

## Kohei Nawa: Aether

By Brett Littman

In December 2018, I visited Kohei Nawa's studio, called Sandwich, located outside Kyoto, Japan. Sandwich is a full-scale collaborative research and experimental lab. Staffed by the artist, his assistants, digital programmers, architects, and students, the studio is used as a space to explore ideas in drawing, painting, sculpture, fashion, public art, scenography, and architecture using methodologies like AI imaging and deep learning, gravity, self-constructed machines, biological cellular growth, chemical reactions, and the phenomenology of perception. During my visit, I was able to tour the expansive studio, see project maquettes and architectural models, and talk with Nawa and his teams about their approaches to various projects. I left inspired and impressed with Nawa's multimedia approach, and it reminded me of Isamu Noguchi, whose museum and foundation I am the Director of in New York. Noguchi also worked fluidly and fearlessly between media and discipline to explore the role of sculpture in society and everyday life. My takeaway from the visit to Sandwich was that relentless experimentation is the driver and generator of all of Nawa's creative output.

One thing about experiments is they often give us the opportunity to observe invisible forces—like gravity, atoms, mitosis, cellular movements, energy and thought patterns, wind velocity, and chemical chain reactions—more clearly. In his sculptures and installations, Nawa has incorporated ideas that make the pathways of experimentation visible. *Foam* (2013–present), a time-based installation reminiscent of the cloud formations seen from an airplane or mountainous archipelagoes, is made with endlessly foaming bubbles that gather, swell, and then collapse at their saturation point. This work is designed to test the effects of gravitational force on fluid dynamics. Another large-scale public work, *Manifold* (2013), visualizes what Nawa describes as atoms of “information, substance, and energy,” virtually rendered as “digital clay” and programmed to collide in order to capture the deformations and morphing caused by velocity, speed, and energy on these objects. *Biomatrix* (2018–present), a mixed media/sound installation that I saw at Nawa's Tokyo gallery, SCAI THE BATHHOUSE,

is a pool sited in a darkened room and filled with red liquid silicon oil. Over time, bubbles resembling lava or blood naturally organize themselves into a square grid on the pool's surface and then disperse. These evanescent events are controlled by a computer program that releases air bubbles into the silicon at variable rates from nozzles at the bottom of the pool. I stayed about thirty minutes in this installation, totally transfixed by and absorbed in the variety of patterns that appeared in the pool. It was like watching an abstract painting being made and erased over and over again.

Another work that utilizes liquid silicon oil is *Force* (2015–present), an installation where pencil-thin streams of viscous oil pour from the ceiling into a gathering pool set into the floor. Here, one can observe the material tension between liquid and solid states as the lines create deformations on the surface of the liquid in the pool. *Tornscape* (2019–present), an evolving large-scale video installation, uses AI programming made to simulate the movement of sand on Mars, showing the effects of weather and friction on a variety of liquids as they violently merge, dissipate, and react to one another. Nawa used Kamo no Chōmei's book *Hōjōki* (*An Account of My Hut*), a diary of natural disasters in Kyoto 800 years ago, as the inspiration for his video mediation on the current state of our ecologically and epidemiologically volatile world.

Nawa continues his experimentation into the effects of natural phenomena on art in three separate series of works: *Black Field* (2020–present), *Dune* (2020–present), and *Catalyst* (2008–present). The *Black Field* paintings, made by mixing wet black pigment and wood oil and then applying this medium to wooden panels, literally document the chemical process of paint drying. The specific mixture of pigment and oil takes roughly one year to dry. Over the course of its fixing process, with exposure to air and other environmental conditions, the webs of black lines crack, fissure, and leak oil, catalyzing new reactions of shriveling, fissuring, and mutation on the surface of the painting. The full permutations of these works would only be visible if one were to observe them nonstop for a full year. Nawa's *Dune* works, made following the digital experiments undertaken to make *Tornscape*, recycle the inks from his *Direction* works (2011–present). Here, various liquids are poured onto an angled support; the resulting fields

and patterns trace the natural movements, impediments, and causal chain reactions of the viscous material as it mixes and slides down the surface. These works resemble topographical maps of strip-mining pits and hint at the pernicious effects of man on natural landscapes and the environment. Building on his early-career experiments between drawing and sculpture, his *Catalyst* works are made by applying hot glue from a glue gun onto paper or directly onto the wall. The networks of dendritic lines branch off in multiple directions, resembling plant stalks or stems reaching toward light or richer earth for nutrients and defying gravitational forces on account of the quick-drying properties of the glue.

Nawa has been on the cutting edge of experimentation, applying 3D technology and computer coding to his sculpture and installations, for more than a decade. He and his digital team at Sandwich have harnessed these new tools to manipulate naturally occurring organic forms like fungi, twigs, antlers, the human body, and the movement of liquid into new digitally processed algorithmic shapes. Early installations like *Biota (Fauna/Flora)* (2013) take site-specific environmental information from Inujima Island in the Seto Inland Sea in Japan, specifically its history of copper smelting and granite mining and the mythological history that gave the island its moniker, “Dog Island.” This biophilic sculpture seamlessly merges these varied data points (the natural, the technological, and the mythic) into a unified form. In works like *Fountain* (2022), Nawa has created the 3D-printed forms with hand-applied microbeads to represent a memento mori of the life cycle of plants and animals from gestation to maturity, death to decay, to their eventual reintegration into the natural ecosystem. His *Ether* (2014–present) sculptures, which to me are a postmodern homage to Constantin Brancusi’s *Endless Column*, are digitally processed renderings of viscous liquid drops falling to the floor—rotated, mirrored, and stacked to form organic pillars.

The *Trans* and *Trans-A/E* (2022) works represent Nawa’s deepest integration of digital media into his aesthetics. Here, the artist transforms images of humans into voxel data (three dimensional pixels), running them through a deep-learning program that connects AI programs through specially written code to distort, smooth out, and speculate on new

resolutions of the original mapping of the human body. He then renders this newly processed data into 3D-printed objects that are sinewy, twisted, bulbous, stretched, and distorted, but still retain the basic structure of the body. The most recent mixed media work in this series, *Trans-A/E* is digitally printed with hand-applied black felt. It takes inspiration from the idealized nude forms on a plaque of a man and woman that was sent into space in 1972 on the Pioneer spacecraft. These works point to alternative ways in which we can transform our own understandings of gender, stereotype, and androcentrism and allow us to imagine how intelligent extraterrestrial life would encounter the human body. Nawa and Sandwich have also engaged in architectural and scenography-related projects. In 2016, Nawa was commissioned to design and build a pavilion at the Shinshoji Zen temple in Hiroshima. *Kohtei*, the wooden shingled, ship-like building they designed, floats over an unrefined rock garden and is entered and exited via a suspended ramp. Once inside the pavilion, one encounters an installation of light reflecting the waves of a shimmering ocean.

Nawa has been interested in dance since an early age when he met Min Tanaka at Art Camp Hakushu in 1994. Since 2015, he has collaborated with the Belgian-French choreographer Damien Jalet on a series of atmospheric sets for three performances entitled *VESSEL*, *Mist*, and *Planet [wanderer]*. With these projects, Nawa has incorporated water, natural elements like potato starch, and hi-tech composites like silicon carbide, latex, and fiber-reinforced plastic for the sculptural elements on stage. I haven't experienced *VESSEL* performed live, but from what I have seen it reminds me of Pina Bausch's incredibly powerful *The Rite of Spring* (1975), performed on a stage covered in red dirt. In Bausch's version of Stravinsky's iconic composition, her dancers enter a fugue or trance-like state and end the dance with their costumes torn, covered in dirt and sweat. In *VESSEL*, Jalet and Nawa achieve a similar state. The still photos of the dancers emerging from pools of water and potato starch are strikingly powerful, and it is wonderful to see a dance set so alive, dynamic, and interactive.

For American audiences Nawa's best-known works are from his *PixCell* series of sculptures (2002–present). His *PixCell-Deer#24* (2011), owned by the Metropolitan

Museum of Art, is probably one of the most Instagrammed works of contemporary art in their collection and has been in several recent exhibitions at the museum. “PixCell,” a neologism created by Nawa, merges the words “pixel” (picture element) and “cell.” To make a *PixCell* sculpture Nawa sources from the internet objects ranging from taxidermy deer, sheep, and birds to musical instruments, plastic toys, vintage TVs, and old rotary telephones. Once these objects have been purchased and delivered to his studio, his assistants “skin” them with transparent glass spheres. This new “skin” changes the viewer’s direct visual relationship to the object as it is now occluded and distorted by these lenses. The sculptures explore the boundaries and limits of the physiology of human vision and the ways it adapts to the new ubiquity of making and viewing digital images on our computers and phones. Another aspect of these works is that they allow Nawa to braid ancient, recently passed, and future histories together. His use of objects like old phones and TVs transforms outdated technology into new digital objects that we piece together through the atomized visual fragments reflected through the glass spheres. In particular, the form of the deer—which Nawa has used several times as the base form for his *PixCell* sculptures—should resonate with anyone who has been to the Kasuga-taisha Shrine in Nara and knows the story of Takemikazuchi, the deity enshrined there, who, as legend has it, rode to this shrine on a sacred deer. Deer and their particular history in Japanese art have been a recurring motif in Nawa’s oeuvre and are also referenced in the large-scale public sculpture *White Deer (Oshika)* (2017) and more recently in *Trans-Sacred Deer (p/gn\_cloud)* (2022), both of which have been generated using 3D printing. The surface of *Trans-Sacred Deer* was lacquered and gold-leafed by a local Kyoto craftsman, bringing generations of craft knowledge in direct contact with the most modern methods of object making.

Related to the *PixCell* works are Nawa’s *Air Cell* (2011), *Cell System*, *Pixel Lens*, and *Rhythm* (2020–present) series. In *Air Cell*, dots of glue are affixed to aluminum supports that are stacked into a grid-like apparatus, creating something akin to the exposed floorplates of a building in an architectural sketch. In *Cell System*, glass now replaces the glue dots and are mounted on the wall as single panels. These displays allow the viewer to see all the glue dots or glass spheres simultaneously and to experience a

simulacrum of the delimiting of space or the biological process that transmits information between cellular structures containing and sending refracted visual information to each other and to the viewer. In *Rhythm*, Nawa has replaced the glue dots and glass spheres with balls made of gray velvet pile. The staccato arrangement of the half and full velvet spheres project movement and energy, like bubbles in a stream, waves in the ocean, or even percussive notes from a drum.

Interestingly, Nawa, who has built his reputation as a three-dimensional artist, has been focusing recently on several serial bodies of work: *Plotter* (2022), *Moment* (2014–present), and *Blue Seed* (2020–present), all firmly grounded in the tradition of drawing. For Nawa, drawing is a medium where he can think freely, make mistakes, watch things play out, and invite chance. It is a way to integrate the haptic with the various mechanical technologies he employs to make lines and marks on paper. In the *Plotter* series, Nawa has built a Rube Goldberg-like drawing machine and affixes either a ballpoint pen or a thin brush pen to it. The machine is programmed to run the pens over the paper, but since it is not finely tuned the pen skips around creating uneven lines and unfilled areas. The results, edited by Nawa, are wonderful records of how chance and unpredictability can interfere in rational machine processes. The *Moment* works are made either by attaching an airbrush with blue ink to a pendulum and letting it glide over the mounted paper or by moving the mounted paper in quick motions while the airbrush remains in a fixed position. The gently curving blue lines physicalize the forces of centrifugal motion, the Earth’s rotation on its axis, and the energy of the perpetual motion of the pendulum itself. It is *Blue Seed*, however, that takes drawing into absolutely new territory. For this series, Nawa treats acrylic plates with special UV light sensitive pigment and then uses UV lasers to create ephemeral, short duration, blue-hued organic shapes and images of scanlines on the surface. These “ghost” forms, based on seeds, cell forms, and their digital structures, are endlessly and randomly generated by a computer program and disappear within seconds of being born, leaving us with a blank sheet ready for the next set of drawings. What I have always loved about drawing is the way artists can use it as a low-stakes proving ground to allow ideas to move in and out of focus. *Blue Seed* shows the absolute indeterminacy of drawing

and makes clear why it is an ideal medium to explore the unresolvable shadows of ideas.

It is true that almost all artists are in a way amateur experimenters, but in Nawa's case his whole studio and practice has been painstakingly set up to collaboratively test out artistic "hypotheses" against reality, materiality, and advances in computer programming. This has made his oeuvre quite varied, materially inquisitive, and dynamic beyond the limited forces of aesthetics. Nawa's projects, originating out of the Sandwich studio, offer a clear road map for other artists who want to explore the "path" of the polymath that can seamlessly integrate art, science, and technology into a uniquely personal vision.

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