

What resists the eye

[translated from French: *Ce qui résiste à l'oeil*, seminar *Le rêve des formes : Arts, sciences & cie*, Collège de France, September 2017] – Olivier Perriquet – olivier@perriquet.net

Le réel, c'est ce qui résiste... (The real is what resists). These words had remained in a fold of my memory, which ascribed them to Lacan. And rightly so, with the exception that my brain had taken care to erase half of it : the latter had said *Le réel, c'est ce qui résiste à la symbolisation...* (The real is what resists symbolization). If I am equally interested in the shortened formula, it is less for how it describes the real in the Lacanian system than for how it implicates me as a subject. The real (or rather, reality, in this abridged version) is what resists me; what resists the human being I am at the moment I experience it with my senses and my intellect and not something that I would have put at a distance by abstracting its properties. If the physical world's resistance to touch contributes to create a feeling of reality, then what if this touch occurs at a distance through gaze and thought? Where does vision, this *avoir à distance* (having from afar) as Merleau-Ponty defines it in *L'oeil et l'esprit*, find resistance and how does it contribute to one's participation in the world? Inhabited by this idea, I hereby present a series of personal installations in the field of expanded cinema. This paper is not exactly an academic essay but the presentation of a series of viewscapes on a world where experimental cinema, artificial intelligence, psychology, science fiction, childhood, space and dream all come together.

As a child, I used to practice astrophotography. I was also subscribed to magazines that were full of a multitude of photographic shots of celestial objects, taken by both professionals and amateurs. I remember the difficulty I had in understanding their scale: I had no idea how big these objects would appear to me in the sky. I know what are the dimensions of an insect, a cow, a house or a mountain because I have experienced first-hand their reality. My body has measured itself against them, I have been able to get close enough or away from them, to be in contact with them, to travel through them. However, I did not know the actual dimensions of a planet, nor how large it would appear in the sky. One of my first memories is of observing the planet Jupiter. Having read that the apparent diameter of the Andromeda Galaxy was three times larger than that of the Moon but only its low luminosity prevented us from seeing it with the naked eye, I believed for a moment that Jupiter could be visible directly in the sky, competing in size with the Moon, and that I hadn't seen it because the phenomenon was simply rare. Yet, when I first observed Jupiter under a telescope, I saw only a tiny fuzzy spot flanked by four small, barely visible dots, even more insignificant. Seemingly at the limit of my eye's resolving power, these infinitesimal stings reminded me of the white tingling that sometimes appears in the eyes after a great physical effort; and this delicate scene, subject to

the perturbations caused by the Earth's atmosphere turbulence, had the wrong idea to permanently leave my field of vision because of the Earth's rotational motion, amplified by the telescope and imperfectly counterbalanced by the stepping motor I had equipped my equatorial mount, making observation even more difficult.

From hour to hour I noticed however that the position of the four small dots was moving around the blurry spot. This show captivated me. The image of Jupiter and its four largest satellites in front of my eyes was far from the photographs I found in magazines, but it fascinated me more because I could observe it by myself and thus get intimate proof that it existed. Now that I finally understood its dimensions through this technical equipment, I could include it in my own world. Unknowingly, in the intimacy of my childhood I was replaying the historical episode in which Galileo, the inventor of the astronomical telescope I had built in my room, had made this observation for the first time, several centuries earlier. Later I discovered that adults too are animated by the same fantasies: before the New Horizons probe delivered high definition images of Pluto in 2015, the most accurate images that existed were those taken by the Hubble Telescope in the 1990s and they were not that different from the shots of Jupiter I obtained with my homemade telescope.

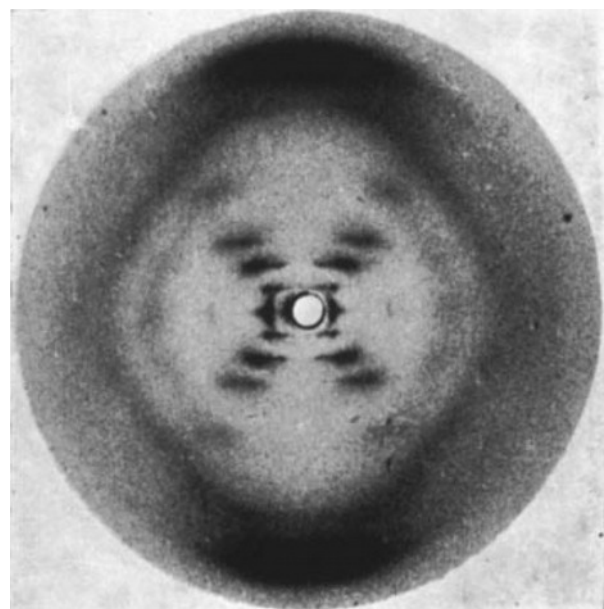
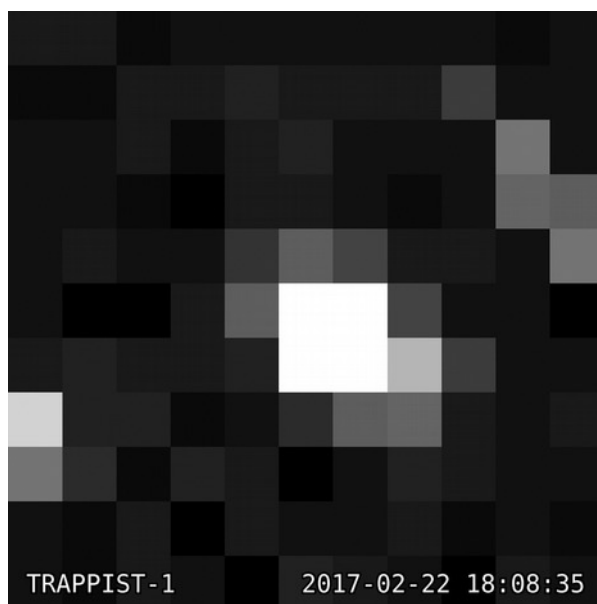


Image of an exoplanet obtained by the TRAPPIST program of NASA (left) and Photograph n°51, showing the DNA structure in double helix, obtained by Rosalind Franklin (right)

The high-resolution images of techno-scientific instruments are often appealing by their canonical beauty (think of microscopic images of the living world, for example) but are they resistant to the eye? Isn't it a beauty the mind soon enough washes away from its memory?

The scientific image named *Photograph n°51*, taken in 1952 by Rosalind Franklin and her assistant after dozens of hours of work, left its mark on people's minds. This image represents one of the conformations of the double helix structure of DNA acquired by X-ray diffraction. At that time, several research teams were competing to find the structure of the DNA molecule and this photograph sparked the discovery. Communicated to James Watson and Francis Crick, behind Rosalind Franklin's back, who awaited the conclusion of her experiments to publish them, *Photograph n°51* helped them win the competition by providing the right model for DNA, and thus be the sole winner of the Nobel Prize. "*The instant I saw the picture, my mouth fell open and my pulse began to race*", confessed James Watson...

Photograph n°51 is an image that objectively has nothing very spectacular while it is of crucial significance for the person who knows how to decipher it. This X-ray image, like the previous one under the telescope, is emblematic of a situation in which there is a contrast between the emotion it can arouse and the ordinary aspect of the image. This is evidence that information and desire are first and foremost on the side of the person who looks at the image.

The installation *Close encounters of a remote kind*, which I created in 2013, is inspired by this type of imagery. A large image is projected onto the ground from a remote position in a configuration that recalls both the camera obscura and the exploration of the seabed or the overflight of the rocky surface of a distant planet. It shows moving black spots that are not immediately recognizable. These forms, featuring aquatic animals, come from a public aquarium located in Canada, where a webcam has been placed in front of a big tank with white whales swimming in it, permanently broadcasting this video stream on the Internet. An algorithm, performing pattern recognition in real time on this stream, detects and tracks the whales, turning them into massive shadows by blowing up the portion of image being tracked.

The area of the image that is magnified sometimes consists of only a few pixels and is constantly distorted by anamorphosis. The algorithm can lose its target at any time and follow another one, sometimes just for a fraction of a second. The resulting choices of framing and editing (if referring to the terminology of cinema) occurring in real time do not stem from a human decision but are carried out by an algorithm that proceeds according to its own logic. The image, however, is intended for a human eye, but an eye that would have freed itself from a predisposition to recognize forms and to name them. Unless this ability is precisely what is being questioned?

“Imagine an eye unruled by man-made laws of perspective, an eye unprejudiced by compositional logic, an eye which does not respond to the name of everything but which must know each object encountered in life through an adventure of perception.”

This pristine nature of the eye, advocated by experimental filmmaker Stan Brakhage, is an invitation to reconnect with the world by de-familiarizing the way we look at it, as a way of returning to an early stage of cognitive development where the language has not yet delineated the world and where the visual organ is close to its primary function, which in the animal can be linked to vital needs and even its very survival.

Imagine an eye (2017) is an installation where I revisit Brakhage's view by interpreting it in the light of artificial intelligence. Presented as a futuristic fiction, an artificial eye observes shapes, trying to identify whether they are indeed human in nature.

In *Computing Machinery and Intelligence*, a seminal article published in 1950, mathematician Alan Turing, drew inspiration from an imitation game to imagine a protocol where a human player must determine by engaging in a conversation with an invisible partner via a chat interface whether he is dealing with another human or an artificial intelligence. Such a system (a chatbot, in this case) is intelligent in the sense of Turing if the examiner is unable to discern the human or artificial nature of the interlocutor. Starting from this protocol, I devised two modifications: first, the examiner would be an artificial intelligence himself; and the test, rather than using language, and the narrow channel of a chat interface, would be a vision experience, one that would involve the body in its entirety. I was also inspired by an unexpected coincidence in the English language: the word fitness, which refers to a sporting practice, is also a technical term from the Theory of Evolution, which refers to the ability of an organism to survive in a given environment. I thus collected on the Internet video sequences of people practicing fitness by imitating animals, which I gave to recognize by a vision algorithm as well as other sequences, showing biomorphic robots.

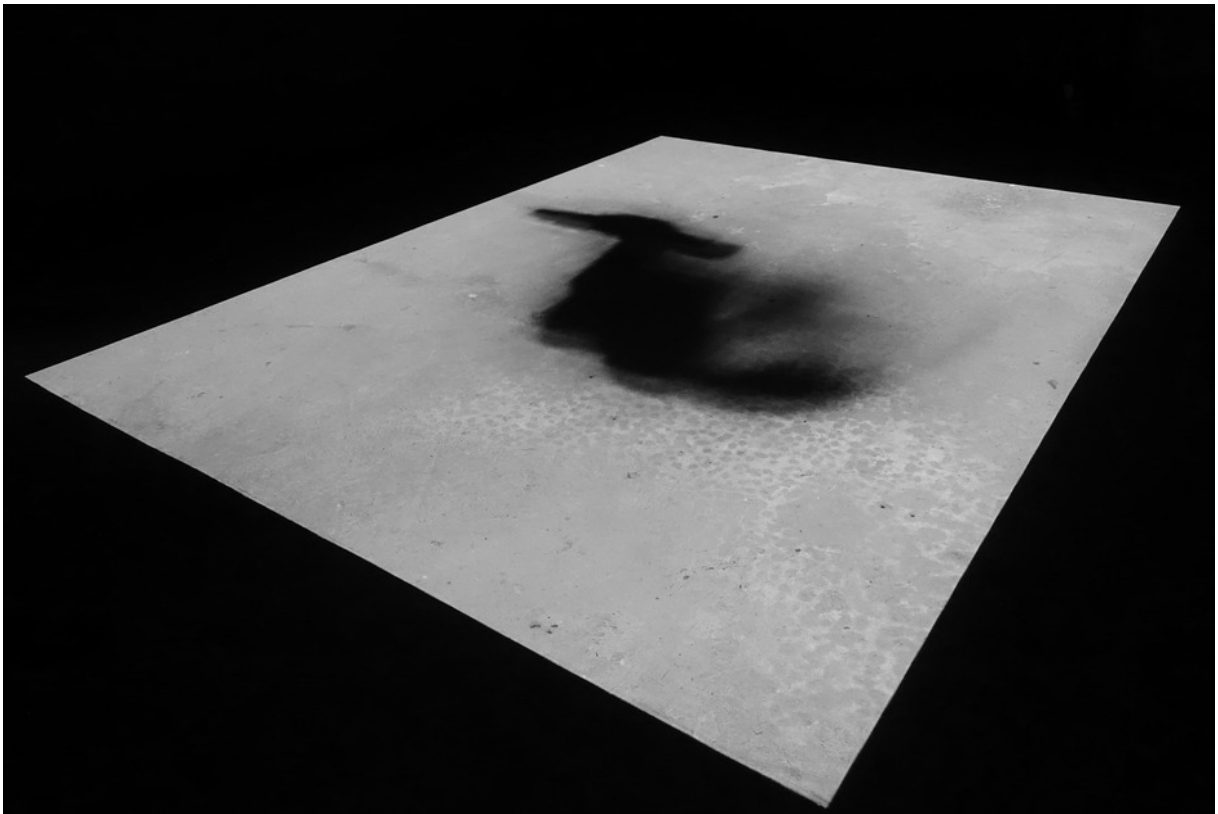
Presented as a small projection on an old cathode ray tube whose round shape could suggest an eye (the organ is however disproportionate, to such an extent that it is difficult to imagine a body to which it could have belonged), this installation echoes the automated pattern detection systems used in surveillance cameras, yet revisiting them in a poetic and benevolent way. It features a Turing Test that is practiced through the eyes rather than through language and where the terms are reversed: a non-human subject observes a form, trying to detect human contours in it.

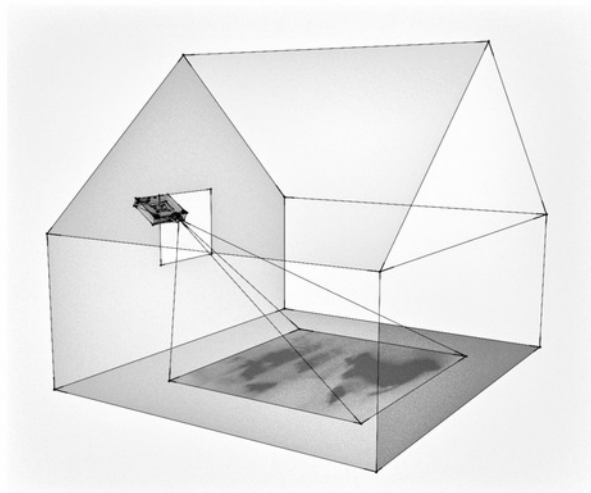
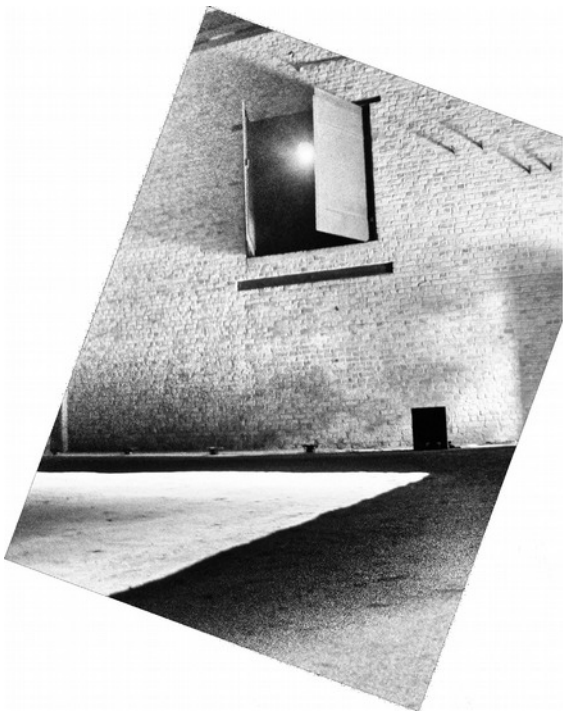
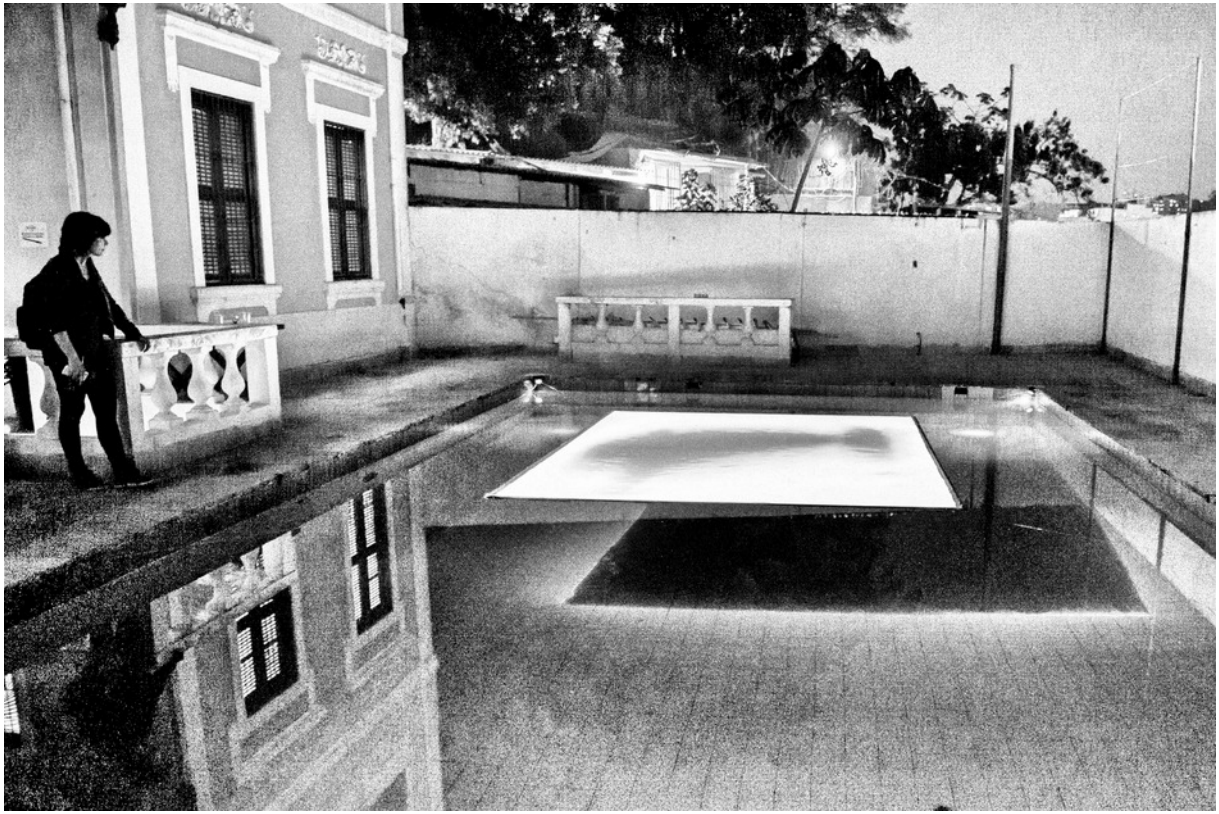
Post machine, which was commissioned by the Centre National d'Etudes Spatiales for the event *La Nuit Blanche* that occurred in Paris in 2016, also features non-human forms, which even vanish into a dream. Assuming a formal analogy exists between the evolution over time of the spacecraft blueprints and that of living beings (the structures appearing on one model are sometimes preserved in the following models, but can also disappear or reappear elsewhere, in a different form), I have created a fiction where these drawings evolve by themselves, as if they were driven by an internal determinism. Having encountered in the collection of documents that I used two symmetries typical of living beings – radial and bilateral – I exploited the first, which reminds me of the shape of stars, although the sphericity of the later is the result of other natural forces. As if they were subjected to the same forces as the celestial bodies towards which the devices they prefigure will later move, these plans appear, deform, inflate and rotate like planets that would be approached from space and then vanish, sometimes causing gaping holes in the image, revealing the emptiness of the outer space.

These images are staged as a device evoking an optical bench of human scale where a traditional technique of optical illusion creates an image that abstracts itself from its support and floats in the exhibition space (I use the technique of Pepper's ghost, which was popularized in the 19th century and is used in performing arts to project holograms-like ghosts). In dreams, ordinary images rearrange themselves, defeating the causal organization of the world we are familiar with to participate in a strange but no less resistant arrangement, and the whole could very well resemble the dream of an astronomer who fell asleep at his worktable after waking too late... In a book entitled *L'incertitude qui vient des rêves*, Roger Caillois questions the state of reality we are granting our daytime experiences. How to be sure, after all, that a memory is really that of an event experienced when awake and not during a dream?

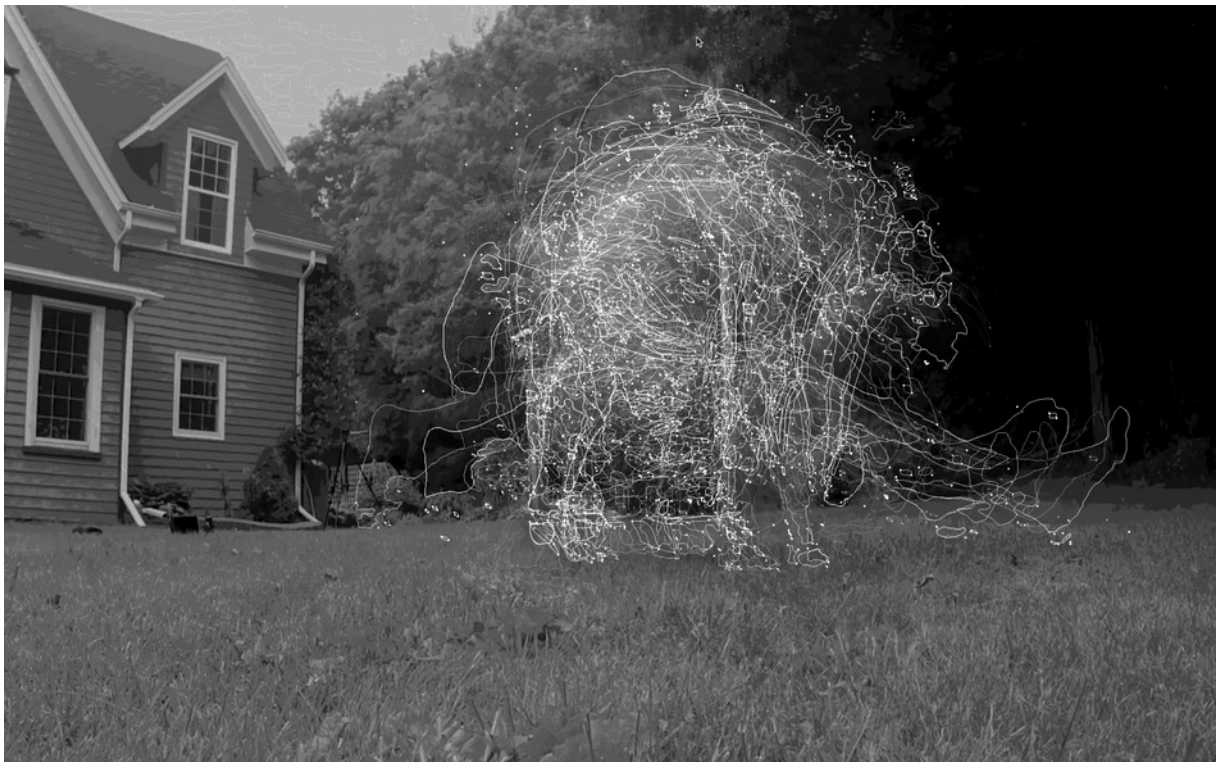
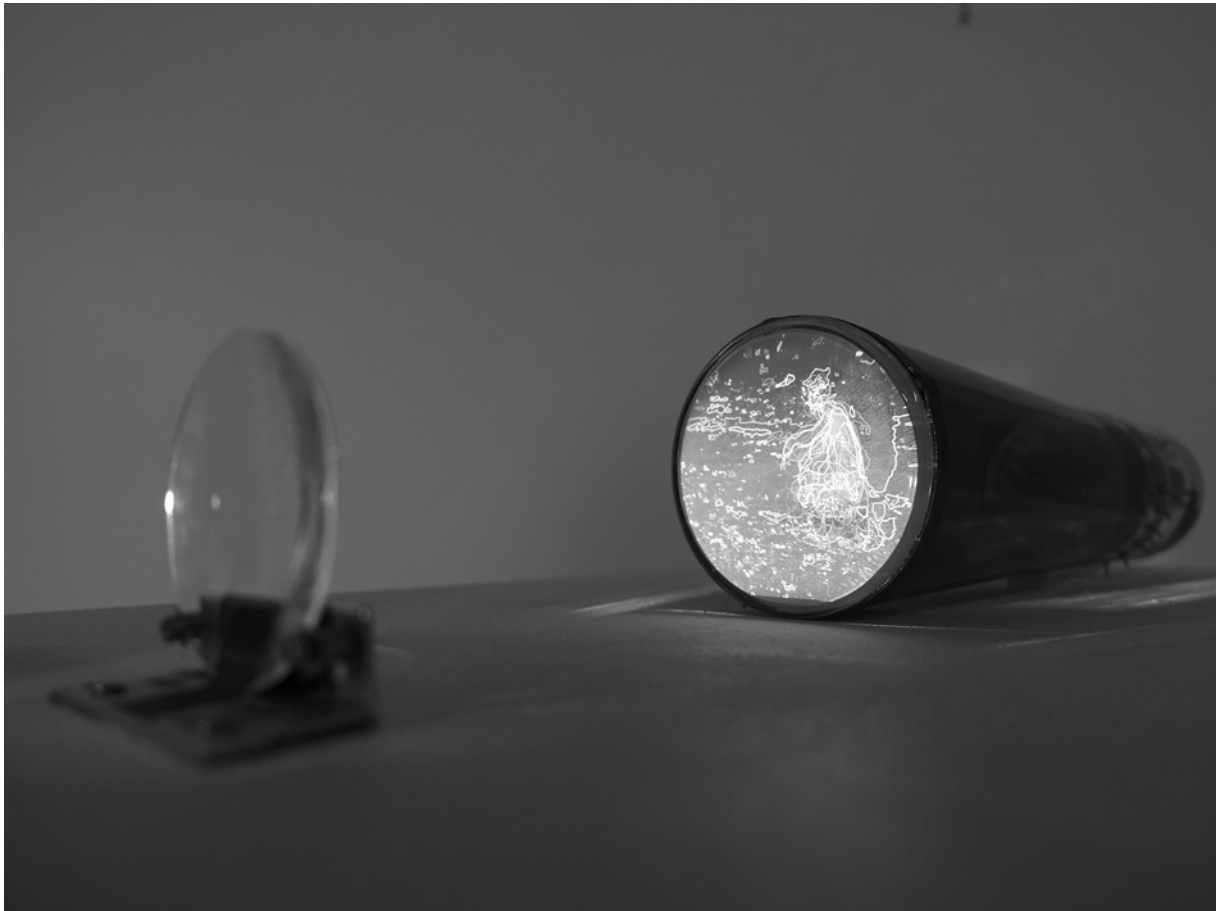
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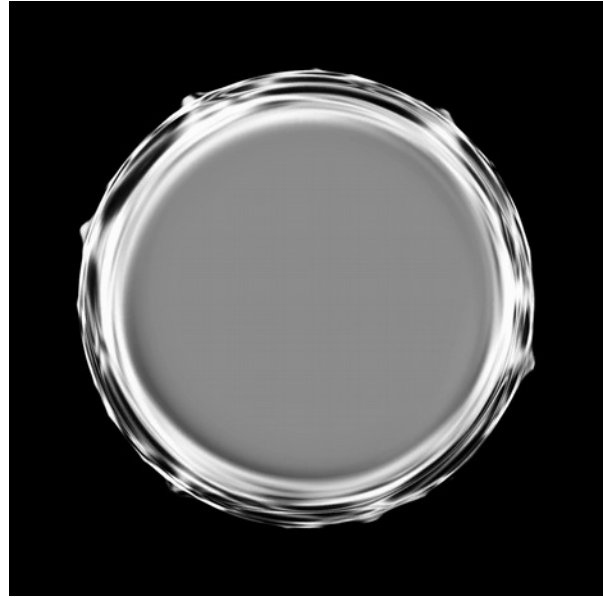
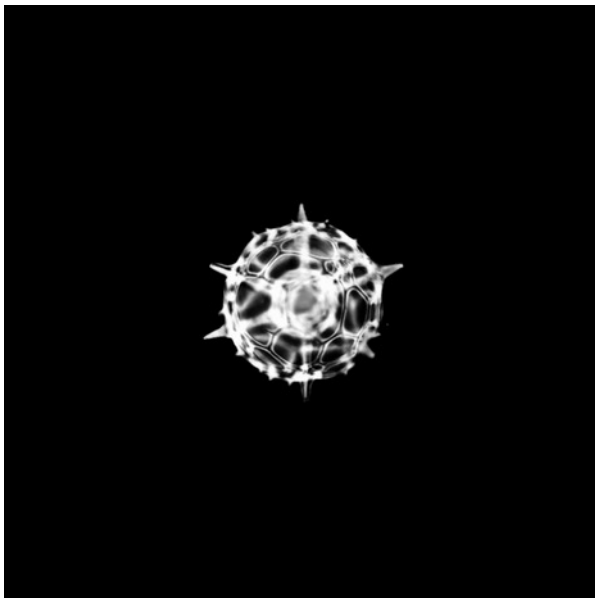
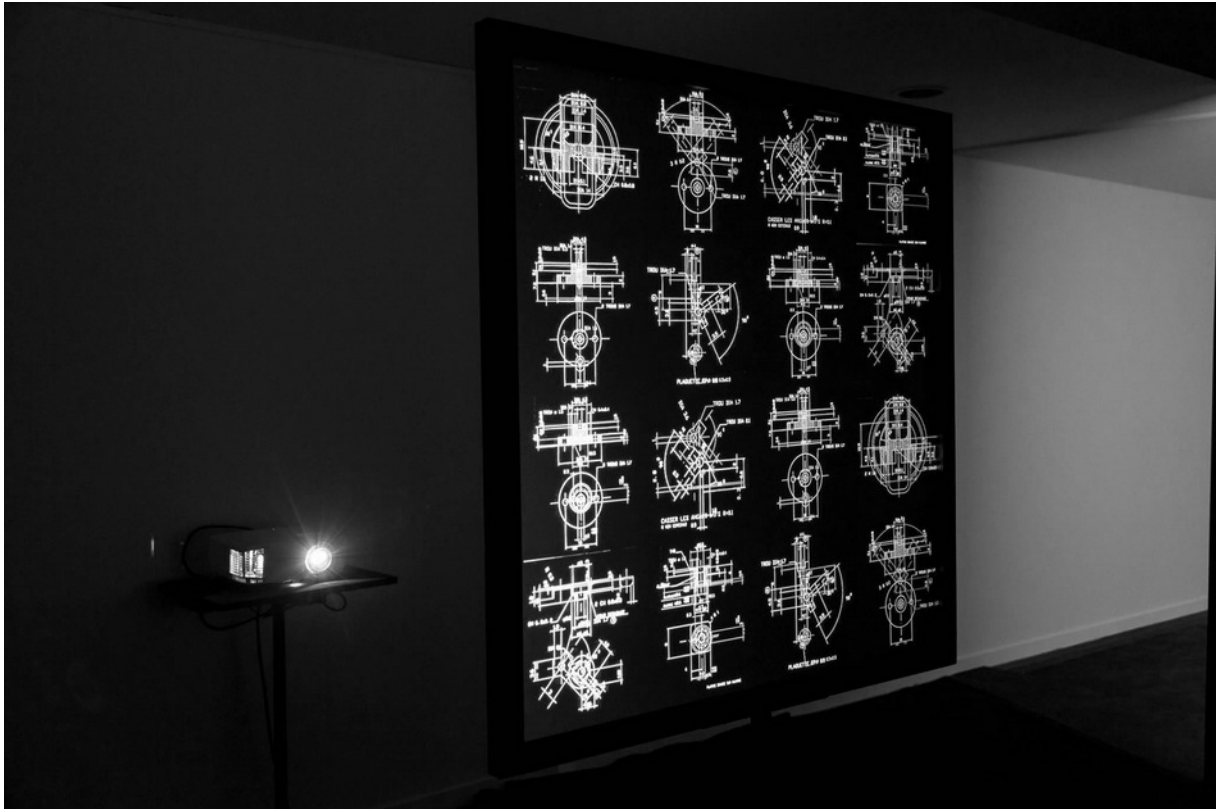




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