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Nam June Paik as a Pioneer of Interactive Art

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University.

by

Byeongwon Ha

Bachelor of Fine Arts, SungKyunKwan University, Seoul, Republic of Korea, 2004

Master of Fine Arts, Yonsei University, Seoul, Republic of Korea, 2009

Master of Fine Arts, Rhode Island School of Design, Providence, RI, 2011

Director: Dr. Eric Garberson,  
Associate Professor of the Department of Art History  
Director of Media, Art, and Text PhD Program

Virginia Commonwealth University  
Richmond, Virginia  
March, 2018

## Acknowledgment

When I talked about my topic, Nam June Paik as a Pioneer of Interactive art, to participants at the ACM Conference on Human Factors in Computing Systems in 2016, a Korean student in the United States discouraged me from researching Paik because he thought of my study as a cliché topic for Korean researchers. I thought that he regarded me a naïve Korean PhD student who chose a famous Korean-born artist without the language barriers. However, I researched Nam June Paik not because I am a Korean, but because I am an artist who creates interactive art. I sometimes wondered who created interactive art first when I made my interactive art projects. I had never thought of Paik as an important pioneer of interactive art before I took a sound theory class from Dr. Colin Lang, who was the former advisor of my dissertation until he resigned due to his serious illness. The professor presented a variety of avant-garde music. Specifically, the readymade quality of Pierre Schaeffer's *musique concrète* fascinated me. In the same semester, I was the teaching assistant for Professor Stephen Vitiello's sound studio class. He prepared a lecture for Nam June Paik: Art & Process as an academic event of Nam June Paik: Global Visionary at the Smithsonian American Art Museum. He asked me to translate Paik's "unofficial" first Korean article about Pierre Schaeffer's *musique concrète*. When I finished translating it, I became a completely different man. I found that he pursued art theory and practice at the same time just like me. I researched the relationship between Paik and *musique concrète*. The study on his "unofficial" first Korean article was the beginning of my dissertation. This research naturally led me to find Paik's "official" first Korean article "The Music of 20's Century." This is original research because no one had scrutinized any content of the article yet. This made me focus on the relationship between his Korean and Japanese articles about music and his interactive art. Based on the literature, my dissertation traces a significant transition from Paik's music theory and practice to his interactive art step by step. For this reason, my dissertation does not examine his interactive art until chapter 4. However, if you read it chapter by chapter, you will find Paik's updated idea of interactive art.

Above all, I would like to thank the four committee members of my dissertation. First, I would like to thank Dr. Eric Garberson, who is the director of the Media, Art, and Text PhD program and the advisor of my dissertation. He encouraged me to develop my dissertation in the context of art history. His deep knowledge about the *Gesamtkunstwerk* helped me analyze Paik's multimedia idea in interactive art. I would like to thank Professor Stephen Vitiello, who worked with Nam June Paik from 1989 to 2002 in various capacities including serving as a production assistant and researcher on a number of projects as well as working as Paik's archivist for the Guggenheim retrospective and being credited as an occasional collaborator. His vivid experience with Paik provided me with valuable facts as if I interviewed Paik in his studio. I would also like to thank Dr. David Golumbia and Dr. Jennifer Rhee, who are professors in the department of

English and core faculty in the Media, Art, and Text program. In addition, even though he was not on the committee of my dissertation, I would like to thank Dr. Byungjoo Lee at Korea Advanced Institute for Science and Technology. He encouraged me to think of interactive art as an unbiased medium between art and engineering. We are developing the concept of Engineering Mind for interactive art for the past two years. The concept helped me self-evaluate my dissertation art projects.

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## Table of Contents

List of Figures .....	vii
Abstract .....	viii
Introduction .....	1
Nam June Paik: Foreign Correspondent for Contemporary Music .....	4
Interactive Art Based on Music .....	13
Chapter Descriptions .....	15
Chapter I: The Music of 20's Century .....	18
1.1 Nam June Paik as a Diligent Student in Both Musicology and Composition .....	19
1.2 Paik's First Korean Article, "The Music of 20's Century" .....	21
1.3 The Bauhaus of Music, Medium-specificity, Purism, and Serialism .....	23
1.4 The Twelve Tone Mannerism .....	32
1.5 Karlheinz Stockhausen as a New Generation of Serialism .....	35
1.5.1 Random Algorithm in Music .....	36
1.5.2 Space in Music .....	40
1.5.3 Electronic Music .....	41
1.6 Beyond Serialism and Beyond Genius .....	43
Chapter II: A Report on the Paris Studio of Pierre Schaeffer's <i>Musique Concrète</i> .....	45
2.1 Pierre Schaeffer's <i>Musique Concrète</i> .....	46
2.2 Before Meeting Pierre Schaeffer in His <i>Musique Concrète</i> Studio .....	48
2.3 Nam June Paik as a <i>Musique Concrète</i> Composing Researcher .....	52
2.4 Significant Unpublished Article .....	55

2.5 <i>Musique Concrète</i> into Visual Collage .....	64
Chapter III: Chance Music.....	68
3.1 Uninvited Composer, John Cage .....	70
3.2 John Cage at the Darmstadt Summer Course in 1958 .....	72
3.3 Karlheinz Stockhausen as a Composer of Spatial Music .....	81
3.4 Another Catalyst – Kurt Schwitters’s Collage .....	81
3.5 <i>Gesamtkunstwerk</i> for Nam June Paik .....	84
3.6 Nam June Paik’s Debut: <i>Hommage à John Cage</i> .....	89
Chapter IV: Nam June Paik’s Interactive Art .....	95
4.1 After Serialism .....	95
4.1.1 John Cage’s Advanced Indeterminate Music .....	97
4.1.2 Karlheinz Stockhausen’s Theatrical Music .....	100
4.1.3 <i>The Symphony for 20 Rooms</i> : Spatial Music from Stockhausen and Cage .....	102
4.2 Three Steps for Nam June Paik’s Interactive Art .....	106
4.2.1 A Controversial Art Field: Interactive Art .....	107
4.2.2 The First Step: A-Music .....	112
4.2.3 The Second Step: Pre-interactive Art .....	117
4.2.4 The Third Step: Interactive Art with Electronic Devices .....	122
4.2.4.1 <i>Record Shashlik &amp; Random Access</i> .....	124
4.2.4.2 Electronic Televisions .....	129
4.2.5 Afterlude to Nam June Paik’s Interactive Art .....	137
Chapter V: Interactive Art Projects Based on the Study of Nam June Paik .....	143
5.1 The Rise of Studio Art-based PhD Programs .....	143
5.2 Specific Interactive Interfaces from Music .....	150

5.3 Three Dissertation Projects .....	153
5.3.1 Non-linear Access to Database: <i>Diligent Operator</i> .....	154
5.3.1.1 Concept .....	155
5.3.1.2 Technology .....	159
5.3.1.3 Conclusion .....	163
5.3.2 Cross-modality: <i>Endless Ripples</i> .....	163
5.3.2.1 Concept .....	164
5.3.2.2 Technology .....	166
5.3.2.3 Conclusion .....	169
5.3.3 Closed Circuit Video Interaction: <i>Floating Painting</i> .....	169
5.3.3.1 Concept .....	170
5.3.3.2 Technology .....	174
5.3.3.3 Conclusion .....	176
Conclusion .....	177
Karlheinz Stockhausen's Random Access and Spatial Music .....	177
Pierre Schaeffer's <i>Musique Concrète</i> .....	179
John Cage's Prepared Piano, Performance, and Cartridge Music .....	181
Return to Nam June Paik's First Solo Exhibition .....	183
Bibliographies .....	185
Vita .....	198

## List of Figures

1. Ethernet cables in <i>Diligent Operator</i> .....	154
2. The capacitive sensor for Ethernet cables.....	157
3. Random number in <i>Diligent Operator</i> .....	158
4. The diagram of the process of <i>Diligent Operator</i> .....	159
5. The input part of <i>Diligent Operator</i> .....	162
6. The cup with a Piezo sensor part .....	165
7. <i>Endless Ripples</i> when visitors put their coins into the cup .....	166
8. A growing example of <i>Endless Ripples</i> .....	168
9. The Max/MSP patch of <i>Endless Ripples</i> .....	168
10. A portrait example of <i>Floating Painting</i> .....	170
11. The interactive interface for <i>Floating Painting</i> .....	175



## Abstract

### NAM JUNE PAIK AS A PIONEER OF INTERACTIVE ART

By Byeongwon Ha, Ph.D.

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University.

Virginia Commonwealth University, 2018.

Major Director: Dr. Eric Garberson, Associate Professor of Art History and Director of Media, Art, and Text PhD Program

Nam June Paik (1932-2006) is well known as the father of video art. However, this study demonstrates the importance of his earlier interactive art (1961-63), which historically has been overshadowed by his video art. At the climax of his career in interactive art, Paik introduced his two-way art to the public at his first solo exhibition in Wuppertal, West Germany, in 1963. Interactive art itself has been a peripheral area in the history of art, and it has plural pioneers across disciplinary boundaries. Among the several origins of interactive art, Nam June Paik utilized music as a fundamental approach to design the emerging art.

Concentrating on Paik's music theory and practice in West Germany, my research traces the unexplored academic area of his articles about new music in the Korean newspaper *Chayushinmun* (1958-59). The perspective in his articles toward new music became a significant foundation for his progressive interactive art. Based on his music background, Paik knew how to

incorporate musical instruments and devices into his interactive art. Finally, this study will articulate a concrete relationship between Paik's musical experiences and his interactive art. It argues that his interactive pieces, based on his musical experiences, make him one of the most creative pioneers of interactive art.

## Introduction

On March 8 through 13, 1963, at Galerie Parnass in Wuppertal, West Germany, Nam June Paik exhibited his first solo show, *Exposition of Music – Electronic Television*. As the exhibition title says, Paik employed music and television, which were unusual elements in a gallery at that time. He architecturally *exposed* music not in a concert hall but in a whole gallery including its courtyard, basement, staircase, and even restrooms, and *electronically* appropriated televisions as art objects. In fact, these were not entirely new phenomena. Several composers including Karlheinz Stockhausen, John Cage, and Pierre Boulez had already experimented to spatialize music itself in different ways.<sup>1</sup> Paik's Fluxus colleague Wolf Vostell had exhibited some televisions for his installation art around the same time.<sup>2</sup> In *Exposition of Music – Electronic Television*, the most famous event was when Joseph Beuys suddenly destroyed one of Paik's piano projects with an axe. The most outstanding works are his thirteen television art installations, which were created without a video recorder. In particular, his video art has been frequently discussed in articles, theses, and catalogues about him.<sup>3</sup> To write a paper about Paik as a pioneering artist with emerging technology could now seem to be unproductive and unoriginal. However, his works can be still new. Paik's first solo show provides scholars with an innovative approach, his interactive art, although most do not focus mainly on this emerging art. In the introduction to the Korean version of *Paik: Du cheval à christo et autres écrits*,<sup>4</sup> the former chair of the

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<sup>1</sup> Paik researched these composers in his articles. In other words, he developed spatial music from them. This fact will be discussed at greater length in chapter 1 and 3.

<sup>2</sup> Paik manipulated his televisions more than Vostell did. This fact will be discussed in chapter 4.

<sup>3</sup> In particular, the curator John G. Hanhardt, who curated Paik's exhibitions several times, focused on Paik's pioneering video art. See John G. Hanhardt, "Nam June Paik and the Transformation of Video into Art," in *Mostly Video Nam June Paik* (Tokyo: Tokyo Metropolitan Art Museum, 1984), 28.

<sup>4</sup> Nam June Paik, *Paik: Du cheval à Christo et autres écrits*, ed. Edith Decker and Lebeer Hossman, trans. Wang Joon Im, Mi Ae Jeong, and Moon Yeong Kim (Yong In: Nam June Paik Art Center, 2010). *Paik: Du cheval à Christo et autres écrits* consists of Nam June Paik's essays, letters, flyers, articles, interviews,

Nam June Paik Art Center, Young Cheol Lee, indicates that art critics from the publication *October* unfairly criticized<sup>5</sup> his video art and performance in their landmark textbook of twentieth-century art, *Art Since 1900*.<sup>6</sup> Just as art scholars often ignore Paik's significant achievement in avant-garde art, they do not much focus on the pioneering quality of interactivity in Paik's art. Instead these critics describe the works of Paik's contemporaries, Woody and Steina Vasulka, as early interactive art pioneers even though their works were created later than Paik's.<sup>7</sup> These art critics simplify Paik as a technophile and an anti-feminist.<sup>8</sup> Paik himself, as well as his interactive pieces, is underrated in art history.

Unlike these art historians, many scholars and artists with a concentration in art-and-technology concur in Paik's importance to this field.<sup>9</sup> The artist duo Christa Sommerer and Laurent Mignonneau frame Paik's *Magnet TV* (1964) as one of the oldest interactive artworks, in which viewers are invited to manipulate images on television by using a powerful magnet.<sup>10</sup> Art historian William Kaizen describes how Paik tried to overcome the passive aspects of mass communication by using a microphone as a visual manipulation

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plans, musical scores, dating from 1947–1992. Philip-Decker, a scholar of Paik's video art, and Irmelin Lebeer originally edited the publication in Brussels in 1993. In 2010, the Nam June Paik Art Center published the Korean version of it with another collection of Paik's writings, *The Return of Nam June Paik*. See Nam June Paik, *The Return of Nam June Paik*, ed. Youngchul Lee and Namsoo Kim (Yong In: Nam June Paik Art Center, 2010).

<sup>5</sup> Ibid., 6.

<sup>6</sup> Hal Foster, et al., *Art Since 1900: Modernism, Antimodernism, Postmodernism* (New York: Thames & Hudson, 2011)

<sup>7</sup> Ibid., 605.

<sup>8</sup> Ibid., 604.

<sup>9</sup> However, some scholars in interactive art ignore Paik's early interactive works. In an anthology on interactive art, *Interactive Experience in the Digital Age*, Marcel Duchamp, Roy Ascott, John Cage, Jack Burnham, and Allan Kaprow were often cited, but Paik was never mentioned. See Linda Candy and Sam Ferguson, eds, *Interactive Experience in the Digital Age: Evaluating New Art Practice* (New York: Springer, 2014).

<sup>10</sup> Christa Sommerer and Laurent Mignonneau, introduction to *Art@science*, ed. Christa Sommerer and Laurent Mignonneau (New York: Springer, 1998), 11.

interface in *Participation TV* (1963).<sup>11</sup> New media scholar Christiane Paul argues that Paik anticipated the revolution of non-linearity in digital art through *Random Access* (1963).<sup>12</sup> Media archeologist Erkki Huhtamo considers Paik's responsive "cybernetic" sculptures and closed-circuit video installations points of origin for interactive art.<sup>13</sup> Along with these positive perspectives, art historians Katja Kwastek, David Joselit, and Dorothee Brill examine Paik as an important pioneer of interactive art,<sup>14</sup> as a significant artist using feedback (two-way communication),<sup>15</sup> and as a creative main Fluxus member with a concentration in interactive art.<sup>16</sup> The work of these scholars has become foundational literature, establishing Paik as one of the most important artists in the history of this emerging art. Moreover, Museum Moderner Kunst Stiftung Ludwig Wien represented Paik's first solo show using the entire space of the gallery with the title, *Nam June Paik: Music for All Senses* in 2009.<sup>17</sup> This retrospective show exhibited not only Paik's original works from the museum's collection,<sup>18</sup> but also recreated his projects with documentary photographs, which were blown up so images depicted within the photographs were true-

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<sup>11</sup> William Kaizen, "Computer Participant: Situating Nam June Paik's Work in Computing," in *Mainframe Experimentalism: Early Computing and the Foundations of the Digital Arts*, ed. Hannah Higgins and Douglas Kahn (Berkeley: University of California Press, 2014), 229.

<sup>12</sup> Christiane Paul, *Digital Art* (London; New York: Thames & Hudson, 2015), 15. *Random Access* is Paik's prototypical interactive art. This project displays strips of audiotape on the wall, which allow audiences to play back the sound with a hand-held head of a tape recorder. This project will be examined in chapter 4 in detail.

<sup>13</sup> Erkki Huhtamo, "Trouble at the Interface 2.0: On the Identity Crisis of Interactive Art," NeMe, last modified February 27, 2007, <http://neme.org/591>

<sup>14</sup> Katja Kwastek, *Aesthetics of Interaction in Digital Art* (Cambridge, MA: The MIT Press, 2013). This will be discussed in chapter 4.

<sup>15</sup> David Joselit, *Feedback: Television Against Democracy* (Cambridge, MA: The MIT Press, 2007). This will be discussed in chapter 2.

<sup>16</sup> Dorothee Brill, *Shock and the Senseless in Dada and Fluxus* (New Hampshire: Dartmouth College Press, 2010). This will be discussed at greater length in chapter 2.

<sup>17</sup> The title of the exhibition catalogue is *Nam June Paik: Exposition of Music – Electronic Television Revisited*. This exhibition provides audiences with the spatial representation for Paik's first solo show.

<sup>18</sup> The majority of Paik's projects in his first solo show is at Museum Moderner Kunst Stiftung Ludwig as a part of the Hahn Collection.

to-life in size.<sup>19</sup> In other words, visitors were able to experience Paik's entire exhibition space as Paik originally intended in "Exposition of Music – Electronic Television." The exhibition also presented Paik's diverse experimental projects, including his "prepared" television works, electronically and non-electronically prepared pianos and non-electronic musical instruments on the first floor of the gallery as well as a cow's head before the entrance, a big balloon in the entrance, electronic musical instruments in the basement, a readymade installation in the staircase, and a dead mannequin in a tub.

This retrospective reevaluated Paik's first exhibition as a whole organic project. The exhibition sub-title *Music for All Senses* shows that his first solo show was a music-centric experiment with multi-sensorial environments. My research mainly concentrates on his interactive art projects with electronic interfaces, *Random Access*, *Record Shashlik*, and *Participation TV*. As a new type of musical instrument or musical visualization, his early interactive art was interlocked with music. To study his interactive art, it is essential to examine Paik's musical experience before he exhibited *Exposition of Music – Electronic Television*.

### **Nam June Paik: Foreign Correspondent for Contemporary Music**

Paik did not spend most of his time learning composition in his early academic career.<sup>20</sup> Even though he completed his thesis on Arnold Schoenberg's serialism, his major was not music but art history and aesthetics in the University of Tokyo; music was his minor. In the fall of 1956, Paik finally became a PhD student of musicology at

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<sup>19</sup> The exhibition space is similar to the theatrical stage in Lars Von Trier's film *Dogville* (2003)

<sup>20</sup> Sukhi Kang. "Nam June Paik and I," in *TV Buddha Nam June Paik*, edited by Hyun Jeong Kim (Seoul: Samkwakum, 2007), 107.

Ludwig-Maximilians-Universität München (the Ludwig Maximilian University of Munich). However, he still took classes in other fields such as art history and philosophy.<sup>21</sup> He chose to be a nomad for art as he always regarded himself a Mongolian nomad, and his wide explorations helped him have an extremely interdisciplinary background. However, Paik's main artistic drive was still in music. In other words, music was always at the center of his art. Even though he mainly studied Western traditional music at school,<sup>22</sup> he explored new ways to redefine music along more progressive and radical lines.<sup>23</sup> Music was not only the starting medium for his projects, but also the unfixed field to be always updated. In this regard, music was not his final destination, but the starting place of his endless creativity. Likewise, when Paik arrived in Munich to study serialism, he soon became more interested in post-Schoenberg serialism. Therefore, Schoenberg's disciples such as Anton Webern, Wolfgang Fortner and, in particular, John Cage, continued to inspire Paik to be a progressive composer. However, as Cage described, Paik was ready to be a progressive artist. Paik had already developed his own way of presenting new music, and he just encouraged Paik to find his style a little bit earlier.<sup>24</sup> In other words, Cage should be considered an important catalyst instead of an influential master. This correction leads scholars to analyze Paik's music background as

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<sup>21</sup> Wulf Herzogenrath, ed., *Nam June Paik Fluxus/Video* (Bremen: Kunsthalle Bremen, 1999), 21.

Paik's academic records at the University of Munich are included in *Nam June Paik/ Fluxus Video*.

<sup>22</sup> Paik originally wanted to be a professor to teach Western traditional music in Korea after study abroad in Munich. See Nam June Paik, "Time Collage," in *Nam June Paik: Time Collage*, ed. Shizuko Watari (Tokyo: Isshi Press, 1984), 8.

<sup>23</sup> In "An Essay for the New Ontology of Music," Paik reviewed the trajectory of his experimental music from action music to interactive musical art. See Nam June Paik, *Video 'n' Videology: Nam June Paik (1959-1973)* (Syracuse: The Everson Museum of Art, 1974), 3. This exhibition catalogue does not have page numbers. Instead, it uses the binary code system for numbering. For example, ○○○○○● means the first page, and ○○○○○●○ means the second page. "An Essay for the New Ontology of Music" is at ○○○○○●●. The translation into the decimal one is 3.

<sup>24</sup> Yongwoo Lee, *Nam June Paik kū ch'iyŏl han sam kwa yesul* (Seoul: Yeoluemsa, 2000), 80.

an open circuit. The materials before and after meeting Cage explicitly show how Paik improved his ideas about interactive art. In this significant period, Paik met Karlheinz Stockhausen in Darmstadt and Pierre Schaeffer in Paris. Paik's ideas about new music came from his active experiences with these composers.

Although Paik as a composer is well documented in some of his exhibition catalogues,<sup>25</sup> Paik as a music critic is not a well-known topic. However, his role as a music critic is essential for the study of his interactive art. Paik himself wrote music articles from 1957 to 1963, which overlapped with his academic years in West Germany.<sup>26</sup> This period also coincides with the stage of developing his interactive art. This study does not consider Paik's music articles to be academic critiques.<sup>27</sup> Instead, it examines them in order to find his personal ideas about new music, and his perspective on emerging art as an art practitioner. Paik's articles reveal his interest in new music and specific composers while developing his interactive art, and they indicate the philosophical link between his music and his interactive art. To avoid any confusion, this research uses English titles, which were translated from Korean and Japanese, from Nam June Paik's exhibition catalogue, *Nam June Paik*.<sup>28</sup>

Paik wrote an eight-part article titled "The Music of 20's Century,"<sup>29</sup> a single article named "A Report on the Paris Studio of Pierre Schaeffer and *Musique Concrète*,"<sup>30</sup> and a two-part article "Chance Music – The Yearly International Holiday

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<sup>25</sup> See John Cage, "On the Work of Nam June Paik," in *Nam June Paik: Video Time–Video Space*, edited by Toni Stooss and Thomas Kellein (New York: H.N. Abrams, 1993), 21-24.

<sup>26</sup> Paik studied in West Germany from 1956 to 1963.

<sup>27</sup> Paik considered himself a terrible critic, who manipulated facts to make interesting articles. See Nam June Paik, "Marcel Duchamp n'a pas pensé à la vidéo," in *Paik: Du cheval à Christo et autres écrits*, 210.

<sup>28</sup> John G. Hanhardt, ed. *Nam June Paik* (New York: Whitney Museum of American Art, 1982).

<sup>29</sup> Nam June Paik, "The Music of 20's Century," ^, August 17, 18, 19, 20, 21, 22, 23, and 25, 1958, 4. The original title is 廿世紀後半의 音樂 (20 세기 후반의 음악).

<sup>30</sup> This article was not published. The fact will be scrutinized in Chapter 2 in detail.



Courses for New Music in Darmstadt”<sup>31</sup> in 1958 and 1959 in the Korean newspaper *Chayushinmun*.<sup>32</sup> To discover how Paik became a foreign correspondent for new music in Europe, it is necessary to research the Korean newspaper that published his articles. *Chayushinmun*, which means “liberal newspaper” in Korean, was first published on October 5, 1945, soon after Korea’s independence from Japan. The president was Ik-In Jeong who used to be the editor for *Maeilsinbo*, which was a periodical for the Governor-General of Korea during the Japanese occupation. However, most workers at the newspaper company were from the moderate left and against the press restriction imposed by the United States Army Military Government in Korea.<sup>33</sup> After its independence from Japan, Korea struggled with poverty and disease, especially, cholera. The military government arrested Jeong due to a false article about cholera published on July 7, 1946.<sup>34</sup> After this trouble, right-wing politician, Ik-Hee Shin, became the president of the newspaper. He turned *Chayushinmun* into a conservative newspaper.<sup>35</sup> It closed on May 26, 1952, due to serious financial problems.

When it was reopened by the new president Nam-II Paik on September 7, 1953, *Chayushinmun* continued to maintain the right-wing stance to garner support from the major political party in South Korea. The newspaper had the perfect name for this goal since it had the same name as the major party. How could Nam June Paik publish his

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<sup>31</sup> Nam June Paik, “Chance Music,” January 6 and 7, 1959, 4. The original title is 偶然한 音樂 – 달브슈타트 音樂講座.

<sup>32</sup> According to the Revised Romanization of Korean by the Korean Government, *Jayusinmun* is the most correct English title. However, Paik used *Chayushinmun* in his C.V. This study follows Paik’s English title. See Nam June Paik, *Electronic Art II* (New York: Galeria Bonino, 1968).

<sup>33</sup> For the information on *Chayushinmun*, this study mainly uses an article from the on-line database of the National Institute of Korean History. See Boyeong Kim, “Jayusinmun,” accessed December 14, 2017. [http://db.history.go.kr/download.do?levelId=npfp&fileName=intro\\_npfp.pdf](http://db.history.go.kr/download.do?levelId=npfp&fileName=intro_npfp.pdf).

<sup>34</sup> Ibid.

<sup>35</sup> Ibid.

articles about progressive music in a conservative newspaper? How was he able to report several articles about new music in one of the poorest countries that desperately endeavored to escape from the ruins of the Korean War? The answer was that the president Nam Il Paik was Nam June Paik's elder brother. Nam Il was a successful businessman and a financial supporter of Nam June's study abroad. The family relationship made it easy for Nam June to be a foreign correspondent in West Germany.

His job for the newspaper facilitated his contact with Dr. Wolfgang Steinecke, the founder and chair of the International Summer Course for New Music (the Darmstadt Summer Course).<sup>36</sup> In the first letter to Dr. Steinecke on June 16, 1957, Paik introduced himself as a musicology student in Munich and as a foreign correspondent for *Chayushinmun*.<sup>37</sup> He emphasized that he would write an article about the music conference in the newspaper. He also stressed that he had graduated from the University of Tokyo with a thesis about Arnold Schoenberg's twelve-tone technique and might have an opportunity to introduce his writing about the conference in the professional music journal *Ongaku Geijutsu* (The Music Arts), too.<sup>38</sup> With the second letter to Dr. Steinecke on June 25, 1957, Paik included his Japanese thesis,<sup>39</sup> but Dr. Steinecke asked him to translate his thesis into German or English.<sup>40</sup> As an exceptional Asian correspondent,

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<sup>36</sup> According to the official website for the course, its original title is Internationale Ferienkurse Für Neue Musik, shortly, Darmstädter Ferienkurse. I follow its short English name form the English version of the website. See "Summer Course," Internationales Musikinstitut Darmstadt, accessed December 14, 2017. <http://www.internationales-musikinstitut.de/en/summer-course/info-en.html>.

<sup>37</sup> Heinz-Klaus Metzger and Rainer Riehn published the Darmstadt Summer Course archive including 44 letters between Paik and Steinecke. See Nam June Paik and Wolfgang Steinecke, "Der Briefwechsel Nam June Paik - Wolfgang Steinecke 1957-1961," in *Darmstadt-Dokumente I: Internationale Ferienkurse für Neue Musik*, ed. Heinz-Klaus Metzger and Rainer Riehn (München: Edition Text+Kritik, 1999), 110.

<sup>38</sup> Ibid.

<sup>39</sup> Ibid., 113.

<sup>40</sup> Ibid.

Paik kept Dr. Steinecke updated on the status of his articles to maintain this important relationship.

Paik was able to be a music reporter due to his family power regardless of his knowledge of new music. However, this does not mean that he was not qualified to publish his article in *Chayunshinmun* because he had already written an article for *Ongaku Geijutsu* a year before. In other words, he proved his ability to write a music article in the Japanese music magazine earlier than in the Korean newspaper. In a letter to Dr. Steinecke on December 20, 1957, Paik stressed that his article about the Darmstadt Summer Course received a positive review from a Japanese critic.<sup>41</sup> Since there is no exact reference given, it is hard to prove. However, his statement is most likely true. If his previous article had not received positive feedback, it would have been impossible for him to publish new music articles four times more after that. He published “The Bauhaus of Music,”<sup>42</sup> “The Twelve Tone Mannerism,”<sup>43</sup> “Serie, Chance, Space,”<sup>44</sup> “Après

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<sup>41</sup> Ibid., 112.

<sup>42</sup> Nam June Paik, “The Bauhaus of Music” *Ongaku Geijutsu* 15, no. 10 (1957): 106-108. The original title is “音楽のバウハウス – ダルムシュタット新音楽講座に出席して,” in English, “The Bauhaus of Music: Report on the International Summer Course for New Music in Darmstadt.”

<sup>43</sup> Nam June Paik, “The Twelve Tone Mannerism,” *Ongaku Geijutsu* 14, no. 9 (1958): 117-122. The original title is “12音マニエリスム? – シュトラスブール世界音楽祭,” in English, “The Twelve-tone Music Mannerism? – The International Society for Contemporary Music in Strasbourg.” Paik wrote its subtitle as “The International Music Festival in Strasbourg” in Japanese. In fact, the 20<sup>th</sup> International Music Festival in Strasbourg (1958) was in conjunction with the International Society for Contemporary Music (ISCM), which is annually held in a different city. In other words, they jointly held the music festival. I use the International Society for Contemporary Music in Strasbourg for the title because ISCM covers the International Music Festival in Strasbourg.

<sup>44</sup> Nam June Paik, “Serie, Chance, Space,” *Ongaku Geijutsu* 17, no. 13 (1959): 82-101. The original title is セリー・偶然・空間など.

Serie,”<sup>45</sup> “Karlheinz Stockhausen *Originale* – Music Theater,”<sup>46</sup> and contributed as a main speaker at the conference “The Avant-garde Music in the World”<sup>47</sup> through 1957 to 1963.

At that time, the Japanese government and Japanese people cruelly discriminated against Korean people in Japan. Most of them were immigrants and compulsory manpower draftees who worked for the Japanese military and in factories and remained after the Second World War. Most Japanese still considered these Koreans their colonial subjects. Even though Paik was an international student in the most prestigious university in Japan, he was not an exceptional case at all. No matter who they were, Koreans needed to hide their nationality in order to avoid discrimination. In the face of discrimination, how was Paik able to write several articles for the music journal? *Ongaku Geijutsu* was originally published as *Ongaku Bunka* (*The Music Culture*) on September, 1946. The music journal was renamed as *Ongaku Geijutsu* on February, 1963. The journal closed in December 1998. Musicologist William Marotti described *Ongaku Geijutsu* as a widely read journal.<sup>48</sup> In fact, many renowned musicians, composers, and musicologists

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<sup>45</sup> Nam June Paik, “Après Serie/1: Focusing on Cologne,” *Ongaku Geijutsu* 19, no. 3 (1961): 13-17. Nam June Paik, “Après Serie/2: People in the Second Period of New Music,” *Ongaku Geijutsu* 19, no. 5 (1961): 32-35. The original title is “セリー以後.” This is “After Serialism” in English. However, in the exhibition catalogue, *Nam June Paik*, it was recorded as ‘Après Serie’ in French. See Hanhardt, ed. *Nam June Paik*, 141. This project follows the record.

<sup>46</sup> Nam June Paik, “Latest Stockhausen Photo Repo: Karlheinz Stockhausen – ‘Originale,’” *Ongaku Geijutsu* 21, no 2 (1963): 36-46. The original title is 特集 2/ 最近のシュトックハウゼン フォトルボ /Karlheinz Stockhausen – *Originale*.

<sup>47</sup> Makoto Moroi, “Avant-garde and Music in the World – Part I,” *Ongaku Geijutsu* 21, no. 8 (1963): 38-47. Makoto Moroi, “Avant-garde and Music in the World – Part II,” *Ongaku Geijutsu* 21, no 9 (1963): 17-29. The original title is “世界の前衛と音楽(座談会).” These are conference transcripts. Paik talked about current Western music as well as his solo exhibition in Wuppertal. He was a main figure of the conference, which was moderated by Makoto Moroi.

<sup>48</sup> William Marotti, “Challenge to Music: The Music Group’s Sonic Politics,” in *Tomorrow Is the Question: New Directions in Experimental Music Studies*, edited by Benjamin Piekut (Ann Arbor: The University of Michigan Press, 2014), 113.

including Yoshio Nomura, Saburo Moroi, and Toshi Ichiyanagi<sup>49</sup> wrote articles for the journal. In particular, Paik was taught by Professor Yoshio Nomura at the University of Tokyo. Paik maintained a good relationship with Professor Nomura when he was in Munich. For his professor, Paik asked Dr. Steinecke whether Professor Nomura could have his registration fee waived or not.<sup>50</sup> With the help of Paik, the professor was able to attend the Darmstadt Summer Course in 1958.<sup>51</sup> Paik's school connection might contribute to easily contacting the editor of *Ongaku Geijutsu*. Furthermore, at the end of his first article in *Ongaku Geijutsu*, Paik introduced himself as a graduate of the University of Tokyo, and a PhD student of musicology in Munich.<sup>52</sup> In the description of himself, Paik appealed to Japanese elitism and longing for Europe.<sup>53</sup> An article about new music in Europe by a graduate of the University of Tokyo was enough to fascinate Japanese readers. This combination seemed to soothe the Japanese aversion to Koreans. It is not surprising that his first article was based on elitist music in Europe. It was not until he became an original artist that he broke from elitist ideals of music. This transitional perspective on music is well described in Paik's Korean and Japanese articles from 1957 to 1963. The process of removing elitist elements in music resulted in Paik's exploration of interactive art.

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<sup>49</sup> Toshi Ichiyanagi wrote an article about John Cage. See Toshi Ichiyanagi, "John Cage," *Ongaku Geijutsu* 17, no. 12 (1959): 10-15.

<sup>50</sup> Paik and Steinecke, "Der Briefwechsel Nam June Paik - Wolfgang Steinecke 1957-1961," 120-122.

<sup>51</sup> Exhibition catalogue *Nam June Paik Fluxus/Video* includes a photograph, which shows Nam June Paik, John Cage and Professor Nomura. The catalogue misspelt his name as Yorio Nomura. See Herzogenrath, ed., *Nam June Paik Fluxus/Video*, 23.

<sup>52</sup> Paik, "The Bauhaus of Music," 108.

<sup>53</sup> The author and educator Fukuzawa Yukichi coined the term *Datsu-A Ron* that means "De-Asianization," or leaving Asia for Europe in the late nineteenth century. This reveals Japanese desire to be equal to Europe beyond Asia. See Robert Tierney, "Going Native: Imaging Savages in the Japanese Empire" (PhD diss., Stanford University, 2005), 16.

In both Korea and Japan, Paik was an intelligent music critic and an academic reporter writing about new music in Europe. To be specific, these articles will reveal Paik's clear vision of music because he wrote them in his mother tongue Korean and his second language Japanese.<sup>54</sup> This is significant literature for exploring his philosophy on music and art. The intellectual ideas in the articles articulated his perspective on his music and art, and they anticipate his new kind of works for the future. In other words, Paik's articles contain not only a wealth of insight about new music but also several allusions to the pieces that he would soon create. In this regard, his Korean and Japanese articles are the key to demonstrating the originality of his interactive projects based on his music theory and practice. However, Korean and Japanese scholars have neglected the significant materials required to research Nam June Paik's interactive art. Furthermore, none of these articles have been translated into English, so no academic papers have fully explored the relationship between Paik's interactive art and his Korean and Japanese articles in Germany. In this regard, this study makes an original contribution to research on Paik's interactive art by examining his early Korean and Japanese writings about music and art.<sup>55</sup>

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<sup>54</sup> During the Japanese occupation, the Japanese education policy prohibited the use of students' mother tongue. To be specific, students received a penalty such as a cleaning activity when they used Korean at school. Due to this restriction, Paik could only use Japanese at school. However, he needed to use Korean at home because his mother did not know Japanese at all. See Nam June Paik, "La Mémoire médiatique," in *Paik: Du cheval à Christo et autres écrits*, 24-25. To him, Korean and Japanese were interchangeable; they share Chinese characters and have the same order of grammar. In particular, Paik preferred using Chinese characters because they prevented ambiguous meanings from homonyms. See Young-Oak Kim, *Stao Painting: A story of meeting with Nam June Paik* (Seoul: Tongnamu, 1992), 236. For this reason, Paik was very able to write articles in either Korean or Japanese.

<sup>55</sup> To get feedback from diverse voices of artists and theorists, I presented three proceedings with the topic, the relationship between his musical background and interactive art in ISEA2015, SEA2016 and ISEA2017. See Byeongwon Ha, "A Pioneer of Interactive Art: Nam June Paik as *Musique Concrète* Composing Researcher" paper presented at the annual meeting for International Symposium on Electronic Art, Vancouver, Canada, August 14-19, 2015). Byeongwon Ha, "An Origin of Interactive Art: Nam June Paik's Progressive Musical Instruments" (paper presented at the annual meeting for International Symposium on Electronic Art, Hong Kong, May 16-22, 2016). Byeongwon Ha, "Interactive Art Based on

## Interactive Art Based on Music

Interactive art mainly incorporates diverse media using multi-sensorial environments. The intertwining of media has been simultaneously developed from the blurred boundaries among science, music, theater, painting, bioengineering, sculpture, architecture, and so on. Likewise, various art scholars stress that interactive art does not have a singular origin, but plural ones from kinetic art, op art, constructivism, Fluxus, and Happenings. Peter Weibel explains algorithms in art as a main quality of kinetic art, op art, constructivism, Fluxus, and Happenings.<sup>56</sup> To appreciate kinetic art and op art, it is very necessary to read instructions first. Weibel insists that the instruction is similar to compositions in Fluxus works, and kinetic art and op art make virtuality from illusionism with the essential participation of spectators. Likewise, Ryszard W. Kluszczyński, who is a curator and a professor of multimedia art in Poland, insists that interactive art does not have a clear beginning. Instead, he suggests interactive art as a form of a rhizome since it is mobile, changeable and ambiguous.<sup>57</sup> He regards interactive art as “rhizomatic archipelagos.” In his article, “Viewer as Performer or Rhizomatic Archipelago of Interactive Art,” he indicates four possible origins of interactive art: kinetic art, action art, assemblage and electronic media.<sup>58</sup> Above all, action art mainly indicates Fluxus

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Musical Genealogy: Nam June Paik’s Random Access” (paper presented at the annual meeting for International Symposium on Electronic Art, Manizales, Colombia, June 11-18, 2017).

<sup>56</sup> Peter Weibel, “It Is Forbidden Not to Touch: Some Remarks on the (Forgotten Parts of the) History of Interactivity and Virtuality,” in *Media Art Histories*, ed. Oliver Grau (Cambridge, Massachusetts: The MIT Press, 2007), 21-42.

<sup>57</sup> The term “rhizome” is used by French philosophers Gilles Deleuze and French psychotherapist Félix Guattari. It was originally a biological term that means a continuously growing horizontal underground stem. The simple sentence “The rhizome is an anti-genealogy” describes that interactive art as Rhizomatic Archipelagos came from a hybrid environment. See Gilles Deleuze and Félix Guattari, *A Thousand of Plateau*, trans., Brian Massumi (Minneapolis: University of Minnesota, 1980), 11.

<sup>58</sup> Ryszard W. Kluszczyński, “Viewer as Performer or Rhizomatic Archipelago of Interactive art,” in *Relive: Media Art Histories*, eds. Sean Cubitt and Paul Thomas (Cambridge, MA: The MIT Press, 2013), 65.

theatrical performances as a participatory performance.<sup>59</sup> Other plural origins of interactive art include participatory kinetic art, assemblage, electronic media, conceptual art as “Rhizomatic Archipelagos,”<sup>60</sup> as well as system art, information art, and conceptual art.<sup>61</sup> In a similar context, art historian Katja Kwastek insists that the foundation of interactive media art is based on the cross-linking of different artistic genres and categories.<sup>62</sup> Due to its inherent interdisciplinarity, its academic position falls ambiguously under umbrella terms such as digital art, electronic art, computer art, or new media art.<sup>63</sup> That is the reason why scholars find it hard to clearly define what the new art is, even though the term has become popular today. Unlike other art forms such as film, sculpture, or ceramics, interactive art is seldom a discipline that is represented by academic departments in institutions of higher education in the United States. When represented, the field is usually included in art and technology, new media, digital media, emerging art, or digital art. This fact has been instrumental in limiting attention paid to interactive art in the academic discipline of art history. For these reasons, interactive art is still ambiguously characterized by artists and scholars alike. Unfortunately, these scholars omitted the early Fluxus member, Paik, and his action music and performance works in this category. In particular, even though Kluszczynski’s rhizomatic approach is useful for expanding the idea of interactive art, his perspective does not examine music as an origin of interactive art. Paik’s musical background is a core element for the invention of his

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<sup>59</sup> Ibid., 69-71.

<sup>60</sup> Ibid., 65-82.

<sup>61</sup> Edward A. Shanken, “Reprogramming Systems Aesthetics: A Strategic Historiography,” in *Relive: Media Art Histories*, ed. Sean Cubitt and Paul Thomas (Cambridge, Massachusetts: MIT, 2013), 84-96. Shanken reevaluates and develops Jack Burnham’s idea that artist Hans Haacke is the central character who overlapped these three fields.

<sup>62</sup> Kwastek, *Aesthetics of Interaction in Digital Art*, 9.

<sup>63</sup> Ibid., 1.



interactive art. My study will add music into the rhizomatic archipelagos, and it will trace Paik's musical interactive art in those rhizomatic archipelagos. I use the term "pre-interactive art," which refers to a childlike or primitive musical device just like musical instruments before the advent of piano, to distinguish it from Paik's later interactive art, which includes electric and electronic devices. This shows that he gradually developed interactive art with a musical approach. Finally, this approach will contribute to crediting the originality of interactive art to Nam June Paik.

## **Chapter Descriptions**

Paik created his own interactive art to surpass the progressive music of three extraordinary composers, Karlheinz Stockhausen, Pierre Schaeffer, and John Cage. Paik's Korean and Japanese articles, written while he studied in West Germany, mainly describe these three composers' music. The articles will be examined in chronological order to reveal the process by which his interactive art developed.

The first chapter mainly examines Paik's first Korean article "The Music of 20's Century." Paik described not only the Darmstadt Summer Course in 1957 but also other main music festivals in Europe. This article overlaps with his Japanese articles "The Bauhaus of Music" and "The Twelve Tone Music" They will be analyzed together to examine Paik's new ideas on music before meeting Cage and before becoming an active performer. This chapter mostly examines Paik's interpretation of Stockhausen's progressive music as a significant foundation for his interactive art.

The next chapter focuses on Pierre Schaeffer's *musique concrète*. Between the two Darmstadt Summer Courses of 1957 and 1958, Paik intensively researched and practiced

*musique concrète* and wrote a single short article about it. This chapter will trace why Paik did not actually publish this article, but later added it into his exhibition catalogue *Videa 'n' Videology: Nam June Paik (1959-1973)*. This article reveals Paik's changing ideas about music in 1958. Even though the article is unpublished, it has important material for bridging the large gap between Paik's thought about purist music and collage music in a practical way.

The third chapter mainly treats Paik's articles about Cage at the Darmstadt Summer Course in 1958. Paik explored this topic in his Korean article, "Chance Music," and his Japanese article, "Serie, Chance, Space." Even though Paik mainly mentioned Cage's chance compositions in both articles, Paik critically focused on Cage's performances and prepared piano. This chapter approaches Paik's interpretation of Cage's performances beyond his chance operation. This encouraged Paik to break from elitism in music and pursue a-music<sup>64</sup> experiments. This became a significant starting point for creating his interactive art.

The fourth chapter examines Paik's after-serialism articles about Cage and Stockhausen. Their "after serialism" experiments encouraged Paik to move from serialism to interactive art. In the transitional period, Paik developed interactive art in three different steps. Paik's action music naturally led to his pre-interactive art and interactive art in his first solo exhibition. These distinguishable steps reveal the process of developing Paik's interactive art and the significant transition from music to interactive art.

The fifth chapter critiques my PhD research and introduces my interactive art projects produced while I completed this study. I use three creative methods of Paik's

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<sup>64</sup> In a-music, "a" means without. Paik's definition of a-music will be discussed at greater length in chapter 3.

interactive art to make my own interactive art projects. First, I expanded Paik's *Random Access* into a web-based database sound project *Diligent Operator* (2016). Second, I used cross-modality from sound to visual images in *Endless Ripples* (2015). Finally, I experimented with visitors' mirror images on the white wall in *Floating Painting* (2016).

My study insists that Nam June Paik utilized perspectives on new music from experimental composers to create his interactive art. This fact can be discovered by analyzing his academic publications and artistic experiences in Germany. From my art research and art practice, I suggest that music as a genealogy of interactive art still can be a creative method to study and make interactive art.

## CHAPTER I: The Music of 20's Century

My life began one evening in August 1958 in Darmstadt. 1957 was 1 BC (Before Cage). 1947 was the year 10 BC. Plato lived in 2500 BC and not 500 BC [Before Christ].

-Nam June Paik<sup>65</sup>

In 1957, New Music was the center of all arts movements and Germany was the center of the New Music.

-Nam June Paik<sup>66</sup>

This chapter mainly analyzes Paik's first Korean article, "The Music of 20's Century." The eight-part article not only presents his review of the Darmstadt Summer Course in 1957 but also surveys contemporary progressive music in Europe. In this article, he concentrated on three core topics in music. First, Paik examined advanced techniques of serialism, developed by Arnold Schoenberg. Second, he criticized the phenomenon that serialism was the current fad among composers without original creativity. Finally, he explored how to overcome banal serialism with Stockhausen's experimental compositions. When Paik first met Stockhausen in Darmstadt in 1957, Stockhausen had become one of the most progressive composers by experimenting with random algorithms, space, and electronic interfaces in music. Paik was impressed with Stockhausen's new music, and he found the future for serialism in his compositions. For this reason, several biographies of Nam June Paik describe 1957 as an important year

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<sup>65</sup> Paik remembered the wrong date when he first met John Cage. He mentioned that he became a zealot for Cage after listening to Cage's *Variation I* performed by Tudor at the Darmstadt Summer Course on September 3 in 1958. See Nam June Paik, "Av. J. C. / Ap. J. C.," in *Paik: Du cheval à Christo et autres écrits*, 41-42.

<sup>66</sup> Herzogenrath, ed. *Nam June Paik: Fluxus/Video*, 1.

when he met Stockhausen during the Darmstadt Summer Course.<sup>67</sup> However, Stockhausen was not available to the music conference attendees. For this reason, Paik, music correspondent, could not have an interview with Stockhausen during the 1957 conference. It seems that Paik did not have any personal relationship with Stockhausen until he took part in the electronic music studio in Cologne because he asked several questions about broadcasting stations with the electronic music system and requested a letter of recommendation to Dr. Wolfgang Steinecke for the application to the electronic music studio instead of directly contacting Stockhausen who was a core member of the electronic music studio in Cologne.<sup>68</sup> As an aspiring twelve-tone composer, Paik described, in “The Music of 20’s Century,” Stockhausen as a significant role model for developing serialism in a more progressive way.

### **1.1 Nam June Paik as a Diligent Student in Both Musicology and Composition**

After completing his bachelor’s degree with a thesis about Schoenberg’s twelve-tone technique or serialism at the University of Tokyo in March of 1956, Paik headed for West Germany to continue to study serialism. During his journey from Tokyo to Munich, he saw diverse collections from Nepal, Bhutan, and Tibet at the Calcutta Museum, and then passed through Cairo, Alexandria, and the Mediterranean with its Renaissance

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<sup>67</sup> “1957: Meets Karlheinz Stockhausen” in Paik’s biography. See Sook-Kyung Lee and Sussanne Rennert, eds., *Nam June Paik* (London: Tate Publishing, 2010), 227. Paik’s meeting with Stockhausen was different from his meeting with Cage. Paik directly had an interview with Cage during the Darmstadt Summer Course.

<sup>68</sup> Paik and Steinecke, “Der Briefwechsel Nam June Paik - Wolfgang Steinecke 1957-1961,” 118-119. Paik described Stockhausen as not friendly but straightforward. See Paik, “Après Serie/1,” 13. Paik had a good relationship with Stockhausen after Paik became a member of electronic music in Cologne. Paik publish an article about Stockhausen including Paik’s interview with him. See Ibid., 12-14. It seems that after taking part in Stockhausen’s *Originale*, Paik stayed in closer contact with Stockhausen. Paik asked Stockhausen to write a letter of recommendation for a grant. See Park Sang Ae, ed. *Letters, Mary Bauermeister* (Yongin: Nam June Paik Art Center, 2015), 148.

culture.<sup>69</sup> He directly experienced diverse Middle Eastern and Western cultures that he studied as a student in the department of art history and aesthetics.<sup>70</sup> Even though he went to Germany to study music, he did not neglect his original interests in visual art. He finally settled in Munich on November 23, 1956, and enrolled in the winter/summer academic year to pursue a PhD in musicology at the Ludwig Maximilian University of Munich.<sup>71</sup> In the exhibition catalogue *Time Collage* in 1984, Paik himself commented on his first article in West Germany, “The Bauhaus of Music.” He studied musicology rigorously so as not to regret studying abroad.<sup>72</sup> As a second choice, he considered becoming a professor who taught the history of medieval Western music in South Korea.<sup>73</sup> Paik also recollected that he had “a kind of academic life” in his Germany period.<sup>74</sup> He was a diligent international student in the center of music.

Paik decided to write about Anton Webern (1883-1945) as the topic of his thesis in Munich.<sup>75</sup> Since he explored post-Schoenberg music, Schoenberg’s creative disciple Webern was a perfect composer for his thesis. However, Paik soon transferred to the Hochschule für Musik Freiburg (Freiburg Music Academy) in 1957 because obtaining a

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<sup>69</sup> A Letter to Rolf Jährling on December 22, 1962. See Paik, “The Letter to Rolf Jährling, Wuppertal,” in *Paik: Du cheval à Christo et autres écrits*, 366. Paik’s essay indicates his trajectory from Tokyo to Munich. See Nam June Paik, “Erinnerung an Muenchen,” in *Neue Musik: Sondernummer zum Kunsprogramm der Olymischen Spiele*, ed. Josef Anon Riedl (Munich: Druckerei Holzinger, 1972), 57.

<sup>70</sup> When Paik first encountered original art pieces that he had seen in books, he was disappointed because he could not find significant greatness as compared to artwork in Asia. See Young-Oak, *Stao Painting*, 251. His study abroad started with rejection of the unconditional conformity to regulations of the Western culture.

<sup>71</sup> Ibid.

<sup>72</sup> Paik, “Time Collage,” 8.

<sup>73</sup> Ibid.

<sup>74</sup> Susanne Rennert, “Nam June Paik: ‘On sunny days, count the waves of the Rhine. On windy days, count the waves of the Rhine.’ Nam June Paiks frühe Jahre im Rheinland (1958-1963),” in *Sediment: Nam June Paiks frühe Jahre im Rheinland*, ed. Günter Herzog (Wien: Moderne Kunst Nürnberg, 2005), 11.

<sup>75</sup> Seong Eun Kim, “My Television is Physical Music – A Who’s Who Companion to Paik’s Introduction and Afterlude,” in *NJP Reader #4: Exposition of Music*, eds. Seong Eun Kim and Sang Ae Park (Yongin: Nam June Paik Art Center, 2013), 44.

PhD required many years, and poor German contemporaries encouraged Paik to study music composition instead of musicology.<sup>76</sup>

In Tokyo University with strict academism soaked with admiration of Western cultures, our job was not to judge but to learn the Western music. Therefore if we would encounter a piece, which would not impress us, both teacher and students would rather say, “I don’t understand this one,” than to say “This is a bad piece”. ... Therefore the accumulation of mediocrity at Lahmbach Galerie finally killed my heavy minority complex of Asian composers, and it leads me to think that “I can compose at least as bad as they do.”<sup>77</sup>

Paik’s essay “Erinnerung an Muenchen” describes the reason for Paik’s return to the composition field after his failure at the Mainichi competition in Tokyo, an important event that changed Paik’s career path from composer to music historian.<sup>78</sup> His first Korean article, “The Music of 20’s Century,” was mixed with his education in musicology at the University of Munich and in composition at Freiburg Music Academy. In this regard, Paik’s in-between status in music helped him to write his articles from both perspectives as a composer and a musicologist.

## **1.2 Paik’s First Korean Article, “The Music of 20’s Century”**

Based on his theoretical and practical music education in Europe, in 1957 and 1958, Paik wrote “The Music of 20’s Century,” for the Korean newspaper

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<sup>76</sup> Paik, “Avant-garde and Music in the World – Part I,” 186.

<sup>77</sup> Paik, “Erinnerung an Muenchen,” 59.

<sup>78</sup> Ibid., 58. This music competition is 全日本学生音楽コンクール, which means Music Competition for All Japanese Students.

*Chayushinmun*. It was published from August 17 to August 25 in 1958.<sup>79</sup> This article is recorded as “‘The Music of 20’5 Century,’ *Chayushinmun*, Seoul (1958)” in Criticism & Interviews of Paik’s CV in the exhibition catalogue of *Electronic Art II* (1968), which was held in the Galleria Bonino, New York. However, the information disappeared in the following exhibition catalogue, *Electronic Art III* (1971). Most of his articles in Korea and Japan disappeared from his CV as he advanced his career in Europe and the United States. The article title reappeared in the Whitney Museum exhibition catalogue *Nam June Paik* in 1982. Some scholars in Korea such as Yongwoo Lee and Hong-Hee Kim briefly mention the article in their books.<sup>80</sup> However, the content of the article has hardly been researched by any scholars in either the West or the East.

The title “The Music of 20’5 Century” uses the prime symbol for music. 20’5 means 20 minutes and 5 seconds. However, Paik switched the minute measure into century one. It refers to the second half of twentieth century. It coincides with the title of the articles in Korean. In fact, the Korean article has the subtitle “Through the New Course in Darmstadt.” However, the subtitle disappears from the third serial article.<sup>81</sup> It seems that Paik deleted the subtitle since his articles dealt with a more comprehensive idea of music in the second half of the twentieth century.

Before publishing this Korean article, Paik visited three different music festivals in Germany and France in 1957 and 1958. As a foreign correspondent for new music, he first took part in the Darmstadt Summer Course in July of 1957. Paik wrote “The

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<sup>79</sup> On Sunday, August 24, 1958, the newspaper postponed publishing Paik’s last serial article to deal with a Sunday special topic.

<sup>80</sup> See Hong-Hee Kim, *Nam June Paik and His Art: Happening and Video Art* (Seoul: Design House, 1992), 126. And also see Yongwoo Lee, *Nam June Paik* (Seoul: Samsung Press, 1992) 49.

<sup>81</sup> The subtitle “Through the New Course in Darmstadt (<달브슈타트>의 新講座를 通하여)” disappeared after “Part II.”



Bauhaus of Music – Report on the International Summer Course for New Music in Darmstadt,”<sup>82</sup> which explained the yearly course in 1957, for the music journal *Ongaku Geijutsu* in October of 1957. He attended the Donaueschingen Music Festival in October of 1957, and the International Society for Contemporary Music (ISCM) in Strasbourg in June of 1958.<sup>83</sup> Paik’s other Japanese article, “The Twelve Tone Mannerism,” was also published in *Ongaku Geijutsu* in September of 1958. In between, Paik published his Korean article “The Music of 20’s Century” in August of 1958 by combining the two Japanese articles. The Korean article was seriously delayed until right before the next year’s Darmstadt Summer Course. The main reason was that the editor of the Korean newspaper was afraid that readers could not understand Schoenberg’s music, and so he asked Paik for an overview of his twelve-tone technique.<sup>84</sup> Also, Paik was busy with his new major in Freiburg and did not have enough time to expand his articles. During the delay, it seems that his plan to only publish a short article about the Darmstadt Summer course expanded into a series of reports on new music in Europe. Due to the delay, he was able to create a comprehensive new music article, “The Music of 20’s Century.”

### 1.3 The Bauhaus of Music, Medium-specificity, Purity, and Serialism

As mentioned, “The Music of 20’s Century” incorporates a major part of the Japanese article “The Bauhaus of Music,” which is a three-page-long paper for specialist

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<sup>82</sup> Paik omitted its subtitle “Report on the International Summer Course for New Music in Darmstadt” in his exhibition catalogue. See Hanhardt, ed. *Nam June Paik*, 141.

<sup>83</sup> One of Juries was Paik’s advisor Professor Wolfgang Fortner in the Freiburg Music Academy. See “*ISCM WMD 1958 Strassbourg*,” International Society for Contemporary Music, accessed January 12, 2018. <http://www.iscm.org/activities/wmds/iscm-wmd-1958-strassbourg>.

<sup>84</sup> Paik needed to explain serialism for ordinary readers in Korea. This fact was described in a letter from Paik to the chair of the Darmstadt Summer Course, Dr. Steinecke on May 10, 1958. See Paik and Steinecke, “Der Briefwechsel Nam June Paik - Wolfgang Steinecke 1957-1961,” 118.

music readers. As compared to his articles in the Korean newspaper, it contains more professional views on new music. In this regard, “The Bauhaus of Music” is essential for any study of Paik’s understanding of new music at the Darmstadt Summer Course in 1957. The Bauhaus was a German institute which incorporated all visual arts, seeking a new mixture of art and modern technology.<sup>85</sup> The founder, Walter Gropius, described:

The Bauhaus embraced the whole range of visual arts: architecture, planning, painting, sculpture, industrial design, and stage work. The aim of the Bauhaus was to find a new and powerful working correlation of all the processes of artistic creation to culminate finally in a new cultural equilibrium of our visual environment.<sup>86</sup>

In fact, the Bauhaus went beyond the visual realm. Gropius focused on Bauhaus professor Laszlo Moholy-Nagy’s Bauhaus stage, which offered a synthesis of form, motion, sound, light, color and scent.<sup>87</sup> Similarly, Gropius sought to create a total art in theater, which was called “Total Theater.”<sup>88</sup> They not only designed a theater building, but also created cross-disciplinary events as total art. However, Paik neglected this collage of media when he wrote articles about the 1957 Darmstadt Summer Course. In “The Music of 20’s Century,” Paik describes that the building of the Darmstadt Summer Course looked like a Bauhaus building, which is a pure (or clear) building with slippery

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<sup>85</sup> Walter Gropius, introduction to *The Theater of the Bauhaus*, ed. Walter Gropius, trans. Arthur S. Wensinger (Middletown: Wesleyan University Press, 1961), 7.

<sup>86</sup> Ibid.

<sup>87</sup> Ibid., 10.

<sup>88</sup> Ibid. After attending the Darmstadt Summer Course in 1958, Paik published “Serie, Chance, Space” in *Ongaku Geijutsu*. This article discussed spatiality in music, which inspired Paik to create his ‘pure theater.’ This development will be dealt with in chapter 3 and 4.

surface.<sup>89</sup> The building was a good example for pure architecture, which got rid of decorations. He was an enthusiast for purity in music because he followed twelve-tone music, which is one of the purest forms in the most abstract art, music.

Paik argued that pure music tries to find its own logic without any description of objects and particular emotion.<sup>90</sup> His understanding of pure music is based on the idea of medium-specificity. As mentioned, Paik's major was aesthetics and art history. Even though Paik did not directly mention medium-specificity, he seemed to apply it to serialism. Art critic Gotthold Ephraim Lessing described medium-specificity as the suppression of qualities of other art forms and the autonomy of each medium. In *Laocoön*, Lessing explores how to distinguish one medium from another. For example, he thinks that in poetry we have the wrathful Jupiter, who hurls the thunderbolt. However, in visual art, Jupiter is simply an austere figure. Unlike the poetry about Laocoön, Lessing emphasizes that in the *Laocoön* sculpture, anguish must be softened into sadness and screams must be reduced to sighs because they would deform the countenance to a repulsive degree.<sup>91</sup> In the same context, Johann Joachim Winckelmann argues that extremes become so unnatural that sedate grandeur in Greek sculpture can be attacked unlike Greek writings in his writing, "On the Imitation of the Painting and Sculpture of the Greeks."<sup>92</sup> Art historian Simon Shaw-Miller examines Winckelmann's idea:

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<sup>89</sup> Paik, "The Music of 20's Century – Part II," 4.

<sup>90</sup> Ibid.

<sup>91</sup> Gotthold Ephraim Lessing, *Laocoön: An Essay Upon the Limits of Painting and Poetry*, trans. Elen Frothingham (Cambridge: John Wilson & Son, 1887), 11-13.

<sup>92</sup> Johann Joachim Winckelmann, "On the Imitation of the Painting and Sculpture of the Greeks," in *Winckelmann: Writings on Art*, ed. David Irwin (London: Phaidon, 1972), 72-73.

The display of strong emotion or impassioned movement would distort the purity of form, he argues, and in the visual arts formal considerations must always control expression. Poetry, by contrast, could display strong emotion without disrupting form.<sup>93</sup>

This idea led to art critic Clement Greenberg's support for purity in art. In his essay, "Towards a Newer Laocoön," he emphasized purging literature from painting to achieve absolute autonomy. He explores how to distinguish painting from literature. Greenberg insisted that Courbet was the first real avant-garde painter who tried to reduce his art to immediate sense data by painting only what the eye could see as a machine unaided by the mind.<sup>94</sup> He took for his subject matter prosaic contemporary life. He broke the concrete relationship between painting and literature, and demolished official bourgeois art. Greenberg emphasized an abstract art as an art of 'pure form,' and "purity in art consists in the acceptance, willing acceptance, of the limitations of the medium of the specific art."<sup>95</sup> This Greenbergian idea coincided with serialism, which Paik was fascinated with until attending the 1958 Darmstadt Summer Course.

Moreover, Paik took three courses, Theory and Method of Critical Forms, Formation and Early Days of the Christian Church Building, and Exercise for Advanced Course, from art historian Hans Sedlmayr from 1956 to 1957.<sup>96</sup> In fact, Sedlmayr rejected purity in art including twelve-tone music. However, it cannot be simplified that since he

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<sup>93</sup> Simon Shaw-Miller, *Visible Deeds of Music: Art and Music from Wagner to Cage* (New Haven: Yale University Press, 2002), 5.

<sup>94</sup> Clement Greenberg, "Towards a Newer Laocoön," in *Clement Greenberg. The Collected Essays and Criticism* (Chicago: University of Chicago Press, 1986), 29.

<sup>95</sup> *Ibid.*, 32.

<sup>96</sup> Paik, *Nam June Paik Fluxus/Video*, 21.

was a Nazi, he rejected the Jewish composer Schoenberg's style.<sup>97</sup> It is necessary to examine why Sedlmayr did not agree with twelve-tone technique. Based on his academic experiences, Paik introduced Korean readers to the four qualities of modern art from Professor Sedlmayr: the intention toward purity (abstractionism), geometrical construction (functionalism), absurdity (surrealism), and longing for the primitive (expressionism).<sup>98</sup>

These qualities originally came from Professor Sedlmayr's book *Die Revolution der Modernen Kunst*.<sup>99</sup> In his book, Sedlmayr explained that purity is not affected from structures or elements of other arts. He emphasized that this absolute concept is not for art but science such as chemistry.<sup>100</sup> Moreover, he negatively regarded extreme purist painting as unstable and indeterminate meaningless non-objective art.<sup>101</sup> This non-objective painting does not represent any meaning. He stressed that the disconnect between image and its meaning led purist painting to be a failed work of art,<sup>102</sup> and the chance or indeterminate approach could not be the advantage of art since it disregards universal meaning and the natural human interest in meaning.<sup>103</sup> Instrumental music does not represent phenomena because it is inherently abstract. Even though other forms of art

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<sup>97</sup> Even though Sedlmayr did not agree with racism in art history, it is true that he was a member of the Nazi party, and politically against Jewish people. See Branko Mitrović, *Rage and Denials Collectivist Philosophy, Politics, and Art Historiography, 1890–1947* (University Park, Pennsylvania: The Pennsylvania State University Press, 2015), 19 and 67. Sedlmayr's perspective was based on German nationalism. Some German art historians including Julius Langbehn wrote a theory about the Italian Renaissance as an achievement of German blood. Likewise, pro-Nazi scholars claimed that German art originated from Greek art, and it developed as Renaissance and Gothic art. They emphasized that German art is not a peripheral boundary but the center of European art. See *Ibid.*, 77.

<sup>98</sup> Paik, "The Music of 20's Century – Part III," 4.

<sup>99</sup> It means *The Revolution of Modern Art* written in 1955. I used the Korean version of *Die Revolution der modernen Kunst*. See Hans Sedlmayr, *Die Revolution der modernen Kunst*, trans. Sang Sik Nam (Seoul: Hangilsa publishing Co., 2001).

<sup>100</sup> *Ibid.*, 45.

<sup>101</sup> *Ibid.*, 75.

<sup>102</sup> *Ibid.*, 67.

<sup>103</sup> *Ibid.*, 67-69.

were fundamentally different from music, Sedlmayr argued, they follow the purity of music. He stressed that to apply purity in twelve-tone technique to purist painting was impossible because artists could not make an agreement with the systematic structure of the painting.<sup>104</sup> He rejected twelve-tone music because he regarded artificial purity as an inhuman form, which rejects a real appreciation, and which results in meaningless art.<sup>105</sup> He mainly insisted that purist art results from mathematics and science, and thus he maintained a conservative perspective.<sup>106</sup> He did not seem to acknowledge electronic music based on these two scientific methods. When Paik wrote his first Korean article, he had already been fascinated by Stockhausen's experimental music, in particular, electronic music. For this reason, even though his professor rejected purity in art, Paik positively emphasized purity as the abstract concept to support twelve-tone composition as a purist style. This demonstrates that Paik was not yet interested in the synthesis of art from the Bauhaus. When the founder of the Darmstadt Summer Course, Dr. Wolfgang Steinecke, began hosting the courses, he wanted to make it a sort of summertime university with talented composers from diverse countries, and he hoped that this institution would give rise to a 'musical Bauhaus',<sup>107</sup> as Paik described it is a base camp for avant-garde composers, critics, and musicians, who came from around 20 countries, against commercial musicians and the obstinate academy.<sup>108</sup> Just as the Bauhaus incorporated a whole range of visual art in a new way, it seems that the Darmstadt Summer Course sought to include a variety of styles of music in a progressive way. Luigi

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<sup>104</sup> Ibid., 100.

<sup>105</sup> Ibid., 99.

<sup>106</sup> Ibid., 101.

<sup>107</sup> Michael Kurtz, *Stockhausen: Biography* (Boston: Faber and Faber, 1991), 31.

<sup>108</sup> Paik, "The Music of 20's Century – Park II," 4

Nono called the musical Bauhaus the Darmstadt School.<sup>109</sup> Paik also mentioned that the Darmstadt Summer Course reminded him of the Bauhaus.<sup>110</sup> It is evident that Paik did not try to mix disciplines during the Darmstadt Summer Course in 1957, although his mentioning of Bauhaus might allude to his collage art, action music, and theatrical music later. Instead, he used the term Bauhaus as a popular metaphor of a progressive art. In this regard, it seems that Paik borrowed Bauhaus to emphasize not its quality of total art, but its new way of creating art.

The first and second serial articles of “The Music of 20’s Century” share the same ideas with “The Bauhaus of Music.” The Korean article has the subtitle “Through the New Course in Darmstadt,” which refers to the 1957 Darmstadt Summer Course. This subtitle implies that Paik regarded the new music in Darmstadt as the main element of the music of the second half of the 20th century. In the end of the 20<sup>th</sup> century, Paik mentioned in the beginning of the exhibition catalog of *Nam June Paik Fluxus/Video*:

*In 1957, New Music was the center of all arts movements and Germany was the center of the New Music.*

*-Paik 1999*

*This is my Text for 2000.*<sup>111</sup>

Paik thought that the Darmstadt Summer Course was the center of art because music that moves toward serialism becomes a leading medium for art movements. Music was always behind the visual arts, which used to be the more avant-garde media.<sup>112</sup> To

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<sup>109</sup> Paik, “Bauhaus of Music,” 106.

<sup>110</sup> Paik, “The Music of 20’s – Part II,” 4.

<sup>111</sup> Herzogenrath, ed. *Nam June Paik: Fluxus/Video*, 1.

<sup>112</sup> Paik, “The Music of 20’s Century – Part III,” 4. Paik focused that the inherent quality of music is not to be realism, but to be abstract. He thought that music prevailed over the others because the other art disciplines followed the purist approach.

explain contemporary music in Europe, Paik pointed out three significant events of new music: revealing composers' personality in music, leaving Christian music for vernacular music, and finally Schoenberg's twelve-tone music.<sup>113</sup> What made Paik interested in the progressive music, serialism? Paik's music against bourgeois tradition was related to his dissatisfaction with father's business, which made a lot of money in a negative way.<sup>114</sup> His aversion to the rich business led to Marxism.

During the Japanese occupation, a large number of Korean students who rejected the gap between bourgeois and proletariat became fascinated by Marxism.<sup>115</sup> Paik recollected that he was an active socialist who was involved as a representative in a socialist meeting in Gyeonggi middle school,<sup>116</sup> which was the best middle school in Korea. He learned music from an exceptional teacher, Geon Woo Lee, who was not only a socialist, but also a progressive composer. In a Japanese music magazine, Lee found Schoenberg's twelve-tone music, or serialism. Lee thought that it was similar to Marxism

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<sup>113</sup> Paik, "The Music of 20's Century – Part I," 4.

<sup>114</sup> Paik said that he left his family due to Marxism. See Young-Oak, *Stao Painting*, 226. After independence from Japan, Paik's father, Nak Sung, had a good relationship with the major political party in Korea, just as he did with the Governor-General of Korea during the Japanese occupation. This political and economic relationship dramatically helped Nak Sung to grow his business in the difficult period after the Korean War. Nam June recognized that his father was a very corrupt businessman. He witnessed his father's immoral political lobbying and profiteering. During the occupation by Japan, his father had donated a fighter plane to the Japanese Air Force in order to get a bank loan. After independence from Japan, Nam June overheard several phone conversations between his father and politicians from the major party. His father lied to both his own business partner and Mr. Ahn, the powerful secretary of President Rhee, to make a powerful relationship with the government. After hearing this, Nam June could only think of what a liar his father was and Nam June loathed being the liar's son. Youngwoo Lee, "NJP: A Walk Through His Adolescent Years," in *The Electronic Super Highway: Travels with Nam June Paik*, ed. Marcella Allison (Cincinnati: Carl Solway Gallery, 1995), 11-12.

<sup>115</sup> Under the Japanese occupation, many Korean intellectuals thought that the loss of their country was due to its impotent feudal hierarchies. To be specific, Marxism's breaking of the hierarchical system and making it an equal social structure fascinated the intellectuals under the Japanese occupation. Therefore, they considered Marxism as a perfect response to both the Governor-General in Korea and the powerlessness of their country.

<sup>116</sup> Im, *Aesthetics of Convergence*, 13. Basically, the Korean middle school merged the modern-day middle and high school systems. In other words, middle school incorporated the entire sixth - to twelfth - grade curriculum.



at first glance. When Lee introduced serialism to Paik in 1947,<sup>117</sup> Paik, an aspiring Marxist, also focused on the similarity between Marxism and serialism. Paik recognized that tonality is a kind of class system that supports the hierarchical system. Paik stressed that Arnold Schoenberg broke tonality, and gave the chaotic results a new order. The technique uses twelve tones equally by breaking a traditional chord. Paik likened the technique as a key to break collective punishment and hierarchies.<sup>118</sup> However, in his Marxism he was not serious as an activist. He said:

At that time, Korea was a tremendous hierarchical society. To pretend to be an intellectual, we needed a Marxism badge. This was a vanity from all those who were intellectuals and rich men.<sup>119</sup>

He was disappointed that the idea of socialism was not connected to the real socialism in North Korea. This gap between the theory and the practice negatively changed his mind toward Marxism. After this, his progressive characteristics stayed only in his art realm. He mentioned that he still admired Karl Marx for the fact that he took the “hypocritical façade” away from the high posture of art.<sup>120</sup> In a similar way, he confessed that he was disappointed in Schoenberg’s piece when he listened to it at first. Schoenberg gave Paik very ambivalent feelings; he did not like Schoenberg’s compositions, but liked his ideas.

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<sup>117</sup> Yongwoo, *Nam June Paik kũ ch'iyŏl han sam kwa yesul*, 40.

<sup>118</sup> Paik, “The Music of 20<sup>th</sup> Century – Part I,” 4.

<sup>119</sup> Yong-Oak, *Stao Painting*, 226. Paik’s Marxism naturally followed serialism as a new music style beyond hierarchies first. During the Korean War, Lee went to North Korea to practice Marxism. However, Paik was disappointed with the North Korean socialism when he witnessed the actions of North Korean soldiers in his house. They were not the socialists that he expected. He hoped that the invading soldiers would find the Marxist books that he hid since they were illegal in South Korea. Instead of finding the books, the soldiers ate his dogs. See. David Ross, “A Conversation with Nam June Paik,” in *Nam June Paik: Video Time–Video Space*, ed. Toni Stooss and Thomas Kellein (New York: H.N. Abrams, 1993), 64.

<sup>120</sup> Yongwoo, “NJP,” 10.

In other words, Paik still loved Schoenberg because he was extremely progressive.<sup>121</sup>

Paik respected Schoenberg as the most progressive artist. For this reason, Paik began with Schoenberg's serialist method, which combines twelve tonal orders and 48 patterns to compose music,<sup>122</sup> and continued to study serialism developed by brilliant composers.

Paik explored the development of serialism, and pointed out Anton Webern who is the father of Pointillism, which is created by splicing melody, tune and metrics<sup>123</sup> and Olivier Messiaen who explored not only irrational rhythms from Indonesian music and birdsongs, but also *Charme De Impossibilité* by serializing rhythm, timbre, and dynamics. Paik insisted that avant-garde composers of the second half of the twentieth century began with these three qualities: twelve-tone technique; Pointillism; and the organization of segmented rhythm, dynamics and pitch. They were against the traditional chord in music. With the synthesis of these three qualities, Paik focused on Stockhausen, who developed serialism in creative ways including electronic music.

#### 1.4 The Twelve Tone Mannerism

When Paik studied in Munich, he actively explored a more progressive version of serialism as compared to normal popular serialism music. To discuss the popularity of twelve-tone music, Paik used mannerism as a style of sixteenth and seventeenth century

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<sup>121</sup> Nam June Paik, "My Jubilee ist Unverhemment," in *Paik on Paper: Sammlung Peter Wenzel*, ed. Thomas Paulus (Köln: Salon verlag, 2006), 10

<sup>122</sup> Schoenberg's twelve-tone music follows these rules:

The twelve notes must be arranged in a definite order (the tone row).

Each composition is created around its own tone row.

The twelve tones can be used in a melody in any order, provided that no tones are repeated before any others are used.

Each tone is given equal importance.

The tone row may be inverted or reversed. See Thom Holmes, *Electronic and Experimental Music: Technology, Music, and Culture* (New York: Routledge, 2012), 62.

<sup>123</sup> Paik, "The Music of 20's Century – Part I," 4.

art between the High Renaissance and Baroque<sup>124</sup> in “The Twelve Tone Mannerism.” In fact, mannerism has two opposing meanings. Whereas John Shearman interpreted its origin, *maniera* not just as style but as refinement, sophistication, elegance, and polish,<sup>125</sup> Craig H. Smyth insisted that mannerism is “conventions of figure,” a repertory of expression.<sup>126</sup> Similar to Smyth’s idea, Paik used the term *mannerism* as a negative style in art from common art historians including Luigi Lanzi who considered mannerism as the preponderance of imitations of a recognized master’s works in a literal and servile manner before Shearman restored it as a positive art style in the mid twentieth century.<sup>127</sup> Paik thought that twelve-tone technique was the majority style of the period, and twelve-tone music was imitated much like painting style in mannerism during the sixteenth and seventeenth century.<sup>128</sup>

To explain mannerism in serialism, Paik mentioned the relationship between quantity and quality in art. Paik clearly explained his idea of beauty:

Even though Dior dresses are great, unless fashionable women in Seoul wear them, they could not be the contemporary style.<sup>129</sup> Conversely, even if they liked to put on Dior, it would not raise the value of Dior because beauty does not care about the consensus from the public or a democracy.<sup>130</sup>

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<sup>124</sup> Paik, “The Music of 20’s Century – Part V,” 4. And Paik “The Twelve Tone Mannerism,” 117.

<sup>125</sup> Henri Zerner, “Observations on the Use of the Concept of Mannerism,” in *The Meaning of Mannerism*, eds., Franklin W. Robinson and Stephen G. Nichols, Jr. (Hanover, New Hampshire: University Press of New England, 1972), 106-107. John discussed to reevaluate mannerism at the Accademia Nazionale dei Lincei in 1960 and the International Congress of the History of Art in New York in 1961 and published his book *Mannerism* in 1967.

<sup>126</sup> *Ibid.*, 109.

<sup>127</sup> Paul Van Den Akker, *Looking for Lines: Theories on the Essence of Art and the Problem of Mannerism* (Amsterdam: Amsterdam University Press, 2010), 28.

<sup>128</sup> Paik, “The Music of 20’s Century – Part V,” 4.

<sup>129</sup> In Paik’s Japanese article, “The Twelve Tone Mannerism,” Paik uses fashionable women in Ginza Street where one of the most luxurious shopping districts in the world instead of in Seoul.

<sup>130</sup> Paik, “The Music of 20’s Century – Part V,” 4.

He was afraid of the mannerism of serialism, in which rare ‘quality’ composers were overwhelmed by a ‘quantity’ of composers as a negative mannerism.<sup>131</sup> Paik emphasized the elite idea of genius to resolve the issue. He quoted Schoenberg’s words:

If it is art, it is not for all,

If it is for all, it is not art.<sup>132</sup>

In “The Bauhaus of Music,” Paik mentions Sedlmayr’s idea that art history should be read in the interrelationship among the development of style, chance, necessity, genius, snobbery, and the tension between personality and style. However, Paik focused much more on the genius part than environment, tradition, and the bloody relationship in “The Music of 20<sup>th</sup> Century.” He denied the gradual development of art. Instead, Paik emphasized that artists must have the quality of genius to escape from mannerism in music, which imitated great artists’ works. He believed that a few elite artists created the criterion of beauty. He agreed that interpreting an artist from the iconographic perspective had limitations since the quality of genius is not from his environmental and genetic elements, but chance.<sup>133</sup> Paik cited Immanuel Kant: “scholars such as Isaac Newton should not be considered as a genius because science was based on the causality.”<sup>134</sup> He could achieve his goal as he put the efforts to his project. Only an artist could be called a genius since it is based on chance.”<sup>135</sup> Finally, Paik added Albert Schweitzer’s word to the genius description: because the quality of genius is the core

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<sup>131</sup> Ibid.

<sup>132</sup> Arnold Schoenberg, *Styles and Idea*, ed. Dika Newlin (New York: Philosophical Library Inc, 1950), 50-51. This was recited from Paik’s Japanese article. See Paik, “The Bauhaus of Music,” 107.

<sup>133</sup> Paik, “The Music of 20<sup>th</sup> Century – Part VI,” 4.

<sup>134</sup> Immanuel Kant, *The Critique of Judgement*, trans. Werner S. Pluhar (Indianapolis/Cambridge: Hackett Publishing Company, 1987), 174-176.

<sup>135</sup> Ibid.

element in art, the historical necessity of a development of style could not exist.<sup>136</sup> Paik thoroughly connected the ideas of genius and chance together. In other words, Paik emphasized that great artists could not be nurtured since their qualities are innate. Paik researched Stockhausen as a genius who saved serialism from its inevitable mannerism.

### **1.5 Karlheinz Stockhausen as a New Generation of Serialism**

Even though Stockhausen is often mentioned as a main figure for Paik right before meeting Cage in several publications, there has been little information known about the musical relationship between Paik and Stockhausen as compared to the relationship between Paik and Cage. For this reason, materials about his music background before the encounter with Cage have been mainly limited to Schoenberg. In other words, Paik's formative period between Schoenberg and Cage is relatively unknown. It is true that Schoenberg's impact on Paik was so significant that Paik decided to study abroad in Germany.<sup>137</sup> However, soon after witnessing serialism in West Germany, Paik was fascinated by post-Schoenberg music. In particular, Paik's radical ideas to create his project started with Stockhausen's experimental music. Like Paik, Stockhausen also expressed much enthusiasm for Schoenberg and his twelve-tone music since 1949.<sup>138</sup> Paik thought that Stockhausen's compositions were creative developments against banal serialism.

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<sup>136</sup> He did not mention its original reference. See Paik, "The Music of 20's Century – Part VI," 4.

<sup>137</sup> Paik said that "the reason I went to Germany was Schoenberg, and the reason I went to America was Cage." See Paik, "Marcel Duchamp n'a pas pensé à la vidéo," 202.

<sup>138</sup> Kurtz, *Stockhausen*, 26.

From his purist and elitist perspective, Paik mostly analyzed Stockhausen's new music in the Darmstadt Summer Course. In "The Music of 20's – Part I and II,"<sup>139</sup> Paik starts with Schoenberg and his talented pupil, Webern, and ends with Stockhausen, one of the most respected composers in Darmstadt.<sup>140</sup> This also shows the transition from mathematical to parametric, to algorithmic, and electronic elements in music. This chronological trajectory coincides with the development from twelve-tone music to electronic music.<sup>141</sup> Paik insisted that Karlheinz Stockhausen in Germany, Pierre Boulez in France, and Luigi Nono in Italy were the leading experimentalists.<sup>142</sup> Paik dealt with Stockhausen in four articles among the eight serial articles as one of the most important composers in post-serialism.<sup>143</sup> Paik illustrated that Stockhausen created electronic music because pianists could not play his difficult notation, furthermore he gave them an opportunity to loop his note randomly to emphasize the pianist's subjectivity.<sup>144</sup> In particular, Paik emphasized three exceptional elements of Stockhausen's compositions in the Korean article: random algorithm in music, space in music, and electronic music.

### 1.5.1 Random Algorithmic in Music

Paik was impressed by Stockhausen's random access methods, which allow data to be approached in a nonlinear way.<sup>145</sup> Paik explained *Klavierstück XI* (1953), which

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<sup>139</sup> As mentioned, the first and second articles have its subtitle "Through the New Course in Darmstadt."

<sup>140</sup> Paik, "The Music of 20's – Part I," 4.

<sup>141</sup> Holmes, *Electronic and Experimental Music*, 66-68.

<sup>142</sup> Paik, "The Music of 20's – Part I," 4.

<sup>143</sup> This post-serialism does not mean after-serialism, but late serialism.

<sup>144</sup> Ibid.

<sup>145</sup> Even though Paik did not directly mention random access, he exactly explained random access. Instead of the term, he explained this linear method as no intention, or absence. See Paik, "The Music of Bauhaus," 107, and Paik, "The Music of 20's Century – Part I," 4. *Klavierstück XI* consists of "nineteen length-related groups of notes distributed in random formation on a sheet of paper. The performer looks 'at random and begins with any group, the first that catches his eye; this he plays, choosing for himself tempo, dynamic

allows performers to choose the order of music so that a pianist is able to start and play randomly.<sup>146</sup> Umberto Eco's first book, *The Open Work* (1962), similarly examined the same composition of Stockhausen.<sup>147</sup> In Chapter 1, "The Poetics of the Open Work," Eco recognizes a common feature in a number of recent compositions, which is "the considerable autonomy left to the individual performer in the way he chooses to play the work, such as the length of a note and the order to group the sounds."<sup>148</sup> Above all, Eco mentions Stockhausen's *Klavierstück XI* as a distinguished example for the phenomenon. In Stockhausen's musical algorithm, the performer has to select any note grouping and make his or her own narrative. Because Paik's article was four years earlier than Eco's, Paik could not be inspired by Eco's writing. In fact, Eco drafted it in 1958.<sup>149</sup> They respectively perceived this avant-garde atmosphere in music in Europe. Paik used 'random access' from computer science to explain not computer works but Stockhausen's approach in music. He pointed out that when the same patterns are repeated three times in *Klavierstück XI*, the pianist ceases to play.<sup>150</sup> Stockhausen's rule-based composition was instructional, mathematical, and algorithmic. Paik asserted the main exploration of the Darmstadt Summer course was the dialectic nexus between chance and the organization of whole music materials.<sup>151</sup> In other words, the outstanding phenomenon of the courses

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level and type of attack." See Jonathan Harvey, *The Music of Stockhausen* (Berkeley: University of California Press, 1975), 77.

<sup>146</sup> Paik, "The Music of 20'5 – Part I," 4.

<sup>147</sup> Umberto Eco, *The Open Work*, trans. Anna Cancogni (Cambridge, Massachusetts: Harvard University Press, 1989), 1.

<sup>148</sup> Ibid.

<sup>149</sup> Hanna Hölling, *Paik's Virtual Archive: Time Change, and Materiality in Media Art* (Oakland: University of California Press, 2017), 54.

<sup>150</sup> Paik, "The Music of 20'5 – Part I," 4.

<sup>151</sup> Paik, "The Music of 20'5 – Part II," 4.

was the relationship between order and disorder.<sup>152</sup> For this paradoxical relationship, Paik emphasized the combination between chance and organization in music.

Paik introduced another aspect of chance music briefly: *Zeitmaße* (1955-56) has five specific qualities including a measurable tempo, as slow as possible, as fast as possible, starting very fast to slow down to a quarter rhythm, and the reverse of the fourth.<sup>153</sup> This is a popular mathematical algorithm to design a dynamic variation in art today. The British composer Jonathan Harvey explains these five qualities more clearly:

- 1. Metronome-measured time, with the familiar chromatic scale of twelve tempo per octave, i.e. from a speed to its double speed.*
- 2. The instruction 'as fast as possible'. This applies to the speed at which one can perform the shortest notes of the passage. Obviously, there may be long durations as well, which may seem as if in a slow tempo.*
- 3. The instruction 'as slow as possible, in one breath'. This means a passage or group-field whose time has to be estimated as a whole, and the parts then fitted inside that whole in the right proportions of note value. The other instruments take this instrument's choice of tempo as their normative tempo on these occasions.*
- 4. The instruction 'fast - slow down' means an even progression from maximum speed to about four times as slow over the group-field-size, which may be short or long, and therefore either violent or gradual.*

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<sup>152</sup> This is a well-organized piece with algorithmic rules with random algorithms. This method is popular in computer-generated art to simulate natural changes in the digital works. See Christa Sommerer and Laurent Mignonneau, "Modeling the Emergence of Complexity: Complex Systems, the Origin of Life and Interactive On-Line Art," *Leonardo* 35.2(2002): 161.

<sup>153</sup> Paik, "The Music of 20'5 – Part II," 4.



5. The instruction 'slow – get faster', the reverse of No. 4 (Above).<sup>154</sup>

The measured time from the second to the fifth qualities depends on relative tempos, which make chance results, affected by anything from the musical instrument to the musician's personality as a new method to make music. This method was against Western traditional music, which had precise tempos and durations. Paik did not neglect these subversive variables to make his music. It seems that Paik connected Stockhausen's approach with somewhat irregular Asian rhythm in his composition. According to a letter from Paik to Dr. Steinecke on February 5, 1958, Paik experimented with his composition *Shilahyangga* with relative tempos as Stockhausen did.<sup>155</sup> However, Dr. Steinecke asked Paik to control precise tempos to introduce his composition to the Darmstadt Summer Course.<sup>156</sup> The musical gap between them was getting bigger as he focused on Stockhausen's experimental music.<sup>157</sup> For this reason, Paik did not have an opportunity to present his music in Darmstadt. Paik's mention of *Zeitmaße* anticipates his significant transition from the absolute to the relative in music. However, Stockhausen's electronic music made Paik focus on exact rhythm again<sup>158</sup> until he met a fundamentally different chance in Cage's music.

In "The Bauhaus of Music," Paik introduced Pierre Boulez's rubato notation, which gives the performer a certain freedom of dynamics, registers, and tempos; however, the interpreter's chance is within more or less strict limits.<sup>159</sup> The performer

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<sup>154</sup> Harvey, *The Music of Stockhausen*, 50.

<sup>155</sup> Paik and Steinecke, "Der Briefwechsel Nam June Paik - Wolfgang Steinecke 1957-1961," 114-115.

<sup>156</sup> *Ibid.*, 116.

<sup>157</sup> Paik felt sorry for young composers who were mad for Stockhausen since they were imitators. It seems that Dr. Steinecke also considered Paik's experiment in *Shilahyangga* as an imitation from Stockhausen's music. See Paik, "The Bauhaus of Music," 106.

<sup>158</sup> A letter to Steinecke. See Paik and Steinecke, "Der Briefwechsel Nam June Paik - Wolfgang Steinecke 1957-1961," 118.

<sup>159</sup> Pierre Boulez, "Alea," *Perspectives of New Music* Vol3. No. 1 (1964): 46-47.

could not deviate out of the intention of the composer. His limited chance was similar to chance in Stockhausen's *Zeitmaße*.

The random access of *Klavierstück XI* is essentially different from the chance of *Zeitmaße* (1955-56). Whereas the earlier focused on random access, the latter concentrated on random variables in the composition. In other words, these two Stockhausen compositions provided the performer with different chance methods. The earlier mainly manipulated the order of the composition in a nonlinear way by the performer whereas the later mostly gave the performer chances to choose tempos. Paik first studied chance music not from Cage, but from the Darmstadt School. In this regard, before meeting Cage, Paik had already focused on chance in music. Stockhausen's chance provided audiences with diverse possibilities from parameters, instruments, performers, and conductors. The mixture of chance and these variable elements made his music more complex. In Paik's first Korean and Japanese articles, he described the random access and chance methods as one of the most progressive in the second half of the twentieth century.

### 1.5.3 Space in Music

Paik explained that Stockhausen's *Gruppen* or *Group for Three Orchestras* (1955-57) allows three conductors to randomly conduct three different orchestras with a basic rule at the same time.<sup>160</sup> Stockhausen turned a time-based medium, music, into a space-based medium. Three orchestra teams surrounded audiences in a horseshoe curve. This idea was developed into *Carré* (1959-60), in which the audience is in a square

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<sup>160</sup> Paik, "The Music of 20's Century – Part IV," 4.

surrounded by four orchestras and four conductors. Paik emphasized the spatial expansion of orchestra and audiences' plural choices to see, in other words, the transition from frontal performances to surrounding performances, from composers' freedom to audiences' freedom,<sup>161</sup> and expanded the boundary of spatial music.

By using recording and loudspeaker technologies, Stockhausen employed the spatial deployment of sound in *Gesang Der Jünglinge* (1955-56). The composition has five tracks from five loudspeakers, which creates a surround-sound environment for the audience. They were "in the eye of the sonic storm, with music emanating from every side and rotating in various directions."<sup>162</sup> Stockhausen developed the surrounding environment further. In *Kontakte* (1958-60), he used four different tracks, which were created by the effect of sounds spinning around the listener at various speeds. To realize the surrounding sound setting, Stockhausen built a rotating speaker table to create a spinning sound effect using four tape tracks for four microphones around the platform.<sup>163</sup> Finally, Stockhausen experimented with this score in his music theater *Originale*.

#### 1.5.4 Electronic Music

In "The Music of 20's Century," Paik mentions that Luigi Nono observed that in Stockhausen's *Studie I* (1952-53) duration and pitch are in inverse proportion.<sup>164</sup> This mathematical composition used synthetic sounds derived from sine tones, which allowed composers to achieve absolutely pure, controllable sounds without the subjective

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<sup>161</sup> This will be discussed in chapter 4.

<sup>162</sup> Holmes, *Electronic and Experimental Music*, 74-75.

<sup>163</sup> Ibid., 75.

<sup>164</sup> Paik, "The Music of 20's Century – Part III," 4.

emotional influence of interpreters.<sup>165</sup> In fact, chance or random methods were not Stockhausen's final destination at all.<sup>166</sup> Instead, he focused on electronic music and the surrounding sound environment more. This experiment removed any interpretations of compositions from performers whereas Stockhausen's previous compositions gave performers some autonomy to choose orders and tempos. Paik's interest in Stockhausen's music naturally shifted from chance music to electronic music.

As mentioned, Paik's concentration on medium-specificity was based on twelve-tone music. Paik stressed that the popularity of serialism came from a direct struggle with traditional rules in Western music such as polyphony and melody.<sup>167</sup> Paik mentioned that twelve-tone composers sought to make a balance between the mathematical approach and the emotional approach.<sup>168</sup> However, he questioned how Korean musicians, who had different backgrounds and education systems, apply twelve-tone technique to their music. Paik felt sympathy for musicians who spent most of their time finding their own national music style instead of making universal contemporary music.<sup>169</sup> He was able to give a less subjective opinion because he was outside of Korea. He did not isolate his idea about music in his country, but diligently studied progressive music in Europe. Paik suggested that Korean musicians needed to learn twelve-tone technique and electronic music to catch up with contemporary music.<sup>170</sup> It seems that he thought that electronic music was

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<sup>165</sup> Karlheinz, Stockhausen, "The Origins of Electronic Music," *The Musical Times* Vol. 112, No. 1541. (1971): 649.

<sup>166</sup> Stockhausen employed some chance or random elements in his music. However, he also removed them when he developed *Gruppen*. Finally, there was no more chance in the composition. See Harvey, *The Music of Stockhausen*, 55.

<sup>167</sup> Paik, "The Music of 20'5 – Part I", 4

<sup>168</sup> Ibid.

<sup>169</sup> Paik, "The Music of 20'5 – Part V," 4.

<sup>170</sup> Paik, "The Music of 20'5 – Part VI," 4.

the most important and newest descendant from twelve-tone technique,<sup>171</sup> and for this reason, he introduced the history from twelve-tone composition to electronic music in order to encourage Korean composers to catch up with Western music in a short time. His opinion also reveals that his interests in serialism expanded into electronic music. Paik informed Dr. Steinecke that he had already sent “Music of 20’s century,” which emphasized the importance of electronic music, to *Chayushinmun*.<sup>172</sup> Before he practiced electronic music, as a musicologist he predicted that electronic music would be prevalent.

### 1.6 Beyond Serialism and Beyond Genius

Beside his Asian minority status in Euro-centric music, Paik needed one more inherent requirement for a good composer, genius. As mentioned, Paik was obsessed by the idea of genius. He stressed that great artists needed the quality of genius, which came from not a specific environment but chance.<sup>173</sup> In “The Music of 20’s Century,” Paik mentioned chance several times to explain the quality of genius. In the last part of it, he soon changed the definition of genius from an innate figure to a developing (learned) one in the early years in West Germany.

It can be concluded that Paik’s radical change of opinion about genius derived from the advent of electronic music. As mentioned, Paik agreed with Kant’s idea about genius: scientists should not be considered as a genius because science was based on learning, or imitation not its originality. Scientists could achieve their goal as they put effort into their project. Only an artist could be called a genius since it is based on

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<sup>171</sup> Thom Holmes has a similar idea about the transition from serialism to electronic music. See *Electronic and Experimental Music*, 58-61.

<sup>172</sup> Paik, “The Music of 20’s Century – Part VII,” 4.

<sup>173</sup> Paik, “The Music of 20’s Century – Part VI,” 4.

chance.”<sup>174</sup> This demonstrates that Paik still distinguished art from science. However, he also witnessed electronic music, which is in between these heterogeneous realms. Mathematics and science were able to be mastered with effort, and electronic music is based on these two disciplines. In the art-and-technology field, Paik thought that he was able to be a genius for his efforts. “The Music of 20’5 Century” ends with a simple question, “Is Faust a genius?” – after mentioning Faust who gets rid of his obstacles and Sisyphus who is stuck with his everlasting repetitive destiny.<sup>175</sup> Through the question, it can be observed that Paik would change the meaning of genius, and was curious about whether genius was really created by chance. From this critical change of perspective, Paik pursued composition again beyond the two inherent necessities of a great composer by changing the source of genius from chance to development. Paik came to believe that genius could not be innate but a result of getting rid of or overcoming obstacles. In other words, the last part of the article implies that Paik would be an artist who overcame the lack of innate genius.

Even though he encountered much banal serialism at conferences and festivals, Paik did not reject serialism itself. Instead, he thought that twelve-tone technique needed this new type of genius to overcome the mannerism of serialism. In this context, Paik hoped that he would become the first-generation genius through his efforts at overcoming mannerism.

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<sup>174</sup> Paik, “The Music of 20’5 Century – Part VI,” 4. Paik disagreed with Sedlmayr’s interpretations with the iconographical approach such as environment, tradition, and the genetic relationship because genius is beyond these backgrounds in the Korean article.

<sup>175</sup> Paik, “The Music of 20’5 Century – Part VIII,” 4.

## CHAPTER II: A Report on the Paris Studio of Pierre Schaeffer and *Musique*

### *Concrète*

Cultural phenomena are debauched bastards

who can hardly find their fathers.

-Nam June Paik<sup>176</sup>

This chapter explores Paik's involvement with Schaeffer's *musique concrète* in the period after meeting Stockhausen before the encounter with Cage.<sup>177</sup> Schaeffer created *musique concrète*, or a collage form of music using phonograph records, in 1948 in Paris and later developed it with audiotapes. Although Schaeffer's contribution to new music was critical, his achievement was relatively ignored in that field. In addition, scholarship on the relationship between Paik and Schaeffer is limited because Paik was interested in *musique concrète* for only a short time in the late 1950s. However, Paik's own criticism reveals that Paik was a *musique concrète* composer as well as a *musique concrète* composition researcher. When Paik composed *musique concrète* in Freiburg in the late 1950s, he also researched the history of *musique concrète* as an origin of electronic music. Paik wrote an article about *musique concrète*, but he did not publish it. Fortunately, Paik added this significant article into his exhibition catalogue *Videa 'n' Videology: Nam June Paik (1959-1973)* about fifteen years later. This chapter traces the reason Paik did not publish it and how he added it into the catalogue. This research shows that Schaeffer's collage music significantly changed Paik's idea of new music as much as Stockhausen and Cage did.

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<sup>176</sup> Paik, *Videa 'n' videology*, 83.

<sup>177</sup> As mentioned in Acknowledgement, Paik's article about *musique concrète* was translated by myself for Professor Stephen Vitiello's lecture at Smithsonian American Art Museum.

## 2.1 Pierre Schaeffer's *Musique Concrète*

*Musique concrète* is a pioneering style of mixing and manipulating music developed in Paris during the late 1940s by French composer Pierre Schaeffer and his collaborators including Pierre Henry. The development of *musique concrète* is well described in his diary-like book, *In Search of a Concrete Music*. He explored sound without text or context.<sup>178</sup> As the translators of the book John Dack and Christine North note, the French word *concrète* is not identical with the English word *concrete*, instead it means palpable, non-theoretical and experiential.<sup>179</sup> Based on the phenomenological approach, *musique concrète* mainly emphasizes two intertwined elements, a sound fragment<sup>180</sup> and acousmatic listening. First, a sound fragment is a discrete and complete sound object for compositions beyond our preconception.<sup>181</sup> They are 0.5 to 5 second-long fragmentary sounds from any sound database<sup>182</sup> including recordings of everyday sounds like ringing bells, trains, and humming tops.<sup>183</sup> Extracted from specific diverse sound sources, sound fragments lose their original context, and then they are converted from objective to subjective sounds by the *musique concrète* composition. The sound fragment is a fundamental unit for *musique concrète* and one of the most remarkable of Schaeffer's achievements.<sup>184</sup> Just as conceptual artist Marcel Duchamp disconnected the fixed relationship between signifier and signified in his "readymades," Schaeffer

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<sup>178</sup> Pierre Schaeffer, *In Search of a Concrete Music*, trans. Christine North and John Dack (Berkeley and Los Angeles: University of California Press, 2012), 4.

<sup>179</sup> *Ibid.*, xii.

<sup>180</sup> The term is also called sonic object, sound object, objet sonore, and objets sonores. In particular, Paik called it objets sonores in the poster of his first solo exhibition Exposition of Music – Electronic Television.

<sup>181</sup> Schaeffer, *In Search of a Concrete Music*, 14.

<sup>182</sup> Rolf Inge Godøy, "Music Theory by Sonic Objects," in *Pierre Schaeffer Polychrome Portraits*, 67.

<sup>183</sup> Chris Meigh-Andrews, *A History of Video Art: The Development of Form and Function* (Oxford: Berg, 2006), 105.

<sup>184</sup> Godøy, "Music Theory by Sonic Objects," 67-68.



explored unlinking the preconceived relationship between sound and its original function. However, whereas readymades create a new meaning, *musique concrète* returns to sound itself. In this regard, Schaeffer emphasized the subjective perceptual listening experience, acousmatic listening from sound fragments.<sup>185</sup> Next, acousmatic refers to a sound that one hears without seeing what causes it. Schaeffer explained acousmatic from the Larousse dictionary, using the example of Pythagoras who taught his lectures behind a curtain so that his disciples could only listen to him without seeing him.<sup>186</sup> Schaeffer thought that radios and tape recorders could play a similar role. In other words, he insisted that the tape recorder had the virtue of Pythagoras' curtain, creating new phenomena to experience, such as audio independent of visual sources.<sup>187</sup> By discovering the instinctive paths that lead from the purely "sonorous" to the purely "musical," this type of environment rejects traditional instruments and cultural conditioning, and it puts the sonorous and its musical possibilities in front of audiences.<sup>188</sup> Therefore, sound fragments based on acousmatic listening make *musique concrète* very phenomenological due to direct sound experiences without visual and contextual references.

Before the popularity of tape recorders, to expand the phenomenological sound experience, Schaeffer's piles of records were decomposed, compressed, stretched, de-ossified, inverted, shattered and pulverized as if a child aggressively played with his toy.<sup>189</sup> This form of experimental music incorporates noises and every day sounds as well as a manipulated sound database in the blurred boundary between art and life. By using

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<sup>185</sup> Ibid.

<sup>186</sup> Pierre Schaeffer, "Acousmatics," in *Audio Culture: Readings in Modern Music*, ed. Christoph Cox and Daniel Warner (New York: Bloomsbury Publishing, 2004), 76-77.

<sup>187</sup> Ibid., 77.

<sup>188</sup> Ibid., 81.

<sup>189</sup> Ibid., 31.

prerecorded sounds, a composer does not need to be a skilled musician any more to make a final sound. Instead, he can create music with his wide range of sound databases.

Schaeffer experimented with a large archive of sound effects, which consisted of more than 500 records in 1950.<sup>190</sup> Ultimately, he dreamed of a huge cybernetic-like machine that could achieve millions of combinations.<sup>191</sup>

After the 78-rpm records project, he adopted slicing tapes between two different sound data with the same envelopes<sup>192</sup> to make a smooth transition, beginning in 1951.<sup>193</sup> This new medium provided audiences with a soft montage sound. This process involved a creator's physical experiences. The process of making *musique concrète* was not based on the graphic-user interface, which contemporary composers now use, but on palpable craftsmanship. As the real meaning of *concrète* reveals, *musique concrète* is fundamentally a haptic medium using physical databases. Schaeffer believed that these techniques were able to provide new notes or pseudo-instruments distinct from traditional musical instruments.<sup>194</sup>

## 2.2 Before meeting Pierre Schaeffer in His *Musique Concrète* Studio

After taking part in the Darmstadt Summer Course in 1957, Paik transferred into the Freiburg Music Academy to study composition in the winter semester. Under his advisor Professor Wolfgang Fortner, Paik finally practiced composition in an academic

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<sup>190</sup> Schaeffer, *In Search of a Concrete Music*, 16.

<sup>191</sup> Ibid., 18.

<sup>192</sup> Each sound has its own envelope, which explains an ephemeral sound with a graph. It consists of four areas; attack, decay, sustain, and release. It is hard to seamlessly mix two different sounds because each sound has its own envelope. To reduce a spectral transposition, Schaeffer connected with each other by finding similar envelopes. See Palombini Carlos, "Machine Songs V: Pierre Schaeffer- From Research into Noises to Experimental Music," *Computer Music Journal* Vol.17, No.3(1993):15.

<sup>193</sup> Ibid., 14.

<sup>194</sup> Schaeffer, *In Search of a Concrete Music*, 203.

context. In “The Bauhaus of Music,” he explained a mathematical aspect of the early electronic music composition, Stockhausen’s *Studie I*, in a single sentence without any description of electronic music.<sup>195</sup> Around ten months later in “The Music of 20’s Century,” Paik described electronic music in detail, and insisted that he would study electronic music.<sup>196</sup> In between these two articles, what suddenly led Paik to be interested in *musique concrète* and finally meet Schaeffer in Paris? According to a letter to Dr. Steinecke dated May 10, 1958, Paik visited Schaeffer’s *musique concrète* studio on April 16, 1958.<sup>197</sup> As mentioned in chapter 1, electronic music composition was developed by diverse new experiments from twelve-tone music to mathematical and algorithmic music. However, among these new approaches, *musique concrète* also played an important role in the invention of electronic music.

The founder of the electronic music studio at the Westdeutscher Rundfunk Köln (West German Broadcasting Cologne, or WDR), Dr. Herbert Eimert, grudgingly acknowledged that Schaeffer’s work was the beginning of electronic music in one of the last articles that emphasized arts-and-crafts collages and noise bricolages.<sup>198</sup> However, Dr. Eimert’s serialist approach based on Austrian avant-garde instrument music, or twelve-tone music, is fundamentally opposed to Schaeffer’s phenomenological methodology.<sup>199</sup> They have a similar editing system based on fragmentary sound sources. However, whereas electronic music seeks advanced technology based on pure music, *musique concrète* explores the philosophical approach to sounds, without its visual index.

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<sup>195</sup> Paik, “The Music of Bauhaus,” 107. He also described the same idea in “The Music of 20’s Century.” See 1.5.4 Electronic Music.

<sup>196</sup> Paik, “The Music of 20’s Century – Part VII,” 4.

<sup>197</sup> Paik, and Steinecke, “Der Briefwechsel Nam June Paik - Wolfgang Steinecke 1957-1961,” 118.

<sup>198</sup> Marcus Erbe and Jean-Simon Grintsch, “Schaeffer@Köln.de,” in *Pierre Schaeffer Polychrome Portraits*, ed. Evlyne Gayou, trans. Francois Couture (Paris: Institut national de l’audiovisuel, 2009), 26.

<sup>199</sup> *Ibid.*, 25.

Schaeffer wrote: “I fought against electronic music, which was another approach, a systemic approach, when I preferred an experimental approach actually working directly, empirically with sound.”<sup>200</sup> In the cold war of new music, Stockhausen, one of the main figures at the electronic music studio, hardly mentions the practical experiences in the *musique concrète* studio under Schaeffer. In his brief autobiography for the Free Berlin Network in 1970, Stockhausen only mentions that he spent a year in Paris taking French composer Olivier Messiaen’s courses in aesthetics and analysis.<sup>201</sup> However, in fact, Stockhausen simultaneously worked at Schaeffer’s studio, the Club d’Essai.<sup>202</sup> Schaeffer recollected that Stockhausen did not listen to his advice about editing sound objects; he just made ‘shuuut’ sounds.<sup>203</sup> Schaeffer gave Stockhausen negative feedback about his cutting sound project with millimeter pieces.<sup>204</sup> However, Stockhausen wrote differently about his piece during this period: he created a sound project with regular intervals by slicing silent leader tapes.<sup>205</sup> In “the molecular structure of sound,” Stockhausen explored how to break up the continuous tones with patches of silence to create a rhythmic pattern.<sup>206</sup> As Schaeffer disagreed with Stockhausen’s experimental music, Stockhausen also regarded *musique concrète* as “a perversely amateurish game of chance and unbridled improvisation” since it did not depend on a scientific but an intuitive method.<sup>207</sup> Their hostile relationship reflects the relationship between *musique concrète* in Paris and electronic music in Cologne. Schaeffer could not help recalling the

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<sup>200</sup> Holmes, Thom. *Electronic and Experimental Music*, 59.

<sup>201</sup> Jonathan Cott and Karlheinz Stockhausen, *Stockhausen: Conversations with the Composer* (New York: Simon and Schuster, 1973), 12.

<sup>202</sup> Robin Maconie, *The Works of Karlheinz Stockhausen* (Oxford: Oxford UP, 1990), 30.

<sup>203</sup> Kurtz, *Stockhausen: A Biography*, 55.

<sup>204</sup> *Ibid.*, 55-56.

<sup>205</sup> Holmes, *Electronic and Experimental Music*, 68.

<sup>206</sup> *Ibid.*

<sup>207</sup> Maconie, *The Works of Karlheinz Stockhausen*, 46.

relationship between the German invasion of France and the invasion of Austrian music, twelve-tone composition, which is one of the main impacts on the early electronic music, in French music.<sup>208</sup> Even though Stockhausen actively created his own music, he used basic sound montage skill from his *musique concrète* practices in Schaeffer's studio.<sup>209</sup> Although the animosity between the electronic music studio in Cologne and the *musique concrète* studio in Paris existed, electronic music was often indistinguishable from works created more directly with the sound medium, as in *musique concrète*.<sup>210</sup> As mentioned in chapter one, Paik emphasized that twelve-tone technique removes any social hierarchies, and equally uses tones in a new order, in other words, without preferences between notes. Likewise, Schaeffer's *musique concrète* has no difference between the sound of a musical instrument and the sound of a train: they are both "sound fragments."<sup>211</sup> Using each note equally in twelve-tone music is naturally linked to using any sound object from instrumental sounds to noises equally in *musique concrète*. It seems that Paik had an ambivalent feeling about *musique concrète* since it is not pure but mixed. Even though he pursued twelve-tone music, one of the most purist types of music, it seems that *musique concrète* helped Paik focus on impure collage music in his "extremely progressive" vision. In addition, *musique concrète* encouraged Paik to reconcile music with sound fragments. This collage method is a very significant change in Paik's artistic life. After all, he was involved in creating the mixed art field and became a collage artist.

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<sup>208</sup> Holmes, *Electronic and Experimental Music*, 56-57.

<sup>209</sup> Ibid., 58.

<sup>210</sup> Ibid., 66.

<sup>211</sup> Schaeffer, *In Search of a Concrete Music*, 14.

The equipment for making *musique concrète* was unique and extremely expensive in the 1950s. For this reason, Paik could not create a *musique concrète* piece until he visited Schaeffer's *musique concrète* studio. Instead, with Professor Fortner, Paik was composing the chamber music piece *Shilahyangga*. At the same time, he was interested in tape music. In the exhibition catalogue *Nam June Paik* (2006), his *2 Original score string quartet (with/without strips of audio tape)* (1957)<sup>212</sup> shows this transition from a normal composition to a tape collage composition. These two scores are identical except for nine strips of audiotape above nine five-lines. Due to a lack of the information about these pieces, the relationship between the compositions and the sound sources for the magnetic tapes were veiled. However, it is clear that Paik had already experimented with music in creative ways even before he visited Schaeffer's studio in Paris. First, Paik experimented by mixing a normal composition and audiotapes as early as 1957. Second, Paik had already been interested in visualizing sound materials. This shows that Paik was not simply influenced by Schaeffer's *musique concrète*, but actively studied his visual music in a creative way.

### **2.3 Nam June Paik as a *Musique Concrète* Composing Researcher**

The Nam June Paik Archive at the Smithsonian American Art Museum stores a wide range of writings, letters, and articles from Paik himself.<sup>213</sup> Paik had precisely archived the materials. If an article originally did not include its date, Paik wrote the date

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<sup>212</sup> Lee and Rennert, ed. *Nam June Paik*, 72.

<sup>213</sup> Nam June Paik's nephew and executor of the Nam June Paik Estate, Ken Hakuta, donated a huge number of significant resources of Nam June Paik to the Smithsonian American Art Museum. See John G. Hanhardt, acknowledgement to *Nam June Paik: Global Visionary*, eds. John G. Hanhardt and Ken Hakuta (Washington D. C: Smithsonian American Art Museum, 2012), 15.

himself next to the article. Unlike his usual articles, one specific newspaper article in Korea does not have its specific date. It has only the published year 1958. Paik added this article, “A Report on the Paris Studio of Pierre Schaeffer and *Musique Concrète*” to his exhibition catalogue *Videa, 'n' Videology* in 1974.<sup>214</sup> Since this article was republished in a good legible quality, it is a valuable material for studying Paik’s music background in 1958.

Scholars and Paik’s colleagues have scarcely talked about the importance of *musique concrète* in Paik’s artistic life, and Paik himself hardly mentioned this experimental French music in his writings. Western scholars could not understand what the article means since Paik wrote it in Korean. Moreover, it presents the same difficulties as his previous Korean article, “The Music of 20’5 Century.” The article was written in an old Korean style, which uses many Chinese characters and irregular loanwords from French and English. It did not allow most Koreans to read the article just like non-Koreans. Even though two Korean books, *Nam June Paik* and *The Return of Nam June Paik*, republished this entire article, they did not study the relationship between Paik and *musique concrète*, but simply included it again without any further discussion. This remains an unexplored part of the study of Paik.

This short article is based on Paik’s visit to the studio on April 16, 1958.<sup>215</sup> It starts with a vivid description of his real walk from Saint-Germain-des-Pres to the *musique concrète* studio in Paris. He described Paris and Schaeffer’s studio first to convey the exotic atmosphere that included Brigitte Bardot hairstyles, Algerian gangsters

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<sup>214</sup> Paik, *Videa 'n' videology*, 83.

<sup>215</sup> In this article, Paik emphasized that he really visited the studio. See Paik, *Videa 'n' videology*, 83. And see Paik and Steinecke. “Der Briefwechsel Nam June Paik - Wolfgang Steinecke 1957-1961,” 118.

and existentialist youths, and an old lady who often talked about philosophy to Korean normal readers. Unlike this entertaining element of the beginning, the main purpose of the visit was serious and practical in order to use the *musique concrète* studio for his project with Professor Fortner. This visit falls between the first Japanese article “The Bauhaus of Music,” in October of 1957 and the third Korean article “Chance Music” in January of 1959. For this reason, this article provides significant material for bridging the gap between Stockhausen in the Darmstadt Summer Course in 1957 and Cage in the same conference in 1958.

Paik thoroughly explores the history of *musique concrète* as a *musique concrète* composing researcher just as he mentions in the end of “A Report on the Paris Studio of Pierre Schaeffer and *Musique Concrète*.” In his article, Paik mentions Paul Hindemith and Ernst Toch as precursors of *musique concrète*.<sup>216</sup> In *Trickaufnahmen* (1930), Hindemith used several turntables to change the pitch of recorded sounds and mixed them to create new interactive rhythmic sequences, and Toch experimented with voices by manipulating volume and pace of the sound data.<sup>217</sup> In other words, they created a method to make meta-record music. Another quality of *musique concrète*, noise, is stressed by Paik: Italian futurist Luigi Russolo had already experimented with noise as a main element for music in the 1920s-30s in this article. In fact, Russolo presents his manifesto “The Art of Noises” in 1913. He highlights that noise sound as the revolution of music is paralleled by the increasing proliferation of machinery sharing in human

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<sup>216</sup> Paik, *Video 'n' videology*, 83.

<sup>217</sup> Holmes, *Electronic and Experimental Music*, 46.



labor.<sup>218</sup> He does not reject noise as an obstacle for music. Instead, he stresses that composers would utilize this inevitable element for new music.

In his *musique concrète* article, Paik explains that Schaeffer mixes these two experimental methods, or noise and meta-music, to make *musique concrète*, and his contributions to experimental music became a critical seed for studio music and growing electronic music studios around the world.<sup>219</sup> Even though Paik clearly does not assert that the origin of electronic music is Schaeffer's *musique concrète*, he definitely insists that without Schaeffer, scholars could not write the history of contemporary experimental music.<sup>220</sup> Accordingly, Paik thought of Schaeffer as a very important pioneer in progressive music and a precursor of electronic music, which Paik had just become interested in.

## 2.4 Significant Unpublished Article

In “A Report on the Paris Studio of Pierre Schaeffer and *Musique Concrète*,” Paik differently writes Pierre Schaeffer as 피엘 세어헬, 세헬 and 뵤에르 쉘펠, and, incorrectly, as PIERRE SHAFFER. Even though there was no precise rule to write French words in Korean in the 1950s, Paik should have used a consistent name for Schaeffer. Due to these errors, it is very unclear whether this article is the final version or not. To find evidences to answer this question, I will examine the published date of the article first.

It is curious that no books refer to the article's exact date. A fundamental question arises: was this article really published? To prove the publishing status of “A Report on

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<sup>218</sup> Luigi Russolo, “The Art of Noises,” in *Sound*, ed. Caleb Kelly (Cambridge: The MIT Press, 2011), 22.

<sup>219</sup> Paik, *Videa 'n' videology*, 83.

<sup>220</sup> Ibid.

the Paris Studio of Pierre Schaeffer and *Musique Concrète*,” the exact date of this article is necessary. Moreover, the exact date is a significant marker to find a specific period of Paik’s artistic timeline. Before and after the article, Paik changed musical directions several times to include composition, twelve-tone music, *musique concrète*, electronic music, and a-music. Paik’s exhibition catalogue *Videa ‘n’ Videology: Nam June Paik (1959-1973)* (1974) has the first reprinted source of his *musique concrète* article.<sup>221</sup> Paik first put an English caption—“1958, ‘A Report on the Paris studio of Pierre Schaeffer and *Musique Concrète*.’ *Chayushinmun*, Seoul, Korea”—in *Videa, ‘n’ Videology*. Similarly, the other books which republished this article also do not mention any specific date for it.<sup>222</sup> Since this article has only the published year, the best way to prove the publication status is to check every single page in *Chayushinmun* in 1958. The task was done by myself first during the summer of 2015 and again during the summer of 2016 at the National Central Library in Korea. I am confident that no such article was published in that year.

There are two pieces of information at the top of this article, namely, (第三種郵便物認可) and the number four, illustrated as. The first one means “the approval for the third kind postal material.” These Chinese letters are for the distribution approval from the government. The second one means page number four, indicating that this article is on the fourth page. All of the other articles written by Paik were published on the same page because the fourth page dealt with art and entertainment. These are very common

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<sup>221</sup> This article was republished in two books. See Yongwoo, *Nam June Paik*, 49-52. And see Park, *The Return of Nam June Paik*, 144-145. They also have only the published year just as the article in *Videa ‘n’ Videology*. Whereas these both articles were retyped for publications, the article in *Videa ‘n’ Videology* is a photocopy of its original article.

<sup>222</sup> All republished articles about Paik’s *musique concrète* have only the published year 1958.

pieces of information, but the position of the information is unusual. The information on the fourth page must follow this order: the number of the issue, the distribution approval, the newspaper name, a specific date, and the page number. The layout on the fourth page of the newspaper did not change at all in 1958. The positions of the number and the distribution approval were definitely manipulated for the following reasons. Since it is the end of the right corner, the contour of the article on the right side must be a line instead of corrugated marks. Or if the position of the number is true, the published date must be on the left from the number. However, there is the approval information instead of the date. It is possible that the position of the approval words is correct. In this case, the number of the newspaper issue, which also refers to the published dates, for example 第 1880 號, or 1880 issue, must be on the left side of the word. Considering this inconsistency, the published date or issue number was intentionally deleted. In other words, although Paik did not touch the content of this article, it seems that the information of this article in the exhibition catalogue was omitted.

This article could be published in another newspaper. However, it is impossible for the following two reasons. First, this article has round brackets between number 4 as *Chayushinmun* did. The other major newspapers in 1958 used a Chinese number (*Kyunghyashinmun*) or a numeric number between square brackets (*Dongailbo* and *Chosunilbo*). Above all, his *muisque concrète* article has a very similar layout to his first *Chayushinmun* article, "The Music of 20<sup>th</sup> Century." They have the same typography, the same letter-spacing, and the same order of title, subtitle, and author's name. They should be designed by the same person in *Chayushinmun*.

Is it possible for this article to have been published in other years such as 1957 in *Chayushinmun*? This could be also disproven by the content that described his visit to Schaeffer's studio. In a letter of May 10, 1958, Paik informs Dr. Steinecke that he visited the *musique concrète* studio on April 16, 1958, to make *musique concrète* part of his ongoing project. He said that he only could use the *musique concrète* studio for a day. Paik wanted to visit the studio again to complete his project. However, that did not happen because he decided to recreate the project at an electronic music studio in Germany.<sup>223</sup> Later, he wanted to rewrite his piece by using electronic music equipment instead of *musique concrète* devices. Because he visited the studio once and wrote an article about his experience at the studio, it is impossible for him to have written the article earlier than April of 1958. In addition, Professor Fortner had granted Paik a private scholarship for electronic music at the Hessian Broadcasting Station in August of 1958.<sup>224</sup> Paik asked Dr. Steinecke to write a letter of recommendation for using the electronic music studio. Dr. Steinecke replied that the Hessian Broadcasting Station did not have electronic music equipment. He suggested that Paik contact Dr. Herbert Eimert at the electronic studio of WDR in Cologne.<sup>225</sup> In addition, in the end of this article, Paik introduced himself, "*Musique concrète* composing researcher = resided in Cologne, West Germany." Paik lived in Munich for only one year, from November of 1956 to 1957.<sup>226</sup> In 1957, he moved from Munich to Freiburg to study with Professor Fortner. A letter from Paik to Dr. Steinecke on December 23, 1957, was addressed from Freiburg. Paik

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<sup>223</sup> Paik and Steinecke, "Der Briefwechsel Nam June Paik - Wolfgang Steinecke 1957-1961," 118.

<sup>224</sup> Ibid., 118-119.

<sup>225</sup> Ibid., 119.

<sup>226</sup> Paik, "Erinnerung an Muenchen," 57.

used the Freiburg address until he sent a letter to Dr. Steinecke on August 17, 1958.<sup>227</sup> For these reasons, the date of “A Report on the Paris Studio of Pierre Schaeffer and *Musique Concrète*” cannot have been before August of 1958. Paik only introduced himself once in his first article in *Ongaku Geijutsu*. Likewise, he seemed to introduce himself because this article is the first one in *Chayushinmun*. This fact indicates that his *musique concrète* article was meant to be published before “The Music of 20’5 Century.” The *musique concrète* article should be written between the visit to the *musique concrète* studio in April, 1958, and the publication of “The Music of 20’5 Century” in August, 1958. However, the period does not match with the place where he lived. Paik met Cage at the Darmstadt Summer Course on September 3, 1958. He then settled in Cologne soon after.<sup>228</sup> Art historian Susanne Rennert also mentioned that Paik moved from Freiburg to Cologne in the autumn of 1958 after taking part in the Darmstadt Summer Course.<sup>229</sup> Paik’s biographies in the exhibition catalogue *Nam June Paik* indicate the same fact that he moved to Cologne in the fall of 1958.<sup>230</sup> Until August 17, 1958, Paik used his Freiburg address in his letter, and Paik used his Cologne address for the first time in a letter to Dr. Steinecke on December 8, 1958.<sup>231</sup> In other words, if Paik did not make a mistake when he wrote his address, the article would have to have been written after September of 1958. This, however, raises serious contradiction. As mentioned, if Paik wrote this article after meeting Cage, Paik would mention Cage in this article. Paik enumerates diverse composers who use recorded sounds such as Paul Hindemith, Pierre Boulez, Pierre Henry

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<sup>227</sup> Paik and Steinecke, “Der Briefwechsel Nam June Paik - Wolfgang Steinecke 1957-1961,” 122.

<sup>228</sup> Hanhardt, *Nam June Paik*, 11.

<sup>229</sup> Susanne Rennert, “Chronologie (1958 – 1963),” in *Sediment* (Wien: Moderne Kunst Nürnberg. 2005), 31.

<sup>230</sup> Lee and Rennert, *Nam June Paik*, 227.

<sup>231</sup> Paik and Steinecke, “Der Briefwechsel Nam June Paik - Wolfgang Steinecke 1957-1961,” 122-23.

and Karlheinz Stockhausen as colleagues, contributors, and developers for *musique concrète* in this article. Among these composers, how could Paik ignore Cage in this article about noise, the sounds of daily-life, and recorded sound collages? Furthermore, Russolo's active appropriation of noises became a fundamental method for Cagean music. Cage's essay "The Future of Music: Credo" begins with "I Believe that the use of noise." He also introduces the idea of composing and performing with found sounds from motors, wind, heartbeats and landslides, in the end, with the aid of electrical instruments, he suggests making new music.<sup>232</sup> The lack of a boundary between noise and music is a very similar idea to *musique concrète*. They shared an origin in Russolo's noise music. However, Paik does not mention Cage in "A Report on the Paris Studio of Pierre Schaeffer and *musique concrète*" at all. Moreover, the subtitle of this article is "The Foremost Contemporary Musician Who Gives Power to Noise." This implies that Paik was interested in noise, daily sounds, as a key element of music before he recognized the greatness of Cage's noise. In fact, Cage experimented with music collage, *Imaginary Landscape No. 1* in 1939, about ten years earlier than Schaeffer did. Even though they used the same method to make music based on the multiple turntables, their philosophies in using recorded sounds are thoroughly opposite. Whereas Schaeffer made collage-based music as recorded, fixed works, Cage mainly focused on diverse sound databases as live collage music. In this regard, while Schaeffer's concrete "music" explores using recorded sounds in the Western traditional music realm, Cage's imaginary "landscape" utilized

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<sup>232</sup> This was originally delivered as a talk at a meeting of a Seattle arts society organized by Bonnie Bird in 1937. It was printed in the brochure accompanying George Avakian's recording of Cage's twenty-five-year retrospective concert at Town Hall, New York, in 1958. This was reprinted in *Silence: Lectures and Writings* (Hanover, New Hampshire: Wesleyan University Press, 1961), 3-6.

recorded sounds as a representation of space.<sup>233</sup> While Schaeffer observed the frame of music, Cage expanded the realm of music into a more progressive field. Cage's collage music was developed based on the spatiality in music as performance art. That is the reason Cage first stressed that *Imaginary Landscape No. 1* was “proto-musique concrète” in 1959,<sup>234</sup> but he was eager to clarify his ideological differences with Pierre Schaeffer by the late 1960s.<sup>235</sup> In this long story between Schaeffer and Cage, Paik neglected a whole part of Cage's pioneering experiment in *musique concrète*. Paik confessed that he ignored American musician Cage and his Asian philosophy before seeing his performance at the Darmstadt Summer Course.<sup>236</sup> In this regard, it seems that Paik did not have enough unbiased knowledge about Cage before meeting him and studying his music. Moreover, as mentioned, Cage was not a main figure at the Darmstadt Summer Course, so it seems that there were few publications on Cage in Germany when Paik wrote the Korean article, right before the Darmstadt Summer Course in 1958.

For these reasons, if Paik started to write this article after the Darmstadt Summer Course in 1958, he at least would have added Cage to the list of contributors of *musique concrète*. Paik must have written this article before studying Cage. As mentioned, Paik moved from Freiburg to Cologne in the fall of 1958. Paik mentioned that he lived in Cologne in his *musique concrète* article. After visiting the *musique concrète* studio, Paik became more interested in electronic music than *musique concrète*. That is the reason he planned to move to Cologne when he studied in Freiburg. Since he was going to Cologne

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<sup>233</sup> David Grubbs, *Records Ruin the Landscape: John Cage, the Sixties, and Sound Recording* (Durham: Duke University Press, 2014), 56-59.

<sup>234</sup> *Ibid.*, 57.

<sup>235</sup> *Ibid.*, 58.

<sup>236</sup> Edith Decker-Phillips, *Paik Video*, trans. Marie-Genviève Iselin et al. (New York: Barrytown, 1998), *Paik Video*, 25.

soon, Paik might have used more the popular city name Cologne instead of Freiburg for Korean readers. Based on his timeline, Paik would have written this article after visiting Schaeffer's studio and before the encounter with Cage, kept it for a while, and then tried to publish it after deciding to move into Cologne before studying Cage's a series of *Imaginary Landscape* compositions. In fact, Paik emphasized later in the United States that Cage's *Imaginary Landscape No. 4* (1951) was the origin of media art as "some kind of quantum leap."<sup>237</sup> Paik insisted that unlike Schaeffer, Stockhausen, and Hindemith, Cage not only made montage sounds but also recognized and used the existence of ubiquitous radio waves, hardware radio, and software ephemeral waves.<sup>238</sup> In other words, after fully analyzing Cage's music, Paik regarded Cage's *Imaginary Landscape* as extraordinary music among collage music. His later study of Cage would keep Paik from publishing his *musique concrète* article because Paik came to know Cage's early music as a pioneer of *musique concrète*.<sup>239</sup> In "A Report on the Paris Studio of Pierre Schaeffer and *Musique Concrète*," Paik mentions:

Of course, even though we must not forget the inventions of the electronic engineer: the tape and tape recorder, that were developed rapidly, let's not take part in the comfort that comes from simplifying complex events because cultural phenomena are debauched bastards who can hardly find their fathers.<sup>240</sup>

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<sup>237</sup> Dieter Daniels, "Touching Television: Participation Media with Marshall McLuhan, John Cage and Nam June Paik," in *TV Commun, de- inter- trans-*, ed. Chaeyoung Lee and Seongeun Kim (Yongin: Nam June Paik Art Center, 2011), 172.

<sup>238</sup> Ibid.

<sup>239</sup> Paik mentioned that he would never present a mediocre composition on a letter to Dr. Steinecke on May 2, 1959. After studying on Cage's *Imaginary Landscape*, Paik would think that his research on a history of *musique concrète* was useless because Cage did achieve it earlier and better than Schaeffer.

<sup>240</sup> Paik used the same sentence in English to emphasize Cage's and Stockhausen's pioneering roles of Paik's interactive art. "With respect and appreciation, I note Cage's and Stockhausen's priority in this respect; although art is often a bastard the parents of which we do not know." Nam June Paik, "To the Symphony For 20 Rooms", *an anthology*, ed. La Monte Young, 1963, n.p.



Although Paik mentions diverse pioneers of *musique concrète* in this article, he does not find a clear origin for *musique concrète*. Even though Paik also uses the bastard as a metaphor to understand the history of new music, he examines that history with a diachronic analysis, a method of his major, art history. At that time, he considered electronic music a descendent of *musique concrète*. In this article, Paik insists that without Pierre Schaeffer, the growing phenomena of electronic music studios around the world could not have existed. Paik continues pointing out that Dr. Eimerit, Stockhausen, and Schaeffer are the most important contributors to the music studio system. Even though Paik's interests moved from *musique concrète* to electronic music when he was in Cologne, in this article, he dealt with *musique concrète* because he regarded it as an origin of the electronic music studio. In other words, Paik thought of the sound montage of *musique concrète* as a significant pioneering element for electronic music. This is the reason Paik went to Paris while he sought to study electronic music. He focused on not only the idea of collage music but also the music editing "studio." Even though the idea of Cage's new music soon overrode the idea of *musique concrète*, Paik's experience in the studio became a core element for designing interactive musical installations later.<sup>241</sup>

Paik's mentor, Stockhausen, did not acknowledge *musique concrète* as an origin of electronic music. In Cologne, *musique concrète* was already out of style.<sup>242</sup> Cologne became the center of electronic music. In this changing atmosphere, Paik explained that he changed his current project from *musique concrète* to electronic music in May 1958.<sup>243</sup>

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<sup>241</sup> See chapter 4.

<sup>242</sup> The same delay can be found in a Paik's letter to Cage. "I tried to videotape the chess game of Duchamp and Cage. After a long wait the permission was obtained from Mr. Cage and Duchamp. When I was ready. It was too late." See Paik, *Videa 'n Videology*, 17.

<sup>243</sup> Dr Steinecke sent a letter to Paik on May 12, 1958. He asked Paik for his ongoing project with the *musique concrète* technology. Dr. Steinecke wanted to preview Paik's project because Paik was preparing his music for the Darmstadt Summer Course. After the letter, Paik switched *musique concrète* into

Furthermore, after seeing Cage's performance in September 1958, Paik explored a way to deconstruct music itself.<sup>244</sup> In a letter to Dr. Steinecke on December 8, 1958, Paik mentions that his ongoing project, *Hommage à John Cage*, would be neither electronic nor concrete. Paik focused more on music performance than these music techniques, and published a Korean article about Cage's music on January 6 and 7, 1959.<sup>245</sup> After meeting Cage, Paik hardly mentioned *musique concrète* in his articles. As mentioned, Paik updated the idea of collage music soon after meeting Cage. For these reasons, Paik seemed to be unable to publish the quickly outdated article "A Report on the Paris Studio of Pierre Schaeffer and *Musique Concrète*" in Cologne in 1958. To sum up, Paik would start to write the article before meeting Cage and complete it between April and December, 1958. However, after all, it seems that this was not published in *Chayushinmun* due to Paik's new updated idea of collage music.

## 2.5 *Musique Concrète* into Visual Collage

When Paik went to the electronic music studio in Cologne to use electronic music equipment, he had no access to the electronic music studio.<sup>246</sup> The music critic Heinz-Klaus Metzger remembered that Paik gathered up abandoned bits of tape every evening

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electronic music to make an exact rhythm in his project. See Paik and Steinecke. "Der Briefwechsel Nam June Paik - Wolfgang Steinecke 1957-1961," 118.

<sup>244</sup> In 1958, Paik was an energetic student who studied new approaches to music and instantly employed them. Another Korean composer, Isang Yun, took part in the Darmstadt Summer Course in 1958. He became Paik's roommate during the festival. Yun had studied music in West Germany since 1957. Paik talked to Yun about the future of his music. This story was included in Yun's letter to his wife in Korea on September 3, 1958. Yun's wife, Sooja Lee, included the letter in her book about her husband, *Isang Yun*. See Isang Yun, "The Letter from Yun to Lee," in *My Husband Isang Yun*, ed. Sooja Lee (Seoul: Changjakkwa Bipyeong, 1998), 154-155. This letter describes Paik's extraordinary perspectives and his plans for the future. This will be examined in chapter 3.

<sup>245</sup> Paik, "Chance Music," 4.

<sup>246</sup> Lee and Kim, eds., *The Return of Nam June Paik*, 150.

before a cleaning woman would come and remove everything.<sup>247</sup> His studio colleague, Hans G Helms, explained that Paik could only use electric devices, not electronic ones.<sup>248</sup> After all, Paik used his own tape recorders to make his project.<sup>249</sup> During the music practices at WDR, his interest in electronic music disappeared. Paik explained the plan of his project *Hommage à John Cage* (1959)<sup>250</sup> to make collage music, and rejected both *musique concrète* and electronic music. The tape recorder part of *Hommage à John Cage* incorporates classical sources such as Ludwig van Beethoven's *Symphony No.5* and Sergei Rachmaninoff's *Second Piano Concerto* with nonmusical sound sources such as screaming, smashed glass, tin boxes full of stones, eggs, a live rooster, a motorcycle, and so on.<sup>251</sup> Paik experimented with spatial and performative music beyond both *musique concrète* and electronic music.

Likewise, the experimental music theorist Douglas Kahn emphasized that Schaeffer finally returned to the notion that no music was possible outside of conventional musical sound, Schaeffer confessed: "It took me forty years to conclude that

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<sup>247</sup> Susanne Rennert, "About Paik, with Paik: A Collage of Conversations Dating from 1992 to 2010," in *Nam June Paik*, ed. Sook-Kyung Lee and Susanne Rennert (London: Tate Publishing, 2010), 213.

<sup>248</sup> Ibid. Helms recollected that Paik used only an electric sound studio. He incorrectly distinguishes electric from electronic music devices. Paik mostly used tape recorders to make his experimental music. See Paik and Steinecke, "Der Briefwechsel Nam June Paik - Wolfgang Steinecke 1957-1961," 128. The tape recorder is an electronic device. Electronic devices allow users to control diverse functions by changing small voltages via switches whereas electric devices simply use electricity to play sound data. It seems that Helms wanted to emphasize that Paik only had access to normal music recorders instead of the cutting-edge electronic music equipment.

<sup>249</sup> Paik and Steinecke, "Der Briefwechsel Nam June Paik - Wolfgang Steinecke 1957-1961," 128.

<sup>250</sup> This chapter only deals with the record part of *Hommage à John Cage*. Its theatrical part will be dealt with in chapter III with the idea of the *Gesamtkunstwerk*.

<sup>251</sup> Sohyun Ahn, *Nam June Paik On Stage* (Yongin: Nam June Paik Art Center, 2014), 31. However, his composition had music collages, sound manipulations, and some electronically generated sounds just as Stockhausen's electronic music, *Gesang Der Jünglinge* (1955-56), which fused the sonic components of recorded passages of a youth choir with equivalent tones and timbres produced electronically. See Holmes, *Electronic and Experimental Music*, 73. Similarly, Paik later recalled that *Hommage à John Cage* was electronic music. See Ahn, *Nam June Paik On*, 33.

nothing is possible outside DoReMi... In other words, I wasted my life”<sup>252</sup> Even though Schaeffer could neither eradicate the indexical point from the objects, nor exclude abstract sounds from musical instruments, he was definitely a pioneer of collage music by mixing data from readymade sound storage. This ambivalent evaluation of Schaeffer seemed to remain in Paik’s mind, too.

Paik made seventy-three collage works for his kindergarten friend Kyung Hee Lee soon after recovering from a stroke in 1996. Each piece consists of a main photograph with a rough oval drawing as a background in the same way a child would draw to emphasize something. They were exhibited at *Nam June Paik Teletopia: from drawing to laser* in Pohang Museum of Steel Art, Korea in 2010. These collage works were published in the catalogue for the exhibition,<sup>253</sup> and partially in Lee’s books, the first edition (2000) and the second edition (2011) of *My Kindergarten Friend: Nam June Paik*.<sup>254</sup> He reused his own photographs, which depict his childhood home, his early performances in Germany, his mentor Cage and so on. Among them, he made a collage drawing with Pierre Schaeffer’s picture. The photo consists of Paik facing away on the left, his wife Shigeko Kubota on the right, and smiling Pierre Schaeffer staring at Paik in the center.<sup>255</sup> Paik drew a lot of oval lines outside of the photo as if he wanted to emphasize it like a child. It seems that Paik wanted to emphasize this photo because Pierre Schaeffer’s works changed Paik’s idea about new music by accessing sound

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<sup>252</sup> Douglas Kahn, “The Sound of Music,” in *The Auditory Culture Reader*, ed. Michael Bull and Les Back (Oxford: Berg, 2003), 83.

<sup>253</sup> See Gab Su Kim, ed. *Nam June Paik Teletopia: From Drawing to Laser* (Pohang: Pohang Museum of Steel Art, 2010), 78-91.

<sup>254</sup> See Kyung Hee Lee, *My Kindergarten Friend Nam June Paik* (Seoul: Yeolhwadang, 2000), 147. And see Kyung Hee Lee, *My Kindergarten Friend Nam June Paik* (Seoul: Design House, 2011), 96-103.

<sup>255</sup> This picture was published in the second edition of *My Kindergarten Friend Nam June Paik*, and in the exhibition catalogue of *Nam June Paik Teletopia: From Drawing to Laser*. See Gab Su Kim, *Nam June Paik Teletopia*, 80. And see Kyung Hee, *My Kindergarten Friend Nam June Paik* (2011), 101.

databases and collages. In other words, he used his visual collage skill to emphasize the pioneer of collage music.

Paik visited *Dada: Dokumente Einer Bewegung* in the Kunsthalle Düsseldorf in 1958, which ran from September 5 to October 19 in 1958.<sup>256</sup> Paik seemed to pay attention to Dada collages because he had already been studying and making sound collages.<sup>257</sup> Paik's experience of *musique concrète* bridges the huge gap between purist music and Cage's iconoclastic collage performance. In other words, it seems that *musique concrète* led Paik to be interested in both Dada collages and Cage's idiosyncratic music performances in 1958. Paik was a diligent composer who removed his musical prejudices of music one by one. For Paik, Schaeffer's *musique concrète* was a significant transitional medium from purist music to collage art.

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<sup>256</sup> Susanne Rennert, "We Have Time," in *Nam June Paik*, ed. Sook-Kyung Lee and Susanne Rennert (London: Tate Publishing, 2010), 60. Because Paik had been attending several lectures of John Cage at the Darmstadt Summer Course starting from September 3, Paik must have been there after the music festival.

<sup>257</sup> Tae Hee Kang, "Nam June Paik Early Years 1958-1973" (PhD diss., The Florida State University, 1988), 10.

### CHAPTER III: Chance Music

I went to see the music with a very cynical mind, to see what Americans would do with Oriental heritage. In the middle of the concert slowly, slowly I got turned on. At the end of the concert I was a completely different man.

—Nam June Paik<sup>258</sup>

The one good fortune in my life was that I got to know John Cage while he was considered more a gadfly than a guru.

—Nam June Paik<sup>259</sup>

This chapter mainly explores Paik's interactions with American composer John Cage after the Darmstadt Summer Course in 1958. Cage is regarded as a significant mentor of Paik as well as the guru of Fluxus, which was the first world-wide avant-garde art group. Paik often mentioned that he was influenced by Cage. This approach often distorts the study of Paik. Influence in art mainly means a one-way communication from a powerful master to his/her tabula-rasa disciple. However, Paik's relationship with Cage cannot be explained by "influence." Art historian Michael Baxandall indicates that influence is not a correct term to explain the relationship between two different artists because the word does not capture the process of creative interpretation between artists, which is like a chain reaction on an Italian billiards table.<sup>260</sup> He gives an example: even though it is a common belief that Paul Cézanne influenced Pablo Picasso, Cézanne's creative impact on Picasso did not result in simple duplication because Picasso's original interpretation caused him to be a separate artist from Cézanne, in addition, Picasso's

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<sup>258</sup> Decker-Philips, *Paik Video*, 25.

<sup>259</sup> Nam June Paik, *Nam June Paik: Beuys Vox 1961-1986*, trans. and ed. Seyung-Gil Paik and Alan Marlis (Seoul: Won Gallery/Hyundai Gallery, 1990), 1

<sup>260</sup> Michael Baxandall, *Patterns of Intention: On the Historical Explanation of Pictures* (New Haven: Yale University Press, 1985), 58-62.

popularity conversely made Cézanne more famous.<sup>261</sup> Similarly, it is necessary to actively explore the interlocking relationship between Paik and Cage. The simplification that Cage influenced Paik ignores Paik's ability to create progressive art. My research regards the communications between Paik and Cage more as an interactive relation than a one-way influence. It mainly involves Paik's active interpretations of Cage's works.

Cage was not a main figure for new music at all in Europe when Paik took part in the music conference. Paik actively studied Cage's compositions regardless of what German music critics were saying. When Paik was looking for a solution to the mannerism of twelve-tone music, he encountered Cage's chance operation and musical performances, which were essentially different from European works at that time. In particular, Paik compared Cage's performance music with Stockhausen's spatial music in his Japanese articles. As Paik studied Cage, Paik's idea about music shifted from the German composer to the American one. And then, Paik's focus moved from Cage's chance operation to his spatial performance. Based on his study of Cage, Paik synthesized Cage's progressive ideas and became a staunch advocate for Cage's music in West Germany. Cage's idea of music contributed to Paik completing his idea of collage art, which began with Pierre Schaeffer and Kurt Schwitters. Paik finally created his own projects based on Cage's idea of music. This also shows that Cage's musical performances thoroughly expanded Paik's idea of new music.

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<sup>261</sup> Ibid., 60.

### 3.1 Uninvited Composer, John Cage

Before the Darmstadt Summer Course in September 1958, Paik expanded the idea of music into sound collages based on *musique concrète* in Freiburg. Around the same time, Paik worked to overcome the mannerism of twelve-tone technique. In particular, after attending the International Society for Contemporary Music in Strasbourg in June 1958, Paik observed that twelve-tone composition had been corrupted by the majority of similar pieces, and most serial composers imitated a few masters' twelve-tone styles with many similar works. And after all, the mannerism of serialism had been discussed in "The Twelve Tone Mannerism."<sup>262</sup> In this regard, even though Paik admired twelve-tone technique, he was simultaneously aware of the mannerism of the technique. Paik explained that of the 180 applications, only twenty-two compositions were accepted in the festival, and all but six were based on twelve-tone technique. He criticized this serious phenomenon, and, he added, whereas many compositions had beautiful melodies, only five were great compositions.<sup>263</sup> He felt disappointed that even though artisans, who achieve perfection by practicing, were many, authors, who make creative works against mannerism, were rare, so audiences had to wait for composers' greatness to be grown.<sup>264</sup> As the title "The Twelve Tone Mannerism" indicates, Paik acknowledged that the summit of twelve-tone technique would lead to its decadence. At the end of his Japanese article, Paik hoped that young composers would explore how to escape from the danger of twelve-tone technique by taking off its rule like taking off armor.<sup>265</sup> Paik did not think

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<sup>262</sup> Paik, "The Music of 20<sup>th</sup> Century – Part V," 4.

<sup>263</sup> Paik, "Twelve-tone Music Mannerism," 121.

<sup>264</sup> Ibid. Paik originally used *Musikant* and added its meanings as artisans although *Musikant* normally is translated as musician.

<sup>265</sup> Ibid.



that a new approach would be possible by breaking the twelve-tone idea in the Western music environment at that time. Although this idea would be undermined by *musique concrète*, this would be reinforced by electronic music, which followed serialism. In this late-serialist<sup>266</sup> moment, Paik encountered Cage's intense performances in Darmstadt.

Unlike European composers such as Stockhausen and Boulez, Cage was not a special guest for the Darmstadt Summer Course. This story was well described in "Excursus: October 1954, Donaueschingen and Cologne" in *New Music at Darmstadt: Nono, Stockhausen, Cage, and Boulez*.<sup>267</sup> In 1954, Cage staged his first performance in West Germany during the Donaueschingen music festival, which was a rival international music course to Darmstadt.<sup>268</sup> Dr. Steinecke did not want to invite Cage to Darmstadt because he hardly received positive feedback in Donaueschingen.<sup>269</sup> Instead, he wanted to invite Cage's colleague, the talented pianist, David Tudor.<sup>270</sup> However, about two months before the conference the French composer Boulez cancelled most of his performances and courses due to technical issues.<sup>271</sup> Because he was a headliner for the conference of 1958, his absence was significant. Dr. Steinecke needed to find a substitute as soon as possible. He asked several composers to teach some courses and give some performances, but could not find any composers who could replace Boulez. Finally, he contacted Cage and Tudor to ask them to give some courses and performances even

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<sup>266</sup> To distinguish two meanings of "post" such as after and late, I avoid the term post, and use late-serialism and after-serialism.

<sup>267</sup> Martin Iddon, *New Music at Darmstadt: Nono, Stockhausen, Cage, and Boulez*, 156-164.

<sup>268</sup> *Ibid.*, 161.

<sup>269</sup> *Ibid.*, 196.

<sup>270</sup> *Ibid.*, 178-79. Dr. Steinecke wanted Tudor to take part in the Darmstadt Summer Course since 1956.

<sup>271</sup> *Ibid.*, 199-200.

though Dr. Steinecke was still reluctant to invite Cage to the conference.<sup>272</sup> In other words, Cage was not fully welcome at the music conference in Darmstadt.

### 3.2 John Cage at the Darmstadt Summer Course in 1958

Paik was not interested in Cage prior to meeting him. He went to see Cage's Oriental performance with a very cynical mind, but Paik became a completely different man after the concert.<sup>273</sup> Paik became a member of the small audience fascinated by Cage's performances in Darmstadt. Paik introduced Korean and Japanese readers to Cage's exciting events. First, his Korean article, "Chance Music – the Yearly International Holiday Courses for New Music in Darmstadt Festival" was published in two parts on January 6 and 7, 1959, in *Chayushinmun*.<sup>274</sup> In the first article, Paik mainly deals with "chance music" from Cage. In the second article, Paik mentions the spatiality of music from Stockhausen and Boulez. It seems that since Dr. Steinecke was not satisfied with Cage's performances and courses, he did not ask Paik to translate his Korean and Japanese articles about this event into German. This article was translated by Korean composer Kunsu Shim much later.<sup>275</sup> The article for common Korean readers on its own is not enough to analyze Paik's interpretation of Cage's compositions and performances during the 1958 Darmstadt Summer Course.

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<sup>272</sup> Ibid., 198-99.

<sup>273</sup> Decker-Phillips, *Paik Video*, 25.

<sup>274</sup> The title of the Korean article is "우연한 음악," which means chance music. This article deals with not only chance music from John Cage, but also music with random access from Karlheinz Stockhausen. Even though chance music is different from random access music, this chapter uses Paik's original title, "Chance Music."

<sup>275</sup> This article was introduced in the exhibition catalog of *Nam June Paik Fluxus/Video* in 1999. Kunsu Shim who is a Korean musician in Germany translated the article into German, and his colleague Gerhard Stabler supervised the translation. See Herzogenrath, ed., *Nam June Paik: Fluxus/Video*, 22-23.

In comparison, Paik published the Japanese article, “Serie, Chance, Space” about the same event for *Ongaku Geijutsu* in December of 1959, which is a twenty-page article for the music magazine. Among all of his articles, this is the most professional with several references and pictures just like a short thesis. Unfortunately, this article is not yet available to Western scholars since it is translated neither into English nor German. In “Serie, Chance, Space,” Paik is not simply immersed into Cage’s chance music, but analyzes his whole idea of music including his spatiality of music. In particular, this Japanese article is a critical source that reveals which courses Paik took and what he thought during the Darmstadt Summer Course. Paik first attended Cage’s *Variations I, Music for Two Pianos, Winter Music*, and *Duo for Pianist II* on September 3, 1958. Subsequently, Paik took Cage’s lecture *Music of Changes* on September 6, 1958. Finally, he took Cage’s *Indeterminacy* on September 8, 1958.

Above all, Paik continues to think about the mannerism of twelve-tone music. In both the Korean and Japanese articles, he starts with the issue that twelve-tone technique cannot guarantee the quality of a composition, and that people also should not *a priori* evaluate the method to create a composition.<sup>276</sup> Conversely, Paik insists that “if a composition is great, people can suppose that its method is great too.” This assumption is not a logical process because the private or secret methods are not *a priori*.<sup>277</sup> It seems that Paik emphasized *a priori* because his taste for twelve-tone music could be a preconception, which could impede analyzing music. Paik observed and experienced new music instead of interpreting it with the idea of twelve-tone technique in the Darmstadt Summer Course. In other words, Paik rejected supporting twelve-tone music

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<sup>276</sup> Paik, “Serie, Chance, Space,” 82. Paik, “Chance Music,” 4.

<sup>277</sup> Ibid.

unconditionally, instead, he carefully explored great compositions regardless of their visible methods.<sup>278</sup> Paik talks about Ernst Krenek's creative composition, *Self-Analysis* (1953) in the first paragraph of "Chance Music." Paik argues that Krenek borrowed new methods a little too late. His paradoxical sentence explains that Krenek's work was not creative but mannerist. Paik emphasizes the difference between a method of composition and composition itself when we evaluate a composition.<sup>279</sup> Furthermore, in "Serie, Chance, Space," Paik distinguishes the process of serialism and the *gestalt* of its sound to focus on its systematic *organic* unity.<sup>280</sup> After being disappointed at Krenek's eclectic mediocre music, Paik focused on the unique methods of Cage.<sup>281</sup> This first paragraph implies Paik's progressive vision for new music. He was not satisfied with popular twelve-tone composition, and he was looking to Post-serial approaches for new music. When he was waiting for the 'After-Serialism,' John Cage performed his unique compositions in Darmstadt in 1958. Paik was immersed in Cage's works and analyzed their particular methods in his article. Without any preconception about his music, Paik was excited about Cage's performance first. And then, his idiosyncratic performance made Paik interested in his chance operation. Paik emphasized that he was not fascinated by Cage's idea, but his performance.<sup>282</sup> This approach is a reversal of the relationship with Schoenberg because Paik preferred Schoenberg's idea to his compositions.<sup>283</sup>

In "Chance Music," Paik explains that Cage's chance operation follows a number of throwing coins based on *I-Ching*, which is an ancient Chinese divination text. Cage

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<sup>278</sup> Paik, "Chance Music-Part I," 4.

<sup>279</sup> Ibid.

<sup>280</sup> Paik, "Serie, Chance, Space," 82.

<sup>281</sup> Paik, "Chance Music-Part I," 4.

<sup>282</sup> Paik, "Av. J. C. / Ap. J. C.," 41.

<sup>283</sup> Paik, "My Jubilee Ist Unverhemment," 10.

darkened natural stains on paper with his pencil, and based on the paper's materiality, he chose some of these stains, then, he overlaid the stained paper with his transparent sheet of blank music notation. The intersection between the papers would become tones in addition to sharp or flat by chance operation.<sup>284</sup> In fact, Cage composed with diverse chance operations by overlaying transparent papers. To be specific, Paik distinguished chance music with a fixed score from chance music with an unfixed one. Some of Cage's chance music had no freedom for pianists. Paik compared the pianist in the *Music of Change* with a carpenter who builds a house based on an architect's blue print.<sup>285</sup> However, Cage became less satisfied with it since its composition imposed severe constraints on the performer, more inhuman than human like Frankenstein's monster.<sup>286</sup> Paik also mentions the indeterminate music from Morton Feldman's *Intersection*,<sup>287</sup> which made a pianist a car driver who can go any time during a green light.<sup>288</sup> Cage had already composed this kind of chance music with indeterminacy.<sup>289</sup> Similarly, in "Chance Music," Paik explains some durations and timbres are freely decided by a pianist in Cage's music.<sup>290</sup> Because some parameters are missing in this score based on simple graphics like lines or rectangles, musicians can interpret them in their own way.

Musicologist David W. Bernstein clearly divides Cage's chance music into two different

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<sup>284</sup> Paik, "Chance Music – Part I," 4.

<sup>285</sup> Paik, "Serie, Chance, Space," 85.

<sup>286</sup> David W. Bernstein, "John Cage's Cartridge Music (1960): 'A Galaxy Reconfigured'," *Contemporary Music Review* Vol.33, Nos. 5-6 (2014): 557, accessed July 8, 2016, doi:10.1080/07494467.2014.998419

<sup>287</sup> Paik did not mention which version of *Intersection* he explained. However, Paik explained it as a piano score and attached the note in the article, based on these materials, Paik talked about *Intersection II* (1951). See Paik, "Serie, Chance, Space," 84.

<sup>288</sup> According to Iddon's *New Music at Darmstadt*, Feldman only performed *Two Pianos*. Paik dealt with the composition with *Cage's Music for Two Pianos*. See Paik, "Serie, Chance, Space," 87-88. It seems that Paik included Feldman's *Intersection* to explain the indeterminate method in music. See Ibid., 85.

<sup>289</sup> In fact, the first version of *Intersection* was dedicated to Cage. See David Nicholls, "Getting Rid of the Glue: The Music of the New York School," in *The New York Schools of Music and Visual Arts*, ed., Seven Jonathan (New York: Routledge, 2011), 28.

<sup>290</sup> Paik, "Chance Music – Part I," 4.

kinds: chance operation is pre-compositional random procedures used to determine a fixed musical score, whereas indeterminacy provides far more freedom for the performer with a set of unlimited possibilities.<sup>291</sup> Even though the distinction is often unknown to audiences, it is true that pianists have, to some degree, their own choices in Cage's compositions.<sup>292</sup> Whereas Stockhausen's random access in *Klavierstück XI* in the Darmstadt Summer Course of the previous year could be altered by performers' decisions and abilities, Cage's music could be manipulated by both the composer's decisions based on the materiality of chance generators such as a coin and paper and performers' reinterpretations based on the compositions. "Chance" appeared in the titles of both the Korean and Japanese articles not because Paik intended to praise the method, but found its critical effect in art. Paik explored how chance operation changed artists' minds. He briefly includes his interview with Cage, in "Chance Music."<sup>293</sup> He asks Cage if a composer would make more than twenty scores a day by using this simple rule, how could the composer choose a single composition for a performance among them? Cage answers that it does not matter which one is chosen. Paik was "impressed by his answer not because of irresponsibility but because of its conformation to Nature by removing a fixed thought between consciousness and unconsciousness."<sup>294</sup>

As mentioned, Paik questions the relationship between quantity and quality in art. In his previous Korean article "The Music of 20's Century – Part V" and his Japanese article "The Twelve Tone Music Mannerism," he is afraid of the mannerism of serialism,

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<sup>291</sup> Bernstein, "John Cage's Cartridge Music (1960)," 557.

<sup>292</sup> Cage's music colleague, pianist David Tudor often performed Cage's compositions, actively interpreted Cage's scores, sometimes fixed the scores for his performances before presenting them on the stage. See Martin Iddon, *John Cage and David Tudor: Correspondence on Interpretation and Performance* (Cambridge: Cambridge University Press, 2013), 83, 85.

<sup>293</sup> Paik, "Chance Music – Part I," 4.

<sup>294</sup> Ibid.

in which a few “quality” serialist pieces were overwhelmed by the sheer “quantity” of so-so serialist music. To Paik, art was an elite medium based on Western aesthetics and philosophies. However, in the Darmstadt Summer Course, Paik was shocked by Cage’s conformity to Nature regardless of the quality of his chance music. Cage’s philosophical perspective played critical roles of subversively both breaking Paik’s elitist idea of art and escaping the mannerism of twelve-tone music. Five years after the encounter, in “afterlude to the EXPOSITION of EXPERIMENTAL TELEVISION,” Paik insists that “The core of the beauty of nature is, that, the limitless quantity of nature disarmed the category of quality, which is used unconsciously mixed and confused with double meanings,” and continues to stress that quality does not mean value, but character without any superiority or inferiority.<sup>295</sup> This shows that Paik continued to bridge the huge gap between these two different meanings of quality until he demolished his elitist prejudices against new music. He did not follow twelve-tone technique for his new music anymore. Instead, Paik was ready to collage anything without any hierarchies. Furthermore, Paik did not focus on chance operation itself, but its deep impact, which changed the rules, criteria, and paradigm of music. In the end, he rejected purity and elitism in music.

Cage broke another of Paik’s preconceptions. Paik was shocked that in *Variation I*, the piano could be still young,<sup>296</sup> and the instrument could be played in a new way; Cage’s piano’s strings, its lid and body itself could be beat, hit, and scratched by the pianist.<sup>297</sup> Paik was much more excited that action was able to convert an old instrument,

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<sup>295</sup> Paik, *Videa ‘n’ Videology*, 5.

<sup>296</sup> To Paik, the piano was for classical music. However, Paik evaluated that Cage’s appropriation updated the piano as a new musical instrument. See Paik, “Chance Music – Part I,” 4.

<sup>297</sup> Ibid.

piano, into a new medium.<sup>298</sup> Right before the encounter with Cage, Paik explored electronic music beyond classical instrumentation. However, Cage's compositions encouraged Paik to think of the piano as a functional object freed from its original function just like a sonorous object in *musique concrète*. This specific piano provided Paik with two creative possibilities for music: manipulating a piano and destroying a musical instrument in action. Cage's prepared piano was developed to make an African pitch set when he composed *Bacchanale* (1940).<sup>299</sup> After modifying the strings of his piano with newspapers, magazines, ashtrays, books and a pie plate, he fixed the thread of a wood-screw, wound between two strings of a single note.<sup>300</sup> Paik later reinterpreted Cage's prepared piano to make a more aggressive and creative piano in *Klavier Integral*. Actions in *Variations I* led Paik to his action music, which made him a notorious artist in Germany. In other words, Cage's idiosyncratic performance encouraged Paik to break the realm of music and pursue avant-garde musical experiments known by these three synonyms: a-music, anti-music, or action music. In this context, Paik perceived a new idea of music, spatiality in music with musical instruments liberated from their original functions.

Similarly, in "Chance Music," Paik expresses his interest in Boulez's work, which consists of eighty-four microphones around the audience to realize an ideal space where the position of sound would be equal.<sup>301</sup> As mentioned, Paik was a high school student who dreamed of a socialist country, in which everyone is equal. In the same context, his obsession with equality is identified with his artistic intentionality. Schoenberg used

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<sup>298</sup> Paik, "Chance Music – Part I," 4.

<sup>299</sup> David Revoll, *The Roaring Silence* (New York: Arcade Publishing, 1992), 69.

<sup>300</sup> Ibid., 70.

<sup>301</sup> Paik, "Chance Music – Part II," 4.



twelve tones equally without any hierarchies between tones, and Schaeffer used sound fragments by breaking the concrete boundary between noise and music. In addition, Boulez experimented with spatial equality using many microphones. This method is a new idea of accessing sound databases equally. With his macro vision, in “Serie, Chance, Space,” Paik stresses that this mixed experience is not limited to music, but it became a new phenomenon from philosophy, science and psychoanalysis.<sup>302</sup> The theory denies time as a continuous event, and emphasizes the concept of time as a non-linear phenomenon. In this context, Paik mentions the French Neo-Impressionist painter Georges Seurat who emancipated painting from static space. This was developed by his contemporary Paul Signac with pointillism and divisionism. Time trespassed the static canvas. In a similar context, Paik emphasizes cubist paintings, which visualize spatiality on the two-dimensional canvas.<sup>303</sup> Paik thinks that there is a blurred boundary between dynamic media and static media, and this revolution is a parallel phenomenon with the progression of science in the past fifty years.<sup>304</sup> In “Serie, Chance, Space,” Paik rejects the medium-specificity of *Laocoon*,<sup>305</sup> which he had agreed with a year before in his Korean article “The Music of 20’5 Century.”

After experiencing diverse new ideas of music in Darmstadt, Paik mentions the concept of the genius again in “Chance Music” as he did in his previous Korean article “The Music of 20’5 Century.” However, he now states that genius comes from

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<sup>302</sup> Paik mentions that the thought of breaking traditional space and time was based on Henri Bergson, Albert Einstein and Sigmund Freud. See Paik, “Serie, Chance, Space,” 90-91.

<sup>303</sup> Paik introduces this cross-disciplinary phenomenon from an article in *Musikalische Jugend* published by Bernard Bosse in April of 1958. In 1993, the journal changed its title into *Neue Musikzeitung*. Unfortunately, there is no archive for the article that Paik cited. The title of it can be translated into “Study on New Time and Space.” See Ibid., 92-93.

<sup>304</sup> Ibid.

<sup>305</sup> Paik, “Serie, Chance, Space,” 90.

“extraordinariness.” Paik suggests, “instead of extinguishing the flames of a young genius’s extraordinary trials, [we] must directly take the path of genius [ourselves].”<sup>306</sup> In this sentence, there is no subject. The subject would be Paik himself since he had been composing his first gallery work, *Hommage à John Cage* at that time. This sentence implies Paik’s ambition to be a learned genius composer who can overcome his status as a racial minority. Paik adds that “because Korean people do not understand the genius’s trials at all, they first tease him, but after all, they will use sophistry to rationalize their own behaviors.”<sup>307</sup> Interestingly, this sentence exactly coincides with his reputation in Korea thirty years later. In “Chance Music,” Paik ends with a quotation from the famous German critic, Karl Wörner: “The history of new music for ten years is the history of Darmstadt for ten years.” Paik emphasizes the role of the Darmstadt Summer Course as the core of art and new music as he did in his previous article, “The Music of 20’s Century.” At the end of “Serie, Chance, Space,” he stresses Cage’s greatness in the Darmstadt Summer Course: “John Cage does not need Germany, but Germany needs John Cage.”<sup>308</sup> He strongly criticized German scholars for excluding Cage from the mainstream and underrating Cage’s performances as he found creative possibilities in Cage’s music beyond serialism. Finally, Paik had a feeling of liberation from the suffocating atmosphere of German music.<sup>309</sup>

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<sup>306</sup> Paik, “Chance Music – Part II,” 4.

<sup>307</sup> Ibid.

<sup>308</sup> Paik, “Serie, Chance, Space,” 101.

<sup>309</sup> Yong-Oak, *Tao Painting*, 249.

### 3.3 Karlheinz Stockhausen as a Composer of Spatial Music

Paik connects random access with the spatiality of time based on the concept of time as a non-linear phenomenon.<sup>310</sup> Paik quotes James Joyce's several sentences from *Finnegan's Wake* (1939), in which the end of the sentence leads to the first sentence again.<sup>311</sup> In the end, Paik explains that this recirculation makes temporal literature a spatial medium.<sup>312</sup> Spatiality in music was not exclusively from Stockhausen's idea. Paik equally explains Cage as a main figure for the idea in "Serie, Chance, Space." However, their ideas about spatiality in music have clearly different approaches. Whereas Cage's spatial music is staged in a theater, philosophically breaking what music is, Stockhausen's spatial compositions are mostly technically advanced works maintaining the form of music. As mentioned, Stockhausen developed spatiality in music in three different directions. First, he encouraged audiences to choose their position to listen to the music. Second, he experimented to expand the realm of the orchestra. Third, he technically studied how to design a surround-sound environment with recorded music and multi-channel loudspeakers. Paik focused much more on Cage's spatial performances than Stockhausen's spatial compositions after the 1958 Darmstadt Summer Course.

### 3.4 Another Catalyst – Kurt Schwitters's Collage

Paik liked Pablo Picasso's collages<sup>313</sup> while he still stuck to purity in serialism music. He found diverse possibilities of collage art in *Dada: Dokumente einer Bewegung*

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<sup>310</sup> Paik, "Serie, Chance, Space," 90-93.

<sup>311</sup> Ibid., 92-93.

<sup>312</sup> Ibid.

<sup>313</sup> Tae Hee, "Nam June Paik Early Years 1958-1973," 9. In fact, Paik stated that Picasso's personal biography more or less coincided with the history of art in Paris. See Paik, "Après Serie/1," 13.

soon after attending the Darmstadt Summer Course in 1958, and he hoped to apply this form of visual collage to sound collage someday.<sup>314</sup> In other words, Paik's collage art expanded from *musique concrète* and collage painting in Paris to comprehensive collage art, which mixed performance, any media, and any materials. In the Dada exhibition, Paik particularly drew attention to Kurt Schwitters, who made collage works in poetry, music, architecture, painting, sculpture and so on. He called his pieces *Merz*,<sup>315</sup> which denotes essentially the combination of all conceivable materials for artistic purposes, and technically the principle of equal evaluation of the individual materials.<sup>316</sup> In particular, Paik focused on two genres of Schwitters's *Merz*. First, it seems that Paik was interested in Schwitters's publication *Sonate* (1923) in a Dada periodical *Mécano* issue 4/5 (1924).<sup>317</sup> Paik concentrated on Schwitters's writing style. His text exploits the small change of utterance and thrives on the vagaries and anomalies of language: its alliterations and assonances, its rhymes, its capacity to generate neologisms, its hilarious homonyms, its fickle clichés, its habit of sidestepping away from, and then dodging back into, intelligibility.<sup>318</sup> In *Sonate*, Schwitters repetitively used short words again and again with gradual transitions. As the title says, this is a sonata with only texts, which begin with "Grim glim gnim bimbim." The slight changes of the words are similar to deviation of sounds from Cage's prepared piano, which consists of both existent and non-existent

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<sup>314</sup> Makoto, "Avant-garde and Music in the World – Part I," 40.

<sup>315</sup> The term *Merz* derived from the second syllable of *kommerz*, which means commerce, that he had found on a piece of paper in one of his collages. See Dorothea Dietrich, *The Collages of Kurt Schwitters: Tradition and Innovation* (New York: Cambridge University Press, 1993), 18.

<sup>316</sup> *Ibid.*, 17.

<sup>317</sup> His *Merz Sonate* was exhibited in the *Dada: Dokumente Einer Bewegung* exhibition. According to the exhibition catalogue, its number is 518 on the list of the Dada works. See Karl Heinz Hering and Ewald Rathke, comps., *Dada: Dokumente einer Bewegung* (New York: Arono Press, 1968), n.p. This is a republication for its original exhibition catalogue. See. Karl Heinz Hering and Ewald Rathke, comps., *Dada: Dokumente Einer Bewegung* (Düsseldorf: Düsseldorf Kunsthalle, 1958).

<sup>318</sup> Roger Cardinal and Gwendolen Webster. *Kurt Schwitters* (Ostfildern: Hatje Cantz, 2011), 116.

piano sounds. Paik wrote some poems which were inspired by Schwitters's writing style. Paik published *Read Poem for Mr. I and Mr. I* (1964). It starts with ココロ コロコロ  
 ココロ コンコン. ココロ is repeated every time after variations of some words. Similar to *Sonate*, Paik's poem includes the small change of utterance sounds. These are also words freed from their original function as in *musique concrète*. Paik created unfixed variations of words in his poem in 1968, to his kindergarten friend, Kyung Hee Lee. The poem starts with “사랑아 사랑 사랑 사랑아 낭상 낭상”<sup>319</sup> In this poem, infantile utterances are directly connected to his childhood memories. Paik confessed his love for childhood sweetheart Lee. His Schwitters-like poems are another type of collage sound art.

Secondly, Paik applied the idea of *Merz* to his first performance. Paik mentions Schwitters in two letters to Dr. Steinecke. On December 8, 1958, Paik explains that his on-going project will use functional sounds freed from their original functions.<sup>320</sup> Paik explored how to make collage music in a Dadaist way. By getting rid of their original functions from sounds, Paik created new meaning for them. Furthermore, this incorporates Cagean sounds from Paik's active performance as well as sonorous objects inspired by *musique concrète*. He defines this project as a-music, or Schwitters-style sound. Schwitters's collage art uses diverse ready-mades such as perambulator wheel, wire netting, twine and cotton-wool, and all individual materials have the same value.<sup>321</sup> Paik explored cross-modality between visual and sound data in this visual *musique concrète*. Second, on May 2, 1959, Paik explains that the third chapter of his performance

<sup>319</sup> Even though it is impossible to perfectly translate a poem into another language, it means: Love! Love Love Love! Ivöl Ivöl. In other words, it consists of love and its permutation.

<sup>320</sup> Paik and Steinecke, “Der Briefwechsel Nam June Paik - Wolfgang Steinecke 1957-1961,” 123.

<sup>321</sup> Cardinal and Webster, *Kurt Schwitters*, 44.

will not be philosophical music but musical philosophy.<sup>322</sup> He stresses the disconnect between functional things and their function again by making aggressive actions of overturning a piano, breaking glasses, tearing paper, presenting a live hen, and turning on a motor bike on the stage, and he insists that these actions do not intend anything humorous, but result in serious combinations like Kurt Schwitters's works.<sup>323</sup> These two mentions of Schwitters imply that Paik was thoroughly inspired by Schwitters's collage projects, which echo the Romantic and Expressionist belief in a larger project in which disparate parts are joined in a harmonious, more complete whole.<sup>324</sup> As Schwitters expanded *Merz* into the world of the *Gesamtkunstwerk* under the term, "Merzbühne (Merz Stage)"<sup>325</sup>, Paik focused on the *Gesamtkunstwerk* as the larger *Merz* right before his debut.

### 3.5 *Gesamtkunstwerk* for Nam June Paik

Schwitters emphasizes: "Whereas Dadaism merely poses antitheses, *Merz* reconciles antitheses by assigning relative values to every element in the work of art."<sup>326</sup> *Merz* itself undermines the medium-specific idea in art. However, Schwitters maintained the compulsion to organize his work according to separate categories predicated on medium, medium specificity hinged on phenomenology.<sup>327</sup> In his ambivalent feeling about the total work of art, he suggested *Merzbühne*, which completely combines all artistic forces in the attainment of the total work of art, the *Gesamtkunstwerk*, based on

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<sup>322</sup> Paik and Steinecke, "Der Briefwechsel Nam June Paik - Wolfgang Steinecke 1957-1961," 126.

<sup>323</sup> Ibid.

<sup>324</sup> Dietrich, *The Collages of Kurt Schwitters*, 130.

<sup>325</sup> Cardinal and Webster, *Kurt Schwitters*, 122.

<sup>326</sup> Dietrich, *The Collages of Kurt Schwitters*, 19.

<sup>327</sup> Megan R. Luke, *Kurt Schwitters* (Chicago: University of Chicago Press, 2014), 189.

the principle of equality of all materials.<sup>328</sup> In Paik's idea of new music, this theatrical approach was mixed with Schaeffer's *musique concrète*, Cage's live performances and Schwitters' *Merzbühne*.<sup>329</sup>

In a letter to Dr. Steinecke on December 8, 1958, Paik explains his new concept of music, "a-music," that the next music follows Schoenberg's atonal and Cage's a-composition.<sup>330</sup> As the third kind of progressive music, Paik broke the physical and psychological boundary of music, and thereby expanded the definition of music to include non-musical territories. Paik regarded a-music as "the sound version of Schwitters's creation."<sup>331</sup> As Schwitters created collage works combining literature, painting, sculpture, typography, architecture, and so on in his "Merz" series, Paik dreamed of the complex art involving diverse senses covering diverse media.<sup>332</sup> Paik actively interpreted Kurt Schwitters's collage technique. In the letter, Paik states that he would include situations in which musicians talk with audiences, blurring the boundary between a creator and his audience. He also would introduce a scooter, ready-made sounds, a performance shooting a bullet through a glass, and a prepared piano, as not only a normal instrument, but also as a chordophone and a percussion instrument. The a-music idea is also found in a letter from Paik to Cage in 1959:

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<sup>328</sup> Cardinal and Webster, *Kurt Schwitters*, 122.

<sup>329</sup> Ibid. This term will be discussed at greater length in the next subchapter with the topic of the *Gesamtkunstwerk*. Schwitters expanded Merz into the world of the *Gesamtkunstwerk* under the term, "Merzbühne (Merz Stage)." Unlike Wagner's *Gesamtkunstwerk*, Schwitters' Merzbühne emphasized the principle of equality of all materials.

<sup>330</sup> Paik and Steinecke, "Der Briefwechsel Nam June Paik - Wolfgang Steinecke 1957-1961," 123.

<sup>331</sup> Ibid.

<sup>332</sup> Sohyun Ahn, "The Space Composed of Sound," in *x\_sound: John Cage, Nam June Paik and After*, eds. Sohyun Ahn, Sooyoung Lee, and Chaeyoung Lee (Yongin: Nam June Paik Art Center, 2012), 74.

I use here: Colour Projector. Film 2-3 screens. Strip tease. Boxer. Hen (alive). 6 years girl. Light-piano. Motorcycle and of course sounds. One TV. // ‘whole art’ in the meaning of Mr. R. Wagner.<sup>333</sup>

In the idea of his performance, there are potential elements for his idiosyncratic projects such as a motorcycle in the second version of *Hommage à John Cage* and a live hen in *Symphony for 20 Rooms* (1961) as well as electronic televisions in *Exposition of Music – Electronic Television* (1963). This concept was reinforced by Richard Wagner’s *Gesamtkunstwerk*, which was opposite to purity in art. As mentioned, Paik thought that purity was the main quality of new music. He was excited for the phenomenon of other arts following the purity of music in “The Music of 20<sup>th</sup> Century” in 1958. However, Paik rejects purity and starts his career outside academia with the *Gesamtkunstwerk* in the letter to Cage in the following year.

What is Wagner’s “whole art” in Paik’s letter? The Romantic composer emphasizes the *Gesamtkunstwerk* as the theoretical basis for artistic synthesis in his essay *The Art-Work of the Future* (1849). Wagner insists that, “by uniting separate branches of art, artists can create common art.”<sup>334</sup> He regarded a desirable outcome as the theatrical stage, or the Drama with reciprocal agreements among the other arts.<sup>335</sup> Unlike the title of his essay, *The Art-Work of the Future*, the *Gesamtkunstwerk* paradoxically comes from a tragic drama, a mass religious event, unified works with dance, music and poetry in the art of ancient Greece.<sup>336</sup> The German term, *Gesamtkunstwerk*, is derived from the archaic

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<sup>333</sup> Nam June Paik, “An excerpt from a letter to Cage,” in *John Cage, A Year from Monday* ed. John Cage (Middletown: Wesleyan, 1967), 90.

<sup>334</sup> Richard Wagner, “Outlines of the Artwork of the Future,” in *Multimedia: From Wagner to Virtual Reality*, trans. William Ashton Ellis, eds. Randall Packer and Ken Jordan (New York: W. W. Norton & Company, 2001), 9.

<sup>335</sup> Ibid.

<sup>336</sup> Shaw-Miller, *Visible Deeds of Music*, 39-40.



verb *samenen*, which means ‘to assemble, gather, collect,’ so Oliver Schefer stresses that the translation of *gesamt* as “total” in English and French is not exact.<sup>337</sup> However, it is true that Wagner himself emphasized a totalizing perspective: to achieve the highest artwork, the separate artists from different media must quell each selfish, harmful outgrowth from the whole.<sup>338</sup> Wagner complained that others misused the *Gesamtkunstwerk*,<sup>339</sup> and Paik seemed to regard it “whole art” in multimedia with daily-life materials. Randall Packer analyzed the *Gesamtkunstwerk* inspired Bauhaus and Fluxus by dissolving boundaries between art and life as well as disciplines. In the end, by blurring boundaries between art and technology, it contributed to organizing electronic multimedia activities including Experiments in Art and Technology (E. A. T).<sup>340</sup> Even though Packer did not mention Paik’s importance in this transition, the Paik can be a main figure who bridges the gap between Fluxus and E. A. T.<sup>341</sup> In this regard, the *Gesamtkunstwerk* is the key to understand Paik’s interactive art.

Anke Finger and Danielle Follett further argued that the *Gesamtkunstwerk* could be divided into three different levels: aesthetic, political, and metaphysical.<sup>342</sup> Paik’s idea about the *Gesamtkunstwerk* coincides with the mixture of the first and the second levels of it. First, the aesthetic level is the blending of diverse arts and genres as in multimedia,

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<sup>337</sup> Anke Finger and Danielle Follett, “Dynamiting the *Gesamtkunstwerk*: An Introduction to the Aesthetics of the Total Artwork,” in *The Aesthetics of the Total Artwork: On Borders and Fragments*, eds. Anke Finger and Danielle Follett (Baltimore: Johns Hopkins University Press, 2011), 5.

<sup>338</sup> Wagner, “Outlines of the Artwork of the Future,” 9.

<sup>339</sup> Eric Garberson, “Historiography of the *Gesamtkunstwerk*,” in *Struggle for Synthesis: The Total Work of Art in the 17th and 18th Centuries*. Conference proceedings, Vol 1 (Lisbon: Ed. do Instituto Portugues do Patrimonio Arquitectonico, 1999), 59.

<sup>340</sup> Randall Packer, “The *Gesamtkunstwerk* and Interactive Multimedia,” in *The Aesthetics of the Total Artwork: On Borders and Fragments*, eds. Anke Finger and Danielle Follett (Baltimore: Johns Hopkins University Press, 2011), 158-159.

<sup>341</sup> The relationship between E. A. T. and Paik will be described in the next chapter.

<sup>342</sup> Finger and Follett, “Dynamiting the *Gesamtkunstwerk*,” 5.

operatic, and synesthetic creations. Second, the political level is the interactive transgression of the concrete boundary between art and life. In this regard, the *Gesamtkunstwerk* seems to inspire the emerging avant-garde art with artistic synthesis.<sup>343</sup> Even though most progressive art movements, including Dada, break the boundary between art and life, they maintain their position in art institutions. However, Joseph Beuys's idea that everyone is an artist who is an active participator within a society, and the concept of Fluxus members including Paik, which breaks the boundary between art and life, invited art to a daily-life instead of galleries or museums.<sup>344</sup> For example, with the help of volunteers, Beuys planted a huge number of oak trees with basalt stones in *7000 oak trees* (1982) in Kassel, Germany. Basalt comes from beneath the earth keeping the energy of the earth. In the project, each tree is next to an approximately four-foot-tall basalt stone on the street, and it erodes extremely slowly. People cannot see any change for a long time. However, they can find growing and changing trees everyday as long as people pay attention to them. We can see the comparison between unchanging and changing natural materials at the same time. In doing so, we can perceive the two different objects from beneath the earth. This work helps people extend their attention to the surroundings day by day. This project reveals not a visual beauty but the meaning that people appreciate. As people pay attention to plants and basalt stones near home, they can actively direct attention to society where we planted trees. Similarly, Paik controlled his human-sized robot project *K-456* (1964) on the street in New York City. They pursued more progressive art by escaping from art institutions.

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<sup>343</sup> Shaw-Miller, *Visible Deeds of Music*, 38.

<sup>344</sup> Brill, *Shock and the Senseless in Dada and Fluxus*, 136.

To better understand Paik's *Gesamtkunstwerk*, it is necessary to analyze it with the practical collages from Cage, Schaeffer, and Schwitters instead of theoretically researching what the definition of the *Gesamtkunstwerk* is.<sup>345</sup> In other words, Paik's "whole art" seems to be one of naïve approaches to the *Gesamtkunstwerk*. In fact, it was made possible by studying works from Schaeffer's music collage, Cage's music performance and Schwitters's *Merz* stage over Wagner's *Gesamtkunstwerk*. On the stage, Paik experimented with the *Gesamtkunstwerk* to mix diverse media from musical instruments to a living creature, which led to his unique performances in *Originale*, *Fluxus*, and *Annual New York Festival of the Avant Garde*. While Paik took part in these different *Gesamtkunstwerk* projects, he created his interactive art as the expansion of the *Gesamtkunstwerk*. In this regard, his *Gesamtkunstwerk* performances are the key reciprocal practices in developing his progressive art.

### 3.6 Nam June Paik's Debut: *Hommage à John Cage*

After meeting Cage, Paik's ideas about music and art thoroughly changed. Departing from his role as a correspondent from the East, he became a sensational artist in Europe performing action music, which subverts Western traditional music. Paik planned his debut performance *Hommage à John Cage* (1959) as a-music. Paik sometimes called a-music "pure theater." Theater itself is not pure but a mix of singing, dancing, acting,

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<sup>345</sup> Art Historian Eric Garberson concludes that *Gesamtkunstwerk* has no standard, monolithic art-historical definition. Diverse scholars have used the term with their prescriptions differently. Some positively have defined the term as an ideal of the Baroque. The others negatively have described the *Gesamtkunstwerk* as the painterly decadent German art compared to the Renaissance's harmonized art, which maintains each art. See Garberson, "Historiography of the 'Gesamtkunstwerk,'" 68. Like the mannerism of twelve-tone music, the *Gesamtkunstwerk* was exploited by artists and scholars who wanted to justify their works.

painting, sculpture, and so on. His ideal relationship between music and purity was destined to be destroyed soon. Steven Maras and David Sutton argue whether medium specificity is valid in multimedia. They borrow the idea from Deleuze and Guattari: “a medium is an apparatus sitting at the unstable interface between ideology, technology, and desire.”<sup>346</sup> They emphasize that new media are seen to be inherently converged, a hybridized combining of pre-existing art forms in an intersection.<sup>347</sup> As Maras and Sutton claim, even though this approach refuses any notion of medium purity, it can preserve the idea of medium specificity because there are identifiable differences between one medium and another.<sup>348</sup> This is a very similar idea to Paik’s *pure* theater as total art. Furthermore, as Shaw-Miller explained, with an idea of phenomenology from Maurice Merleau-Ponty, because the phenomenological experience cannot be divided into five separate senses, a pure art form cannot be maintained against hybrid media.<sup>349</sup> As the philosopher Jerrold Levinson explained: the notion of a pure art form is logically secondary to that of a hybrid,<sup>350</sup> Paik changed his idea of purity in art. It is a prime element for a hybrid environment for art. For example, Schoenberg created a hybrid opera, *Die glückliche Hand* (*The Lucky Hand*, 1913) when he developed his own atonal music. Even though his composition was based on an early atonal technique, his theatrical music pursued the unity between music and image with a *Gesamtkunstwerk* idea.<sup>351</sup> After meeting Cage, Paik lost

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<sup>346</sup> Steven Maras and David Sutton, “Medium Specificity Re-visited” *Convergence* 6, no. 2 (2000), 101.

<sup>347</sup> *Ibid.*, 103.

<sup>348</sup> *Ibid.*

<sup>349</sup> Simon Shaw-Miller, “Music as Imminent *Gesamtkunstwerk*,” in *The Aesthetics of the Total Artwork: On Borders and Fragments*, edited by Anke Finger and Danielle Follett (Baltimore: Johns Hopkins University Press, 2011), 194-195.

<sup>350</sup> Shaw-Miller, *Visible Deeds of Music*, 11.

<sup>351</sup> Shaw-Miller mentioned that Schoenberg’s composition for *The Lucky Hand* is absolute music. See Shaw-Miller, “Music as Imminent *Gesamtkunstwerk*,” 191. However, John C. Crawford explained that Schoenberg started to compose it at the very outset of his free atonal period. See John C. Crawford, “*Die glückliche Hand*: Schoenberg’s *Gesamtkunstwerk*” *The Musical Quarterly* 60, no. 4 (1974), 583.

his interest in purity and medium-specificity in music, instead, he began to utilize the idea of purity in theater. The paradoxical term ‘pure theater’ implies Paik’s transitional perspective from purity to the *Gesamtkunstwerk*. Since the inherent quality of theater is the *Gesamtkunstwerk* as in Greek drama, the paradoxical term “pure theater” could be coined. He practiced how to break bourgeois musical tradition and expanded the realm of music into theatrical performance.

Paik’s idea about his debut was described by Korean-born composer Isang Yun, Paik’s roommate during the Darmstadt Summer Course in 1958. Yun had a chance to listen to the future of Paik’s music in their dormitory during the conference. In a letter to his wife,<sup>352</sup> Yun describes Paik’s idiosyncratic perspectives and his plans for the future. Above all, Yun writes that Paik plans to study electronic music. However, Yun describes that soon after meeting Cage, Paik wanted to experiment with aggressive performances, which makes a crashing sound like shooting a bullet through a glass.<sup>353</sup> In the same letter, Yun illustrates that Paik would like to explore how to deconstruct music itself. Paik gave up mainstream Western music and elitism, and he found a new possibility of music in performance. After a few days of attending Cage’s performances, Paik’s ideas about music and art thoroughly changed. This became a fundamental idea for Paik’s first performance *Hommage à John Cage*.

Originally, Paik planned to perform *Hommage à John Cage* in the Darmstadt Summer Course in 1959.<sup>354</sup> However, it was unclear whether Paik could stage it at the

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<sup>352</sup> Yun, “The Letter from Yun to Lee,” 154-155.

<sup>353</sup> This was realized in his first performance, *Hommage à John Cage* in 1959.

<sup>354</sup> In a letter from Paik to Dr. Steinecke on May 2, 1959, Paik asked Dr. Steinecke to give him an opportunity to present *Hommage à John Cage* for Darmstadt Summer Course in 1959. See Paik and Steinecke, “Der Briefwechsel Nam June Paik - Wolfgang Steinecke 1957-1961,” 125-126.

conference or not. Dr. Steinecke suggests that Paik should acknowledge his project in the limitation of music. Dr. Steinecke thought that Paik's a-music was too provocative to show as his debut project in the Darmstadt Summer Course.<sup>355</sup> Fortunately, Paik had a great opportunity to present it as the opening event for the exhibition of collage painter and sculptor Horst Egon Kalinowski at the *Galerie 22*. It seems that Paik's Schwitters-like performance would be a perfect opening for the collage art exhibition.

In a letter to Dr. Steinecke on December 8, 1958, Paik explains that he would include new ideas such as musicians talking with the audiences and a more aggressive prepared piano than Cage's.<sup>356</sup> Paik describes that this a-music is made up of "functional actions liberated from their function." This idea came from "functional sounds liberated from their original function," sonorous objects in *musique concrète*.<sup>357</sup> As discussed in chapter two, Paik researched *musique concrète* as the origin of electronic music. Even though both forms of progressive music had few interactions, for a listener, *musique concrète* and electronic music were very similar. Paik's collage sound also seems to be similar to both since they share the same sound manipulation technologies in the music studio. Even though Paik mentions that a recording element in *Hommage à John Cage* is neither electronic music nor *musique concrète* in the letter,<sup>358</sup> his rejection is not the opposition to both new music forms. It seems that Paik hoped to expand the realm of collage-based music by rejecting both electronic music and *musique concrète* as he, in a-music, expanded music into a new realm by rejecting the traditional definition of music.

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<sup>355</sup> Ibid., 128.

<sup>356</sup> Ibid., 123.

<sup>357</sup> Ibid., 124.

<sup>358</sup> Later, Paik regarded it electronic music in an interview. See Ahn, *Nam June Paik on Stage*, 33.

In this regard, *Hommage à John Cage* reveals a history of new music from *musique concrète* to electronic music and then explores how to go beyond them. Although Paik mentions that actions in this performance are not important,<sup>359</sup> the actions play a significant role in creating unique real-time sounds compared to electronic music and *musique concrète*. The performance part of *Hommage à John Cage* includes several aggressive actions such as throwing eggs, shouting in Korean, turning off an electric light, lighting candles, and so on.<sup>360</sup> Paik explores how to renew the definition of music with his reinterpretation of the *Gesamtkunstwerk*. Because *Hommage à John Cage* involves active performances, it is also called action music. Since Paik interacted with audiences in a violent way, he was named a “cultural terrorist” by Allan Kaprow. In his a-music, Paik decided to blur the boundary not only between several media, but also between performer and audience. In the same letter, Paik explains the plan to use a scooter, ready-made sounds, and a performance in which he would shoot a glass.<sup>361</sup> As Paik experimented with diverse media, the distinction of each medium would be meaningless as in Schwitters’s *Merz* stage. The real-time performance with electronic media in *Hommage à John Cage* is similar to Cage’s *Imaginary Landscape* series, which uses music player devices as musical instruments. The tape recording part of *Hommage à John Cage* incorporates classical sources such as Beethoven’s *Symphony No.5* and Rachmaninoff’s *Second Piano Concerto* with nonmusical sound sources such as screaming, smashed glass, tin boxes full of stones, eggs thrown against a wall, a live rooster, a motorcycle, and so on.<sup>362</sup>

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<sup>359</sup> Paik and Steinecke, “Der Briefwechsel Nam June Paik - Wolfgang Steinecke 1957-1961,” 124.

<sup>360</sup> Ahn, *Nam June Paik On Stage*, 31.

<sup>361</sup> Paik and Steinecke, “Der Briefwechsel Nam June Paik - Wolfgang Steinecke 1957-1961,” 124.

<sup>362</sup> Ahn, *Nam June Paik On Stage*, 31.

Paik performed *Hommage à John Cage* three times more on June 16, 17 and 19, 1960, at Mary Bauermeister Atelier in Cologne, during the Antifestival, which is the four-day Contre series against the conservative International Society for New Music in Cologne.<sup>363</sup> Paik attended the same music festival, which was held in Strasbourg in 1958, and published the Japanese article, “The Twelve-tone Music Mannerism?” Two years later, he finally took part in its Antifestival by rejecting serialism. In his iconoclastic performance, Paik left without turning off a motorbike on the stage and made audiences upset because the atelier was filled with carbon monoxide.<sup>364</sup> By performing functional action liberated from its function, Paik used the motorbike as a toxic gas generator with noise sounds. He experimented with olfactory senses beyond visual and audio media in his first project. Paik staged with his own project based on the idea of the *Gesamtkunstwerk*. This also shows in his successive updates of new music from Stockhausen, Schaeffer, and Cage.

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<sup>363</sup> Nam June Paik sent Wolf Vostell a mail about performances at the Mary Bauermeister Atelier during 1960 to 61. Paik also sent Bauermeister a copy of this mail with some notes. Paik added the exact schedule of *Hommage à John Cage* there. See Park, ed., *Letters*, 44.

<sup>364</sup> Michael Nyman, “Nam June Paik, Composer,” in *Nam June Paik*, ed. John G. Hanhardt (New York: Whitney Museum of American Art, 1982), 82.



## Chapter IV: Nam June Paik' Interactive Art

What will happen in twenty years? 2015?

Sad fact is that I will be 83 years old.

Otherwise interactive art will be fine.

-Nam June Paik<sup>365</sup>

Nam June Paik's perspective on music rapidly changed through his active participation in courses from music institutes, conferences, and festivals in Europe. In particular, he gradually developed an idea about new music from his interactions with progressive music composers such as Karlheinz Stockhausen, Pierre Schaeffer, and John Cage. Ultimately, Paik created interactive art as an extremely progressive music experiment. This chapter examines the concrete relationship between his musical experiences and his creative interactive art. His interactive art can be separated into three transitional steps from progressive music to interactive art: a-music, pre-interactive art, and interactive art with electronic devices. Paik's musical experiences are the foundation of his interactive art.

### 4.1 After Serialism

Nam June Paik's elder sister, Hee Duk Paik, wanted to study in Japan to be a pianist. Her father, who was conservative and patriarchal like most fathers at that time in Korea, did not allow her to study abroad, but bought her a piano as compensation. For this reason, Nam June was exposed to the piano as early as 1935<sup>366</sup> when he was in kindergarten. Nam June indirectly learned how to play the piano while his sister had

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<sup>365</sup> Nam June Paik, "Interactive: The Next Twenty Years," in *InfoART*, eds. Kim Hong-Hee and Cynthia Goodman (Seoul: Sam Shin Gak, 1995), 19.

<sup>366</sup> Yongwoo, "NJP," 10.

piano lessons at home. He learned piano by watching her playing the musical instrument first. This was his first real contact with music.<sup>367</sup> To him, his sister was like his mother because she was fifteen years older. The age gap helped him to learn piano earlier and better. Paik learned how to compose music from his sister's friend, Jae Duk Shin, who was educated in Japan and later became the chair at the department of music in Ewha Women's university, which has one of the best private music schools in Korea.

For Nam June, music was not only an audible medium, but also a visual medium as his first solo exhibition title, *Exposition of Music*, indicates. Paik's major was not music in either Korea or Japan because his father kept him from playing the piano because he thought music was feminine. He was always toeing the outside boundary of the regular academic music environment. As mentioned, Paik mainly learned music through private lessons. In addition, his friend Sukhi Kang, who studied music in Germany, insists that Paik had never been educated to be a professional composer. Kang remembers that Paik could only write a poor quartet composition. He denies that Paik was a disciple of Professor Wolfgang Fortner at the Freiburg Music Academy.<sup>368</sup> He recounts an anecdote about Paik and the professor. When Paik met Professor Fortner, the professor asked him to introduce his composition. Kang explains that Paik got an axe from his bag and tried to break a piano with the axe, and the professor barely managed to keep Paik from the aggressive action. In the end, Kang says, Professor Fortner did not allow Paik to study under him.<sup>369</sup> However, Paik describes that first meeting differently. When Paik showed his score to Dr. Fortner, Paik was a little bit disappointed that the

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<sup>367</sup> Ibid.

<sup>368</sup> Sukhi, "Nam June Paik and I," 108.

<sup>369</sup> Ibid.

professor focused more on Paik's music style than his composition itself.<sup>370</sup> The stories contradict each other. Kang's statement is not fully true because there are several facts that show Paik studied with Professor Fortner.<sup>371</sup> It is possible that the traditional composer regarded Paik as just an amateur composer who wanted to become famous with sensational actions. However, based on his unorthodoxy, Paik explored how to reject and deconstruct Western traditional music. In this regard, the absence of orthodoxy inspired him to make creative work.

#### 4.1.1 John Cage's Advanced Indeterminate Music

After publishing "Serie, Chance, Space" in 1959, Paik intensively examines Cage's compositions again in his Japanese article, "Après Serie/1" in March of 1961.<sup>372</sup> Paik does not focus on Cage's process of making a composition as compared to his previous articles, "Chance Music" and "Serie, Chance, Space," but concentrates on Cage's spatial music performances. In this regard, he specifically discusses "After Serialism" in Cage's performance. In the article, Paik describes Cage's three compositions performed on October 5 and 6, 1960, at Mary Bauermeister's Cologne Atelier. At first, Paik explains Cage's score *Music Walk* (1958) as "Pure Theater" performed by Cage, Merce Cunningham, Tudor, and Carolyn Brown. Paik focuses on messy actions in the spatial project, and the active actions remind him of an exciting pro-

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<sup>370</sup> Nam June Paik, "Avant-garde and Music in the World – Part I," 38.

<sup>371</sup> The correspondences between Nam June Paik and Dr. Wolfgang Steinecke described that professor Fortner was involved in Paik's music pieces as an advisor professor from 1957 to 1959. See. Paik and Steinecke, "Der Briefwechsel Nam June Paik - Wolfgang Steinecke 1957-1961," 111-118. If professor Fortner had not taught Paik, it would be impossible for him to write a letter of recommendation for the Cologne electronic studio. See. Ibid., 118 and Decker-Philips, *Paik Video*, 24. The correspondence was republished in *Darmstadt Dokumente I*.

<sup>372</sup> This article has the subtitle "Focusing on Cologne." It consists of two topics, "Stockhausen, The Second Period" and "John Cage – Third Time is the Charm, Europe."

wrestling match.<sup>373</sup> Paik mentions music critic Heinz-Klaus Metzger's visionary analysis: action was not an important element for music was superior to action in the past. The action was limited to playing classic musical instruments. In Stockhausen's *Klavierstück XI*, both were neck and neck, but in the end, in Cage's *Music Walk*, actions prevailed over sounds.<sup>374</sup> This also coincides with Paik's trajectory from twelve-tone music to his debut performance, *Hommage à John Cage*. The most outstanding quality of after-serialism is action in music. However, it seems that Paik was not satisfied with the fixed action in Cage's score since Paik argues that their action was not a performance, but rather a sort of movement based on a time schedule with stopwatches.<sup>375</sup>

On the second day, Cage presented *Cartridge Music* (1960) with his manipulated musical devices. As mentioned, he often used a piano to make non-existent pitches. Performers in his compositions often played the piano to make different sounds by directly touching the strings and opening and closing the lid of the piano. Cage also used musical sources from electric musical devices in *Imaginary Landscape I* (1939), and culminated with 12 radios for the real-time performance in *Imaginary Landscape IV* (1951). Likewise, in *Cartridge Music*, he manipulated the electric musical device, old-fashioned phonograph cartridges. He removed the stylus from the cartridge. Instead he inserted diverse daily-life objects into the cartridge such as a pipe cleaner, a wire, a feather, a slinky spring, a dried leaf, a used match, or a spoon for ice cream.<sup>376</sup> Paik illustrates that performers rubbed diverse materials in cartridges to generate unexpected

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<sup>373</sup> Ibid.

<sup>374</sup> Ibid.

<sup>375</sup> Paik, "Après Serie/1," 16.

<sup>376</sup> Iddon, *John Cage and David Tudor*, 167.

sounds.<sup>377</sup> With the amplifying system, performers of the composition were able to reveal sounds that could not be heard before.<sup>378</sup> With the help of electric and electronic devices, Cage was able to focus on micro-sized daily-life sounds. In other words, the cartridge became an interactive haptic interface to magnify the sounds from unimportant daily items. Paik emphasizes that the practice does not work here because the rubbing practice cannot make sounds they want, and he calls it “the pleasure of failure” in “Après Serie/1.”<sup>379</sup> Paik was dissatisfied with Cage’s chance and indeterminate music because they became fixed compositions after performers did several rehearsals.<sup>380</sup> However, *Cartridge Music* undermined this fixation on the performance. This performative device was free from its original function. Paik particularly drew attention to the unexpected quality for performers in Cage’s prepared musical device for spatial music. In addition, *Cartridge Music* used another innovative method to make sounds. Cage called it “auxiliary sounds,” created by attaching contact microphones to other objects, mostly furniture.<sup>381</sup> Performers attached the microphones to props following Cage’s instructions. This showed that anything could be a sound object for performance, and manipulated music devices were a great interface to actively make unexpected sounds.

Cage performed one more composition on the same day, *Music for Amplified Toy Pianos* (1960), which consisted of five toy grand pianos made in Japan. As the title explains, it was something of retrograde step because talented musicians used small toy

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<sup>377</sup> Paik, “Après Serie/1,” 16.

<sup>378</sup> Iddon, *John Cage and David Tudor*, 167.

<sup>379</sup> Paik, “Après Serie/1,” 15.

<sup>380</sup> See Nam June Paik, “About the Exposition of the Music,” in *De-coll/age 3*, ed. Wolf Vostell, December 1962, n.p.

<sup>381</sup> Iddon, *John Cage and David Tudor*, 167. This is a popular sensor in interactive art. Various Arduino projects use piezo sensors as contact microphones to detect any vibrations on surfaces. See “Knock,” Arduino, last modified July 29, 2015, <https://www.arduino.cc/en/Tutorial/Knock>.

pianos for children.<sup>382</sup> As Kurt Schwitters expressed his poems at the infantile level, Cage performed with musical toys in a similar level. Cage's pianos made a sort of string instrument sound by flicking the plastic rod between the key and the hammer, which in turn strikes the metal bar which produces sound. In other words, Cage skipped "the key," a key element for piano, to make an unfamiliar sound from a familiar musical instrument. As a result, the toy pianos produced a new kind of percussion sound.<sup>383</sup> The key perfectly lost its function in *Music for Amplified Toy Pianos*. This disconnection between keys and their sound became a significant idea for Paik's prepared piano project later because the loss of their original function encouraged him to give them new functions as interactive interfaces in *Klavier Integral*. After Cage's chance compositions, Paik actively studied Cage's spatiality of music and his appropriation of electric and electronic music devices as the significant phenomenon of after-serialism. This progressive approach between music, technology and spatiality became a practical foundation of Paik's experimental music.

#### 4.1.2 Karlheinz Stockhausen's Theatrical Music

*Originale* is "theatrical music"<sup>384</sup> developed by Stockhausen and Mary Bauermeister during their summer course in Finland.<sup>385</sup> The theatrical music was held twelve times

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<sup>382</sup> Iddon, *John Cage and David Tudor*, 159.

<sup>383</sup> Ibid., 160.

<sup>384</sup> Stockhausen distinguished musical theater from theatrical music. As compared to "music theater," which focuses on its own costumes and its own choreography, his "theatrical music" is a new kind of musical play with new musical movements with simple costumes, a musical lighting, pluridirectional sonic projection with the help of transmitters on every concert stage. Stockhausen's theatrical music must be interpreted not in the context of narrative drama but in the context of music. See Ivanka Stoianova, "Gesamtkunstwerk and Fomelkomposition" in *The Aesthetics of the Total Artwork: On Borders and Fragments*, eds. Anke Finger and Danielle Follett (Baltimore: Johns Hopkins University Press, 2011), 365.

<sup>385</sup> Kurtz, *Stockhausen*, 114. Even though Kurtz explained *Originale* as the music-theatre work, I correct it as theatrical music for the reason in footnote 384.

from October 26 to November 6 in 1961.<sup>386</sup> *Originale* starts with Stockhausen's *Kontakte* and other recordings of his voices from his lectures and composition such as *Invention and Discovery* (1961), *Zyklus* (1959), *Gruppen* (1955-57), and *Gesang Der Jünglinge* (1955-56). Stockhausen's *Kontakte*, which is his first project with electronic music and live music, was used as the main sound in *Originale*. He was planning to surround the audience with different stages like *Gruppen*. Unfortunately, due to rejection by the theater manager, he was not able to do so.<sup>387</sup> However, he experimented with diverse collages, not only from musical instruments, sound tapes, and theatrical props, but also several participants such as painters, recording engineers, pianists, and performers. His experimental composition was expanded into theatrical music. He concluded that *Originale* was a Gesamtkunstwerk not in the sense of Kandinsky but in the sense of Schwitters.<sup>388</sup>

Since the length of the project was based on these records, Stockhausen organized the plan of *Originale* as a precise time-based performance, consisting of eighteen scenes, organized into seven structures on sixteen pages<sup>389</sup> in "the form of instructions for the 'dramatis personae' carefully placed in time-boxes."<sup>390</sup> Even though *Originale* incorporates diverse indeterminacies from situations and reactions of performers, it observed fixed durations as normal compositions did. This is similar to Cage's *Cartridge Music*. In other words, although they experimented with creative methods to make

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<sup>386</sup> Maconie, *The Works of Karlheinz Stockhausen*, 115.

<sup>387</sup> Ibid.

<sup>388</sup> Maconie, *The Works of Karlheinz Stockhausen*, 115.

<sup>389</sup> Herzogenrath, ed. *Nam June Paik: Fluxus/Video*, 37.

<sup>390</sup> Harvey, *The Music of Stockhausen*, 90.

spatiality in music, these compositions did not reject the precise time frame of traditional music.

#### 4.1.3 Symphony for 20 Rooms: Spatial Music from Stockhausen and Cage

After taking part in Stockhausen's *Originale* and studying Cage's spatial compositions, Paik planned to stage his spatial event *Symphony for 20 Rooms* in 1961. Even though Paik called it symphony, it consists of twenty unique experiential musical spaces. The final version of this symphony consisting of 20 rooms went missing while Paik went to Cologne, New York, and Tokyo to meet La Monte Young, George Maciunas, and Yoko Ono.<sup>391</sup> For this reason, the published symphony was based on a German version right before the final missing one. The existing version of *Symphony for 20 Rooms* incorporates only sixteen imaginary rooms. Paik later translated it into English. This has been included in several major exhibition catalogues such as *The Worlds of Nam June Paik* (English Version),<sup>392</sup> *Nam June Paik* (English and German Version),<sup>393</sup> *Nam June Paik Exposition of Music Electronic Television Revisited* (English Version),<sup>394</sup> *Nam June Paik Global Visionary* (German version),<sup>395</sup> *Nam June Paik Fluxus/Video* (German version),<sup>396</sup> and *The Return of Nam June Paik* (Excerpt English and Translated Korean version)<sup>397</sup> *Paik: Du cheval à Christo et autres écrits* (Excerpt English and Translated

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<sup>391</sup> Paik, "Marcel Duchamp n'a pas pensé à la video," 208-209.

<sup>392</sup> Paik, *The Worlds of Nam June Paik*, 41.

<sup>393</sup> Lee and Rennert, ed. *Nam June Paik*, 89.

<sup>394</sup> Susanne Neuburger, ed. *Nam June Paik : Exposition of Music Electronic Television Revisited*, (Köln: Verlag Der Buchhandlung Walther König, 2009), 60.

<sup>395</sup> Hanhardt and Hakuta, eds., *Nam June Paik: Global Visionary* (Washington D. C: Smithsonian American Art Museum, 2012), 41.

<sup>396</sup> Herzogenrath, *Nam June Paik: Fluxus/Video*, 32-33.

<sup>397</sup> Lee and Kim, *Return of Nam June Paik*, 204-208.



Korean version).<sup>398</sup> The large number of republications shows that the composition is significant in his artistic life. In fact, this is a milestone in his interactive art.

*Symphony for 20 Rooms* provides visitors spatial freedom with different 20 rooms in which they are invited to experience various senses from acoustic, visual, tactile, and olfactory events. This is a popular multi-sensory approach that now prevails in interactive media labs. For example, Paik placed different media in different rooms, such as a live hen, readings from detective stories, walls covered with national flags and erotic underwear, prepared pianos, tape recorders with diverse sound collages, and a television.<sup>399</sup> It was intended that audiences could choose any room in a nonlinear way and experience diverse senses in each room. Furthermore, among these rooms, Paik designed several where viewers would take part in making sound and experiencing tactile senses from audio recorders, electronic sounds, contact microphones on the floor, and ready-mades such as toys, whistles, and instruments.<sup>400</sup> This project provided audiences with broader interactions, from analogue to electronic devices. The symphony emphasizes interactive equality, which is similar to how Christa Sommerer and Laurent Mignonneau explore the tension between historical objects and cutting-edge digital technology today.

In a one-page essay about the spatial symphony, “To The ‘Symphony for 20 Rooms’,” which was published in *An Anthology of Chance Operations* edited by La Monte Young,<sup>401</sup> Paik particularly credits Stockhausen and Cage for spatial freedom in

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<sup>398</sup> Paik, *Paik: Du cheval à Christo et autres écrits*, 387-396.

<sup>399</sup> Manuela Ammer, “In engineering there is always the other-The Other,” edited by Susanne Neuburger, *Nam June Paik : Exposition of Music Electronic Television Revisited*, (Köln: Verlag Der Buchhandlung Walther König, 2009), 64.

<sup>400</sup> Ibid.

<sup>401</sup> Paik, “To The ‘Symphony for 20 Rooms’,” n.p.

music. In his essay, Paik first explains Stockhausen's *Paare*.<sup>402</sup> The composition allowed audiences to go in and out during the concert, which continued for 5 to 6 hours or more until the last listener had left.<sup>403</sup> Passive audiences who listen to music from start to finish became active interactors who chose the specific parts that they wanted to listen to and changed its duration. In other words, music is not based on its fixed scores anymore. In the same year, Paik similarly wrote an instruction-based piece, *Entwicklungshilfe* (1961),<sup>404</sup> which countered the controlled atmosphere of the opera. In a floor plan for an opera house, Paik marked a straight line from the seat at the center of the first line to the exit. Paik commanded that during the conventional finale of the opera, a participant would climb over the seats behind in a straight line to the exit. He considered the ending gesture, such as applause and salutations, pretentious actions, and planned to interrupt the opera during the applause. As a reaction against the bourgeois performance, the participant reveals his feeling without a voice. The performer's action breaks the convention that the audience should hold their positions in the theater until the performance really finishes. Paik learned how to give audiences the freedom to choose to listen or not listen to music in *Paare*. In other words, Paik focused on digital binary on-and-off choices in Stockhausen's music. Paik regarded this as a fundamental idea for the interactive method in music.

Second, Paik mentions that in a version of *Music Walk* at Galerie 22 in Düsseldorf, Cage planned to provide two different music rooms for audiences to choose

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<sup>402</sup> When Nam June Paik mentioned *Paare* in "To The 'Symphony for 20 Rooms,' this was not staged yet. For this reason, Paik mentioned that *Paare* was Stockhausen's unfinished project. Although Paik mentioned that this was going to be staged in Bremen in 1962, it remained as a plan like Paik's *Symphony for 20 Rooms*. See Paik, "Après Serie/1," 14.

<sup>403</sup> Paik, "To The 'Symphony for 20 Rooms,'" n.p.

<sup>404</sup> Nam June Paik, "Entwicklungshilfe," in *Decollage 1*, ed. Wolf Vostell, June 1962, n.p.

from.<sup>405</sup> Even though Cage's composition had only two choices, the possibility of choice itself was meaningful for Paik.<sup>406</sup> From Cage, Paik learned how to montage more than one music space. He improved Cage's idea to overcome a one-way source for audiences. The spatiality in music inspired Paik to create nonlinear approach to multiple music sources. He developed both Stockhausen's and Cage's spatial music into interactive music, which can be freed from fixed compositions and manipulated by the active actions of audiences. In other words, he expanded music into spatial environments, in which audiences can make collage music and perform with their active participation. Finally, Paik mixed Stockhausen's unfixed time with Cage's multiple spaces to give audiences real freedom in his music. In this regard, manipulating both time and space in music became a significant seed for Paik's interactive art. This is Paik's total reinterpretation from interactions with Stockhausen and Cage.

Paik again stresses the ideas from those composers in "About the Exposition of Music" in 1962.<sup>407</sup> He emphasizes that he used the main interactive elements such as viewers' plural vectors and diverse music sources from the plan of *Symphony for 20 Rooms*:

In 1961, I have written a sketch to *The Symphony for 20 Rooms*, where the audience has a choice of at least 20 different sound sources, between which they can freely circulate. The free time leads the music necessarily to the space-music

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<sup>405</sup> This was Cage's plan for *Winter Music* at the Gallerie 22. See Paik, "To The 'Symphony for 20 Rooms'," n.p.

<sup>406</sup> Paik regarded having a baby as a violent event because he or she was born without the freedom to choose his or her birth. See Yong-Oak, "Stao Painting," 256.

<sup>407</sup> He wrote this essay about his first solo show *Exposition of Music – Electronic Television*. See Paik, "About the Exposition of the Music," in *De-coll/age 3*, n.p.

(room-music) because the free time requires more than two vectors (directions), and two vectors constitute necessarily the space (room).<sup>408</sup>

Visitors have the freedom to go to any room to experience a specific sound environment. Art historian Manuela Ammer insists that *The Symphony for 20 Rooms* anticipated the prime importance for Paik's first solo exhibition *Exposition of Music – Electronic Television*, which is the active involvement of visitors in the performances and the exhibition in general.<sup>409</sup> In an interview in *Ongaku Geijutsu* on September of 1963, Paik often mentions that *Exposition of Music – Electronic Television* consisted of more than “20 rooms.”<sup>410</sup> It implies that his first exhibition developed from the idea of *Symphony for 20 Rooms*, which was significantly inspired by Stockhausen and Cage.

#### **4.2 Three Steps for Nam June Paik's Interactive Art**

Paik's interactive art can be distinguished in three stages: a-music experiments, pre-interactive art, and interactive art in his first solo exhibition. After meeting Cage, Paik's ideas about music and art thoroughly changed. Departing from his role as a correspondent from the East, he became a cultural terrorist as an artist performing action music in Europe, which subverted traditional Western music. He practiced to break the bourgeois musical tradition and expand the realm of music to include theatrical performance. Next, he created childlike interactive musical devices for his performances. Finally, Paik provided audiences with musical instruments as experimental interactive interfaces.

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<sup>408</sup> Ibid.

<sup>409</sup> Ammer, “In engineering there is always the other-The Other,” 65.

<sup>410</sup> Makoto, “Avant-garde and Music in the World – Part II,” 18.

#### 4.2.1 A Controversial Art Field: Interactive Art

As mentioned in the introduction, interactive art has plural genealogies from various disciplines and fields inside and outside of art. In addition, it is necessary to discuss interaction as a prime element for interactive art. Whereas art historian Söke Dinkla proposes that interactive art refers to “a category-specific designation for computer-supported works in which an interaction takes place between digital computer systems and users,” several other scholars wonder whether computer-supported art should even be called interactive at all, insofar as there are numerous art forms that activate the recipient to an even greater extent without the support of technical media.<sup>411</sup> Edward A. Shanken, a leading scholar of art and technology, states, “The ethos of interactive art is that the behavior of the viewer/participant contributes to, or alters, the state of the work.”<sup>412</sup> His idea about interactive art is more comprehensive and more general as that which involves the behavior of participants in the final outcome of a work. In this context, Roy Ascott’s *Change Painting* (1958) is a great example of interactive art without a computer. This open work encourages viewers to slide several Plexiglas layers with simple images. They can make different combinations of layers as a collage image. On this controversial issue, I use Shanken’s broad definition for my research. Since my study traces Paik’s trajectory from new music to interactive art without a computer, the comprehensive definition will be helpful to find aspects of interactivity in his work.

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<sup>411</sup> Kwastek, *Aesthetics of Interaction in Digital Art*, 4.

<sup>412</sup> Edward A. Shanken, “Virtual Perspective and the Artistic Vision: A Genealogy of Technology, Perception, and Power” (Paper presented at the annual meeting for International Society for Electronic Art, Rotterdam, the Netherlands, September 16-20, 1996). Retrieved on November 10, 2017. [https://www.researchgate.net/profile/Edward\\_Shanken/publication/265270392\\_VIRTUAL\\_PERSPECTIVE\\_AND\\_THE\\_ARTISTIC\\_VISION\\_A\\_GENEALOGY\\_OF\\_TECHNOLOGY\\_PERCEPTION\\_AND\\_POWER\\_1/links/568a5f9908ae1e63f1fbc0d2/VIRTUAL-PERSPECTIVE-AND-THE-ARTISTIC-VISION-A-GENEALOGY-OF-TECHNOLOGY-PERCEPTION-AND-POWER-1.pdf?origin=publication\\_detail](https://www.researchgate.net/profile/Edward_Shanken/publication/265270392_VIRTUAL_PERSPECTIVE_AND_THE_ARTISTIC_VISION_A_GENEALOGY_OF_TECHNOLOGY_PERCEPTION_AND_POWER_1/links/568a5f9908ae1e63f1fbc0d2/VIRTUAL-PERSPECTIVE-AND-THE-ARTISTIC-VISION-A-GENEALOGY-OF-TECHNOLOGY-PERCEPTION-AND-POWER-1.pdf?origin=publication_detail)

Since the literature on interactive art is lacking, to properly observe the field with a wider vision, scholars need to find a more comprehensive term to encompass discussions about interactive art. Shanken places interactive art in the category of Art, Science, and Technology (AST) in “Historicizing Art and Technology: Forging a Method and Firing a Canon.”<sup>413</sup> He explains that the field does not have a clearly defined method for analyzing the role of science and technology in the history of art. First, since the absence of an established methodology and a comprehensive history that would help clarify the interrelatedness of AST compels revision, the exclusion or marginality of AST will persist.<sup>414</sup> Second, authoritative art historians, such as Hal Foster, Rosalind Krauss, Yve-Alain Bois, and Benjamin H. D. Buchloh, show an abhorrence of technology so that the exclusion of AST from canonical histories of art continues.<sup>415</sup> These double obstacles reinforce the exclusion of AST from art history. However, Shanken strives to include art-and-technology in art history, bridging the huge gap between conceptual art and art-and-technology. In his previous article, “Art in the Information Age: Technology and Conceptual Art,” he stresses that art-and-technology is based on information, software, and immaterialization, similar to how conceptual art emphasizes concept, or immaterial software.<sup>416</sup> He also insists that some conceptual artists are able to play a mutual role between these two fields. Shanken focuses on conceptual artists such as Les Levine, Hans Haacke, and Joseph Kosuth in the exhibition organized by art critic Jack Burnham, *Software, Information Technology: Its New Meaning for Art*, at the Jewish Museum in

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<sup>413</sup> Edward A. Shanken, “Historicizing Art & Technology: Forging a Method and Firing a Canon,” in *MediaArtHistories*, ed. Oliver Grau (Cambridge, Massachusetts: The MIT Press, 2007), 43-70.

<sup>414</sup> *Ibid.*, 44.

<sup>415</sup> *Ibid.*, 46.

<sup>416</sup> Edward A. Shanken, “Art in the Information Age: Technology and Conceptual Art,” *Leonardo* 4 (2002): 434.

New York in 1970. In particular, with technical assistance from Scott Bradner, Haacke created two cybernetic projects, *Visitor's Profile* (1969) and *News* (1969).<sup>417</sup> *Visitor's Profile* encouraged visitors to type in their factual information such as sex, age, educational background, income bracket, and so on, and their opinion on a variety of subjects. On a large screen, they would see the constantly changing data based on a statistical profile of the exhibition's visitors.<sup>418</sup> His other project *News* accumulated news data from around the world in real time. Via teletype print-outs, visitors were able to see the physical news data, which piled up behind the teletype machines.<sup>419</sup> His projects predicted visualization of information in .Net art and big data projects based on Internet resources.<sup>420</sup> In this regard, his interactive art projects blurred the boundary between scientific art and social art. Shanken continues to study Haacke's projects in his next article, "Reprogramming Systems Aesthetics: A Strategic Historiography,"<sup>421</sup> in 2009. He developed this approach by articulating the concrete relationship between Burnham's "System Aesthetics" and contemporary art. System aesthetics is inspired by biologist Ludwig von Bertalanffy, which insists that comprehensive interactions occur among material, energy, and information.<sup>422</sup> Similarly, in Burnham's idea, "any situation, either inside or outside the context of art, may be designed and judged as a system."<sup>423</sup>

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<sup>417</sup> Jack Burnham, ed. *Software: information technology: its new meaning for art* (New York: Jewish Museum, 1970), 34.

<sup>418</sup> Ibid.

<sup>419</sup> Ibid.

<sup>420</sup> Paik was also invited to show his project in the *Software, Information Technology* exhibition. However, he wrote an apology letter to the exhibition officer. His letter was published in the exhibition catalogue. See Ibid., 53. He describes that he was so lazy that he could not exhibit his project. This may be characteristic Asian modesty and humility. He was then finalizing his big current project, 'CONFIDENTIAL PLAN OF STP COLOR TV synthesizer' with his collaborator Shuya Abe. As Paik mentioned his video synthesizer as confidential plan, he was busy finalizing the project when he received the invitation.

<sup>421</sup> Shanken, "Reprogramming Systems Aesthetics," 84-96.

<sup>422</sup> Jack Burnham, "Systems Esthetics," *Artforum*, September, 1968, 32.

<sup>423</sup> Ibid.

Burnham explores a radical shift from object-oriented sculpture to system-oriented sculpture.

Based on Burnham's approach, Shanken disagrees with Buchloh's binary division of Haacke's works into biological aesthetics and social aesthetics. Shanken argues that Buchloh evaluated the latter as part of mainstream in art history, ignoring Haacke's scientific works. To show that Buchloh's criticism is biased, Shanken continues to find Burnham's earlier significant contributions to applying Haacke's works as system aesthetics in both biological and political ways with the help of ideas from Luke Skrebowski and Bruno Latour.<sup>424</sup> Shanken reevaluates Haacke's works with the interpretation from Burnham's System Aesthetics. Nevertheless, Shanken acknowledges that new media art including electronic art and interactive art hardly can be included in the mainstream of contemporary art since mainstream art has already established its own academy, institutions, curators, and critics and does not want to share the limited market with new media art.<sup>425</sup> Alternately, new media art developed its own scholarship and critics. However, it lacks museums and galleries to show projects in that field.<sup>426</sup> In the two different fields, Paik survived in mainstream art by making a blurred boundary between them.

Cybernetics, the science of pure relations, or relationship itself, has its origin in karma. . . .

The Buddhists also say

Karma is samsara

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<sup>424</sup> Shanken, "Reprogramming Systems Aesthetics," 91-92.

<sup>425</sup> Edward A. Shanken, "Contemporary Art and New Media: Digital Divide or Hybrid Discourse?" In *A Companion to Digital Art*, edited by Christiane Paul (Hoboken: John Wiley & Sons, 2016), 465.

<sup>426</sup> Ibid., 464.



Relationship is metempsychosis<sup>427</sup>

Even though Shanken describes Paik's essay in 1966 as a poetic writing,<sup>428</sup> his writing can be reinterpreted in the realm of digital interactive art. Cybernetics, which represents the relationship between human and machine with the control system, fundamentally supports defining interactive art. In 1947, Norbert Wiener coined the term cybernetics from the Greek word *kubernetes*, or "steersman." According to Shanken, "The scientific discipline of cybernetics emerged out of attempts to regulate the flow of information in feedback loops in order to predict, control, and automate the behavior of mechanical and biological systems."<sup>429</sup> In the same context, Kwastek insists that cybernetics opens up new perspectives on processes of interaction.<sup>430</sup> The essay above is the first mention of cybernetics in Paik's writings about three years after his major interactive art exhibition.<sup>431</sup> As mentioned, in several writings about his interactive art in his first solo show in 1963, Paik mentioned diverse artists, philosophers, and colleagues to explain his own interactive art. It seems that Paik did not recognize cybernetics when he created interactive art in his first solo show. Paik approached cybernetics with the Buddhist ideas like Karma and Samsara, which mean relationship and metempsychosis respectively. Paik's cybernetics can be interpreted in two different ways. First, his cybernetics can explain a relationship between human beings as well as a relationship between a human and a machine or computer. In this regard, Paik's cybernetics has a concrete relationship

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<sup>427</sup> Nam June Paik, "By Nam June Paik," in *Manifestos, A Great Bear Pamphlet*, ed. unknown (New York: Something Else Press, 1966), 24.

<sup>428</sup> Edward A. Shanken, introduction to *Telematic Embrace: Visionary theories of Art, Technology, and Consciousness by Roy Ascott* (Berkeley; Los Angeles: University of California Press, 2003), 24.

<sup>429</sup> Shanken, "Historicizing Art & Technology," 18.

<sup>430</sup> Kwastek, *Aesthetics of Interaction*, 5.

<sup>431</sup> Paik, "By Nam June Paik," 24.

with relational aesthetics, as defined by Nicolas Bourriaud.<sup>432</sup> This art also needs a viewer's interaction. However, the interaction is more related to a social relationship by breaking the divide between daily life and artwork and between a participatory project and its participants. Relational aesthetics does not need any electronic devices to interact with as Paik interpreted. Second, metempsychosis can be translated as a relationship between on and off, or 0 and 1 in the digital age. Paik's idea on cybernetics incorporates any relationship from human beings to high-tech electronic devices. For these reasons, Paik's interactive art has both qualities from interactive art and relational aesthetics. This perspective can contribute to bridging the huge gap between these two heterogeneous fields. In the end, Paik's conception of interactive art supports the comprehensive definition of interactive art given above.

#### **4.2.2 The First Step: A-Music**

After his successful debut project, *Hommage à John Cage*, Paik more actively developed trespassing on the audience's holy territory in *Etude for Pianoforte* (1960). The legendary performance was held on October 6, 1960, at Mary Bauermeister's atelier right after Cage's *Cartridge Music* and *Music for Amplified Toy Pianos*.<sup>433</sup> *The New Yorker Magazine* art critic Calvin Tomkins vividly described that Paik played some Chopin on the piano, broke off, wept, and got up and threw himself upon the innards of another, eviscerated piano that lay scattered about the floor, then picked up a long pair of scissors and leaped down to where Cage, Tudor, and Stockhausen were sitting, in the

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<sup>432</sup> Nicolas Bourriaud, *Relational aesthetics* (France: Les Presse Du Reel, 2002), 11-17.

<sup>433</sup> Herzogenrath, *Nam June Paik: Fluxus/Video*, 28.

front row, and cut off Cage's necktie with his scissors.<sup>434</sup> A year after Paik made the first performance to honor Cage, Paik attacked Cage himself during his second performance. Cage's necktie reminded Paik of the pretentiousness of the American avant-garde.<sup>435</sup> To the artist who explored breaking any boundaries and artists' hypocrisy, this gentlemanlike appearance was a taboo to destroy as much as European traditional music. Paik also used a telephone in a bar to declare that the performance was over.<sup>436</sup> From talking to audiences, cutting an audience member's tie, to declaring the end of his performance by phone, Paik sought to transcend the limitation of the performance space in his radical spatial music.

His performances were much more progressive and aggressive than those of Cage and Stockhausen. Paik kept removing Western-centric conventions and blurring the boundary between art and life. On September 27, 1961, Paik first presented *Simple* in the "Action Music" program at the Liljevalchs Konsthall in Stockholm. Like his two previous performances, this consisted of Paik's aggressive actions and recording collage sounds. In the action parts, Paik threw beans into the audience.<sup>437</sup> This performance not only gave audiences a surprise, but it also attacked them. The provocation toward audiences trespassed their safe space again. In the sound part, Paik edited a woman's scream, radio news, children's noise, and classic music in around 15 seconds.<sup>438</sup> After performing several a-music pieces as an individual artist, Paik became an important member of several performance groups. First, he joined Stockhausen's *Originale*. In the

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<sup>434</sup> Calvin Tomkins, "Video Visionary," In *The Electronic Super Highway: Travels with Nam June Paik*, edited by Marcella Allison (Cincinnati: Carl Solway Gallery, 1995), 23.

<sup>435</sup> Paik, "Marcel Duchamp n'a pas pensé à la vidéo," 207.

<sup>436</sup> Rennert, "Nam June Paik," 15.

<sup>437</sup> Ahn, *Nam June Paik on Stage*, 43.

<sup>438</sup> Ibid. In fact, Paik reused the major part of *Hommage à John Cage* for *Simple*.

time-boxes for *Originale*, where performers' roles and instructions were described, Paik's description included his last name "Paik," unlike other roles with no name.<sup>439</sup> Paik himself constituted a medium, which could not be replaced by anyone else.<sup>440</sup>

Paik illustrated the event in his article "Latest Stockhausen Photo Repo: Karlheinz Stockhausen – *Originale*." He insisted that *Originale* was a revival of the originality of individual artists and a double composition, which was composed by ready-made compositions, and that it was a collage of personality against serialism.<sup>441</sup> As stated, Paik staged his antithesis performance against serialism in his debut project, *Hommage à John Cage*. In the end, Paik was free from the twelve-tone technique, and pursued his career after serialism. As an outstanding figure in *Originale*, Paik performed *Simple* (1961), *Etude Platonique* (1961), and *Zen for Head* (1961), or a variation of La Monte Young's *Composition 1960 #10 to Bob Morris* (1960). In fact, Paik's performances in *Originale* were not a new idea because he staged his previous solo performances again to subvert Western bourgeois music.

After participating in *Originale* twelve times by 1961, Paik was becoming more and more famous for his idiosyncratic action music in West Germany. In New York, Fluxus founder George Maciunas heard of Paik's performances and invited him to join his group.<sup>442</sup> In the middle of 1961, Maciunas contacted three avant-garde artists, German poet Hans G Helms, Italian composer Sylvano Bussotti, and Nam June Paik, to organize

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<sup>439</sup> Maconie, *The Works of Karlheinz Stockhausen*, 116.

<sup>440</sup> In fact, Stockhausen did not like Paik's performance in *Originale*. See Neuberger, *Nam June Paik*, 85. Moorman contacted Paik to realize her experimental performance right after she came to know his notorious reputation from Karlheinz Stockhausen and Mary Bauermeister. They recommended Paik as the only avant-garde Asian artist. See Joan Rothfuss, *Topless Cellist* (Cambridge: MIT Press, 2014), 51.

<sup>441</sup> Paik, "Latest Stockhausen Photo Repo," 44.

<sup>442</sup> Hanhardt, *The Worlds of Nam June Paik*, 30.

a new global artist group in Europe.<sup>443</sup> However, only Paik helped him organize the group in West Germany.<sup>444</sup> At that time, on May of 1961, Paik introduced Maciunas as the editor of Avant-garde art magazine “Fluxus” to Japanese readers.<sup>445</sup> It is true that the term Fluxus came from the title of magazine that he planned to publish.<sup>446</sup> However, Fluxus magazine was never published. It was just a plan by Maciunas. He wanted to raise the money for the publication. That is why he planned a concert, which was easier than a publication.<sup>447</sup> La Monte Young recollected that he witnessed the moment Maciunas coined the term on around May or June of 1961.<sup>448</sup> For this reason, it assumes that Paik, in West Germany, heard the Fluxus Magazine directly from Maciunas in New York when the term Fluxus was created.

Paik and Maciunas were interested in progressive music before they knew each other. In particular, they shared the idea of breaking art and life from John Cage. Before the beginning of Fluxus, some main Fluxus colleagues were inspired by Cage’s class at the New School for Social Research in Greenwich Village, New York.<sup>449</sup> The 1958-59 class included Fluxus artists and associates George Brecht, Al Hansen, Dick Higgins, Scott Hyde, and Allan Kaprow, with visits by Jackson Mac Low and La Monte Young.<sup>450</sup> Art historian Hannah Higgins stresses that Paik and Young attended Stockhausen’s

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<sup>443</sup> Nam June Paik, “George Maciunas,” in *Paik: Du cheval à Christo et autres écrits*, eds. Edith Decker and Lebeer Hossman, translated by Wang Joon Im, Mi Ae Jeong, and Moon Yeong Kim (Yong In: Nam June Paik Art Center, 2010), 80.

<sup>444</sup> Rennert, “We Have Time,” 62.

<sup>445</sup> Paik, “Après Serie/2,” 46.

<sup>446</sup> Larry Miller, “Larry Miller: Transcript of the Videotaped Interview with George Maciunas, 24 March 1978,” in *The Fluxus Reader*, edited by Ken Friedman (Chicester, West Sussex; New York: Academy Editions, 1998), 187.

<sup>447</sup> Ibid.

<sup>448</sup> La Monte Young, “Why I withdrew from Fluxus,” in *Fluxus Scores and Instructions: The Transformative Years “Make a salad,”* edited by Jon Hendricks, Marianne Bech, and Media Farzin (Roskilde: Museet for Samtidskunst, 2008), 53.

<sup>449</sup> Meigh-Andrews, “A History of Video Art,” 108.

<sup>450</sup> Hannah Higgins, *Fluxus Experience* (Berkeley: University of California Press, 2002), 1.

composition course in Darmstadt, and they shared an orbit with the experimental Darmstadt school of poetry and theater in the late 1950s.<sup>451</sup> Bauermeister gave diverse opportunities to experimental composers at her space, the Bauermeister Atelier. An international array of artists later associated with Fluxus circulated through this remarkable atelier, including Paik, Emmett Williams, the German Wolf Vostell, and the American Benjamin Patterson. At the atelier, the four-day Contre series included works by Cage, Brecht, Young, Paik and Patterson, and the atelier was called a “Proto-Fluxus in Cologne.”<sup>452</sup> This Antifestival encouraged Cage, Stockhausen, and Bauermeister to share ideas and work across national boundaries.<sup>453</sup> In the same period, Maciunas’ AG Gallery on Madison Avenue expanded on and developed an audience for the experimental formats associated with Brecht’s events and the Cage class generally.<sup>454</sup> In other words, before Maciunas met Paik, they were exposed to Cage’s experimental music independently in Germany and New York. In this musical atmosphere, Maciunas conceived Fluxus’s provisional name, *Neo-Dada*.

Why did they refer to themselves as *Neo Dada* while the term was rejected by the founder of Dadaism, Tristan Tzara?<sup>455</sup> Artistic interest in Dada experienced a strong and sudden rise in the late 1950s and early 1960s, and this atmosphere became a fundamental background for Fluxus.<sup>456</sup> Whereas Stockhausen interpreted the collage of the individual Dadaist Schwitters with heterogeneous materials in his *Originale*, Maciunas thoroughly

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<sup>451</sup> Ibid., 11. Higgins’s opinion is very controversial. Paik had attended the Darmstadt Summer Course since 1957. However, Young only took part in the courses in 1950. Stockhausen radically experimented with his music every year. The seven years’ gap might not be sufficient to mention that Paik and Young shared an orbit.

<sup>452</sup> Ibid.

<sup>453</sup> Ibid.

<sup>454</sup> Ibid., 2-11.

<sup>455</sup> Brill, *Shock and the Senseless in Dada and Fluxus*, 102.

<sup>456</sup> Ibid.

focused on Dadaism as a way to break the boundary between art and life.<sup>457</sup> Fluxus members included artists Vostell, Paik, Williams, Patterson, Alison Knowles, Brecht, Robert Watts, Young, Philip Corner, Ay-O, Takehisa Kosugi, Mieko Shiomi and so on from America, Germany, Lithuania, Korea, Japan, etc. Fluxus emancipated viewers and audiences from a passive reaction, and broke boundaries between the East and the West as well as boundaries between art and life. They also broke the boundaries between individual media. As founder Maciunas asserted, Fluxus should not be permanent, it refused to fix its position and constantly changed it.<sup>458</sup> “The idea that Fluxus was born long before 1962”<sup>459</sup> is a common belief in art history as a cyclical phenomenon. However, it is true that Fluxus first coalesced as a global group for experimental art with no boundaries between countries. In the world-wide avant-garde group, Paik was one of the most important participants and a main performer with a-music.

#### **4.2.3 The Second Step: Pre-interactive Art**

Between a-music and *Exposition of Music – Electronic Television*, in a significant transitional period, Paik created pre-interactive projects. As discussed above, Paik’s pre-interactive art can be encompassed by a more comprehensive definition of interactive art. However, to distinguish his later interactive art based on electric/electronic devices from his early interactive art based on childlike materials, I used the term pre-interactive art. Whereas Paik encroached upon the audience’s space in a-music, in his pre-interactive art he invited them to take part in his projects as active performers in a playful and infantile

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<sup>457</sup> Maconie, *The Works of Karlheinz Stockhausen*, 115.

<sup>458</sup> Hanhardt, *The Worlds of Nam June Paik*, 17.

<sup>459</sup> 1962 is the official year for the first Fluxus concert. See Ken Friedman, “Fluxus and Company,” in *The Fluxus Reader*, edited by Ken Friedman (New York: Academy Editions, 1998), 237.

way. The return to his childhood synchronizes with his primitive music. It seems that this regression was linked to the fact that his endeavors in electronic music were ignored by audiences. Paik sadly recollected that although he spent eighty percent of his working time on the collage sound of *Hommage à John Cage*, his aggressive actions became much more famous than his tape collage.<sup>460</sup> After using sound collages in his action music in *Simple*, Paik focused on analogue musical materials more than electronic musical devices.

To make more experimental music, Paik needed to redefine music. In “An Essay for the New Ontology of Music (1963),” Paik reviews the trajectory of his experimental music from action music to interactive musical projects.<sup>461</sup> It indicates that his interactive music was a culminating result from his music practice. In other words, Paik’s pre-interactive art was a step toward interactive art with electric/electronic devices. His return to old music was so radical that he came back to the period before the advent of the piano. However, this is not a simple regression in his music, but a fundamental experiment to make a more advanced musical environment. For this reason, I call Paik’s primitive musical instruments, which allow visitors instinctively to make sounds, “Nam June Paik’s pre-interactive art.” This phase created new kinds of musical instruments after deconstructing or manipulating classical instruments in a-music. This childlike regression has some things in common with Cage’s and Schwitters’s works. As mentioned, Cage composed *Music for Amplified Toy Pianos* with small real toy pianos,<sup>462</sup> and Schwitters juxtaposed daily-life materials for his *Merz* painting. Similar to how they

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<sup>460</sup> Nyman, “Nam June Paik, Composer,” 82.

<sup>461</sup> Paik, *Videa ‘n’ Videology*, 3.

<sup>462</sup> This reminds me of *Fisher Price* musical toys, which encourages babies to enhance their multiple potential senses with the combination of sounds, haptic materials and visual images.



created collage projects with toy-like items, Paik made childlike musical instruments. Paik mixed sound collage techniques with visual collage techniques based on no priorities, or an infantile collage. Paik adapted the title of Schwitters's poem *Ursonate* (1923) for his pre-interactive art project *Urmusik* (1961).<sup>463</sup> Even though *Urmusik* does not look polished and elegant, it is a significant precursor project for his interactive art. The title *Urmusik* means primitive music and implies a new starting point for music in Paik's musical background. After studying musicology and composition in academia, Paik returned to his kindergarten joy in the musical instrument. Paik practiced his ideas about interaction by creating a new kind of musical instrument with junk items such as a tin can, a wooden crate, and strings, as Schwitters did in his *Merzbilder*. "*Urmusik* is Sigmund Freud's music box: it encourages the playful, evoking an infantile type of lust—the desire to make music—and welcomes the amateur who never went to music school."<sup>464</sup> Paik's long efforts to pursue new music might finally allow him to travel to his childhood memories. He came back nostalgically to the time when he was taught by his elder sister and her friend at home. He stubbornly played the piano in his own way.<sup>465</sup> At the very beginning, Paik's piano was not an instrument which generated beautiful sounds or harmonies, but an interactive device like a musical toy. Unlike traditional musical

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<sup>463</sup> Tae Hee, "Nam June Paik Early Years 1958-1973," 15.

<sup>464</sup> Dieter Ronte, "Nam June Paik's Early Works in Vienna," in *Nam June Paik*, ed., John G. Hanhardt (New York: Whitney Museum of American Art, 1982), 75.

<sup>465</sup> Kyung Hee, *My Kindergarten Friend: Nam June Paik* (2000), 92.

Lee was Paik's close friend in kindergarten. In 1968, when Paik published his writing in a Korean magazine, *Space*, his topic was about her. See Nam June Paik, "New York Fragmentary Thoughts," *Space*, August, 1968. This article was also republished in her book, *Nam June Paik, My Kindergarten Friend*. See Kyung Hee Lee, *My Kindergarten Friend: Nam June Paik* (2011), 166-170. This includes her personal recollections from her kindergarten days with Paik. She mentions that the word "kindergarten" appears in the poster of Paik's first solo show in Wuppertal and proves that Paik was definitely obsessed with his childhood. See *Ibid.*, 112-113. It implies that he actively utilized the memories to make his interactive pieces.

instruments, this piece could not make exact sounds. It seems that this imprecision was related to Paik's interpretation of Cage's *Cartridge Music* as the pleasure of failure, when musicians cannot render expected sounds. Furthermore, it did not look like any instrument. Due to its inexpensive and simple appearance, viewers might easily interact with the musical instrument like a toy. This primitive pleasure was hidden by his westernized training for a long time. When he was in the university of Tokyo, he remembered the conformity with Western music:

[...] with strict academism soaked with admiration of Western cultures, our job was not to judge but to learn the Western music. Therefore if we would encounter a piece, which would not impress us, both teacher and students would rather say "I don't understand this one", than to say "This is a bad piece."<sup>466</sup>

His desire from his childhood music experience was not manifested until he decided to reject Western traditional music. Paik's creative interactive music began with the return to his joyful early music experience. This shows that Paik thoroughly eradicated the musical elitism of his early academic life in West Germany.<sup>467</sup> In other words, his interactive art started when he stopped following the authoritative Western music.

Paik developed another interactive piece, *Zen for Touching* (1961), with tactile sensory experiences. As the title suggests, it encouraged viewers to touch a bell, wires, and bolts hung in a plastic colander. It became "the gong of Asia"; in other words, a

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<sup>466</sup> Paik, "Erinnerung an Muenchen," 59.

<sup>467</sup> This idea is similar to *Simtunes* (1996) by Toshio Iwai. The video game was published by Electronic Arts (EA) as a series of popular Sim-series. The game was originally created for a video game console Super Nintendo Entertainment System. The package was planned to include a mouse device to make visual notation. In the introduction of the game manual, he confessed that he did not have a single music lesson when he was a child, and did not play a musical instrument. However, he wanted to make a visual musical instrument for people who like music, but don't feel musically talented. This idea is similar to *Urmusik* for its phenomenological playfulness by making access to music easy, with casual media such as a cheap assemblage and a video game.

musical instrument like *Urmusik*.<sup>468</sup> In particular, this work actively dealt with hapticity, one of the significant ideas in interactive art today. Paik experimented with tangible items to encourage viewers to phenomenologically feel the musical instrument. Paik also made *Zen for Walking* (1961), which consists of a pair of sandals with carved stone head, bell, and chains attached.<sup>469</sup> This piece allowed viewers to put on the sandals and to make sounds by walking. In another version of *Zen for Walking*, or *Violin with String* (1961), Paik slowly dragged a violin in street. He said that this method produced beautiful sound.<sup>470</sup> He used the same idea of Cage and Schaeffer, making a sound liberated from the function of classic musical instruments. This unusual music became mortal music due to its self-destroying process. Paik seemed to use gerunds in his titles to emphasize his Zen projects not as art objects, but as musical instruments with active viewers participation. This concept is loosely linked to Marcel Duchamp's readymade piece, *Bicycle Wheel* (1915). This readymade object consists of a wheel, which protrudes from a pedestal pointed toward the viewer. Unlike his other readymades, this was a kinetic installation. Moreover, since it had an active possibility of interactive movement, Duchamp himself enjoyed putting it in motion by hand.<sup>471</sup> For this reason, media archeologist Erkki Huhtamo insists that *Bicycle Wheel* is a "proto-interactive" work.<sup>472</sup> Art historian Simon Shaw-Miller agrees that *Bicycle Wheel* is a moving sculpture. He describes that Duchamp enjoyed looking at it, just as he enjoyed looking at the flames dancing in a fireplace, and emphasized it as an attractive moving object. Shaw-Miller

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<sup>468</sup> Ronte, "Nam June Paik's Early Works in Vienna," 75.

<sup>469</sup> Ibid., 76.

<sup>470</sup> Kang, "Nam June Paik Early Years 1958-1973," 72.

<sup>471</sup> Erkki Huhtamo, "Twin-Touch-Test-Redux," in *MediaArtHistories*, edited by Oliver Grau (Cambridge: The MIT Press, 2007), 81.

<sup>472</sup> Ibid.

stresses that the movement of the unusual sculpture naturally produced sounds, and viewers might be irresistibly tempted to stick a pencil against the spokes.<sup>473</sup> He focused on its sound qualities as well as its kinetic properties. In this regard, Paik's pre-interactive art projects have a significant origin from Duchamp's readymades. Paik's pre-interactive artworks are currently at the Museum Moderner Kunst in Vienna as part of the Hahn Collection. To keep them from serious degradation, they have become art objects, which viewers cannot interact with anymore. However, they conceptually retain their value as pre-interactive art. His interactive experiments with daily items and musical instruments broadened the realm of music and promoted the idea of interactive art.

#### 4.2.4 The Third Step: Interactive Art with Electronic Devices

Paik's five-senses instrument *Klavier Integral* was exhibited in his first solo show *Exposition of Music – Electronic Television*. This originally began as a simple prepared piano with 10 of the piano strings torn off.<sup>474</sup> He presented a different version of *Klavier Integral* in every exhibition, varying his action music performance for each stage. In other words, his piano was not fixed, but changing. It evolved with external items and electronic devices. As Paik explored how to make more creative music, his prepared piano became a completely different instrument from Cage's. While Cage's prepared piano was a temporary, reversible intervention to alter the sound, Paik rigged up the piano to create a multi-sensory interactive instrument.<sup>475</sup> *Klavier Integral* developed from

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<sup>473</sup> Simon Shaw-Miller, "Exposition of Music: Nam June Paik, Marcel Duchamp, the Idea and Objects of Music," in *NJP Reader #4: Exposition of Music*, eds. Seong Eun Kim and Sang Ae Park (Yongin: Nam June Paik Art Center, 2013), 142.

<sup>474</sup> Sooyoung Lee, "Prepared Piano VS Integral Piano." In *x\_sound: John Cage and Nam June Paik and After*, eds. Sohyun Ahn, Sooyoung Lee and Chaeyoung Lee (Yongin: Nam June Paik Art Center, 2013), 48.

<sup>475</sup> Daniels, "Touching Television," 173.

a simple prepared piano to complex interactive art from 1958 to 1963. In his evolving piano, Paik used double indeterminacies from both collaborators and visitors. Peter Brötzmann, artistic collaborator for the exhibition,<sup>476</sup> recalls that Paik asked him to do something with toys that Paik brought for his prepared piano.<sup>477</sup> Artistic collaborator Tomas Schmit<sup>478</sup> also mentions that Paik's prepared piano was not fixed, but collaborators fiddled about with all the objects even while the exhibition was in progress.<sup>479</sup> Paik did not have enough time to care about his prepared piano due to his electronic television projects. However, it seems that Paik followed the process of "open work" as Tudor interpreted Cage's indeterminate composition. For this reason, Paik admirably added his artistic and technical collaborators to the poster for his exhibition.

As mentioned, Paik did not limit his materials to sound objects. Instead, he used an unbiased collage technique, just as Schwitters's *Merz* appropriated daily items. Paik's piano used not only musical materials, but also experimented with more mundane objects as Cage and Fluxus members had. According to Schmit's memory, the interactive musical device was connected with diverse inputs and outputs such as a hammer, a shoe, a pushbutton, a rocker, double switches, a transistor radio, a hot-air fan, film projectors, and a siren.<sup>480</sup> Paik had literally developed an "integral" piano, which incorporated diverse parts and gadgets from 1958 to 1963 in his first solo exhibition. In the end, audiences were able to take part in the performance with all five senses by engaging both

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<sup>476</sup> His name was not on the poster for the exhibition. However, his name was added to one of the posters. See Hanhardt, *The Worlds of Nam June Paik*, 42.

<sup>477</sup> Sang Ae Park, ed. *Peter Brötzmann Takehisa Koguchi* (Yongin: Nam June Paik Art Center, 2014), 66.

<sup>478</sup> His name was misspelled in the exhibition poster. However, his name was corrected in one of the posters with Paik's handwriting. See Hanhardt, *The World of Nam June Paik*, 42.

<sup>479</sup> Tomas Schmit, "Exposition of Music," in *Nam June Paik: Exposition of Music Electronic Television Revisited*. Ed. Susanne Neuburger (Köln: Verlag Der Buchhandlung Walther König, 2009), 132.

<sup>480</sup> *Ibid.*, 131.

analogue and electronic devices. Paik's electronic interactive art began with *Klavier Integral* in a long and intense practice. This incorporates a-music, pre-interactive art, and interactive art itself. In other words, *Klavier Integral* is a significant interactive art project, which shows the historical development of Paik's interactive art. By departing from Cage's prepared piano as a musical instrument, Paik's *Klavier Integral* expanded its realm into a synthesizer-like interactive sculpture.

#### **4.2.4.1 *Record Shashlik & Random Access***

Paik not only manipulated the classic musical instrument piano in *Klavier Integral*, but also electronic musical players in *Record Shashlik* and *Random Access*. They were exhibited in the basement of the Galerie Parnass during the *Exhibition of Music – Electronic Television*. They consisted of electronic music players and their storage. In other words, *Record Shashlik* included a turntable with a long mobile cartridge and its 78-rpm records.<sup>481</sup> Paik threaded several records in two different axes on a table like Shashlik, a worldwide food from Asia to Europe, which consists of skewers threaded with meats and vegetables. In *Random Access*, using a long mobile head from the tape recorder, he attached pieces of audiotape strips to a white wall. At first glance, it looked like black-and-white graffiti. These mobile heads from the music devices allowed participants to play back a specific part of the music storage. Even though they employed different music devices, they had the same strategy: the audience's random access of sound databases with extended musical interfaces. *Record Shashlik* and *Random Access*

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<sup>481</sup> Tomas Schmit remembered that it consisted of around 30 records. See Schmit, "Exposition of Music," 132.

are Paik's great achievement based on the progressive ideas of three composers: Stockhausen, Schaeffer, and Cage.

First, Paik actively used Stockhausen's random access in spatial music. As mentioned in chapter 1, Paik considered Stockhausen's random access the most important progression in the Darmstadt Summer Course in 1957. Paik made a movable head for playing records in the rotating axis in *Record Shashlik*. Likewise, he detached the head part from the tape recorder, and attached the tape strips on a wall in *Random Access*. This collage environment made viewers interact with the graphical tapes using the recorder head. Stockhausen gave performers some opportunities to choose the order of music with random access, which has equal access like a book.<sup>482</sup> In *Klavierstück XI*, players of Paik's interactive musical instruments were able to choose any starting point, middle points, and ending point of the records. Players were limited to specific performers in *Klavierstück XI* whereas players were open to common audiences in *Record Shashlik* and *Random Access*. This is a significant difference between Stockhausen and Paik.

Furthermore, Paik utilized the spatial music idea of Stockhausen's *Gruppen*, which allowed three conductors to randomly conduct three different orchestras with a basic rule at the same time. As mentioned in chapter one, Stockhausen turned a time-based medium, music, into a space-based medium by employing three orchestra teams, which surrounded the audience in a horseshoe curve. Stockhausen provided audiences with unfolded environment for music in *Gruppen*. *Record Schashlik* is a sculptural installation with stacked records. This is similar to a hard disk drive, which has several layers on an axis.

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<sup>482</sup> He mentioned book was a non-linear medium, as opposed to the sequential nature of film and video. See Kyung Hee Lee, "Rebirth....., He Returned to Life," in *TV Buddha Nam June Paik*, ed. Hyun Jeong Kim (Seoul: Samkwakum, 2007), 73.

Audiences were able to choose any point to play these sound databases. They were spatially able to have random accesses just as computer users can nonlinearly use any files on a hard disc drive. It was not well known that *Random Access* was also a spatial music project beyond the two-dimensional white wall. As proved in the documentation pictures of *Random Access* in the exhibition catalogue of *Exposition of Music Electronic Television Revisited*,<sup>483</sup> *Random Access* has a three-direction environment for music like *Gruppen*. Participants were surrounded by three sides of magnetic audiotape strips. On both the left and right lower sides of audiotapes on the white wall, there were several parallel tape strips on the top of the clothes, which could be rotated with a ratchet lever like a mechanic music box. While only the white wall part remains in exhibitions today, Paik's original idea on *Random Access* was based on spatial music of *Gruppen*. This encouraged passive audiences to be playful performers to create spatial music.

Second, like the editing environment of Schaeffer's *musique concrète* studio, *Record Shashlik* and *Random Access* provided visitors with an unprecedented opportunity to compose an ephemeral music in real time. As mentioned in chapter two, *musique concrète* had used 78-rpm records until the tape recorder was invented. Paik's two interactive projects utilized essential materials to create *musique concrète*. He researched the history of *musique concrète* as a brilliant sound collage. Even though Paik lost interest in *musique concrète* soon after meeting Cage, for his interactive projects, Paik utilized his haptic experience of the sound editing system in the electronic music studio and its origin, the *musique concrète* studio. Editing sounds was originally a composer's main role in *musique concrète* and electronic music. Whereas Cage made collage-based

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<sup>483</sup> Neuburger, *Nam June Paik: Exposition of Music Electronic Television Revisited*, 145.



music in his performances, both studios published collage music as final works.

However, by appropriating readymade music databases, Paik created *musique concrète* as a performance again. Moreover, in Paik's projects, composers were not performers anymore. Instead audiences became interactive participants. In *Record Shashlik* and *Random Access*, audiences were able to access music databases in a nonlinear way.

In particular, *Random Access* visualizes abstract graphics on the white wall. Paik suggested a distinct interactive method in this project. He appropriated a passive white wall in the gallery to make an active interactive interface. When audiences interacted with the white wall, they manipulated sound in real time.

The white wall as interactive canvas has been a popular interface since the late 1990s for interactive art installed at digital art and electronic art conferences including SIGGRAPH and ISEA as the digital projector has become more affordable. In this regard, *Random Access* is a pioneering project using a wall-size interactive screen as an interactive interface. In "Time Collage," Paik recollects the conversation with art critic Yoshiaki Higashino in the WDR studio in Cologne. When the critic visited the studio, he saw more than one hundred audio strips hung on the ceiling. He was surprised that the cutting-edge electronic music came from a handcraft workshop which looked like a workplace in the medieval age.<sup>484</sup> In other words, Paik must have used a huge number of audio strips to make his sound art by hand. His haptic experiences in the *musique concrète* studio in Paris and the electronic music studio in Cologne were reflected in his musical interactive art. Their environments came from the process of making *musique concrète*. In other words, audiences visited in a quasi-*musique concrète* studio, and had

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<sup>484</sup> Paik, "Time Collage," 23.

the experience of making their own music in real time. Paik declared, “I am no longer a cook (composer), but only a feinkosthandler (delicatessen proprietor).”<sup>485</sup> He quit the fully authoritative position of composer, and composed 70% and left 30% for the audience.<sup>486</sup> Similarly, on the poster for *Exposition of Music – Electronic Television*, Paik wrote a sub-title, “How to be satisfied with 70%.” It shows that Paik wanted to be satisfied with his unfinished projects, or interactive art as an extremely progressive art form. Whereas electronic music and *musique concrète* usually presented a pre-recorded seamless sound with montage skills by using expensive editing systems, his interactive art provided “The pleasure of failure” between two different sources like Cage’s collage sound in real time. In the auditory experience of *Random Access*, audiences were able to listen randomly to disturbing sounds depending on the position of the recorder head as in *Record Shashlik*. However, this project left audiences freer to change the speed of reading the tape strips. Paik did not provide viewers with a final work, but made them take part in the process of creating a music collage. This *open work* gave viewers active interactions. By providing audiences with diverse choices of sound databases, Paik created his own interactive pieces. In this regard, these projects can be considered as pioneering interactive art projects with music devices, which mix and manipulate different sounds in real time.

Third, Paik developed Cage’s appropriation of musical instruments and devices. As discussed, Paik improved his prepared piano *Klavier Integral* with diverse attachments from ointment to electric devices. After that, Paik became interested in another of Cage’s musical device manipulations. It seems that *Record Shashlik* and

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<sup>485</sup> Paik, “About the Exposition of the Music,” n.p.

<sup>486</sup> Paik, “Avant-garde and Music in the World – Part II,” 17.

*Random Access* were inspired by the expansion of the playable space from Cage's *Cartridge Music*. To encourage visitors to interact actively with sound databases, Paik's interactive art needed a free interactive interface. Cage manipulated phonograph turntables by removing the needle in its cartridge in *Cartridge Music*. He also used contact microphones to listen to sounds from daily materials such as furniture. Whereas the cartridge music devices were still fixed in specific places, the contact microphones could be moved by performers. Paik actively mixed Cage's two ideas, manipulating musical devices and movable playing devices, to make a more active interactive environment for his interactive art *Record Shashlik* and *Random Access*.

Paik's reinterpretations of three composers' ideas contributed to him creating radical methods to make interactive art. While Stockhausen, Schaeffer, and Cage pursued experimental music, they never gave up traditional performers' roles in their composition. However, Paik sought to realize two-way communication systems in his art by directly connecting his manipulated musical devices with audiences. In the end, in *Record Shashlik* and *Random Access*, audiences were able to access music databases in a nonlinear way as core contributors, not as passive listeners.

#### **4.2.4.2 Electronic Televisions**

Paik wrote *About the Exposition of Music* to preview his first solo show *Exposition of Music – Electronic Television*. This essay clearly omitted its important subtitle, Electronic Television. Originally, Electronic Television was a small part of the

whole show as suggested by his early flyer for this exhibition.<sup>487</sup> There are two possible assumptions about why Paik omitted or neglected “electronic television.” First, although Paik had some basic knowledge of electronic theory from the experience of electronic music,<sup>488</sup> he needed to use professional techniques to hack televisions. He may not have been sure whether he would be able to finish his thirteen different electronic televisions by the opening of exhibition. He had previously held off submitting his composition to the Darmstadt Summer Course in 1958 because he did not want to present his project unless he was satisfied with it.<sup>489</sup> Given his perfectionism, he could have been reluctant to add electronic television into the title until he made sure that he was able to finish it before the opening of the exhibition. Second, his ideas sometimes were stolen by his colleagues. Specifically, he did not present new television projects to his Fluxus friends until he finished them.<sup>490</sup> At that time, some of the Fluxus members, George Brecht and Wolf Vostell, also used television as an object for art though his contemporaries did not have any skills in electronic engineering as compared to Paik.<sup>491</sup> Furthermore, according to Edith Decker-Philip, the first art theorist who researched Nam June Paik’s art as a dissertation topic, Vostell misdated his projects to assert his originality in video art. She refutes his dating of his projects with diverse evidence including correspondences between her and him, and between her and museums.<sup>492</sup> However, it seems to be true that

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<sup>487</sup> Won Jung Shin, “Reading (between) the Lines – Nam June Paik’s Wuppertal Exhibition,” in *NJP Reader #4: Exposition of Music*, eds. Seong Eun Kim and Sang Ae Park (Yongin: Nam June Paik Art Center, 2013), 73.

<sup>488</sup> Paik insisted that his experience with electronic music devices was used as a main technology for his electronic television projects. See Yong-Oak, *Stao Painting*, 258.

<sup>489</sup> Paik and Steinecke, “Der Briefwechsel Nam June Paik - Wolfgang Steinecke 1957-1961,” 126.

<sup>490</sup> Yong-Oak, *Stao Painting*, 258-259.

<sup>491</sup> Nam June Paik, *Nam June Paik, Video Artist*. By Dick Higgins, April 12, 1977, Nam June Paik Archives: Smithsonian American Art Museum, Box 1, F.8.

<sup>492</sup> Decker-Philips, *Paik Video*, 41-53.

Vostell had an idea of using television in art earlier since Paik mentioned that he was inspired to use television by Vostell's *Decollage TV* in his statement for Exposition of Music – Electronic Television.<sup>493</sup> However, Paik stated that image manipulation in television was inspired by Professor K. O. Götz's unrealized theory about the programming of electronic television.<sup>494</sup> In other words, even though Paik used television in a gallery as Vostell did, Paik creatively manipulated television for his video art. Paik wanted to show his experimental television projects after thoroughly enhancing them and without being duplicated by his rivals.<sup>495</sup> In fact, whereas Paik's video manipulation projects in his first solo show were generated by changing the television's circuit, others' television/video art pieces were ready-made objects in art or video projects with simple built-in video manipulations.

Paik said that he saw the improvement of Kurt Schwitters in his video.<sup>496</sup> As mentioned, Schwitters's poem was based on constant variations of texts. When a reader recites the poem, it recalls a parameter in a random algorithm. After his first solo show, Paik pointed out his experimental television's inherent indeterminacy – the quality of television was random movement of tiny electrons – in “afterlude to the EXPOSITION of EXPERIMENTAL TELEVISION.” In this self-review about his first solo exhibition, Paik mentioned that nature is beautiful, not because it changes beautifully but simply

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<sup>493</sup> Nam June Paik, “The Introduction to the Electronic TV Show at Parnass Gallery,” in *De-coll/age 4*, ed. Wolf Vostell (Köln, January 1964), n.p.

<sup>494</sup> Ibid.

<sup>495</sup> Vostell insisted that he exhibited his video art before Paik's first solo show. However, Edith Decker-Philips analyzed this controversial issue in her book *Paik Video*, which was developed from her dissertation. Decker-Philips several times corresponded with Vostell to find the truth. She proved that Vostell's arguments frequently were not consistent and often misleading. In the same context, Paik secretly created his first video sculpture, *TV Cross* (1966). This is well described a letter between Paik and Bauermeister. See Park, ed. *Letters, Mary Bauermeister*, 107.

<sup>496</sup> Paik's *Key to the Highway* (1995) starts with this sentence. See Lee and Kim, *The Return of Nam June Paik*, 65.

because it changes, and he emphasized that his experimental television had the same mechanism of nature.<sup>497</sup> He continued, “the core of the beauty of nature is [that] the limitless quantity of nature disarmed the category of quality.”<sup>498</sup> Paik thought of quality as value in “The Twelve Tone Music” to emphasize that rare *quality* composers were overwhelmed by a *quantity* of composers as a negative mannerism. However, as mentioned in chapter 3, Cage’s idiosyncratic performances changed his mind into the meaning of quality from value to character.<sup>499</sup> This subversive idea made Paik escape from the obsession to make a perfect work. Instead, he explored how to make an open work with the participation of audience members.

Paik concentrated on interactivity as the most radical method in music in “About the Exposition of Music.” At the end of the essay, Paik insists that the performer must not practice or rehearse for Cage’s compositions since repetitive practice reduces the ephemeral and indeterminate quality of the composition.<sup>500</sup> Cage’s use of chance operations was often used for a fixed score. Likewise, his indeterminacy was often fixed by a performer. As mentioned in chapter three, Tudor interpreted Cage’s indeterminate composition, and made his own score before his performance. Furthermore, Paik made a negative comment about Cage’s indeterminate music because audiences as a passive listener could not distinguish it from normal music.<sup>501</sup> Beyond Cage’s indeterminate music, Paik sought to maintain indeterminacy for the audience. Paik pushed progressive music one step further than Cage and Stockhausen had. His mentors experimented with

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<sup>497</sup> Paik, *Videa ‘n’ Videology*, 5.

<sup>498</sup> Ibid.

<sup>499</sup> Ibid.

<sup>500</sup> Paik insisted that this was a main issue in Cage’s composition. While working to overcome it, Paik came to have an idea about interactive art.

<sup>501</sup> Paik, “About the Exposition of the Music,” n.p.

random access and indeterminacy in music for performers. However, Paik explored the same ideas for the audience. Myron Krueger argues that whereas random processes were implemented in computer art so as to generate complexity, the participants are the source of the unpredictability in interactive art.<sup>502</sup> In this regard, Paik invited participants as the agency of active random algorithms to his interactive projects.

To concretize the audiences' participation, he used a variation of Abraham Lincoln's famous phrase: "Music for the people, by the people, of the people."<sup>503</sup> His aspiration toward two-way art is reinforced by the idea of the American democracy. This is antithetical to his previous aesthetics, in which art was related not to democracy and social security but absolutism in his first Korean article "The Music of 20's Century."<sup>504</sup> He was proud of his interactive projects since he did not follow John Cage.<sup>505</sup> In other words, Paik's concrete idea of interactive art started with the Cage Shock in 1958, and culminated in Paik's rejection of Cage's indeterminate music. Based on his musical philosophy, Paik finally introduced his interactive art pieces in his first solo show in 1963.

In 1995, Paik mentioned his electronic television and interactive art in two different places. When Stephan von Wiese asked Paik how he learned video, Paik replied that he invented it with electronic music technologies.<sup>506</sup> Whereas he was proud of his video art, he was humble about his interactive art. In the 1995 Gwangju Biennale catalogue, he confessed that making interactive art was not by choice but necessity.

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<sup>502</sup> Kwastek, *Aesthetics of Interaction in Digital Art*, 12.

<sup>503</sup> Paik, "About the Exposition of the Music," n.p.

<sup>504</sup> Paik, "The Music of 20's Century – Part V," 4.

<sup>505</sup> Paik, "Avant-garde and Music in the World – Part II," 17.

<sup>506</sup> Rennert, "We Have Time," 68.

Most of his 1963 – 70 works had to be either live or interactive, because the first affordable color VTR did not come out from Sony until 1970.<sup>507</sup> Even though Paik left an unpretentious comment about his interactive art, he actively invented his own interactive art and was proud of his achievement, which had, finally, escaped from Cage's shadow.

Based on his knowledge of electronic music, Paik succeeded in making an abstract image on television. In particular, he manipulated broadcast images in real time. When he installed thirteen televisions at the *Exposition of Music –Electronic Television* in 1963, West Germany had only one channel of the public television corporation, which provided viewers with content for a very limited time.<sup>508</sup> These very limited choices coincided with the environment of the one-way communication music that Paik wanted to destroy. Paik scheduled his exhibition in the late evening to manipulate the prime-time content in real time.<sup>509</sup> This became a significant starting point for the advanced video manipulation device, *Paik/Abe Video Synthesizer* (1969-1972), which is a color video synthesizer invented by Nam June Paik and his collaborator Shuya Abe. Later, Paik's video art projects were processed by this synthesizer. It can be interpreted with viral aesthetics which art historian David Joselit coined. Viral aesthetics is similar to the result from the invasion of a virus into certain ecology. It does not aim to overturn its host, but infect it as the Paik/Abe Synthesizer degrades and distorts the image of mass media.<sup>510</sup> In other words, the aesthetics does not reject the origin of the host but manipulates it. Joselit

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<sup>507</sup> Paik, "Interactive: The Next Twenty Years," 20.

<sup>508</sup> The public broadcasting company was ARD (Arbeitsgemeinschaft der öffentlich-rechtlichen Rundfunkanstalten Bundesrepublik Deutschland), which consisted of the first and the second public broadcasting channels. However, the second one was regional. All of Paik's experimental televisions, which used the broadcasting content, were set to the first public broadcaster. See Shin, "Reading (between) the Lines," 76-77.

<sup>509</sup> Ibid., 76.

<sup>510</sup> Joselit, *Feedback*, 50.



connected Paik's video art based on the synthesizer with American novelist Williams S. Burroughs's manipulation of language via a tape recorder. Burroughs thought that when the established lines of association in mass media are cut, the associational links are broken. By altering muttered lines of the mass media with a tape recorder, he used it as a kind of political virus. Joselit insisted, that although Paik and Burroughs' manipulations are similar to Duchamp's readymade, which untied the signifier from the signified, Paik and Burroughs tied their works to a political purpose.<sup>511</sup> Paik's viral images are made up of various video sources, as his electronic music and *musique concrète* project did with many audio sources. Paik overcame the limited video sources in a creative engineering way. He was proud of his experimental televisions because no two sets had the same kind of technical operation.<sup>512</sup> He created different video manipulations, which were decided by the music parameters such as various generators, tape-recorders, and radios.<sup>513</sup> Furthermore, one of his experimental televisions allowed visitors to manipulate its images via a pedal like a piano pedal.<sup>514</sup> In addition, by connecting electronic music devices like an oscillator, an amplifier, and microphones with a television, Paik created his first interactive video art pieces, specifically, *Participation TV* (1963).<sup>515</sup> Viewers were able to generate abstract images on television by making sounds through the microphones. He created his first video art without a video device, and it became a pioneering piece of interactive art. In his diverse experiments, he actively employed cross-modality between images and sounds to promote interactivity. This new kind of art

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<sup>511</sup> Ibid., 55.

<sup>512</sup> Paik, *Videa 'n' Videology*, 5.

<sup>513</sup> Schmit, "Exposition of Music," 132.

<sup>514</sup> Ibid.

<sup>515</sup> Ibid.

was based on Paik's theories in new music and his practice in electronic music. Paik employed a reversed direction of *Random Access and Record Shashlik* in *Participation TV*. While his musical interactive art encouraged viewers to change graphical or sculptural images into sound pieces, *Participation TV* allowed viewers to change their voices into abstract images on television in real time. Paik used normal microphones as input interfaces to draw abstract images on television. By controlling their voices, interactors were able to manipulate images in *Participation TV*. This became a very basic interface for interactive art. Contemporary computer programming languages for interactive art such as Max MSP Jitter and Quartz provide a similar interactive environment as a typical example for the beginner.

Paik sought to transform passive viewers into active ones by appropriating the television, a popular appliance. To escape the one-way medium, Paik used two microphones as interactive interfaces. As mentioned, viewers at that time could only watch one program from the single broadcast channel in West Germany. They could not give any feedback to the one-way communication at all except for normal functions such as controlling brightness, contrast, and volume.<sup>516</sup> Their interactions were limited to check the program schedules and to select their favorite programs, and turn the appliance on and off. In other words, they had only one choice: watching or not watching. In this regard, viewers were a passive audience that had no right to change the content. Paik emphasized that Cage's score also had this singular choice, which offered no freedom just like Johannes Brahms's and Ludwig van Beethoven's compositions.<sup>517</sup> Paik

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<sup>516</sup> Unlike these built-in video effects, Nam June Paik was proud of really hacking televisions. See Paik, *Videa 'n' Videology*, 5.

<sup>517</sup> Paik respected John Cage's idea in *Music Walk*. Cage wanted to use two rooms for it. However, it was not realized. See Paik, "To the 'Symphony of 20 Rooms'," n.p.

deliberately thought about the way to offer plural choices in his art. Paik not only converted passive television into an interactive device, but also changed passive viewers to active participants.

#### 4.2.5 Afterlude to Nam June Paik's Interactive Art

Paik explains that his obsession with progressive methods came from his genetic quality.

I question again myself why was I interested in “most extreme”? It is because of my Mongolian DNA. – Mongolian – Ural –Altair horseback hunting people moved around the world in prehistoric age from Siberia to Peru to Korea to Nepal to Lappland. They were not center-oriented like Chinese agrarian society. They saw far and when they see a new horizon far away, they had to go and see far more –

Tele-vision means in Greek to see far.

see far = fernsehen = Tele-vision<sup>518</sup>

This implies his thoughts about the inferiority complex of Asians. In an interview with Dick Higgins on April 12, 1977, in Higgins's SoHo loft, Paik argued that Asians were colonized by Western powers because they did not develop science. That is the reason Paik focused on new technology.<sup>519</sup> Ultimately, Paik switched his negative DNA in music with his positive DNA in art-and-technology. After his first satellite broadcast, *Good Morning, Mr. Orwell* in 1984, various newspapers in Korea asked him for interviews. He did not talk about new music any more. Instead, he suggested that Korean readers should

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<sup>518</sup> Paik, “My Jubilee ist Unverhemment,” 10.

<sup>519</sup> Paik, *Nam June Paik, Video Artist*, n.p.

catch up with developed countries focusing on information technology.<sup>520</sup> Similarly, Paik wanted Korean musicians to deal with more universal current issues in music to catch up with Western music in his first Korean article, “The Music of 20’5 Century,” in 1958. He was a patriot visionary who contributed to developing his country. However, Paik not only focused on new technologies but also the relationship between technology, society, and humans. This was his unique perspective toward interactive art, too. Paik stressed animal comes before machine in cybernetics. He saw cybernetics as a communication theory, which makes a machine understand a human language. In this regard, he was not a simple technophile.<sup>521</sup>

Paik screened his film *Zen For Film* in 1964 at the Filmmakers' Cinematheque in New York. By using a long film leader, Paik showed a solid white image on the screen. As it was projected, the film naturally accumulated some dust and scratches, and showed an imperfect white image to audiences. This shows that film cannot be a pure white color, just as a perfect silent environment cannot be possible.<sup>522</sup> His project was not only an experimental film, but also a performance within the filmic space. Paik stood in front of the projector light, meditating or performing some simple actions to convert fixed serial images in film into a living movie.<sup>523</sup> Paik’s film can have an origin in the shadow theater – the most ancient and, geographically, the most widely known of all screen practices in Asia hundreds of years ago, long before they were introduced in Europe in the late 17th century – in which the audience sits in front of the screen, while the performers operate

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<sup>520</sup> For example, Paik explained three necessities to be a member of developed countries: Cross-licensing, Inventing a new idea and its commercialization, and Information. See Nam June Paik, “As an Opportunity to Bridge the Information Gap Between Developed countries and Korea,” *Chsunilbo*, August 3, 1993, 15.

<sup>521</sup> Paik, *Videa ‘n’ Videology*, 27.

<sup>522</sup> John Cage, “On Nam June Paik’s ‘Zen for Film’ . (1962-64),” in *Electronic Art III*, ed. Nam June Paik (New York: Galeria Bonino, 1968), n.p.

<sup>523</sup> Sheldon Renan, *An Introduction to the American Underground Film* (New York: Dutton, 1967), 247.

the shadow puppets behind it.<sup>524</sup> Compared to the hidden performer in the shadow theater, Paik appeared before the film screen to intervene in his film with his shadow as a big impurity. His animosity toward purism visually culminated in this performance project, and, at the same time, seems to predict participants' bodies as an important interface in interactive art.

In *Zen for Film*, the combination of the white screen and constant light is a main interactive interface to recognize viewers' contour. This shadow-like image became a popular element for interactive art. For example, *Shadow* (Scott Snibbe, 2002) recorded viewers' short performances and loops the clip again and again on multiple screens like a multi-layered remix sound. *Messa di Voce* (Golan Levin, Zachary Lieberman, Jaap Blonk, and Joan La Barbara, 2003) made audiences' voices generate abstract images and manipulated their shadow on the screen at the same time. *Shadow Monsters* (Philip Worthington, 2006) expands viewers' shadow images into an augmented reality project. *Shadow Projection* (Peter Campus, 1974) fills visitors' dark shadows with their body images in real time.

To make an interactive performance, Paik returned to a magic lantern in the pre-cinema period as Iwai did. In fact, Paik created another significant interactive art piece *Three Camera Participation* (1969) after his first exhibition. Unlike *Participation TV*, this new participation television does not use abstract images via microphones any more. Instead, it used three closed-circuit video cameras. In 1964, Paik had experimented with three-color channels such as red, green, and blue to convert three black-and-white images into a color image. This effort to make an inexpensive color video camera became a seed

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<sup>524</sup> Erkki Huhtamo, "Elements of Screenology: Toward an Archaeology of the Screen," *ICONICS: International Studies of the Modern Image*, Vol.7 (2004): 38-39.

for *Three Camera Participation*.<sup>525</sup> It was impossible for these three cameras to record a visitor's silhouette at exactly the same physical angle. It naturally generated slightly different overlapping red, green, and blue images. The overlapping areas made different colors based on the primary color of the light system. This interactive project encourages visitors alternately to focus on their three different bodies. The same technology was used for his *One Candle* (1989). A fixed candle with a moving flame replaced a visitor. This is no longer an interactive piece for visitors. However, it generates beautiful images from ever-changing light. Likewise, with the closed-circuit video system, Paik created a mirror image for a fixed sculpture of the Buddha in *A Buddha Watching TV* (1974). However, it is not a subjective mirror image but an objective flipped image from a video camera's gaze because an image from the video camera to the television is not like a mirror but a view from a person facing the man. Even though Paik made fake mirror images since he did not have a technique to flip images, it was a great setting because it showed the tension between real Buddha and the other's gaze at it.

The objective image was changed into a mirror image to encourage audiences to interact with their body images. For example, Camille Utterback's *Text Rain* (1999) allows viewers' interaction with their bodies and small colorful rain-dropping texts on the white wall as an augmented reality mirror, which is reminiscent of one of Paik's early computer-generated works, *Confused Rain* (1967)<sup>526</sup> and *Random Access*. Visitors in *Text Rain* can change the position of dropping text images on the screen on a white wall in

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<sup>525</sup> Sooyoung Lee, "Nam June Paik's TV Experiments," in *Nam June Paik's 80<sup>th</sup> Anniversary: Nostalgia is an Extended Feedback*, eds. Seongeun Kim, Kyunghwa Ahn, Sohyun Ahn, Sooyoung Lee, and Yujean Rhee (Yongin: Nam June Paik Art Center, 2013), 178.

<sup>526</sup> Paik was a researcher in residence at Bell Labs from 1967 through 1968. At the lab, he created *Confused Rain*, which was a printout of the letters of the word confused falling down the page in a random accumulation. See Kaizen, "Computer Participator," 231.

real time. With newer technology, Utterback converted Paik's chance art into indeterminate art for visitors. Furthermore, Daniel Rozin's *Wooden Mirror* attracts viewers through the auditory sense to engage the natural materials. 830 small wooden blocks constitute of a monochrome mirror on the wall. It reminds viewers of old 8-bit computer graphics like a grayscale pixilated image. Each block is controlled by a servomotor. A small camera at the center of the mirror transmits the image in front of the mirror in real time. The computer transforms the image into a pixelated image, and then transmits the number of the angle to each wooden block. Since wood can emit diverse colors by reflecting the light at different angles, viewers can see a whole grayscale image on *Wooden Mirror*. This interactive piece quickly works to represent the image of viewers in real time, and its movement makes a fascinating natural sound without any speakers. This piece provides viewers with the experience of a multi-sensorial performance. After that, Rozin created several mirror projects by using diverse materials such as penguin toys, colored pressed tin cans, and fur.

Nowadays, many art-and-technology artists make interactive pieces which can manipulate a moving image with their shadows on the screen by using affordable interactive interfaces such as *Kinect*, which was originally created for the video game console *X-Box 360* and *X-Box One*. Audiences can easily experience a two-way communication environment with their shadow or mirror images in real time. The popularity of the interface led interactive art to a virtual reality environment. They are immersed in its illusionism without the recognition of their identity. It often discourages viewers from actively interacting with art. It results in the passive recipient that Paik was worried about.

As mentioned, Paik's interactive art was associated with democracy. However, he contradicted himself when he realized the interactive environment. Above all, Paik invited less than 20 people to his first solo exhibition.<sup>527</sup> He planned to give a small group enough time to interact with his interactive art pieces. He knew that as the number of visitors was getting bigger in interactive art, their feedback was getting worse. He found the side effect of democracy in interactive art. Some interactors aggressively or flippantly used his interactive pieces as Paik did in his action music. Their interaction went beyond his intention and control. Finally, he needed to limit their actions to avoid any malfunctions or error in his interactive projects. Paik came to know that he should limit visitors' actions to promote proper interaction with his interactive projects. However, Paik was aware that this interactive project was not the truth because it did not have a real freedom.<sup>528</sup> He acknowledged that he could not give audiences a real freedom. This contradicts his philosophy of interactive art. For this reason, after all, it seems that his interests moved from interactive art to video art and video synthesizer just as Cage created his controlled indeterminate music. However, this case of Paik's trial and error in interactive art still gives artists a fundamental question, how to strike a balance between audiences' freedom and artists' intention, while they develop interactive projects.

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<sup>527</sup> Tomas Schmit recollected that guests were mainly Paik's friends on the first evening, and few audiences on the other days. See Schmit, "Exposition of Music," 131.

<sup>528</sup> Makoto, "Avant-garde and Music in the World – Part II," 20.



## **Chapter V: Interactive Art Projects Based on the Study of Nam June Paik**

This chapter evaluates my art practice based on my PhD research. I studied the concrete relationship between Nam June Paik's musical background and his interactive art. This reveals that Paik created unprecedented interactive pieces based on his music practices and theories in West Germany. I insist that progressive music was one of the most significant origins of interactive art. Even though my background is far from the music field, in my own projects I use specific musical interfaces such as Max/MSP and DMX-512, which were originally created for composers and music performers. I have been employing these musical interfaces to create my interactive pieces since before I clearly recognized the relationship. With these emerging technologies, I present three interactive art projects in which I reinterpreted the unique qualities of Paik's interactive art. First, I focused on Paik's random-access method to approach a wide range of sound databases in *Diligent Operator* (2016). Second, I concentrated on Paik's cross-modal design for active participation in *Endless Ripples* (2015). Finally, I reinterpreted Paik's real-time interactive video interface in *Floating Painting* (2016).

### **1. The Rise of Studio Art-based PhD Programs**

Some scholars and artists have negative opinions about PhD programs for artists. They question whether or not the degrees are necessary or not for art practice. They think that artists do not have to do deep research since great artists have worked without any PhD degrees. Nevertheless, obtaining a PhD degree is becoming popular among artists today. In particular, art-and-technology PhD programs have been based on disciplines such as electronic engineering, philosophy, music, computer science, and art history in

the United States. To earn the degree, students are mostly required to write a dissertation and create their own project at the same time. Likewise, the Media, Art, and Text PhD program that I pursue provides an interdisciplinary synthesis of mass communications, fine art, art history, and English. Among my colleagues, I am currently the only person to do both research and practice as an artist.<sup>529</sup> The art-practice PhD degree is like a *pharmakon* for artists, which has two opposite meanings, poison and medicine, and the *pharmakon* finally has an ambivalent effect, painful pleasure.<sup>530</sup> PhD research sometimes makes studio art-based PhD students create better conceptual works, but they could be isolated by the theories, and sometimes make projects only for interpreting their texts.

In this ambivalent environment, I sometimes think research can be perfect just as research. Alfred Hitchcock said that he would not make the famous novel *Crime and Punishment* as a feature film because it was somebody else's achievement.<sup>531</sup> Even though my research is my own achievement, my scholarly personality is different from my artistic personality. My research stands alone as a separate achievement from my artworks. In this regard, it is hard to directly apply my research to my art project. I think that art is not based on a mathematical formula:  $1 + 1 = 2$ , but Sergei Eisenstein's montage theory:  $A + B = C$ . Moreover, I have often witnessed that emphasizing theories based on research has made artists' project much less fascinating. This can often contribute to encouraging artists to make a non-art project with only research. Even though if a PhD program is based on art practice, this study requires students to think of research first. Few PhD students can start with their project prior to the research in

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<sup>529</sup> Other PhD students concentrate on theory in the Media, Art and Text program.

<sup>530</sup> Jacques Derrida, "Plato's Pharmacy," in *Dissemination*, trans. Barbara Johnson (Chicago: University of Chicago Press, 1981), 70 and 99.

<sup>531</sup> Francois Truffaut, *Hitchcock* (New York: Simon and Schuster, 1966), 49.

history or theory. Based on the research, they make their projects in a one-way communication, or from theory to practice. However, the process of making artworks is not based on a one-way communication from authoritative theories. The flow in one direction only discourages artists from making creative projects since this keeps artists from throwing away their previous idea when they find a better one in an organic metamorphosis. In my case, when I developed my project, I found that I had better to remove musical parts from my current works. However, I could not get rid of it since my project was based on my ‘musical research.’

What I want to make cannot be isolated in what I studied during the research, since what I want to make is always getting beyond what I studied while I created. For this reason, I agree with Nam June Paik’s quotation of Arnold Schoenberg, “art means new art.”<sup>532</sup> However, I should compromise with the matter between my projects and research to some degree. I definitely agree that these two fields can interact with each other. In my PhD program, I explore the positive feedback system to make more creative art based on my research.

Art historian James Elkins interrogates what the studio art-based PhD program is in “Fourteen Reasons to Mistrust the PhD.” His goal is not to reject the controversial PhD program, but to articulate this ambiguous degree by answering several questions such as the difference between the MFA and the studio art-based PhD, the necessity of PhD research in art, artists based in other PhD programs in sociology, chemistry, or political theory, etc.<sup>533</sup> To be specific, he looks positively on the art-practice PhD degree since it

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<sup>532</sup> Schoenberg, *Styles and Idea*, 44.

<sup>533</sup> James Elkins, “Fourteen Reasons to Mistrust the PhD,” in *Artists with PhDs: On the New Doctoral Degree in Studio Art*, ed. James Elkins (Washington D.C: New Academia Publishing, 2014). 227-278.

promotes a self-reflexivity for artists to understand their artworks. However, at the same time, he insists that many great artists did not articulate their works and theories, and moreover, some artists cannot explain what they are doing during their production.<sup>534</sup> In the end, he thinks that not all art practice needs the PhD degree.

I insist that the art-practice PhD program definitely helps artists in art-and-technology to improve their projects and the concept of them. Elkins stresses that artists pursuing the degree are similar to scientists since they are required to do the research and the practice in the laboratory at the same time.<sup>535</sup> However, he also posted the opposite opinion in Risa Horowitz's response that these were not parallel because scientists do not have to show their lab works.<sup>536</sup> I think that my field, art-and-technology, is exceptional. Many scientists need to present their achievement at conferences before publishing the results from their research. Even though most of them do not bring their real project to the conference, they present diverse materials such as proceedings, mock-up, video documentation, and still images for attendees. I think that their presentation is not so different from artists' presentations at conferences. I took part in one of the biggest HCI (Human Computer Interaction) conferences, CHI 2016 in San Jose, California. This conference mainly hosted HCI topics in computer science and electronic engineering, interaction design, user experience design, and user interface although there were also some interactive art papers. Even though HCI and interactive art are fundamentally different, they used the same format for writing papers and presenting their projects at the conference. I was not dissatisfied with their presentations. I think that the presentations

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<sup>534</sup> Ibid., 237.

<sup>535</sup> Ibid., 232.

<sup>536</sup> Ibid.

are fine for my field instead of a real art exhibition. As mentioned in the introduction, interactive art has a strong relationship with conceptual art. With the conceptual approach in interactive art, I was able to understand their concepts and appreciate their projects at the conference without a physical exhibition. For example, one of the presenters in the conference introduced participatory haiku powered by a smart phone application. He explained the process of making his project, the research, the methodology, the video documentation and references from Fluxus and John Cage's legacy in participatory art.<sup>537</sup> I think that this academic approach in the HCI field can be critical to provide artists with the art-practice PhD program in interactive art.

In fact, this kind of PhD practice can go back to the 1950s. Paik first took various diverse cross-disciplinary courses in musicology at the Ludwig Maximilian University of Munich. And then he transferred to the Freiburg Music Academy to learn composition. During his studies, Paik also attended the international summer music courses in Darmstadt. Finally, he attended several philosophy courses at the University of Cologne. Even though Paik did not complete a PhD degree, he took a range of courses from art history, musicology, composition, architecture, philosophy, and so on in West Germany. He alternated art theories and art practices there. He said that he did not learn video but invented it,<sup>538</sup> and he actively made his own PhD by drawing on curricula from several institutions. His academic background was essential to create his interactive art, as my research shows. This suggests that interactive art can be a great discipline for a studio art-based PhD program. In this regard, Paik created his own PhD program in West Germany

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<sup>537</sup> Vyandas "Vegas" Šimbelis, et al., "Repurposing Bits and Pieces of the Digital" (Paper presented at the annual meeting for CHI2016, San Jose, CA, USA, May 7-12, 2016).

<sup>538</sup> Rennert, "We Have Time," 68.

by mixing art practice and research. As mentioned, Paik opened creative possibilities to make new interactive pieces with musical approaches. Paik found them among various composers: Karlheinz Stockhausens's Random Access in algorithmic music, Pierre Schaeffer's collage-based and readymade music, and John Cage's appropriation of musical instruments and devices. I will apply Paik's reinterpretation of new music from these composers to my interactive art projects. In other words, his creative strategy is the starting point for my interactive art. Even though my original background is not in music or musicology, I have been using musical tools and interfaces to make interactive art. For example, I use the composition program Max/MSP Jitter and musical interfaces such as *DMX-512* and DJing tools in my interactive art. These interfaces share Paik's significant idea about interactive art, converting audiences into theatrical performers.

Even though Paik invented his interactive art to give audiences real freedom, nowadays, interactive art often makes visitors more passive than non-interactive art projects do, and converting audience active participants who activate semiotic signification in interaction remains a utopian activist goal for many artists.<sup>539</sup> Shanken interrogates whether the audience is ready to actively interact with interactive art or not. He emphasizes that technological novelty cannot guarantee the possibility of freedom due to the limited forms of agency.<sup>540</sup> With limited choices, they are required to follow the instructions of artists. To deal with this paradoxical issue, some artists design interactive pieces, which convert audiences into real creators. For example, some artists create new musical instruments for sound art, or new editing systems for a music collage. Paik

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<sup>539</sup> Kristine Stiles and Edward A. Shanken, "Missing In Action: Agency and Meaning In Interactive Art," in *Context Providers: Context and Meaning in Digital Art*, edited by Margot Lovejoy, Christiane Paul, and Victoria Vesna (Chicago: The University of Chicago Press, 2011), 31-35.

<sup>540</sup> Ibid., 36.

manipulated his pianos, turntables, and tape recorders to create interactive artworks such as *Klavier Integral*, *Random Access*, and *Records Shashlik*. In these projects, users were not passive audiences but active performers. However, they were not able to be real composers or musicians such as Johann Sebastian Bach, Ludwig van Beethoven, or David Tudor with these interactive musical devices. Since these gallery-based installations engage visitors for only limited time, mastering a new musical instrument is not possible. Continuing this musical genealogy in interactive art, Toshio Iwai attempted to make users into real musicians. He created the musical composition tool *Simtunes* and a musical performance device *Tenori-on* (2005). In *Simtunes*, users can save their compositions and share them with their names with others around the world.<sup>541</sup> By using *Tenori-on*, some musicians posted their beautiful performances on *Youtube*.<sup>542</sup> This was a breakthrough event, in which a user equally became a real creator. However, this method mainly needs artists' fame and commercial supporters to release a product to the public.<sup>543</sup> For this reason, most interactive art does not follow this method to make audiences creators.

Nam June Paik made *Participation TV* by breaking the hierarchical relationship between senders and receivers. His counterattack against the broadcasting system was conceptually successful in the 1960s. Currently, in the world where interaction design and interactive interface are prevalent, such a monotonous interactive piece is not unique any more. However, this simple interaction significantly can reveal the same political

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<sup>541</sup> Users draw pictures with dots. When small musical instruments, which look like bugs move on the picture, each color dot below these bugs makes a different tone. This is a synesthesia project between music and painting.

<sup>542</sup> This is an electronic musical instrument, which consists of 256 touch LEDs. The interactive interface allows audiences to use sequence music like DJing controllers.

<sup>543</sup> *Tenori-On* was a collaboration with the commercial musical instrument company Yamaha.

issue. The simple interactive art piece compares the limitations of interactive art with the restrictions of society as an artistic metaphor. To manipulate the final image in interactive art, visitors need to follow its instructions and rules. This is similar to a hierarchical system, a one-way communication, and hegemony. I used this method to make *Diligent Typist* (2011).<sup>544</sup> In other words, this project explores how a lack of freedom in interactive art is connected to a lack of freedom in society. However, artists ironically can change audiences' passive interactions into active considerations by converting them into more active agents in their community. Although the interface remains in the same place, audiences do not follow the rules as a conformist method, but recognize it as a satirical approach. My interactive research projects employ this strategy to go beyond passive interactive art.

## 5.2 Specific Interactive Interfaces from Music

Nowadays, a lot of artists in the art-and-technology field use Arduino, which consists of an open-source programming language and a micro-controller board for physical computing. However, artists with no programming background can hardly access this emerging technology although it is relatively easier than other programming languages. It is not easy for artists to practice computer programming languages, on the other hand, computer scientists cannot easily improve their artistic sensibilities. However,

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<sup>544</sup> *Diligent Typist* has a simple but powerful narrative by masking a MacBook backlit keyboard image. In a small office where there is a MacBook, a laptop desk, a chair, 4-channel speakers and a projected screen, the screen loops a simple keys' march on a MacBook keyboard from left to right. The computer commands viewers to press a letter on the keyboard in alphabetical order. When they press the same key that the computer commands, viewers contribute to making the big letter image with busy typing sounds. Each key sacrifices its own entity to show a big letter like Mass Performance. This project was exhibited at SIGGRAPH Asia in 2012.



by appropriating the musical environment, artists are able to make interactive art with a lower threshold for physical computing and programming. I would like briefly to explain some major interactive art tools from music.

Above all, music composition tools such as Max/MSP Jitter and Pure Data provide artists with an interactive environment useable in the realm of electronic art. Max/MSP Jitter is a visual programming language for electronic music, sound installation, mapping projects, interactive art, and so on. This is not freeware but a commercial program for digital art. Unlike Arduino, Max/MSP Jitter provides users with more legible interfaces. The visual interface language of the program came from the metaphor of connecting cables in sound devices. This program allows users to create diverse object boxes to use a specific objective and generate several message boxes and number boxes to assign specific attributes to the object boxes, and then connect them with cables by dragging between them. Another composition tool, Pure Data, has a similar interface to Max/MSP Jitter. Several objects in Pure Data are compatible with ones from Max/MSP Jitter. Even though Pure Data does not have powerful visual manipulation functions like Max/MSP Jitter does, it is a great open source software to make simple visual and interactive sound projects. Furthermore, artists can use the programs to control diverse ready-made musical devices such as DJing interfaces, MIDI keyboards, and DMX-512. Program users can also use an Arduino without writing a code. They just need to upload a built-in communication code, Firmata, to the Arduino board, and use a patch interface such as Maxuino and Pduino for either Max/MSP Jitter or Pure Data. In other words, these electronic music environments give musicians or

composers the opportunity to make interactive art. This coincides with my research, which is that music can lead artists to develop interactive art.

Second, DMX-512 is a light-control technology for real-time music performance, in particular, DJing. The DMX-512 system was created to control up to 512 light channels at the same time. It has two separate parts. The first part is software. This is compatible with diverse DJing programs. Additionally, it can also communicate with Max/MSP Jitter. Projects with the program use an external object *imp.artnet.controller*, which simply allows users to communicate with LED channels by using a combination of 9-bit numbers (512) for positions and 8-bit numbers (256) for brightness.<sup>545</sup> Even though these 8-bit numbers change the brightness of LED lights, it is not a direct proportion, but it looks like a log graph, which quickly increases the brightness from 0 to 50, and then slows down from 50 to 255. Users sometimes need to recalibrate the brightness to convert this graph into the directly proportional graph. The second part is hardware. Among diverse DMX interfaces, my projects use Open DMX Ethernet (ODE) made by Australian sound company Enttec. The DMX system consists of a DMX interface, a DMX decoder, and LED strings. As a mediator between a DMX decoder and a computer, the DMX interface communicates with the computer via an Ethernet cable, and the DMX decoder via an XLR converter. The communication numbers are decoded in a DMX decoder. The decoder translates the digit numbers from the interface into certain voltages to adjust the brightness of LED lights. This finally makes interactive LED lights. Users can choose single color LED strings, different color temperature LED strings, and RGB LED strings to make algorithmic light environments. The process of making a color is

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<sup>545</sup> This object can be downloaded from a website. See David Butler, "IMP.DMX," The Impersonal Stereo, accessed August 13, 2017, <http://www.theimpersonalstereo.com/software/imp-dmx/>.

similar to selecting a color in Photoshop by combining three color-values from 0 to 255. The combination of these three channel numbers lights up a certain color. This interface does not make sounds. However, this decorates the real time sounds with the changing light environment. In other words, the lighting system makes a three-dimensional space for music. This visual sense is interlocked with the audio sense. I present three interactive artworks that use these music technologies.

### 5.3 Three Dissertation Projects

Most art projects are expected to be exhibited in galleries and museums. However, interactive art often has technical and/or financial barriers to being installed. Fortunately, three of my dissertation projects had great opportunities to be introduced to artists and visitors from around the world at international conferences. First, *Diligent Operator* was exhibited for the International Symposium on Electronic Art (ISEA) in Manizales, Colombia in 2017. The art paper about this project “Diligent Operator: The Resurrection of *Musique Concrète* with Max/MSP Jitter and Arduino” was also presented at the same conference. Second, *Endless Ripples* was published for the Art.CHI II exhibition catalogue at CHI 2016 in San Jose, and presented at the Artist’s Talk session at ISEA in Hong Kong in 2016. Finally, *Floating Painting* was exhibited at ISEA in Manizales, Colombia in 2017. The descriptions for *Diligent Operator* and *Endless Ripples* above were originally written for these conferences, and slightly modified for the dissertation.<sup>546</sup>

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<sup>546</sup> Byeongwon Ha, “Diligent Operator: The Resurrection of *Musique Concrète* with Max/MSP Jitter and Arduino” (Paper presented at the annual meeting for International Symposium on Electronic Art, Manizales, Colombia, June 11-18), 2017. Byeongwon Ha, “Endless Ripples: A Growing Interactive

### 5.3.1 Non-linear Access to Database: *Diligent Operator*

*Diligent Operator* encourages visitors to make sound collage music in real time by connecting black Ethernet cables as if visitors become ‘diligent operators’ in the operating switchboard system. *Diligent Operator* creatively reinterprets Paik’s *Random Access*, which was exhibited in his first solo exhibition Exposition of Music – Electronic Television in Wuppertal, West Germany, in 1963. *Random Access* allows visitors to make sound collages by rubbing the strings of graphical audiotapes on a white wall with a mobile head of a tape recorder in a nonlinear way. This project is considered one of the most significant pioneering interactive artworks.<sup>547</sup> Based on his research on *musique concrète* compositions, Paik employed the composing environment of *musique concrète* to make the interactive system for *Random Access*. Likewise, *Diligent Operator* is an academic creation that was developed from the study of *Random Access*.



Figure 1 Ethernet cables in *Diligent Operator*

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Donation Device” (Extended abstract presented at the annual meeting for CHI2016, San Jose, CA, USA, May 7-12), 2016.

<sup>547</sup> Paul, *Digital Art*, 15.

### 5.3.1.1 Concept

Most computer users are isolated in their own filter bubble on the Internet. For example, video service websites such as YouTube and Netflix have algorithms to accumulate information about users. They then recommend specific video clips and movies based on each customer's searching and viewing data. In the end, they control users' activities online by analyzing their web surfing data. Due to this closed-circuit algorithm, users are becoming more and more trapped by their previous online data. As data grows bigger and bigger, customers are paradoxically becoming more passive with the local and closed-circuit experiences in the Internet environment, a World Wide Web. In 1984, Paik broadcast a worldwide satellite performance, *Good Morning, Mr. Orwell* with diverse artists in both the East and the West, but passive viewers are today still limited in their local and autocomplete boundaries.

Visitors to interactive art usually try to find the description and follow the creator's introductions to view their own contributions to predictably changing the creator's limited world without any reflections about their own identities. Does interactive art really give visitors the freedom to choose? Or, does interactive art itself employ passive volunteers to activate it? Based on these questions, *Diligent Operator* suggests a negotiation boundary between a passive environment in interactive art and an active space in progressive music. Even though musicians practice musical instruments following the rigid rules, they can be creative performers once they master the instruments.

*Diligent Operator* makes an interactive acousmatic environment for visitors. It identifies passive recipients submitting to their filter bubbles on the Internet with

conformists following the instructions in interactive art. In *Diligent Operator*, visitors become diligent switch-board operators in a hierarchical workplace in order to re-think their role as an interactive subject. In a recognizable similarity to Paik's *Random Access*, *Diligent Operator* uses visual collage on a white wall with a movable interface. Instead of audiotapes, in *Diligent Operator*, 12 Ethernet cables are attached to the white wall. The end of each cable has a different changing four-digit random number image every 30 seconds. These 12 random numbers are generated in 12 sections of 833 or 834, which equally split numbers from 0000 to 9999 into 12 regions to indiscriminately be selected. Each number represents a four-digit number for video camera data, or DSC four-digit number. If uploaders on YouTube do not type titles for their video clips, the system automatically assigns the identical file names to their video titles. Since they do not have a real title and little information, most of them cannot be searched with any keywords except for the combination of DSC and the specific numbers. However, they are public videos, which every user can have access to. In other words, most of the video clips do not communicate secret or confidential messages, but show everyday life. For this reason, titles with DSC and four digit numbers are mainly documentation of activities to be shared with family, relatives or small communities.

The computer commands visitors to connect a specific four-digit number among 12 random numbers in order to play sound fragments from the specific DSC video files on YouTube. However, audiences' shadows from the projector prevents viewers from finding the number. Their bodies make viewers uninvited guests in interactive art. To complete the computer's mission, they need to hide their bodies so as not to make any shadows on the numbers as much as possible. If visitors do not successfully follow the

instruction by connecting the specific Ethernet cable on the white wall with an interactive interface, or a long Ethernet cable on the ceiling in 30 seconds, the random numbers and the instruction number change. If the visitors succeed, the computer finds 32 YouTube video clips from a list of search results based on the DSC number that the computer provided, and randomly plays six of them without visual images. The sound becomes a sound fragment liberated from its original function like *musique concrète*'s sound collage. This is global collage music without our preferences. Each sound clip plays for ten seconds, and the following sound starts in the middle of the previous sound clip. In other words, visitors listen to overlapping sounds except the starting and ending five seconds. In addition, if uploaders for the video clips allowed advertisements before them, visitors listen to those instead of the amateur videos. This collage between amateurish and professional sounds makes a comparison of sound, and it underscores the home-movie-like sounds.

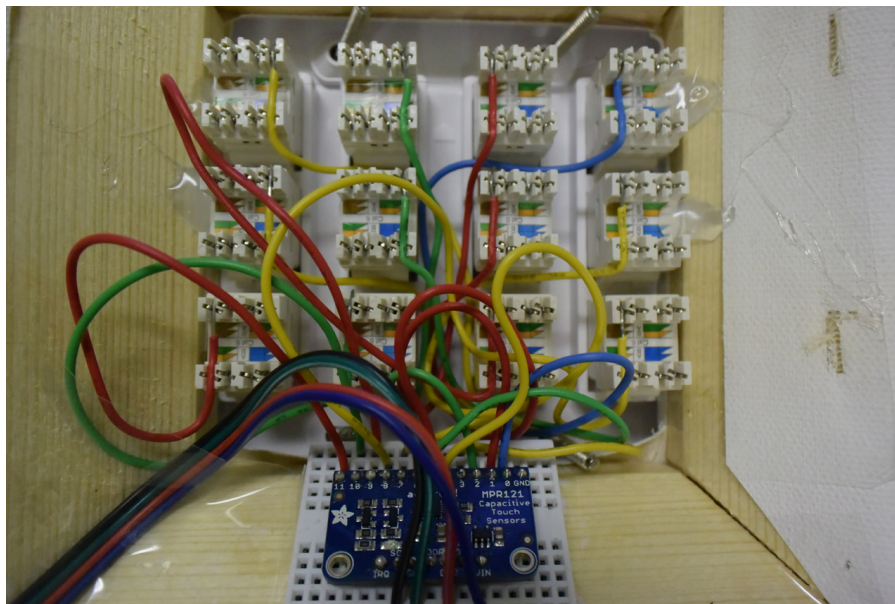


Figure 2 The capacitive sensor for Ethernet cables

As opposed to the autocomplete function, following the computer's rule discourages visitors from interacting according to their own preferences. Following the computer's command makes visitors passive operators, but their interactions demolish their filter bubbles of autocomplete with the double random algorithm between a random number on the wall and randomly chosen video links on the collected list from the number. This provides visitors with random access to peripheral video clips, as compared to popular videos that users mainly visit. In other words, with physical computing and programming, visitors perform as passive operators who navigate diverse video clips without their biased keywords. Their passive interactions paradoxically contribute to breaking their filter bubble, and allow them to listen to peripheral sound collages with random access. In the end, they become active musicians in the restricted world.



Figure 3 Random number in *Diligent Operator*



### 5.3.1.2 Technology

The physical computing part of *Diligent Operator* includes Arduino and Adafruit 12-Key Capacitive Touch Sensor Breakout - MPR121. This breakout board communicates with Arduino via I2C communication protocol, which uses only two pins, SDA and SCL, to interact with serial signals from various devices. This board allows users to use 12 capacitive touch sensors without building any parts with resistors, capacities, and pull-up or pull-down wires. To have Arduino communicate with Max/MSP Jitter, this project simply uses serial communication. Since Max/MSP Jitter is only required to recognize basic signals from the capacitive sensor, the program does not need an external patch like Maxuino. Each pin is attached to each Ethernet cable on the wall. Max/MSP Jitter simply generates 12 different four-digit random numbers, which are projected onto the wall. These numbers dim up and down, and change every 30 seconds. Their positions are adjusted to the end of each Ethernet cable by using the

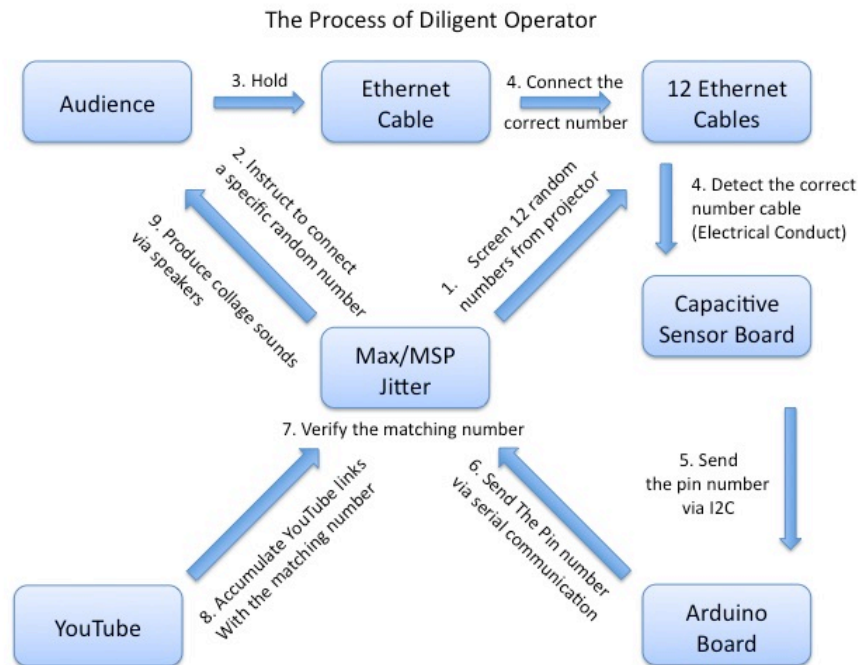


Figure 4 The diagram of the process of *Diligent Operator*

jit.gl.videoplane objects based on the OpenGL technology. When a mobile Ethernet cable on the ceiling, acting as an input interface, is connected with any of these 12 Ethernet cables, the touch sensor board recognizes which cable is connected.

The computer commands visitors to connect a specific Ethernet cable, which has a specific number among these 12 random numbers. If visitors connect the right number cable with the mobile Ethernet cable hung in the ceiling after the instructions, the computer collects the addresses of 32 video clips with the title of DSC and the specific number on YouTube by using the coll object and randomly selects six video links among them. By using the jweb object, which allows creators to incorporate Internet websites in their Max/MSP Jitter patches, participants can listen to collage music from the video clips. In other words, selecting the right four-digit number on the wall automatically leads the computer to enter the DSC and the number on the search bar on YouTube, and randomly plays six of the videos on the list of the search results. However, their correct connection impacts the random order of collage music in *Diligent Operator*. Visitors' access moment decides the list and order of the final six video clips because Max/MSP Jitter generates random numbers based on the moment when users execute the random object.<sup>548</sup> The random number from the computer is intertwined with the random order of search results by participants.

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<sup>548</sup> The reference for Random in Max/MSP Jitter describes that "A second argument is used to set a 'seed' value for the random generator. If no argument is specified, the time value will be used to initialize the seed." Diligent Operator does not use a specific argument for the random object so that it generates a random number based on the time elapsed since system startup as the seed. In other words, six YouTube addresses among 32 ones are randomly selected and ordered for the list of sound clips by using this unpredictable seed when visitors connect the Ethernet cable. Visitors' reaction time will contribute to making a specific random order for playing the six video clips.

Interactive art mainly employs participants as the source of unpredictability, and such random processes have a similar role to a complexity generator in computer art.<sup>549</sup> *Diligent Operator* mixes both strategies to make an unpredictable complexity in sound art. This project provides visitors with a chance to make the order of sound fragments as if they become *musique concrète* composers. In other words, connecting Ethernet cables in this project generates the chance order of diverse sounds. Mixing randomly amateurs' sounds from YouTube literally makes real-time *musique concrète* via the Internet all the world over. In this regard, visitors are not passive conformists, but active musicians in interactive art.

The result of *Diligent Operator* is simple sound collages. The original sources from video clips are not manipulated except for trimming their length. Furthermore, its limited selections can make monotonous interactions. Even though *Diligent Operator* intends to encourage visitors to concentrate on sounds from diverse ordinary users, these could discourage them from actively taking part in making sound collages due to its restricted sounds. This would still be an unfinished project, and it would need some modifications to encourage visitors to actively participate.

*Diligent Operator* can be developed with the basic sound manipulation techniques of *musique concrète*. First, the collage music can be edited by modifying speed, envelope, direction, and volume in the original sound sources. These sound manipulations, like DJing techniques, are the main legacy of *musique concrète*. However, *Diligent Operator* does not intend to eradicate the original quality of sound because sound from amateurish videos in diverse cultures can contribute to breaking our filter

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<sup>549</sup> Kwastek, *Aesthetics of Interaction in Digital Art*, 12.

bubbles and give audiences authentic acousmatic sound experiences in a whole new world. The auditory environment from *Diligent Operator* will balance between original sound sources and their modified objects. In other words, this will intertwine original sound with its manipulated sound just as in *musique concrète*. This complex editing method will revive a real *musique concrète* project, but as a real-time performance. Next, this project can be more complex with more inputs. *Diligent Operator* uses only 12 Ethernet connections. For the future, it would incorporate around 100 inputs just like a real operator switchboard. This environment will provide visitors with more active participation to find “the random number.” This will make participants real diligent operators.

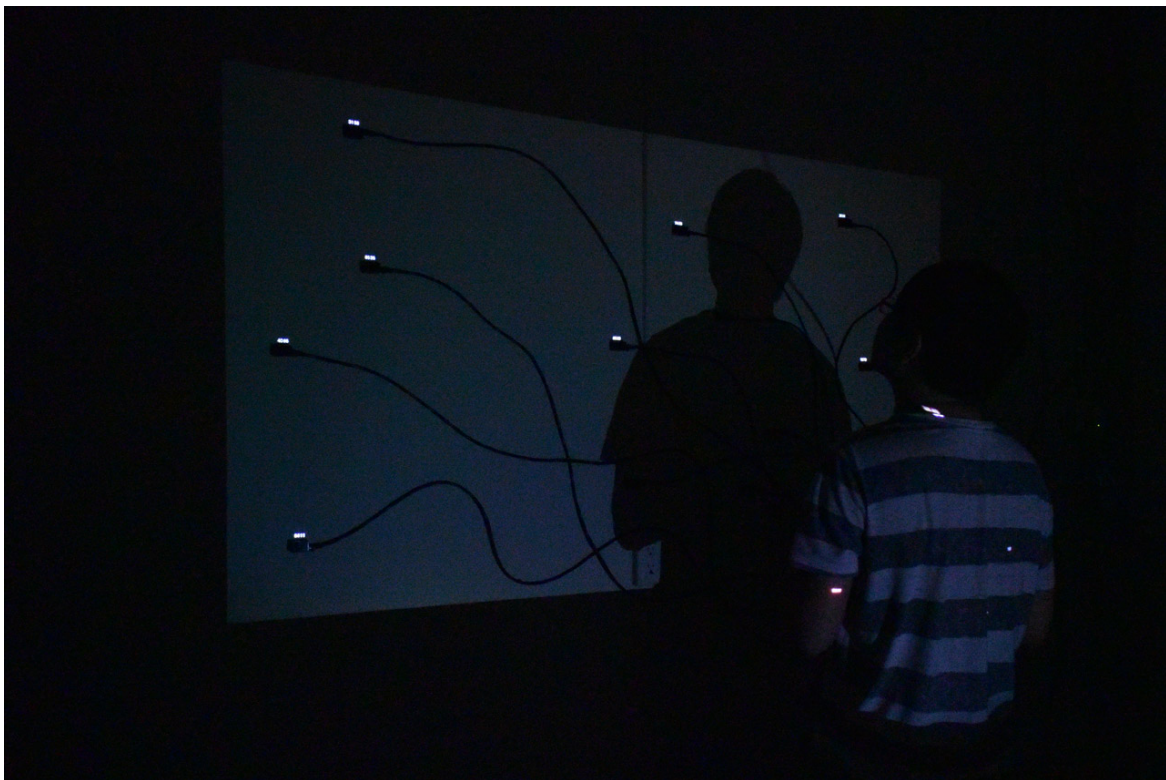


Figure 5 The input part of *Diligent Operator*

### 5.3.1.3 Conclusion

*Diligent Operator* has the same origin, *musique concrète*, as Paik's *Random Access*. In this virtual environment for *musique concrète*, visitors become diligent switchboard operators and silent conformists. However, as interactive subjects, visitors can be active musical performers by composing the order of sound fragments with a random algorithm based on their reaction moments. As opposed to normal interactive art, following the rule does not lead to a clear narrative result. Instead, visitors become collage musicians with unexpected daily-life sounds. In this regard, *Diligent Operator* contributes to retrieving the active roles of both composers in *musique concrète* and participants in interactive art.

### 5.3.2 Cross-modality: *Endless Ripples*

*Endless Ripples* is a growing participatory pond. It consists of a huge number of white LED lights under the tiled painting canvases and a disposable cup with some water in the middle of the pond. When visitors come into the dark space, LEDs under the cup emit dim lights to attract them to throw their coin into the cup. If they are successful, ambient noises from speakers disappear. Instead, they can see bright ripples through the canvases. The coins will be donated to the nearest public facilities to the exhibition. The coins that fall outside the cup will be used for growing and duplicating the project to provide more opportunities for audiences to take part in. Both outcomes will help them to contribute to local causes. This interactive project explores how to coexist between art and life.

### 5.3.2.1 Concept

Art historian Claire Bishop argues that participatory art has been a restoration of the social bond through a collective elaboration of meaning.<sup>550</sup> It seems to be an artistic solution to the social problem of passive people. Compared to it, interactive art seems to naively focus on emerging technologies to invite viewers to an individual experience. When Nam June Paik introduced his early interactive piece *Participation TV* to the public in 1963, there was no boundary between interactive art and participatory art. They were interchangeable. *Participation TV* provided viewers with an opportunity to make their own images by using two microphones in real time. Their voices made very abstract images on television. An important thing in the interactive interface was that there was not just one microphone but two for audiences to use together. Paik made television a two-way communication device to escape from the prevalent one-way signal of a propagative broadcasting company. *Participation TV* was exhibited in Paik's first solo show *Exposition of Music – Electronic Television*. This exhibition consisted of more than twenty spaces where visitors were able to participate in different music environments. The individual or group interaction became a collective reaction to the society. The project bridged the gap that now exists between participatory art and interactive art. Like Paik's approach, *Endless Ripples* seeks to find a significant way to make individual experiences into collective participation in a society. To achieve the enigmatic goal, this piece suggests a growing interactive donation device.

The coin is a common item for the transaction. Since it has low monetary value, it is often used for a small donation in public spaces. We can find interactive donation

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<sup>550</sup> Claire Bishop, introduction to *Participation*, ed. Claire Bishop (Cambridge: MIT Press, 2006), 10-17.

devices at a gallery, a shopping mall, or a mart. They do not get a donor's money first, but provides him or her with a visual and audible entertainment. For instance, when a donor puts a coin into the device, he or she could see the coin rolling spirally into a hole in the center. At the same time, it provides him or her with a beautiful rolling coin sound. The device expands the process of putting a coin in a donation box to provide an artistic experience. It is synesthetic feedback for his or her generosity. A coin becomes a meaningful interaction interface for our society.

The coin has been a wish interface for a long time. Visitors and tourists around the world make wishes as they throw their coins into many artificial fountains and natural ponds. The coins are sometimes used for the benefit of their community such as a local hospital. Unlike its original meaning, an individual wish becomes a collective feedback to make our society better.



**Figure 6 The cup with a Piezo sensor part**

The coin is also a historically significant interface for chance operation. Composer John Cage used a coin as the seed of new music. With the combination



between the binary result from the coin and I-Ching, which is an ancient Chinese divination text, he could compose a music piece while avoiding any Western-centric consciousness of music. With the daily item in his pocket, he could break the Western rules of composing.

The coin is little and has low value. However, at the same time, it has the potential power to engage with our daily life socially and conceptually. Based on the diverse meanings of the coin, *Endless Ripples* explores how to use the coin as a meaningful interface in interactive art.

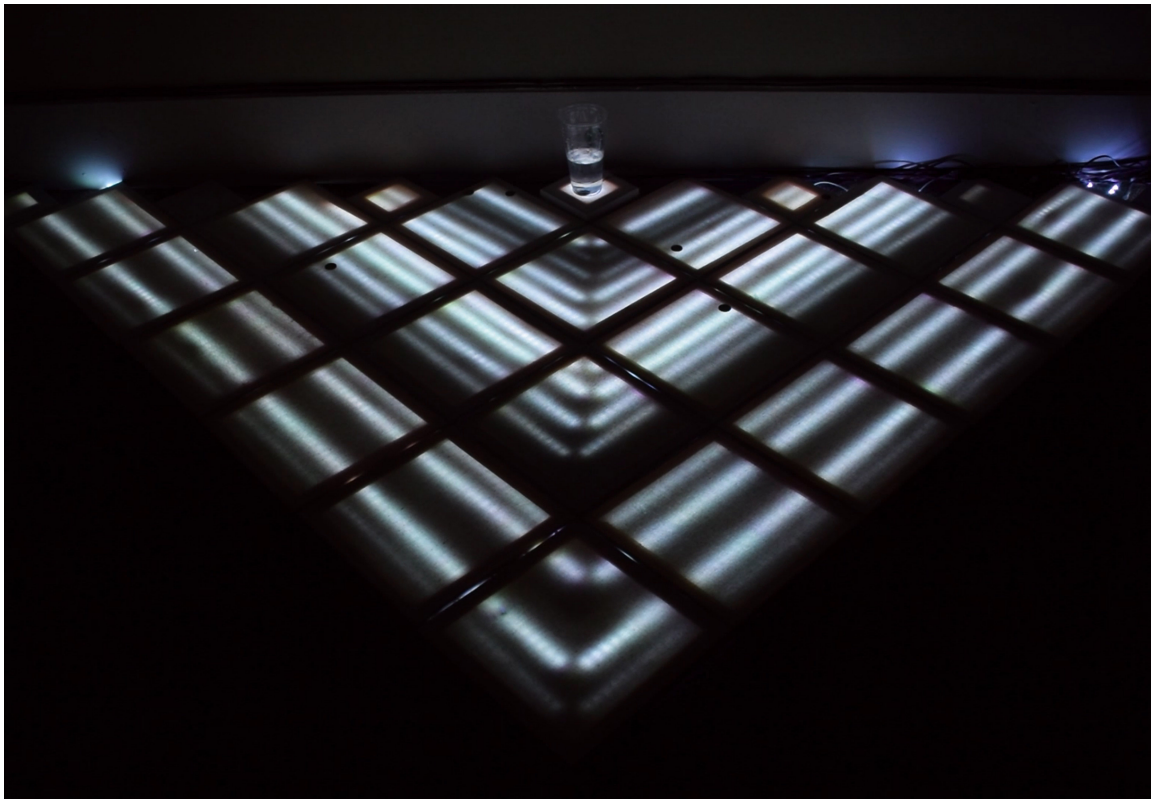


Figure 7 *Endless Ripples* when visitors put their coins into the cup

### 5.3.2.2 Technology

*Endless Ripples* consists of three different parts. The first part is a sound installation. With loud speakers, it mixes sounds of diverse advertisements from *Youtube*



and a streaming closed-circuit camera website *EarthCam* in real time.<sup>551</sup> The combination between two different sound sources represents the noisy environment in a busy city.

The second part is an input interface. This project does not use any specific customized interface to trigger the device. Instead coins in visitors' pockets will be used as an interactive interface. The familiar interface and action facilitate their access to the installation. Visitors' participation generates three different results. First, it makes a silent environment, in other words, meditation without ambient noises, when they throw a coin in the cup. A contact microphone below the cup detects when a coin is put into it. The computer receives a sound number from the movement of the coin. It gives viewers silent ripples. Second, it is an entertaining participation like an arcade game. When viewers throw their coins into the cup correctly, they get beautiful ripples as compensation. If not, their coins on the canvases could be a filter by covering some LEDs for the next ripples. In this regard, participants manipulate the ripple images in an analog way. Third, coins in the cup will be donated to local facilities such as public schools and hospitals. Coins outside the cup will support Endless Ripples to be duplicated in other places. This is a growing piece outside the digital world. No matter whether they are successful or not, their participation will contribute to helping local causes on supporting the open visual sound installation.

The third part of *Endless Ripples* is an output image. By using a DMX interface, many LED channels can be controlled by a computer. It simulates the movement of

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<sup>551</sup> This project uses live New York City ambient sounds from the *Earthcam* Website. See "Time Square Cams," Earthcam, accessed May 16, 2016, <http://www.earthcam.com/usa/newyork/timesquare/?cam=tsstreet>.



### 5.3.2.3 Conclusion

There is a simple distinction between participatory art and interactive art. Whereas participatory art mainly deals with social relationships, interactive art mostly focuses on emerging technology. In this regard, participatory art and interactive art seem to have concrete boundaries, as if each has a different genealogy. However, Nam June Paik experimented with his interactive art in his whole participatory art environment. With regard to this blurred boundary, *Endless Ripples* explores a way to bridge the significant gap between them. To give visitors exciting experiences and an opportunity to contribute to society, *Endless Ripples* can be installed anywhere from a museum or a gallery to an arcade or outside of a building. It can be circulated or be permanently installed as it gradually grows. The more *Endless Ripples*, the better the communities.

### 5.3.3 Closed Circuit Video Interaction: *Floating Painting*

*Floating Painting* explores visitors' passive role as a portrait model in interactive art. This visualizes the process of drawing a painting over a long time like drawing a real portrait painting. A webcam scans a visitor's face into an 18-by-32 pixilated image, and the LED canvas emits one color pixel of the image per three hundred milliseconds in order, then the webcam simultaneously re-photographs the LED colors on the canvas. Next, viewers can see the drawing process that illustrates the face on the wall. Unlike most interactive art projects with a real-time feedback system, *Floating Painting* shows its result over a long time as visitors' slow portraits. Visitors as passive models experience *temps mort*, or dead time to actively see their identity apart from the interactive space and to objectively think about their role in interactive art.

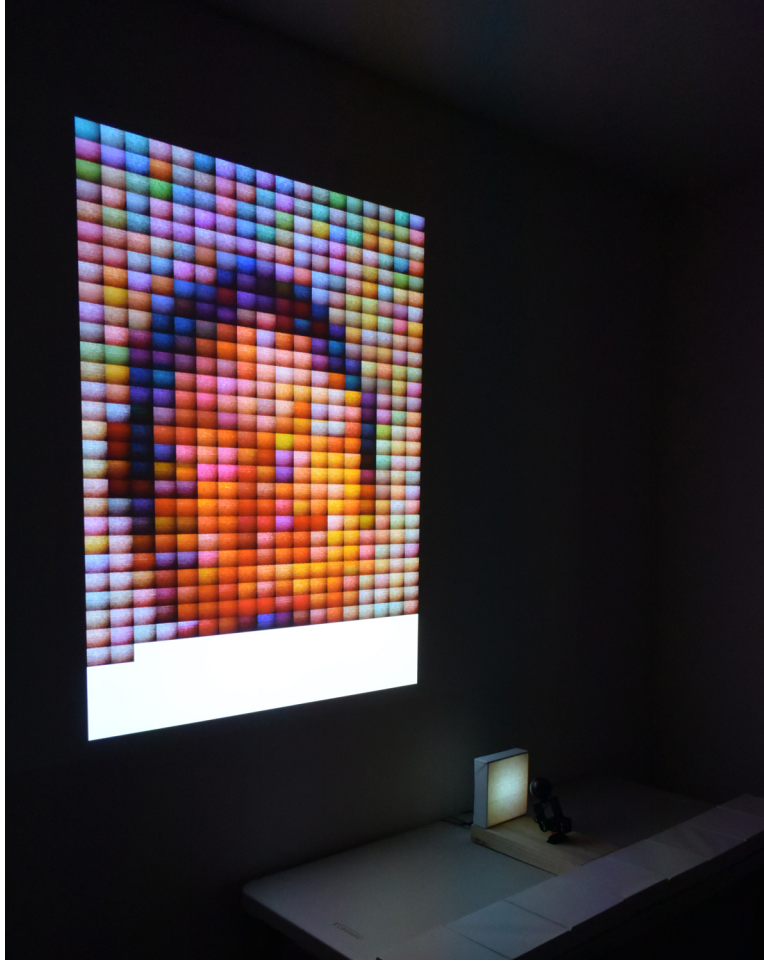


Figure 10 A portrait example of *Floating Painting*

### 5.3.3.1 Concept

In Wuppertal, West Germany, in 1963, Nam June Paik exhibited his creative interactive art projects, which were reminiscent of musical instruments and music studios. By providing sound mixing tools for visitors, Paik encouraged them to take part in composing and playing their own sound pieces in an interactive way. For Paik, the primary element for interactive art was to give visitors the choice to stay or leave during a performance. This approach came from Paik's mentor and colleague Karlheinz Stockhausen's composition *Paare* (1962). In fact, Paik mentioned this composition several times in his English and Japanese articles including "To The 'Symphony for 20

Rooms’,” “Après Serie/1” and “About the Exposition of the Music.” In *Paare*, audiences can come into the concert hall, leave and revisit freely during the long performance.<sup>552</sup> Instead of staying in their seats, they become liberated from the composer, his music and its physical space. *Floating Painting* employs this simple and fundamental idea to reflect on interaction and participation in current interactive art. Even though interactive art was originally designed to provide visitors with unprecedented freedom to contribute to manipulating final results as collaborators in the project, recently the freedom of most interactive art is very limited and discourages visitors from actively responding to the project. For example, to respond to interactive art, visitors are only required to follow artists’ instructions. This restricted freedom gives visitors fewer choices compared to art pieces without interactive interfaces. To emphasize this paradoxical issue, *Floating Painting* provides visitors with a very slow interactive environment.

Nam June Paik performed in front of his film *Zen for Film*, which had only solid white color at the Filmmakers' Cinematheque in New York in 1964. His mentor John Cage compared it with his silent composition 4' 33''. Cage stressed that it was impossible for his composition to be silent because of ambient sounds and noises, likewise, it was impossible for *Zen for Film* to be a visual nothingness due to natural worn-out scratches and dust.<sup>553</sup> By using his body, Paik became like a huge piece of dust to subvert purism in film as he had done in music since several years earlier.

Aforementioned, currently, many artists in the art-and-technology field have been using visitors’ bodies as a critical interface to participate in their interactive projects. This

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<sup>552</sup> Paik, “To The ‘Symphony for 20 Rooms’ n.p.

<sup>553</sup> Cage, *Electronic Art III*, n.p.

popularity gained momentum with the release of Kinect as an interactive interface. Even though this was originally designed for users to physically interact with the video games of the X-Box consoles, artists appropriate the affordable interface in their interactive art. Some collaborative open sources simply allow Kinect and their programming to communicate with each other. Since the popular interactive interface has been released, the body has been popularly used for interactive art with a low budget and a simple coding. The visitor's bodies are not a silhouette image any more. Since this interface uses infrared technology, their bodies disappear on the screen. Without their image, they can be immersed into the virtual reality designed by artists. For this reason, the body tends to become a passive agent in current interactive art. The visitors' bodies often disappear from the works. Even though their invisible bodies are included in the project, in most cases, audiences just need to follow the system of artists' instructions to see results that the artists designed. In this regard, interactive art provides them with not a real freedom, but some limited interactions without a recognition of their identity. *Floating Painting* criticizes the quality of interactive art as a one-way communication medium. It reveals the passive role of visitors by making them portrait models in this project.

Although they are portrait models, they do not have to stay in front of the webcam while the portrait is being finished because the computer instantaneously scans their faces. In other words, they experience *temps mort*, or dead time, a term which French film critics coined to analyze Italian filmmaker Michelangelo Antonioni's specific take: the static moment after the actors stopped acting but before their real life resumes.<sup>554</sup> The

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<sup>554</sup> Seymour Benjamin Chatman, *Antonioni, or, The Surface of the World* (Berkeley: University of California Press, 1985), 126.

director features postdiegetic space that is left after the characters depart.<sup>555</sup> The background without characters makes the location as important as the characters.<sup>556</sup> This unusual time encourages viewers to actively think of what meanings the *temps mort* shot evokes.<sup>557</sup> This film style was applied to *Floating Painting* to break the illusionism of interactive art and encourage visitors to think of *temps mort* in interactive art. After the webcam quickly scans visitors' faces to draw a portrait, they will recognize that they are consumed, lose their role in this interactive art and experience *temps mort*, after all, they need to choose whether they stay or move away.

If visitors want to see the resulting image, they need to stay more than 3 minutes because the computer draws the picture "pixel" by "pixel" with the physical computing interface. If they leave, they cannot ever see their portrait because the computer does not save the image. They also can leave for a while, and then revisit the piece to see their face image. This project gives audiences the freedom of deciding their position. This freedom has long existed in all media. However, the time gap between their interaction with the webcam and their complete portrait image can encourage visitors to think about serious questions such as their reaction in this project, how this project works, their desirable role in this project, and other visitors' roles. Visitors would not regard this interactive art as an entertaining apparatus. Instead this project encourages visitors to think both about the interactive art without themselves and themselves without the interactive art. In this regard, visitors' passive roles can be converted into active roles during the tedious time just as in Antonioni's *temps mort*.

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<sup>555</sup> Ibid., 125.

<sup>556</sup> Ibid., 126.

<sup>557</sup> Ibid.

### 5.3.3.2 Technology

*Floating Painting* has two different cybernetic interfaces, Arduino and DMX-512, and Max/MSP Jitter, a program to visualize the virtual painting process. Arduino controls two servomotors, which were assembled to make a simple robot gesture with a webcam on the top. The first motor pans 180 degrees to capture a viewer's face and changing colors on a LED canvas on the opposite side. The second motor tilts up to recognize the viewer's face and down to grab the color area from the canvas. These motors slightly move slightly when the webcam captures each color for the portrait image on the wall as if the webcam draws like a real painter. This also makes an interesting mechanical noise to break the silent atmosphere.

In *Floating Painting*, DMX-512 enables an LED panel to rapidly change colors. This project originally used Arduino and MOSFET transistors to control the LED color. However, a malfunction occurred when servomotors were used. RGB LED color and white color channels need four PWM pins (three for RGB and one for white), which range from 0 to 255 to enable LED strings to change their brightness instead of turning on and off the light, and two servomotors need two PWM pins. Constant fast changing numbers from these six PWM made the Maxuino program, a communication interface patch between Arduino and Max/MSP, shut down. For this issue, this project used DMX-512 even though it needed to use only four channels of LED strings.





Figure 11 The interactive interface for *Floating Painting*

Max/MSP Jitter recognizes a viewer's face, and crops the face image in real time. It makes the servo motor module turn around to the canvas. And then, the program converts the face image into 18 by 32 color pixels to transmit each RGB value to the RGB LED panel. The panel shows colors from each pixel one by one every 300 milliseconds. The viewer can see ever-changing colors on the canvas during the transmission. The webcam captures RGB values from the canvas again every 300 milliseconds. The Max/MSP Jitter program juxtaposes small 18-by-32 color blocks from the canvas one by one to show the process of drawing a painting. In other words, viewers are required to spend more than three minutes to see their complete portrait. This process does not save each color block, but leaves the residue image for a while. When their portraits are complete, they will disappear soon for the next model.

#### 5.3.3.3 Conclusion

*Floating Painting* discourages visitors from being active participators in interactive art. Moreover, it rejects the popular instant feedback in this field. It prolongs the duration to show the process of making a portrait almost like a physical painting. During *temps mort*, this project gives visitors an unusual opportunity to rethink what they are doing there. *Floating Painting* encourages the passive portrait models to be active critics for interactive art while they wait for their ephemeral portrait.

## Conclusion

Nam June Paik never learned how to make visual art in the academic field. In the same way, he never learned electronic engineering or computer science in that field. To make his unprecedented interactive pieces more than half a century ago, Paik studied and practiced progressive art through the motto “Do It Your.”<sup>558</sup> Compared to his fame in video art, his pioneering interactive projects have not been properly evaluated yet. Coming back to a very fundamental level, I mainly examined his interactive art based on his new music articles from Korea, Japan, Germany, and the United States from 1957 to 1964. This period overlapped with his academic years in West Germany. Paik actively reinterpreted his musical knowledge and experiences to update new music. His inspirations from diverse composers have not fully been shown to the larger academic field. In this respect, historical research about Paik’s musical background demonstrates his pioneering role in interactive art. The study of new music addressed in his writings reveals that his interactive art results from the long-term development of a diligent academic artist. He was a creative composer, an active musician, a musical instrument inventor, and ultimately an important pioneer of interactive art.

## Karlheinz Stockhausen’s Random Access and Spatial Music

After completing his thesis on Arnold Schoenberg’s serialism in the University of Tokyo in 1956, Paik stuck to the study of the progressive music technique in West Germany. To directly experience new music, Paik attended *the Yearly International Holiday Courses for New Music in Darmstadt* in 1957. He was exposed to after-serialism

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<sup>558</sup> “Do It Your” is one of sub topics in the poster of Paik’s *Exposition of Music – Electronic Television*. This reminds us of “Do It Yourself,” nowadays prevailing in the art-and-technology field.

experiments as well as current serialism music in the progressive music courses. At the music conference, Paik encountered Karlheinz Stockhausen, and respected him as a leading composer after serialism.<sup>559</sup>

Paik analyzed Stockhausen's compositions in Korean and Japanese articles after attending the Darmstadt music festival. In his articles, Paik explains a unique quality of Stockhausen's *Klavierstück XI*, "Random Access," which allows data to be approached in a nonlinear way. This composition allowed a performer to randomly choose its order, and the performer ceased to play when the same patterns were repeated three times.<sup>560</sup> The combination of the rule-based composition and random access is similar to a random algorithm, which is common in computer-generated art today. Paik stressed the outstanding role of Stockhausen and his random access method as a significant quality in music in the second half of the twentieth century.<sup>561</sup> Paik directly applied the random access method to his interactive art with the same title. To achieve the new method, Paik unrolled many tape strings on a white wall to play them with a mobile head of the tape recorder in a non-linear way. Besides non-linear access, Paik appropriated Stockhausen's *Gruppen* to realize three-dimensional interactive art projects. Paik paid attention to its musical spatiality, which had three orchestras surrounding the audience in a horseshoe curve. Even though *Random Access* is exhibited as a two-dimensional piece on a white wall, it originally had three sides of musical databases just like *Gruppen*. This musical spatiality was also used in Paik's other interactive art *Record Schashlik*, which had the same random access, but different audio storage, phonograph records. In this regard,

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<sup>559</sup> Paik, "The Music of 20'5 – Part I," 4.

<sup>560</sup> Ibid.

<sup>561</sup> Paik, "The Music of 20'5 – Part II," 4.

*Random Access* was an inherently three-dimensional project, which was inspired by Stockhausen's *Gruppen*.

Paik focused another spatiality of music from Stockhausen's *Paare*, which allowed audiences to freely come in and out of the concert hall during the music performance. Audiences were mainly required to stay their seats until the concert ended. However, Stockhausen gave them a significant choice, which allowed audiences to go in and out during the concert. In a more progressive way, Paik himself left his action music without declaring the end in *Etude for Pianoforte*. Based on Stockhausen's spatiality in music, Paik expanded the limited range of a performer outside of the theater.

As the future of music, Paik also learned and practiced electronic music, which was created by Stockhausen. Even though Paik was not immersed in electronic music for a long time, his electronic music practice critically helped him create nascent interactive art and video art. Unlike his video art competitors, Paik was the only figure that understood electronic engineering for television. Based on his electronic music knowledge, Paik exclusively created thirteen different manipulated television projects in his first solo exhibition *Exposition of Music – Electronic Music* in 1963. He became an artist of the first generation who learned how to use resistors and capacitors to make art.

### **Pierre Schaeffer's *Musique Concrète***

Before being aware of Cage's early sound collage compositions, Paik taught himself sound collage from Schaeffer's *musique concrète*, which consists of discrete and complete sound objects, or *objets sonores*. Paik studied *musique concrète* as a precursor of electronic music. He visited Schaeffer's *musique concrète* studio in Paris once to make

his *musique concrète* project. However, he could not complete it in a day. And then he changed his original plan to complete it with electronic music instead of *musique concrète*. Even though Paik's interest in *musique concrète* moved to electronic music quickly, his *musique concrète* experiences contributed to making the interactive art pieces *Random Access* and *Record Shashlik*. They respectively stood for record-based and a tape-based *musique concrète* studios. To make collage music, Paik needed to accumulate a wide range of sound data and then edit them into one sound piece. Beyond the music collage, Paik applied Kurt Schwitters's painting and sculptural collages to his interactive art. The sound storage media became visual collages, and visitors became performers to convert visual images into sound images again. Paik encouraged audiences to experience haptic editing activities in a virtual *musique concrète* studio.

It seems that audiences visually approached the interactive projects first, and then physically touched them to make sounds. Paik conversely utilized this cross-modal sense to make his interactive television, *Participation TV*. This project allowed viewers to convert their voices into abstract video images on television. These cross modal experiments from visual image to sound images and vice versa in Paik's interactive art became a prototype for interactive art.

By using *objets sonores* in *musique concrète*, a composer did not need musicians. Just as there are no musicians in *musique concrète*, there are no composers in Paik's *Random Access* and *Record Shashlik*. By yielding a composer's role of creating *musique concrète* into audiences, Paik became a pioneer of interactive art. In other words, Paik invited audiences as participants to two *musique concrète* studios. Even though Paik omitted Schaefer's *musique concrète* in the history of his own interactive art since Paik

replaced it with collage music of Cage, soon after meeting him, it is hard to ignore that *musique concrète* practically contributed to making sound collage environments for audiences in Paik's interactive art.

### **John Cage's Prepared Piano, Performance, and Cartridge Music**

Even though Cage's chance operation thoroughly changed Paik's philosophy of music, Paik did not follow Cage's chance or indeterminate music at all since it did not allow audiences to experience real chance and freedom in art. Instead, Paik utilized Cage's method of chance operations to undermine a huge gap between double meanings of quality as value or character. Before Cage's music, Paik interpreted quality as value, and was disappointed at the mannerism of serialism, which had only a few quality composers who were overwhelmed by a majority of so-so composers. However, after Cage's music, Paik regarded quality as character. In Cage's music, any sound can be music. He broke the clear boundary between music and noise. With Cage's philosophical approach, Paik just found differences rather than hierarchies in music. He left purism and elitism in music, and was able to break all hierarchies and authorities in that field.

In addition, it is essential to draw attention to Cage's appropriation of musical instruments and devices for the study of Paik's interactive art. Cage broke the clear boundary between musical instrument and readymade objects in his performance. In Cage's music, any material can be a musical instrument. Paik stressed that he was not fascinated by Cage's theories but his performances with manipulated musical instruments. Cage's action performance was different from Stockhausen's musical spatiality. Stockhausen stuck to the classical structure of music even though he experimented with

music by using extremely progressive methods such as surrounding musical space with several louder speakers, audiences surrounded by multiple orchestras, random access algorithmic music, music theater, and electronic music. Compared to Stockhausen's music, Paik very excitedly described Cage's busy performances, which dealt with his appropriated musical instruments and devices in his articles.<sup>562</sup> Paik planned to share this exciting performance opportunity with audiences, and it naturally became the core idea of his interactive art. Furthermore, Paik improved the choice to come in and out of the concert hall in Stockhausen's *Paare* with Cage's *Music Walk*, which allowed audiences to choose one from two concert rooms. By multiply the number of Cage's rooms by ten, Paik designed *Symphony for 20 Rooms* for twenty different musical environments, and it naturally led to the creation of *Exposition of Music – Electronic Television*, which allowed visitors to select more than twenty different progressive musical environments.

As mentioned, Cage's use of musical instruments and devices cannot be divorced from his compositions. He used various prepared pianos to make sound beyond a classic piano as either a manipulated string instrument or a percussion instrument. In Cage's *Music for Amplified Toy Pianos*, several keys of his toy pianos were connected with other readymades to make sounds, and Paik witnessed that the piano was able to be a youthful musical instrument again.<sup>563</sup> Inspired by several of Cage's compositions and performances, Paik continued to develop the interactive piece, *Klavier Integral*, which incorporates Paik's a-music, pre-interactive art, and interactive art. It started as a simple prepared piano, but finally became a multimedia synthesizer with multi-sensory inputs and outputs such as a light bulb, a hair dryer, barbed wires, etc. In *Cartridge Music*, Cage expanded his

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<sup>562</sup> Paik, "Après Serie/1," 16.

<sup>563</sup> Paik, "Chance Music – Part I," 4.



investigations with prepared pianos into theatrical performance with new musical devices such as manipulated turntables and contact microphones. By replacing a stylus in the cartridge with different everyday materials such as a feather and a leaf, and attaching contact microphones to tables and other furniture, Cage made unexpected sounds for his compositions. At the concert, Paik found that musical devices could be manipulated as a creative interface for interactive music projects. Paik went one step more toward progressive music. Whereas Cage only gave these new interfaces for playing music himself and his talented musicians, Paik provided audiences with his appropriated musical devices in *Random Access*, *Record Shashlik* and *Participation TV*. After all, these musical installations broke the substantial boundary between artists and audiences. This is Paik's main idea for interactive art based on his music experience.

### **Return to Nam June Paik's First Solo Exhibition**

In 1993, Nam June Paik and Hans Haacke collaborated in the German pavilion for the Venice Biennale. They won the Golden Lion prize for their collaborative German Pavilion project. As mentioned, Haacke created various conceptual projects. With the software perspective, he created electronic projects in collaboration with engineers. However, in Venice, Haacke returned to conceptual art by scattering thin concrete blocks on the floor with the Nazi emblem on the wall. Haacke redesigned the space in the German pavilion that Adolf Hitler visited right before World War II. It recalls one of the 20 rooms that Paik designed for the *Symphony for 20 Rooms*. Paik planned to scatter some fragile materials on the floor to encourage visitors to experience sounds, tactile and vibration to

their bodies.<sup>564</sup> Paik used the inside and outside of the pavilion to exhibit his video sculptures, which shows the themes across the world with Paik's coined term, "Electronic Super-highway." Especially, Paik installed various robot projects outside the Pavilion. Unlike his early robot *K-456*, his robots did not move anymore. However, he used nature itself to make a *robot garden* in woods. Similar to his first solo exhibition, Paik did not distinguish inside from outside in an art place. He returned to the spirit of *Exposition of Music – Electronic Television*. He expanded the idea of the art space in traditional galleries and museums. He did not want to stay as a legendary pioneer only in media art. According to his first Korean article, "The Music of 20's Century," it seems that he wanted to be Faust who sold his soul to the devil to be a genius escaping from the status of Sisyphus who was in the mannerism of twelve-tone technique. His soul was a traditional serialism. In the end, he exhibited his interactive art as an after-serialism experiment in the mainstream art field.

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<sup>564</sup> Paik, *The World of Nam June Paik*, 41.

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## Vita

Byeongwon Ha was born on August 30, 1979, in Busan, Republic of Korea. He received his Bachelor of Fine Arts in Film, Television, and Multimedia from SungKyunKwan University, Seoul, Republic of Korea in 2004. He received his Master of Fine Arts in Media Art from Yonsei University, Seoul, Republic of Korea in 2009 and also earned his Master of Fine Arts in Digital+Media from Rhode Island School of Design, Providence, Rhode Island in 2011 and subsequently researched at the Public Lab in Providence and Boston for one year. While pursuing his PhD, he taught in the Department of Sculpture and Expanded Media in 2016 and has taught in the Department of Kinetic Imaging for three years since 2016.