment, the wisdom and creativity of the Yi ancestors were especially prominent. They longed for a harmonious and beautiful living space, hoping for a vibrant world. Thus, Hnewo teyy is not just a myth but a hymn of dialogue between humanity and nature, telling how the Yi ancestors created a harmonious living environment out of chaotic nature.

The story begins with, "In ancient times, there was no sky above, no stars in the sky; below, there was no earth, no grass on the ground." After the world was created, the Yi ancestors decided to seek the symbol of life—trees. "There are no trees on the ground, go to the sky to get them." This simple yet poetic

expression reflects their respect and dependence on nature. They carefully brought three trees from the sky, planted in this barren land with hope and longing for life.

Over time, with the warmth of the sun and gentle rain, these trees grew rapidly, forming a dense forest. The barren mountains thus came to life, with fir trees standing tall, becoming a new landscape on the earth. This process was not just material creation but spiritual elevation, without any resistance or conflict, everything was harmonious and smooth.

In this process, the Yi ancestors, with their hands and wisdom, transformed a desolate and lonely land into a vibrant paradise. Their desires were fulfilled through this intimate cooperation with nature, creating a world full of vitality and color. Such a narrative reflects the Yi culture's respect and love for nature, conveying the idea of harmonious coexistence between humans and nature, reminding us of the importance of creation and harmony in life. In Hnewo teyy, words related to the Han people, such as "Han ethnicity" and "Han person," appear a total of 17 times. Words related to the Tibetan people, such as "Tibetan" and "Lama," appear 7 times. These references describe the friendly interactions between the Yi and Han peoples and the close connections between the Yi and Tibetan peoples. The epic vividly depicts the imagined relationship between the Tibetan, Yi, and Han peoples, reflecting both a recognition of kinship and a profound understanding of geographical space. Throughout history, the survival and production activities of various ethnic groups in the southwest have formed inseparable close relationships, creating alliance-like social bonds[15]. These interdependent relationships are determined not only by geography but also by the shared history of multi-ethnic cohabitation.

In Hnewo teyy, the Yi use the metaphor of brotherhood to express this awareness: over centuries, different ethnic groups have formed familial bonds. The relationships among the Yi, Tibetan, and Han peoples have grown closer, enhancing mutual recognition and reflecting a deep cultural resonance. Through legendary narratives, the epic illustrates the shared origin and fate of the three groups. Despite their distinct cultures and customs, they are intrinsically linked, embodying the idea of being an inseparable part of each other.

This epic is not only a reflection on the Yi's origins but also a profound understanding of the ethnic community. Through long-term interaction and exchange, these groups have created a rich cultural tradition and diverse lifestyle, forming a harmonious and mutually beneficial family. Through such narratives, Hnewo teyy echoes the brotherhood within the Chinese national family, emphasizing the importance of unity and mutual aid, thereby passing on precious cultural heritage and wisdom to future generations. This expression of community identity enriches the cultural connotations of the epic and provides an important perspective for understanding the integration and coexistence of diverse cultures.

4.4 The Metrical Patterns of Formulaic Expressions in Hnewo Teyy

In Hnewo teyy, the quantity of formulaic expressions is closely linked to the cultural context of the epic. Different regions have distinct characteristics in the use of formulas. According to Parry's definition, a formula in a poet's language can be defined as a repeated phrase used under consistent metrical conditions to express a central idea[16]. The content of these formulas includes general meanings such as names, actions, time, place, and quantity, as well as specific meanings like religious figures, special objects, animals, and plants. The author will conduct a statistical analysis of common formulaic expressions in the epic.

4.4.1 Formulas related to characters in Hnewo teyy

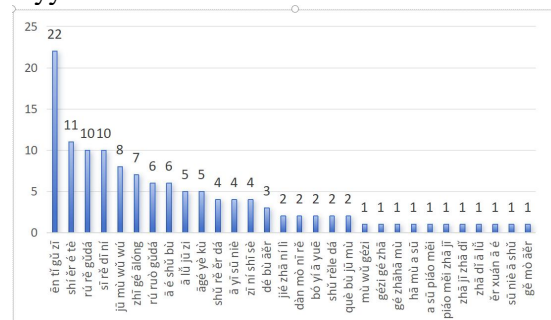


Figure 3: The character names appearing in the Hnewo teyy

The character names in the epic, as shown in Figure 3, are all four-syllable words. It's evident that the father's name serves as the surname for the next generation. In Hnewo teyy, this naming practice reflects cultural heritage and continuity, preserving the

family's history and traditions, and demonstrating a collective family consciousness. This practice enhances the sense of identity and belonging among family members and is also seen in Manchu and Mongolian cultures. Names carry symbolic meanings and cultural implications. For example, in Hnewo teyy ēn tǐ gǔ zī, appearing 22 times, represents supreme authority; zhī gé ālóng, appearing 7 times, is a divine person; ā é shǔ bù, appearing 6 times, means sacred Bimo; others include gě mò āěr, a skilled craftsman, dàn mò nī rě, a wise woman, and ěr xuán ā é, linked to human evolution in ancient times.

Additionally, each generation's name ends with a same word, creating a repetitive pattern that aids memory and gives the text a rhythmic quality. Listing names by generation adds a progressive rhythm. In oral recitation, the structure with is following each name clarifies the reading rhythm. This approach not only eases memorization but also highlights the oral tradition of the epic.

4.4.2 Formulas related to objects in Hnewo teyy

The author found that in the epic Hnewo teyy, descriptions of various objects typically follow a consistent pattern. This not only adds coherence to the descriptions but also enhances the rhythm and memorability of the epic. The descriptions often use specific material words to highlight the nature, value, and function of the objects.

In epics, elements like gold, silver, copper, iron, bamboo, and wood often embody profound symbolic meanings, closely tied to the ancient Yi people's craftsmanship, hunting, and settled life. The use of these materials reflects not only the texture and function of objects but also their symbolic significance—gold typically symbolizes nobility and the sacred, while iron represents strength and resilience. These elements mirror early human understanding of nature and their lifestyle and societal development stages.

In the epic, gold, silver, copper, and iron signify the importance and application of different metals in ancient Yi society. These metals were used not only for making tools and weapons but also played crucial roles in symbolizing power. Gold and silver often represent wealth and authority, whereas copper and iron are associated with practical

tools and technological advancements. Bamboo and wood symbolize natural materials, essential in construction and tool-making, reflecting comfort and adaptability to the environment. Their use demonstrates the ancient Yi people's wisdom in living harmoniously with nature.

These elements and their symbolic meanings are central themes in primitive epics and cultural memory. By depicting the lives and beliefs of ancient people, these epics pass down their understanding of nature, technology, and social structures. The use of these symbols is a literary device and a vital carrier of cultural identity and historical memory. Through these symbolic objects, the poetry conveys the concept of a communal identity, portraying a people with a shared historical background and cultural values. This cultural identity and the sense of community for the Chinese nation emphasize historical continuity and enhance social cohesion and cultural unity[16].

4.4.3 Formulas related to time in Hnewo teyy

In epics, the significance and formulaic expression of numbers enhance the work's mystique and symbolism, allowing readers or listeners to gain deeper insights into the story's essence and characters' destinies. This skillful use is one of the unique charms of epic literature. Next, we will analyze the narrative in Hnewo teyy and its formulaic expression of time and numbers.

In epics, certain formulaic expressions of time demonstrate a deep, condensed perception of time in Yi traditional culture. In poems and epics, time units such as "one day," "three days," "three months," "three years," and "nine days" are not merely measurements; they vividly reflect the Yi culture's concrete thinking. These expressions have literal meanings, but their deeper significance is abstract and symbolic. These time units transcend specific realities, becoming broader and more abstract expressions. They represent the singer's psychological extension and perception of time, reflecting a flow that surpasses daily life. In this context, time becomes an emotional vessel and a psychological symbol, beyond a linear, measurable existence.

For example, "one day" might signify an epiphany or a fleeting happiness, while "three days" or "three months" could symbolize the

beginning and end of a journey or a turning point in life. The more profound "nine days" often embodies an endless reverence and expectation for mystery, hope, and the unknown. This poetic expression of time allows Yi epics to function not only narratively but also as vessels of emotional resonance and cultural identity, offering listeners a sense of profound heritage.

For instance, in "Song of Everlasting Regret" by Bai Juyi, the abstract time concept of "one morning" conveys thoughts on love and fate, making the passage of time seem effortless. Such symbolic meanings of time are given formal expression in epics, becoming a customary language and structure for the singers of Hnewo teyy. This structure offers readers or listeners a vast space for imagination, adding a mysterious allure to the epic.

5. Conclusion

In the perspective of ethnic communities, the Yi epic Hnewo teyy reveals profound and unique cultural connotations. It is not only a significant literary work of historical inheritance but also a bridge connecting various ethnic groups and conveying the idea of harmonious coexistence. This study systematically analyzes the epic's word frequency, animal and plant vocabulary, ethnic names, and formulaic expressions using quantitative linguistics, uncovering its linguistic and thematic uniqueness.

Firstly, word frequency statistics indicate that Hnewo teyy possesses a distinct colloquial character. This reflects the vividness and transmission methods of Yi culture, showcasing its affinity and grounded style in communication. The colloquial expressions make the epic more accessible to readers and listeners, bridging the gap with daily life, and imbuing it with a rich sense of humanity and vitality. Through this linguistic form, the epic reinforces the sense of community for the Chinese nation, becoming a vessel of ethnic emotional resonance.

Secondly, the distribution of high-frequency words in Hnewo teyy aligns with Zipf's Law. This feature not only demonstrates linguistic regularity but also reflects the epic's structural stability and rhythmic beauty. The use of high-frequency vocabulary in the narrative makes the storyline more engaging and enhances its

ease of transmission. Such a strong sense of rhythm endows each word with a symbiotic quality, forming a vibrant cultural system.

Lastly, the epic exhibits rich formulaic characteristics, creating a harmonious vision of coexistence among all things. In Hnewo teyy, detailed descriptions of animals and plants not only portray the natural environment but also express the Yi people's reverence and love for nature, emphasizing harmonious relationships between humans and nature, and among people. This pursuit of coexistence resonates with the enduring harmony virtues of Chinese culture, highlighting the holistic view of Chinese civilization.

In conclusion, Hnewo teyy is not only a significant symbol of Yi culture but also a vital embodiment of ethnic community consciousness. Through analyzing this epic, we can gain a deeper understanding of the essence of Yi culture and appreciate the great wisdom of the Chinese nation, which seeks unity in diversity and coexistence in harmony. This story acts as a bond, tightly connecting diverse ethnic groups, composing a harmonious and beautiful symphony in shared history and culture. Through such epics, we can inherit the national spirit and jointly build an inclusive, harmonious, and mutually beneficial ethnic community.

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