International Resonance in the Artwork and Writing of Jiro Takamatsu

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INTERNATIONAL RESONANCE IN THE ARTWORK AND
WRITING OF JIRO TAKAMATSU

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INTERNATIONAL RESONANCE IN THE ARTWORK AND WRITING OF JIRO TAKAMATSU

A Thesis Presented to the Graduate Faculty of
Meadows School of the Arts
Southern Methodist University
in
Partial Fulfillment of the Requirements
for the degree of
Master of Arts
with a
Major in Art History
by

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This thesis will argue that the canonical literature concerned with Conceptualism should also reflect the important contributions of artists whose work directly contributes to and engages with the artistic dialogue centered around philosophy, science, and mathematics that was taking place during the 1960s and 1970s. This thesis will explore the post-war Japanese artist Jiro Takamatsu (1936–1998) and his use of point and string throughout his oeuvre, which consists of thematic series of artworks that are constructed through his interest in the ideas of linearity, extension, seriality, and existence.

Takamatsu is placed within art history as an early anti-art, Fluxus-adjacent artist who is most noted for influencing the Mono-ha art movement which used found materials to reveal “the world as it is” — he is rightly celebrated as such, however, I believe his influence reaches much further than that. Through this exploration, I also wish to draw out the thematic connections his many series of artworks have with his global contemporaries during the 1960s-80s. Takamatsu’s series were also concerned with phenomenological questions that seemed to arise simultaneously throughout the conceptual art world, his series also engaged with ideas from topology, set theory and thermodynamics, of which his global contemporaries are also concerned.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF FIGURES</td>
<td>vii</td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Chapter 1: CONCEPTUAL ART IN JAPAN</td>
<td>6</td>
</tr>
<tr>
<td>Chapter 2: POINT &amp; LINE</td>
<td>14</td>
</tr>
<tr>
<td>Chapter 3: WAVE &amp; ENERGY</td>
<td>27</td>
</tr>
<tr>
<td>CONCLUSION</td>
<td>36</td>
</tr>
<tr>
<td>FIGURES</td>
<td>39</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>53</td>
</tr>
</tbody>
</table>
LIST OF FIGURES

Fig. 1 — Jiro Takamatsu, *Oneness of Paper*, 1972, collage, 20 x 30 cm, Collection of Matt and Okasana Symonds.

Fig. 2 — Jiro Takamatsu, *The String in the Bottle No. 1125*, 1963–85, Coke bottle, white cotton rope, 32.5 x 10 x 10 cm, Yumiko Chiba Associates.

Fig. 3 — Matsuzawa Yutaka, *Ψ (Psi) Corpse (Pusai no shitai itai)*, 1964, offset lithograph, 38.4 x 26 cm. Takiguchi Shūzo Papers, c. 1945–1979, Keiō University Art Center, Tokyo.

Fig. 4 — Jiro Takamatsu, *Perspective*, 1966, lacquer on wood 101.7 x 223.5 x 113.5 cm. Collection of Museum of Contemporary Art, Tokyo.

Fig. 5 — Jan Dibbets, *Perspective Correction, My Studio I, 1: Square on Wall*, 1969, gelatin silver emulsion on canvas, 115.5 x 115.8 cm. Artist Rights Society (ARS), New York.

Fig. 6 — Jiro Takamatsu, *Slack of Cloth*, 1970, cotton, 240 x 240 cm, The Museum of Modern Art, Saitama.

Fig. 7 — Jiro Takamatsu, *Slack of Net*, 1968–9, cotton string, 220 cm x 220 cm, Estate of Jiro Takamatsu / Yumiko Chiba Associates.

Fig. 8 — Documentation of Jiro Takamatsu, *Stone and Numeral*, 1969, photograph taken at the Tama River, exhibition print, unidentified photographer, Estate of Jiro Takamatsu / Yumiko Chiba Associates.

Fig. 9 — Sol Lewitt, *Serial Project, I (ABCD)*, 1966, baked enamel on steel units over baked enamel on aluminum, 20” x 13’ 7” x 13’ 7”, Artists Rights Society (ARS), New York.

Fig. 10 — Mel Bochner, *Theory of Sculpture #2 (Counting): Cardinal Versus Ordinal 5*, 1970, stones and chalk on floor, size determined by installation.

Fig. 11 — Mel Bochner, *Counting Alternatives: The Wittgenstein Illustrations*, 1991, 12 lithographs, each: 20 x 15 in., The Metropolitan Museum of Art, New York.

Fig. 12 — Installation view of Lee Lozano Wave paintings, c. 1968—1970, oil on cotton duck.
Fig. 13 — Hans Haacke, *Condensation Cube*, 1963–65, Plexiglass and water, 76 x 76 x 76 cm, Museu d'Art Contemporani de Barcelona.

Fig. 14 — Jiro Takamatsu, *Cube 6 + 3*, 1968, Lacquer on wood, Overall: 13 x 13 x 13 inches (33 x 33 x 33 cm), The Rachofsky Collection and the Dallas Museum of Art through the DMA / amfAR Benefit Auction Fund.
INTRODUCTION

This thesis will explore the post-war Japanese artist and theorist Jiro Takamatsu (1936–1998) whose oeuvre consists of thematic series of artworks that are constructed through his interest in the ideas of linearity, extension, seriality, and existence. He worked in a range of mediums, including sculpture, photography, painting, drawing, and performance, of which his Shadow series paintings (1964-1975) are most well-known to those interested in his work. Takamatsu is placed within art history as an early anti-art, and Fluxus-adjacent artist who is most noted for influencing the Mono-ha art movement which used found materials to reveal “the world as it is” — he is rightly celebrated as such, however, as I will argue his reach extends beyond that of Japan. As art historians continue to revisit and revise the histories that have been focused on Euro-American discourses, we can continue to revive the narratives of dialogue that may have been unacknowledged initially; such as the connection between artists in Japan and New York beyond that of the work of the Gutai group.

Through this exploration, I also wish to draw out the thematic connections that his many series of artworks have with his international contemporaries during the 1960s and 1980s, as well as the systems of international exchange that allowed for the cross-pollination of ideas throughout this period. Takamatsu’s series were concerned with phenomenological questions that seemed to arise simultaneously throughout the conceptual artworld with ideas from topology, set theory and quantum mechanics, of which his international contemporaries also
explored. Within this paper, I will focus on the roles of point, line, and wave within Takamatsu’s artworks and will make the argument that these devices reveal his entanglement within the web of international Conceptual artists, who also drew on concepts from mathematics, physics, and logic. Through this exploration I will hope to address some questions—how did Conceptual artists become so captivated with these ideas, and how did Takamatsu’s explorations differ or fall in line with these ideas?

I will expand upon the ideas of “global contemporaneity” as understood by independent curator, Reiko Tomii. Tomii speaks about the correlation between artists as “resonances” or “connections” rather than use terms that could infer that an artist was working derivatively or appropriating other artists, specifically about Japanese avant-garde artists who created artworks that were made concurrently with global conceptual art trends. Although, Tomii was more interested in Japanese artists who were working in the wilderness of Japan, that is outside of the seat of power of Tokyo, and how their work was resonant with trends in the city; as well as internationally yet innovative in that they challenged societal norms. In Tomii’s book to which I refer, Radicalism in the Wilderness: International Contemporaneity and 1960s Art in Japan she looks at the careers of Matsuzawa Yutaka, members of “Happeners” in The Play group, and the art collective Group Ultra Niigata (GUN) as peripheries to what was considered mainstream art in Tokyo. She directly refers to Takamatsu and the art movement Mono-ha as the examples for

1 Conceptual art as a term to denote an essentially formalist practice developed in the wake of minimalism, and conceptualism, which broke decisively from the historical dependence of art on physical form and its visual appearance. Conceptualism was a broader attitudinal expression that summarized a wide array of works and practices which, in radically reducing the role of the art object, reimagined the possibilities of art vis-à-vis the social, politic, and economic realities within which it was being made.

canonical mainstream Japanese art. Takamatsu may have been considered a mainstream artist within Japan, however as I will contest, he could make an exemplary case as a mainstream conceptual artist not only in Japan but at an international level. Takamatsu’s high visibility in exhibitions outside of Japan and his engagement with global artistic trends could prove invaluable to moving the discourse towards decentering the Western narrative that artistic ideas flowed from the West outwards, instead further making clear how important global artistic exchange was during this time.

The U.S. is mentioned as a location of importance in this thesis for dual purposes: the first reason is due to the shift from Paris to New York as an important art center due to the influx of artists fleeing their war-torn countries and political situations. The second is due to the occupation of Japan by the United States after the end of World War II until 1952 and the ensuing Anpo agreement which saw the U.S. assist in establishing the Japan Self-Defense Force as well as a capitalist economy, of which saw a moment of not only rapid economic growth but a radical shift in identity for Japan’s populace. The events of the war have created a lasting and complicated interrelationship between the U.S. and Japan which I will explore further in the first chapter. The 1994 exhibition, *Japanese Art After 1945: Scream Against the Sky*, laid the foundation for the study of post-war and contemporary Japanese art in North America and it was the first exhibition on the subject shown internationally. The exhibition contextualized the socio-political circumstances in post-war Japan, and the textbook that was produced concurrently serves as a starting point for academics interested in exploring the subject.

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3 Tomii.
An exhibition that many speak of when exploring this postwar period of globalism is *Global Conceptualism: Points of Origin 1950s–1980s* which took place at the Queens Museum of Art in New York in 1999. The exhibition was primarily concerned with revealing the two distinct waves of activity that occurred amongst Conceptual artists: the first, from the late 1950s to the early 1970s, and the second from the mid-1970s to the end of the 1980s. Conceptual artists during these moments were generally concerned with language over visuality, institutional critique, and the dematerialization of the artwork. Exhibition organizers attempted to gather a team of international curators to address trends from Asia, Europe, the Americas, Russia, Africa, and Australia and New Zealand. This was an ambitious effort attempted by the organizers to represent a massive amount of geographical territories within a single, comprehensive exhibition. The section of the book about Japan, titled “Concerning the Institution of Art: Conceptualism in Japan”, was written by Tomii. Tomii does not include Takamatsu in the exhibition, although he featured in her much later 2016 book, *Radicalism in the Wilderness: International Contemporaneity and 1960s Art in Japan*, mentioned above. She instead describes the development of *gainen geijutsu* (concept art) within Japan as something that emerges from the anti-art atmosphere surrounding the late 1960s in Japan amongst the postwar tensions between Japan and the U.S. that sparked student protests.

The phrase, “international contemporaneity” (*kokusai-teki dōjisei*) reflects the sentiments that art production has become “entangled” from the local and the international in a country through a “universally shared frame of reference.” It would not be beneficial to ignore the fact that Euro–North American conceptual art shaped the discourse within Japanese art criticism.

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6 Camnitzer et al., 15.
during the 1970s, but it would be even more detrimental to believe that it was the sole inductor in sparking ideas of the moment. The “1970 Tokyo Biennale: Between Man and Matter” is mentioned as being an important moment for conceptual art in Japan which, for Tomii, “confirmed the generally conceptual international tendencies” of art production. Many Japanese scholars acknowledge that “Art After Philosophy” by the North American conceptual artist Joseph Kosuth was widely read by artists and critics through the means of translation and publication in Japanese art magazines. Tomii provides an example of the similarities shared between works created by Kosuth and Takamatsu some years apart. The similarities between Five Words in Blue Neon (1965) by Kosuth and English Word (1970) by Takamatsu are “uncanny” according to Tomii. Despite this brief discussion of Takamatsu, Tomii suggests that the Japanese artist Matsuzawa Yutaka could be seen as the counterpart to Kosuth as the representative of gainen geijutsu. Matsuzawa’s importance is emphasized even further by Tomii in Radicalism in the Wilderness, however I believe that the opportunity to link the work of Takamatsu to Matsuzawa is missed in both publications. Although the task to encapsulate global conceptualism into one exhibition is perhaps insurmountable, “Global Conceptualisms” was an important step in engaging with the idea that each art center discussed throughout the globe served as a node that relays information and ideas in multiple directions.

7 Ibid, 16.
8 Ibid, 17.
Chapter 1

CONCEPTUAL ART IN JAPAN

In order to better comprehend the local context of Conceptual art in Postwar Japan that arose during the time in which Takamatsu was active, one must understand the cultural, social and political conditions that existed in Japan during the late 1960s. During the early 1960s and the 1970s, Japanese conceptual artists were interested in epistemology, the branch of philosophy concerned with the theory of knowledge; as well as phenomenology, which was concerned with human experience. The student protests that began at the University of Tokyo spread throughout the country, the attitude against traditional bases of government power was compounded with the emerging anti-American sentiments that arose after the renewal of U.S.-Japan Security Treaty in 1970.9 Takamatsu took part in the anti-art happenings that took place in public spaces as well as events such as the Yomiuri Exhibition in the late 1960s; the shift in his artistic practice was very much in line with the international movement towards conceptualist making practices. Takamatsu, around the time of this shift, wrote that human perception was inherently biased and in order to be able to “pursue the consummate forms of things” the artist must turn that investigation “into art.”10

Lee Ufan, an assistant of Takamatsu and a key figure of the Mono-ha movement, wrote an essay titled, “Beyond Being and Nothingness” (1971) that proposed three conditional modes that would enable an individual to philosophically investigate direct experience: “Gesture (the reciprocation of action between man and matter), Corporeality (the ambiguous structure if the body as both self and other), and Topos (the situational engagement of perception).”\textsuperscript{11} This philosophical and phenomenological pursuit of Takamatsu and his contemporaries was what sparked the shift away from the anti-art happenings that coincided with the student protests of the late 60s in Japan. As previously mentioned, conceptual art in Japan sprang from local concerns which then intertwined with the international concerns of the same moment; the anti-art collective Bikyōtō’s slogan “Dismantle the power machine of art!” linked their activities to the student radicalism of the late 1960s and would represent the feelings of other collectives working at the same time in Japan.\textsuperscript{12} This moment of student protests and widespread anxieties of the postwar era, leading into the cold war, occurred simultaneously across the globe, allowing artists working internationally to be aware of what was occurring elsewhere through the circulation of print journals and bulletins. Some examples of these internationally circulated publications included Flash Art and Studio International from Italy, Art News from the U.S., and Gutai’s bulletin from Japan.\textsuperscript{13}

Conceptual art was a term that arose to describe an art “which broke decisively from the historical dependence of art on physical form and its visual appearance.” Conceptualism reduced the role of the art object and privileged the idea. In some regions, it also privileged the social,

\textsuperscript{11} Hosaka, 12.
\textsuperscript{12} Camnitzer et al., \textit{Global Conceptualism}, IX.
\textsuperscript{13} Joshua Mack et al., \textit{Parallel Views: Italian and Japanese Art from the 1950s, 60s and 70s}, ed. Allan Schwarzman (Bologna: Damiani, 2015), 371–75.
political, and economic realities within which the art object was made. To further elaborate, conceptualism could be considered a universal term that defined this moment of art production internationally, while in Japan the development of gainen geijutsu was seen as something that uniquely arose in parallel to Conceptual Art of its Euro-North American counterparts. This idea of “international contemporaneity” (kokusai-teki dōjisei), as further explained by Tomii, “attests to the confluence of the international and the local in a country where the legacy of modern art and civilization has often been understood as a universally shared frame of reference.” This shared frame of reference is apparent in the shaping of Japanese art criticism—which was influenced by Euro–North American Conceptual art critics and artists toward the beginning of the 1970s. Takamatsu was not considered an art critic but was frequently in conversation with art critic contemporaries. Japanese critics frequently referenced statements by Euro–North American artists and the presence of Duchamp on the anti-art movements of Japan cannot be overstated. As mentioned in my introduction, Joseph Kosuth’s “Art After Philosophy” (1969) was well read by artists and critics alike. Both Kosuth and Takamatsu explored the relationship between language and art through the use of tautologies, and both utilized the methodologies of logic and mathematics. Takamatsu’s artistic production was in line with his international counterparts, however his work was also embedded in the Japanese context. At the Venice Biennale that took place in 1968, Takamatsu was invited to show in the Japan Pavilion by Haryū Ichirō alongside Miki Tomio, Sugai Kumi, and Yamaguchi Katsuhiro. Haryū was considered one of Japan’s (go-sanke)

14 Camnitzer et al., Global Conceptualism, VIII.
15 Camnitzer et al., 15.
or “Big Three” of art critics, which included Tōno Yoshiake, and Nakahara Yūsuke, of whom
were “instrumental in consolidating and institutionalizing contemporary art in Japan.”
Haryū wanted to show that Japan’s avant-garde artists were in dialogue with their international peers,
echoing Japan’s urge to establish itself as a cultural and economic powerhouse in the post-war
era. At this particular event, there was pressure to boycott by Italian students who were
protesting against the Biennale. The atmosphere of student protest in Italy was a familiar one to
the Japanese artists in attendance, as there were student demonstrations in Japan over the
impending renewal of the Anpo US-Japan treaty in 1970; which was originally enacted in 1951
and known as the Treaty of Mutual Cooperation and Security Between the United States and
Japan. Artists in Japan were critical of the Japanese establishment for their handling of the
student protests and the unrest caused some art schools to become closed temporarily and in
some cases, permanently. Takamatsu had just began teaching fulltime at Tama Art University in
1968; during partial closures he would review student’s work and hold free classes outside the
university. Hjuku Despite the call to boycott, the artists represented at the Japan pavilion
decided collectively to move forward with the Biennale as they believed their actions would not
contribute in a meaningful way to the Italian students plight. They were focused on increasing
the international visibility of Japanese artists by participating in the Biennalle, perhaps the
influence of Haryū’s will to do so was enough to convince the artists to move forward.

Another example that is demonstrative of the interconnectedness of the post-war period is
the 1969 edition of the Fluxkit, organized and designed by George Maciunas, a founding member
of the happenings group Fluxus. One of the contributors to the Fluxkit was Hi Red Center, the

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18 Mitsuda, Words and Things, 152.
anonymous art group Takamatsu founded with Genpei Akasegawa and Natsuyuki Nakanishi. The group participated in anti-art happenings in early 1960s Japan which grew out of collectives such as the Neo-Dada group (originally called Neo Dadaism Organizers) of which Akasegawa was involved. The short-lived Hi Red Center group grew to an unknown amount of collaborators who were based in Tokyo as well as New York City and had a close relationship with members of the Fluxus group. Shigeko Kubota who traveled to New York City from Tokyo to join the Fluxus collective, worked with George Maciunas to create a map of Hi Red Center’s activity in Tokyo. The Hi Red Center poster (1965) was created to introduce the collective’s activities to a Western audience, it would have been displayed as a stand-alone art object or included in anthologies and the aforementioned, Fluxkits. The map depicted the locations of Hi Red Center’s twenty-one events that took place from 1963 to 1964 across Tokyo and is overlaid with descriptions of each event. The Great Panorama show is listed as event 18, of which the detail of the event on the map states, “The Gallery stayed closed for 5 days. After 5 days a cockroach was released from a bottle kept there.” This event was devised by the group as a reaction to musician and mentor Yasunao Tone’s plea to tone down their actions following the arrest of Akasegawa by the Tokyo Metropolitan Police for the counterfeiting of money that he mailed as invitations to his exhibition of collage works in Tokyo called the 1000-yen Note Incident. The trial took place over a few years and was well-covered by the media sparking a debate about freedom of

expression in Japan, Takamatsu appeared as a witness in defense of Akasegawa who was
eventually sentenced to three years hard labor and one year of probation.21

The Hi Red Center poster was made for the occasion of several Fluxus members
reenacting Hi Red Center’s happening Movement to Promote the Cleanup of the Metropolitan
Area (Be Clean!), often referred to as the Cleaning Event, in 1964; as an homage to the group’s
“punk ethos” that so-inspired the Fluxus members.22 The first performance of Cleaning Event
was in reaction to the Japanese government’s call to sanitize Tokyo in preparation for the
upcoming 1964 Tokyo Olympic Games which was marketed as the “Beautification of the Capital
Movement.” In Cleaning Event, members of Hi Red Center wore white lab coats and
meticulously scrubbed areas of the street with toothbrushes and other cleaning materials, which
they then afterward marked the area as clean.23 Maciunas invited the three founding members of
Hi Red Center to New York to perform in Fluxclinic and to again reenact the Street Cleaning
Event at the Grand Army Plaza in 1966. Shigeko Kubota was not the only artist to move from
Japan to New York City; artists such as Yayoi Kusama and On Kawara also decided to join the
burgeoning international art scene in New York created by the post-war migration of artists.24
These three artists are a small example of the number of Japanese artists who moved to New
York, their presence there and travels to and from Japan embodying the artistic interchange
between continents.

Another important moment for conceptual art in Japan was on the occasion of the 1970
Tokyo Biennale: Between Man and Matter which was curated by the art critic Nakahara Yūsuke;

22 Cope, Japrock sampler.
24 On Kawara lived in Mexico before eventually moving to New York.
the Biennale included forty artists total, Takamatsu included, with seventeen foreign artists including the likes of Christo, Richard Serra, and Jannis Kounellis. “Between Man and Matter” focused on relationships between man and matter that contain endless contradictions.25 The event was important for Japanese conceptual artists to increase their visibility within the international arts scene, much like Haryū Ichirō had wanted to accomplish at the Venice Biennale. The title of this exhibition is what prompted Lee Ufan to write his essay “Beyond Being and Nothingness” in 1971. By 1975, “making” returned to favor over institutional critique and conceptualism after almost two decades. Perhaps an irony of history is that the institution of art acquired another layer when what was once called “avant-garde” was included as a part of “contemporary art” (gendai bijutsu), which was an institution unto itself within Japan’s art world today.26 Takamatsu entered artworks from the Oneness series (1969–70) in the exhibition, including Oneness of Paper [Fig. 1] wherein the blank spaces found within, for Takamatsu, were vestiges of “absence.” His contribution to the catalog for the exhibition related to his interest in the totality of an object, “If one were to only create a relationship with a specific (a partial) element of a thing, a strong feeling of uncertainty toward that thing would always remain . . . I feel that it is necessary for one to create a relationship with that thing in its entirety within the extent of one’s capability.”27 Takamatsu’s exploration into totality was one that would last for his entire career—this long journey towards uncovering the truth of existence would begin with his experimentations with point and string. As discussed, Japanese artists found themselves thinking

25 Camnitzer et al., Global Conceptualism, 16.
26 Camnitzer et al., 26.
about the same questions as the rest of the art world, although there were a multitude of conditions that existed which contributed to their production of something distinctly Japanese.
Chapter 2

POINT & LINE

International Conceptual artists in the 1960s and 1970s turned to mathematics and physics to attempt to order the world. Takamatsu, among others, investigated “point,” “zero dimension” and the “elementary particle” as conceptual devices. These artists engaged critically with the Cartesian tradition of using abstract concepts and structures to rationalize the physical world. As legend would have it, analytic geometry came to Descartes as he watched a fly “crawling about on the ceiling near a corner of his room.” But the corner of a room does not stretch indefinitely in all directions in the same way as the coordinate axes do. We can generate coordinate systems from any point in space as it suits our calculations, but the corner of a room is anchored to a single place. As popular opinion has it, time is the fourth dimension—an extension of the straight lines of the Cartesian coordinate plane. In 1907, mathematician Hermann Minkowski was the first to connect time and the fourth dimension. Twenty-one years later, Sir Albert Eddington articulated the metaphor of “time’s arrow,” cementing it not only as a concept but as a common visual metaphor.28 Perhaps we can consider “points in space” and “time’s arrow” as alternatives for Takamatsu’s Point and Line; this chapter will also demonstrate

how these interests connect to those of other Conceptual artists working within Japan and internationally.

Takamatsu focused on the idea of the Zero Dimension, which is the idea of raising or lowering something a dimension and an idea that is a fundamental part of geometry. He was certainly not the first artist to do so—in Paris in the 1920s, a band of Cubists known as the Puteaux Group fervently studied geometry and tried to adopt the notion of dimension in their works. Marcel Duchamp spoke about the conception of dimensions that went beyond the fourth dimension through the act of lowering and raising. Takamatsu’s work, *Pressed Shadows*, seemingly expresses the arduous journey to anti-reality—which could perhaps serve as an extension of a line that began with Takamatsu’s early “Point” series. Using the concept of dimension instead of a vanishing point, Takamatsu seems to have gone searching for a road to anti-reality in the nameless dimensions that arise between dimensions, and the realms that extend beyond the fourth dimension. Assuming that Takamatsu knew about the “string theory” of physics, this idea begins to make more sense, because treating the zero dimension of elementary particles where there is no mass as a one-dimensional “string” is the general idea of string theory. For Takamatsu the elementary particle represents “the ultimate of division” and also “emptiness itself,” like the line within a painting, the point resists reality while existing in the space-time of reality. The uncertainty relationship states that elementary particles in quantum mechanics do not allow position and speed to be measured simultaneously and means we are unable to picture solid images of elementary particles (such that particles of light are points but at the same time waves). Simply stated, although they are the smallest constituent elements that

create real existence, it is imaginable that the world we are unable to capture through ordinary
perception is what Takamatsu refers to as “absence.”

The “web of existence” for Takamatsu could be envisioned as a large mass of lines that
overlap, rapidly filling in the void of space,—the rapid movement of lines are what constitute
“existence.” Further, this state of movement originates from within the point, the emptiness of
“anti-spatial dimensionality.” Takamatsu may have had a vision that the “points” represented as
a cluster of accumulated lines of cells that are creating existence, self-propagating to build a life
form as yet unseen. It [string] is the non-material, abstract, conceptual object that is length (can
also be thought of as line, or point extended), Takamatsu started from the concept of a line in
Euclidean geometry as “breadth-less length,” in other words, a line according to metaphysics.
Takamatsu in his pursuit of point wrote: “point, exists as is / regardless of not possessing mass.
To exist, depends on the meaning of existing. That is meaning itself.” Point for Takamatsu was
not simply a geometric term, however, but a singular moving entity that straddled the space-time
of reality and the space-time of what is other than reality—namely, emptiness. He defined a
“point,” for example, as "a single centripetal unit that cannot be divided any further.” This
definition is based on that of Euclidean geometry, which states that a point is that which has no
part. Takamatsu was thinking about this idea of a point, or that of unit that was indivisible, when
he wrote this in The World Expansion Project:

Things divide infinitely, before the quantum mechanics quest. Imagine for a moment the
elementary particle which is the ultimate of division. It is ceaselessly potentiality, it is
emptiness itself with infinitely increasing density. I have to think of a mechanism
whereby to more efficiently accelerate and increase pressure on that emptiness. A day in
May 1962.

31 Hosaka, Takamatsu Jiro, 41.
32 Hosaka, 39, 43.
33 Mitsuda, Words and Things, 34.
Emptiness or absence for Takamatsu means 100 percent potentiality (future), beyond the existence that can never be perfect (reality). It is an ambiguous concept and in some sense it is very optimistic; in other aspects it can be understood as reality-negating. Takamatsu’s “Point/String” is not only his own starting point, but it was an interest shared by artists, art critics, and architects in Japan (and internationally) at the beginning of the 1960s has become apparent.

Line is what point becomes in space, for line could be thought of as a point extending from “nothing.” In Lines: A Brief History, Tim Ingold describes a situation like this: “Whenever thread turns into traces, surfaces are formed, and whenever traces turn in to thread, they are dissolved.” This reminds us of Takamatsu’s Slack of Net (1968-1969). At the 1970 Biennale of Tokyo he made a series of wood sculptures and in one part of the series, Takamatsu utilized the grid by stacking slices of tree trunks in order to create a new tree trunk form derived from these slices of other tree trunks. He did this in order to challenge the etymology of the word “tree” and what it is that we mean when we say the word “tree:” the word itself, the overall physical form or the organic process that constitutes a living tree. In another series, he sculpted cubes atop tree trunks to indicate the point where nature and human reasoning meet each other, supposedly the idea for this came to him as he waited at a bus stop. Line can either link points together or create relationships. The “Compound” series accentuates the connections between things. By doing this, it can reveal invisible laws in our world by depriving each thing of its function and making them all equal, and then placing them in a relationship based on horizontal, vertical, and diagonal lines. Takamatsu suggested that this direction in his work was linked to the “Space in Two

34 Mitsuda, 127.
35 Hosaka, Takamatsu Jiro, 48.
36 Ibid, 239.
“Dimensions” series (1979): “I made these works with only a compass and ruler. The lines I drew from the edge of the canvas and the curves I made with the compass at the point of contact made it seem as if the canvas was depicting the canvas.” In other words, the artist was not imposing his will on the canvas. Instead, Takamatsu suggests that the canvas held the idea of the lines, curves, and other necessary elements, and he simply liberated them from the canvas. The lines are drawn neatly, but the density of the lines is not constant and not rendered perfectly by Takamatsu. They are blurred here and there, imperfect. In plane geometry, a line can be considered an infinite set of points. Theoretically, the density of the set could change partially. An individual cannot create anything that is an absolute and total relationship with anything, therefore it is also true that a person could ever understand an object in its totality—perhaps consider that we can imagine that the universe is infinite but we cannot render anything close to what that would be in our imaginations. Even if we were capable of imagining sparsely what the universe could look like, it would then only be a segment of “infinity” when seen from a true sense of totality.

String could be imagined as line come to life, or the expansion of point into space for Takamatsu or the inverse, string could be seen as one-dimensional. Takamatsu commented on the expansion from “Point” to “String,” saying he “suddenly realized that ‘Point’ did not have to be three-dimensional and stretched the wire to make it one-dimensional” and “after that began thinking it was fine as “String.” In an interview conducted by Tono Yoshiaki for Tenbo magazine, Takamatsu writes about his interest in string:

37 Hosaka, 133.
38 Universe of his Thought, 96.
39 Hosaka, Takamatsu Jiro, 42–43.
String is long, you know. Individual pieces of string can be thick or thin, of any color, but when it comes to the function of string, if you like, or rather notions thereof, there is no thickness or color, just length. Moreover because unlike steel wire, for instance, string is soft, it has no fixed form. Pieces can be easily joined to make any length. String is freedom of length itself. I sensed in it a kind of “minimal materiality.” And wanted to focus exclusively on such properties. So I had no interest in what sort of shapes I could make with it [...] When the string is placed in transparent bottles, what you sense is not so much the volume inside the bottle, as the distance drawn out of it. I guess canned distance might be the way to describe it.40

This sort of “minimal materiality” led Takamatsu to explore this idea in his The String in the Bottle series where he coiled string inside of Coca-Cola bottles, although the branded bottles didn’t have any particular meaning as they just happened to be what was on hand when this idea came to mind. In this series, The String in the Bottle (1963–85) [Fig. 2], Takamatsu further explores this investigation of line in a physical sense beginning in 1963 when he both contracted and expanded the line.41 Perhaps this illustration of the string laying upon itself to the top of the bottle could be seen as a way to visualize the superstring model, Takamatsu was always trying to depict the ways in which seeing works. The superstring model that oscillates in the ten-dimensional world of superstring theory cannot be visualized, but in “a mechanism to see seeing,” it is probably necessary to be able to see that there are things that are not visible.

In World-Expanding Project 2, Takamatsu analyzed how all things of existence become imbued with meaning, as well as how they become bound up with other things by the “thread of relationships.”42 Lines for Takamatsu could serve multiple functions depending on their perceived orientation; horizontal lines evoke a perfect sense of stability and a realistic, ordinary

40 Hosaka, 192.
42 Mitsuda, Words and Things, 209.
sensation. Vertical lines evoke a wondrous sense of tension, and a transcendental extraordinary sensation, and diagonal lines evoke a moving and changing sensation with their sense of instability and indecision. The mechanisms of these different orientations of line for Takamatsu were related to human sensitivity in relation to gravity, such as our sense of balance and muscle nerves. 43

A predecessor of Takamatsu who was also interested in human perception, amongst many other interests, was Matsuzawa Yutaka, also known as “The Father of Japanese Conceptualism.” The object of his critique is the materialism of modern civilization as a whole. Matsuzawa claimed that in 1964 he had heard a voice which commanded, “Vanish objects!” He thereupon set out to create art solely from text, as a denunciation of art’s materiality and human self-perception. The first to go was painting: Ψ Corpse (Pusai no shitai itai, 1964) [Fig. 3], a printed handbill that immediately followed his revelation, announces “nonsensory painting, which is invisible to the eye yet present, similar to the intangible subatomic reality hypothesized by quantum mechanics. 44 Matsuzawa sought to represent the ever-presentness and essence of matter, he was also interested in representing the wave function and the shifting, uncertain states at subatomic levels with quantum mechanics. He conveyed the shifting nature of the universe, between real and non-real. Matsuzawa’s approach to conceptualism was meditative, he searched widely for a means to realize this idea, studying art and poetry and exploring alternative realities in parapsychology and quantum physics. 45 Matsuzawa’s indebtedness to Asia, especially Buddhism, is evident in his aspiration for the ideas of “nothingness” and “void,” his use of the

43 Hosaka, Takamatsu Jiro, 205.
44 Camnitzer et al., Global Conceptualism, 19.
mandala-derived three-by-three grid that embodies Esoteric Buddhist cosmology, and his reliance on the viewer’s ideation. His injection of non-materialist Eastern spiritualism into avant-garde art practices generally perceived as part of Western tradition offered a viable alternative to Euro-North American Conceptualism.46 Perhaps Takamatsu’s form of conceptualism could be seen as a more global form of conceptualism steeped in the rise of modernity as compared to Matsuzawa’s more traditional approach. Matsuzawa and Takamatsu through their interest in quantum mechanics shared the quest for the zero state of the world. Matsuzawa in his work *Symbol Problems* (1950s), equates the idea of universality with vanishing as well as entropy and the state of “Nil.”

In *Perspective* (1966-1971) [Fig. 4], Takamatsu attacks the idea of perspective as mastered by Renaissance artists, he ruminates in *The World Expansion Project*, “Distant things appear smaller. This is the three-dimensional principle (law) of human vision. Based on this, we create three-dimensional objects and throw them out into an actual space. When we gaze at them again, what dimension are the objects we see from?”47 Takamatsu toys with perspective throughout this grid-based artwork, requiring a more attentive gaze as well as multiple overviews of the artwork in order to notice the subtle perspective tricks. This revisitation of Renaissance perspective was in vogue amongst conceptual artists during this time; while exploring the relationship between a viewer and the artwork, the artist would put themselves in the shoes of the viewer in order to imagine all possibilities of future interactions. For example, the artist Jan Dibbets addresses perspective in a similar manner in his artwork *Perspective Correction, My Studio I, 1: Square on Wall* (1969) [Fig. 5], which features the outline of a square on a wall of an

46 Camnitzer et al., *Global Conceptualism*, 20.
interior with a window. Although taken at an angle, the square appears to be aligned with the plane of the photograph as well as with the background surface of the wall. But whereas the wall recedes illusionistically toward an imaginary vanishing point to give a pictorial representation of architectural depth, the outlined square remains true to the flatness of the photograph.48

Made of sixteen separate parts, Slack of Cloth [Fig. 6] paradoxically could not have been created without using a grid plan due to the rigid appearance we prescribe to gridded lines—the grid used by Takamatsu in this instance causes the cloth to react abnormally. Lee Ufan said of Slack of Cloth, “Shifting things in one’s surroundings so that they appear not just as they are but just as they are comprise the act of expression and artistic production, and through this, it becomes possible to perceive things just as they are in a reflective manner.”49 Each piece of Slack of Cloth was meticulously planned out so that the large piece of canvas could not unfurl as expected upon laying out the work on the ground, instead of lying flat like other pieces of material would have, the construction of the work forces the structure to become rigid and architectural.

Working within the same Slack series, Takamatsu lays the grid bare in Slack of Net, this time there is no canvas, only string. When Takamatsu conceived of Slack of Net, the original idea was to three-dimensionalize the geometric grid alone, locating it in a real space. That line here is visualized with string is obviously related to the fact that the early work String evolved from Point into line; Yuri Mitsuda calls Slack of Net the actuality of grid.50 There are parallels

50 Mitsuda, 171.
between the Wave and Slack series and the grids in the Perspective series, in which things are distorted according to a given rule. Rather than Euclidean geometry, premised on straight lines and flat planes, this seems to suggest a realm of Non-Euclidean geometry. *Slack of Net* sets out a rule for five 305mm lines, and the other made up of 365mm, these precise measurements ensure that the artwork demonstrates those distortions of the known world. Ingold describes a situation like this in the following impressive words, “Whenever thread turns into traces, surfaces are formed, and whenever traces turn in to thread, they are dissolved.” These words remind us of Takamatsu’s *Slack of Net* (1968-1969) [Fig. 7].

Line for Takamatsu goes beyond its corporeal limitations and becomes more conceptually concerned with linearity and totality through mathematical processes within *Stone and Numeral* (1969) [Fig. 8]. Takamatsu writes about his thought process when creating this artwork:

“..."

It was as if he were saying that the world can be broadened to one that transcends human consciousness when one realizes the fact that no matter how far down a numeral is fractionalized, the spaces exist between numbers can never be filled. Takamatsu painted numbers between 0 and .99 on riverbed stones found next to the Tama River in suburban Tokyo—graphically the distance between numerals became increasingly narrow; mathematically

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51 Hosaka, 239.
52 *Universe of his Thought*, 65.
this was a process that was a division of a whole rather than an example of cumulative counting.53 *Stone and Numeral* depicts the concepts of Point and Line that extend infinitely. This work also relates to the mathematical systems of Perspective and Slack, the displacements of Shadow, the illogical happenings of Hi-Red Center and to Takamatsu’s text-based works.

Eve Meltzer, when discussing Sol Lewitt’s *Serial Project 1 (ABCD)* (1966) [Fig. 9], explains the ways in which structural order and procedural creation of artworks saturated different disciplines, “By 1967, the year LeWitt created this particular structure, the rules of structural order were widely and readily applied to nearly every field of cultural inquiry — mathematics, the empirical sciences, the social sciences, especially anthropology and psychology, of course linguistics.” By this time, it was common practice for specialists in a vast variety of fields to explore and explain different phenomena through structural order. Many different thinkers of this moment sought out the definition of structure; Jean Piaget in 1968 said a structure is, “not a mere collection of elements and their properties,” but rather it “involve[s] laws: the structure is preserved or enriched by the interplay of its transformation laws, which never yield results external to the system.”54

Much like Takamatsu, Mel Bochner’s investigation of the phenomenological aspects of photography as a medium led him to a consideration of the issue of scale and thereafter the question of measurement vis-à-vis the real world.55 *Theory of Sculpture #1 (Unleveling)* (1970), using language, and *Theory of Sculpture #2 (Counting): Cardinal Versus Ordinal 5* (1970) [Fig.

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55 Rorimer, *New Art in the 60s and 70s*, 184.
10], using representations of quantity, both engage non-material representational systems. In the former work, one end of a sixteen-foot wooden pole is propped up on the baseboards of a wall. Its title is inscribed on the wall along with information stating ’12” RISE = 5° SLOPE.’ The latter work consists of two sets of stones laid out on the ground in linear configurations that meet at a right angle. Sharing a stone at their point of convergence, one line comprises single, equally spaced stones. The other line is made up of piles with one, two, three, four, and five stones. Roman numerals from one through five are drawn sequentially in chalk on the floor beside the single stones as well as beside the grouped stones. The representational markings correspond in one line with quantity (cardinal numbers) and, in the other, with sequential order (ordinal numbers). The artists, in this way, combined statistical notations, both linguistic and numerical, with empirically presented objects. Comparable to ensuing works similarly realized on the ground, these pieces take part in the process of probing consistencies and inconsistencies between representation and direct experience. Similarly to Takamatsu, Bochner chooses to use stone as the marker of the material world to then define conceptually; perhaps both artists decided upon stone due to its availability in mass as well as the common human perception that the Earth is composed of seemingly infinite sources of stone.

In Counting Alternatives: The Wittgenstein Illustrations (1991) [Fig. 11], Bochner illustrates passages from Wittgenstein’s essay, “On Certainty” (1969), in which the philosopher responds to G.E. Moore’s paper, ”A Proof of the External World”, Wittgenstein claims doubt is embedded in underlying beliefs and therefore the most radical forms of doubt must be rejected because they contain contradictions. In Double Square Branch, Bochner illustrates his

56 Rorimer, 186.
interpretation of Wittgenstein’s passage that says, “A language-game: bringing building stones, reporting the number of available stones. The number is sometimes estimated, sometimes established by counting. Then the question arises ‘Do you believe there are as many stones as that?’ and the answer ‘I know there are - I’ve just counted them.’ But here the ‘I know’ could be dropped. If, however, there are several ways of finding something out for sure, like counting, weighing, measuring the stack, then the statement ‘I know’ can take the place of mentioning how I know.” Takamatsu is seemingly responding to the same passage from Wittgenstein’s writing in his Stone and Numeral artwork, the difference between Takamatsu’s and Bochner’s dealings with Wittgenstein is that Bochner outright mentions Wittgenstein in the name of artworks while Takamatsu does so indirectly in thought and writing. Through these comparisons of Takamatsu’s artwork with the international community of Conceptual artists, my hope is to demonstrate how these artists are responding to similar interests and concerns of the same moment. These shared interests further demonstrate how interconnected these international artists were to one another and also displays the reasoning behind advocating for the inclusion of Takamatsu within the international Conceptual art canon.
Why was the waveform so compelling to artists at this time? For Takamatsu, the wave grid came to life in the following year as a stand-alone series, Wave (1969). The undulating grid that is seemingly composed of straight lines is humorous at first glance, in a trompe l’oeil kind of way.\(^5\) The artwork The Pole of Wave appears to simply be a wavy-shaped pole, but appears straight when looked at from a different angle; this causes the viewer to encircle the work until they have become satisfied that they understand the perspective device that Takamatsu has employed. Slack of Net is composed of strings that have been tied into grids, the slack of the string is due to Takamatsu planning to utilize strings that are longer than the perimeter of the grids.\(^6\) Takamatsu wanted this work to emphasize the point that it can purify one’s sight by transcending the sense of existence possessed by the material. In his Perspective series, Takamatsu applied the laws of perspective in two dimensions to the three-dimensional world in order to examine how the visual sensation perceives the outside world. In the Waves and Slacks that continued this exploration, he emphasized the inconsistency between what is perceived through the visual sensation as a general concept (a flat board or cloth) and the image captured by the visual sensation itself (an undulating board or cloth sewn in three-dimensional shape so

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\(^5\) Mitsuda, *Words and Things*, 165.
\(^6\) *Universe of his Thought*, 51.
that there is a projection in the center). Takamatsu wanted to utilize science to bend matter into its purest form, akin to an alchemist transmuting metals into golden perfection. He said, “My intention is to use an atomic method to make something absent by changing an entity into energy alone.” When an entity coincides with a virtual image, that entity is then transformed into energy and seemingly dissipates. This form of disappearance may have been based upon the phenomenon of “annihilation” in physics, in which a collision between a particle and an antiparticle causes the entire mass to be converted into energy. Takamatsu’s interest in subject matter emerging from physics and mathematics is once again in line with his international contemporaries, new scientific discoveries were frequently being reported on the news as well as in print. The wave of scientific information has not only caught the attention of artists but largely captures the interest of humanity. 1969 brought the introduction of the Boeing 747 Jumbo Jet and in the same year, NASA landed astronauts Neil Armstrong and Buzz Aldrin on the moon—it was perhaps impossible not to be excited by these major technological advancements.

Takamatsu’s drawings for the artworks in his Wave series depicted the twisting, bending, and melding of materials such as wood and metal—materials that would typically require strenuous force to shape. The transformations that Takamatsu engineered in his plans engaged with an interest in topology, which is the concern with the properties of geometric forms that shift under certain conditions. The use of line in works included in the Wave series are somewhat apparent, however we can see the use of point due to the fact that topology is also referred to as point set topology which is the study of limits in sets considered as collection of points that define the topological space of an object. For Slack of Cloth and Slack of Net,

59 Universe of his Thought, 195.
60 Hosaka, Takamatsu Jiro, 120.
Takamatsu alters the topological aspects of a single material to reveal to the viewer the multitudes of that material—again we can imagine this as an experiment in uncovering the true totality of the vinyl cloth.

In “Discovering the Interconnected Field,” an essay concerned with quantum vacuums, author Ervin Laszlo discusses evidence that indicates “that the interconnecting holofield is a specific manifestation of the cosmic quantum vacuum.” In contemporary quantum physics the quantum vacuum is defined as the lowest energy state of a system of which the equations obey wave mechanics as well as special relativity. The energies of this field appear when all other, more conventional forms of energy vanish—at the zero point (hence the name). Zero-point energies are “virtual” energies: they are not the same as the classical electromagnetic, gravitational, or nuclear forces. Rather, they are the very source of the electromagnetic, gravitational, and nuclear forces of the cosmos. As such, they are the ordination source also of the energies that are bound in mass: the particles of matter that populate the known universe. The technical definitions of the zero-point energy field that underlies the quantum vacuum indicate an almost infinite energy sea in which particles of matter are emergent substructures. According to English physicist Paul Dirac’s calculations all particles in positive energy states have negative-energy counterparts (by now such “antiparticles” have been found experimentally for all presently known particles.) The zero-point energies of the quantum vacuum are what compose the “Dirac-sea”: a sea of particles in the negative energy state. By stimulating the negative states of the zero-point field of the vacuum with sufficient energy, a particular region of that field can be “kicked” into the real (that is, observable) state of positive energy. This process

is known as pair-creation: out of the field comes a positive energy (real) particle together with its antiparticle. Thus whenever there is matter, there is the Dirac-sea; the observable universe floats, as it were, on its surface.\textsuperscript{62} Takamatsu is utilizing this process of pair-creation when he creates devices to depict nothingness; points, lines, waves and slack could all be seen as products of pair-creation.

The artist Lee Lozano also utilized waves as a device within her artwork, she abandoned the world of things to depict pure energy waves derived from the electromagnetic spectrum in her \textit{Wave Series} (1967–1970) [Fig. 12]. Lozano was also trying to achieve an immersive environment with her “wave” paintings.\textsuperscript{63} Each was based on the same template, with two identical wavy lines running parallel down the vertical length of the canvas to mimic the format of the electromagnetic spectrum: the higher the “frequency” of the wavelength, the shorter the gap between the waves.\textsuperscript{64} In 1969, Lozano copied a diagram of the “extended electromagnetic spectrum” from Jagit Singh’s 1961 book \textit{Great Ideas and Theories of Modern Cosmology} to which she added the extra, speculative category of “unknown cosmic rays” at the very top of the scale.\textsuperscript{65} Much like other artists at the time, she turned to books containing scientific ideas and theories and then either altered or added to those ideas and then applied the results to her artwork. Unlike Takamatsu’s work after his stint with Hi Red Center that no longer involved the artist’s body, Lozano frequently referred to the energy created by her own body in her art. Lozano calculated the energy required of her to create a wave in a painting through the postulate: “LENGTH OF PAINTING SESSION INVERSELY PROPORTIONAL TO LENGTH OF

\textsuperscript{62} Ibid.
\textsuperscript{63} Jo Applin, \textit{Lee Lozano: Not Working} (New Haven, CT: Yale University Press, 2018), 72–73.
\textsuperscript{64} Ibid, 78.
\textsuperscript{65} Ibid, 79.
WAVE.” Lozano directly refers to the amount of energy generated by her labor within the painting through this equation but also indirectly indicated the metaphor of energy that the wave represents. Her work was then part performative, through the making and expenditure of her own energy to paint and the energy inherent in the waveform existed abstractly. Perhaps we could also consider the transfer of the artist’s energy into the painting being the energy that gives the waves’ life. It seems as if Lozano also prescribed to this notion due to the fact that she chose not to frame her paintings, saying that, “the idea was always that they [the Wave paintings] were to be extended in any direction, that the energy left the canvas, beyond the edges.” This is one of the main differences between Takamatsu’s use of waves and Lozano’s—Takamatsu was trying to demonstrate the existence of energy through his artform while Lozano directly imbued her paintings with her own energy.

Hans Haacke took a different approach towards his experiments with waves by physically incorporating water into his artworks, he did so because he saw a need for his works to be more interactive. This need to utilize interactive media to depict energetic processes influenced his investigations of “unmechanical sources of energy.” In Condensation Cube (1963–1965) [Fig. 13], perhaps the most well-known of these experiments, Haacke made it so that the relative temperature of the box’s environment would influence the cycle of evaporation and condensation visibly within the box. The cube being made of Plexiglas made it so that you could see every side as well as the inside of the center of the cube, we can compare this formally with Takamatsu’s Cube 6 + 3 (1968) [Fig. 14]. Haacke’s other works from this period also deal with

67 Ibid, 201–3.
the manipulation of the liquid state of water through controlled variables; for example, in *The Wave* (1965), a rectangular prism is suspended from the ceiling and it swings in subtle variations due to the flow of air currents in the room and the movement of the water within the box. Other related works utilize Plexiglas walls and horizontal layers across which forms of liquid and steam drip, sway, and drop. We can compare the visualization of energy by Haacke and Lozano, in that Lozano imbued her paintings with energy while Haacke quite literally depicts energy in motion. In his own words, Haacke situates the intersection of the artistic object and the conditions of life within its environment as a continuous system: a “sculpture” that physically reacts to its environment and/or affects its surroundings is no longer to be regarded as an object. There are a range of factors that influence it, as well as its own radius of action, that reaches beyond the space it materially occupies. It merges with the environment in a relationship that is better understood as a “system” of interdependent processes. These processes happen unbeknownst to the viewer, transfers of energy, matter or information evolve. In order for the system to work, the viewer must be present; either because they might serve as a source of energy or their presence is what activates the artwork. Similar to Takamatsu’s *system of seeing* that he willed his viewers to participate in when circumambulating his sculptures to make sense of what they were perceiving.

Haacke and Takamatsu, as well as other Conceptual artists, were leveraging systems that placed their artworks in a precarious status as sites of action instead of art objects that requires the viewer to simply take in what is represented; these objects became sites of exchange. They would take abstract scientific ideas and pare them down in a sense, so that viewers would engage with ideas that would otherwise be imperceptible to us such as Haacke’s wind and water works that displayed environmental change. The very pattering of *Condensation Cube* reveals, for
instance, the slight variation in temperature caused by the difference in a few more visitors entering or exiting the gallery, the minor presence of wind currents affecting the flow of temperature, and even the longer-term cycles of light that pass through a gallery space. *Condensation Cube* becomes a work of art that is reflective of the environment it is placed in, although the environment it is decided to be shown in by the artist does need to fit certain parameters in order for the art to function in the way that the artist has intended. It reflects the changing conditions of thermodynamics of its surroundings, therefore also acting as a tool that records the specific environment in abstract ways.68 This passive form of interactivity between the viewer(s) and the object is reflective of how many Conceptual artworks from this time functioned.

Thinking of the different questions that Conceptual artists sought to answer; I would be remiss not to contemplate the materiality (or dematerialization) of the object that so captivated artists of the moment. For many artists, the execution of the artwork was simply a byproduct of the idea itself, or, wait for it, the *concept* of the artist was of ultimate importance. This was true of Takamatsu, especially considering the DIY construction and found materials used in his works; this is one stark contrast between Japanese artists and the rest of the conceptual art world, who (for the most part) delegated the creation of artworks to professional fabricators or the museums themselves. This is also one of the reasons why Japanese Mono-ha artists and Italian Arte Povera movements are so frequently linked. Artists such as Robert Barry were also concerned with materiality, creating works of art that experimented with the concentration of continuous energy as well as transformations of their surroundings. In order to illustrate the

68 Nisbet, 201–3.
properties of carrier waves, the artist photographed the location where the carrier wave would have existed. The carrier waves exist upon the same electromagnetic spectrum that light waves do, and are also considered a form of energy; the only dissimilarity being that light waves are of a different length. Barry’s work was concurrent with overarching concerns for materiality and immateriality in the visual arts during the period, these concerns are best exemplified by Lucy Lippard and John Chandler’s essay “The Dematerialization of Art.” This essay builds upon Lippard’s book, *Six Years: The Dematerialization of the Art Object from 1966 to 1972*, the term *dematerialization* became an important factor for discussions of materiality and immateriality within a milieu dedicated to objecthood. Lippard and Chandler lean heavily on theoretical physicists Richard Feynman and Murray Gell-Mann throughout their text.

The mathematical and scientific theories that conceptual artists refer to within “dematerialized art” are already aesthetic visual art forms before being appropriated by the artists as explained by Lippard and Chandler. The British artist Terry Atkinson, one of the members of Art & Language, responded to this claim by stating:

Matter is a specialized form of energy; radiant energy is the only form in which energy can exist in the absence of matter. Thus when dematerialization takes place it means, in terms of physical phenomena, the conversion of a state of matter into that of radiant energy, then one would be committed to the contradiction of speaking of a formless form, and one can imagine the verbal acrobatics that might take place when the romantic metaphor was put to work on questions concerning formless-forms (non-material) and material forms.

Atkinson goes on to argue that aesthetic philosophy was irrelevant once the line between energy and matter had been crossed and that it should not be brought back by lacking claims

69 Nisbet, 196.
about beauty from theoretical physicists. Aesthetically, Barry noted many “beautiful characteristics” and sculptural qualities with what he was doing. He was a fan of the fact that the electromagnetic waves can “exist forever. They’re ever changing. They expand out into the universe, always. They’re ever expanding.” The ionospheric reflections that enabled woven-the-horizon, transatlantic radio communications had sculptural implications at earth magnitude: “Because of the position of the sun and favorable atmospheric conditions during January—the month of the show—this piece New York to Luxembourg could be made. At another time, under different conditions, other locations would have to be used.” Atkinson also mentioned the possibility of reflecting waves using ultrasound: “Ultrasonic sound waves have different qualities from ordinary sound waves. They can be directed like a beam and they bounce back from a wall. Actually, you can make invisible patterns and designs with them. They can be diagrammed and measured.” Atkinson like Takamatsu is interested in altering the qualities of a material, to bend it to the artists’ will to display the multitudes of energy.

71 Kahn, 225.
CONCLUSION

Takamatsu wanted to reveal the world as it is, by utilizing mathematics, physics, and quantum mechanics to illustrate the simple truths of our own limited powers of observation. He was in conversation with conceptual artists and philosophers working at the same moment, as well as the old masters’ revelations about artistic tools such as perspective. His oeuvre consists of a multitude of experiments to engage with the unknown and to then make it visible to the viewer, he was always consistently evolving throughout his series but was always concerned with the main focus of uncovering the unknown. Artists working internationally were invigorated by the emergence of new ideas through different fields of science such as systems theories, mathematics, and quantum mechanics. However, each individual certainly had their own ideas about why they were exploring this subject matter. It will always be important to differentiate the local from the global and how those two can coalesce.

After considering the overlapping use of mathematical and scientific aesthetics throughout the international conceptual art community, we can, and should, expand the milieu to include Japanese artists such as Jiro Takamatsu. Takamatsu was able to combine his Japanese sentiments with ideas from Western schools of thought from Paris and New York. This was the primary difference between Takamatsu and his Western contemporaries—his unique perspective that emerged from his role as an anti-art participant in Hi Red Center during Japan’s cultural and economic shift in the postwar era. The 1960s sparked the beginning of how we understand the
contemporary international art world, these artists were referencing the same ideas from mathematics, physics, and logic.

Through comparison of the themes found throughout a sampling of Takamatsu’s different series that deal with point, line, and wave we begin to notice the apparent overlap in the ideas that were fascinating to artists at this time. Changes not only occurred within Japan but the world began to take shape into what we now know as a globally interdependent network of nations and peoples, a place where ideas and innovations can originate anywhere. International exhibitions and biennales were well underway, and Takamatsu made his presence known at many important events. Through this increasing presence, Takamatsu entangled his legacy with other artists from the United States through his anti-art affiliates that found themselves working in New York and throughout the art world. The current art historical literature will begin to include artists such as Takamatsu because of the fascination with the overlap between canonical artists whose accomplishments have been relayed over and over again through different lenses. The socio-political connections between post war Japan and the U.S. cannot be ignored; the feedback loop of culture between these two countries is forever intertwined due to the aftereffects of the war and the ensuing American occupation. This entanglement represents the conditions that enabled the idea of international contemporaneity to ring true of the universally shared frame of reference shared by conceptual artists.

While Takamatsu has posthumously been provided his late dues by curators in the 21st century, there has been a hesitation on the part of art historians to begin to revise the art historical canon of the late 20th century, in which Conceptualism has been primarily framed as a Western art movement wherein occasionally an international artist will have stepped within its
boundaries. Perhaps it is time to reconsider that the artists working during this time were reacting to the same fascination with science and mathematics internationally. There wasn’t a unilateral movement of ideas from the West outwards, but a system of exchange that functioned through print, through exhibitions, and through the fluid movement of artistic thought across the globe.
Fig. 1 — Jiro Takamatsu, *Oneness of Paper*, 1972, collage, 20 x 30 cm, Collection of Matt and Okasana Symonds.
Fig. 2 — Jiro Takamatsu, *The String in the Bottle No. 1125*, 1963–85, Coke bottle, white cotton rope, 32.5 x 10 x 10 cm, Yumiko Chiba Associates.
Fig. 3 — Matsuzawa Yutaka, $\Psi$ (Psi) Corpse (Puṣai no shitai itai), 1964, offset lithograph, 38.4 x 26 cm. Takiguchi Shūzo Papers, c. 1945–1979, Keiō University Art Center, Tokyo.
Fig. 4 — Jiro Takamatsu, *Perspective*, 1966, lacquer on wood, 101.7 x 223.5 x 113.5 cm., Collection of Museum of Contemporary Art, Tokyo.
Fig. 5 — Jan Dibbets, *Perspective Correction, My Studio I, 1: Square on Wall*, 1969, gelatin silver emulsion on canvas, 115.5 x 115.8 cm. Artist Rights Society (ARS), New York.
Fig. 6 — Jiro Takamatsu, *Slack of Cloth*, 1970, cotton, 240 x 240 cm, The Museum of Modern Art, Saitama.
Fig. 7 — Jiro Takamatsu, *Slack of Net*, 1968–9, cotton string, 220 cm x 220 cm, Estate of Jiro Takamatsu / Yumiko Chiba Associates.
Fig. 8 — Documentation of Jiro Takamatsu, *Stone and Numeral*, 1969, photograph taken at the Tama River, exhibition print, unidentified photographer, Estate of Jiro Takamatsu / Yumiko Chiba Associates.
Fig. 9 — Sol Lewitt, *Serial Project, I (ABCD)*, 1966, baked enamel on steel units over baked enamel on aluminum, 20” x 13’ 7” x 13’ 7”, Artists Rights Society (ARS), New York.
Fig. 10 — Mel Bochner, *Theory of Sculpture #2 (Counting): Cardinal Versus Ordinal 5*, 1970, stones and chalk on floor, size determined by installation.
Fig. 11 — Mel Bochner, *Counting Alternatives: The Wittgenstein Illustrations*, 1991, 12 lithographs, each: 20 x 15 in., The Metropolitan Museum of Art, New York.
Fig. 12 — Installation view of Lee Lozano *Wave* paintings, c. 1968—1970, oil on cotton duck.
Fig. 13 — Hans Haacke, *Condensation Cube*, 1963–65, Plexiglass and water, 76 x 76 x 76 cm, Museu d'Art Contemporani de Barcelona.
Fig. 14 — Jiro Takamatsu, *Cube 6 + 3*, 1968, Lacquer on wood, Overall: 13 x 13 x 13 inches (33 x 33 x 33 cm), The Rachofksy Collection and the Dallas Museum of Art through the DMA / amfAR Benefit Auction Fund.


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