

# Discussion on the Physical Properties and Musical Properties of Sound

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**Abstract:** The enrichment of musical materials is a very long process, and the exploration of new materials is also a traditional thing. These foundational works deepened the understanding of music and sound, and at the same time promoted the progress of music as a discipline.

**Keywords:** Music; Overtone; Sound; Physical

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## 1. Introduction

In the traditional music category, sound has four basic attributes: timbre, timbre, pitch and intensity, which is also a subjective evaluation of sound rather than the nature of sound.

## 2. The essence of sound

The book records that the nature of sound is vibration. The vibration of an object causes fluctuations in the pressure of the surrounding medium, which, once it reaches the human ear, converts the fluctuations into a bioelectrical signal, the brain then reflects this bioelectrical signal into the timbre, pitch, pitch and intensity just mentioned. The result of this whole reflection is actually the subjective cognition formed by the external stimulation, which is not objective. The objective existence corresponding to these four basic properties is actually: the structure of overtones, the duration of vibration, the frequency of vibration, amplitude, these are the essential properties of sound. However, in addition to these, the sound also covers some other non-basic, more advanced properties. When all the music is reduced to sound, the music shakes off its original meaning of mode, tonality, melody, harmony, etc. , the gap between music and noise ceases to exist when the material of music ceases to be confined to music and all sounds around it become music. All that remains of sound is its amplitude, its phase, its image, its frequency, its overtones, and so on.



Fig. 1 Vibration of sound

## 3. The development of music

On the other hand, the enrichment of music material is a very long process, the exploration of new material is also a traditional thing, which is not unique to composers. The material of music covers musical sound system, melody, timbre



attributes can improve the level of piano performance.

The enrichment and development of music materials have deepened the leap in the understanding of music and sound, and promoted the progress of music as a discipline. When there is no limit to the type of sound, there is no more subjective judgment of the music's merits and dislikes.

Every advancement in music also includes the contributions of some of the greatest musicians, artists and scientists. Just Think, there is no trial and error, there is no material innovation and development, this is our study of music and sound is a significance.

## **References**

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