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Image:

Near Nogales. Maximally Stable Extremal Regions; Good Features to Track, 2017
Courtesy of the artist and Metro Pictures, New York

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MACHINE VISIONS

TREVOR PAGLEN

28 JUN. 2018 — 30 SEP. 2018

MUSEOTAMAYO

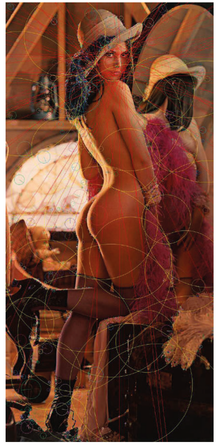
Trevor Paglen researches and articulates the ways in which digital technologies transform images, from their generation to their consumption, along with the different processes of storage, data analysis and means of transfer. For *Machine Visions*, Paglen presents, on the one hand, works that evince the different technologies behind image capturing for the purpose of surveillance. On the other hand, the exhibition gathers a series of works which put into question the way machines learn to see. In this interview, the curators of the exhibition spoke with the artists about the pieces featured in his first solo show at a museum in Mexico and Latin America.

You began your career studying photography and then pursued a PhD in Geography. Throughout the years, your research has intermingled both fields of disciplines as well others such as journalism or engineering. An important aspect your work inspects how surveillance as a process of image making intends to expand territories of control, either physical or social. Along these lines, you also study how technologies we use domestically were created as military projects (like the internet or satellite navigation) or developed thanks to warfare-related research (like mobile cameras). How do you reckon warfare technologies are affecting visual culture and the way we relate to image making? And, for that matter, how do you think this overflow of information in an extremely visual culture affects how we view art?

One of the big issues I've been trying to understand for a long time now has to do with the automation of vision and perception more generally. We live at a time when imaging technologies are not only autonomously creating images, but also starting to autonomousl interpret them. A very simple example would be something like an "Automated License Plate Reading" (ALPR) system. These are cameras installed in cities and on the back of police cars that automatically take a photo of every car passing by, read the license plate, and put that information into a database. It's a system that takes pictures, interprets those pictures, and does something with those interpretations, all without any human 'perceiver' in the loop. These kinds of vision technologies were of course first developed for the military in applications like guided missiles, Heads Up Display (HUD) systems in fighter jets, and "smart" weapons more generally, but they are now ubiquitous, including places we might not imagine them to be such as the backends of Facebook, Google, Amazon, and all sorts of communications platforms. I really do think that the development of these kinds of autonomous sensing systems signifies a new moment in visuality—one that is probably even more significant than the development of photography or perspective at past moments in time. This automation of vision, and all the forms of power that go along with it is really what our exhibition is an exploration of.

How have these changes have affected the way you produce art?

I think in two main ways: on one hand, I want to try and see how the introduction of planetary-scale sensing systems—whether they're military satellites in the night sky or mass-surveillance systems attached in undersea cable networks—become allegories for the moment in history we find ourselves living within. Put another way: what does it mean to look up at the night sky (something people have been doing for tens of thousands of years) and in addition to the constellations and stars, seeing hundreds of military satellites and tens of thousands of "space-debris" objects. On the other hand, there are different "mechanics" of seeing that are created through things like military satellites or guided missiles or drones or artificial intelligence. Whatdoes the world below look like through the eyes of a guided missile, a Facebook algorithm, or a reconnaissance satellite? To me, this is an exploration of the mechanics and politics of perception itself. The Other Night Sky, for instance, involved many hours of looking for locations in the desert, with the intention of perusing the sky in search for unregistered satellites. The work inverts the point of vision precisely towards what wants to remain invisible, and by turning the viewpoint it makes clear a process of colonization, in which the colonizer fabricates the image of the other but never of themselves. Would you agree with this reading? I definitely think that imaging technologies like satellites have particular forms of power built into the ways that they see. It's also definitely true that sensing infrastructures such as reconnaissance satellites or Google's artificial intelligence systems centralize power in specific places and in several ways. There's a centralization of power in terms of the infrastructure—in the case of space satellites, it means centralizing state power in government ministries that launch, operate, and collect intelligence in secret. In the case of something like Amazon, it's centralizing planet-scale infrastructures of data centers, fiberoptic cables, software platforms, protocols, as well as the collection and storage of unimaginable amounts of data by very centralized corporate actors. I agree with your statement about these being a colonial systems insofar as they are extra-territorial, global, centralized, and designed to bring aspects of everyday life previously inaccessible to centralized military or capital forces under their purview.

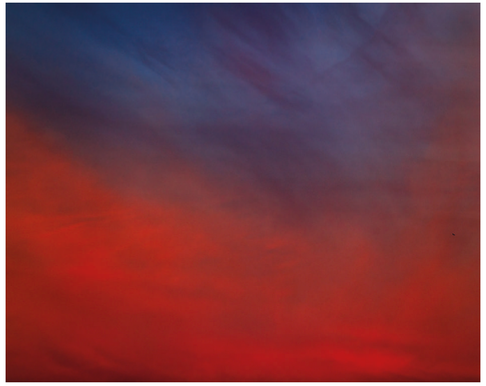


Lenna: Empress of Invisible Images, Queen of the Internet, 2017
Courtesy of the artist and Altman Siegel, San Francisco

The Great Hall (Corpus: The Interpretation of Dreams) Adversarially Evolved Hallucination, 2017
Courtesy of the artist and Altman Siegel, San Francisco

Also, one could argue that, along with the conceptual and political facets of this exercise, there is also quite a pictorial and traditional gesture to it, almost as if you were doing surveillance en plein air. How do you think about traditional art practices and categories in relation to your work?

I think about the history of images and art nonstop and it's present in everything I do. I think that when you're making art, you're having a conversation with your contemporaries, but you're also having a conversation that spans across time—you're talking to your ancestors and your descendants. A lot of the time, the task is to describe or show the particularities of the moment in time you're living. I look at things like the sky, the ocean, people's faces, the stars, etc. These are all things that artists and humans have been looking at for tens of thousands of years. I try to understand what those things look like now and how that differs from the past.



Untitled (Reaper Drone), 2010
Courtesy of the artist and Altman Siegel, San Francisco

Machine Readable Holly Herndon, 2017
Courtesy of the artist and Metro Pictures, New York

Perhaps one could argue that there are—among others—two different gestures conducting the works present in this exhibition. On the one hand, you are showcasing methods of surveillance and their implications for the individual, as in The Other Night Sky, the Drone series or Code Names of the Surveillance State. On the other, your most recent research explores how machines are learning to see. For instance, Behold These Glorious Times! reproduces the computer learning systems, where they assimilate a gigantic pool of images of a given subject (or thing) as an algorithm, which becomes a generalization of what that subject can look like. This learning process has been described as non-conscious thinking. This video work poses interesting questions, such as whether the computer learning process imitates that of humans. Or rather, are computers affecting the way we understand the action "to know", shifting its meaning to the accumulation of information?

The exhibition definitely has those two poles: one vantage point is that of a human looking at how vision machines, surveillance apparatuses, and planetary communications infrastructures have transformed the stars, the sky, the ocean, the earth, language, and such. The other vantage point is from those machines themselves: what does the world look like through the eyes of a drone, a spy satellite, a facial recognition system, a machine learning system, and so on. I think about computer vision and machine learning systems less in terms of concepts like knowledge and more in terms of concepts like power. What sorts of work are these systems designed to do? Who benefits from that work? And at whose expense does it come? For me those are far more relevant questions than whether or not a neural network mimics the structure of a human brain (my strong opinion on this is that it doesn't at all, but this gets into very obscure technical and philosophical arguments very quickly).

In works such as Fanon or Weil, computers interpret how Franz Fanon or Simone Weil looked like through an exercise of abstraction: the machine is simultaneously producing a portrait as well as producing a generalization. In Hallucinations, it seems that you take a step further. If we think how the industrial revolution introduced an important dichotomy to art, namely whether artistic production is manual or machinic, Hallucinations introduces a new level: the digital. You work creatively with computers by asking them to produce images of something that they have never seen or does not exist in real life. Computer, as opposed to mechanic devises, are generally seen as having an agency of their own, a process we cannot fully control. In this sense, could you say that your work is a co-production with computers?

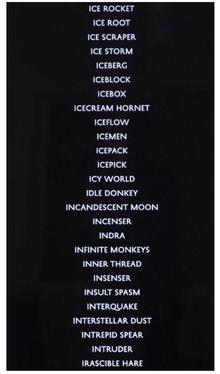
The works you mentioned are all made by inducing "artificial intelligence" systems to make images of things they "see"—in the case of Fanon and Weil, the images show what a facial recognition algorithm has determined the "signature" of their face to be. You can think of those as almost "meta-portraits" in the sense that they're like portraits of all the portraits of that person. That "meta-portrait" is used by facial recognition software to try to figure out who someone is. The Hallucination pieces are made by training neural networks how to recognize different objects and once they can do that, I use a technique to induce the network to generate synthetic images of something it's learned to recognize. I don't really think of them as co-productions with computers, because computers have no agency. It's a huge amount of work on my part to build and train the systems and then to go through the tens of thousands of results the system produces to find images I think could be compelling artworks. The process is actually pretty close to how a Sol Lewitt or other structuralist piece of art gets made than anything else.

Images:

Drone Vision, 2010
Courtesy of the artist and Metro Pictures, New York

It Began as a Military Experiment, 2017
Courtesy of the artist and Metro Pictures, New York

Code Names of the Surveillance State, 2015
Courtesy of the artist and Metro Pictures, New York



Writing texts—which are often infused with critical theory—is also a very important output for your research. How does writing act upon the creative process of your artworks? Does one usually happen before the other, alongside, or do you regard them as independent?

The writing really happens in parallel. Most of the work I do involves quite a lot of research trying to understand how different systems work from technical and critical perspectives. When I spend a lot of time looking at something, I inevitably develop opinions about it as well as ideas about how the world might be changing. When something is on my mind a lot, I'll usually try to write something just to share my thoughts with anyone who might be interested. But writing and making artworks usually are going side-by-side and definitely inform each other but aren't dependent upon each other.

**A book accompanying* Machine Visions *includes some of the most recent texts written by Trevor Paglen.*

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Trevor Paglen (Maryland, United States, 1974) lives and works in Berlin. He holds a B.A. from U.C. Berkeley, a MFA from the Art Institute of Chicago, and a Ph.D. in Geography from U.C. Bekeley. He has had solo exhibitions in the Nevada Museum of Art, Reno; the Secession, Vienna; the Berkeley Art Museum; Kunsthall Oslo; and the Kunsthalle Giessen, Germany. A mid-career survey exhibition Sights Unseen is on view at the Smithsonian American Art Museum, Washington, D.C.