Trevor Paglen and Alessandra Franetovich
Impossible Objects: A Conversation

Alessandra Franetovich: I would like to start by asking you a question about first contact. You first encountered the theories of Russian cosmism while working on your project The Last Pictures. Your project investigates the processes, methods, and purposes that lie in the creation of images, as well as the imagery and maybe even mythology that emerged during the space race of the previous century – mainly during the Cold War period. Stretching back much further, however, the development of Russian cosmism began with philosopher Nikolai Fedorov at the end of the nineteenth century. Indeed, talking about cosmism today, as well as about space travel, necessitates connecting three different centuries.

The Last Pictures proposes a reflection on humankind's decades-long experience of living in the era of the “technosphere,” when humans are surrounded by hundreds of satellites moving in Earth’s orbit. These satellites are mainly used for communication, for mapping Earth, and for military purposes. Some of these early satellites still function today, while others are just orbital garbage that we cannot, at least for the moment, recuperate or recycle. You envisioned a hypothetical future after the extinction of humankind in which the satellites remain. In such a future, these artificial objects become ruins of modernity and monuments of a past civilization. Following from this scenario, you conceived an artwork shaped as a disk that stores a huge amount of photographs and documents, which you then placed on a satellite. This work could be interpreted as a re-reading of the Voyager Golden Records that NASA sent into space in 1977. However, you followed quite different criteria than the space agency when selecting images to be included on the disk. For this artwork, you intertwined ethical and aesthetic dimensions. Russian cosmism is absolutely based on this duality, too. How did the theories of Russian cosmism inform your thoughts?

Trevor Paglen: I had actually started two projects, Orbital Reflector and The Last Pictures, at the same time. They were two very different approaches to thinking about how to work with space. During that period I was also working with Marko Peljhan, a Slovenian artist who teaches at UC Santa Barbara in California. He had been teaching some theories from Russian cosmism in his classes. These ideas were not very familiar to Americans, but Marko is well versed in those intellectual histories, given his much stronger connection to the Eastern European and Russian histories of space. One of the big things that I was struggling with while working on The Last Pictures is that, at least in the American mythology, space is an extension of the frontier.
So, you go into outer space, you go to the moon, you plant a flag, you do some mining on asteroids, and the idea is that it’s Nevada again, or California again. I was trying to contradict that story, or that way of thinking about the cosmos. I wanted to tell a different one about space — not as a limit, and not as a horizon of possibility, so much as a limit and an encounter with the kind of something that is radically other. And that radically other thing could be space itself, or theories of infinity, and so on. When you get into things happening in solar systems and galaxies and the cosmos itself, you enter a form of time that is very alien to the ways in which we perceive and experience time as humans. So what does that encounter produce between a moment in human history and a moment in a human lifetime within the vast scales of time that characterize the universe? Marko introduced me to some of this thinking, and it made a lot of sense to me, especially because I read Fedorov in a much more allegorical way perhaps than I think he meant his work to be read. I read Fedorov by thinking about him as starting a tradition in which space flight is a series of encounters with something that is both radically other and radically one’s self. On the one hand, it means going into something that’s very different. On the other, that thing that is very different is also a deep reflection of something in you, or the culture that you come from, or what have you.

This was a useful way to think about a project like The Last Pictures, the premise of which was to put a collection of images into space, but more importantly, putting them into time — in a way that is radically different than the ways in which we normally insert images into time, or think about images in relationship to time. Questions then start to arise, like: What does an image mean, if anything? And what does meaning mean, if anything? All these strange reflections happen when we insert something from a human timescale, and from a specific moment in human history, and a specific set of situated ways of seeing and situated knowledge, and put it into a context that is much broader and universal. And, at the same time, there’s an understanding that those things don’t translate, and can never translate. So, what is it exactly that you are doing, then? For me, that was the central question of The Last Pictures. Cosmism provided a much more helpful way to think about those kinds of questions than a kind of Western, riding off into the sunset, cowboy version of space — or even a conception of space characterized by NASA and the people who worked on the Golden Record project, which was still very much the imagination of an encounter with an alien civilization or something similar.

TP: For me, a lot of different threads fed into thinking about the spacecraft itself as a kind of sculpture. On one hand there is a question which has to do with the politics of space, with looking at the history of space flight, and then asking what kinds of objects humans have put into space. Historically, those kinds of objects fall into three categories: military satellites, communication satellites, and scientific satellites. And that’s it — that’s all of space flight. And I would go further to say that all commercial and scientific-based flight is subsumed under military space flight. Furthermore, I would argue that there’s no such thing as space flight without nuclear war. It was invented to facilitate nuclear war, not to facilitate space flight itself. When you think about that whole history, the actual practices of space flight are entirely militarized, 100 percent, through and through.

The political provocation that I was trying to ask was this: In relation to the history of space flight, can we imagine making a spacecraft whose political logic is the exact opposite of every other object that’s ever been put in space? One that has no military value, no scientific value, that is somewhat radically aesthetic, but whose aesthetic creation has very different kinds of politics built into it? That’s the imagination. Now, I actually don’t think that’s ever possible to achieve, but that is one of the animating ideas. And there are many contradictions within that, and that’s fine. There are always contradictions with things in the world.

A second set of ideas informing it are, again, influenced by cosmism in a way. And when I say...
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aerodynamics. When you’re in a low Earth orbit or
reasons. The other reason has to do with
ballpark of cylindrical shapes for reflective
shape for doing that is something much more
different question. It turns out the most efficient
area that can reflect light. The most efficient
object that has the maximum amount of surface
imagine something else.
Third, the decision to have the object a
reflector is also a very cosmist thing to do,
perhaps. The Last Pictures was a reflector as
well. They’re both cosmist in the sense that you
create an object that can only ever be
understood through the particularities of your
moment in time, and through the particularities
of the weight of what you bring to it. Space is a
fantastic backdrop to be able to ask those kinds
of questions, because we have no idea what
space is like. Space is mostly just what we
imagine it is. The idea of a reflector as an allegory
makes that very explicit: the thing that we see is
the reflection of the thing that we want to see.
Finally, there were aesthetic as well as
technical reasons for the diamond-shaped
Orbital Reflector. The technical reasons are two-
fold: on one hand, you’re trying to design an
object that has the maximum amount of surface
area that can reflect light. The most efficient
shape possible to meet those criteria is a sphere.
We’re actually not interested in surface area per
se, but in reflective surface area, which is a
different question. It turns out the most efficient
shape for doing that is something much more
cylindrical. For aesthetic reasons, I didn’t want it
to be a cylinder, but it needed to be in the
ballpark of cylindrical shapes for reflective
reasons. The other reason has to do with
aerodynamics. When you’re in a low Earth orbit or
even a medium Earth orbit, a spacecraft
experiences small amounts of atmospheric drag.

But as you go further up into space, there isn’t a
specific line that separates the Earth’s
atmosphere from outer space – the atmosphere
just gets thinner and thinner and thinner, to the
point where, even hundreds of kilometers up in
space, there are still particles of carbon dioxide
and oxygen evaporating into space. When
satellites hit those particles, it creates friction,
and the satellites slow down and are eventually
brought back to Earth. Satellites have to
continually boost themselves into higher orbits
to stay up. By creating more of a fuselage shape,
you can minimize the effects of that atmospheric
drag, and therefore allow your spacecraft to have
a longer time in orbit. All of those things came
together, so there were very serious technical
restraints on the possible range of shapes that it
could take. And within that possible range of
shapes, I chose the diamond.

AF: I would like to further investigate your
reference to public art, because this is indeed
another peculiar aspect of your artistic research.
Hypothetically, The Last Pictures could be picked
up by somebody in the future and decoded, while
Orbital Reflector is even more radically public. To
me, your interest in the concept of the “public”
also resonates with the idea of the “common”
that was at the core of Fedorov’s theoretical
work, published posthumously in a volume titled
“The Philosophy of the Common Task.” There is
an interesting relation between this and what
you said concerning the politics at play in our
lives. The reality of national politics did influence
your work in a very real way. When the US
government shut down between 2018 and 2019,
this unfortunately broke the connection with the
satellite used for Orbital Reflector. This event
might be interpreted as the intrusion of fate,
which is a huge topic, especially in contemporary
art. Did it change your own understanding of the
artworks, or the entire project at large?

TP: That’s right. Despite trying to make this
radically public artwork, you are still constrained
by the fact that the work must be made within a
nation state structure. Individual states regulate
space launches, and so you can have a little bit
of freedom in terms of how you pick what
national system you want to be regulated by. But,
regardless, you’re gonna be regulated. In the US,
that regulation is done by a combination of the
FCC (the Federal Communications Commission),
the military, and NASA. When we launched the
satellite, we were in communication with it. It
was a small satellite initially – about the size of a
shoebox. It was launched in a collection of other
satellites, but because ours was then going to
blow up to be a gigantic mirror, we needed to
make sure that we were not going to hit
somebody else’s satellite when we did that
So we needed to track it and give it a little bit of time so that it would move out of the way of other satellites. We were tracking it and communicating with it. To make that final maneuver, we needed to get a sign off from all of those agencies. But in the meantime, the Trump administration closed down the government because they wanted Congress to fund a giant wall across the border between the US and Mexico. They basically held everybody hostage in order to get the money to build this wall. And so, the government was shut down for around six weeks. During that time, we still needed to get the permission to expand the mirror, but there was nobody to call. The people at all of the agencies we needed to speak with were furloughed. There was no official mechanism left to release the giant reflector. In a very real way, the fact is that Trump’s wishes to build a wall with Mexico killed the Orbital Reflector project, which is obviously ironic for many reasons. In a way, it proved the point of the project, or one of the points of the project, which was to think about the relationship between the public and territories and borders. For me, it was a perfectly legitimate resolution to the project. It wasn’t the one outcome I expected, nor the one that we had planned for, nor the one that we had engineered. But from a conceptual standpoint, I think it is a perfectly fine way to end the project.

AF: Do you ever consider replicating this project?

TP: For me, the project is finished. I have a backup satellite that we built. There is the material existence of the project, which has more to do with the conversations produced in the process of designing it, and in engaging with the imagination of it. This is really the point of many of these kinds of projects. And that part was very successful, in my opinion. So I’m not actually sure what additional value trying to have a second launch would bring to the table.

AF: Kazimir Malevich, a reference for your project, left behind a great deal of writing. One fragment from his writing comes to mind. In a 1919 essay reflecting on Suprematism and its philosophical system, which is based on the use of colors and shapes, he ended the text with: “the white, free depths, eternity, is before you.”² He noted himself that the final quest for eternity was a central subject of his research. I read this as a poetic statement that can of course be connected in various pragmatic ways to his work. Are infinity and its poetic drive also a reference point for you?

TP: For me it’s not these transcendental questions of infinity or form, and more about finding a way of translating those into practical
1. Uomo senza mondo

Noi a torto passiamo per uno che ha trascorso dieci - un'occupa-
zione davvero non molto diversa - a ritornare l'immagine di un
mondo aperto ed esteso nello spazio, a mettere in guardia l'u-
manità dall'autoestrusione, da un "mondo senza uomo" (forse
però senza vita).

Questa mia "idea fissa" (come la riprese un Bloch confun-
duito senza speranza all'eterna speranza) effettivamente mi ha ac-
compagnato lungo più di metà della mia via filosofica (se mi è
concesso dire del "senso apocalittico" - senza attribuzioni -
che mi porta affer "accompagnato"). Ma questo "occupare" di
una fessura possibile, che iniziò il giorno stesso di Hiroshima, il 6
agosto 1945, pur senza tradursi subito in "testi", rappresenta in
fondo (per adottare una formula di Heidegger) una "svolta", un
rivoluziunamento del mio orizzono tema principale: Tant'è vero
che prima della data di venuta quasi tutte le mie occupazioni,
speculative, politiche, pedagogiche, letterarie - una distinzione
che peraltro mi appare piuttosto priva di senso - si riferivano al
contrario "l'uomo senza mondo". Così intendo con questa for-
mula?
Diverse cose.

"Uomini senza mondo" erano e restano coloro che sono coerenti
e vivono all'interno di un mondo che non è il loro; un mondo che,
sebbene venga prodotto e tenuto in funzione dal loro lavoro
quotidiano, non è esso per loro, all'interno di un mondo per il quale sono presenti e in
funzione del quale sono certamente utilizzati, ma cui model-
l, scopi, linguaggio e gusto non sono connessi loro, né sono
loro concessi.

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projects tried to locate questions that I think: both Orbital Reflector and of The Last Pictures by very similar kinds of problems. That was true people in the sciences were originally animated imaginative questions, I found out that a lot of big questions. But, they’re not. And so, in the I thought those fields were asking these kinds of explain the constraints. Repeatedly, I found solve this problem, explain it to them, and it needed be solved in three or four or engineering problem that I had no idea how to impossible happen. For example, while building communities of people that can put different skillsets together in order to make the impossible happen. For example, while building The Last Pictures I often encountered a technical or engineering problem that I had no idea how to solve, and it needed be solved in three or four days, and it was Christmas, and there was no budget. I would get on the phone and call every single person I could find in the world that could solve this problem, explain it to them, and explain the constraints. Repeatedly, I found people that were excited and offered to help. I went into engineering and science because I thought those fields were asking these kinds of big questions. But, they’re not. And so, in the process of asking these more poetic or imaginative questions, I found out that a lot of people in the sciences were originally animated by very similar kinds of problems. That was true of The Last Pictures and Orbital Reflector: both projects tried to locate questions that I think many get excited about, but that are not actually addressed in the fields that could try to answer them.

TP: Today, people tend to think about science as a way of looking at things, of experimenting with materials, for trying to understand outcomes or to develop ways of seeing that allow us to interpret the world in different ways. I see lots of similarities between that and art, and historically these things have at times been indistinguishable from one another. What troubles me about the reality of art and science in the (kind of) postwar era is that science has been intimately and inseparably connected to institutions of power, whether those are corporations, militaries, or industries of science. I see and am wary of what science gets out of the collaboration between art and science. I’m not so sure what art gets out of the deal.

Having said that, both The Last Pictures and Orbital Reflector were only possible because very skilled scientists worked on them. What was fun about both of those projects is that neither should not have happened. A big part of the project, in other words, is the creation of communities of people that can put different skillsets together in order to make the impossible happen. For example, while building The Last Pictures I often encountered a technical or engineering problem that I had no idea how to solve, and it needed be solved in three or four days, and it was Christmas, and there was no budget. I would get on the phone and call every single person I could find in the world that could solve this problem, explain it to them, and explain the constraints. Repeatedly, I found people that were excited and offered to help.

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think if you take a different kind of Fedorovian approach, you can say, well, are there ways in which we can collectivize knowledge which we don't have to be alienated from? That’s a different system, but maybe the scale of the individual versus technology is not the most useful scope within which to think about these contradictions. Having said that, throughout Fedorov's work, as well as Marx’s, there is a kind of transcendental communism. That’s the way I like to read it. I actually don’t think that it’s necessarily meant to be there. It's way more religious and weird, which we don't talk about that much with Fedorov. Fedorov was not a great guy as far as I’m concerned. Some of the ideas are fun to play with, and some of them are really not.

But the point is that I think one can imagine a society in which there can exist large technological infrastructures that don’t have to extract value from individual humans or be turned against society. They don’t have to be turned against people. Now, within a capitalist economy, they are going to inevitably work against people and workers who are sites for extracting value. But I think that in the imagination of Fedorov, or in the imagination of Marx or Lenin, you could imagine infrastructures and technological systems at large scales that are not alienating. Again, we’re talking about imaginative structures, which for me is one of the fun things about the cosmos.

AF: You’re trying to imagine a kind of egalitarian future society, or at least more egalitarian than today. While we wait for the realization of this fantastic and ideal society: Do you think that in order to achieve better living conditions, it would be enough to be aware of these various systems of manipulating or engineering reality – which of course can be employed for both positive and negative ends? Or, do you imagine other effective means? For me this then raises the question of how you perceive the role of art today.

TP: In a project like *Orbital Reflector* – as well as *The Last Pictures* – the strategy is to make objects that are kind of radically nonsensical. That are just really weird. Like why did you do that in order to point out the fact that we could say the same thing about infrastructures that we take for granted? And we can look at a project like *Orbital Reflector* and say, why did you do that? Well, we could ask the same question of nuclear weapons. We could ask the same thing about rockets in the first place. We could say: that was a terrible idea, why did you do that? And I’m not saying *Orbital Reflector* was a terrible idea, but the rhetorical or artistic strategy was to make objects whose logic tries to contradict the system that they emerged from.

For a while, I called them impossible objects. One impossible object is a spacecraft that doesn’t do anything and doesn’t make money for anybody. It is just meant to be an aesthetic object, and it’s created by working within the existing space industry. That is not the kind of object that would emerge organically from the existing industry. Though, “organically” is a tricky word. But, all the same, it’s not something that the logic of the system would tend to produce. I also think about the works as opposite objects somewhat. In a way, *The Last Pictures* was about imagining what it would mean to try to take responsibility for the long-term footprint that humans have on the planet. How to have an ethical relationship with the deep changes to the planet for which humans are responsible? And even using a word like “ethical” doesn’t really apply, because the timescales are too different. Again, there is a contradiction between the ways we can think and what we can do, which are on radically different timescales. But the point is that both projects were designed to do precisely what the industries that made them possible would not do. That’s the strategy.
Trevor Paglen is an artist whose work spans image-making, sculpture, investigative journalism, writing, engineering, and numerous other disciplines.

Alessandra Franetovich is an art historian and independent curator who lives between Germany and Italy. She is currently a PhD candidate in Art History at University of Florence. Her dissertation research addresses the concept of the archive as a device to artistic self-institutionalisation, and investigates the role of archival practices in the construction of Russian contemporary art, through the case study of the Archive of Moscow Conceptualism owned by the artist Vadim Zakharov. She has led lectures, seminars, and conferences on her research in several European countries. As a curatorial assistant, she works with museums, art institutions, and galleries in Italy. As an independent curator, she has curated exhibitions and collaborated with art galleries, non-profit spaces, and festivals.

