

# *Formation and Development of Mongolian Grassland Songs and Their Music from the Perspective of Big Data*

**Jia Xu\***

*Philippine Christian University, Manila, Philippines*

*Xujia423@126.com*

*\*corresponding author*

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**Abstract:** Communication is the driving force for the development of literature and art, and the change of communication mode affects the development of literature and art. Mongolian folk songs are mainly broadcast through oral speeches, books, newspapers, radio and television. In the era when the Internet has become an important form of cultural exchange, Mongolian grassland folk songs are faced with opportunities and challenges brought about by Internet communication. This paper aims to study the formation and development of Mongolian grassland songs and their music from the perspective of big data. This paper analyzes the similarities and differences between Mongolian folk songs and Mongolian folk songs in terms of historical interpretation, artistic style and singing style, and tries to find out the differences between Mongolian traditional folk songs and modern Mongolian folk songs. This paper mainly expounds the relationship between Mongolian grassland folk songs and Internet communication, analyzes the current situation and strategies of Mongolian grassland folk songs' online communication, and analyzes the relationship between folk songs, such as the guidance of the government, the establishment of information database, the establishment of special websites and innovative communication channels. Experiments have proved that Internet communication is about 50 times faster than traditional communication channels, which can better promote the development and dissemination of Mongolian grassland songs.

## **1. Introduction**

Mongolian folk songs are one of the most dazzling pearls in China's folk song family, with a large number of songs, most of which reflect Mongolian people's grassland life, grassland culture

and customs, and have a long history. According to the characteristics of Mongolian music, modern and contemporary musicians adapt to the needs of teaching and artistic practice. By using Mongolian music elements to create or adapt traditional folk songs and re-creating according to the factors of the times, Mongolian songs are endowed with rich musical artistic content and connotation. If we only compare the singing characteristics of Mongolian folk songs and Mongolian songs, we will inevitably have an incomplete understanding. Therefore, this paper thinks that it is a reasonable research method to compare and analyze the artistic style of Mongolian folk songs and songs created by Mongolian people as singing noumenon at first [1-2].

In the study of Mongolian grassland songs and their music formation and development from the perspective of big data, many scholars have made research on them and achieved good results. For example, Yaglova N V wrote in *Mongolian Excellent Folk Music and Songs Creation*: "It is not easy to lose national characteristics and charm when singing Mongolian folk songs prototype with pure voice and truer voice [3]. Garrido Wainer J M, through its soft voice, resonant consistency, and soft and natural atmosphere, combined with the melody and singing characteristics of Mongolian style, thinks that the perfect unity of Mongolian style and aesthetic singing is an excellent example of Mongolian song singing [4].

Starting from the angle of communication, based on the theory of communication, combined with the related theories of Mongolian grassland folk songs in ethnomusicology, this paper integrates case study, concept collection and cultural criticism. By reading a large number of scholars' research achievements in Mongolian grassland folk songs art, communication, network communication, intangible cultural heritage protection and other topics, it adopts the methods of investigation and analysis, literature research and case study. This paper reviews the development course of Mongolian grassland folk songs' media communication and scans the current situation of communication under the network environment, studies its communication methods and effects, analyzes its shortcomings and puzzles, and tries to put forward new ideas about Mongolian grassland folk songs' inheritance, development and innovation in the network communication among numerous academic viewpoints.

## **2. Study on the Formation and Development of Mongolian Grassland Songs and Their Music from the Perspective of Big Data.**

### **2.1. Emotional Expression**

Mongolian-style songs are simple and concise in lyrics, beautiful and refined in melody, while some songs created in the later period keep the mode and tonality of Mongolian style in the development and progress of melody, and at the same time, they also absorb more new elements and new writing skills, making the melody full of fresh breath. At the same time, the texture of accompaniment is also more abundant. First, some changing sounds are added, which can attract listeners' attention from the hearing. Secondly, some elements of pop music are added to make it easier for young people to accept. Finally, the texture of accompaniment parts should be constantly changed, and the column and spin, decomposition and spin can be properly integrated into different paragraphs. Make the whole work richer and fuller, and make the emotional expression more delicate and rhythmic [5-6]. The overall structure layout of Mongolian music creation has three types, as shown in Figure 1. There are two kinds of splicing methods for this kind of works. One is to use the melodies of voice column and folk song to state or overlap on different tonality and pitch. The music section (sentence) is sometimes the same, and sometimes it is different. The second is to connect two or more Mongolian folk songs through some modern methods of expression, reflecting a more simple form of Mongolian music. Such works as "eye catching" type usually use some interval fragments to vaguely show the characteristics of Mongolian music. When reaching the

climax, an extremely simple Mongolian tone pops up on the paper. The length of this segment is sometimes only a few notes, sometimes longer. The timbre layout type uses timbre layout to layout the whole work as a way of expression of monophonic music.

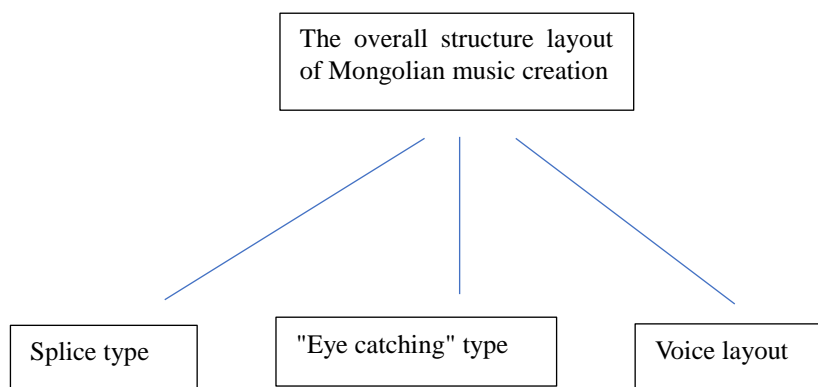


Figure 1. The overall structure layout of Mongolian music creation

In the folk society, the inheritor and the transmitter of Mongolian traditional music are identical in some sense. First of all, the teacher teaches the successor out of his hobbies and requests; Secondly, the successor also requests the teacher to teach because of his own likes and interests. Both have the same purpose - like Mongolian traditional music. As shown in Figure 2:

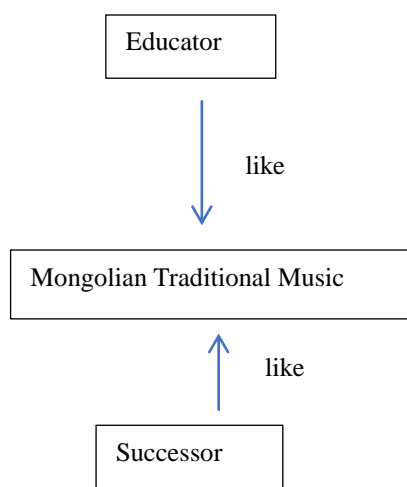


Figure 2. The overall structure layout of Mongolian music creation

## 2.2. Comparison of the Use of Decorative Sounds

### 2.2.1. The Application of Decorative Tones in Mongolian Folk Songs

Mongolian folk songs have unique decorative techniques represented by "nagila". Mongolia means "elegant and tortuous". It is characterized by fast and strong decorative tone before making long tone or sharp tone of color decoration. The common monotony and duality of Grade II and Grade III are often reflected in the same degree of decoration. The song "nogueira" vibrates the vocal cords under the support of breathing, and at the same time, it uses the movement of chin and throat to produce tone and tone change. Nogueira has a lot of improvisations, most of which are not

detailed in the spectrum. But improvisation is not free, but the rich theoretical basis and understanding of music. In terms of education, "noguera" is regulated in order to avoid the random increase of music content [7-8].

### 2.2.2. Mongolian Songs Use Decorative Notes

Mongolian music completely absorbs the decorative features of Mongolian folk songs, mainly students of grade two or grade three, with clear marks on the spectrum, so that singers can fully embody the singing style of Mongolian music without destroying the beautiful lines of Mongolian music. However, when dealing with decorative sounds, we can understand not only the changes of hard sounds, but also the characteristics of Mongolian folk songs and show their charm. This is a decorative sound feature that vocal music workers must pay attention to [9-10].

### 2.2.3. Compare the Usage of Two Kinds of Song Decoration

Mongolian folk songs have many skills in decorating the corner of notes, which can be said to be a beautiful form of decorative notes. Unfortunately, the expression of frequency spectrum is not exhaustive, but gives singers more room for improvisation. In the corner of Mongolian folk songs, the use of decoration is based on a comprehensive understanding of the musical features of songs and the analysis and integration of multiple versions of Mongolian folk songs [11-12].

## 2.3. Algorithm Selection

In this paper, a questionnaire was designed for the formation and development of Mongolian grassland songs and their music, and 3000 people were interviewed in 20 cities. The algorithm of this questionnaire mainly uses Bayesian algorithm [13].

Definition 3.1: Let  $(C, E, P)$  be a complete event space, where  $P$  is the probability set, and the event type set has a formula for any event  $B$  in the classification set:

$$A_i \in E (i=1, 2, \dots, n), P(A_i) > 0 \quad (1)$$

Type collection  $C = \{C_1, C_2, \dots, C_m\}$ , for the taxonomic set  $\bigcup_{i=1}^n A_i = C$ , any event  $B$  has a formula for it:

$$P(B) = P(A_i) \sum_{i=1}^n P(B|A_i) \quad (2)$$

Definition 3.2: Assume that there is a complete event set  $(C, E, P)$ , where the event probability has the formula:  $P(A_i) + P(B) = 1, P(B) > 0$ , for  $B \in E$  there is a formula:

$$P(A_i|B) = \frac{P(B|A_i)P(A_i)}{\sum_{j=1}^n P(B|A_j)P(A_j)} \quad (3)$$

In reality, many actual environments and temporary situations are difficult to control and predict completely, so Bayes theory can't be completely objective and absolute in event statistics and expectation analysis, which leads to some computational differences [14-15].

### 3. Research and Design Experiment of Mongolian Grassland Songs and Their Music Formation and Development from the Perspective of Big Data.

#### 3.1. Comparative Analysis of Artistic Styles of Mongolian Folk Songs and Mongolian Songs

Mongolian folk songs are one of the most dazzling pearls in China's folk song family, with a large number of songs, most of which reflect Mongolian people's grassland life, grassland culture and customs, and have a long history. According to the characteristics of Mongolian music, modern and contemporary musicians adapt to the needs of teaching and artistic practice. By using Mongolian music elements to create or adapt traditional folk songs and re-creating according to the factors of the times, Mongolian songs are endowed with rich musical artistic content and connotation. If we only compare the singing characteristics of Mongolian folk songs and Mongolian songs, we will inevitably have an incomplete understanding. Therefore, this paper thinks that it is a reasonable research method to compare and analyze the artistic style of Mongolian folk songs and Mongolian songs as singing noumenon.

#### 3.2. Experimental Design

In this paper, aiming at the formation and development of Mongolian grassland songs and their music from the perspective of big data, the experiment is designed, first of all, to explore the help of different transmission ways for Mongolian grassland songs, and secondly, to investigate the development direction of Mongolian grassland songs in the future through a questionnaire survey of mainland residents' understanding ways.

### 4. Research and Experimental Analysis of Mongolian Grassland Songs and Their Music Formation and Development from the Perspective of Big Data

#### 4.1. Development and Changes

In order to explore the help of big data in spreading Mongolian grassland songs, this paper selects two Mongolian grassland songs with the same quality, one of which is spread by traditional means and the other by Internet big data, and compares the number of clicks of the two songs on a music platform. The experimental data are shown in Table 1.

*Table 1. Transmission of Mongolian grassland songs under the two routes*

	one	two	three	four	five
Traditional communication	2	30	71	81	129
Internet communication	58	812	1709	2517	6912

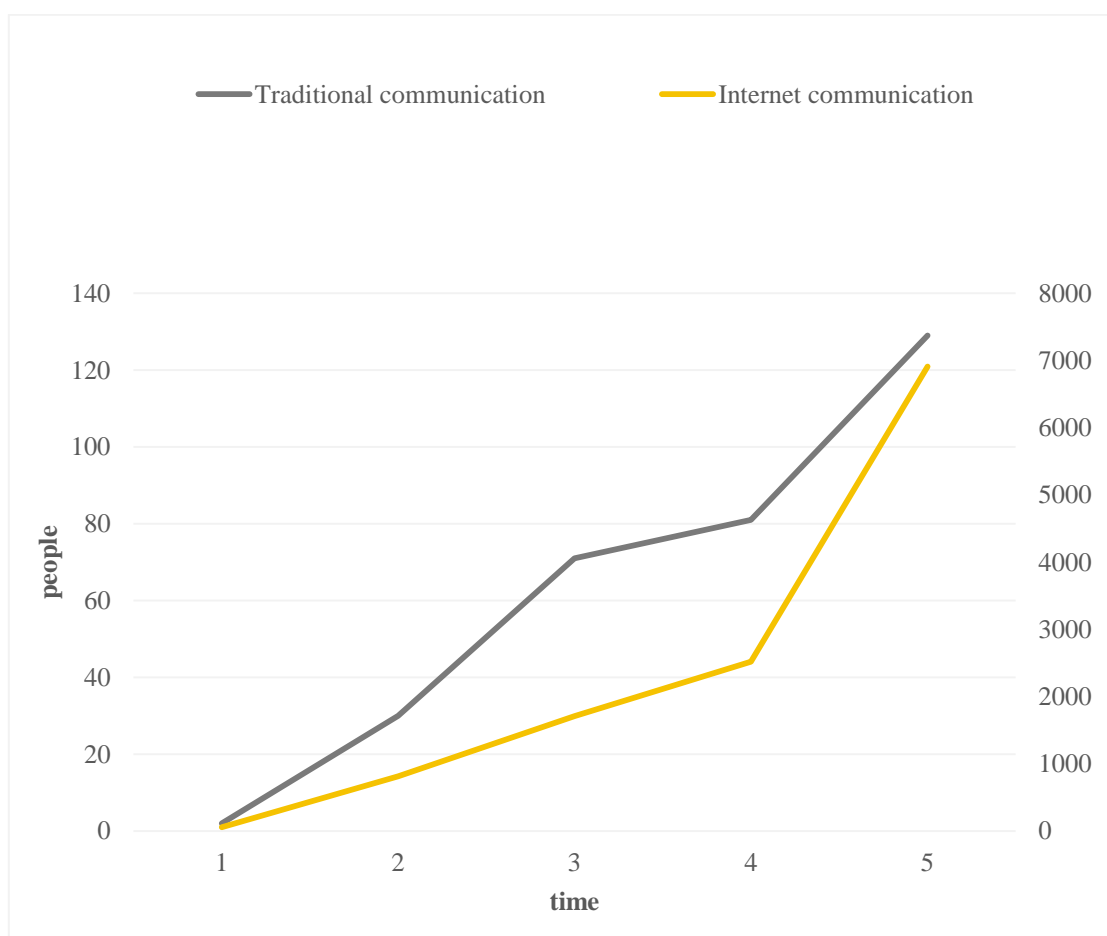


Figure 3. The help of the era of big data to the spread of songs in the Mongolian grassland

As can be seen from Figure 3, the spread speed of songs spread through Internet big data far exceeds the traditional spread way, so big data is of great help to the spread speed of Mongolian grassland, which is almost dozens of times, increasing exponentially, and is an important boost to the development of Mongolian grassland songs in the future.

#### 4.2. Route of Transmission

In this paper, a questionnaire survey was conducted among residents in two inland cities, mainly to investigate their knowledge of Mongolian grassland songs and how they learned about Mongolian grassland songs. The experimental data are shown in Table 2.

Table 2. The way of population exposure to Mongolian grassland songs

	Network propaganda	television	Social public welfare publicity	perform	Books and newspapers
Area1	62	13	19	five	one
Area2	73	16	eight	three	0

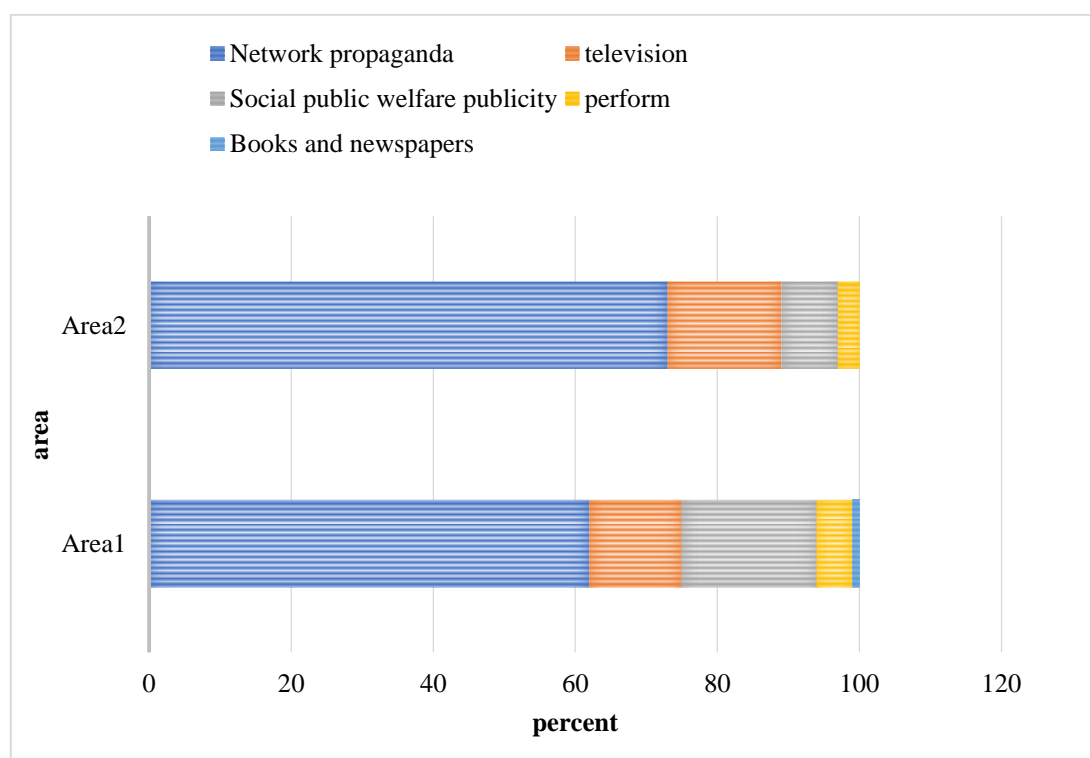


Figure 4. Channel for people in the two areas to contact Mongolian grassland songs

As can be seen from Figure 4, the vast majority of mainland residents learn about Mongolian grassland songs through the Internet, accounting for about 60%-70% of the total, of which books and newspapers account for the lowest proportion, which is almost zero. Therefore, the traditional paper media has begun to fall into the doldrums, and the Internet will be the best place for song development in the future.

## 5. Conclusion

Mongolian folk songs and songs created by Mongolians are part of Mongolian music culture. Mongolian folk songs have attracted more and more attention from people with distinctive characteristics, and are a continuous source of Mongolian songs. With the development of the times, the changes of the society and the improvement of the general public's aesthetic interest, Mongolian music has far surpassed Mongolian folk songs in theme, artistic features and singing style, and the music content has also expanded. Spreading Mongolian grassland folk songs through the Internet is not only about the improvement of social influence and propaganda, but also about providing a broad communication platform and space for the inheritance and protection of Mongolian grassland folk songs, so that people who are really interested in contributing to the protection of Mongolian grassland folk songs can be targeted. At the same time, the network communication of Mongolian grassland will stimulate new research fields to ensure the continuity of its communication and realize the real cultural communication. Moreover, when Mongolian grassland is well known, people will combine objective and subjective factors to provide a rational way for the inheritance and development of this culture. Because, as an intangible cultural heritage, the protection of Mongolian grassland folk songs is not only the responsibility and obligation of the people in the birthplace, but the responsibility and obligation of all mankind.

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## Data Availability

Data sharing is not applicable to this article as no new data were created or analysed in this study.

## Conflict of Interest

The author states that this article has no conflict of interest.

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