



Research on the Uncertainty of Musical Information [†]

Xiaolong Yang

Frontier Institute of Science and Technology, Xi'an Jiaotong University, Xi'an 710049, China; 01051@xacom.edu.cn

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Abstract: Against the background of the rapid development of today's human society, this article integrates the concept of musical uncertainty through informatization, uses the exploration of dialectics in philosophy to further summarize the informatization, uncertainty and essential attributes of music, integrates with the author's own understanding of the above musical concepts, and clarifies the author's research results on the uncertainty of music.

Keywords: music; information; uncertainty

1. Introduction

Contemporary human social development is characterized by informatization (intelligence), globalization, uncertainty (complexity), and the future development of intelligent society, which may bring about benefits or challenges for mankind. The world and everything are uncertain. We are now in an era full of uncertainty, in the post-globalization and, post-pandemic era... We do not know what will happen tomorrow? Uncertainty is the only definite attribute of science. The essence of science is to constantly explore and reveal the truth, and replace the old understanding with new cognition. Human beings also grow up in constant self-denial. However, the continuous development of science has also caused confusion in many people—in the face of uncertainty, human beings instinctively pursue certainty, from the Big Bang to the universe we know today, but what makes us do this? From the earliest primitive single-celled organisms to human beings with wisdom today, what has influenced this development? Human beings are afraid of uncertainty, because uncertainty causes us to know nothing about our surroundings and the future. The pursuit of certainty is the goal of science. Claude Shannon believes that information is something used to eliminate uncertainty. His unique insight into information led people to re-examine logical theory. Just like fractals and the transformation of uncertainty characteristics caused by the butterfly effect, uncertainty embodies the essence of the spirit of the Information Age. This article mainly discusses the uncertainty of musical information, the logical relationship between music and philosophy, and the question of where music come from and where it goes?

2. Deconstruction and Analysis of the Concept of Music under the Philosophy of Information

2.1. Deconstruction of the Concept of Music under the Philosophy of Information

As a highly meta-philosophical information philosophy, we can understand a world of dual existence. As an information phenomenon, music is obviously the operation and creation of social information. People are often intoxicated with the beauty of music, but rarely think about and ask about how and why music exists. What is the essence of music? How is music produced, and so on. Using the theory of information philosophy on the progressive construction of people's information activity level, we can reveal the following processes: the main body's assimilation and alienation of the musical information of all kinds of sounds that we come into contact with, including the transformation of "subjective



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presentation" information state; through the identification of the perceptual information of various sounds, the establishment of time-related information coding; the subject subjective transformation and recomposition and the combination of the memory storage of information, and then the creation of the main body of musical information; further judgment and, reasoning to perform logical deduction regarding the "external object" to convert the purpose and plan information; and the behavioral instructions generated by the control of the subject's ideas regarding the object through practice, achieving the artistic practice process of subject information creation.

2.2. Analysis of Music Ontology under the Philosophy of Information

Music is the information created by the subject, and the most important characteristic of information is the difference, which is reflected in the subject's musical literacy (including talent) and understanding of music such as speed, rhythm, strength, syntax and emotion, expressiveness, imagination, etc. In particular, the challenge of improvisation is to maximize the differences in repetition, maximize the absolute domain of a piece of music, and still maintain its consistency as a piece of music. The difference in the creation (regeneration information) of information provides a lot of different perspectives for musical art, and the differences also reflect the uniqueness of artists (social information). Because music exists in the form of unreal (intentional) information, there is an inevitable need to present its uncertain characteristics in the form of musical information.

Art is non-eternal, and Deleuze believes that philosophy and music have fundamental similarities. He said in an interview: "Philosophy is indeed a song, which is beyond doubt to me. It is not a song of sound, but it has the same sense of movement as music." In this same sense, the author believes that it is rich in uncertainty. Music is inseparable from pure feeling, which transcends the individual understanding of things. Deleuze calls this feeling perception, and the pure response beyond the individual meaning is called feeling. Therefore, music can allow one to think about the problems considered by philosophy.

The essence of music is reflected in itself, or its essence is pure reflection, the self-connection of reflection—that is, the same. Music, as a free information, is not only different from itself, but also contains identity. As a difference in self-connection, it can also be said to be self-identification. For example, in music performance, speed is a category that excludes other characteristics and highlights them. Therefore, we often compare different players to highlight their uncertainty.

Art (music) itself has the characteristics of intention, difference and uncertainty. In Ingartón's view, the proposition that music is an "intentional object" not only explains the essential characteristics of music, but also the unique way in which music exists—that is, it exists in an unreal (information) intentional way.

3. The Logical Relationship between Music and Philosophy

From the point of view of general philosophy, technology is the player's ability to reproduce the height of their thought through "material". This is the ability to make the performer work hard to a level of specialization; it is the ability to make the performer realize their ideas and "concretize". The complexity of music itself reflects its unity as social information, and its individual differences are also reflected in the process of creative thinking. The emergence of some conclusions is often sudden and does not have the clarity of the process of thinking consciousness. This is what people call "inspiration", "intuition" and so on. Because of the nature of the reasoning process of "inspiration" and "intuition", which are not clear, people often provide mysterious explanations, or "delightment of the gods". However, if we examine it from the point of view of information activities, "inspiration" and "intuition" are not magical things. Bergson believes that art is to liberate oneself by intuition, transcend social life, transcend the "objective world", and discover the "deep reality" behind the appearance. So in terms of "intuition", it is an uncertainty. Heidegger also said that real truth is moving, creating possibilities, and being in an uncertain state.

To some extent, music belongs to the field of pure meaning—that is, a variant of emotional expression. As an illogical difference of pure meaning, music is also in the process of continuous decomposition and combination. All musical elements (melody, harmony, rhythm, texture, tone, tonality, etc.) permeate each other and are inseparable from each other. The increment of infinite possibilities is as closely related as mathematics. Therefore, musical art is the integration and unity of external differences, and performance is the integration and unity of flowing or successive uncertainties. It is the unified existence of existence and non-existence, logical and non-logical.

Music contains quite complex skills (information), which naturally seems to be an inextricable requirement. Chopin said, “Art is something with strict philosophy, enriched by geniuses, has a set of rules, and is bound by advanced laws.” This self-evident stipulation is a more common industry technical method and a more general emotional experience state. But even if Chopin himself plays his own work, each performance cannot be exactly the same.

4. Traceability and Analysis of Uncertainties in Music

4.1. *The Relationship between the Traceability of Uncertainties in Music and Dialectics*

The British philosopher Aaron Redley believes that “playing is an adaptation or interpretation of a musical work that has been played. It is like a work of art, which can be evaluated and aesthetically appreciated.” Therefore, there is only “correct performance”, and there is no single correct ideal performance. No one’s version is the only classic. In fact, it is precisely because of the seemingly incomplete notation system that it the infinite possibility of music performance interpretation, that is, uncertainty.

The ideological eclipse of uncertainty can be traced back to Heraclitus in ancient Greece, who stated that “People can’t step into the same river twice.” He can be said to be the founder of dialectics, proposing that “everything flows and nothing lives.” Uncertainty is more embodied in philosophy as a kind of skepticism (skepticism). Skepticism believes that cognition is subjective and conditional, and is a method of systematic doubt and circular research to realize cognition. Therefore the world is full of uncertainty. For example, Hume, a British empiricist philosopher, believes that there is no inevitable law of the nature of knowledge in this world. Everything is uncertain and depends on time and space, so empiricism cannot judge the black swan, because “sensual certainty” itself is destined to be caused by Hegel’s words in *Spiritual Phenomenology*. Its fleeting nature is equated with fundamental uncertainty. Dialectical understanding will not cause confusion, and this uncertainty itself is certain. For example, dialectics is an intellectual provision and depicts the unique and true nature of general limited things. First of all, one can reflect beyond the provisions of isolation, relate it to the relationship with other provisions, but still maintain the validity of that provision. Therefore, the author believes that dialectics is also an uncertainty.

4.2. *Analysis of Uncertainties in Music*

4.2.1. The Relationship between Musical Attributes and Uncertainty

In the study of contemporary information philosophy, “uncertainty” can also be understood as a state of “imperfect information” that human beings generally face in the real world. The reason why coping with uncertainty has become an eternal challenge for human beings is that uncertainty comes from the limited cognitive ability of human beings under information ontology. The world is uncertain, and science is not necessarily the truth. In fact, uncertainty is the universal law of the world. The core of science is uncertainty, and uncertainty is the only definite attribute of science. Uncertainty is a process, not a result. As Hegel said, truth is flowing. But if an artist does not understand the truth, there is no truth in their art. The real art is the statement of the truth!

Music is the emotional description and expression of people and the world with the help of the language of music (notes and melodies), but music is far from a combination of notes, just like literature is more than just a combination of words... Therefore, uncertainty is one of the fundamental attributes of music, which is the specific characteristics of music rather than the characteristics of other arts, which exist in the elements and links of music. According to the view of information philosophy, music is the unity of direct existence and indirect existence. It is not only objective direct existence (sound) but also subjective indirect existence and objective indirect existence—that is, the sound carrier of music is objective and realistic, but the content conveyed by the sound to the listener is objective and unrealistic information (emotion). The uncertainty of music lies in the subject's understanding and re-creation of objective existence (second creation), and the integration of the subject's spiritual and emotional factors.

Therefore, the essential attributes of music determine its uncertainty—that is, how to deal with its uncertainty. "Our souls are often inherited from people we don't know at all, who promote us to engage in different activities, but usually don't let us have too many choices." These words in Debussy's letter are basically a portrayal of his life and all his works. His "uncertainty" is presented in his music, which produces emotions that are not limited to traditional forms to capture objects and events, which is also the musical manifestation of Impressionism.

4.2.2. The Nature and Uncertainty of Music

Music is the most abstract of all art, which can directly express people's hearts and the rich emotional world. The abstract (special) nature of music art stems from its ubiquitous uncertainty. These abstract art work(music)present us with unique non-visual worlds, which are non-repeatable in time and space. However, because music's ontology does not have an emotional element, it only plays the role of symbolic information, from the notes in the music score to the melody played, so that the subject obtains the music information in the whole process, meaning that people will integrate their emotions into the music—that is, imbue the music with different emotions.

The abstraction and uncertainty of music can convey pure emotions very well. This is also because it does not convey a clear concept, but is closer to the core of the mystery and human nature of the universe, which is the carrier of the most romantic characteristics. If we regard the art of music as an object determined by the concept, we cannot understand how it changes the relationship between the subject and the world. And the art of music can always be understood in a diversified way. This makes the meaning of the art of music "uncertain" to some extent, because this meaning cannot be established without a doubt. However, this uncertainty is not so much a philosophical decline; rather it makes the art of music "infinite" in a sense. It shows how the world of limited knowledge transcends without putting forward any "dogmatic" philosophical claims.

In the final analysis, the uncertainty of musical information is the charm of musical art. The reason why it is very important to pay attention to uncertainty is that it affects the research process itself. Uncertainty makes us realize that the miracle of music is that it digitizes three basic conditions for the existence of matter (information) in the form of sound: temporality, spatiality and movement. Uncertainty allows us to ask whether our theoretical expectations are correct, whether we pay too much attention to a single explanation, and whether we have taken into account the similarities, advantages and disadvantages of other seemingly credible explanations. Therefore, I. Hassan, a postmodernist scholar, believes that "uncertainty indeed permeates our actions and thoughts. It constitutes our world."

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