

[Translation]

Online Publication

*Tokyo Art Beat*¹

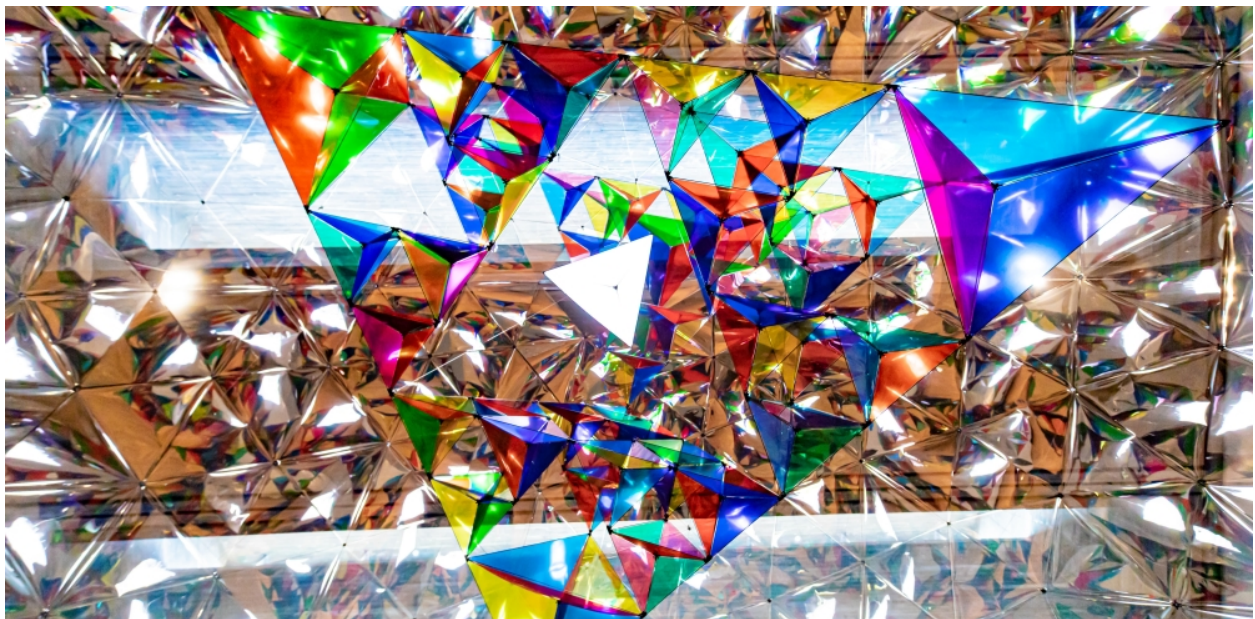
July 25, 2022

Yasuo Nomura's Artwork Expands Human Conceptualizations of "Art" with its Outlook on the Universe

A Review of Norimichi Hirakawa and Yasuo Nomura's Exhibit "The Given Universe and the Days of Wonder" at the Iwami Art Museum of Shimane Prefecture

Review by Ryo Sawayama
Translation by Shirley Gabber

Norimichi Hirakawa and Yasuo Nomura's exhibit "The Given Universe and the Days of Wonder" was displayed at the Iwami Art Museum of Shimane Prefecture from July 2 through August 29. Both artists in this exhibit straddle the domains of art and science. Yasuo Nomura's artwork is discussed here by art critic Ryo Sawayama.



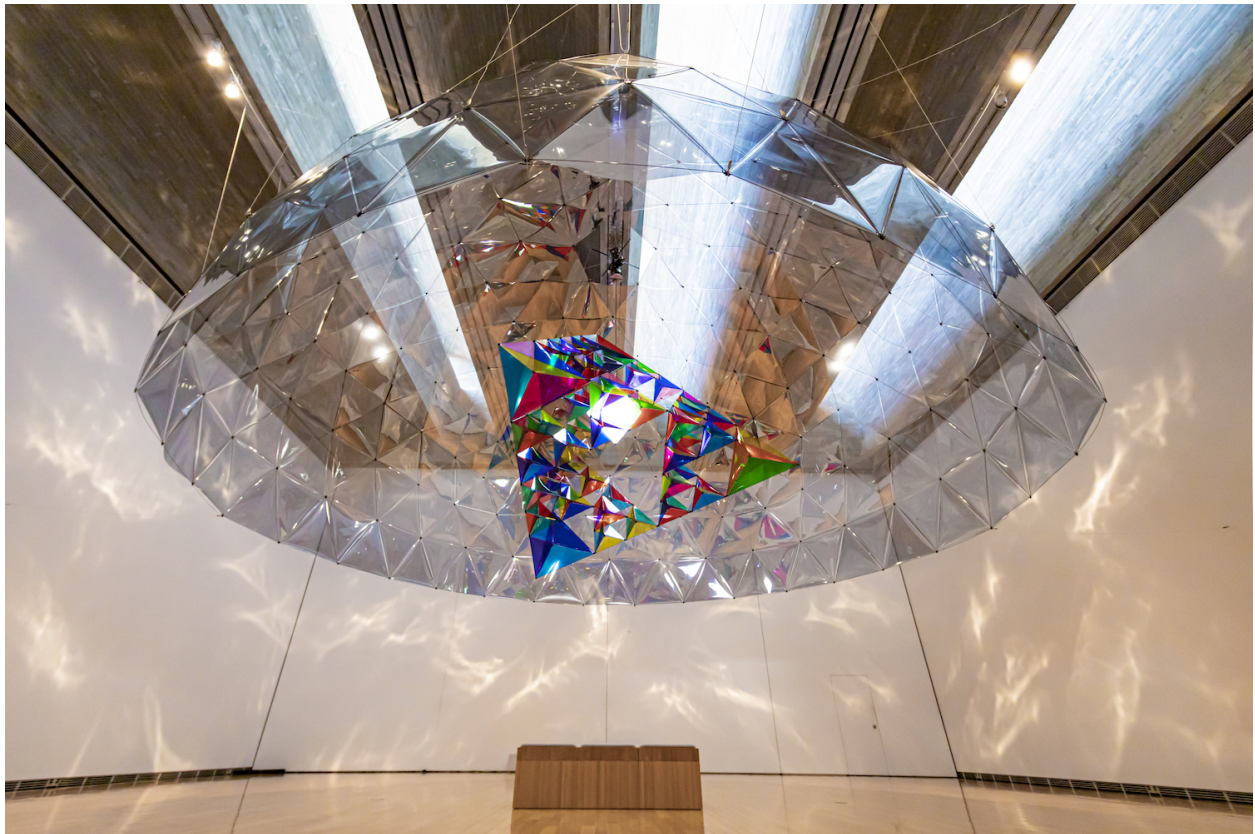
View of Yasuo Nomura's "InsideOut" (2022) at the exhibit, Photo by Shotoku Koh

¹ *Tokyo Art Beat* is a prominent Japanese online publication that news, reviews, and interviews about art events taking place in Japan and around the world.

Taking up the universe and multi-dimensionality and surpassing human conceptualizations of “art”

Can there be “art” without the human conceptualization of “art”? Now, at Norimichi Hirakawa and Yasuo Nomura’s two-person exhibit at the Iwami Art Museum of Shimane Prefecture, there is something latent within the artworks which I suspect may be a question such as that. Hirakawa and Nomura’s work have much in common, such as the themes of science and the universe. Both of their works, which were conceived of outside the bounds of human conceptualizations, inevitably expand the scale of the art framework itself. Although this exhibit is put on at the art museum with the intention of highlighting artists who are connected to Shimane Prefecture, it surpasses that localized framework. Both artists’ pieces can be said to have expansive cosmological and scientific properties.

Although this article will only take up Nomura’s work, Norimichi Hirakawa’s work was also of an extremely high level. It is very significant that this public art museum, as in this exhibit, chooses to exhibit artists of medium standing who have the strength to not be swayed by trends of the art world and to develop their works steadfastly.



View of Yasuo Nomura’s “InsideOut” (2022) at the exhibit, Photo by Shotoku Koh

The exhibit consists of three of Hirakawa’s works, one of Nomura’s, and one collaborative piece from both artists. The piece put up by Nomura in this exhibit is called “InsideOut” (2022) and is a large structure that was created and installed on site. The piece, which was created to fully

utilize the space available in the exhibit room with the highest ceiling, can be summed up as a giant hemispherical dome.

Before observers can experience this hemispherical dome (in other words, before entering the exhibit room,) they must first pass through a small “cave” or “tunnel.” As they go through it, along with the airflow wafts a faint fragrance emitted by a diffuser. In front of them as they come out of the tunnel, a dome ten meters in diameter reveals itself. The dome has a geodesic structure formed by a series of triangular units based on regular tetrahedrons, which we know from Buckminster Fuller (Fuller thought of regular tetrahedrons as a building block of the universe and developed the geodesic dome.) The dome is wrapped in a thin translucent film, and quietly oscillates with the fluttering of the air coming in from the skylight. The observer’s body is enveloped in a sensation as if they have entered the inside of a large soap bubble that gently shakes. Farther into the room are playing environmental sounds recorded at the local Takatsu River in Shimane Prefecture. The repetitive and continuous sounds, despite being unprocessed audio, communicate the geometrical regularity in environmental systems.

<https://youtu.be/BVFyGTlhVN4>

A pyramidal structure made of the same tetrahedral units hangs further inside the dome from its apex and slowly rotates. The varicolored sides of the tetrahedrons transform the outside of the dome as their multi-colored cross sections reflect on the film with the rotation of the structure. On the film outside the dome, countless triangles of red, green, yellow, pink, and purple are diffusely reflected, resonating with the light streaming in from the exhibit room skylight. At this point, two polarities make the observer’s experience abstract: one is the amorphous movement of the natural phenomena of air and light, and the other is that all the forms being visually reflected are nothing but the geometrically controlled faces of triangles. Therefore, the question that’s taken up here, more than the abstractness of the form of the artwork itself, is the abstractness of the space and the experience.

There, the observers witness the tetrahedral structure projected onto the dome’s film dispersing into scattered triangular fragments. That is, a three-dimensional object transforms into countless reflections created by overlapping rays of light, i.e., an image. What can be seen there is the geometry of cutting the three-dimensional into two-dimensional cross sections. Furthermore, this phenomenon visually presents the fluidity of topology known as “dimensions.” This is produced by a light emitted from the fourth dimension which goes past human perception.

According to Nomura, the dome represents the globe. Thus, within the title of “InsideOut” is the hidden meaning of “turning the globe inside out,” a concept behind this artwork. Accordingly, when someone enters the dome, they experience the topological inversion of observing the surface of the inside-out globe from the inside. The idiosyncrasy of this dome’s topology is that the surface of the globe is inside-out and from inside of it we observe the globe. Various triangles reach a point where they fold and pile up together, with the piece finally reaching a directional agnosia linked with its experiential topology.

As Nomura states, this dome approaches the structural form that is known in the math world as a “Klein bottle.”² The following excerpt is from an exhibit handout of Nomura’s:

In the world of math there is a mysterious bottle called a “Klein Bottle” which lacks an inside and an outside. There is only a thin surface separating the inside and the outside of the jar, and if you go along that surface thinking that you are on the inside, before you know it you will end up on the outside. If, as you were passing through a tunnel, space turned inside out, where would be the boundary of the universe which ought to be expanding out? Please try to use every inch of your body to feel this experience in the art museum. Inside of your body, that is made from stars that were born 13.8 billion years ago, you might be able to feel the same vast universe expanding.

In Nomura’s “InsideOut” the observer’s experience of the art is planned so that they start by going through a cave, then they smell diverse fragrances, and as they listen to the sounds that echo from further inside the room they proceed along the dome’s light film. Before they know it, they feel that space has turned inside out, just like in a Klein bottle. The sensations of smell, sound, color, and air mix fuzzily and melt together.

² A Klein bottle is a bottle that does not have an edge that divides the inside and outside. Therefore, an ant could start walking anywhere on the bottle and would be able to reach any other point on the surface of the bottle. A Klein bottle has an elongated neck which goes in through the side of the bottle and ends in a hole in the base. See <https://www.kleinbottle.com/>



View of Yasuo Nomura's "Inside Out" (2022) at the exhibit, Photo by Shotoku Koh

This reminded me of a curious description that Charles Sanders Peirce wrote in *Reasoning and the Logic of Things* about an unbounded space evocative of a Klein bottle. This is a little long, but I'll quote him:

Now I am going . . . to describe an unbounded three-dimensional space, having a different shape from the space we know. Begin if you please by imagining a closed cave bounded on all sides. In order not to complicate the subject with optical ideas which are not necessary, I will suppose that this cave is pitch dark. I will also suppose that you can swim about in the air regardless of gravity. I will suppose that you have learned this cave thoroughly; that you know it is pretty cool, but warmer in some places, you know just where, than others, and that the different parts have different odors by which they are known. I will suppose that these odors are those of neroli, portugal, limette, lemon, bergamot, and lemongrass, – all of them generically alike. I will further suppose that you feel floating in this cave two great balloons entirely separated from the walls and from each other, yet perfectly stationary. With the feeling of each of them and with its precise locality I suppose you to be familiarly acquainted. I will further suppose that you formerly inhabited a cave exactly like this one, except it was rather warm, that the distribution of temperature was entirely different, and that [the] odors in different localities in it with which you are equally familiar, were those of frankincense, benzoin, camphor, sandal-wood, cinnamon, and coffee, thus contrasting strongly with those of

the other cave. I will further suppose the texture-feeling of the walls and of the two balloons to be widely different in the two caves. Now, let us suppose that you, being as familiar with both caves as with your pocket, learn that works are in progress to open them into one another. At length, you are informed that the wall of one of the balloons has been reduced to a mere film which you can feel with your hand but through which you can pass. You being all this time in the cool cave swim up to that balloon and try it. You pass through it readily; only in doing so you feel a strange twist, such as you have never felt, and you find by feeling with your hand that you are just passing out through one of the corresponding balloons of the warm cave. You recognize the warmth of that cave[,] its perfume, and the texture of the walls. After you have passed backward and forward often enough to become familiar with the fact that the passage may be made through every part of the surface of the balloon, you are told that the other balloon is now in the same state. You try it and find it to be so, passing round and round in every way. Finally, you are told that the outer walls have been removed. You swim to where they were. You feel the queer twist and you find yourself in the other cave. You ascertain by trial that it is so with every part of the walls, the floor, and the roof. They do not exist any longer. There is no outer boundary at all³.

In Peirce's thought experiment described here, you freely swim through space as you pass through the cave. During that time, you are enveloped in various scents. As you continue to swim while guided by the scents, large balloons appear. You are not only able to touch the surface of the balloons, but the balloons have a peculiar surface. You realize that you are also able to pass through. When you pass through, you feel a "strange twist." Inside of the balloon is the inside of the first cave. There are no walls there anymore and "there is no outer boundary at all."

The observer that Peirce describes here passes through the film of the dome of air called a "balloon" while relying on various smells and textures. As they experience this movement through the balloons, they learn at last that the inside and outside are connected without boundaries. All boundaries and limits have disappeared, in what could be called a "living Klein bottle."

Looking at it this way, Peirce's description and Nomura's dome have an almost perfect concurrency. However, in reality, Nomura was unaware of Peirce's discussion (which is why I felt amazed at this almost supernatural coincidence.) Peirce had no clear influence on Nomura. Therefore, this is a dialogue about philosophy and art that crosses space and time in a chance meeting. In that dialogue, the modernity of Nomura's artwork equals the pioneering nature of Peirce's philosophy.

The concurrency of the two becomes clearer when you consider that the inside and outside of both Peirce's and Nomura's structures are connected not only through spatial continuity, but

³ Peirce, Charles Sanders. (1992.) *Reasoning and the Logic of Things: The Cambridge Conferences Lectures of 1898* (pp. 251-253) (Kenneth Laine Ketner, Ed.). Harvard University Press.

through various other forms of continuity, such as of the sensory qualities of color, smell, sound, and touch. Peirce said that these many forms of continuity “had in an antecedent stage of development a vaguer being, before the relations of its dimensions became definite and contracted” (p. 259) and he calls that “the cosmos of sense qualities.” What Nomura’s structure is pursuing is, undoubtedly, a “cosmos of sense qualities” where the spatial continuity between inside and outside and the various sensory continuities have become one, and the demarcations between dimensions do not yet exist.

According to Kunitake Ito who researches Peirce, Peirce preceded Einstein’s theory of relativity and repudiated the “steady state theory of cosmology,” which claims that the whole universe is in an eternally immutable condition. He developed a pioneering and modern original cosmology⁴.

One passage in the referenced *Reasoning and the Logic of Things* shows Peirce’s metaphysical vision, which was stimulated by the paradigm shift of 19th century science and physics and which preceded the theory of relativity and quantum theory. Ito calls this “Peirce’s cosmology.” Thus, Peirce’s description can seem strange because he approaches the incomprehensible and strange nature of space-time in the universe itself.

The multidimensional Möbius strip and Klein bottle, the observers’ multi-spatial experiences, and Peirce’s metaphysical vision that conceives of the unique spatial-temporal conditions that make those experiences possible, are not only connected to modern-day multiverse theory and superstring theory, but if anything can be taken as their precursor.

⁴ Ito, Kunitake. (2006). *Peirce no Uchuuron* [パーサーの宇宙論] (p. 2). Iwanami Shoten.



At a workshop held in the exhibit room on July 9, participants and research psychologists took part in a meditative practice where they ate a single raisin. The participants shared with each other their realization that becoming aware of the “cosmos of sense qualities” inside of themselves was itself an experience of turning inside out, the aim of the artwork.

Photo courtesy of the artist

What Nomura created cannot be divided into inside and outside or front and back. His work takes an outlook on the universe in which the end of the universe and the inside of the earth are inverted. Here and now, the far ends of the universe are being summoned. Nomura developed this piece in concert with modern developments in astrophysics, which certainly affected the implementation of his art. Modern astrophysics, to the extent that it can realism to this expression of Nomura’s, draws ever nearer to the inscrutable nature of space-time in the universe.

This unbounded space is also connected to the concept of “higher dimensions” which Nomura has been consistently chasing after. An unbounded form like the Klein bottle cannot be fully implemented in three-dimensional space and can instead only be materialized without inconsistencies in the four-dimensional world. Therefore, this structure conceptually diverges from the dimensional forms that conventional art has depended upon, namely two-dimensional pictures and three-dimensional sculptures. Nomura’s structure thus belongs to the lineage of Dimensional Art which grew from the “The Dimensionist Manifesto” authored by Charles Sirató in 1936.



View of Yasuo Nomura’s “Inside Out” (2022) at the exhibit

Author : Ryo Sawayama

Born 1982. Art critic. He is the author of *The Dynamics of Painting* (published by Kanbanbo, 2020). He is also the co-author of *10 Lectures on Contemporary Art* (edited by Masayuki Tanaka, published by Musashino Art University Press, 2017).

企画展
平川紀道・野村康生 既知の宇宙 | 未知なる日常
HIRAKAWA Norimichi・NOMURA Yasuo given universe | days of wonder
2022.7.2 [SAT] → 8.29 [MON]
島根県立石見美術館 IWAMI ART MUSEUM

開催時間 | 9:30 - 18:00 (展示室への入場は 17:30 まで) 休館日 | 毎週火曜日

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Iwami Art Museum official exhibition site (Japanese only)

<https://www.grandtoit.jp/museum/hirakawa-nomura>

Original article

<https://www.tokyoartbeat.com/articles/-/nomura-yasuo-given-universe-review-2022-07>