

ART

Are Artists the New Interpreters of Scientific Innovation?

By GISELA WILLIAMS SEPT. 12, 2017

WHEN WE THINK OF ARTIST residencies today, we think of the MacDowell Colony, in the woods of New Hampshire, and of the Skowhegan School, in Maine. There's the Rome Prize fellowship, at the city's American Academy, and Donald Judd's Chinati Foundation, in Marfa. To be an artist in residence means removing yourself from the noise and obligations of regular life, and instead getting to concentrate on your creative life, often in a beautiful locale.

But once, an artist residency meant something very different: being embedded squarely within regular life, an experience meant both to inspire artists and to infuse what were seen as artless environments with creativity. In 1966, an artist named Barbara Steveni and her husband, John Latham, the influential British conceptual artist, started the Artist Placement Group, or A.P.G., in London, the goal of which was to embed artists in industrial and government organizations, to allow them to both learn about and to have a voice in the world of business and science — and then, when possible, organize exhibitions of work inspired by those experiences. Latham himself spent time at the Scottish Office in Edinburgh researching industrial waste heaps called “bings” that were created by distilling oil from shale, and the artist David Hall made 10 short films, called “TV Interruptions,” that were broadcast uncredited on Scottish Television and are now regarded as landmarks of British video art. The project, which was renamed Organization and Imagination, or O+I, in 1989, was considered groundbreaking and important enough that the Tate bought the A.P.G. archives in 2004.

Meanwhile, in the U.S., two visionaries were also campaigning for a greater collaborative relationship between modern art and science: Gyorgy Kepes, who founded the Center for Advanced Visual Studies at M.I.T. in 1967, and the artist Robert Rauschenberg, who, around the same time, co-founded E.A.T. (Experiments in Art and Technology) with the engineers Billy Kliver and Fred Waldhauer and artist Robert Whitman, to initiate and support collaborations between artists and scientists. (Their most publicized project was a series of installations, including a water-vapor sculpture by Fujiko Nakaya and physicist Thomas Mee, made for the dome at the 1970 world's fair, Expo '70, in Osaka, Japan.) Two years later, NASA invited Rauschenberg to witness the launch of Apollo 11, the first manned voyage to the moon — an experience that resulted in “Stoned Moon,” a remarkable series of lithographic prints.

This kind of residency eventually fell out of favor for the luxury-summer-camp variety. But in the last few years, there's been a resurgence of interest in the idea of inviting artists to observe, learn and work within mainstream government agencies and institutions, among entrepreneurs and scientists as well as among the artists themselves. In this innovation-hungry age of TED Talks and Silicon Valley, every company seems to be launching an experimental lab that is meant to foster innovation through the cross-fertilization of ideas in a variety of disciplines, including the creative arts. Two years ago, the art collector Dasha Zhukova donated a million dollars to M.I.T. to create an artist residency there in her name. At the same time, the work of artists like Thomas Struth, Vija Celmins, Tom Sachs and Olafur Eliasson is driven and influenced by the rapid pace of discoveries in scientific fields from artificial intelligence to astrophysics. The photographer and architect Hiroshi Sugimoto has repeatedly explored the relationship between image and evolving technology, including in his Lightning Fields series, for which he used a 400,000-volt Van de Graaff generator to apply an electrical charge directly onto film.

Gerfried Stocker, the artistic director of Ars Electronica, a think tank that started a festival celebrating arts and sciences in Linz, Austria, in 1979, believes that artists have become "cultural missionaries" in a time of "intensive transformation driven by technology." It's crucial, he says, "that humanistic voices address the ethical and moral questions created by this transformation." Ars Eltronica helped institutions like the European Organization for Nuclear Research (known as CERN, its acronym

in French), as well as the European Southern Observatory, when they recently founded their own artist residencies. With the assistance of Ars, CERN — which is based in Switzerland and is home to both the Large Hadron Collider and the world's largest particle physics research facility — initiated Collide, its flagship art residency program, in 2011. Monica Bello, the head of Arts@CERN, explains, “The objective at CERN is to understand the fundamental structure of the universe. This is extremely compelling to artists, as they are often interested in studying matter itself.”

CERN HAS SINCE HOSTED about a dozen international artists through Collide, including Julius von Bismarck, a German artist who creates installations, often humorous, that are typically inspired by science, nature and technology. At CERN, he staged several interventions, including locking 30 physicists underground and asking what they saw in the dark, pushing them to describe physical matter that couldn't be seen. More recently, CERN has partnered with FACT, the Foundation for Art and Creative Technology in Liverpool, England, which helps to produce as well as to provide a space to show the work inspired by the CERN residencies.

“Science is too important to leave to the scientists,” says Mike Stubbs, director of FACT. “Science has kind of become a new church, but it's clear now that technology has not been applied to everyone in society to their benefit. We need voices from the arts and sociocultural disciplines to provoke important debates.” As the artist Thomas Struth says, “My feeling is that somehow, since the 1980s, politics are always running behind the development of technology, and it's very hard to create a legal framework to control what's happening. Maybe artists are looked to because of their freedom and critical analysis, and because in general they are not corrupted. Someone brings up the self-driving car and within no time, someone yells, ‘Hurrah, the self-driving car!’ It's like, who needs it? What about more public transport?”

At the same time, institutions like CERN need artists to translate their findings to a larger audience. “Often experiments are invisible,” says Stubbs. “They just exist as pure data.” Agencies like CERN benefit when well-known and respected artists emphasize the importance of their work and explain it in an accessible visual medium. Stubbs takes it even further: “I think it's absolutely essential that artists are part of the process not just in terms of visualizing information but how we

understand scientific culture.” It’s also worth remembering that the cultural divide between art and science is a relatively new one; for much of human history, the two fields were not oppositional, but collaborative. This relationship reached its apotheosis in the Renaissance era, whose most famous artist — Leonardo da Vinci — was also a scientist. Art was aligned with religion, but it also explored the natural and physical world. In the Victorian era, however, the two worlds diverged into what the British physicist C. P. Snow called “the two cultures”; these projects, and the people involved in them, aim to correct this schism. “Artists are no longer concerned with creating artwork that reflects or interprets reality; rather, they want to be active agents in creating it,” says Stocker, of Ars Electronica. “That means that artists need to have an even deeper understanding of the mechanics behind science and technology.”

THE SEARCH FOR that understanding has been a kind of revelation for the contemporary figures involved in these new partnerships. A few months ago, when the artist Olafur Eliasson was in Montreal, he visited Buckminster Fuller’s 20-story geodesic dome, built for the 1967 world’s fair. “It gave me a great boost of creativity,” he says. “That was a time when there was a strong confidence that technology and creativity would shape the future.” Three years ago, Eliasson was awarded a several-weeks-long residency at M.I.T. He used the time to work on a project called “Little Sun,” a portable solar lamp that he designed with the engineer Frederik Ottesen, which is sold at high cost in wealthy countries so that it can be sold cheaply in poor ones. According to Eliasson, the lamp is meant to raise the question, “how can we create an affordable global energy system that factors in human emotion, creativity and desire?” His work, he says, often grapples with “how to tell people that they are not consumers of the world, they are co-producers of the world.”

Struth, who will be showing large-scale studies of recent work at the Marian Goodman Gallery in New York in November, has made his own artist residencies in science-related businesses and agencies over the years just by asking. Earlier this year, he spent several days in Houston taking photos at NASA. Struth says that despite the fact that he is extremely skeptical and critical of certain technological developments and the way they’re used, he enjoys working with scientific researchers: “They tend to be very open. They have certain similarities with artists because they are working on something they don’t know or can’t see.”

Then there's the conceptual artist Jorge Mañes Rubio, who in 2016 began a residency at the **European Space Agency**. The agency had announced plans to create an international moon village: "There was no budget but it was an important call to space agencies and private companies. Mars is far too distant of a goal, so the moon seemed like the next step," explains Rubio, whose works are often about re-engaging neglected places and cultures.

After spending time with the ESA's Advanced Concepts Team, which is based in the Netherlands, Rubio decided he would build a moon temple. Despite the team's discomfort with the idea — they worried it was too religious and new-age for their purposes — he proceeded, spending months with experts to learn about the moon's geology and the practicalities of living in an atmosphere with one-sixth the gravity of Earth's. Rubio ended up designing a structure that could be 3D-printed from moon dust, giving it a utopian-adobe look. But the best part of the project might have been both his and his new collaborators' understanding that science, contrary to popular belief, is not immune to the thrill of romance, the pull of magical thinking. "There was a lot of friction about building a temple," Rubio recalled, "but then someone said, 'Actually I like this idea. What if we just build this temple and leave? Maybe we decide not to stay and we just create a beautiful space to celebrate the earth's relationship with the moon.'"

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