

The Methodological Enlightenment of Information Theory Coding Principle to Chorus Command Art

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ABSTRACT

With the deepening of the concept of information and the improvement of the information theory, information theory has already jumped out of the category of communication engineering and gradually penetrated into the social sciences, philosophy, humanities and other fields, showing the nature of philosophical methodology, which is also applicable to the chorus command art. This paper first expounds the basic model of information theory. Secondly, it analyzes the enlightenment of the basic model to chorus command and probes into the coding principle of information in chorus command art, which includes clarity, science, adequacy and simplicity.

1. INTRODUCTION

Information theory, firstly appearing in the field of communication engineering, is a theoretical discipline that uses mathematical statistics and probability theory to study a series of problems such as data compression, data transmission, information entropy and cryptography. Along with the deepening of the concept of information in recent years, as well as the fulfillment of the information theory, information theory has long been out of the scope of communication engineering and gradually infiltrated the subject in the fields of humanities, social, science and philosophy, showing the nature of philosophical methodology. This paper discusses the methodological implications of the coding principle of information theory on choral command art.

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2. BASIC MODEL OF INFORMATION THEORY

2.1 Source, Homestay and Channel

The source means the source of information, including the microphone in the communication system, the speaker, etc. The electrical signal which output by the source can be used as a carrier containing information. Information sinks are receivers and end-users of information, including earphones and listeners in the communication system, where electric signals can be converted into sound. Channel is the transmission channel and medium of information, including transponder, transceiver, coaxial cable system and so on. In the process of transmitting the signal, some factors will frequently interfere with the channel. Not only does a carrier receive a signal from its source but also will be subject to a lot of noise, resulting worse communication effect, and even some information distortion. In order to make the sender get the same message as the receiving end, the noise needs to be suppressed or reduced at maximum.

2.2 Encoding and Decoding

The source cannot directly transmit information in the channel, but after it is converted into a signal, and the transformation process is the coding process. At the same time, it is difficult to directly transmit the signal sequence by taking the output end of the channel as the carrier, which needs to be reconverted into the pre-coding form, and this process is decoding. The coding process and the decoding process is exactly the opposite.

3. THE ENLIGHTENMENT OF BASIC MODEL OF INFORMATION THEORY TO CHORUS COMMAND

3.1 The Orientation of Source and The Homestay in Chorus Command

In the term of information theory, the chorus command process can be viewed as the communication process. Specifically, the information sink is the chorus member, the source is the conductor, and cooperation activity between the two is the communication process. In other words, if a group of people have not received professional training, then they will often rely on personal feelings to understand the chorus track, resulting in various understandings. Naturally, it will not form a coherent understanding. While the main task of the conductor is to issue a series of clear instructions to guide the chorus members, so that it carries out chorus activities along the past direction, making the chorus track performance get the best results.

3.2 The Connotation of The Channel and Noise in Chorus Command

As we all know that channel refers to a series of information transmission channels and media, including internet broadband, radio waves, etc., and it can carry out information exchange with the receiver. In the art of Chorus command, the effective measures used by the conductor to convey the instructions to the choir include

expression, gesture, movement and other body language which can help choir better understood and observed. But it should pay attention that the chorus players are unlikely to interpret the conductor's body language completely correct. There are three factors to account it: first, physical barriers. Because of the different positions of the chorus players, it is difficult for the chorus members who standing in the back row or corner to effectively identify the subtle expressions and movements of the conductor; second, accidental error. Whether the conductor, or the chorus members may make accidental mistakes due to tension, distraction, excitement and other reasons. Third, on-site interference. In the chorus performance process, the audience's cheers, applause, as well as the scene of the sound, lighting and so on may cause interference to the conductor, chorus players. In order to ensure that command activities can be carried out effectively, commanders also need to exclude the impact of noises.

3.3 Forms of Coding and Decoding in Chorus Command

As an information source, the conductor is unlikely to transmit the individual's understanding and feeling of the music to the chorus members directly, but to do so by means of "body language", which requires the relevant instructions to be transformed into conducting expression, action and gesture, which is coding in the art of chorus command. Of course, to make the chorus fully understand, the code needs to follow certain rules. For example: if the conductor shows the upper arm driven punching action to the chorus, it means that the singing strength needs to be strengthened, but the racket can be gentler; if the conductor shows the rapid movement of the wrist, it shows that the singing speed needs accelerating, and the beat is urgent. These action conventions must reach a consensus in advance. Only in this way, the chorus players can accurately understand the intention of the conductor, thus achieve successful "decoding".

4. CODING PRINCIPLES OF INFORMATION IN THE ART OF CHORUS COMMAND

4.1 Clarity

Clarity is the primary principle of chorus command information coding. Only the coding reflects obvious clarity, can it guarantee the validity of information transmission in the process of chorus command, and ensure the chorus player accurately understand the intention of the conductor, correctly carrying out. For achieving this performance, we should take high priority over three points : first, the command language must be simple and clear, so that all the chorus players can receive it in a timely manner, and second, the con language cannot change too much but keep as fixed as possible, so that the chorus players can understand its meaning in the shortest time; third, to let the chorus player distinguish correctly and avoid misreading, the difference between the conducting language should be as large as possible.

4.2 Scientificity

Chorus command is an artistic language in essence, which is command law, not only by the conventional factors, but also to be scientific. In the process of designing the command language, it is necessary to maintain a logical connection with the information conveyed, and only in this way can people better master and understand. For example, to construct the "body language" of the change of singing intensity based on the psychology of the format tower, if the singing intensity is soft, then the limb movement is small; if the singing intensity is strong, then the body movement is big. Meanwhile, small body movements can be reflected by the soft changes of the wrist and fingers, the large body movements can be reflected by arm movements, effectively achieving internal consistency between performance requirements and command language.

4.3 Adequacy

Whether it is the content of chorus command art or the form is rich, the conductor usually has to send a lot of information to the chorus players in the chorus performance, including emotional , pause, intensity, speed, breathing, etc., rather than just beat and rhythm, It requires that we should focus on considering the capacity when design the information coding of chorus command, so as to better ensure the information transmission.

4.4 Simplicity

From the above mentioned, the conductor usually sends a lot of information to the chorus, but he has only very limited information coding medium available, only including the individual limb. How can these limited information coding media carry more information? It is vital to take advantage of the simplicity of information coding, which is a question that needs to be seriously considered in the art of Chorus command, trying to prevent redundant, aimless and impractical command actions unrelated to chorus tracks, so as to save the physical strength of the conductor and allow the chorus team to better identify the intention of the conductor, responding more sensitively. It is important to concentrate on the issue of efficiency, which aims at maximizing the information capacity of the unit code, expressing the rich emotional connotations of music through the most refined action language and achieving the "brief but not simple" effect.

5. CONCLUSIONS

In a word, it is indispensable to keep pace with the times, blaze new trails, innovate the traditional mode. We are expected to adopt the principle of information theory coding to maximize the performance, so that more spectators can appreciate the beauty of chorus command art.

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