

BRAIN(S)



EXHIBITION AT THE CENTRE FOR CONTEMPORARY CULTURE OF BARCELONA (CCCB)
From 27th July to 11th December 2022

PRESS CONFERENCE

Tuesday 26th July at 11:00 · Mirador Hall at the CCCB
(Streaming via the [CCCB's YouTube channel](#))

The human brain is the most complex object we know of and the one that raises most questions in the fields of science and philosophy alike. The exhibition that the CCCB will be devoting to it, from 27 July to 11 December 2022, looks at how, throughout history, art, science and philosophy have studied and represented this fascinating organ.

Brain(s) explores both the anatomy of the brain and everything that it generates: consciousness, abstract thinking, language, imagination, dreams and memory. The exhibition also investigates other minds beyond the human: artificial, animal and collective intelligence, and brainless organisms.

The exhibition, produced by the CCCB, Fundación Telefónica (Madrid) and Wellcome Collection (London), is curated by the physicist and biologist Ricard Solé and by Emily Sargent, exhibition curator at Wellcome Collection.

Scientists, philosophers, poets and artists have been studying and questioning the structure, function and evolution of the brain for centuries. A hundred years after **Ramón y Cajal** discovered that the neuron was the basic unit of brain architecture, the pace of discovery has picked up speed and established new links between science and philosophy. But even though the scientific community has drawn up the most detailed map of grey matter ever to have existed, the functioning of the brain remains unknown. Why do brains exist? Where does consciousness come from? And what about creativity? What happens when the mind gets ill? Is it possible to create intelligent machines? What can we learn from the collective intelligence of ants?

Brain(s) explores these issues and many others by observing the rich landscape of cognition and its historical development, from natural systems to systems created by human beings. By exploring historical, scientific and artistic material, the exhibition challenges our understanding of conscious experience and looks at what can happen when that experience is interrupted or damaged.

The exhibition, which presents some 300 works, combines the visions of contemporary artists such as **Tomás Saraceno**, **Ivana Franke**, **Patrick Tresset**, **Joan Fontcuberta**, **Greg Dunn**, **Roc Parés**, **Laramascoto**, **Shona Illingworth** and **Xavi Bou** with historical material such as original drawings by **Santiago Ramón y Cajal**, period editions of **Vesalius** and **René Descartes**, the inventions and machinery of visionary scientists such as **Leonardo Torres Quevedo** and **Lady Ada Lovelace**, comics, films and the scientific projects of leading scientific research institutes.

An extensive network of researchers, creators and thinkers is involved in the “Brain(s)” project, both in the exhibition and in developing a program of activities that includes a cycle of films, public debates and mediation workshops.

The CCCB’s exhibition draws on two originally independent shows, *Brains: The Mind as Matter* (2012) and *States of Mind: Tracing the Edges of Consciousness* (2016), held at London’s [Wellcome Collection](#), coproducer of *Brain(s)* with the CCCB and [Fundación Telefónica](#) (Madrid).

SECTIONS OF THE EXHIBITION

1.- MATTER

The exhibition begins with an analysis of how the study of fossil skulls and cave art charts the emergence of the symbolic mind. Reviewing the classical approach based on anatomical descriptions, it also addresses old questions associated with the relevance of brain size, and how a distorted ideological view of this aspect led to the emergence of phrenology and eugenics. With developments in anatomy and physiology, the brain has been equated with the cutting-edge technology of each era. This section closes with the presentation of various technological analogies: the brain as loom, mechanical calculator, electrical or telephone network, and as computer.

This first section, evoking a cabinet of curiosities, opens with a presentation of part of the extensive collection of the Wellcome Collection, which brings together books on the history of modern health and medicine, ancient objects of anatomy, and engravings, drawings and photographs. The display cases combine historical materials from the 16th to the mid-20th century, such as period editions by scholars such as **Vesalius**, **René Descartes** and **Thomas Willis**; histological drawings by **Camillo Golgi** and **Santiago Ramón y Cajal**, and surgical instruments and anatomical models. This block also presents original documents of the analytical machine of **Charles Babbage** and **Lady Ada Lovelace**, and the period machinery of the engineer **Leonardo Torres Quevedo**, among others.

2.- MIND

Brains create minds: they imbue thought, emotions, dreams and consciousness. This section analyses the brain and consciousness as processes in which memory is a fundamental element, probably our brain’s most important attribute. To a large extent we are our memory, and when it fails our worlds can collapse. As soon as the first scholars began to understand that the brain could be related to illness, attempts emerged to change brain states. Initial techniques have given way to new technologies such as virtual reality or deep brain stimulation, treatments that offer unexpected ways to find answers to brain diseases.

In this second section, the emphasis is on the present-day state of neuroscience, and the philosophical and ethical interpretations that some artists make of it. Installations like that of **Laramascoto**, based on the work of the anthropologist **Roger Bartra** and his theory of the exobrain; **Alex Guevara**'s new immersive installation based on the recording of his neural activity while he sleeps; excerpts from the documentary about agnosia by filmmaker **Joaquim Jordà** and the self-portraits of the artist William Utermohlen, affected by Alzheimer's. These and other works of contemporary art dialogue with cutting-edge scientific experiments by research groups.

3.- OTHER MINDS

The cognitive biosphere is not limited to our brains. We are beginning to realize that finding answers to the big questions might mean looking for cognitive agents that challenge our intuition: simple cells that solve complex mathematical problems, collective intelligences developed by species working together as one mind, artificial intelligences that mimic brain circuits or brainless biological robots that carry out basic behaviours.

To explore artificial intelligence, this section presents documentary material from the first AI conferences that dialogue with contemporary art installations based on AI and creativity, such as those of **Joan Fontcuberta**, **Patrick Tresset** and **Roc Parés**. After walking through a cobweb installation by **Tomás Saraceno** that makes us think about the concept of extended mind, we will find some of the most recent research on alternative minds in the cognitive biosphere: the intelligence of *Physarum*, a fungus that is capable of getting out of a maze to find food; xenobots or synthetic life forms; the intelligence of an octopus that becomes the lead in a play by **Rimini Protokoll** and the collective intelligence of flocks of birds by **Xavi Bou**.

CURATORS OF THE EXHIBITION



Emily Sargent is Senior Curator of temporary exhibitions at Wellcome Collection. She has curated numerous large exhibitions on a wide range of subjects, such as human enhancement and the connection between health and architecture. She recently directed a program of artist projects at Wellcome Collection exploring care practices during the COVID-19 pandemic. Previously she worked at London's Royal College of Art as an independent curator of exhibitions in the UK and other countries. She studied at Goldsmiths College, University of London. She is a regular contributor to events and also writes for various publications.



Ricard Solé is research professor at ICREA (Catalan Institute of Research and Advanced Studies) and currently works at Pompeu Fabra University where he directs the Complex Systems Laboratory of the PRBB (Barcelona Biomedical Research Park). He has degrees in Physics and in Biology from the University of Barcelona and a PhD in Physics from the Polytechnic University of Catalonia. He is also an external professor at Santa Fe Institute (New Mexico, USA) and the Complexity Science Hub in Vienna. His research has received the support of several organizations in Europe and the United States, including the McDonnell Foundation and ERC Advanced Grants. One of his main research interests is the origins and evolution of the complexity of natural and artificial systems, including the space of possible cognitions and what he calls "liquid brains". He has recently launched new research aimed at terraforming ecosystems in danger of collapse. He uses both mathematical models and experimental studies based on synthetic biology.

GENERAL INFORMATION

Dates and opening times

From 27th July to 11th December 2022

Open from Tuesday to Sunday and on public holidays from 11:00 to 20:00 / Closed on Mondays except public holidays

Venue

Gallery 2 of the CCCB

Admission fees

6 € / 4 € concessions

Sunday from 15:00 to 20:00 free of charge subject to prior reservation

[Concessions and free admission](#)

 Hi-res images of the exhibition at [the CCCB's digital press room](#)



Press service of the CCCB

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