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The Satellite Chaser: Artist Xin Liu in Conversation

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Xin Liu's first performance of *Orbit Weaver*, which took place aboard a parabolic flight operated by Zero-G Corp on 17 November 2017. Photo: Steve Boxall

Xin Liu's digital commission *The Earth is an Image* (2021) establishes a dialogue between audiences tuning in via an antenna positioned in Hong Kong and dying satellites circling overhead. The work expands the artist's long-standing interest in melding art and technology, but also offers a poignant meditation on connection and isolation by staging an interpersonal drama between machines reaching the ends of their lives. In this interview, Kate Gu (Producer, Digital Special Projects) speaks with Liu about the project, her thoughts on art and technology, and the reasons why an artist would venture into outer space.

Kate Gu: What inspired you to delve into the genre of space art? It has a history but is still quite an obscure field, as very few people can access some of the technologies used to create it.

Xin Liu: When I was studying at MIT Media Lab as a graduate student, one of my classmates was a typical space enthusiast. He founded a cross-departmental space exploration initiative that allowed people from fields like biology, architecture, art, design, and the humanities to collaborate in a space-related environment. It was almost like a start-up; we worked hard and eventually turned this student-run organisation into a regular subject department at MIT.

“Space art is a type of world view and perspective, not just a purely technical approach.”

Xin Liu

At the moment, space art can be divided into two general areas: one involves creating art around the theme of space, while the other involves the artist bringing themselves or objects into space to explore new possibilities.

My interest in space stems more from the earlier movement of [land art](#). For me,

space technology is not just a type of modern technology; it also allows us to understand the relationship between Earth and the universe, and to view any interrelated questions from an outer space perspective. This means that, when we say that we are from Earth, we first have to acknowledge the concept of outer space in order to have this kind of self-awareness.

This is what I am most interested in exploring in my work. Space art is a type of world view and perspective, not just a purely technical approach.



Earthrise, the first image of the whole earth, taken by an astronaut from Apollo 8 on 24 December 1968. Photo: Courtesy of NASA

Gu: You mentioned land art and the question of perspective. *The Earth is an Image* shows a bird's eye view of Earth from space. What do you hope to convey through this particular angle?

Liu: If anyone goes on the website for the work when the satellites enter the receptive range, they will see the line: 'When the Earth was first seen as a whole, it marked the beginning of the Anthropocene.' I wrote this because whenever we discuss Earth, we often think of the photo of the 'Blue Marble'. Many will say that this photo shows our home, but the perspective in it is inherently non-human. Except for the few astronauts who have been to the moon, very few of us have actually seen the Earth. Similarly, whenever we see mountain ranges, traffic flows, and houses on GPS maps, all we get is a set of cut and dried model-like imagery and simplified data. None of these perspectives originate from our daily experiences.

We live in a very interesting era. Our daily lives are detached from the visual data we receive and therefore from our ability to observe the world. We can understand an extremely complicated system, and even calculate and render the precise moment of the Big Bang, but it is completely abstracted from the human sensorial experience. I want to use this work as a bridge to connect these two ways of understanding and experiencing the world.

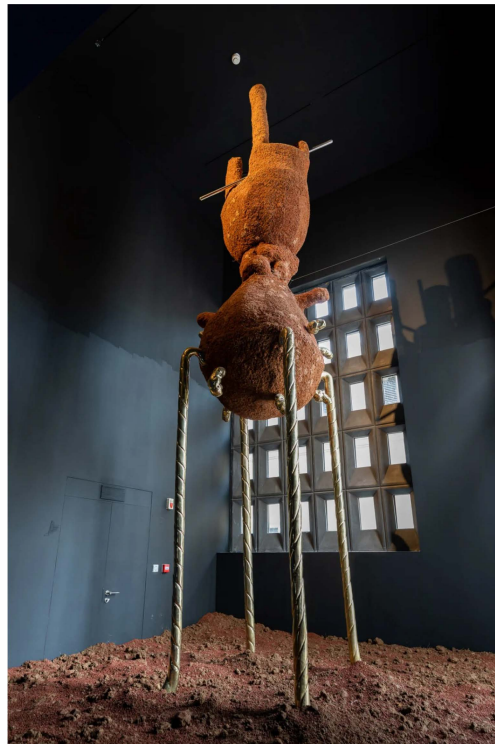
“I hope to establish my own personal connection with and experience of the world and the universe, at the same time as sharing it with others.”

Xin Liu

Gu: Whenever we contemplate our relationship with the universe, we often think from the perspective of the whole human race and disregard any personal experience. But you also mentioned the idea of the self. As an individual, what is your relationship with the universe?

Liu: This might sound very unscientific, but in terms of sensibility, I think the universe that is felt by each living being is singular and unique. So, I think the connection an individual has with the universe is the only experience of it that we could truly discuss. Could any one person truly represent humanity and the multifaceted qualities of an individual?

Through this work, I hope to establish my own personal connection with and experience of the world and the universe, at the same time as sharing it with others. I hope that the audience will also reflect on their own relationships with the world.



Installation view of *Haumea Field*, part of the project *Unearthing Future* (2020–). Photo: Courtesy of Xin Liu and Aranya Art Center

Gu: In your project *Unearthing Future* (2020–), you brought potato seeds into space and observed how they changed in this extreme environment. On the one hand, this project explores cultural themes like the movement of species and humans, but on the other, it also highlights certain scientific research values. How does your process straddle both the humanities and the sciences? When you are contemplating a question, do you think from the perspective of an artist or an engineer?

Liu: When I am figuring out how to create something, I think more like an artist, as I am mostly concerned with what the artwork is trying to convey. But artists aren't the only ones who think in this way; anyone who is interested in cultural history or human activity will as well. Art is only one way of expressing an idea.

What *Unearthing Future* is concerned with is how to confront the issue of colonialism and diversity in the face of space exploration. The potato is the fifth largest crop on Earth. Originating from Peru, its history is the history of human colonialism. Even now, when humans travel to outer space, we bring potato seeds with us.

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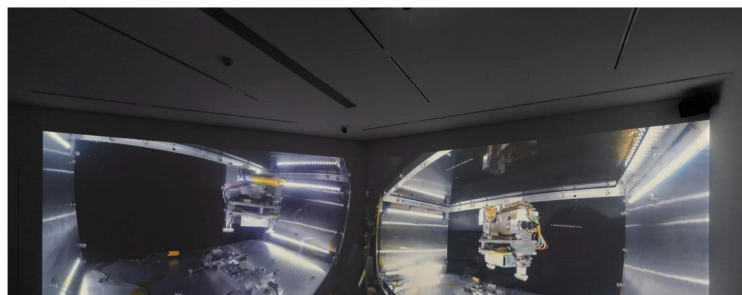
Xin Liu

What the scientific field cares more about are two potential ways of developing potatoes when they enter outer space. One is to use the conditions of space to genetically modify and produce 'super potatoes'. The other is to believe in the inherent variety of potatoes, their ability to adapt to different environments, and their increased survival rate through mixing seeds. Rather than being purely scientific, these methods could also reflect different world views. Do you aim for superior species, or believe that diverse environments offer more possibilities?

For me, technology and art are sometimes mixed together, so my work is often like telling a story: the research is a prop, and a variety of academic fields can be included, creating a small world.

Gu: In your previous works such as *Orbit Weaver* (2017) and *Living Distance* (2019), your body is present in the pieces. But in *The Earth is an Image*, your body is nowhere to be seen. Why this change? Is it because of the constraints of the website medium?

Liu: I don't think my body is absent in the piece. This work comes from my attempt to use my broom at home as an antenna to receive satellite signals. My body was still there when I received the noise and satellite images. As a web-based work, the uniqueness of *The Earth is an Image* lies in the fact that the audience needs to go to the website to see it—I hope they are not just looking at my body or what I was doing to make the work but listening and seeing themselves—the experience closest to my pursuit of satellites at the time. Although they do not see me, I hope they can participate with their own presence.





Installation view of *Living Distance* (2019). Photo: Courtesy of Xin Liu and Aranya Art Center

Gu: After the release of the work, I received some responses from viewers who felt that they were always missing the live stream and did not quite understand the theme of 'presence'. We are living in a technological age, and everyone is used to receiving information instantly, so it can be a little difficult to tell them that they have to wait patiently to experience this work.

Liu: This could definitely be challenging for some viewers, but we do release a weekly forecast of the satellite transmission time so everyone can prepare in advance. I hope that the audience can sit in front of their computers and imagine the exact moment when a satellite passes through the Hong Kong sky.

Gu: On the website for the work, you mention the sense of loneliness felt during the pandemic. These abandoned satellites also convey a sense of isolation as they stroll through space. Can you elaborate on whether there is a connection between the two?

Liu: I created this project because I was quarantining at home in New York. At the time, I felt detached from the rest of the world, but social media and the news were constantly reminding me of what was happening. It felt very paradoxical, so I wanted to see what was actually going on outside. I became curious about capturing satellite signals since they take photos of Earth from the sky and could let me see what New York looked like. Later, when I had to order an antenna online, many stores had run out of stock. Chasing satellites became a trend during the pandemic, which is quite fascinating. People probably wanted to find new ways to reconnect with the world.



A short clip of Xin Liu's *The Earth Is an Image*. Commissioned by M+, 2021

Gu: Speaking of antennas, this work also points to the question of replacing older technology. The radio wave technology used in the abandoned satellites is considered outdated compared to those on the ground. This reminds me of Marshall McLuhan's media theory, which suggests that new technologies not only replace but also revive older ones. How do you view the relationship between old and new technologies?

Liu: In terms of this work, older technologies equate to radio waves similar to what we use to adjust FM radio channels—a crucial media communication technology in the twentieth century. Now, however, we have the internet, with the relatively more secure fibre optics and cellular networks like 5G. But we have also realised that the internet is not without restrictions. A lot of large companies are controlling the way we use it. In contrast, anyone could listen to radio broadcasts, and they were not encrypted very well. Radio transmissions have turned out to be a more accessible option and I am fascinated by how decentralised they are. This is the situation we are facing: a captivating intermingling of old and new that forms when technological progress meets history.

Gu: Another aspect is the level of difficulty in operating the technology. If you have basic knowledge, you can make an antenna yourself and set up some kind of installation. But for new equipment, like iPhones, there is limited room to adjust or change the way it functions. Along with what you said about the trend towards decentralisation among users, what do you think about this?

Liu: Some older technologies no longer seem as complicated to use as before, so we think they are easier to learn. But new technologies have this potential as well. Although they look very complex, these technologies are still open to anyone—you just need to take some time to figure them out. However, Apple, a corporation that has created an entire ecosystem of products, purposefully makes its technology closed off from users. On this level, capitalism itself has used various means, even intellectual rights, to stop us from understanding new technologies.

There are a lot of debates around this topic. One of them comes from a legal perspective, which is why there are antitrust laws. Another looks at how an individual comes to understand a seemingly intricate piece of technology. As a member of the public, I think having basic knowledge or even just curiosity can help us. When we agree to those terms and conditions, for example (I accept, I accept, I accept), what do they really mean? It is a black box, but the reason the box is sealed off is for reasons beyond just the complexity of the technology.

Gu: Thanks for your time—it was great to hear about your experience and insights into space, art, and technology. To conclude, could you say something about your next projects?

Liu: One of them is about genome sequencing. I am interested in knowing how it is slowly integrated into our lives. The work will be presented in a new format, which will be quite refreshing.

Interested in understanding more about The Earth is an Image? Start exploring the [artwork](#).

This interview was originally published on WeChat on 21 February 2022. It has been edited for clarity. Check out the [full recording](#) in Mandarin.

Kate Gu is Producer, Digital Special Projects at M+.

Xin Liu is an artist and engineer who takes a post-metaphysical approach to explore the personal, social, and technological spaces in our world. Her most recent work centres on the verticality of space, extraterrestrial explorations, and cosmic metabolism. Liu received her MA from Massachusetts Institute of Technology, her MFA from Rhode Island School of Design, and BE from Tsinghua University in Beijing. She is currently the Arts Curator for the Space Exploration Initiative in MIT Media Lab and an artist-in-residence at the SETI Institute in Silicon Valley. Her numerous awards and fellowships include the X Museum Triennial Award, the Van Lier Fellowship, and the Sundance New Frontier Story Lab fellowship.