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# John Cage's 'Rock' Music: Ecocritical and Performance Considerations in Ryoanji for Solo Oboe and Percussion Obligato (1983)

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JOHN CAGE'S 'ROCK' MUSIC: ECOCRITICAL AND PERFORMANCE  
CONSIDERATIONS IN RYOANJI FOR SOLO OBOE AND PERCUSSION  
OBBLIGATO (1983)

by

Everette Scott Smith

A Dissertation  
Submitted to the Graduate School,  
the College of Arts and Sciences  
and the School of Music  
at The University of Southern Mississippi  
in Partial Fulfillment of the Requirements  
for the Degree of Doctor of Musical Arts

Approved by:

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May 2019

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## ABSTRACT

In the years following World War II, several American composers began breaking from the confines of music notation relegated to five lines and four spaces. Of particular interest to this study, John Cage (1912–1992) began liberating his compositions from the restraint posed by traditional notation in 1951 with his work *Imaginary Landscape No. 4*. He continued to create and develop varying systems of graphic notation with his indeterminate works, which became increasingly influenced by his interest in the environment and in South and East Asian aesthetic and philosophical considerations, themselves environmentally influenced. One of the latest products of Cage's coalescence of Asian aesthetics and graphic notation was *Ryoanji* for solo oboe with percussion obbligato (1983).<sup>1</sup> Inspired by his visit to the Ryōan-ji dry landscape garden in Kyoto, Japan, Cage created graphic notation for his piece bearing the same name by tracing the contours of fifteen rocks onto modified manuscript staves.<sup>2</sup>

Although significant research examines the Asian philosophical and aesthetic influences on John Cage's compositions, and more recent scholarship has examined his works through the lens of ecocritical methodologies, very little critical attention has been given to the ways in which environmentalism informed his compositional process. Furthermore, even less has been given to performance practice considerations in his works.

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1. Following the original 1983 composition for oboe, Cage wrote several versions including one for voice, flute, double bass, trombone, and orchestra between 1983 and 1985.

2. Consistent with Cage's writing, hereafter within this monograph Ryōan-ji will be used to refer to the temple/garden and *Ryoanji* will be used for the musical work. Additionally, I will use "Ryoanji" to refer to the collective visual artworks unless otherwise noted by specific name i.e. *R3* (where *R*=*Ryoanji*).

By examining *Ryoanji* through an ecocritical lens and exploring the impact of Cage's relationship with the natural environment on his compositional process in this piece, this monograph will show that Cage's ecomusicological aesthetic was used to inform his works and specifically this piece.<sup>3</sup> Additionally, this study will offer an ecocritical reading of *Ryoanji* to illustrate how Cage's environmental considerations could inform performing practices of *Ryoanji for Solo Oboe and Percussion Obbligato*.

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3. Ecomusicology is a sub-methodology of ecocriticism (the study of humanity and the natural environment), which has been a method of inquiry in the humanities since the 1970s. While ecocriticism has been applied to history, literature, and other academic disciplines, it has only recently been applied to musicological study. A 2011 colloquy in the *Journal of the American Musicological Society*, edited by Aaron S. Allen, was a pivotal starting point for the study of "Ecocriticism and Musicology" now termed "Ecomusicology." Aaron S. Allen, ed., "Ecomusicology: Ecocriticism and Musicology," *Journal of the American Musicological Society* 64, no. 2 (Summer 2011): 391–394.

## ACKNOWLEDGMENTS

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\* \* \*

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*Ryoanji for Solo Oboe and Percussion Obbligato* by John Cage © Copyright 1983 by Henmar Press Inc. All rights reserved.

For Taylor



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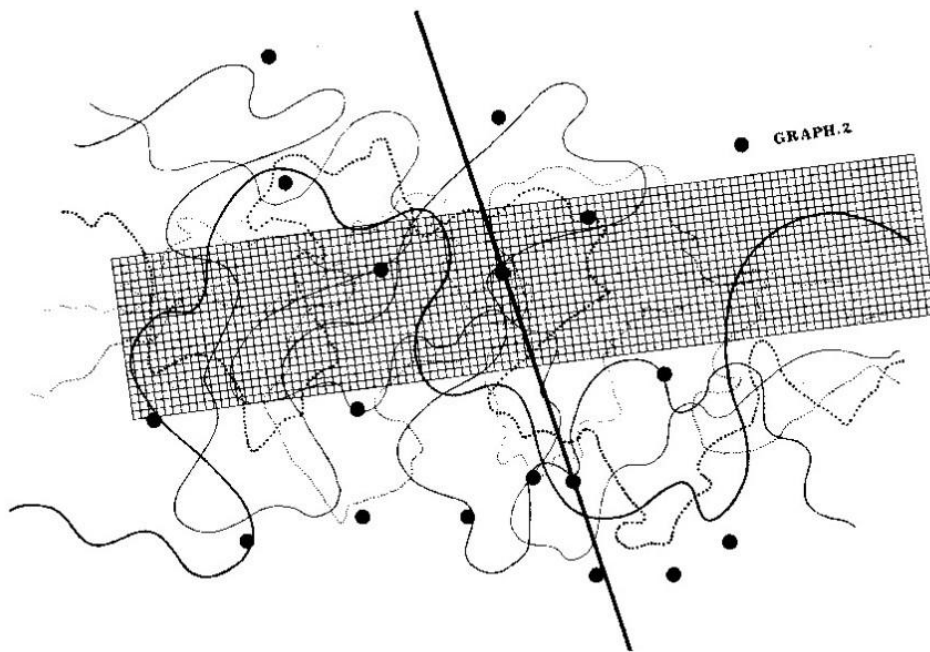
## CHAPTER I - INTRODUCTION: THE EXPENDABILITY OF CONVENTIONAL SYNTAX AND CAGE'S ENVIRONMENTAL THOUGHT

### **Graphic Notation**

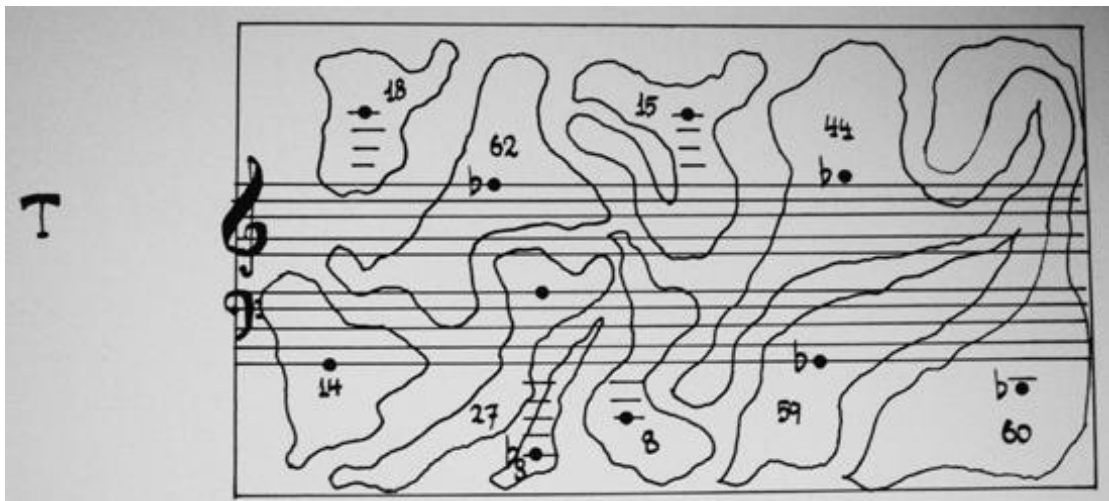
John Cage's experiments with altered music notation began in 1951 with *Imaginary Landscape no. 4* written for 12 radios and 24 players, which, along with *Music of Changes*, were also his first indeterminate works. In collaboration with Morton Feldman, Cage continued experimenting with altered and graphic notations with successive works including *Imaginary Landscape no. 5* written in 1952 which consisted of 42 magnetic tape recordings.<sup>4</sup> This piece led to seminal works in the practice including *Concert for Piano and Orchestra* (1957–58) and two well-known 1958 works, *Variations I* and *Fontana Mix*. The score of *Fontana Mix* is entirely graphic, while scores such as *Concert for Piano and Orchestra* contain vestiges of traditional notation in a graphic score. It should be noted how visually similar the solo part of *Concert for Piano and Orchestra* appears to the oboe part in *Ryoanji*.

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4. David Cline, *The Graph Music of Morton Feldman* (Cambridge: Cambridge University Press, 2016).



Example 1.1 John Cage: *Fontana Mix* (1958) (excerpt: Graph 2)



Example 1.2 John Cage: *Concert for Piano and Orchestra* (1958) (solo piano excerpt:  
Graph T)

Cage continued his explorations of graphic and altered notations eventually combining it with his interest in environmentalism as seen in the 1970s with works such as *Score (40 Drawings by Thoreau)* and *23 Parts: Twelve Haiku* (1974) in which the musical notation is derived of empirical ink drawings from a nature journal. These pursuits culminated in one of his latest examples of graphic notation, *Ryoanji* for solo oboe with percussion obbligato (1983),<sup>5</sup> which also exhibits his fondness for nature and environmentalism as both symbolic and aesthetic elements, and part of his compositional process.

Prior to his interest in mycology and studying Zen Buddhism with D.T. Suzuki in the late 1940s and early 1950s, John Cage did not care much for the environment, nature, or being outdoors.<sup>6</sup> As David Patterson points out, Cage hated nature in the earlier years of his career. Patterson recalls a conversation with American sculptor Richard Lippold (1915–2002) in which he disclosed that Cage:

hated nature. At Black Mountain College, he wouldn't go on walks or anything. His excuse was that the sun burnt his skin—from the freckles, or something like that. His interest in nature was very, very remote. When he moved to the country, he was forced to deal with it, and it led to his interest in mushrooms. . . . Then he got so absorbed by hunting

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5. James Pritchett notes that after *Renga* (1975–76), “almost none of Cage’s compositions have graphic elements in their notation” with the exception of *Ryoanji*. James Pritchett, *The Music of John Cage* (Cambridge: Cambridge University Press, 1993), 189.

6. Cage said “I had the good fortune in the late forties to attend the classes of Daisetz Suzuki in Zen Buddhism for two years, and that had a determining influence upon my music and my thinking.” Richard Kostelanetz, *Conversing with Cage* (New York: Limelight Editions, 1988), 29. A few years later, in 1954, Cage moved to the country and took up mycology. In 1962 he co-founded the New York Mycological Society and later published *The Mushroom Book* in 1972 with Lois Long and Alexander Smith. Further contrasting his earlier views as noted in Patterson (1996), in 1963 Cage wrote a letter to Lou Harrison from Stony Point, New York in which he now lamented being so busy as to not have time to “walk in the woods.” John Cage Letter to Lou Harrison dated 2 March, 1963 published in Laura Kuhn, ed., *The Selected Letters of John Cage* (Middletown, CT: Wesleyan University Press, 2016), 282.



mushrooms that it never bothered him to be out in the sun or anything like that.<sup>7</sup>

Cage's interest in the environment continued to increase due to several influences and his ideas regarding nature and ecology can be viewed as situated within several ideologies: his earlier Asian aesthetic ideas from philosopher Ananda Coomaraswamy and those from Zen Buddhism; his interest in the work of Henry David Thoreau spurred by America's environmental movement of the 1960s, and later from ecological concerns situated within his political views.

### **Coomaraswamy**

One of the most influential sources of Cage's musical thinking was from Ceylonese-British philosopher Ananda Coomaraswamy (1877–1947), and specifically his writings *The Transformation of Nature in Art* (1934) and *The Dance of Shiva* (1918).<sup>8</sup> The spiritual emphasis of Coomaraswamy's writings stated that the production and consumption of art are mystic experiences encountered by both the artist and the observer/listener of that art.<sup>9</sup> When describing his artistic aesthetic, Cage often cited Coomaraswamy's quotation of St. Thomas Aquinas that "Art is the imitation of Nature in her manner of operation: Art is the principle of manufacture."<sup>10</sup> Cage first encountered the quotation in the 1940s from Coomaraswamy's *The Transformation of Nature in Art*

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7. David Patterson, "Appraising the Catchwords, c. 1942–1959: John Cage's Asian-Derived Rhetoric and the Historical Reference of Black Mountain College" (PhD diss., Columbia University, New York, 1996), 27–28.

8. James Pritchett, *The Music of John Cage* (Cambridge: Cambridge University Press, 1993), 36–37.

9. Ibid., 37.

10. Ananda K. Coomaraswamy, *The Transformation of Nature in Art* (New Delhi, India: Munshiram Manoharlal Publishers, 2014).

(1934)<sup>11</sup> and reworded the phrase as “The function of art is to imitate nature in her manner of operation” in his 1967 writing *A Year from Monday*.<sup>12</sup> It is this idea of “manner of operation” which bears significance in the way Cage manifested environmental considerations in his compositional process.

## **Zen Buddhism**

Cage was most likely introduced to Zen Buddhism in the late 1930s when he attended Nancy Wilson Ross’s lecture at the Cornish School titled “Zen Buddhism and Dada.”<sup>13</sup> After attending the classes of Japanese writer and Zen expert Daisetz Teitaro Suzuki (1870–1966) at Columbia University in the 1940s, Cage developed an interest in Zen Buddhism.<sup>14</sup> It became central to his works and general aesthetic through the 1950s and 1960s. Central views such as detachment and the harmonious interconnecting between all people and the “unidirectional movement of time moving toward enlightenment” also allowed his Zen views to cohabitate with ideas such as the “spaceship earth” worldview of political theorist Richard Buckminster Fuller (1895–1983). Along those lines, Cage’s views of technology, and more specifically sound recording and electronic sound production, became ecological in nature: “all technology

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11. David Patterson postulates that “Cage was reading Coomaraswamy’s *The Transformation of Nature in Art* within months of his arrival in New York in the fall of 1942.” David Patterson “The Picture Is Not in the Colors: John Cage and Ananda Coomaraswamy,” in *John Cage: Music, Philosophy, and Intention, 1933–1950*, ed. David Patterson (New York: Routledge, 2002), 184. See also Edward James Crooks, “John Cage’s Entanglement with the Ideas of Coomaraswamy” (PhD diss., University of York, York, England, 2011).

12. John Cage, *A Year from Monday: New Lectures and Writings* (Middletown, CT: Wesleyan University Press, 1967), 31.

13. Laura Kuhn, ed., *The Selected Letters of John Cage* (Middletown, CT: Wesleyan University Press, 2016), 422.

14. Ibid., 128, 136.

must move toward the way things were before man began changing them; identification with nature in her manner of operation, complete mystery.”<sup>15</sup> Furthermore, his interest in Zen Buddhism led him to begin his explorations of chance operations and music for magnetic tape.

## **Thoreau**

From the 1950s Cage became more concerned with *method* than *structure* in his works—ideas which would soon be strengthened and affirmed by the writings and philosophical ideas of Thoreau. In a 26 October 1967 letter to John Phetteplace, Cage mentions the “pleasure” he was having reading the writings of Henry David Thoreau, saying “every idea I’ve had is there.”<sup>16</sup> Cage frequently wrote about Thoreau and extensively used Thoreau’s quotes and drawings from his writings and journals in his visual art and musical works. Brooks notes:

Thoreau’s presence is felt in the extent to which nature is a source for many of the materials; and the art which Cage married to nature is direct and essential: structures derived from Japanese poetry, simple forms constructed from alternation and repetition. . . . [I]n many of these compositions Cage seems to be recapitulating Thoreau’s journey (recorded above all in his journal) into the art of life by way of nature.<sup>17</sup>

He posits that Cage’s works after the 1970s were “directly indebted” to Thoreau.<sup>18</sup>

Cage’s interest in Thoreau expanded in the early 1970s and works such as the “antiwar,

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15. John Cage, *A Year from Monday: New Lectures and Writings* (Middletown, CT: Wesleyan University Press, 1967), 18.

16. Kuhn, 374. Brooks also notes he was introduced to Thoreau in 1967 citing David Reville, *The Roaring Silence: John Cage, A Life* (London: Arcade Publishing, 1992), 220.

17. William Brooks, “Music II: from the late 1960s” in *The Cambridge Companion to John Cage*, ed. David Nicholls (New York: Cambridge University Press, 2002), 135.

18. *Ibid.*, 135.

antislavery essay ‘Civil Disobedience’ (1849), served as an underpinning to Cage’s emerging social anarchism.”<sup>19</sup>

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19. Laura Kuhn, ed., *The Selected Letters of John Cage* (Middletown, CT: Wesleyan University Press, 2016), 414. For additional information about how environmentalism and ecology informed Cage’s politics see Joseph Finkel, “Negotiating Music and Politics: John Cage’s United States Bicentennial Compositions ‘Lecture on the Weather’ and ‘Renga with Apartment House 1776’” (MA thesis, Arizona State University, 2011).

## CHAPTER II - MANIFESTATIONS OF NATURE IN CAGE'S WORKS

“The responsibility of the artist is to imitate nature in her manner of operations.” –John Cage

Though Cage composed his first visual artworks in 1969 with the lithographs he created memorializing Marcel Duchamp's death the previous year, these works were actually executed by Calvin Sumison whom Cage likened to a pianist realizing a composition.<sup>20</sup> For his 1972 *Mushroom Book*, Cage collaborated on lithographs with Lois Long, a botanical illustrator, by providing texts for the plates.<sup>21</sup> When Cage arrived at Crown Point Press to begin some printmaking projects in January 1978, he had yet to personally produce any pieces of visual art aside from his graphic notation scores, which blurred the lines between musical composition and the plastic arts. Like his previous musical works, Cage's explorations in the visual arts were informed by his interest in Zen Buddhism, the writings and drawings of Thoreau, and the natural environment. As with previous musical works, Cage's visual artworks were created using various chance operations (at first by hand or on paper and later via computer). In addition to using chance operations to create his art pieces, he also used chance operations to decide which printing techniques he would learn and media to work within each day of his initial seven-day residence from at Crown Point from 2 January to 8 January 1978, which he

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20. *Not Wanting to Say Anything About Marcel*, 1969. Kathan Brown and Helen Lockett, “Plates” in *Every Day is a Good Day: The Visual Arts of John Cage* (London: Hayward Publishing, 2010), 78.

21. Kathan Brown and Helen Lockett, “Plates” in *Every Day is a Good Day: The Visual Arts of John Cage* (London: Hayward Publishing, 2010), 80. It was a later French reprint of *The Mushroom Book* in 1983 whose cover art included one of the Ryoanji drawings. John Cage, *Le livre des champignons* (Marseille: Editions Ryôan-ji, 1983).

documented in his work entitled *Seven Day Diary*. This work provides evidence that chance operations were used not only within each creative process but to determine the process itself, adding an additional layer of chance.

DAY ONE	Hard ground etching; Drypoint
DAY TWO	Hard ground etching; Drypoint; Soft ground etching
DAY THREE	Hard ground etching; Drypoint; Soft ground etching; Sugar aquatint
DAY FOUR	Hard ground etching; Drypoint; Soft ground etching; Sugar aquatint; Photo etching
DAY FIVE	Hard ground etching; Drypoint; Soft ground etching; Sugar aquatint; Photo etching; Found objects
DAY SIX	Hard ground etching; Drypoint; Soft ground etching; Sugar aquatint; Photo etching; Found objects; Color etching
DAY SEVEN	Hard ground etching; Drypoint; Sugar aquatint; Photo etching; Found objects; Color etching

Table 2.1 Chance-Derived Printing Processes from Seven Day Diary <sup>22</sup>

Utilizing the ink drawings and sketches of nature in the journals of American Poet-Naturalist Henry David Thoreau (1817–1862), Cage created his first prints using chance operations to designate the ink drawings’ position, color, size, etc. The first artistic print, *Score Without Parts (40 Drawings by Thoreau): Twelve Haiku* (1978) was based on his 1974 musical work, *Score (40 Drawings by Thoreau) and 23 Parts: Twelve Haiku*, a previously composed graphic notation score containing Thoreau drawings to which Cage now added color in addition to the chance-derived construction (Figure 2.1).

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22. John Cage, *Seven Day Diary (Not Knowing)*, 1978, National Gallery of Art, Washington, Gift of Kathan Brown, 1996. © John Cage Trust.

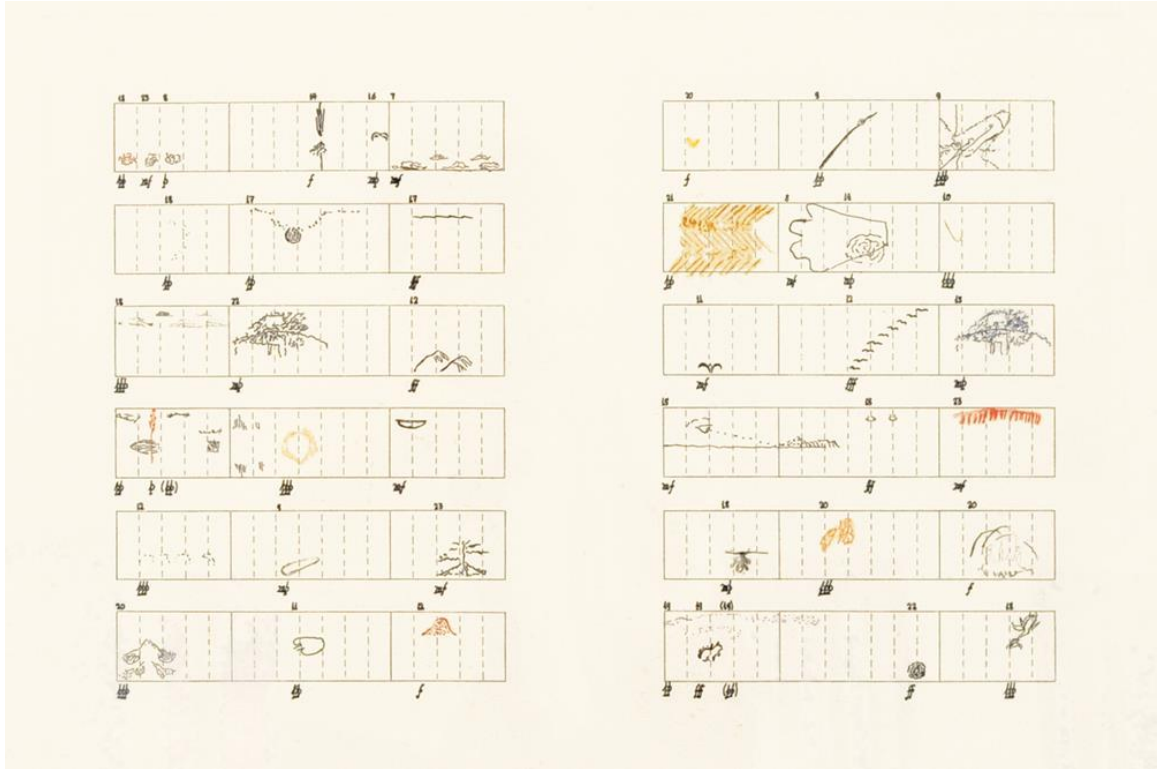


Figure 2.1 John Cage: *Score without Parts*

Cage continued his use of Thoreau's nature drawings in other prints, transforming them from empirical data to artistic pieces in works such as the musical work *Renga* (1975–76) whose score used Thoreau's journal drawings in place of traditional notation, and print project *17 drawings by Thoreau* (1978). In *17 drawings* one can see, among others, a hazelnut (red foreground) and a prominently featured hawk feather (brown middle ground), the latter taken from Thoreau's 11 November, 1858 journal entry (Figures 2.2 and 2.3).

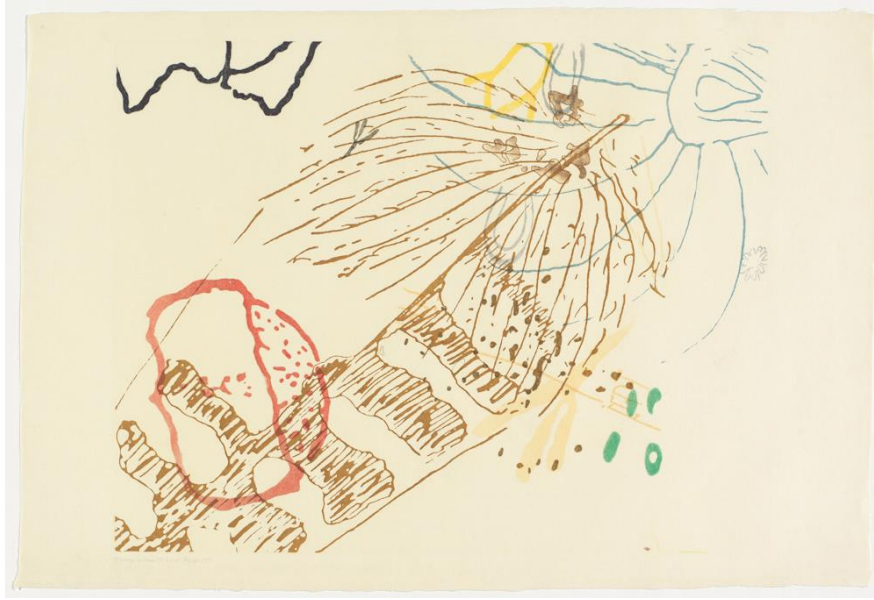


Figure 2.2 John Cage: *17 drawings by Thoreau* (1978)<sup>23</sup>



Figure 2.3 Henry David Thoreau "*Journal*" (11 November, 1858)<sup>24</sup>

<sup>23</sup> John Cage, *17 Drawings by Thoreau*, 1978, National Gallery of Art, Washington, Gift of Kathan Brown, 1996 © John Cage Trust.



Other artistic works to use Thoreau's environmental ink drawings include *Signals* (1978) and *Changes and Disappearances* (1979–1982), which consisted of thirty-five abstract prints containing fragments of Thoreau's drawings, again compiled through numerous chance operations applied to process and medium. The National Gallery of Art describes the work as follows:

The *Changes and Disappearances* series is Cage's most complicated print project. Every mark, color, and image resulted from questions answered by numerous chance operations. Cage recorded every result on a score devoted to each print. He then created maps, or printing guides, by tracing the placement of each plate and annotating the tracings with every mark, line, image, and color to be used. *Changes and Disappearances* 32 was printed using thirty-six unique plates and required eleven maps. The print is composed of eighty-five inked plate edges and 177 inked marks for a total of 262 distinct colored lines and shapes... Here Cage mirrored nature's complex, chance-dependent evolutionary patterns and seemingly infinite possibilities.<sup>25</sup>

In 1982, during his fifth session at Crown Point, Cage created a multi-work series titled *Déreau* (a portmanteau of *décor* and *Thoreau*), which utilized twenty-four of Thoreau's drawings. Cage's extensive use of Thoreau's drawings as source material is evident in that they were used in all of his prints until his 1980–82 work *On the Surface*.<sup>26</sup>

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24. Henry David Thoreau, Journal XI: 2 July, 1858 – 28 February, 1859 (11 November, 1858 excerpt). Digitized at The Walden Woods Project, The Thoreau Institute at Walden Woods, accessed 17 December, 2018, <https://www.walden.org>.

25. The National Gallery of Art, accessed 4 February, 2019, <https://www.nga.gov/features/yes-no-maybe/cage/c-d.html>.

26. James Pritchett, *The Music of John Cage* (Cambridge: Cambridge University Press, 1993), 185.

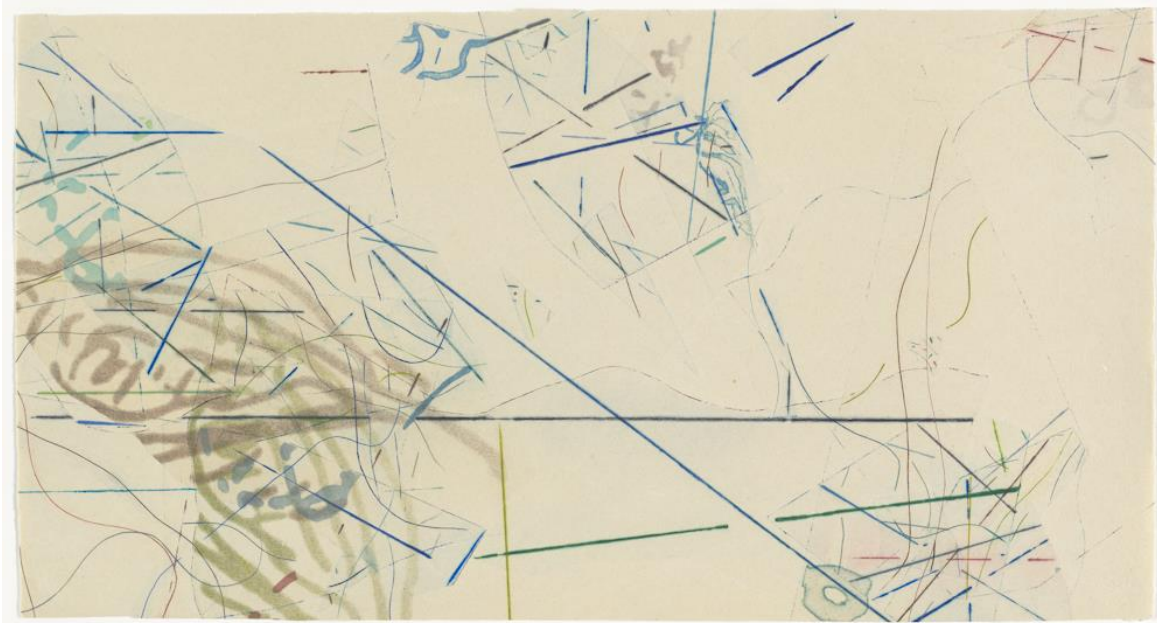


Figure 2.4 John Cage: *Changes and Disappearances 32* (1982)<sup>27</sup>

During his January 1983 visit to Crown Point, Cage included drawing alongside his printmaking projects and began the collective series of Ryoanji-inspired prints and drawings entitled *Where R = Ryoanji*. From this series sprang related pieces such as the 1985 collection of drypoints entitled *Ryoku* (a portmanteau of *Ryoanji* and *Haiku*). Here, he combined the environmental elements of chance operations with his own aesthetic decisions. As a graphic score, *Ryoanji* would appear to be a culmination of Cage's environmental ideas and use of nature. The musical work combined the use of natural elements in the composition process (the rocks he traced) similar to the empirical drawings of Thoreau; it used chance operations, which Cage viewed as evocative of

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<sup>27</sup> John Cage, *Changes and Disappearances 32*, 1982, National Gallery of Art, Washington, Gift of Kathan Brown, 1996 © John Cage Trust.

natural or environmental processes of creation and evolution; and the performance was to be a sonic depiction of the actual Ryōanji garden.

While working on his Ryōanji-inspired works, during his visits to the Mountain Lake Workshop in Virginia in 1983, Cage began experimenting with watercolors and paintbrush techniques, both with abstract test strokes (“try-outs”) as well as continuances of the “Ryōanji” stone tracing process. Despite resistance to using a brush to create works at the insistence that he was not a painter,<sup>28</sup> Cage continued to work in watercolor and brushed acid on copper during subsequent visits to Mountain Lake in 1988, 1989, and 1990 with many of his sugar lift on aquatint prints also emulating strokes of a paintbrush.<sup>29</sup> During Cage’s April 1988 visit to Mountain Lake he created four works, *New River Watercolors, Series I–IV*, each of which was created using chance operations to determine paper type, colors used, paint application instruments and methods, as well as the specific stones around which Cage traced. Using a method similar to the “Ryōanji” works, Cage used large stones from the Appalachian New River, which he collected from his earlier 1983 visit to Mountain Lake. These larger stones were used in works such as Cage’s massive 1990 painting *New River Rocks and Washes*, an 8.5 by 28 foot work thought to be lost until it’s rediscovery during the writing of this document.

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28. Kathan Brown and Helen Luckett, “Plates” in *Every Day is a Good Day: The Visual Arts of John Cage* (London: Hayward Publishing, 2010), 136.

29. Stephen Addiss and Ray Kass, eds., *John Cage: Zen Ox-Herding Pictures* (New York: George Braziller Publishers, 2009), 10.



Figure 2.5 Large Appalachian New River Rocks Cage Used at Mountain Lake<sup>30</sup>



Figure 2.6 Feather with Watercolor Tracing (Cage at Mountain Lake)<sup>31</sup>

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30. Mountain Lake Workshop, accessed 5 February, 2019,  
<https://www.mountainlakeworkshop.com/john-cage>.

31. Mountain Lake Workshop, accessed 5 February, 2019,  
<https://www.mountainlakeworkshop.com/john-cage>.

During his final visit to Mountain Lake in April 1990, Cage created works based on opposing natural elements of fire and water, drawing on his previous uses of burnt and washed papers, as well as watercolors. Additionally, he used rock tracings in this creation process as well, illustrated in his watercolor on smoked paper work *River Rocks and Smoke 4/11/90, No.1*. All these visual art pieces show that nature and environmental elements were inherent in the very being of the works themselves not only in the representation of the final product but in the process of creating that work.



Figure 2.7 John Cage: *River Rocks and Smoke 4/11/90, No.1* (1990)<sup>32</sup>

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32. John Cage: *River Rocks and Smoke 4/11/90, No.1* (1990).





Figure 2.8 John Cage: *New River Rocks and Smoke* (1990)<sup>33</sup>

### **Musical works using environmental sounds**

Aligning his interests in nature and acoustic ecology, several of Cage's pieces are comprised of environmental sounds, both real and simulated.<sup>34</sup> In various works he employs natural items, often percussion instruments, as the source of the sounds. Several pieces include recorded soundscapes of natural environments while others have orchestral instruments mimicking the sounds of natural phenomena. In a February 1957 lecture, Cage defines experimental music as one that embraces both sounds and silences including those which are environmental: from nature as well as ones environment

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33. John Cage, *New River Rocks and Smoke* (1990).

34. The term "environmental" used here, is broadly defined to include sounds from *the* environment (nature) as well as sound from *an* environment or particular space.

(broadly defined) to include any specific space. Multiple musical works incorporate this idea by utilizing environmental sounds.

Recording technology allowed Cage to explore the use of biophonic, geophonic, and anthrophonic sounds in his works and, beginning in the 1950s, he employed the use of environmental recordings from various spaces.<sup>35</sup> Cage's use of recordings of environmental spaces exhibited the importance of the physical environment of performance space, and the use of "Soundscapes."<sup>36</sup> *Williams Mix* (1952) for example, contains six categories of sound: "city sounds (A), country sounds (B), electronic sounds (C), 'music' and especially manually produced sounds (D), wind-produced sounds and vocal music (E), and 'small' sounds requiring amplification (F)."<sup>37</sup> *Fontana Mix* (1952) contains sounds from the city, the country, humans, and synthetic apparatus.

In the score for *Five Hanau Silence* (a single instructional folio dated 7 October, 1991), Cage suggests that the performer record environmental sounds at either three or five places in Hanau with times and locations around the city to be specified by Cage based on chance operations (see example 2.1). In similar works Cage provides tape

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35. Within the study of soundscape ecology or acoustic ecology, which studies the acoustic relationships between living organisms and their environment, American musician and soundscape ecologist Bernard Krause (b. 1938) coined the terms Geophony (earth-related, non-biological sounds); biophony (sounds created by non-human living organisms); and anthropophony (human produced sounds), which were used in the recording and archiving of environmental soundscapes and housed at Wild Sanctuary, which Krause founded in 1968. Wild Sanctuary, accessed 25 January, 2019, <https://www.wildsanctuary.com>. The term itself first appeared in Barry Truax, ed., *Handbook for Acoustic Ecology* (Vancouver, BC: A.R.C. Publications, 1978).

36. The term Soundscape, any acoustically immersive environment perceived by humans, was first used by Michael Southworth in his 1969 article "The Sonic Environment of Cities" and made popular by R. Murray Schafer. Michael Southworth "The Sonic Environment of Cities," *Environment and Behavior* 1, no. 1 (June 1, 1969): 49–70. C.f. R. Murray Schafer, *The Tuning of the World: A Pioneering Exploration into the Past History and Present State of the Most Neglected Aspect of Our Environment: The Soundscape*, (New York, NY:Random House, Inc., 1977).

37. David W. Bernstein, "Cage and High Modernism" in *The Cambridge Companion to John Cage*, ed. David Nicholls (New York: Cambridge University Press, 2002), 209.

recordings of environmental sounds. *Bird Cage* (1972) employs twelve tapes with recorded bird sounds from the Bombay Hook National Wildlife Refuge east of Dover, Delaware and the National Aviary in Pittsburgh, Pennsylvania. With his 1973 piece *Etcetera*, the performing musicians are to be accompanied by a tape recording of environmental sounds from the location the piece was composed. Produced by Cage's friend David Behrman, the sounds heard in *Etcetera* are from the rural countryside when Cage was living in Stony Point, New York, and include birdcalls and the blowing wind. Written percussion parts enhance the recordings by emulating rain and leaves rustling.<sup>38</sup>

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38. Stephen Drury, Notes for the Mode recording of *Etcetera* and *Etcetera 2/4 Orchestras*, "Writings: John Cage: Etcetera & Etcetera 2/4 Orchestras," Stephen Drury, accessed January 25, 2019, <http://www.stephendrury.com/writings/cageetceteras.html>.



Turner,  
What I suggest you record are  
the sounds <sup>(the silences)</sup> in several places in Hanau  
(send me a map of the city; I will mark  
the points specified by chance operations); I  
will also specify the "times" of day or night  
when the recordings are to be made. They  
should then be superimposed (made into a  
single record) or, even better, played  
separately from separate points in space.  
Let me know how many places you  
will take. Three or Five?  
Best wishes,  
John Cage 10/7/91

Example 2.1 John Cage: *Five Hanau Silence*<sup>39</sup>

Behrman's tape recordings of environmental sounds are also used in Cage's 1974 work  
*Score (40 Drawings by Thoreau) and 23 Parts: 12 Haiku* (mentioned earlier in this

39. John Cage, *Five Hanau Silence*, 10/7/91, ms (present location unknown), Claus and Wolfgang Sterneck, accessed 27 December, 2018, <http://www.sterneck.net/john-cage/hanau-silence/index.php>.

chapter) in which the ambient environmental sounds of dawn at Stony Point are heard.<sup>40</sup> In *Etcetera 2/4 Orchestras* (1986), tape recordings also provide accompaniment to the performers but include sounds from a contrasting, urban environment: New York City. Recorded in Cage's Sixth Avenue apartment, his ringing telephone plays throughout the piece. Similar to the treatment of some of the instruments in a way to enhance sounds of the particular environment in *Etcetera*, *Etcetera 2/4 Orchestras* contains "orchestral chords [that] bring to mind the squealing of car brakes, car horns in traffic, [and] the scraping of metal against metal."<sup>41</sup> In his collaborative work *Lecture on the Weather* (1976), Cage employed Thoreau's journal drawing as in his visual works as well as readings from the texts of Thoreau's *Walden: Life in the Woods* and *On Civil Disobedience*.<sup>42</sup> Thoreau's drawings were included as part of an accompanying film for the work, produced by Argentinian visual artist Luis Frangella.<sup>43</sup> Additionally used was

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40. In a 1979 conversation with Richard Kostelanetz Cage clarifies that for *Score*, the recording was just taken just at dawn while the "ambient sound [for *Etcetera* was] not at dawn, just anytime during the day." In Richard Kostelanetz, "His Own Music: Part Two" *Perspectives of New Music* 26, no. 1 (1988): 28. Additionally, Cage invited Behrman to produce the weather related recordings for *Lecture on the Weather* the following year however Cage remembers that "somehow he didn't receive the letter that I sent him." With the invitation and Behrman committed to another project, he suggested Maryanne Amacher for the commission instead. Richard Kostelanetz, *John Cage (ex) plain (ed)* (New York: Schirmer Books, 1996), 131.

41. Stephen Drury, Notes for the Mode recording of *Etcetera* and *Etcetera 2/4 Orchestras*, "Writings: John Cage: Etcetera & Etcetera 2/4 Orchestras," Stephen Drury, accessed January 25, 2019, <http://www.stephendrury.com/writings/cageetceteras.html>.

42. Though primarily considered one of Cage's Political works, *Lecture on the Weather* contains elements of nature in both composition and execution/performance. In addition to performance elements discussed here, environmental elements used in the composition process will be discussed later in this chapter. For more information on this piece see Joseph Finkel, "Negotiating Music and Politics: John Cage's United States Bicentennial Compositions 'Lecture on the Weather' and 'Renga with Apartment House 1776'" (MA thesis, Arizona State University, 2011).

43. Finkel identifies (cf. Finkel 2015, pp. i, 100) Frangella as a "Chilean visual artist" (i) and "Chilean painter and sculptor" (100). It is unclear why the author delineates Frangella as a Chilean national. He was born in Buenos Aires, Argentina in 1944 and graduated from the University of Buenos Aires in 1970 before moving to New York City, where he died in 1990. As of this writing I am unaware of

the use of a recording of environmental sounds as a weather soundscape (including breeze, rain, and thunder), produced by American composer and installation artist Maryanne Amacher, who Cage said produced “the best recordings of ambient environmental sounds.”<sup>44</sup> With the recording, the tone and structure of the vocal parts also created a soundscape that emulated those of breeze, rain, and thunder.

Of the many environmental recordings Cage made and used in his works, he lamented one natural phenomenon whose sound he was not able to capture. In doing so he also strengthens his arguments about sound ecology and sonic transcription:

I’ve had for a long time the desire to hear the mushroom itself, and that would be done with very fine technology, because they are dropping spores and those spores are hitting surfaces. There certainly is sound taking place. I mentioned this in the last article in *Silence*, in that humorous article. I would still like to do that. It leads, of course, to the thought about hearing anything in the world since we know that everything is in a state of vibration...One could go to an exhibition of sounds in which you would see something and hear it as well. I would like to do that.<sup>45</sup>

Cage’s desire to hear sounds from the vibrations of inaudible environmental objects is of particular importance in regards to the symbolic sonic representation of stones discussed in the following chapter.

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any documentation of him changing citizenship before moving to the US. “Luis Frangella, 46, Painter and Sculptor,” *New York Times*, Dec. 14, 1990.

44. Cage recalling Berhman’s recommendation of Amacher in Richard Kostelanetz, *John Cage (ex) plain* (ed) (New York: Schirmer Books, 1996), 131.

45. John Cage, Interview with David Cope (1980) in Richard Kostelanetz, “His Own Music: Part Two” *Perspectives of New Music* 26, no. 1 (1988): 35.

## Musical Pieces that use natural materials as instruments/sounds

In addition to environmental recordings and the use of natural materials in his visual art from the same period, several of Cage's musical works from the 1970s exhibit his interest in ecology through the use objects taken from nature to produce sounds. For instance, *Child of Tree* (1975), a work for solo percussionist with amplified plant materials, employs the *I Ching* to select ten instruments that are either plants or made of plant materials. The piece famously uses plucked cactus spines and Poinciana tree pod rattles.

If I have a piece of cactus, either by means of an alligator clip attachment or by means of a cartridge with a needle in it, I can connect the cactus and the spines with the sound system, and then by plucking one of the spines or touching it with paper or cloth or something, I can get a very beautiful pitched sound, and the pitch relations between the spines of a single piece of cactus often will be very interesting—microtonal.<sup>46</sup>

Inspired by this work, Cage embarked on a project that never came to fruition in which he wanted to amplify a city park in Ivrea (a municipality of Turin), in northwestern Italy. As with the anechoic chamber at Harvard, Cage was fascinated by the seemingly silent environment of Ivrea, free of urban noise and overlooking the Alps, and wanted visitors to hear the sounds the plants were making. The project fell through, however and, despite invitations from other cities (Rome and Zagreb), he never accepted the other invitations likening the marvelousness and beauty of Ivrea's silence to that of a concert hall.

*Branches* (1976) calls for any number of percussionists with amplified plant materials and is a series of variations on *Child of Tree*, utilizing the same plucked cacti, pod rattles, *et alia*. Both *Child of Tree* and *Branches* are improvisatory works which Cage notes is

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46. John Cage, Interview with Tom Darter (1982) in Richard Kostelanetz, "His Own Music: Part Two" *Perspectives of New Music* 26, no. 1 (1988): 34.

facilitated by the organic materials used: “There I give directions for the improvisation because the improvisation can’t be based on taste and memory since one doesn’t know the instruments.”<sup>47</sup> *Inlets* (1977), written for percussion, also employs natural materials for sound production. Written for four players, three play water-filled conch shells while a fourth player creates sounds from burning pinecones and blowing a singular tone through an additional conch shell. “Music thus arises out of the chance sonic encounter between human performer and the natural material of the instrument itself. It is as if nature is being allowed an equal role in the process of the composition.” A secondary piece, *Pools* (1978), is a solo version of *Inlets*, also utilizing Conch shells and burning pinecones.

### **Musical Works Using Thoreau’s Writings, Environmental Drawings and/or Natural Objects in the Composition Process**

Cage first tangentially engaged Thoreau in his compositional process in his *Song Books* (1970) for solo voice. Two of the solos (“Solo for voice 3” and “Solo for voice 5”), utilize a portrait of Thoreau and a map of Concord, Massachusetts to extract the melodic line.<sup>48</sup> Throughout the work, the solo voice may be accompanied by magnetic tape recordings of environmental sounds as well. “Solo for voice 4” for example, indicates: “this solo may be accompanied by a tape recording of bird sounds” and “Solo for voice 5” instructs “this solo may be accompanied by a tape recording of sounds of wind, rain, thunder, etc.”<sup>49</sup> As with *Lecture on the Weather*, previously discussed in this

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47. John Cage, Interview with Tom Darter (1982) in Richard Kostelanetz, “His Own Music: Part Two” *Perspectives of New Music* 26, no. 1 (1988): 34.

48. William Brooks, “Music II: from the late 1960s” in *The Cambridge Companion to John Cage*, ed. David Nicholls (New York: Cambridge University Press, 2002), 133.

49. John Cage, *Song Books: Volume 1*, (New York: Henmar Press, 1970), 7,12. In this early work Cage did not create or commission the creation of magnetic tape recordings of the suggested environmental

chapter, Cage also employed Thoreau's writings and drawings in other musical and collaborative performance works. In 1970–71, Cage created a musical-poetic work called *Mureau* (a portmanteau of music and Thoreau), his first to engage with Thoreau's writings. Using the *I Ching*, Cage extracted text from all of Thoreau's writings about music, sound, and silence to compile a new single text that included a "mix of letters, syllables, words, phrases, and sentences."<sup>50</sup> The performance is a reading of the seemingly random and sometimes nonsense-sounding result of the text compilation where Cage has taken Thoreau's use of sound-related syntax and transformed it into a sonic artwork. The sounds produced eclipse any lexical or textual meaning.

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sounds as he did with works following.

[https://monoskop.org/images/0/03/Cage\\_John\\_Song\\_Books\\_Volume\\_1.pdf](https://monoskop.org/images/0/03/Cage_John_Song_Books_Volume_1.pdf).

50. Recording of John Cage describing the piece prior to a 1975 performance. From the Sound in American Literature archive at Bard College which also houses the John Cage Trust. "John Cage, 'Mureau'," Sound in American Literature, accessed January 25, 2019, <https://courseblogs.bard.edu/lit3028s16/category/archive/>.

the terin' r in They i t ed to oss tw wings maypul They Wilhourwh o b  
h e They noth month s song t p hr tee the ie th e e ph r he tck toprii fi  
bth ed t i rth a days heard cuckoo they boys chattering up threese t  
cheese this the almost forgotten sounds soundslumberous sound so exp  
anded being life off but is heard distinctly throughout it still to the s  
lower measure and often and of TEN ANDA SPRinglike and exhilarating  
sound of which the echo is the best sort of glorifying going today  
itto change its positionsometimes a loud crack on in this early breathing  
in the dawn This This breathing of chip-birds sounds chip-birds ear How fu  
ll the air of sound! They stood, hearing wind and water They rks p s  
strike ear we Hip-yOU, HE-he-he-he It was long beFORE THE jingle comes  
I hear a robin singing before sunset song jingle comes up, soon TO SPR  
ingoo We hear which we do w This is facto vit chit chit char weeter  
char tee chu vit chit chit char WEETER CHAR TEE CHULiter gain th  
e of were fox The Hear ored with singer morn is extent in with my dis when t  
hein end are Heard sweets frog's does the One God's breaTH ALDSOR VI  
RTue its vireo precisely the and her the last eye is sun now on Near if and hea  
r He hem squirrel the zon toup down here her nine-o'clock wicheR WIC her w  
hicher wich heard the hooting of wth that she has been elevated t A  
DAY LIKE This rd and uttering a faint chip mournful, martial and eff  
eminate is dissolved g as the sound of a far-off glorious life ooas thoug  
h they dwelt in the depths a seem to be hushed rt to a slow music e  
that chiefly distinguishes this season ewhich the murmer has agitated l  
to a strange, mad priestess h in such rolling places i eh but bellowing  
from time to time t y than the vite and twittering a day or two h a

## Example 2.2 John Cage: *Mureau* (excerpt)

Cage composed *Empty Words* in 1973–74, again using Thoreau text in addition to drawings from his *Journal*. Similar in result to *Mureau*, *Empty Words* “is arguably [Cage’s] most radical devolution of syntax into sound.” and was broadcast over National Public Radio, lasting twelve hours.<sup>51</sup> Cage described the piece as “a transition from language to music.”<sup>52</sup>

Later inspiring the plate etching *Score Without Parts*, Cage created *Score (40 Drawings by Thoreau) and 23 Parts: Twelve Haiku* (1974), by putting lines controlling duration on top of Thoreau drawings from *Walden Pond*. The written parts for

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51. Kuhn, 414.

52. John Cage, *Empty Words: Writings '73–'78*. (Middletown, CT: Wesleyan University Press, 1979).

each of the twenty-three performers contain fragments of those Thoreau drawings.<sup>53</sup> In these two works Cage sonically transforms Thoreau's writings, acting as a call to action for the listener to observe his natural environment.

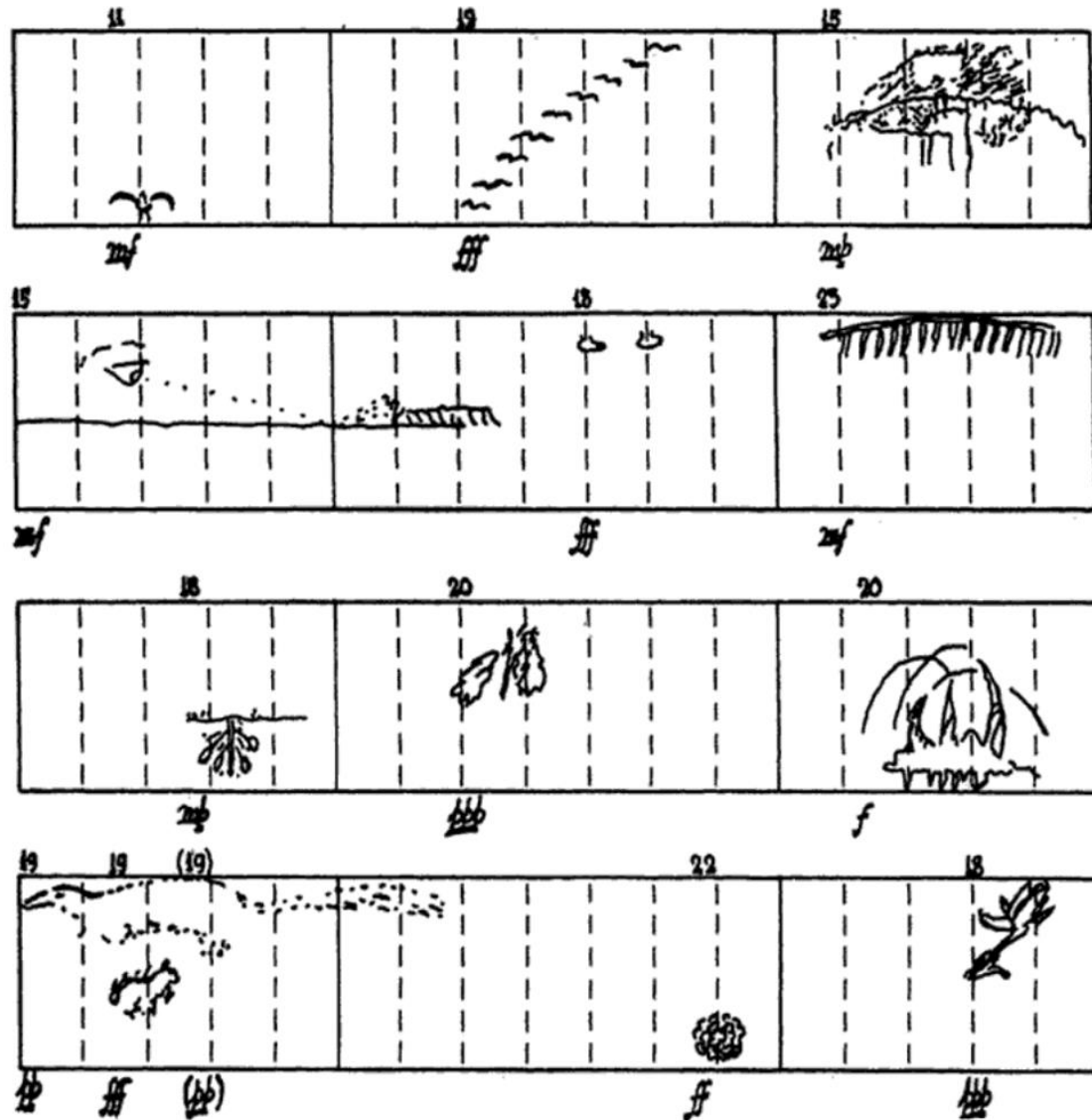
Cage's combination of natural ambience and the text and pictures of Thoreau's journal is not haphazard. Thoreau, as his journal demonstrates on every page, was an avid walker in the woods and a keen observer of everything that he encountered there. In [*Empty Words* and *Score* (1974)], after hearing fragments of Thoreau's accounts of the world of nature we are ready to go out and see for ourselves. By opening the windows of the concert hall, either physically or through the medium of tape recording, Cage takes the world that we experience secondhand in Thoreau's writing and invites us inside.<sup>54</sup>

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53. Kathan Brown, "Visual Art" in *The Cambridge Companion to John Cage*, ed. David Nicholls (New York: Cambridge University Press, 2002), 113.

54. From James Pritchett's 1994 essay "'Something like a hidden glimmering': John Cage and recorded sound," (Princeton, 14 April, 1994). The original 1994 version of this essay is housed at <http://rosewhitemusic.com/cage/texts/glimmering.pdf> but was later published with modifications in 1996 in *Contemporary Music Review*, 15:1-2, (January 1996), 103–108.





Example 2.3 *Score (40 Drawings by Thoreau) and 23 Parts: Twelve Haiku (excerpt)*<sup>55</sup>

Additionally, *Apartment House 1776* (1976), commissioned for the American bicentennial, is a Thoreau-derived work and is often programed with the aforementioned *Renga*. While it falls out of the categories discussed herein in regards to compositional process, Cage also paid homage to Thoreau in his radio play *James Joyce, Marcel*

55. John Cage, *Score (40 Drawings by Thoreau) and 23 Parts: Twelve Haiku* (New York: Edition Peters, 1974).

*Duchamp, Erik Satie: An Alphabet* (1982) which contains a speaking role for “Thoreau.”<sup>56</sup>

In 1983 Cage composed *Ryoanji for Solo Oboe and Percussion Obbligato* by tracing rocks to create melodic line in a manner similar to his use of images as melodic contour in earlier works such as *Song Books* and the graphic notation created from Thoreau drawings. Though Kathan Brown says *Score without parts* is the “only graphic work that uses music notation,”<sup>57</sup> The *Ryoanji* score offers evidence to the contrary. As both a visual artwork and a musical score, the work as a whole must be taken into account including the percussion obbligato part, which is fully notated with standard notation in quarter notes and quarter rests. This, combined with Cage’s intentional handling of the left-to-right rock tracings to accommodate standard music notation contradicts Brown’s assertion. In line with Thoreau’s ideology, many of Cage’s environmental works “urge [the listener] to put on [his] boots and go looking for birds, flowers, or mushrooms,”<sup>58</sup> a result hopefully executed by the performer. *Ryoanji* is no exception.

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56. Laura Kuhn, ed., *The Selected Letters of John Cage* (Middletown, CT: Wesleyan University Press, 2016), 415.

57. Kathan Brown, “Visual Art,” in *The Cambridge Companion to John Cage*, ed. David Nicholls (New York: Cambridge University Press, 2002), 114.

58. James Pritchett, “‘Something like a hidden glimmering’: John Cage and recorded sound” (Princeton, 14 April, 1994), accessed 9 January, 2019.  
<http://rosewhitemusic.com/cage/texts/glimmering.pdf>, 3.

### CHAPTER III – RYOANJI FOR SOLO OBOE AND PERCUSSION OBBLIGATO

“In recent years...I’ve been continuing to write music and I’ve been making etchings and drawings as well. In the course of this an oboe player was going to make a tour in Japan. I got to thinking after hearing the oboe, hearing it slide, that it could be a sliding sound, and what could bring that sliding sound about would be the perimeter of a stone. And in the garden in Kyoto called Ryoanji there are fifteen stones.” –John Cage<sup>59</sup>

#### **The Ryōan-ji Garden**

Touring Japan in 1962 with Toshi Ichijanagi, Yoko Ono, and David Tudor, Cage first visited the 500-year old Ryōan-ji dry landscape Zen garden in Kyoto, Japan. Additionally, he returned to the Garden several subsequent times thereafter. Shaped in a 30 x 10 meter rectangle, the garden consists of fifteen large rocks arranged within a bed of raked white pebbles. The large rocks are arranged into four relative groupings and the small pebbles are carefully raked into lines emulating water, as is traditional form for Japanese dry landscape Zen gardens or *karesansui*.<sup>60</sup> Due to a large wall enveloping the back two sides of the space, the garden is designed so that all fifteen rocks cannot be viewed at the same time from any single vantage point. The 30 x 10 meter proportions of the Ryōanji garden are maintained throughout Cage’s eponymous visual art and musical scores.

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59. Joan Retallack, ed., *Musicage: Cage Muses on Words, Art, Music* (Middletown, CT: Wesleyan University Press, 1996), 242.

60. François Berthier, *Reading Zen in the Rocks: The Japanese Dry Landscape Garden*, trans. Graham Parkes (Chicago: University of Chicago Press, 2000).



Figure 3.1 Ryōan-ji Garden

An aerial diagram shows the placement of each rock as well as the large wall surrounding two and a half sides of the rectangular garden. Furthermore, when examining the cross-sectional lines showing proportion of placement, the horizontal lines emulate those of a music staff and the rocks therein situated on either line or space.

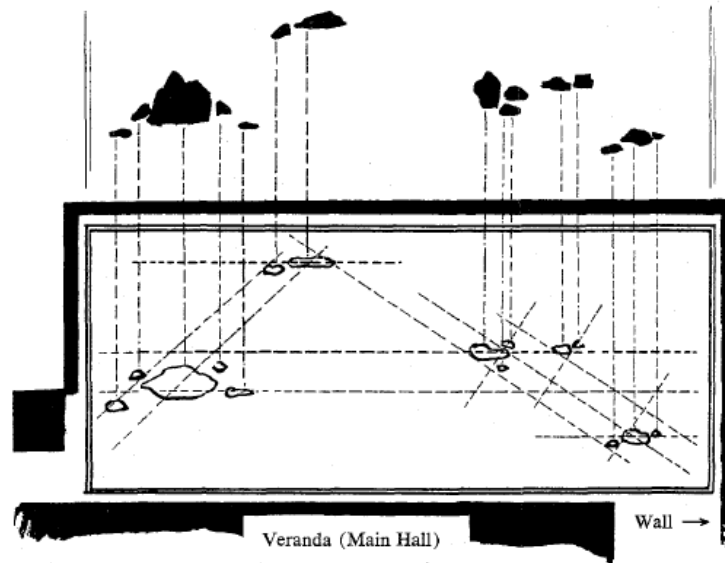


Figure 3.2 Aerial Diagram of the Ryōan-ji Garden

Laura Kuhn denotes that from the 1980s until his death in 1992, Cage “devoted himself to drawing addressing the aesthetic order of the complex that is revered in Japan as a perfect depiction of nature”<sup>61</sup> which is evidenced in the drawings and musical works based on Ryōanji.

### Cage’s “Ryoanji” visual art

Just as Cage began using natural materials in his musical compositions, he also started using objects from nature in his visual art from the late 1970s when he worked at Crown Point Press in Oakland, California.<sup>62</sup> Inspired by those several visits to the Ryoanji Garden, Cage began a series of drawings and ink presses in 1983 collectively

61. Laura Kuhn, executive editor: John Cage Trust.  
<http://johncagetrust.blogspot.com/2013/07/john-cage-ryoanji-catalog-raisonne.html>

62. Housed in the archival holdings at the Crown Point Press are some of the sketches and rocks used to create the Ryoanji art pieces and musical score. Kathan Brown notes that Cage spent a week or two at Crown Point every year (usually in January), for the last fifteen years of his life. Kathan Brown, “Visual Art,” in *The Cambridge Companion to John Cage*, ed. David Nicholls (New York: Cambridge University Press, 2002).

entitled *Where R=Ryoanji* by tracing around 15 different stones, and spent the last decade of his life producing 170 artistic iterations of the garden through this process.

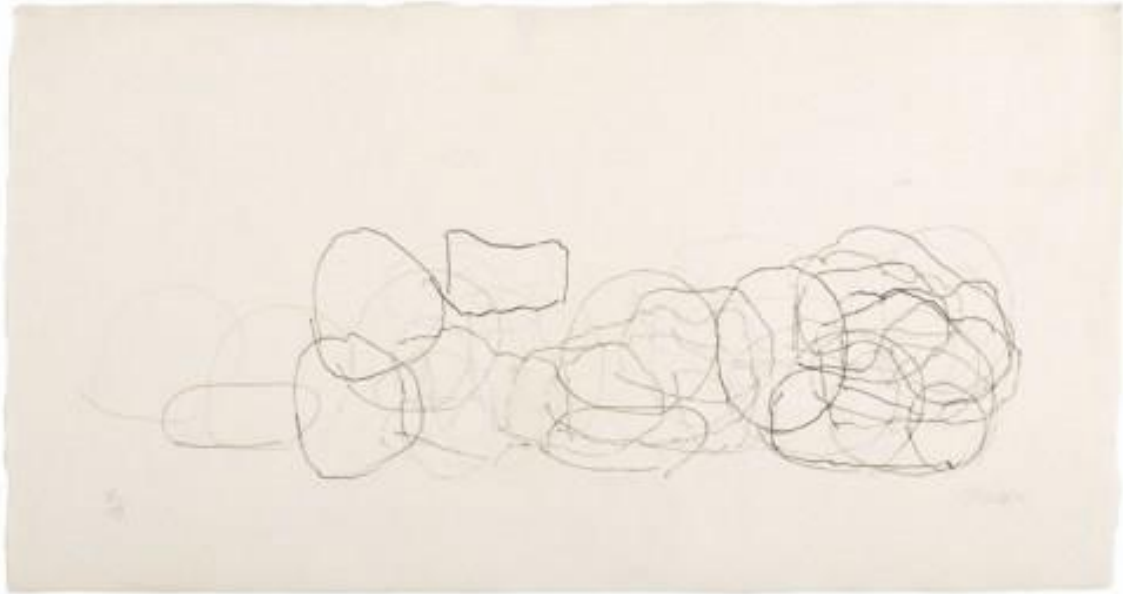


Figure 3.3 John Cage: *Where R = Ryoanji (3R/17)* (1992)<sup>63</sup>

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63. John Cage, *Where R = Ryoanji (3R/17)*, 1992. Pencils on handmade Japanese paper, 25.4 x 48.3 cm. The John Cage Trust, Red Hook, New York. Photo: David Heald/Solomon R. Guggenheim Foundation, New York. © The John Cage Trust at Bard College.



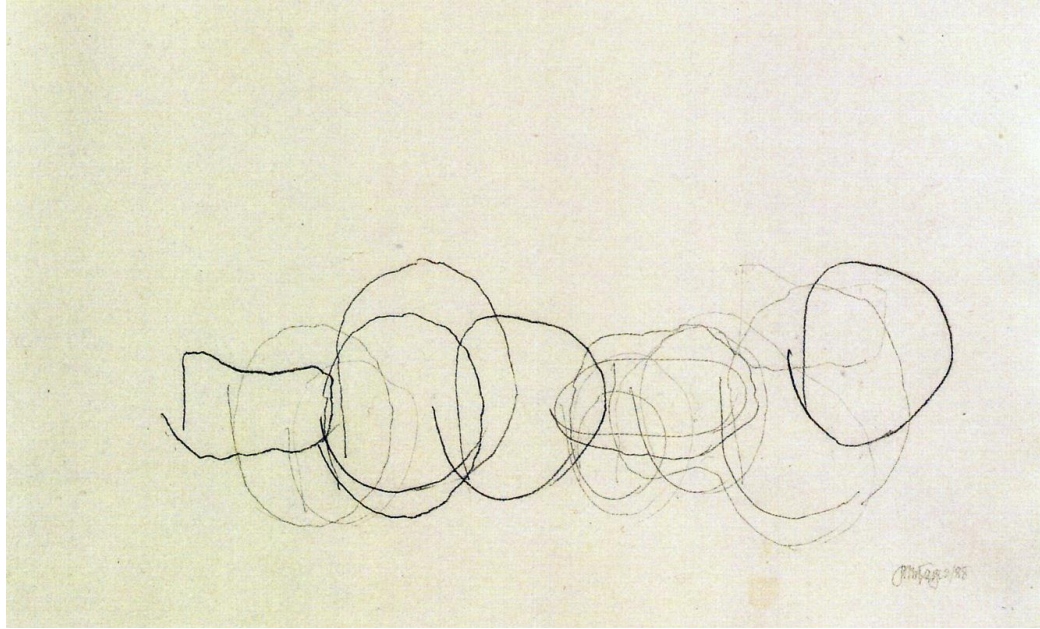


Figure 3.4 John Cage: *Ryoanji* (17 February, 1988)<sup>64</sup>

Included among these are enumerated classifications such as *R3/* (where *R=Ryoanji*) (1983), which indicated a 3 factorial of the 15 rocks being traced (15 times 15 times 15): each of the 15 rocks traced fifteen times a piece at 225 tracings per rock resulting in 3,375 total tracings.

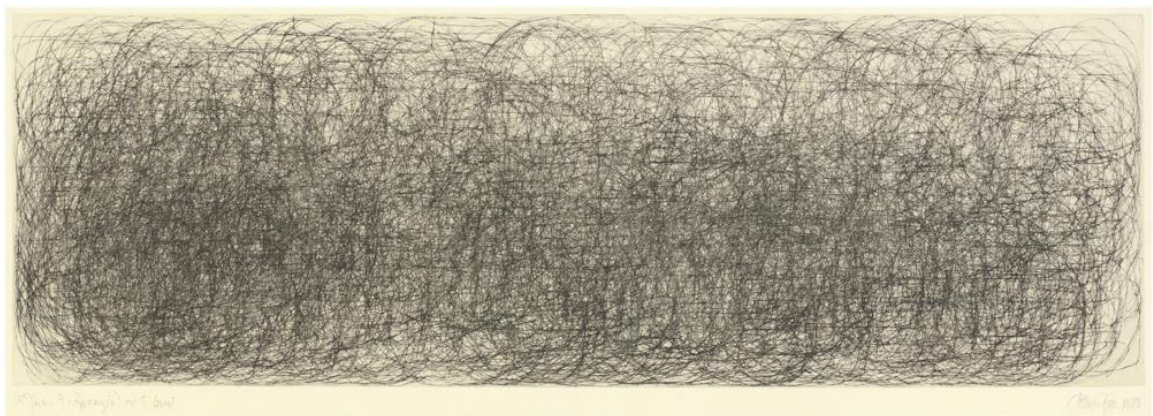


Figure 3.5 John Cage: *R3* (where *R=Ryoanji*) (1983)<sup>65</sup>

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64. John Cage, *Ryoanji*, 17 February, 1988, Pencil on Japanese Handmade Paper (photo by Guy Mannes-Abbott), © The John Cage Trust.

Looking at the set of sixteen large rocks (figure 3.6), from which he chose fifteen for each work, the different shapes of each can be discerned from the visual works. For example, several of the rocks pictured below can be seen prominently featured in the foreground of figure 3.4. Also evident are the small pebble and parallelogram shaped rock in the middle ground of figure 3.4.



Figure 3.6 Small and Large Sets of Stones (16) and Pencils used in Ryoanji Works

In addition to the drypoints and pencil drawings, Cage applied the process to paint on both handmade Japanese papers, and paper he burned prior to being painted. In the first

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65. John Cage, *R3 (where R=Ryoanji)*, 1983, Drypoint in black, National Gallery of Art, Washington. © The John Cage Trust.



volume of Cage's *Catalogue Raisonné of the Visual Artworks*, editor Corinna Thierolf of the Pinakothek der Moderne compiled the roughly 170 explorations of "Ryoanji," which Cage created between 1983 and 1992. Kuhn says these artworks illustrate "aesthetic and conceptual reflections relevant to his entire oeuvre" and exhibit his artistic goals of "maximum insight with minimum means."<sup>66</sup>

### **History and Composition of the musical work**

While Cage was creating these visual artworks based on the Ryōanji garden, James Ostryniec, a well-known oboist and experimental music performer in New York, contacted him to commission an oboe work for an upcoming tour of Japan.<sup>67</sup> As a product of Cage's coalescence of Asian aesthetics and graphic notation, he adapted his recent drawings to become *Ryoanji for solo oboe with percussion obbligato*, which he composed in 1983. For this piece Cage created a system of graphic notation whereby he traced the contours of fifteen rocks onto modified manuscript staves. The oboe part consists of a series of eight episodes each on two pages of rectangular systems indicating a general register range of notes. In each rectangle Cage traced partial contours of fifteen different rocks (chosen from sixteen) representing the fifteen stones of the Ryōanji garden. The resulting notation consists of bends of single pitches in various directions,

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66. Laura Kuhn, executive editor: John Cage Trust.  
<http://johncagetrust.blogspot.com/2013/07/john-cage-ryoanji-catalog-raisonne.html>

67. In a 15–17 July, 1992 interview with Joan Retallack, Cage could not recall whether the Ryōanji drawings or musical score were created first: "I don't know whether I was already making the drawings or not. I may have been doing that." Joan Retallack, ed., *Musicage: Cage Muses on Words, Art, Music* (Middletown, CT: Wesleyan University Press, 1996), 242. Kathan Brown, founder of The Crown Point Press believes the drawings "probably" preceded the musical work pointing out Cage's first Ryōanji prints at Crown Point in January 1983 and the musical work being dated 1983–84. Kathan Brown, "Visual Art," in *The Cambridge Companion to John Cage*, ed. David Nicholls (New York: Cambridge University Press, 2002), 120. Additional, other sources including [www.johncage.org](http://www.johncage.org) (part of The John Cage Trust), list the Ryōanji prints as beginning summer 1983 which could be another reason for the lack of definitive primacy between them and the musical score.

shapely glissandi, and abrupt movements between pitches often resulting in accidental multiphonics, which are marked by broken vertical lines. In the score Cage notes: “any multiphonics that happen unintentionally are welcome.”<sup>68</sup>

The main difference between the “Ryoanji” drawings and the musical score is that, with the score, Cage maintained traditional Western practices of notating so that the music can be read left to right. To do so he only traced portions of each rock so as to enable it to become a form of readable notation. This gave much more precision of pitch than typically associated with his other graphic notation scores. Here the lines become a modification of standard music notation rather than a totally new system. With the visual art works, Cage said he was “not dealing with time [so he could] draw around the whole stone. Music is characterized by detail and by having to do things that work in time.”<sup>69</sup> This also provides opportunity for an interesting reading regarding Zen aesthetics. The Japanese dry landscape garden exemplifies Zen Buddhist philosophies in its respect for the rocks as opposed to “human domination and exploitation of nature.”<sup>70</sup> In general, the garden is privileged in Zen Buddhism as one of the highest forms of artistic expression.<sup>71</sup> Important to the relationship between Zen and Cage’s Ryoanji-inspired creations is the traditional “Ten Ox-herding Paintings” with short accompanying poems. In Zen philosophy the ox represents the unity of the heart and mind. “In Chinese and Japanese

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68. John Cage, *Ryoanji: for Oboe Solo with percussion obbligato* (New York: Henmar Press Inc., 1985), 2 recto.

69. Joan Retallack, ed., *Musicage: Cage Muses on Words, Art, Music* (Middletown, CT: Wesleyan University Press, 1996), 243.

70. François Berthier, *Reading Zen in the Rocks: The Japanese Dry Landscape Garden*, trans. Graham Parkes (Chicago: University of Chicago Press, 2000), xi.

71. Ibid., 3.

the same character 心 has both meanings, so searching for the ox can be understood as searching for one's own true self" and the ox-herding poems and paintings serve as a metaphor for enlightenment: specifically, a journey outward leading to a journey inward.<sup>72</sup> The ten paintings and poems include: Searching for the Ox; Finding its Traces; Seeing the Ox; Catching the Ox; Taming the Ox; Riding the Ox Home; Forgetting the Ox; Transcending the Ox; Returning to the Source; and Returning to Society. Each detailed painting is framed with a circle and while paintings one through seven, nine, and ten contain elaborate images, number eight (Transcending the Ox) contains an empty circle representing one of Zen's most fundamental images of transcendence.<sup>73</sup>

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72. John Cage, *Zen Ox-Herding Pictures*, ed. Stephen Addiss and Ray Kass (New York: George Braziller, Inc., 2009), 16.

73. *Ibid.*, 17.



Figure 3.7 “No. 4: “Catching the Bull”

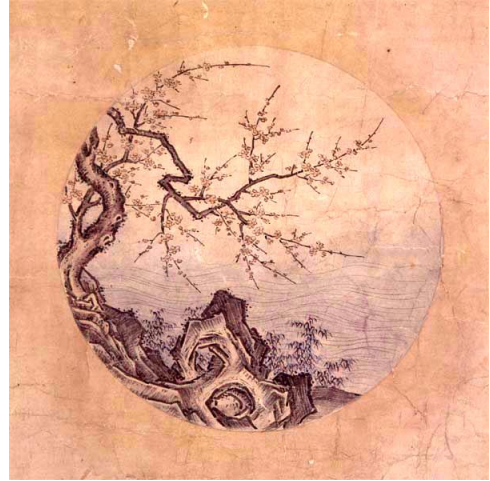


Figure 3.8 “No. 9: Reaching the Source”

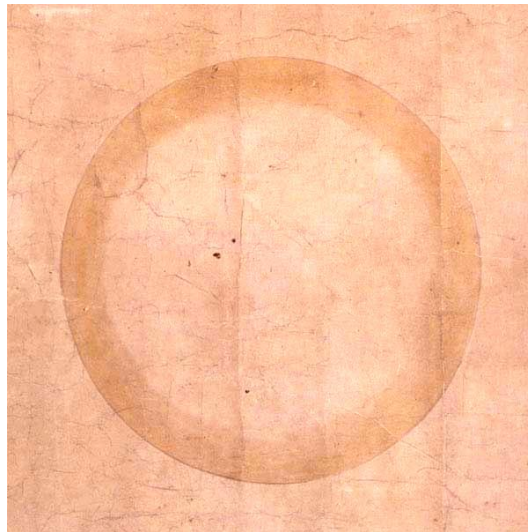


Figure 3.9 “No. 8: Both Bull and Self Transcended”

The searching, finding, and returning narrative of the ox-herding metaphor gives significance to the circle in Zen Buddhism. Cage was aware of this significance and its historical Zen roots as evidenced by his study with Suzuki, in his writings about Zen, and his familiarity the “Ten Ox-Herding Pictures” used to communicate the essence of Zen philosophy. In addition to the *Ryoanji* score and the 170 “Ryoanji” visual artworks comprised entirely of thousands of circles, during his 1988 tenure at the Mountain Lake

Workshop, Cage created several works inspired specifically by the “Ten Ox-Herding Pictures” including his watercolors previously discussed.<sup>74</sup> The significance of the circle in Zen Buddhism also holds weight within Cage’s work. The circle’s ability to represent both “emptiness and abundance,” as gleaned from the Zen ox-herding pictures and poems, resonated with Cage who applied its emphasis on rhythmic silence (“emptiness of rhythmic structure”) to his musical works from the mid-1940s.<sup>75</sup> The collective “Ryoanji” drawings, consisting of thousands of circles, and Cage’s *Ryoanji* musical score are reflective of Zen philosophy as exhibited in the poetry and art of the Zen ox-herding narrative. Without speculating any implied intent or meaning, it is interesting to note that in the *Ryoanji* musical score Cage made a conscious decision to interrupt the circles so the player could read each line as a glissando moving forward in time and thereby eliminating the “returning” portion of the ox-herding narrative.

### ***Ryoanji* Performance Considerations**

Given Cage’s aesthetic views on the environment, and knowing that/how he made manifest those views in some his visual and musical works, how can the oboist performing *Ryoanji* execute Cage’s desire to reflect nature in art? The difficulty of execution with this particular piece lies in interpretation of nontraditional notation and pitch presentation, temporal variation, and interpretive freedom versus accuracy of execution, both of whose lines are incredibly blurred. What does accuracy of execution in a piece of this nature look and sound like? Cage’s instructions are limited and he often admitted that he wrote pieces down so that he could hear them via performance (a

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74. John Cage, *Ten Ox-Herding Pictures*, ed. Stephen Addiss and Ray Kass (New York: George Braziller, Inc., 2009).

75. James Pritchett, *The Music of John Cage* (Cambridge: Cambridge University Press, 1993), 69.

position in contrast to those of erudite composer notating from the mind). Issues of performance practice in this specific work are further complicated when considering Cage's own words:

The reason I am less and less interested in music is not only that I find environmental sounds and noises more useful aesthetically than the sounds produced by the world's musical cultures, but that, when you get right down to it, a composer is simply someone who tells other people what to do. I find this an unattractive way of getting things done. I'd like our activities to be more social and anarchically so. As a matter of fact, even in the field of music, this is what is happening.<sup>76</sup>

A statement like this from the composer leaves even more questions for the performer and the score becomes one of vague allusions. The few performances and recordings of this piece limit the pool of reference for the performer and Libby Van Cleve's book *The Oboe Unbound*, considered the ne plus ultra in contemporary and extended technical performing practices for oboe, contains no mention of *Ryoanji*.<sup>77</sup>

This piece is not only evocative of nature, but is a literal sonic transcription via the rock tracings, which Cage describes using environmental language. In the preface to the score Cage says of the eight two-page sets, "each two pages are a 'garden' of sounds."<sup>78</sup> Here he advocates for what Michael Peters terms "echolocation" or seeing with sound.<sup>79</sup> The idea of echolocation also resonates with Cage's thoughts mentioned

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76. John Cage, *A Year from Monday: New Lectures and Writings* (Middletown, CT: Wesleyan University Press, 1967), ix–x.

77. Libby Van Cleve, *The Oboe Unbound: Contemporary Techniques* (London: Rowman and Littlefield, 2014).

78. John Cage, *Ryoanji: for Oboe Solo with percussion obbligato* (New York: Henmar Press Inc., 1985), 2 recto.

79. Michael Peters, "Sound Environment Programming the Post-1945 Moment: Charles Olson, Sun Ra, John Cage, and the Way Back in—" PhD diss., University at Albany, State University of New York, 2014), ProQuest Dissertations & Theses Global.

previously about wanting to hear what he was seeing and vice versa. Furthermore, the idea of sonic transcription of the physical rocks into glissandi played on the oboe is at odds with Piekut's assertion that "[Cage's] compositional practice contradicted [a] modernist ontology of nature at every turn by actively *forming* that world that he purported merely to discover."<sup>80</sup> As a performer interpreting a piece like *Ryoanji*, it is important for one to turn the audience's attention away from us or Cage but rather to have the listeners ears and attention turned "outward, toward the world."<sup>81</sup>

When considering the work *Music for* (1984), James Pritchett notes that the score of notes and chords on traditional manuscript staves bears no "immediately apparent connection with Cage's graphic works," but its understanding can be enhanced when comparing to works like *Déreau* where abstract images move "against the backdrop of Thoreau drawings."<sup>82</sup> Furthermore, he notes: "In hearing the repeated tones, the recurring patterns of the interludes, and the free virtuoso articulations of pitch bands, one can almost *see* these [visual] elements as they drift across the space."<sup>83</sup> Here Pritchett appears to be advocating for, or at least empirically describing, examples of echolocation in the performance of these works. It would stand to reason that given the similar nature of compositional process, one could argue that *Ryoanji* reflects this same idea found in

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80. Benjamin Piekut, "Chance and Certainty: John Cage's Politics of Nature," *Cultural Critique*, Vol. 84 (Spring 2013): 134–163, 135.

81. In describing *Score* (1974), James Pritchett insightfully notes "our attention is turned away from the figure of John Cage, composer and performer; instead our ears turn outward, towards the world." James Pritchett, "'Something like a hidden glimmering': John Cage and recorded sound" (Princeton, 14 April, 1994), accessed 9 January, 2019. <http://rosewhitemusic.com/cage/texts/glimmering.pdf>, 2.

82. James Pritchett, *The Music of John Cage* (Cambridge: Cambridge University Press, 1993), 186–87; 189.

83. James Pritchett, *The Music of John Cage* (Cambridge: Cambridge University Press, 1993), 189.

similarly composed works and could be considered in the same terms of seeing through sound. Because of this, the performer's interpretation of the piece within the context of compositional process is of utmost importance beyond random successions of glissandi.

To further understand elements of the glissandi and pitch bends for interpretation of the music, one could examine the rocks used in the compositional process to make informed choices about sound production, duration, silences, frequency, etc. Michael Fowler cites the work of Van Tonder and Lyons on Japanese Gardens in listing predicated axioms about visual perception: "homogenous and natural colour is preferred in elements such as rocks, moss, and gravel[;] Odd numbered groupings (such as 'triads') should be used over even numbered groupings[; and] asymmetrical design better reflects that which occurs in nature."<sup>84</sup> While Fowler's work focuses on the execution of these design principles in regards to the soundscape afforded by water features, they also can provide insight into the performing practices of Cage's piece. What then can the design principals of homogeneity, odd numbering, and asymmetry bring to musical interpretation and how could this information be used to inform an analysis of *Ryoanji*?

## **Recordings**

Considerations must be given to the auditory nature of *karesansui* in Japanese aesthetics and recordings of past performances offer various unique approaches to interpreting the piece. Audio recordings serve not only to document an interpretation of the musical work. In this specific case, they provide insight into the compositional construction of the score and Cage's interpretation of the spatial design of the natural environment of the Ryōanji garden. Regarding the recording process, Cage notes "that

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84. Michael Fowler, "Mapping Sound-Space: the Japanese Garden as Auditory Model" *Architectural Research Quarterly* 14, no. 01 (2010): 63–70.



musical action or existence can occur at any point or along any line or curve or what have you in total sound-space; that we are, in fact, technically equipped to transform our contemporary awareness of nature’s manner of operation into art.”<sup>85</sup> There are currently five known extant recordings featuring the original *Ryoanji* version for oboe including one professionally produced CD recording, one full *YouTube* recording, two *YouTube* videos featuring excerpts of a live performance of the piece, and one recent recording where the solo oboe and solo flute versions are played simultaneously. The sole commercial recording of the oboe version is played by Gudrun Reschke while the remaining four *YouTube* recordings feature Nancy Clauter, Anne Goldberg, Alison Mari, and Catherine Lee (in collaborative synchronization with the flute version).

Oboist	Year	Duration of performance m:s	Oboe entrance m:s
Catherine Lee	2016	22:12	1:29
Anne Goldberg	2011	17:48	0:46
Alison Mari	2007	Incomplete Excerpts	1:22
Nancy Clauter	2006	Incomplete Excerpts	NA
Gudrun Reschke	1995	Incomplete Excerpt 9:18	2:26

Table 3.1 Recordings of *Ryoanji* for Oboe

### Frequency, Dynamics, Texture, and Tone

Given Cage’s interest in the “property of sounds” over “sounds themselves”<sup>86</sup> one historically informed performance consideration is an ecocritical interpretation of the glissandi based on the rocks used in the compositional process. Many of the *Ryoanji* prints were created as drypoints where Cage used a tool to scratch the lines into copper plates, a process which proved to be difficult to execute and resulted in irregularities of

85. Cage, *Silence*, 1961, 9.

86. John Cage “composition as process” in Cage, *Silence* 1961, 20–22, 27. Cited in William Brooks, “Music II: from the late 1960s” in *The Cambridge Companion to John Cage*, ed. David Nicholls (New York: Cambridge University Press, 2002), 129.

shape from the rocks used. The *Ryoanji* pencil drawings were much easier to produce and the tracings were much more accurate representations of the rock shapes. The process used for the *Ryoanji* score therefore includes more accurate tracings, which allow discernment of which rocks he used where. Furthermore, Stephen Whittington notes that Cage used “paper templates of the stones,” which would have given more accuracy and consistency to the shape throughout the compositional process.<sup>87</sup> Attempts to locate, or verify the existence of these templates, have been unfruitful.<sup>88</sup> Considering the existence of such templates, despite evidence they exist, elicits questions such templates could answer if available, regarding construction and performance of this piece. Given the ability to locate iterations of each rock would arm the performer with new information about each line of notation, which can possibly be used to inform the performance of the work. For example, in a 2012 video recording, oboist Nancy Clauter says “I get the impression that most of these rocks are very smooth surfaces just by the way that the

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87. Stephen Whittington, “Digging in John Cage’s Garden; Cage and Ryōanji In this article Whittington did not indicate the provenience of this information but in a personal communication with the author indicated it was from Toni Stooss’s “*Fluss Steine und Rauch—Aquarelle und Zeichnungen von John Cage*” [“River Stones and Smoke—Watercolors and Drawings by John Cage”] from Wuld Herzogenrath and Barbara Nierhoff-Wielk, eds. “*John Cage und . . .*”: *Bildender Künstler—Einflüsse, Anregungen* [“John Cage and . . .” Visual Artists—Influences, Suggestions]. Cologne: Dumont, 2012. Exhibition catalog. Stooss indicates (cf. Stooss 2012, pp. 204f., note 12) Cage created “cardboard templates” of the rocks used.

88. No other consulted sources mention the paper/cardboard templates of the rocks Whittington and Stooss discuss and, in a personal correspondence, Kathan Brown denied any knowledge of those paper templates or Cage’s use of such at Crown Point. Kathan Brown, e-mail message to author, January 21, 2019. Additionally Corinna Thierolf contends (cf. Thierolf 2013, pp.17f., note 3) “this statement is not tenable, as both Margarete Roeder and Laura Kuhn emphasize (oral communication, August 15, 2012). No such templates are preserved in Cage’s estate, nor have witnesses observed the artist work with templates.” In the personal correspondence with the author, Whittington notes that this situation is complicated by the fact that in the John Cage Manuscript Collection housed at the New York Public Library there is a document entitled “Templates used in composing Ryoanji.” Stephen Whittington, e-mail message to author, February 5, 2019. The template[s] he mentions here are filed at the NYPL under the archive number “JPB 95 – 3 folder 726 Public service copy, JPB 94 – 24 folder 606 Originals” under the titles “Holograph in ink” and “Templates used in composing Ryoanji.” These templates are rectangular outlines used for the notation of the Ryoanji drawings and score rather than of the actual rocks themselves.

piece is written and its kind of exciting for me to try to emulate that sound-wise as well if it's a crescendo or decrescendo within the shape of the rock."<sup>89</sup> A cursory visual examination of a photo of the rocks Cage used (above in Figure 3.6) shows that, in fact, many of the rocks are not smooth. Jagged shapes and rough edged surfaces illustrate the contrary not only from the photo but in the score as well. The photographic evidence of shape and texture may also be corroborated when considering the type and makeup of each rock used (cf. Appendix A). Furthermore, in John Rockwell's 4 December, 1983 review of the concert on which *Ryoanji* premiered, he described James Ostryniec's performance as containing "sour, curling figurations."<sup>90</sup> This description, in addition to the absence of any language describing 'smoothness', leads one to postulate that Ostryniec's original performance contained glissandi much more aligned with the varying physical rock shapes rather than a blanket stylistic description of smoothness throughout.

The evidence provided by Cage's own writings and our knowledge of the compositional process used would suggest that the exclusive use of Western musical standards of phrasing and traditional articulations, both in accordance with Western concepts of beauty, is not the most informed approach to executing this work. Considering the shapes, composition, and density of the rocks used in the compositional process may serve to provide additional insights into how to perform this piece. Additionally, examining the densities of rocks used could also inform dynamic choices and contrasts, if any. Cage did not include dynamic markings in the *Ryoanji* score but

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89. Nancy Clauter (Oboe) and Kevin Holm-Hudson (Percussion), "Ryoanji" (*Youtube* video), 11:07, posted by "TheNortonBrothers," April 15, 2012, accessed 4 February, 2019, <https://www.youtube.com/watch?v=rPXbPXFqUjI>.

90. John Rockwell, "Concert: Music from Japan Series at Asia Society," *New York Times*, December 4, 1983.

indicated that “the dynamics, not given, are to be soft rather than loud, as a rule, a rule that has exceptions.”<sup>91</sup>

Among the stones used include two artificially polished stones; four pebbles naturally smoothed from aquatic environments; a striated radiolarian rock from the deep ocean floors and comprised of Radiolaria (plankton) skeletons; a quartz geode with agate typically found in desert or volcanic areas and prominent in the western United States; a chalk pebble from warm tropical sea beds formed from limestone composed of calcite shells; a piece of coral rock from shallow tropical waters and consisting of the limestone exoskeleton of a coral animal; a green diopside with phlogophite and calcite, a fibrous stone formed when intense heat and pressure are applied to limestone dolomite or by the crystallization of magma (molten rock); a piece of Schist, a scaly metamorphic rock formed from high temperature and pressure applied to mud or clay; a Dolomite crystal with sphalerite and pyrite crystal formed by organic matter or microbial organisms and containing an iron-based structure on iron pyrite or “fool’s gold;” and a crystal sphalerite on chalk, and iron-based stone with a structure close to that of a diamond on limestone formed from the calcite shells of coccolithophores (see Table 3.4).<sup>92</sup>

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91. John Cage, *Ryoanji: for Oboe Solo with percussion obbligato* (New York: Henmar Press Inc., 1985), 2 recto.

92. Corinna Thierolf, *John Cage: Ryoanji: Catalogue Raisonné of the Visual Artworks Vol. 1* (Munich: Schiller/Mosel in association with Pinakothek der Moderne, 2013), 226.



Figure 3.10 Fifteen rocks used for the *Ryoanji* score<sup>93</sup>

In *Ryoanji*, the “placement and densities of rocks [were] controlled by chance” which does not lend itself to traditional analytical means or deciphering composer intent.<sup>94</sup>

Foregoing traditional analytical methods, this graphic score has been analyzed to best determine which rocks were used to create each glissando, in hopes of gleanings additional information possibly useful to a performer beyond mere sets of glissandi. To

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93. Corinna Thierolf, *John Cage: Ryoanji: Catalogue Raisonné of the Visual Artworks Vol. 1* (Munich: Schiller/Mosel in association with Pinakothek der Moderne, 2013), 20.

94. Pritchett, 185.

do so, photographs and drawings of the stones used were projected and scaled to create templates similar to those mentioned by Stooss and Whittington. These templates were then used to discern specific iterations within the score. Figure 3.8 illustrates the stones from Figure 3.7. Hereafter, the stones will be referred to by number assigned to each in Figure 3.11 and corresponding Table 3.2.

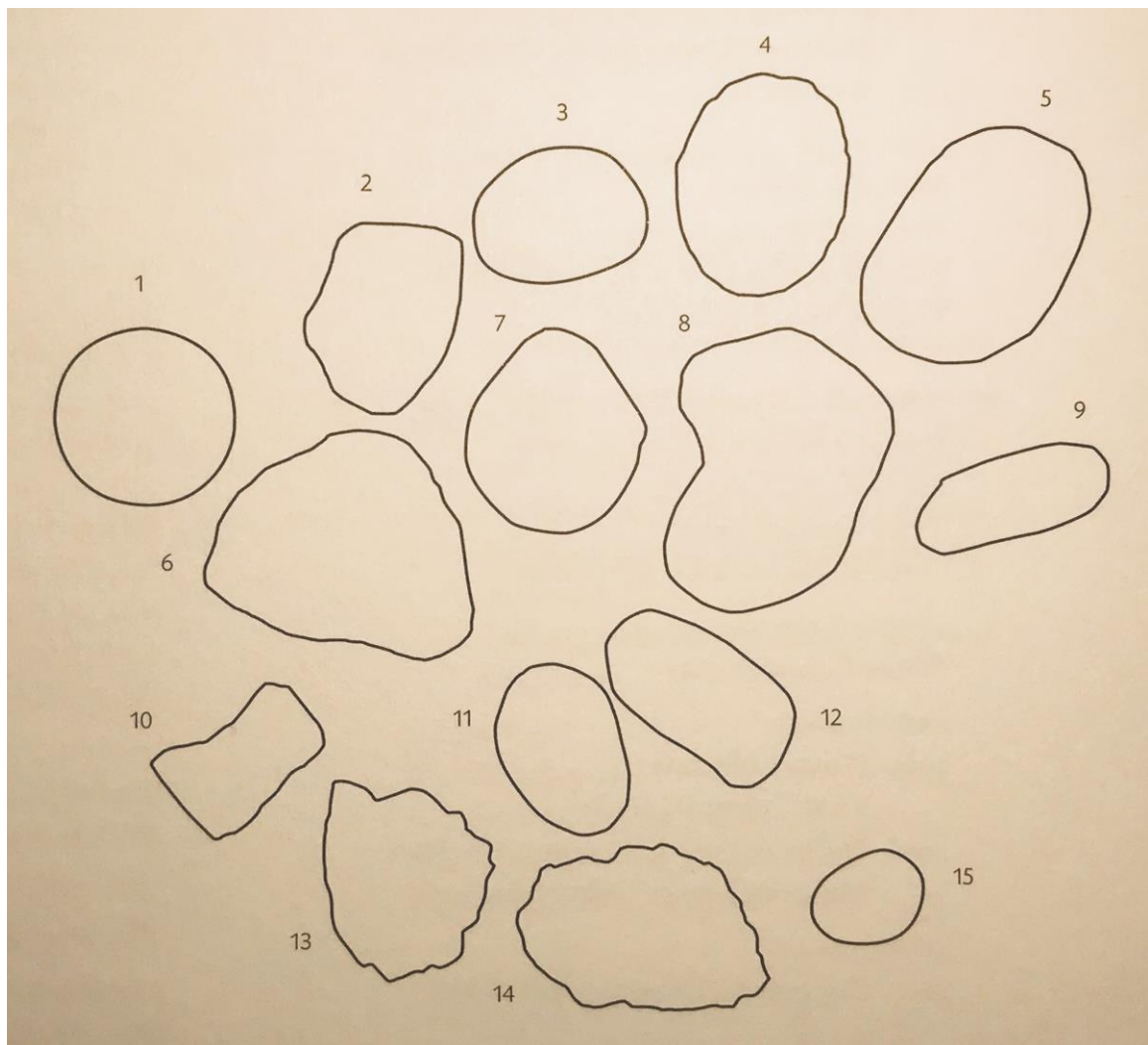


Figure 3.11<sup>95</sup> Template Outlines of Fifteen *Ryoanji* Rocks

95. Corinna Thierolf, *John Cage: Ryoanji: Catalogue Raisonné of the Visual Artworks Vol. 1* (Munich: Schiller/Mosel in association with Pinakothek der Moderne, 2013), 226.

Rock # from Figure 3.10	Name
1.	Artificially polished and ground stone
2.	Striated radiolarian rock
3.	Brown pebble
4.	Quartz geode with agate
5.	Chalk pebble
6.	Recent coral
7.	Artificially polished black stone
8.	Chalk pebble
9.	Black pebble
10.	Green diopside with phlogopite and calcite
11.	Dark brown pebble
12.	Schist
13.	Dolomite crystal with sphalerite and pyrite crystal
14.	Crystal sphalerite on chalk
15.	Black pebble

Table 3.2 Rock Types Utilized in *Ryoanji* Score<sup>96</sup>

Examining the opening page of the piece, the reader sees the two modified staves drawn in proportion to the Ryōanji garden’s rectangular shape. Above the first staff in the upper left corner of the score is the range for this particular staff indicating the range of C5 to A#5.<sup>97</sup> Therefore the left vertical axis extends only through the range of an augmented sixth (C5–A#5) with no leger lines (as those would be outside of the “garden”), rather than a traditional treble staff extending from F4 to E5 and with the possibility of leger lines. This range indicates the pitch limits for this particular “garden” comprising two pages each with two modified staves. Each of the following seven other “gardens of sound” (sets of two pages each with two rectangular “staves”) are confined to ranges G5–A6 (pp.4–5); G#5–A#6 (pp. 6–7); A#4–D#5 (pp.8–9); A5–D#6 (pp. 10–11);

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96. Corinna Thierolf (cf. Thierolf 2013, pp.226, Appendix B) ordered and assigned these numbers to each of the fifteen stones used.

97. In this document, scientific pitch notation (SPN) or American standard pitch notation (ASPN) is used to specify individual octaves of each pitch class, where A4 is A440 Hz.

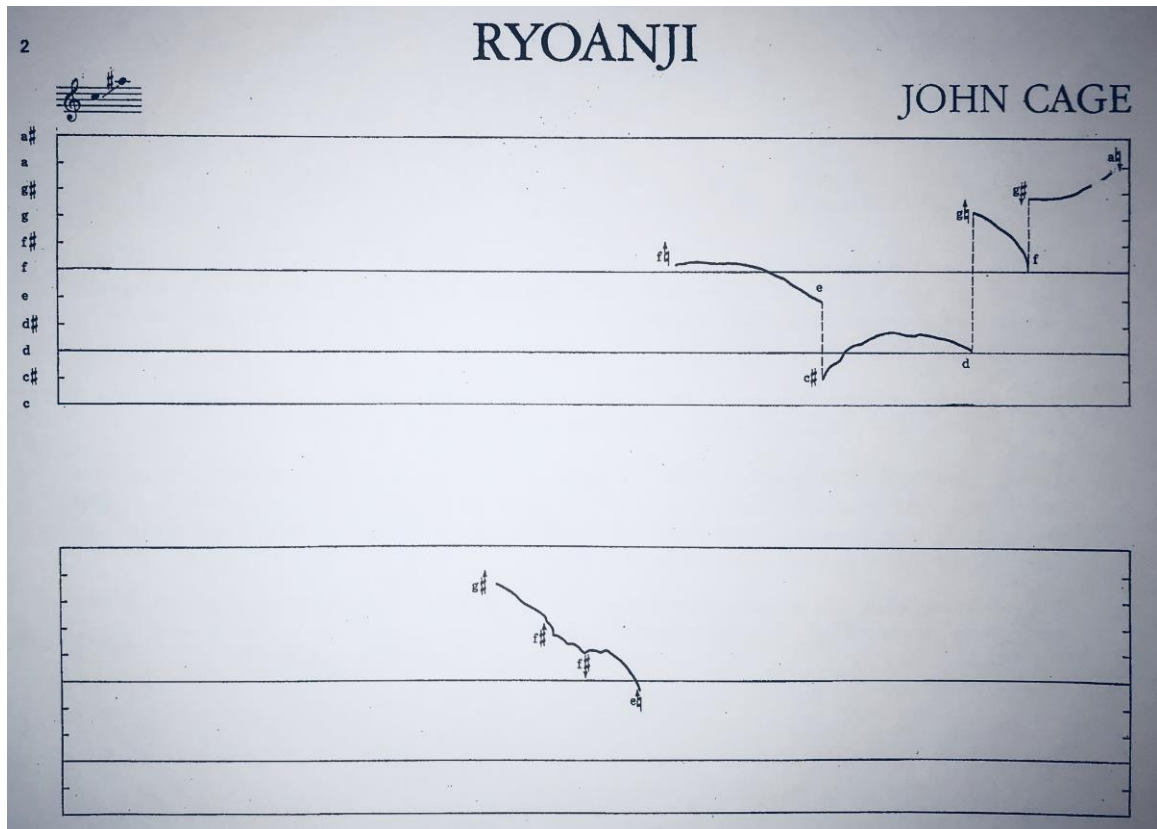
E4–G4 (pp. 12–13); D#4–G4 (pp. 14–15); and A4–C6 (pp. 16–17). With a range spanning two octaves plus a fifth (from D#4 to A#6), the piece is bookended by a perfect fifth beginning on F5 and concluded on C5.

<b>Score Garden</b>	<b>Range:</b>
Garden One	C5–A#5
Garden Two	G5–A6
Garden Three	G#5–A#6
Garden Four	A#4–D#5
Garden Five	A5–D#6
Garden Six	E4–G4
Garden Seven	D#4–G4
Garden Eight	A4–C6

Table 3.3 Oboe Pitch Range in Each Garden Set

While there is no indication of tempo or meter, the large space between the beginning of the staff and the first written tones for the oboe to play, appears to indicate that there should be some amount of silence occurring between the start of the piece in the percussion obbligato and the first intonation of the oboe.





Example 3.1 John Cage: *Ryoanji* (excerpt)

Template analysis has determined that the stone used for the opening glissando is stone no. 7, followed by stone nos. 4, 11, and 3. On the second staff is a glissando created from stone no. 14 and flanked by indications of silence (rests) on either side. Stone nos. 7, 11, and 3 are all solid, smoothed, and dark-colored stones (one smoothed artificially and two smoothed by water from their natural environment). For the first, third, and fourth glissando of this staff, these should be played as smooth as possible with solid focused air, dark tone, clear attacks, tapered releases, and very little if any vibrato to evoke the rocks used in the composition process. The second glissando of the staff, encompassing a range from C#5 to D#5 was drawn from stone no. 4, which is a quartz geode with agate. The exterior of the geode is rough but solid and can be seen, from the tracing line and

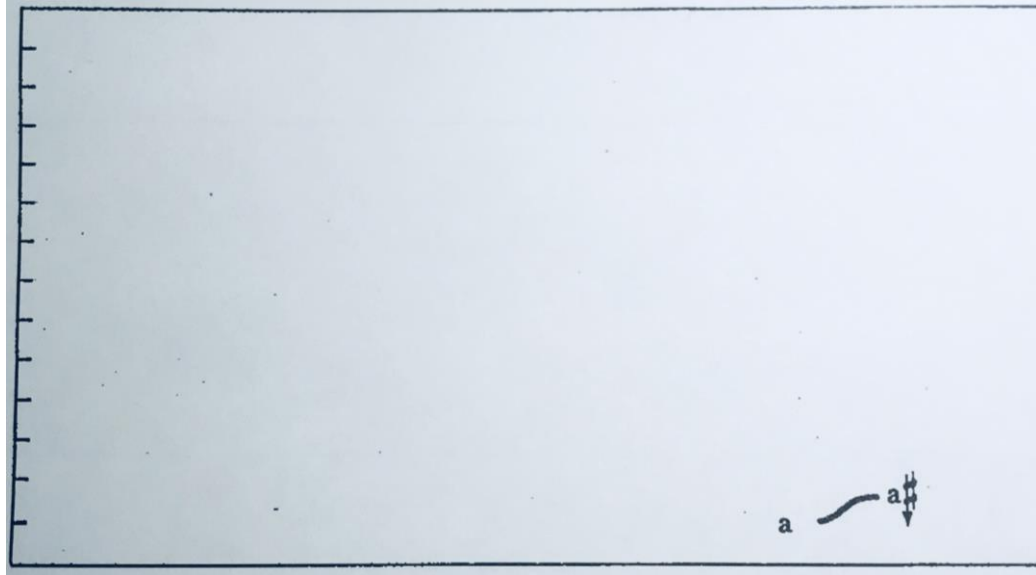
photograph, to be somewhat less smooth than the other three stones of the same staff. The line, while rough, is not jagged as with some of the other stones used and rather than extreme movements of pitch the exterior of the stone will be best represented by a somewhat smooth glissando as played with the other glissandi of this staff but with vibrato. Though some recordings, like previously discussed Alison Mari, use extensive vibrato throughout the work, vibrato should be used only at specific, carefully chosen moments. This particular iteration is one place where selective vibrato becomes an effective interpretive practice to evoke shape and texture. Interestingly this geode, with a rough solid exterior, is hollow with jagged crystals formed inside its cavity. The hollow cavity of these rocks is caused during their formation around an air bubble, a root, an animal burrow, etc. The interior of this stone is not obvious from its outer tracing but knowing of its existence provides an interesting facet to tone production. Given the indeterminate nature of this piece's construction and no extant evidence of Cage's in-depth consideration of Western orchestration, it is fascinating to consider that the C#5, D5, and D#5 written here are "half-hole" notes on the oboe. These particular notes are created by using the fingerings of the same notes one octave below (C#4, D4, D#4) but with the left hand first fingering opening a small vented hole to force the note to sound up an octave to the C#5, D5, and D#5 written here. These notes, especially the C#5, have a distinct tone from this vented fingering that causes the note to sound hollow and airy. Generally, this tone-color is loathed by oboists who work tirelessly to remove the airiness and darken the sound of the note. Here the brilliant, though non-intentional, use of these particular pitches to represent a hard stone with a hollow interior allows the oboist to celebrate the color of these airy and hollow-sounding notes as effective interpretation of

the composer's compositional process. This example illustrates one of the first examples of distinct and differing uses of tone and vibrato to distinguish and individualize the glissandi.

The second staff of this first page contains a single tracing from stone no. 14. This crystal sphalerite on chalk is rough in texture and jagged in shape. Its composition is that of hard crystals formed on top of a relatively soft limestone chalk. The jagged line produced from this stone necessitates more irregular movement with the pitch bends. While the use of vibrato will help, pitch bends on this glissando should be much more distinct to illustrate the differences in shape and texture from this stone and others which are rough but not jagged as with stone no. 4, previously discussed.

With the assistance of the templates, the performer may choose to isolate the uses of each rock within the score and use the compiled table of characteristics and composition (Table 3.4, pp. 5960), to glean understanding of each rock used in the composition process. This may serve as an analytical tool to provide insight into ways in which each glissandi could be performed based on the individual rock used in the process.

Some of the tracings are too small to definitively pair with a specific rock and even the predominately rough or jagged rocks have small sections, which are smooth. The particular interpretation of these could be left to the player's discretion based on personally chosen criteria or specifically assigned based on conjecture of the stone used. For example, the second page of garden no. 3 (pp. 7) contains a line, which is approximately 6.5 millimeters between an A5 and lowered A#5.

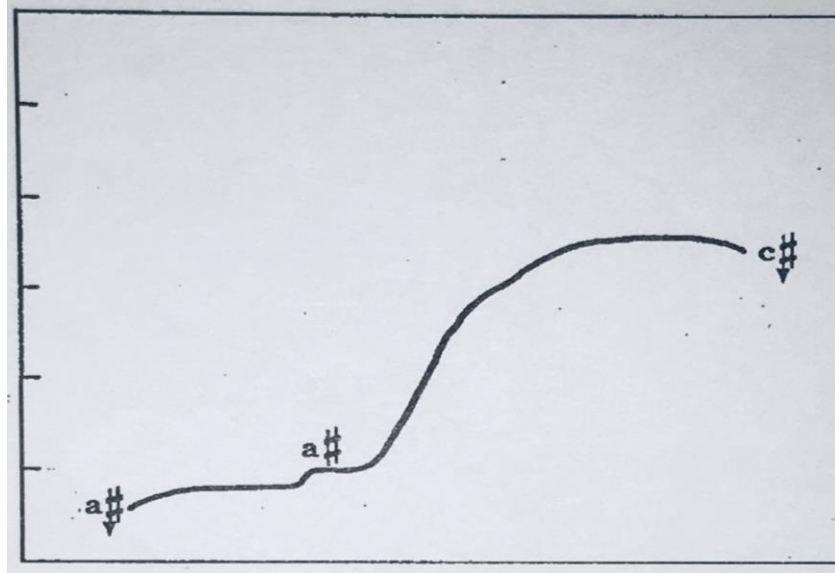


Example 3.2 John Cage: *Ryoanji* (excerpt)<sup>98</sup>

Though not readily distinguishable as any specific rock, and given the margin of error in the creation of templates used herein, one conjecture could be that the rock used bears some resemblance to the chalk pebble (stone no. 8) on page two of the fifth “garden” (pp. 11). Though the ranges of the two “gardens” are different (“garden” no. 3: G#5–A6; garden no. 5: A5–D#6), they share a similar shape and occur at the same A#5.

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98. John Cage, *Ryoanji: for Oboe Solo with percussion obbligato* (New York: Henmar Press Inc., 1985), 7.



Example 3.3 John Cage: *Ryoanji* (excerpt)<sup>99</sup>

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99. John Cage, *Ryoanji: for Oboe Solo with percussion obbligato* (New York: Henmar Press Inc., 1985), 11.

Rock #	Name of Rock (Classification)	Characteristics	Environment of Formation	Composition
1.	Artificially polished and ground stone	Artificially Smooth texture with harder density	Unknown (likely aquatic)	Unknown (likely clastic sediment)
2.	Striated radiolarian rock (Sedimentary)		Deep ocean floor	Fossils of Radiolaria (Plankton) skeletons
3. 11. 9. 15.	Brown pebble/Dark brown pebble/Black pebble (Sedimentary)	Smooth texture with harder density	Found on ocean beaches, rivers, estuaries, lakes, and inland at the location of ancient seas	Rock particles smoothed by water and generally composed of sediment e.g. clay, sand, silt, or a combination thereof
4.	Quartz geode with agate (Sedimentary, though host rock may be igneous or sedimentary)	Rough grainy exterior with hollow interior of jagged crystals	Usually deserts and volcanic areas. Prominent in western United States	Forms as bubbles in volcanic rock or in sedimentary rock from roots, animal burrows, etc. Internal crystals form from silica precipitation
5. 8.	Chalk pebble (Sedimentary)	Smooth texture with softer density	Warm, tropical seas	Limestone formed from the calcite shells of coccolithophores (coccoliths)
6.	Recent coral (Metamorphic)	Porous and naturally dull. Very soft and brittle	Temperate and Tropical waters along the equator, usually shallow and near continental/island coasts	Coral Animal uses limestone (calcium carbonate) to build outer skeleton
7.	Artificially polished black stone	Artificially Smooth texture with harder density	Unknown (likely aquatic)	Unknown (likely clastic sediment)

Table 3.4 Descriptions and Characteristics of *Ryoanji* Rocks<sup>100</sup>

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100. These fifteen rocks described here and identified by Thierolf (cf. Thierolf 2013, pp.226, Appendix B), are the ones Cage used to create the *Ryoanji* musical score and larger visual artworks. Corinna Thierolf, ed., *John Cage: Ryoanji Catalogue Raisonné of the Visual Artworks Vol. I* (Munich: Schirmer/Mosel, 2013). The stones he first brought to Crown Point for his initial visual artworks comprise a different set of sixteen and are much smaller (figure 3.6), which Kathan Brown confirmed. Kathan Brown, e-mail message to author, January 21, 2019.

10.	Green diopside with phlogopite and calcite (Metamorphic/Igneous)	Hardness 5-6, fibrous, grainy	Mainly from Russian and Serbia, as well as parts of China, India, Finland, and the United States (New York)	Intense heat and pressure applied to limestone dolomite or by the crystallization of magma (molten rock)
12.	Schist (Metamorphic)	Coarse grained, Scaly texture	Generally mountainous areas due to pressure needed for formation	High temperature and pressure applied to clay and mudstone
13.	Dolomite crystal with sphalerite and pyrite crystal (Metamorphic/Sedimentary)	Brittle with high metal content	Anaerobic environments of supersaturated saline lagoons in Brazil as well as the alps, England, and United States. Formed by organic matter, microbial organisms, and specifically sulfate-reducing bacteria.	Iron based with structure close to that of diamond; similar to limestone; iron pyrite/"fool's gold"
14.	Crystal sphalerite on chalk (Sedimentary)	High metal content on softer chalk	Peru, Mexico, Canada	Iron based with structure close to that of diamond + Limestone formed from the calcite shells of coccolithophores (coccoliths)

Table 3.4 cont.

## Temporal Considerations

Lacking any temporal indications of rhythm, meter, or tempo, a performer's determination of those elements leaves itself open to a wide array of interpretations. Analyzing available recordings of *Ryoanji* shows a variety of temporal possibilities. The percussion obbligato begins the piece with the oboe beginning its first glissando some time thereafter. Of the recordings consulted, times between the percussion's first note (beginning of the piece) and the oboe's first glissando (solo entrance) range from forty-six seconds to two minutes twenty-six seconds. With no other temporal elements, perhaps the interpretation can be aided by examining Cage's compositional process and the proportional ratios between oboe rests (silences) and intoned pitches in the graphic score. Of the twenty-four rectangular staves in the printed score, all but the first two measure 276 millimeters in length. The first two staves measure 260 millimeters in length, which are reduced to accommodate spacing for the printing of the title and composer. In this analysis the first two reduced staves have been adjusted from 260 to 276 millimeters and will hereafter be discussed in terms of twenty-four equal staves. The opening space from the beginning of the piece to the oboe entrance measures 158mm. The following oboe entrance measures 113.7mm total and is comprised of four sections (38.2mm, 38.2mm, 15mm, 22.3) of uninterrupted sound. The subsequent and final silence of the staff measures 4.3mm.





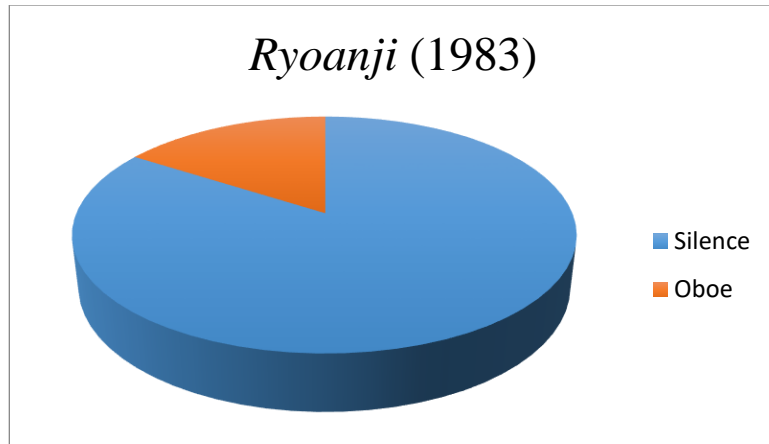


Figure 3.12 Total Silences vs. Oboe Glissandi in *Ryoanji* (1983)

Garden	Staff	Total Length (in mm)	Silence (in mm)	Oboe (in mm)	Silence (in mm)	Oboe (in mm)	Silence (in mm)	Oboe (in mm)	Silence (in mm)	Oboe (in mm)	Silence (in mm)
1.	1/4	260	149	36+36+14+21	4	-----	-----	-----	-----	-----	-----
	2/4	260	105	36	119	-----	-----	-----	-----	-----	-----
	1/4 adj. <sup>101</sup>	276	158	38.2+38.2+15+22.3	4.3	-----	-----	-----	-----	-----	-----
	2/4 adj.	276	112	38	126	-----	-----	-----	-----	-----	-----
	3/4	276	14	41	79	3 + 62	52	13 + 12	-----	-----	-----
	4/4	276	-----	20 + 28	14	29+21+16	16	63	5	44 + 5	15
2.	1/4	276	37	34	67	30	52	34 + 22	-----	-----	-----
	2/4	276	-----	6 + 33	90	82	2	16 + 47	-----	-----	-----
	3/4	276	-----	7	7	34	107	24	67	18+12	-----
	4/4	276	-----	47	51	67	111	-----	-----	-----	-----
3.	1/4	276	29	33+14+18+36+17+1+47	62	19	-----	-----	-----	-----	-----
	2/4	276	-----	2	182	24+34+32	2	-----	-----	-----	-----
	3/4	276	36	46	81	79 + 6	28	-----	-----	-----	-----
	4/4	276	98	8	93	39	38	-----	-----	-----	-----

Table 3.5 Linear Measurements of Ryoanji Glissandi and Silences <sup>102</sup>

102. The adjusted measurements (indicated by 1/4 adj. and 2/4 adj.) listed here from “garden” no. 1: staves one and two, are adjusted from 260mm in length as printed in the score to 276mm in length. This adjustment serves to correspond with the 276mm length of every other staff in the score. The reduced size of the first two staves on the first page of the score is due to the size reduction in printing to allow space for the work’s title and composer (cf. Cage 1985, pp. 2).

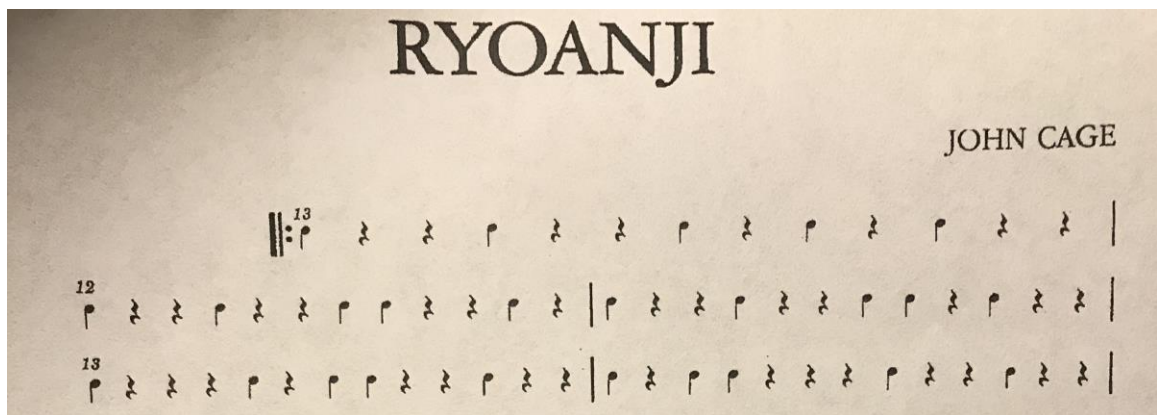
101. Each of the eight “gardens” in the score contains four total rectangular “staves” each measuring 276mm in length. This table includes the linear measurements of each silence and each intonation of the solo oboe solo within each staff. Where, in the score two separate glissandi are connected vertically but there is no silence space between them, they are combined with (+) markings to indicate a single iteration of tone comprised of two or more separate tracings.

Garden	Staff	Total Length (in mm)	Silence (in mm)	Oboe (in mm)	Silence (in mm)	Oboe (in mm)	Silence (in mm)	Oboe (in mm)	Silence (in mm)	Oboe (in mm)	Silence (in mm)
4.	1/4	276	81	71	124	-----	-----	-----	-----	-----	-----
	2/4	276	4	62	26	49	135	-----	-----	-----	-----
	3/4	276	208	43	25	-----	-----	-----	-----	-----	-----
	4/4	276	121	39	3	62	51	-----	-----	-----	-----
5.	1/4	276	136	67+27	36	10	-----	-----	-----	-----	-----
	2/4	276	-----	35+42+18	33	4+24	91	28	1	-----	-----
	3/4	276	10	60	206	-----	-----	-----	-----	-----	-----
	4/4	276	48	29	87	45+10+7+29+7	14	-----	-----	-----	-----
6.	1/4	276	276	-----	-----	-----	-----	-----	-----	-----	-----
	2/4	276	276	-----	-----	-----	-----	-----	-----	-----	-----
	3/4	276	244	32	-----	-----	-----	-----	-----	-----	-----
	4/4	276	-----	13	128	65	12	40	18	-----	-----
7.	1/4	276	147	30	99	-----	-----	-----	-----	-----	-----
	2/4	276	46	28+29	76	27	47	23	-----	-----	-----
	3/4	276	-----	32	93	39	112	-----	-----	-----	-----
	4/4	276	22	60	111	52	31	-----	-----	-----	-----
8.	1/4	276	80	51+42+9	22	32+7+33	-----	-----	-----	-----	-----
	2/4	276	11	31	27	31	78	80	18	-----	-----
	3/4	276	28	61	185	2	-----	-----	-----	-----	-----
	4/4	276	-----	73	84	8+9+34+10+35	23	-----	-----	-----	-----

Table 3.5 cont.

## Percussion Obligato

*Ryoanji* further demonstrates the aesthetic idea of environmental sound through echolocation by using a percussion obligato to act as an aural portrayal of the small raked pebbles in the Ryōanji garden. A series of unmetred quarter notes and quarter rests, played on metal, wood, or other natural-material idiophones and membranophones, serves to illicit sonic representation of those many small white pebbles surrounding the fifteen large rocks in the Ryōanji garden.



Example 3.5 John Cage: *Ryoanji* (excerpt)

In performance, this becomes an example of creating a sonic environment around the piece itself and is in line with Cage's views of acoustic ecology of surroundings. Cage also offers the option of an orchestra playing the obligato part on instruments of each player's choosing. There is no score indication of how many percussionists are to play the percussion obligato or how many percussion instruments each performer plays however in a letter to Malcolm Goldstein dated 8 July, 1991 Cage denotes that the obligato should be played by a single solo percussionist or a larger group of "20 or

whatever total number it is.”<sup>103</sup> Considering the indeterminate nature of this aspect of scoring, along with the option for an orchestra to play the obbligato in what Cage refers to as “Korean Unison,”<sup>104</sup> one possible interpretation of the score is to allow the audience to be active participant-observers, each playing a percussion instrument. This expands the soundscape from the stage to the entire performance space and surrounds the oboe (the sonic transcription of the fifteen large rocks) with many more iterations of the small raked pebbles from the garden. Sonically, this becomes a closer representation of the Ryōan-ji garden especially as the number of participant-observers increases in addition to adhering to Cage’s desire for musical “activities to be more social.”<sup>105</sup> This also aligns with Cage’s term “Musicircus” wherein several seemingly unrelated things are happening simultaneously.<sup>106</sup>

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103. Published in Laura Kuhn, ed., *The Selected Letters of John Cage* (Middletown, CT: Wesleyan University Press, 2016), 582.

104. In a letter to Joseph Di Girolamo dated 23 March 1984, Cage says “By ‘Korean Unison’ is meant the practice of playing the same thing but not at precisely the same time. Microtonal inflections are also introduced so that what is the same is also always new.” Published in Laura Kuhn, ed., *The Selected Letters of John Cage* (Middletown, CT: Wesleyan University Press, 2016), 536. As of this writing I have found no other definition or use of the phrase “Korean Unison” as it relates to music or otherwise. Furthermore, I cannot find evidence of Cage using the term in any other available writings or correspondence. The phrase appears to have inherent racist connotations but otherwise is used to describe a type of heterophony. Yayoi Uno Everett and Frederick Lau (cf. Everett and Lau, eds. 2004, 228) briefly mention the term in regards to Cage’s *Ryoanji* but do not offer an explanation. Yayoi Uno Everett and Frederick Lau, ed., *Locating East Asia in Western Art Music*. Middletown, Conn: Wesleyan University Press, 2004, 228. There is a possibility Cage heard the term from colleague and Korean music scholar Lou Harrison to whom Cage wrote a letter anticipating his forthcoming book on Korean Music written in collaboration with Korean Musicologist Lee Hye-Ku (b.1909–2010) though the 1963 manuscript copies done in Harrison’s hand in calligraphy only exist in the Lou Harrison Archive and UCLA Ethnomusicology Archive and, at the writing of this document are not yet digitized and available outside the archive. Lou Harrison scholar Leta Miller said she doesn’t recall Harrison ever using the term. Leta Miller, e-mail message to author, February 5, 2019.

105. John Cage, *A Year from Monday: New Lectures and Writings* (Middletown, CT: Wesleyan University Press, 1967), ix.

106. In a 1975 interview with Cole Gagne and Tracy Caras, Cage commented “seen from a particular point of view, music is simply the art of focusing attention on one thing at a time. In my recent works, since about 1968, I have tried not to focus the attention on one thing at a time, and have used this

## CHAPTER IV – EPILOGUE

Despite the arguments by scholars included Benjamin Piekut that Cage missed the mark on his environmental ideas and rather molded those ideas to fit his work, the numerous writings by Cage and outward use of nature and the environment espoused in his visual and musical works must be taken into consideration when approaching a musical work where it is relevant. Through compositional process, Cage was the agent actively using the environmental elements in the creation of the work and using the performance of the work to confirm and exhibit his ecological ideas as they are situated within creative mediums. With *Ryoanji*, Cage illustrated how he manifested those ideas in an artistic work both in the compositional process as well as in the performance via symbolic rather than programmatic representation of the Ryōanji garden. Referencing Coomaraswamy, in 1959 Cage said “in an older view, and in my own, it is the artist’s duty to imitate in his work not the appearance of nature, but her manner of operation”<sup>107</sup> and in 1990 he reaffirmed the position “art is an imitation of nature not as she is but in her manner of operation.”<sup>108</sup> These statements affirm the environmental importance of compositional process and shows that *Ryoanji* encompassed both views imitating nature and imitating the operation of nature

Because of the avant-garde nature of the majority of Cage’s oeuvre, issues regarding performance practice, especially with regard to his later works, have received very little critical attention. This monograph addresses a small part of the lacuna of

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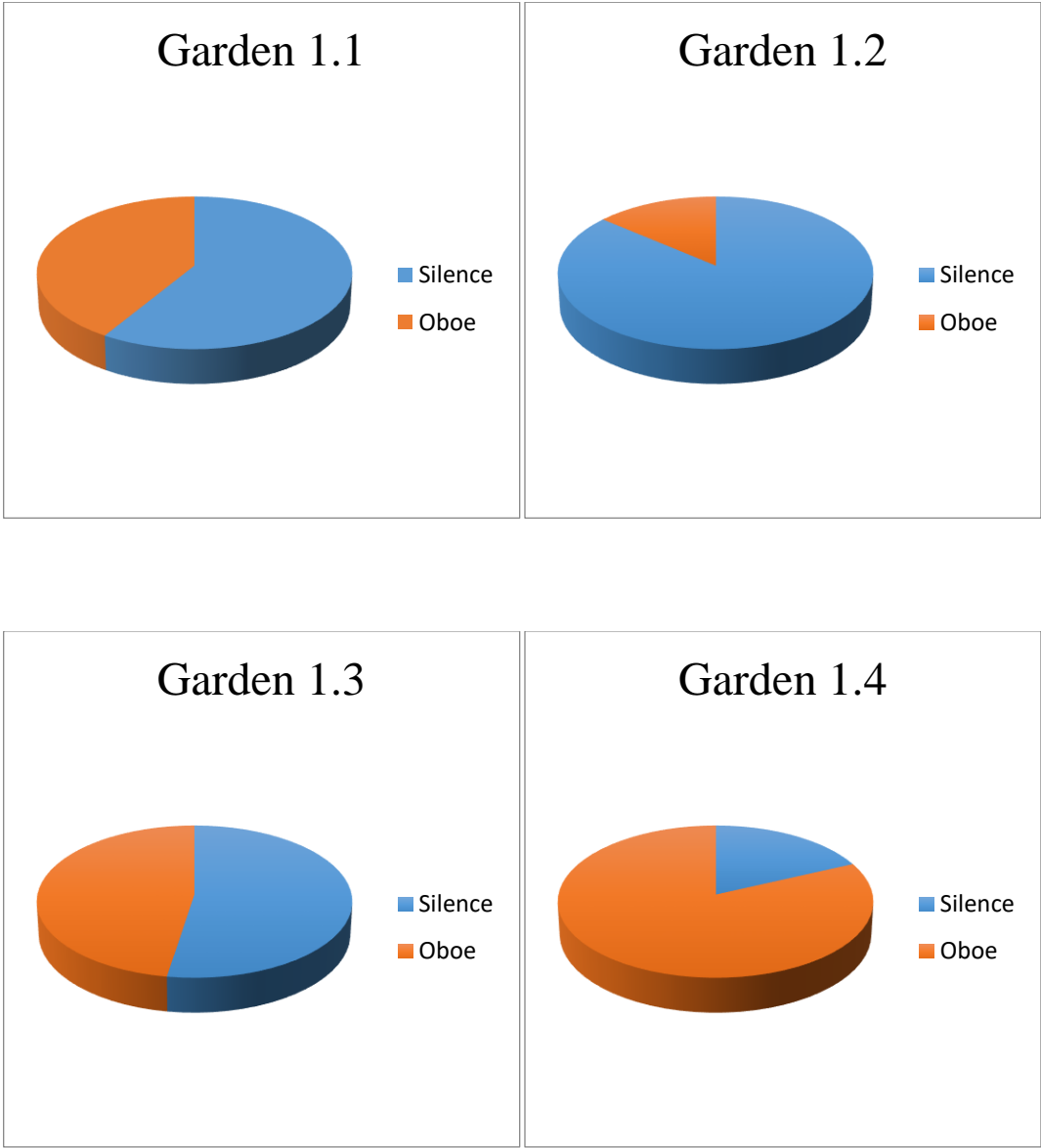
principle that I call ‘musicircus’—of having many things going on at once.” Richard Kostelanetz, “His Own Music: Part Two” *Perspectives of New Music* 26, no. 1 (1988): 29.

107. Cage and Hoover 1959, 246.

108. Cage 1990, 229–30.

performance considerations within these non-traditional works. Considering a performer's responsibility to carry out a composer's intent, and given the nontraditional nature of the notation, this narrative serves as a guide to possible ways in which a performer can execute Cage's desire to reflect nature in art. By providing an ecocritical reading of this piece, the analysis herein does not establish composer intent but rather offers a single analytical narrative informed by cultural context and Cage's environmental thoughts and processes used in composing this and other works.

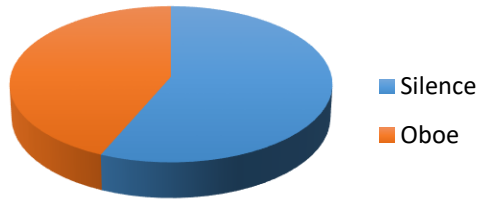




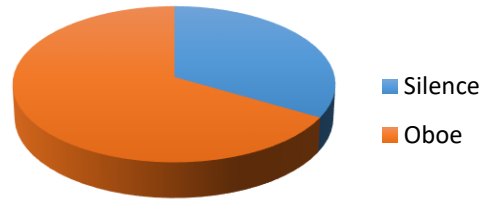
109. Cf. Table 3.5, pp. 60–61.

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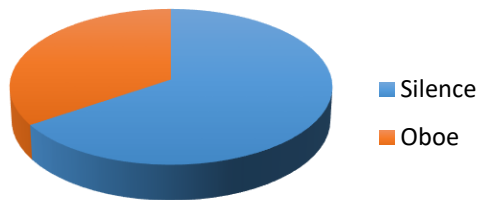
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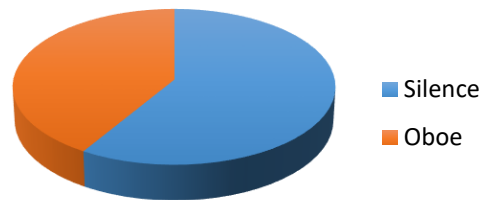
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Garden 2.3

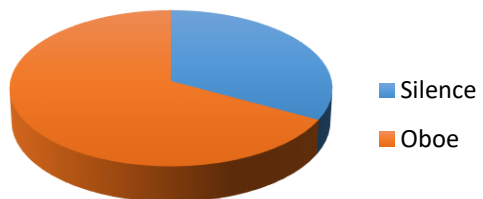


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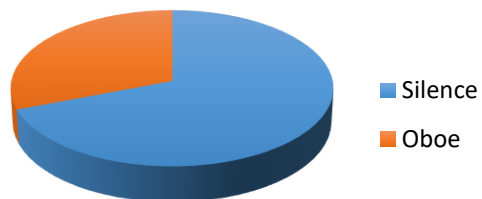


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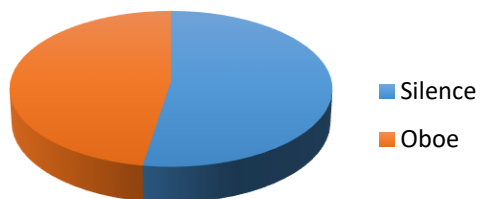
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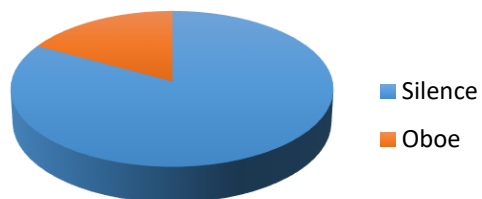
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Garden 3.3

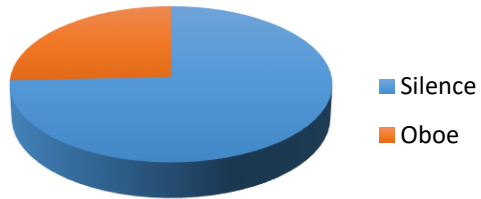


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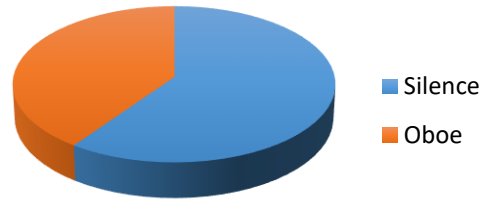


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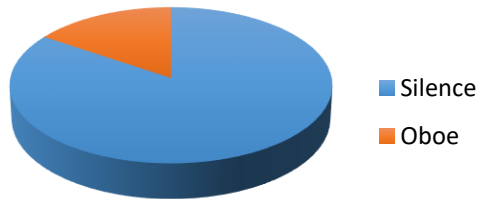
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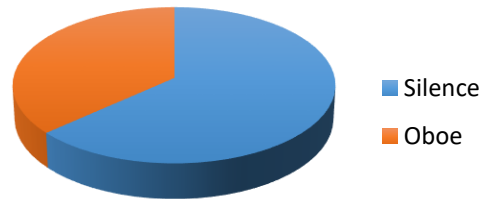
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Garden 4.3

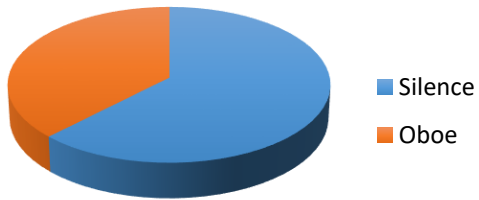


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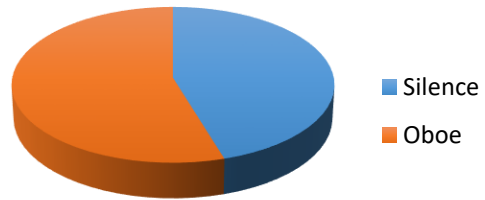


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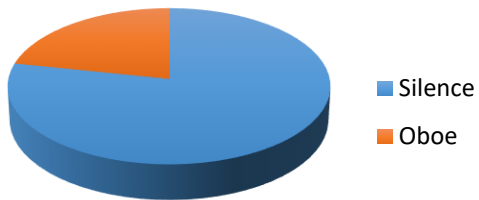
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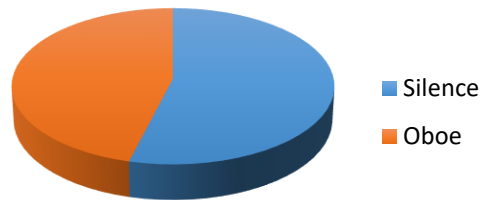
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Garden 5.3

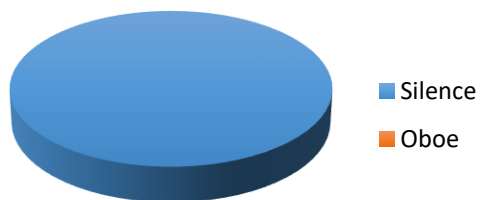


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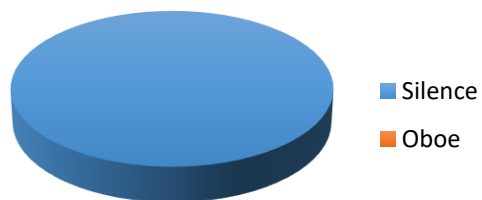


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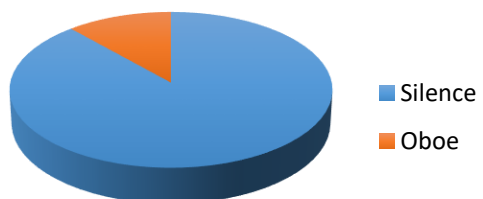
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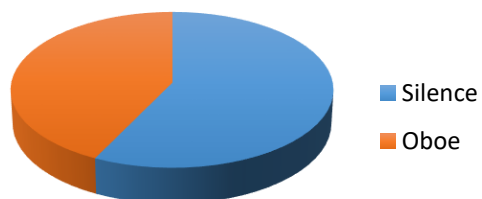
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Garden 6.3

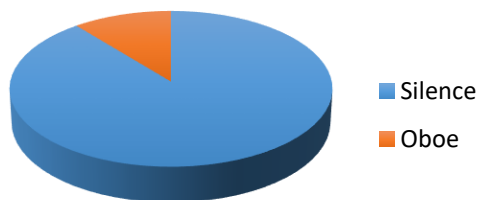


Garden 6.4

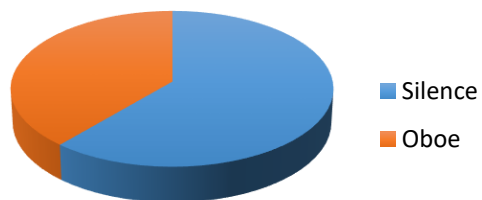


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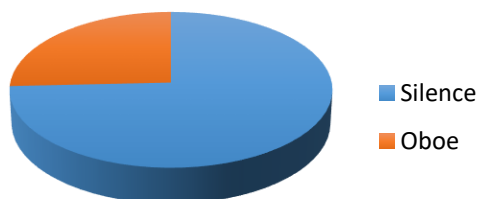
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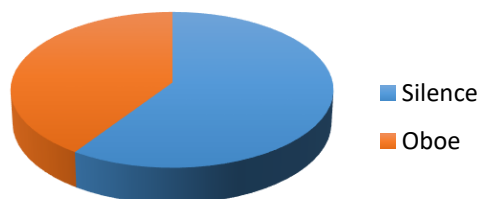
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Garden 7.3

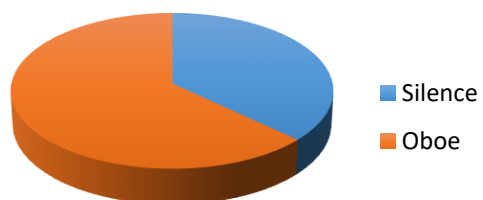


Garden 7.4

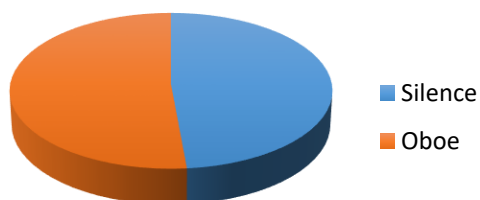


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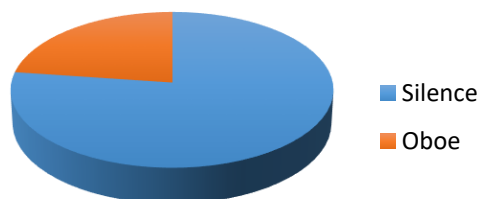
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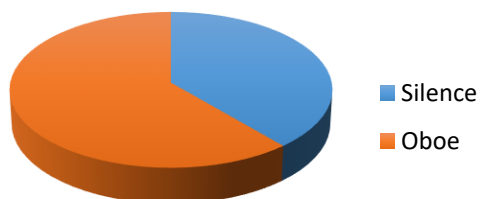
Garden 8.2



Garden 8.3

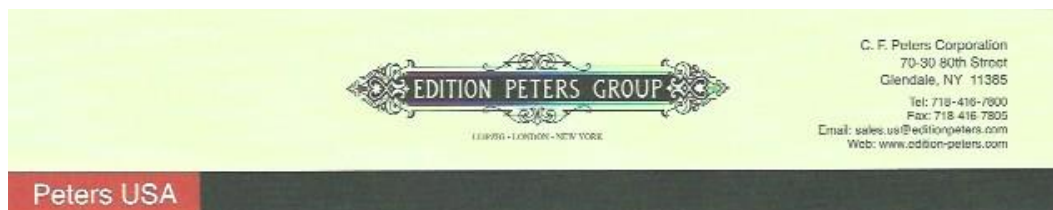


Garden 8.4





## APPENDIX B – PERMISSIONS



February 26, 2019

Everette Scott Smith  
8445 Justin Ave.  
Baton Rouge, LA 70809

Dear Mr. Smith,

This letter grants you the right to include excerpts from **Score (40 Drawings by Thoreau) and 23 Parts, Fontana Mix, Concert for Piano and Orchestra, and Ryoanji for solo oboe and percussion obbligato** by John Cage in your dissertation as part of the requirements for your degree at the University of Southern Mississippi.

We are pleased to grant you this permission, gratis. In your acknowledgements you must include the copyright dates and the credit notices as follows:

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Best wishes for your studies,

Sincerely,

C.F. PETERS CORPORATION\*

Héctor Colón  
Rights and New Music  
\*On behalf of Henmar Press, Inc.

C.F. Peters is a member of the Edition Peters Group

## APPENDIX C – IRB APPROVAL LETTER



**INSTITUTIONAL REVIEW BOARD**  
118 College Drive #5147 | Hattiesburg, MS 39406-0001  
Phone: 601.266.5997 | Fax: 601.266.4377 | [www.usm.edu/research/institutional.review.board](http://www.usm.edu/research/institutional.review.board)

### NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.  
Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 18080604  
PROJECT TITLE: John Cage's 'Rock' Music: Ecocritical and Performance Considerations in Ryoanji for Solo Oboe and Percussion Obligato  
PROJECT TYPE: Doctoral Dissertation  
RESEARCHER(S): Everette Scott Smith  
COLLEGE/DIVISION: College of Arts and Sciences  
DEPARTMENT: Music  
FUNDING AGENCY/SPONSOR: N/A  
IRB COMMITTEE ACTION: Exempt Review Approval  
PERIOD OF APPROVAL: 09/11/2018 to 09/11/2019

**Edward L. Goshorn, Ph.D.**  
**Institutional Review Board**

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