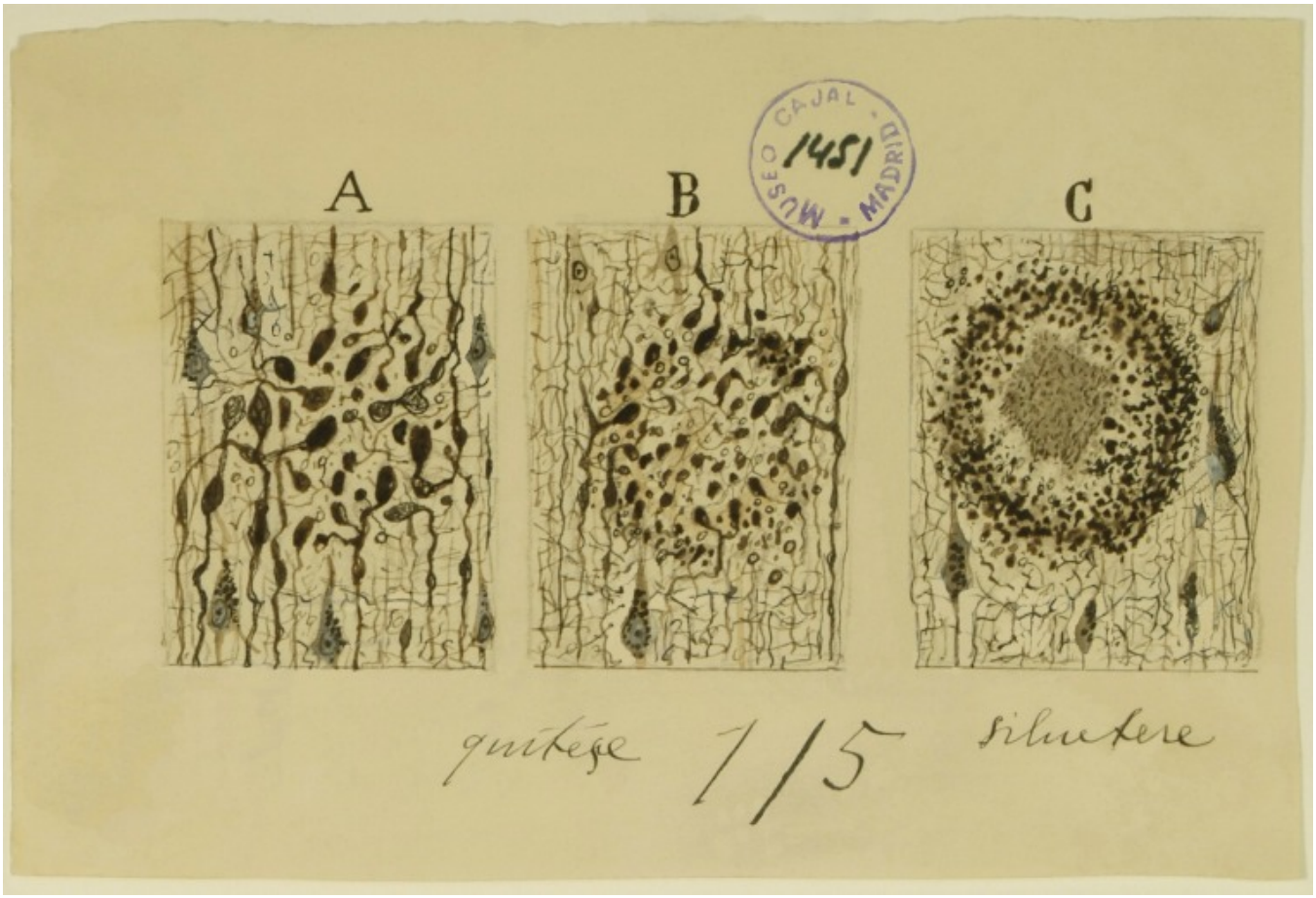
Playing dead

“The ability to study the world through empirical observations and to reach conclusions regarding the nature of reality has completely changed the way we experience the world around us.” Bar Yerushalmi on art and the science of consciousness at the exhibition “States of mind: Tracing the edge of consciousness,” showing now at the Wellcome Collection in London.

Critique / Bar Yerushalmi March 27, 2016

Shavasana1, or the death position, is a yoga posture in which a person lies on his back, legs slightly spread, hands laid at the side of the body, the palms turned up. To practice shavasana is to be perfectly still, the only movement being the motion of consciousness over the body. Many yoga practitioners see it as one of the most important in the lexicon of positions, as it embodies the wish to embrace death, to be released from the shackles of the physical body and be reborn as an autonomous consciousness.

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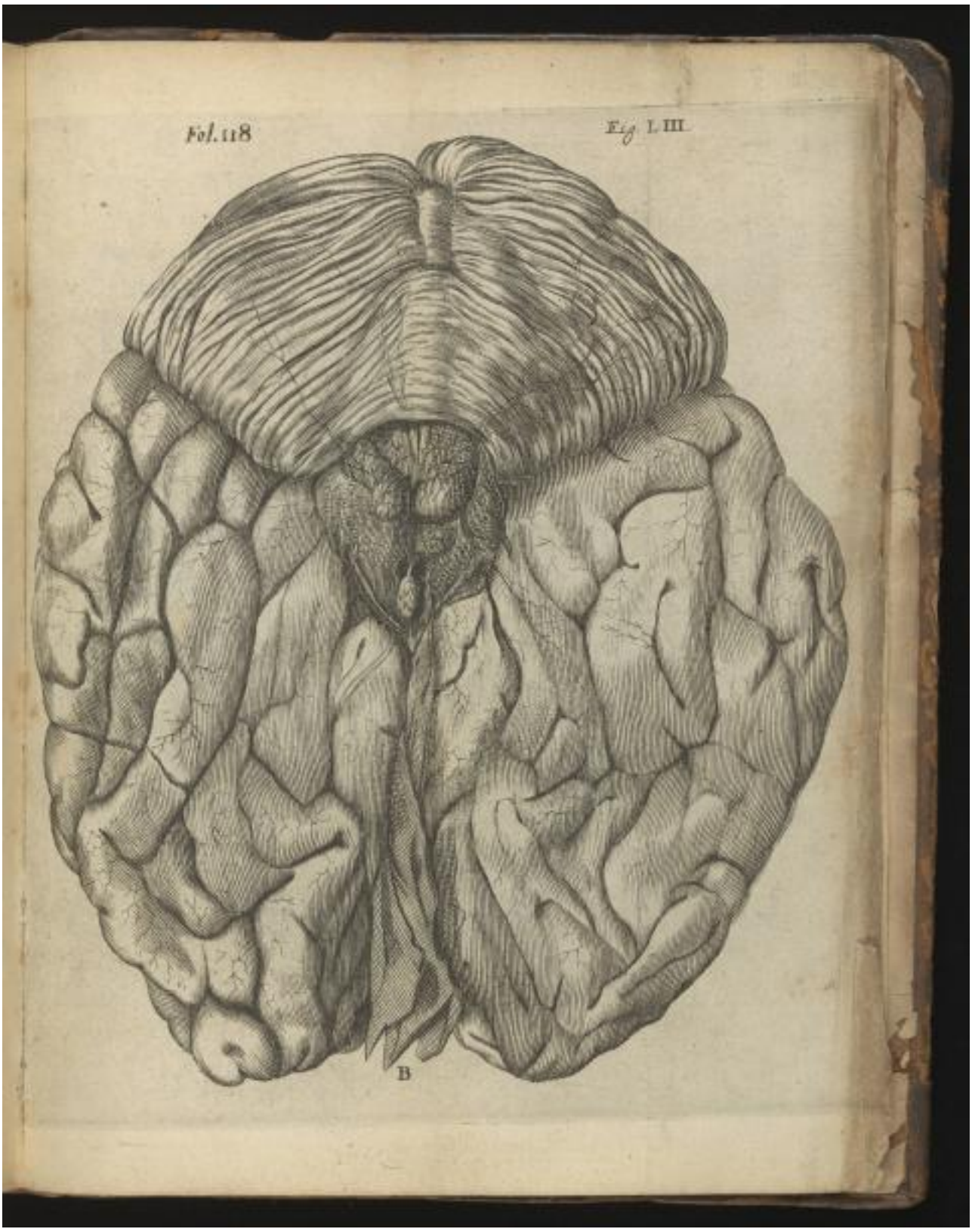


[1]Formation of Alzeimer Plaque - 4245.
Cajal Legacy. Instituto Cajal (CSIC). Madrid. Features in: States of Mind: Tracing the Edges of Consciousness, Wellcome Collection

The ability to imitate death has always been, and still is, a source of both wonder and discomfort for human beings. As rational beings, we abhor the thought that consciousness may change, or even disappear. Ambivalent states such as dreaming or consuming mind-altering substances entice constant curiosity. The uncertainty regarding the existence of consciousness is accompanied by many disputes about its nature; this uncertainty is part and parcel of the development of modern science and philosophy.

Francis Crick (1916-2004), a pioneer researcher in the field of consciousness, and mainly known as one of the discoverers of DNA, claims: “the astonishing hypothesis is that you, your joys and your sorrows, your memories and your ambitions, your sense of personal identity and free will, are in fact no more than the behavior of a vast assembly of nerve cells and their associated molecules.”2

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[3]René Descartes: view of posterior of brain showing pineal in situ. NB excellent drawing of convolution.

Crick, who died in 2004, never completed his research, but the questions he has raised are still valid. Consciousness, in all its complexity, remains an unfathomable mystery. The philosopher David

Chalmers articulated it when he spoke about the difficulty of talking about consciousness, calling it “The hard problem.” According to Chalmers, the study of consciousness begun only in the 1980s, when neuroscientists and physicists started to address this existential question, which has long been in the realm of psychology and philosophy. Indeed, today science is capable of analyzing a model of the brain and of identifying conscious and neural reactions, but all we can learn from it is how consciousness feels. The gray matter has not yet divulged its secrets.

The exhibition “States of mind: Tracing the edge of consciousness,” at the Wellcome Trust Collection in London, shines a light on the elusive consciousness.

Games of hide and seek

Ever since Antonie van Leeuwenhoek, a Dutch scientist and cloth merchant, first observed the tiny creatures under his microscope, in 1672, the illusion that there’s nothing science couldn’t observe has taken hold. As Dr. Alan Bates, a professor of the history of medicine at University College London, put it in a conversation we had a few months ago: “in the 1950s we first got an electron microscope[3] in our laboratory, and suddenly it seemed that there was nothing in the world that wouldn’t give up its secrets, should we decide to look at it.” The conviction that if only we looked closely enough, a glorious truth would be revealed is still deeply rooted in the medical sciences today.

The Wellcome Collection indeed contains a few marvelous specimens from the early days of brain research. Sketches of brain cells by Santiago Ramón y Cajal (1852-1934), a pioneer of brain research, next to a drawing of the human brain by René Descartes (1596-1650). The French philosopher believed that the physical and the spiritual world were made of different substances, connected through the pineal gland in the center of the brain.

For scientists of earlier centuries, rolled-up sleeves and a set of scalpels signified a methodology of continually searching, attempting to discover consciousness somewhere inside the folds of tissue and nerve cells.

Another interesting item is a collection of photographs by the French officer Louis Darget. Darget, an amateur scientist and enthusiastic spiritualist, used to experiment with photographic plates, which he would place on his patients’ foreheads. The exposed plates, usually looking like abstract Rorschach stains, constituted the basis of Darget’s research, as he believed them to be imprints of the patients’ thoughts. Titles such as “the photograph was made by laying the plate on Mrs. Darget’s forehead while she was sleeping” not only hint at the Dargets’ private lives but also provide an interesting peek into the connection between science and photography in its early days, as well as the inventions of the Roentgen machine and the discovery of radioactivity, which have become a source of inspiration for poetic experiments of this kind.

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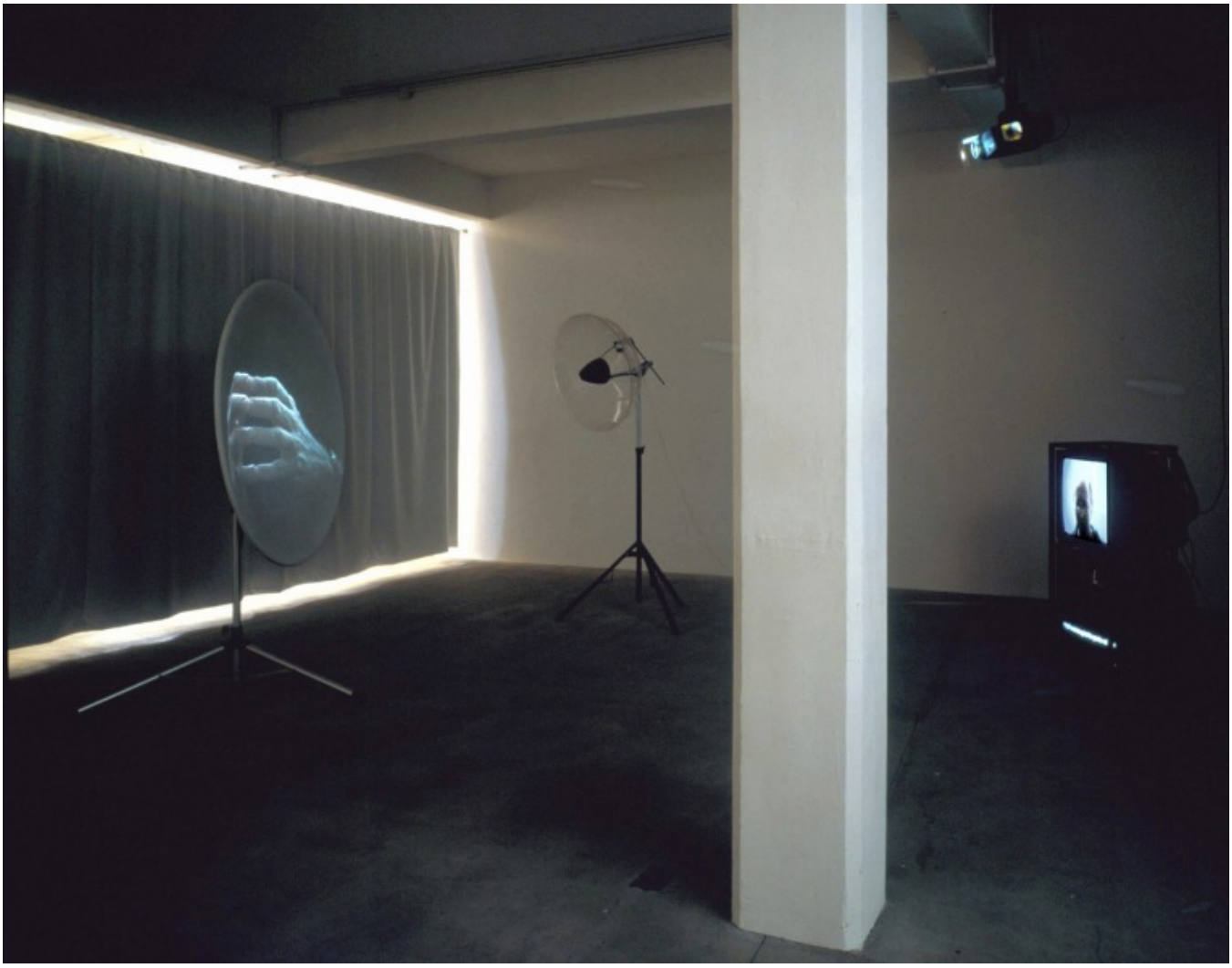


[5]Goshka Macuga. Somnambulist
2006. Courtesy of the artist and Kate MacGarry, London

One of the interesting theories in the field of consciousness research is called pan-psychism[4], which claims that everything in the world has its own consciousness. In 1992, the neuroscientist Giulio Tononi introduced a scientific formula called PHI[5], which tries to measure how much information passes through the brain at any given moment, and linked it to the consciousness potential of various life forms relative to the complexity of their brains. Tononi's theory is new, but the metaphysical idea behind it has been around for hundreds of years. The scientific search for consciousness is intricately linked to the rise of spiritualist movements in the 19th century, which in turn have been influenced by various scientific theories.

Somnambulism, sometimes called the "moon sickness," has been a rich font of various explanations ranging from demonic control of the dreamer's body to psychological theories about feelings of resentment towards the father figure. The riddle of the sleepwalker has begat quite a few horror films, as well as scientific breakthroughs. A famous example can be seen in Dr. Franz Mesmer, a German physician who conceived of the theory of animal magnetism, the belief that every life form possesses an invisible force field, which can be harnessed and used in the cure of others. The theory became the basis of a technique called "artificial somnambulism." Eventually, this method would become one of the building blocks of psychoanalysis, and be named "hypnosis," in which the therapist puts the patient into a trance and causes him to obey his commands.

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[7]Imogen Stidworthy. A Whisper Heard
2003. Courtesy of the artist, Matt's Gallery, London and Galerie Akinci, Amsterdam

One of the outstanding works in this context is a sculpture by the artist Goshka Macuga, *Somnambulist*. The work is an homage to the silent film “the Cabinet of Dr. Caligari,” a 1920 masterpiece of German Expressionist cinema, by the director Robert Wiene. The film tells the story of a psychotic hypnotist, who uses his powers to take control of the body of a young man and commit a series of murders. Macuga has created a wooden model of the young man, the victim of hypnosis from Wiene’s film. Her somnambulist lies on his back, his eyes closed, dressed in black. His face is painted black and white, like the make-up the director had used to create the sense of expressiveness in his actors. The painted face looks like a ceremonial death mask. The young man is shown as he awaits Dr. Caligari’s instructions, bound between sleep and death. The artist is resuscitating the morbid mythology of Sleeping Beauty. A close look reveals the exquisite carvings which expose the delicate mechanics behind the make-up mask, and turn the flesh-and- blood figure into a ritualistic icon, waiting to be used.

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[9]Imogen Stidworthy. A Whisper Heard
2003. Courtesy of the artist, Matt's Gallery, London and Galerie Akinci, Amsterdam

The last part of the exhibition, perhaps the most interesting, deals with the way physical or mental injuries affect consciousness. In Imogen Stidworthy's installation, *the Whisper Heard* from 2003, she sets up two recordings: one is of her son, Severin, who is in the early stages of language acquisition, and the other is of Tony, who has suffered a brain infarct which damaged the language regions of his brain, and who is in the process of re-learning speech. In the installation, both read aloud a segment of Jules Verne's *A Journey to the Centre of the Earth*, in which the main character awakes from unconsciousness, only to find himself in a maze of underground tunnels.

The raw memory of language is stirred in both of them: the artist's son, who experiences difficulty in his first encounter with the encoded world of words, and Tony, who, like Orpheus on his way back from oblivion, struggles with the need to say what he already knows, but cannot express. The linking of the two creates an aural image of stammering and failed attempts, circling with the effort to create a whole word.

The exhibition ends with two films by Aya Ben Ron. In the first, *Still under treatment*, 2005, she chooses to record patients undergoing anesthesia, before surgery. The camera follows the subjects' faces as they drift from wakefulness to unconsciousness, their tongues lolling and their eyeballs rolling back. As viewers behind a glass wall, we witness the moment of loss when the body stops functioning and relinquishes control to the clinical charge of nurses and ventilation machines.

Aya Ben Ron, Still Under Treatment, 530min, DV, 2005 (2).jpg **[10]**



[11]Aya Ben Ron. video stills from "Still under Treatment". 2005

The exploration of extreme states continues in Ben Ron's second film (*Shift,* 2009-2011), in which she follows the daily lives of vegetative-state patients at the Reut Medical Rehabilitation Center in Tel Aviv, Israel. She monitors the lives of the patients, their families, and the hospital staff. Her viewpoint is usually from the edge of the room; she watches, as a silent observer, the intimate ambivalence of those who are always at the mercy of others. Simple activities such as feeding, putting to bed, or rising, become daily heroic struggles. It is hard not to feel compassion when faced with their sober gaze, their consciousness trapped inside a non-functional body. The film concludes

with an interview with professor Yechiel Michael Barilan of Tel Aviv University, a medical ethics reseracher, who studies the meaning of his patients' lives when their physical condition prevents them from making decisions about them. "Who are we to decide who is suffering and who isn't, who should live and who should die?" he says with the coolness typical of physicians.

On the lack of knowledge

The scientific revolution, which begun in the 16th and the 17th centuries, equipped Man with tools and capabilities he had never had before. The ability to study the world through empirical observations and to reach conclusions regarding the nature of reality has completely changed the way we experience the world around us. Electron microscopes and R.A.M. scanners can create magnificent pictures of invisible worlds, but even they cannot see beyond matter.

In a forgotten film by Arnaud Desplechin, "The Sentinel," from 1992, he tells the story of a student of forensic medicine. One day, after an encounter with a stranger on the train, and having been followed by the border police, he discovers a shrunken human head in his suitcase. Excited and fascinated by his find, he starts an investigation to determine the identity of the man to whom the head had belonged. He stays up late in the laboratory in an earnest attempt to uncover the head's secrets. He dissects the severed head, layer by layer, until there's nothing left but a few scraps of human tissue. The investigation comes to a dead end, a meaningless collection of flesh and bones.

Desplechin's film might be a good metaphor for the conclusion of the show, which is all about wandering around blind corners. The Wellcome Trust collection, bearing the torch of the association between science and art, has elected to present an exhibition in which the frustration due to the lack of knowledge is the curatorial starting point. This is an exercise in observation of areas of friction in the human consciousness, the twilight zone where the veil of awareness is at its thinnest.

The exhibition "States of mind: Tracing the edge of consciousness" [12] at the Wellcome Collection is on view until October 14th, 2016

- 1. From the Sanskrit: shava means a dead body and asana means a position.
- 2. Francis Crick, The Astonishing Hypothesis: The Scientific Search For The Soul. Scribner reprint edition. 1995. ISBN 0-684-80158-2.
- 3. A microscope capable of enlarging objects significantly more than a standard one, by focusing an electron beam on the studied object, scanning it. The technology has been in use since the 1940s.
- 4. From the Greek: pan means everything, or the whole, and psyche, meaning soul or brain.
- 5. Tononi, G. (2012). PHI: A Voyage from the Brain to the Soul. Pantheon Books

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[12] https://wellcomecollection.org/exhibitions/states-mind-tracing-edges-consciousness