COLOR | SPACE | TIME

Barbara H. Berrie

Art and Science—often presented as separate ways of seeing—are more aligned than is generally credited. I saw this for myself at Scientific Delirium Madness. There was plenty of thinking—hard, deep, broad thinking—and a great deal of doing. I came expecting to read and to write a bit. Instead, I found myself swept into the act of making.

I made a tower of blocks using elements from two color worlds: the apparently separate color worlds of the artist and the scientist. Cyan, magenta, yellow—the colors that cannot be made by mixing others on the painters’ palettes. Red, blue and green—the perceived responses to EM radiation that combine to make “white,” that light around us, the invisible energy that reveals the color and form of the world of things to us through our eyes.

I included artists’ quotes on the color blocks: They are reactions to immaterial color, mainly, not so much to the colorant. However, the struggle to transcend the materiality of color appears to occur, in apparent contradiction, by mastering its physicality—such as in paint. Inspired by Scientific Delirium Madness, I aim to write more about my personal reactions to art and science. For the time being, I’ll focus on the things of color, which delight my eye and hand.

Barbara H. Berrie
Email: barbaraberrie@nga.gov

Barbara H. Berrie, Maquette, wood, acrylic paint, 5.5 x 5.5 x 22.5 in, June–July 2018. (© Barbara H. Berrie)
From the vantage point of the Djerassi residency, the ocean appears and disappears constantly, blending in with the sky, the clouds and the fog. This "blurring" of the horizon, the indiscernibility of the surrounding elements, was very fascinating to me and became a subject of passionate discussion among fellow residents.

Being on the West Coast of the United States for the first time, I started to imagine how this unique environment must have inspired artists of the “Light and Space” and “Finish Fetish” art movements that originated in California in the 1960s. Their use of translucent materials has long been an inspiration for my work.

In my art practice I’ve been exploring not only the unique ways in which computer graphic simulations relate to reality and the perceived environment but also how they can unveil an extended mimesis of nature.

In April 2018 I projected a video work onto the facade of the Grand Palais in Paris. It consisted of site-specific digital simulations made with computational fluid dynamics software. I used the architectural features of this Art Nouveau building as boundaries and obstacles within which digital fluids, based on air and water, flowed. As the simulations and fluids drifted, vortices emerged that were rendered visible on the facade.

At Djerassi I continued this body of research by developing a new series of simulations that would arbitrarily interpret schematics of the mesmerizing coastal landscape in order to generate new digital landscapes. Although the colors of the Djerassi simulations had a quantificational function, I use them in a figurative manner, inspired more by computer blindness than computer vision. While remaining in the realm of the digital, these abstract images invite the viewer to imagine their own unforgettable landscape.

Alan Bogana
Email: mail@alanbogana.com
Web: www.alanbogana.com
HYBRID RECONFIGURATIONS

Sarah Rosalena Brady

My art-science work supports a manifesto to make robust biological, cultural, political and technological recompositions to reveal power dynamics within cultures, languages and systems. My research at Djerassi explored object transformation using machine learning, digital fabrication and ceramics to make hybrids. Hybrids combine binaries of human/posthuman, self/other, ancient/modern and biological/technological.

POETIC REFORMATION AND ARTIFICIAL INTELLIGENCE

By questioning what it means to be human, posthumanism challenges the term intelligence to arrive at new kinds of cultural configurations. Forms generated with machine learning can grasp interpretations of the world within cognitive frameworks that we can’t understand. It is in a constant state of becoming, not yet manifested in reality, aiding us to produce new and aesthetic modes of thinking and making, speaking and being. They become rich poetic devices.

LETTERFORMS

I explored a series of forms generated with a recurrent neural network (Google’s Sketch RNN model) trained with an input of 50,000 written letters from world languages, many indigenous, to examine the potential of posthuman intelligence under colonization. Each outputted letterform was enlarged and traced in earthenware to make large figures. The work comments on the poetics of artificial intelligence as a tool for reconstruction and meaning-making from absence.

ANIMIST

The symbol of the animist has an animated range of non-human modes of agency, subjectivity and assemblage. During my time at SDM, I put together an object created with a convolutional neural network trained on desert insects. I am interested in desert life for its power between life and nonlife as well as our trajectory of our Blue Planet becoming Red, and then the colonization of the Red Planet to simulate the Blue with technological expertise.

Sarah Rosalena Brady
Web: www.srbrady.com
Email: sarahrosalenabrady@gmail.com
AFTER DJERASSI

Judith Dancoff

When he heard a reading of my writing at this year’s SDM residency, fellow resident Hideo Mabuchi said I should go to Hiroshima for the 6 August commemoration of the bomb. I knew immediately he was right. My father was an atomic scientist who died when I was four because of his work, and much of my writing practice stems from this. So, a few weeks later, I traveled to Japan, first to Tokyo and Kyoto, and then on 5 August, to Hiroshima.

Today the city is thriving, and if signs of the devastation exist, they are nowhere in sight less than a mile from ground zero. The streets are wide and clean with large, gracious trees and modern buildings, not unlike parts of Los Angeles, in fact.

After I checked into my hotel, I went looking for dinner and stumbled upon a restaurant that specializes in Hiroshima-style Okonomiyaki, a crepe stacked with vegetables, noodles and other ingredients. It is served all over Japan, but here there is a special sauce and meaning: easy to prepare, it was the staple for survivors in the first few years. Before the city was rebuilt, they cooked it on grills in the open, and it kept them alive.

I woke early for the ceremony to be sure to find a seat. At exactly 8:15, the moment the bomb was dropped, we stood in silence for 60 seconds; the ringing of the peace bell followed. The mayor of Hiroshima gave a short speech and released hundreds of doves.

In the evening, people floated lanterns down the river, with messages inside. I floated one for the souls of all the victims, and one for my father’s soul, to make his amends.

Judith Dancoff
Email: judith.dancoff@gmail.com
Web: judithdancoff.com

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LOOKING BACK IN TIME
David S. Goodsell

The Djerassi Resident Artists Program describes itself as a “gift of time,” but for me, it turned out to be much more. I spent much of this gifted time reconstructing two key stages in the abiogenic origin of life: the evolution of self-replicating molecules and protocells in hydrothermal vents (Fig. 1) and the primordial cell that was so successful that it outcompeted its rivals and gave rise to all life on Earth (Fig. 2). Both paintings integrate data from structural biology, proteomics, microscopy and theory to create a mesoscale window on the current scientific conception of each stage.

The residency also gave me a second gift: Our group of residents was deeply nurturing and collaborative. With them, I extended my practice in unfamiliar and exciting directions, including embodied learning for gaining an intuitive somatic understanding of cell division, exploring traditional egg tempera with pigments foraged from the surrounding area (Fig. 3) and experiments with these pigments on clay surfaces and natural materials. I found myself finishing the residency with a new love for watermedia and a determination to foster this type of creative collaboration in my future work.

Acknowledgments

I thank Anne and Rodney Pearlman for underwriting my residency as well as NSF grant R01GM120604.

David S. Goodsell
Email: goodsell@scripps.edu
Website: http://mgl.scripps.edu/people/goodsell
ORCID: 0000-0002-5932-2130

Fig. 1. David S. Goodsell, Abiogenesis 2,000,000X, watercolor on paper, 2018. (© David S. Goodsell)

Fig. 2. David S. Goodsell, Last Universal Common Ancestor 2,000,000X, watercolor on paper, 2018. (© David S. Goodsell)

Fig. 3. David S. Goodsell, sketch of the view from the studio, egg tempera with foraged clay on paper, 2018. (© David S. Goodsell)
Amy Landesberg
The Wet 'n Wild brush series consists of small objects configured to emerge as human or botanical form. If you want a good look, get up close and personal. The intended effect is the uncanny, and that always includes questions of the sensate body. Life is the worry, sorrow, joke of this body of work. It plays at life, bites its nails, sometimes pets it, in differing manners and scales. What are life's criteria? Holism, mortality, active information, metabolism, inherent stability, flexible control, growth, reproduction? . . . Or is it a matter of degree? With borderline cases?

Amy Landesberg
Email: al@amylandesberg.com
Web: www.amylandesberg.com

© Amy Landesberg. Photo: David Naugle.
**BEYOND BORROWING**

*Hideo Mabuchi*

Sometimes we make art based on ideas or forms from science. Sometimes we develop the science of processes or materials from art. Such topical art<science crossover can be brilliantly productive. But is there a deeper level of art<science integration that goes beyond borrowing?

If you could live as a dedicated artist and as a deeply engaged scientist, what would come to matter most? What would emerge as most genuine and essential about searching and making? What would you most urgently want to teach? Would you still feel the need to artify science, or to scientify art?

If you could come together in true communities of artists and scientists—convening not just to perform a project but indefinitely, just because you want to—where would you find your common ground? What would arise as your shared goals and aspirations? What, and how, would you decide to create?

In connecting art and science must we leave all else aside?

Maybe everything relates to everything; maybe that’s really what both art and science are about. Maybe they have no interface because they’re actually co-immanent. Maybe we should just connect all the dots we can find, along all possible paths, in myriad colors.

Let us weave a dense, polychrome web and take refuge in the vivid richness of being.

*Hideo Mabuchi*
*Email: hmabuchi@stanford.edu*
WATCH. was constructed by subtractive writing: removing three words by grinding to bare aluminum, then adding a single period, transforming a historic road sign from the utilitarian into a gateway to transcendence.

Honoring the materials of this place, the work upcycled an original Djerassi SMIP ranch sign and weathered post bearing nine bullet holes that recall past days of exuberance.

The work invites artists, staff and visitors to be still for a moment and to watch—extending our collective memories far back in time beyond our own ancestors. Watching in this primordial landscape provides the other that makes us whole.

We return from this place to the world—but we are changed forever by the profound awe available to those who WATCH. Having possessed it, we may find peace.

WATCH. is dedicated to the spirit of the people of this place, Carl, Pamela and Dale Djerassi, who once read this word with their own eyes; Tim DeVoe, who designed the interface of post and earth; Wade Watkins, who grew up beyond the ravine behind the watch-scape, running cattle and horses, amidst the California quail, wild turkey and big cats; and Margot Knight, for her gifts of time and understanding.

Thomas C. Skalak
Email: tcskalak@gmail.com

WATCH. is a new landscape artwork at the Djerassi ranch, created in 2018. (© Thomas C. Skalak)
ROOTS HARMONIC: BIRTHING POLYRHYTHMY

Anya Yermakova, Sebastián Pérez and Dasha Lavrennikov

In the very first week, we realized that perhaps the task of art-sci isn’t to connect “art” and “science” but rather to allow art to invite flow between “human sciences” and “physical (chemical, biological) sciences.” Our unsuspecting guides thereafter were a found scrap of wooden blinds that sounded like a castanet-washboard hybrid, rocks, the redwood stumps and daily (micro)encounters with the human and nonhuman creatures on the land.

(Re)Encounter with Entanglement

When Bill Klein the piano tuner came to work on the new grand piano in the composer’s studio, he and Anya spent over an hour playing with the insides of the old (1909!) upright in the barn common space. Two weeks later, some strings he left behind connected this piano to Pamela Djerassi’s loom, while others personified spiderwebs in the forest. The loom was no accidental encounter: Resurrected by Hideo Mabuchi, the loom’s interconnectedness with the piano drove home a theme, and a concern, that we...
discussed with Hideo from the beginning of the residency—entanglement and the layer beneath the “complex network” analogy, leading into a fundamental indeterminacy of quantum systems that we understand through the harmonic oscillator model.

**THE STUMPS**

*Anya: The softness of the redwood stumps sucked me in. Gravity felt different on the incline. A Score [1] emerged that poked at this indeterminacy with our embodied pasts and with embedded histories of poets [2] that walked this art/sci hybrid line. Roots came and went; sometimes I confused mine with those of the trees. I revered the trees for letting me witness again and again their roots, exposed.*

The activated piano spiderweb spoke with our emergent microsounds: of clay flute, charango, quena, voice, stones, body percussion, vocals, cello, double bass. Our experiments in polyrhythm throughout the residency became in *Roots Harmonic* a composition among the stumps. The spiderweb’s capacity to speak again is wide: softly when supporting a falling branch, or fortissimo if it decides to pop.

*Anya Yermakova*
*Email: ayermakova@gmail.com*
*Web: anyayermakova.com*

*Sebastián Pérez*
*Email: sebastian.astrophysics@gmail.com*
*Web: sebaperez.io*

*Dasha Lavrennikov*
*Email: dasha.lavrennikov@gmail.com*
*Web: www.instagram.com/dasha.lavrennikov*

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1. For score and video see the supplementary material at www.mitpressjournals.org/toc/leon/52/3.