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Reflections on John Cage's Music of Changes

by Cathryn Wilkinson

I. INTRODUCTION:

A. Brief biography of John Cage

John Cage (1912-1992) was born in California and consequently grew up in a diverse society with a prominent presence of Asian cultures. By the end of his career, he had achieved note as a composer, philosopher, and collaborator with choreographer Merce Cunningham. Cage brought a questioning and intensely thoughtful spirit to the act of composition and understanding his music requires the same thought-filled approach. One of Cage's early teachers, another California native, Henry Cowell (1897–1965), had done pioneering studies in Asian and other ethnic musics. He and Cage both experimented with concepts of form that did not depend on clear phrase patterns or require delineation of beginnings and endings.

Cage searched for new and more basic ways to organize sounds without being enslaved to Western concepts of melody, beat, and cadence. He wrote for varied ensembles of instruments, including unusual pairings of percussion instruments, electronic tapes, a prepared piano, and even a

work for portable radios, his Imaginary Landscape No. 4 from 1951. Cage included periods of silence in much of his music because he believed that just like an Asian print with blank areas to be imagined by the viewer, the silences in his music were an invitation to be filled with ambient sounds.

“There is no such thing as an empty space or an empty time. There is always something to see, something to hear.” ¹

John Cage exhibited a gentle, peaceful spirit that testified powerfully to those who would disparage the unfamiliar sounds of his “modern” music as chaotic and disturbing. His humility led one writer to describe him as “anti-ego and anti-masterpiece...,” ² because Cage quietly suffered much criticism of his attempts to rethink one thousand years of traditional Western music.

B. Introduction to The Book of Changes

Compiled in the 9th century B.C.E., during the ancient Zhou (Ch'ou) dynasty (c. 1122 – 256 B.C.E.), The Book of Changes is considered one of the classics of ancient Chinese philosophy. Later these writings became an influence on Confucian thinking, and in keeping with the concept of overall interconnectedness, integrated as well with Buddhism and Daoism.

The wisdom in The Book of Changes is seen as infallible and innately trustworthy. “The Way of the Yi [Book of Changes] is so comprehensive that it leaves nothing uncovered in its domain. Among other things, it encompasses astronomy, geography, musicology, the art of war, phonetics, mathematics, and even the practice of alchemy, which lies beyond proper categories of learning, et cetera. All these branches of learning can employ the *Yi* to elucidate their rationale.”³

The 64 judgments recorded in the Book of Changes are based in the belief that all life and matter are inter-related. To apply the wisdom in the Book of Changes, one must toss 50 yarrow sticks or 3 coins to yield numbers which are interpolated into the 64 hexagrams. The hexagram is a stack of two trigrams, each containing three horizontal solid (yang) or broken (yin) lines. In a given moment, “the casting of a hexagram is an absolutely sure and accurate method of determining the character of moments of time.”⁴ Therefore a hexagram addresses many facets of life experiences, all of which are part of one another.

While the modern form of The Book of Changes probably originated in sections over time, the origin is described thus in “Explaining the Trigrams:” “The sage was mysteriously assisted by the gods and so initiated the use of yarrow stalks. How the yarrow stalks respond to commands as if they

were echoes defies understanding – it just happens. The sage observed the changes between the yin and yang and so established the trigrams.¹⁵ In seeking the Dao of Heaven, the Dao of Earth, and the Dao of Man, the sages found each one with its opposing, but correlative yin and yang, therefore six features in all.

Sample excerpt: The judgment for hexagram #42 on Yi, 'increase:'
"Yi is such that it is fitting to set out to do something and it is fitting to cross the great river." In Lynn's translation, "Whenever one practices the Dao of Increase, one should do so in tandem with the proper time. Increase should be used to make up insufficiencies. The way increase is used to cross over difficulties is just like the way one uses wood to cross over the great river."¹⁶

C. Music of Changes

John Cage created Music of Changes in 1951 and David Tudor performed the premiere on January 1, 1952 at the Living Theatre in New York. This work is scored for a solo pianist and arranged into four books without titles or standard tempo markings. In this work, one can see how Cage attempts to break away from traditional Western approaches. He eschews the strict Western pattern of beating time. Each book unfolds in lengths of time governed by a progression of tempos. Cage observed the

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pattern of 3 - 5 - 6 $\frac{3}{4}$ - 6 $\frac{3}{4}$ - 5 - 3 $\frac{1}{8}$ as the number of measures performed at each choice of tempo.

Although the notation for Music of Changes follows a traditional system of treble and bass clefs indicating precisely pitch and duration (rhythm), Cage specifies that the performer is to play every 2 $\frac{1}{2}$ centimeters of space on the page in a standard unit of time, equal to 1.15 seconds, or 69 beats per minute on a standard metronome. In this way, he linked time, counted by the performer, with space, measured on the page.

Cage also tries to break away from the traditional timbre of the piano. He achieves ringing tones in addition to the typically percussive nature of the piano. The pianist must depress keys at certain points without actually allowing them to sound, thereby allowing those strings to vibrate freely without a hammer strike. The pianist can impact the decay of a piano tone by operating one of three pedals, as specified by the composer: the damper pedal allows strings to vibrate freely until they naturally come to rest, the *sostenuto* pedal allows only strings of depressed notes to vibrate freely, and the *una corda* pedal allows the hammer to strike only one string per key, instead of producing a fuller sound by striking two or three strings per key.

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Cage chose the sounds for *Music of Changes*, what one might seek to equate with a melody in the Western tradition, from tossing coins, reading the *I Ching* and matching up a series of 64 musical elements. Half of the musical choices were silences and half were generated by the pianist: single pitches, tone clusters, or chords. He used similar charts of possibilities to select the dynamics, rhythm, and tempo.

Although the process of laying out *Music of Changes* was meticulous and Cage notated the music in extremely precise detail in his handwritten manuscript, the resulting sounds give no impression of organization, such as one might be conditioned to follow in Western tonal music. Instead the sounds of the piano float in and out of the ambient sound in a nearly unobtrusive flow. He described *Music of Changes* as "a freely moving continuity."⁷ Cage confessed that as he continued to explore the compositional process throughout his life, his music held more and more of a tendency to move towards ideas of no order.⁸

Music of Changes reflects aspects of Eastern philosophy, particularly in its use of silence that is to be filled by whatever sounds occur in the moment, and in the lack of control or will on the part of the composer. Because Cage accepts whatever sounds were generated from the *I Ching* as well as whatever sounds may occur to fill the silences, he expresses the view

that all of totality is in harmony, that nothing further need be fixed or arranged by the composer.

D. Terms

- a. I Ching (Zhou Yi or Yi Jing): A collection of ancient Chinese writings used for divination or to make predictions about the future
- b. Dao (the Way): A Chinese philosophy dating from the 6th century B.C.E., centered on realizing the way or path to self-understanding
- c. Ch'an (Zen): Buddhist philosophy as introduced in China by the monk Bodhidharma around the turn of the 6th century C.E., with a focus on meditation to achieve a state of perfect wisdom and enlightenment
- d. Yin/yang: The two great opposing and complementary forces at work in the world. Yin is female, cold, dark, passive, and soft. Yang is male, light, warm, active, and firm. Together they interact to make up the world.
- e. Aleatoric music: A process in which some elements are left to chance and may vary due to factors that are not controlled directly by the composer. Compositional choices (timbre, pitch, dynamics, duration, tempo) may be aleatoric, for example

determined by a random sequence of numbers or a preconceived pattern. Performance choices, for example the order in which sections of a work are played, the selection of pitches at random, or the pacing of passages where no tempo is given, may be aleatoric.

- f. Indeterminacy: Another name for various aleatoric processes in music.
- g. Meter: The measuring of a regular pattern of beats in music. Beats traditionally are grouped in a recurring pattern, for example continually counting in groups of twos like a march, or threes, like a waltz.

II. RESOURCES FOR MORE INFORMATION

A. East Asian philosophy

The Classic of Changes: A New Translation of the I Ching as interpreted by Wang Bi. Trans. Richard John Lynn. (Columbia University Press, 1994)

"East Asian Philosophy." Ames, Roger T. (1998) In E. Craig, ed. *Routledge Encyclopedia of Philosophy*. London: Routledge. Retrieved May 16, 2008, from <http://www.rep.routledge.com/article/G218>

The Zen Teachings of Master Lin-Chi. Trans. Burton Watson. (Columbia University Press, 1993)

"An Exposition of Zhou Yi." Guo Qiyong. In *Studies in Modern Neo-Confucianism* (Higher Education Press and Springer-Verlag, 2006)

"The 'Zhouyi' (Book of Changes) As An Open Classic: A Semiotic Analysis of Its System of Representation." Gu, Ming Dong. *Philosophy East and West*, Volume 55, No. 2, April 2005, p. 257-82.

B. Modern music

Music of the Twentieth Century: Style and Structure. Bryan R. Simms, 2nd ed. (Schirmer Books, 1996)

Soundings: Music in the Twentieth Century, Glenn Watkins. (Schirmer Books, 1988)

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C. John Cage

Silence: Lectures and Writings by John Cage (Wesleyan University Press, 1961)

"John Cage, 79, a Minimalist Enchanted With Sound, Dies." Allan Kozinn. (*The New York Times*, August 13, 1992). NOTE: The correction following this article explains that John Cage should not be referred to as a minimalist since none of his compositions were based on minimalist techniques.

John Cage: Composed in America. Marjorie Perloff and Charles Junkermann. (Chicago, 1994)

"John Cage: A Memoir." CD liner notes by Don Chance Gillespie (Lovely Music, Ltd., ©1998)

D. Recordings

Music of Changes, Joseph Kubera, piano (Lovely Music, Ltd., 1998)

John Cage: Works for Piano, vol. 6, Martine Joste, piano (Mode, 2005)

Classical Music Library accessible from COD library web page:

<http://www.cod.edu/library/resources/subjectdb/music.htm> . Select John Cage as the composer; then *Music of Changes* from the work list, or follow the link below:

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[http://0-internal.cod.classical.com.lrc.cod.edu/listen/browser.php?find=&dir_term\[0\]=2147565581&dir_direction\[0\]=keyword&area=tracks&gw=1&logic=&fcls\[0\]=Search&fnew=0&sbid=-1&fp1\[0\]=](http://0-internal.cod.classical.com.lrc.cod.edu/listen/browser.php?find=&dir_term[0]=2147565581&dir_direction[0]=keyword&area=tracks&gw=1&logic=&fcls[0]=Search&fnew=0&sbid=-1&fp1[0]=)

E. Painting

Chinese Art. Mary Tregear. (Thames & Hudson, 1997)

Chinese Art and Culture. Robert L. Thorp and Richard Ellis Vinograd.
(Pearson Prentice Hall, 2006)

III. CLASSROOM ACTIVITIES

A. Objectives

- a. To learn about John Cage's Music of Changes and place this music in the context of East Asian philosophy
- b. To develop the ability to listen closely to music in an unfamiliar style
- c. To compare this music with your own Western experience

B. Lecture points

- a. Introduce John Cage, this work, and the I Ching using material above in I. INTRODUCTION
- b. Music of Changes culminates Cage's work up until 1951
 - i. "He wasn't about conscious control and manipulation of musical materials."⁹
 - ii. Indeterminacy removes the composer's will from the process of composition
- c. Music of Changes as distinguished from typical western solo sonatas
 - i. Time is measured in space. The performer must think in terms of spans, not in counting beats.
 - ii. The formal plan is determined by chance, like the wind or a wave, instead of being constructed, like

an architect may fit together the sections of a building

- iii. The idea of a closed form and a logical progression through that form from a discrete start to a corresponding finish, is completely avoided
 - iv. Cage sought to expand the timbral effects of the piano. Try depressing a piano key and then playing other keys. Listen for the differences in sound, particularly as the sound decays.
- d. In *Music of Changes*, Cage applies principles from the I Ching and Zen Buddhism
- i. Acceptance of whatever occurs, whether in whatever fills the silences or in sounds he composed
 - ii. Appreciation of all sound as beautiful and part of a harmonious whole or oneness
 - 1. Cage refers to it as an “infinite play”¹⁰
 - 2. His philosophy: “Sound occurs in nature with ceaseless abandon, unmotivated by the human will, not produced as a metaphor for any other meaning.”¹¹
 - 3. He embraced a “positive chaos of nature”¹²

4. In Eastern philosophy, process and change take priority over form and stasis.¹³
- iii. Cage formed 64 outcomes to chart pitch, intervals, clusters, tempo, duration, dynamics, and texture and determined the presence of these elements through reading the I Ching
- e. Listening Examples
 - i. Listen to the opening 2 minutes of Book I and Book III

C. Questions for discussion.

- a. To prepare for discussion
 - i. Listen to at least a portion of Music of Changes. Book I (approximately 3 minutes) or Book IV (approximately 10 minutes) are recommended.
 - ii. Read I Ching (trans. Lynn), "The Coin Method," p. 21-22 and "Explaining the Trigrams," p. 119-124.
- b. Is this concert music? Why or why not? Can you think of a context where hearing it would be most meaningful?
- c. Think of one of today's popular western musical styles (country, folk, blues, jazz). Why would these styles NOT match up with John Cage's compositional goals?

- d. John Cage wrote that “Value judgments are not in the nature of this work as regards either composition, performance, or listening.”¹⁴ That is, the listener need not find more or less important elements, or more or less beautiful passages. How does Music of Changes escape from value judgments?
- e. Do you like this music? Why or why not?

D. Repeated hearings of Book IV

- a. Conduct the 1st hearing as background music while doing a chore, reading, or talking.
- b. 2nd hearing, ask yourself what images or scenes come into your imagination?
- c. 3rd hearing, how many different kinds of sound can you observe?
- d. 4th hearing, what do you notice in the silences?

E. Evaluation

- a. Quick T/F quiz
 - 1. Music of Changes is written for voices, percussion, and piano.
- (F)

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2. John Cage has been hailed as one of the most inventive poets of the 20th century. (F)
3. The I-Ching is a Chinese text from the 9th century B.C.E. designed to aid in making choices. (T)
4. In writing *Music of Changes*, the composer submits to a continuous uncontrolled or chaotic progression of time that is a principle of Zen. (T)
5. A principle of Eastern philosophy is the separate and disconnected multi-dimensional nature of all things, expressed commonly in the concept of yin-yang. (F)

b. Essay questions

1. What was the message John Cage tried to convey in *Music of Changes*? Give background from his personal experience and context for the influences on him.

2. A New York Times reporter wrote that John Cage was at best described as an inventor. What in this music would support his description? Give two examples of how John Cage shows invention in *Music of Changes*.

F. Extension

- a. Solo piano music in the western tradition is typically governed by a formal plan that is structured on a strict

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progression from start to finish. Compare this kind of organization with Cage's organizing principles. Where are the main differences in these two approaches? Why would a sonata plan contradict the principles of Zen? How important is closure in time-related arts like music, dance, or theatre?

- b. Look at *Fishing in a Mountain Stream* (Xu Daoning, 11th c. C.E., ink on silk, in Tregear, p. 114) or *Dream Journey on the Xiao and Xiang Rivers* (Master Li, 12th c. C.E., ink on paper, in Thorp, p. 250). Compare the empty spaces, which the viewer is expected to fill in by imagination, with the "silent" passages in *Music of Changes*.
- c. Listen to Pierre Boulez's *Second Piano Sonata*, composed in 1947-48. This work was a great inspiration for Cage. Find ways in which the two soundscapes are similar?
- d. Listen to all four books of *Music of Changes*. Listen for all the changes in the sound: texture, tempo, volume, range, phrase lengths, and mood.

- ¹ *Silence*, p. 8
- ² Watkins, p. 564
- ³ Gu, p. 257
- ⁴ Lynn, p. 18
- ⁵ Lynn, p. 119-120
- ⁶ Lynn, p. 396-7
- ⁷ *Silence*, p. 18
- ⁸ *Silence*, p. 20
- ⁹ Gillespie
- ¹⁰ *Silence*, p. 15
- ¹¹ Simms, p. 346
- ¹² Gillespie
- ¹³ Ames
- ¹⁴ Simms, p. 347