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The Benjamin Botkin Folklife Lecture Series

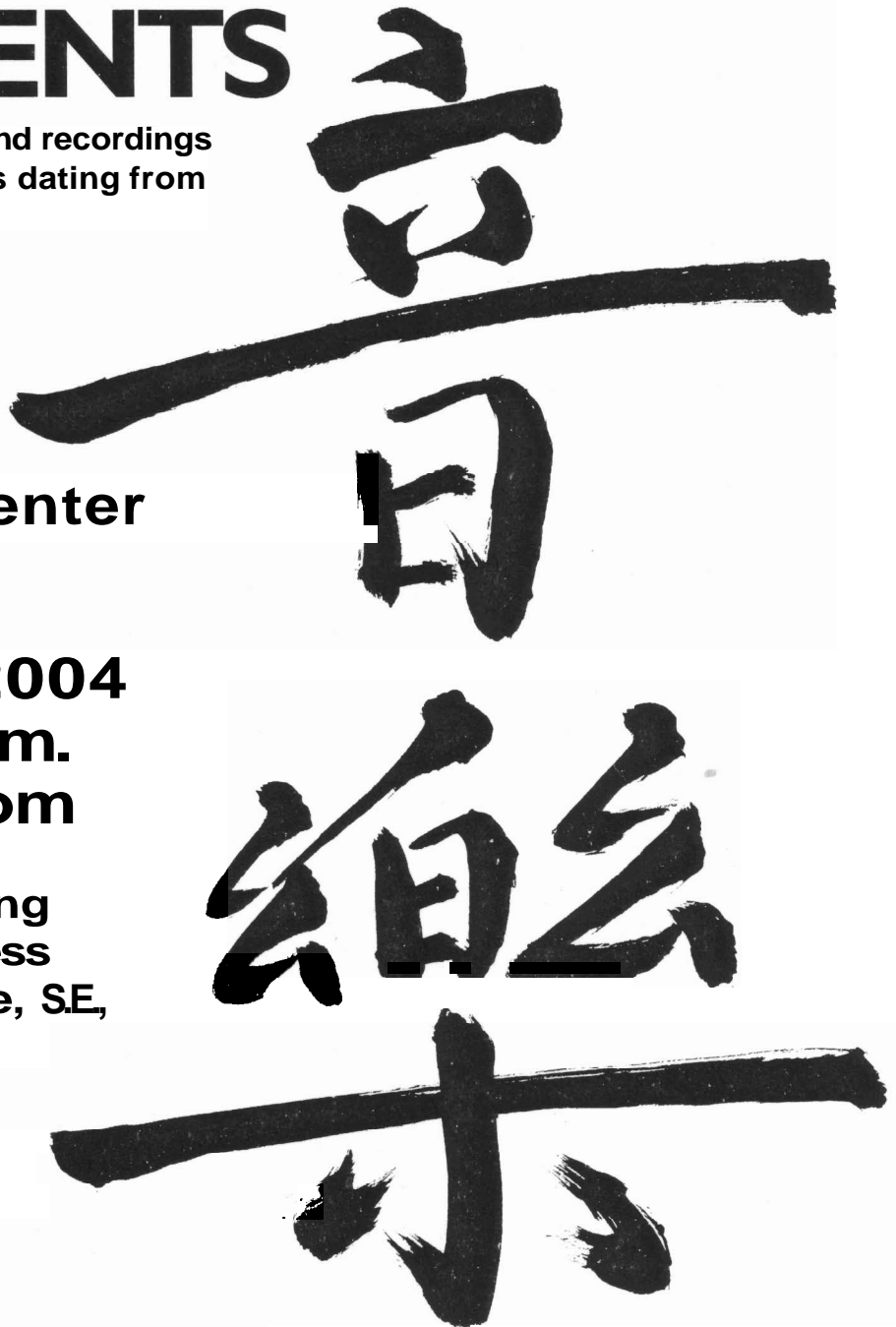
# EIGHT SOUNDS OF CHINESE MUSICAL INSTRUMENTS

The lecture will be illustrated by sound recordings  
and by images of musical instruments dating from  
2100 BCE to the present.

**NORA YEH,**  
Ethnomusicologist,  
American Folklife Center

**Tuesday, May 25, 2004**  
**12:30pm-1:30 p.m.**  
**West Dining Room**  
Sixth floor of the  
**James Madison Building**  
**The Library of Congress**  
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**Washington, D.C.**

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# EIGHT SOUNDS OF CHINESE MUSICAL INSTRUMENTS

The ancient Chinese incorporated cosmology, numerology, philosophy, spirituality and aesthetics in their classification of musical instruments. These ideas significantly influenced the development of various musical traditions of the Han Chinese majority who have dominated the stylistic development of most performing arts in China.

Although there may be fewer applications of the traditional codified musical concepts today, the foundations of music still remain tenaciously preserved. The idea of *bayin* or "eight sounds" refers not to the pitches or notes of a scale but to the tonal qualities and colors produced on instruments. Accordingly, the instruments were categorized by their materials. In the formation of ceremonial and ritual music orchestras, this categorization was rigidly followed. The eight sounds and their examples are:

1. Metal (*jin*): bell chime
2. Stone (*shi*): stone chime
3. Earth (*tu*): ocarina
4. Bamboo (*zhu*): flute
5. Gourd (*pao*): mouth organ
6. Wood (*mu*): clappers
7. Silk (*si*): stringed instruments such as qin and zheng
8. Leather (*ge*): drum

While the modern Chinese follow Western methodology to classify instruments based on the way sounds are produced into four groups, namely the idiophone, aerophone, chordophone and membranophone, the ancient Chinese intimately relate sound production with nature and products of nature. Of the eight materials, metal, earth, and wood come from the Chinese concept of five elements (the other two being fire and water). Stone belongs with earth. Bamboo and gourd belong with wood or plants. Silk and leather have to do with fauna.

No method of classification is perfect in that there are often exceptions. For example, some flutes were made of jade, clay, porcelain or iron. And there were bronze drums, clay bells, and clay drums. Today, most mouth organs do not use a gourd for the sound chamber: Instead, they are made of metal or wood. Although these examples of instruments do not reflect a strict correlation between material and sound, their discoveries in archaeological sites help us to understand the importance of the sounds of the more perishable instruments.

The words for music in Chinese are *yin* and *yue*. According to some experts, the pictograph for *yin* or sound is a stylized representation of a vertical flute blown by the mouth. Some scholars believe that the character *yue* is made up of four parts: top middle shows the word "white" or "hundred" (i.e., "many"), flanked on both sides by skeins of silk, on top of wood. This describes some type of stringed instrument, either a lute or zither: *Yin* can be any type of sound in the acoustic as well as abstract sense. Examples include "shengyin," "zaoyin," "fanyin," "xiangyin," and "zhiyin." *Yue* usually denotes music, with an emphasis on instrumental melodies, thus "zouyue," "aiyue," "qiyue," and "yuedui." While the sound produced on a flute usually flows from one pitch to another; connecting notes like lines, sounds of a lute often provide tones like points. Thus the *yin-yang* balance occurs

when the fluid melodic lines (*yin*) of the flute connect points or pitches (*yang*) through plucking of the lute. The symmetry of *Yin* and *Yang*, the trinity of Heaven, Earth, and Man, the importance of seasonal changes, the eight directions of the wind, are closely related to the production of sounds, the construction of instruments, the composition of music and the underlying texture of melodic arrangements.

Socio-political changes, foreign influences, economic development, and secularization in the past thousand years have had significant effects on the practice of *bayin*. Indigenous instruments were either replaced or supplemented by those of foreign origin. The stone chimes and bronze bells have become more or less museum artifacts in spite of attempts to reconstruct the old sounds and re-enact antiquated ceremonies. On the other hand, instruments made with bamboo, wood, silk and leather have become increasingly popular: Interestingly, these again represent the four classifications mentioned above, namely aerophone, idiophone, chordophone and membranophone, of which two belong to percussion and two to melodic families.

General characteristics of traditional Chinese instrumental music include:

**Time:** mostly duple meter in 2, 4, 8, or 16 beats per measure; rhythmic patterns often relate closely to poetic patterns or spoken language.

**Melodies:** heterophony (melody by a lead instrument supported by other instruments), monophony, unison. No polyphony. Pentatonic and heptatonic scales in various modes, tonal centers, and ending notes.

**Structure:** often begins with free meter; followed by slow duple (2 and/or 4) to fast duple (8 and/or 16), ending with fast climactic ending.

**Aesthetics:** beauty lies in the programmatic presentation, mood enhancement, description of emotion in titles, projection of sentiment through aural communications, accentuating movements (i.e., dance and action), imitating sounds (water; birds, horses etc.), paraphrasing poems and tones in language, ornamentation of notes and phrases, and desire to invoke spirit, harmony, peace, festivities, etc.

It is indeed a challenge to learn to appreciate Chinese music. With no background information about a European classical composition, such as Mozart's Requiem, it would be hard to understand the value of the music, historically and culturally. By the same token, by studying cultural contexts, we can certainly learn to enjoy the unique sounds of Chinese music.

**Nora Yeh**

*Nora Yeh, currently an archivist at the Archive of Folk Culture, American Folklife Center, received both M.A. and Ph.D. in Ethnomusicology from UCLA. She has taught at UC Santa Barbara; served as panelist for NL4 and consultant for governments of China and Taiwan; received awards to conduct research in East and Southeast Asia; and contributed to publications on Chinese and Asian American performing arts.*

