

The Cartographers of Dead Thoughts

The **Kaiser Wilhelm Institute for Brain Research** was founded in Berlin 100 years ago. The first Director was **Oskar Vogt**, an ambitious scientist who became famous when he investigated Lenin's brain. His wife Cécile and he provided important findings on the structure of the cerebral cortex – and also labored under a misconception or two.

TEXT **ELKE MAIER**

The request Oskar Vogt received from Moscow in January 1925 was, in itself, nothing special for the avid neuroscientist: he was to examine the brain of a dead person. To this end, the brain would be cut into thin slices to make its microstructure visible under the microscope. However, the fact that it was the brain of Vladimir Ilyich Lenin made it a matter of far-reaching political significance.

The revolutionary leader died at his estate in Gorki on January 21, 1924 at the age of just 53. At his autopsy, his brain, severely impacted by multiple strokes, was removed and preserved in formalin. It was hoped that a detailed brain analysis would now shed light on just what was behind Lenin's exceptional intellect.

Oskar Vogt seemed to be just the right man for this important assignment: the 54-year-old was one of the world's leading neuroscientists and was very familiar with brain anatomy and pathology, neurology and psychiatry. Under his guidance, his technical assistant Margarete Woelcke produced in Moscow, between mid-1925 and mid-1927, an extensive series of sections of Lenin's brain, thousands of paraffin-embedded slides.

Vogt undertook the histological study in the Moscow Brain Research Institute, the "Pantheon of brains," which had been specially founded for the investigation of Lenin's brain – with Oskar Vogt as its Director. He summarized his findings as follows: The cortex layer III revealed an enormous number of unusually large pyramidal cells. This gave Lenin's brain a "far richer basis" than that of an ordinary mortal, and makes our comrade an "athlete in associative thinking." The Soviet government was satisfied. The Communist Party newspaper *PRAVDA* declared his findings to be "an important contribution to the materialistic explanation of mental phenomena in general."

The theory that a person's skills can be seen in the architecture of their brain guided Oskar Vogt's entire research life – as well as that of his wife Cécile, five years younger than her husband. Oskar Vogt had studied medicine and zoology, among others under the renowned Ernst Haeckel in Jena. He met his future wife in 1898 while studying abroad in Paris. Then 22 years old, Cécile Mugnier

was one of the first women in France to study medicine, and had a thorough education in neuroscience. After marrying, the couple settled in Berlin and founded the private "Neurological Central Station" in an apartment building on Magdeburger Straße.

In addition, Oskar Vogt worked as a neurologist and made a name for himself not least through innovative hypnosis methods. He conducted hypnosis sessions, for instance, "segregated by gender," "with several people in one room," but also outdoors, "on hammocks in walkways" or "in protected locations in the forest." The "thought-lazy, comfortably lulling dozing" was popular with the wealthy clientele and brought the Vogts a profitable livelihood. Also among his patients were industrial magnate Friedrich Alfred Krupp and his wife. A friendship developed between the doctor and the industrial couple that would prove to be very beneficial for the Vogts' career.

Initially, the support from the Krupp family ensured that the "Neurological Central Station" became attached to Berlin's Friedrich Wilhelm University in 1902 as the "Neurobiological Laboratory." In early 1914, Oskar Vogt was finally able – again backed by the Krupp family – to set up a Kaiser Wilhelm Institute for Brain Research. He himself was appointed Director. The institute initially remained on Magdeburger Straße until, in the late 1920s, thanks to the generous support of the Rockefeller Foundation, a new institute building could be constructed. It was built near the municipal psychiatric hospital (formerly the III insane asylum) in Berlin-Buch.

The inauguration ceremony took place on June 2, 1931, but the international press was allowed to visit the institute in advance. An extensive article appeared in the *VOSSISCHE ZEITUNG* on December 20, 1930. The author, Arthur Koestler, appears to be simultaneously repulsed and fascinated. Professor Vogt "gave a speech with photographs that were not for the faint-hearted," he writes. And: "Our intellect in paraffin really isn't a pretty sight. On the one hand, it upsets the stomach, and on the other hand, it stimulates philosophical meanderings..."

Successful team: Oskar and Cécile Vogt at their brain-cutting machine circa 1905. Through their research, they helped improve science's understanding of the brain – and in the process, made the mistake of wanting to contribute to “cultivating the intellectual man.”

Koestler is impressed by the serial production of brain sections: “As many as 35,000 sections are produced from a single brain!” These are “sections with a fantastically thin cross-section.” One would need about a year “to come to terms with one brain,” and the procedure devoured “6,000 Deutschmarks per brain.” After their examination, the finished sections were housed in a “fire-proof tower,” in a “card catalog of dead thoughts.”

The brain research institute, at the time the world's largest, has “a veritable labyrinth of diverse laboratories, workshops and special departments for processing special tasks,” including “a reproduction department with all the paraphernalia for microphotography, cinematography, and even its own print shop.” There are labs that, for various experiments, are soundproof, shockproof or shielded against electromagnetic waves. The institute also includes a small research clinic.

The Vogts headed the “Architectural Brain Research” department. Unlike Sigmund Freud, they considered mental illness to be a disease, not of the spirit, but primarily of the mind. The aim of their studies was thus to discover the morphological substrate of these illnesses. To this end, they collected brains together with clinical data on the deceased and drew comparisons. They were

Vossische Zeitung of December 20, 1930

» The impression this incredible presentation of the dissected intellect left on its visitors was almost overpowering. Planck himself formulated this impression [...]: after all, the last significance of science consists in its application to life; and if the investigation of the human brain seems so particularly meaningful to us – this is due, in the end, to the fact that we ourselves each have a brain ...«

particularly interested in “extreme types”: their plan was to amass an extensive collection of elite and criminal brains in order to track down the center of genius or criminal activity.

Today, we know that the brain structure reveals nothing about talent, character traits or the propensity for criminality – just as little as a person's intellect can be determined from the size or architecture of their brain. Other findings from the researcher couple, in contrast, such as their contributions to charting the cerebral cortex in humans and mammals, are still valid today.

Contrary to hopes, however, the Vogts' work at the institute in Berlin didn't last long. The National Socialists marked out Oskar Vogt for his connections with the Soviet Union, as well as the liberal and international atmosphere at the institute, and unceremoniously forced him into retirement. In 1937, he and his wife left Berlin and built – again with the aid of the Krupp family – a new research establishment in Neustadt in the Black Forest, where



they continued their work into old age. During the war, they also offered shelter there to those under persecution.

Oskar and Cécile Vogt worked closely together for sixty years. In public, however, it was primarily Oskar Vogt who was honored, while his wife's achievements were often overlooked. More than a quarter of a century after her death in 1962, Cécile's likeness finally appeared on a 140-Pfennig Deutsche Bundespost stamp.

After Oskar Vogt's departure, neuropathologist Hugo Spatz succeeded him at the institute in Berlin. There, he and his colleague Julius Hallervorden also examined the brains of victims of the mass murder of the psychologically ill and mentally disabled, the so-called “euthanasia” program. When it came to getting “material” for research into epilepsy and “congenital feeble-mindedness,” the researchers had no qualms about using the brains of victims of the NS “euthanasia” program, including many children.

The brain specimens in the “Hallervorden collection” made their way, in 1962, into the new Max Planck Institute for Brain Research in Frankfurt am Main. There, they sat in storage, among millions of others, for another two decades. It wasn't until the 1980s that historian and journalist Götz Aly uncovered their true origin through a meticulous comparison of section numbers in Frankfurt and patient files in Brandenburg-Görden. On May 25, 1990, all of the brain sections from the period between 1933 and 1945 were buried in Munich's Waldfriedhof cemetery.

The nearly ninety-year-old sections of Lenin's brain can still be found in the Moscow Brain Research Institute, neatly labeled and separated from the outside world by several security doors. The brain of nuclear physicist, dissident and Nobel Peace Prize laureate Andrei Dmitrievich Sakharov is also stored there in thin sections – the brains of the Soviet Union's founder and the dissident side by side. And still, brain research won't discover which of the two had the greater intellect.