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Pantheon of Brains: The Moscow Brain Research Institute 1925–1936

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The investigation of Lenin's brain by the German neurobiologist Oskar Vogt and his Russian collaborators in Moscow is one of the most exciting and simultaneously questionable chapters in the history of medicine. With the bizarre claim to be able to detect the material substrate of genius it provoked as much unrealistic expectations in the public as strong criticism by the scientific community of brain researchers. The following paper deals in a brief survey with the foundation and the early history of the Moscow Brain Research Institute (INSTITUT MOZGA) and its initial task — the collecting and mapping the brains of famous (Russian) persons in general and the investigation of Lenin's brain in particular.

Keywords neuroanatomy, Brain Research Institutes, cortical architectonics, "elite" brain collections, Oskar Vogt, Semion Aleksandrovich Sarkisov, Vladimir Ilyich Lenin, Soviet Russia

Already in the eighteenth and nineteenth centuries, close relations existed between German and Russian science, especially in the field of medicine, to their mutual advantage. Holding to this tradition, Russian and German scientists alike made intensive efforts at the beginning of the 1920s to resume this collaboration, which had ceased with the outbreak of World War I. In January 1923 the noted Berlin brain researcher Oskar Vogt and his wife Cécile travelled to Moscow in order to participate in the First All-Russian Congress for Psychoneurology and to deliver a paper. Their lecture on "Pathoarchitectonics and Pathoclisis," in which they reported on their 25 years of experience in investigating the cytoarchitectonical structures of the cerebral cortex, left an extraordinarily lasting impression on specialists in Moscow (Vogt, 1923).

The singular effect the Vogts had on the Russian public must be understood in the context of the time. Since 1922, an international medical team led by the Breslau Neurologist Otfried Foerster had been struggling to save the life of the Russian state leader Vladimir Ilyich Lenin, who had — after several strokes — fallen seriously ill, and was searching for an effective diagnosis and therapy for Lenin's neurological symptoms.[1] Thus, the question was raised already in Lenin's lifetime, whether the Vogtian concept of pathoclisis could deliver a practical application for Lenin's treatment (Richter, 1991).

The cytoarchitectonics perfected by Oskar Vogt and his team goes back to a discovery made by the Russian neuroanatomist Vladimir Alekseevich Bets at the end of

[1]German physicians at Lenin's bedside were — apart from Foerster — the neurologists Oswald Bumke, Adolph von Strümpell, and Max Nonne, the surgeons Georg Klemperer and Moritz Borchardt, and the Internist Max Minkowski (Crome, 1972).

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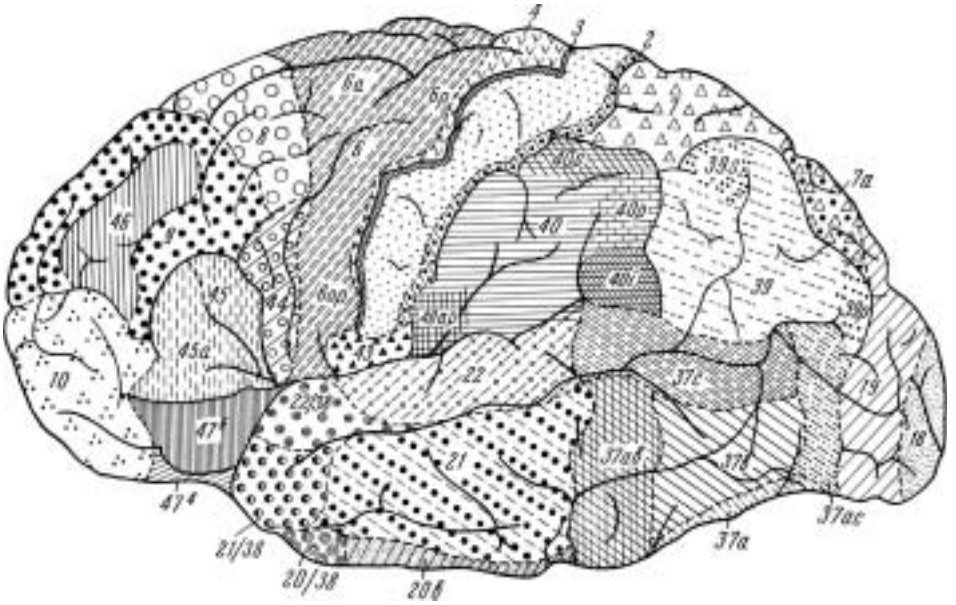

Figure 1. The map of cytoarchitectonical areas in the human brain cortex by Institut Mozga (Sarkissow, 1967, p. 83).

the nineteenth century (Betz [*sic*], 1881). Bets discovered a way to determine the number and size of localized neurons in the various layers of the cerebral cortex, as well as their quantitive variation from region to region. Histological sections of the brain cortex under the microscope reveal — vertically from layer to layer — a characteristic cytoarchitecture. Adjacent cortical layers with an identical cytoarchitecture form a region. The horizontal structuring of the cortex into regions, each with their different cytoarchitecture, is called architectonics, presentable as cortical maps (Richter, 2000b, pp. 350–351).

The ability to detect the relative size of the cortical regions responsible for mental capabilities, which varies widely from individual to individual, was the essential prerequisite for using the investigative methods of brain architectonics to evaluate mental capabilities. Because of its metrical character, brain architectonics has an advantage over methods like individual psychology, which is based primarily on subjective assessments. Since architectonics can ascertain the size of the cortical regions involved in certain mental capabilities (in square centimeters) and their relative share of the total available cortex (in percentage), it provides objective criteria for evaluating (though only *post mortem*) the individual characteristics of a brain (Richter, 1996, pp. 375–376).

The research conducted by the Berlin Brain Research Institute in this field pursued, apart from clinical objectives, the goal of providing neuroanatomical criteria for the evaluation of "elite brains" and, what then appeared possible, the "breeding of superior brains," particularly by means of a natural selection involving the conscious sexual choice made by one of the marital partners: in other words, a eugenically based selection (Richter, 1996, p. 381). Eugenic ideas of breeding, such as those expressed by Vogt, were an element of many social utopias and, from the end of the nineteenth century on, were advocated by social reformers, philosophers, biologists, and physicians with political persuasions ranging from the far left to the far right.

Such ideas had been gaining social acceptance since Charles Darwin and Francis Galton, particularly in Europe and in North America at the beginning of the twentieth century. As in England, the birthplace of eugenics, and in Germany, eugenic ideas were also cultivated in Soviet Russia from the 1920s to the early 1930s. The leading Russian social hygienist Prof. Nikolai Alexandrovich Semashko, People's Commissar for Health in the Soviet government since 1918, regarded eugenics as the logical development of hygiene and the most significant aspect of a socialist program for public health.

Some months after Lenin's death, the 70-year-old Nestor of Russian neurology, Lazar Solomonovich Minor, on New Year's Eve of the year 1924 notified Oskar Vogt of the general conclusions from consultations in a special governmental physicians' committee. In his letter, written in rather old-fashioned but absolute correct German, Minor wrote: "Today I was summoned to a meeting of a committee whose task it is to bring about the most exact investigation and description of the brain of the deceased V.I. Lenin. The view expressed at this meeting was that the investigation should be complemented with a more exact cytoarchitectonic investigation in accordance with the current state of science. Everyone was inclined to consult you on this matter, perhaps even to have you perform this investigation in person" (Vogt estate).

Even while exploring other possible alternatives, the committee and the Soviet government that authorized Minor's letter considered the appointment of Vogt as the best and only possible choice (Richter, 2000a, pp. 50–52). Nonetheless, Vogt's reputation — although he directed simultaneously a university brain research institute and the famous Kaiser-Wilhelm-Institute for Brain Research in Berlin,[2] but he held no academic chair — no doubt a still needed enhancement in Russia. Therefore, in February 1925, the Russian Academy of Sciences elected him as their correspondent member of the biology section. The memorandum written by the biophysicist and academy member Petr Petrovič Lazarev honored Vogt as "one of the most important authorities in the field of brain research with an original method for investigating the structures of the brain" (Lazarev, 1925).

Aside from his professional qualifications, Oskar Vogt's politically left engagement along the lines of the then Independent Social Democratic party of Germany (USPD) also made him an attractive candidate in the eyes of the Moscow committee. The great trust that the Soviet authorities quite obviously placed in Vogt can also be attributed to some extent to his personal relationships with the already mentioned People's Commissar for Public Health, N. A. Semashko, the secretary of the Council of the People's Commissars (Sovnarkom), Nikolai Petrovich Gorbunov, and the family of the (then still deputy) Soviet foreign minister, Maksim Maksimovich Litvinov. Thus three circumstances explain Vogt's appointment as director of the Moscow Brain Research Institute: his internationally recognized professional competence, his left-leaning political convictions, and his tightly woven international network of personal relationships.

In a manner quite unusual for a high-ranking group of physicians, the committee met with Vogt in February of 1925 to discuss whether "the cytoarchitectonic investigation [could] provide information on the material substrate of Lenin's genius." According to the minutes Vogt and every medical expert present responded positively to this question (Anonymous, 1994). We now know, that this was exactly what the Stalinist fraction in the politburo wanted: to create an image of the deceased Lenin as superhuman. With it fit

[2]Vogt's first institute in Berlin (1898) has been called "Neurologische Zentralstation" (Neurological Central Station). The name of the new institution indicated Vogt's extensive plan to create a national — and in addition to that an international — network of brain research institutes. Five years later, in 1903 in London, Vogt's "best" enemy the neurologist Paul Flechsig and his colleague Wilhelm His established the "Brain Commission" of the International Association of Academies in London with similar aims (Richter, 2000c).

together that the Stalin fraction intended to bolster their insistence that Lenin's famous Testament, which indicted Stalin, had been written when Lenin's mental competence was diminished. To blunt this claim, the opposition, a fraction comprised of Lenin's close political friends and his widow Nadezhda Konstantinovna Krupskaia, wished to obtain proof that Lenin's mental competence was undiminished until the end of his lifetime (Richter, 2000a, p. 17).

The contract between the "Institute V. I. Lenin, represented by its deputy director I. P. Tovstukha[3], and Professor Dr. Oskar Vogt, director of the Neurological Institute of the University of Berlin," entrusted Vogt with the "scientific investigation of Lenin's brain" and the "general supervision of all the work." The term of the contract was unlimited as the undertaking was expected to take several years. Nine paragraphs stipulated the scientific task and the conditions to assure its fulfilment. These conditions included providing the laboratory with personnel and instruments in rooms to be made available to the Lenin Institute as well as training Russian physicians in the necessary cytoarchitectonical investigative methods. (Vogt estate, file No. 146).

The preliminary work on Lenin's brain began at the end of February 1925, when Cécile Vogt, at her husband's invitation, arrived in Moscow together with Margarete Woelcke, the Vogts' chief preparator at the Berlin Institute. In their luggage, they carried all the equipment required for the cytoarchitectonical investigation: macrotome, microtome, incubators, Vogt's microscope, paraffin, stains, and chemicals, as well as a large supply of microscope slides with glass covers for specimens. The Lenin Institute found rooms for the laboratories in the Dmitrovka. Here Lenin's brain was to be microtomed between 1925 and 1927 and the sections (initially every tenth only) were stained for microscopic investigation. Since these accommodations were only provisional, Vogt devoted much of his time, apart from laboratory work, toward planning a future brain research institute. In September 1925, he presented the results of his planning to the medical committee (RTsKhIDNI, f. 16, op. 2, d. 69 l. 1–2ob.)

At this point, two of the young physicians assigned to the scientific staff, Semion Aleksandrovich Sarkisov und Isai Davidovich Sapir, finished their several-month postgraduate training at the Berlin Institute for Brain Research and took up their work in Moscow. By the time the institute was officially founded in November 1928, four more Russian physicians, amongst them the neuropathologists Ivan Nikolaevich Filimonov and Nikolai Semionovich Popov, had received the same training in Berlin. In subsequent years up to 1932–1933, they were followed by other members of the first and second generation of the institute's staff (Richter 1996, p. 379).

With the resolution of November 13, 1928, the Council of Ministers (Sovnarkom) of the Russian Socialist Federal Soviet Republic (RSFSR) approved the founding of the Moscow State Brain Research Institute, which still exists — since 1950 as an institute of the Russian Academy of Medical Sciences (Nuvakhov et al., 1995, pp. 92–93). The "Statutes of the V. I. Lenin Institute for Brain Research" (in Russian language: Institut Mozga) defined the new institute as "a scientific research institute . . . with all the rights and privileges of the highest scientific institutes" of the Soviet Union ([Narodnyi Kommissar Zdravookhraneniia], 1928, pp. 92–93). Thus, from the beginning it was made clear that despite the directorship of the German Oskar Vogt it was a national (Russian) institute and not a German-Russian joint venture.

The statutes in paragraph 1 declared the task of the institute to be the investigation of the architectonical characteristics of the cerebral cortex and human race biology. The institute

[3]It should be mentioned that the deputy director of the Lenin-Institute, Ivan PavlichTovstukha, had a second permanent position: he had been one of Stalin's secret secretaries, and the one for so-called *semi-dark* affairs, who had to guarantee that Stalin would be informed about everything that Vogt and his young collaborators in the institute did! (Bazhanov, 1989)

thus ventured far beyond the initial special task assigned to its staff, the investigation of a single brain (Lenin's brain), and became a general brain research institute like any other in the world, with an emphasis on cerebral architectonics. In the future, the institute's program would include the phylogenesis and ontogenesis of the human and vertebrate brain, from fishes to primates, as well as neuroanatomy and experimental neurophysiology.

At the initiative of the Freiburg pathologist Ludwig Aschoff, the institute was assigned the additional task of conducting research on human race biology. In a narrower sense, "race research" — as the department was nicknamed — was the study of the geographical distribution of illnesses and their pathogenesis in climatically and culturally diverse regions. Vogt accepted the adoption of this additional and, for a brain research institute, untypical task in the hope that the department could later perform the intended research on "racial" brains. In reality, the new laboratory was an independent German-Russian research institute and was only affiliated with the brain research institute at an administrative level. The "German-Russian Laboratory for Comparative Race Pathology" — its official name — investigated selected diseases, such as goiter, stomach ulcers, and liver cirrhosis, among various ethnic groups in relation to their physical and cultural living conditions between 1928 and 1933 (Hamperl, 1972; Weindling, 1992; Gross Solomon and Richter, 1998).

After 1928, the Institut Mozga was officially organized, therefore, into two main departments: the brain research department (with the anatomical and anatomical-physiological laboratories) and the race biology department. Both departments had access to histology, photography, and collotype printing as service departments or groups. The museum, with its collection of ontogenetic and phylogenetic evolutionary series of animal and human brains as well as the "Pantheon of Brains" with its collection of brains from eminent Russian politicians, artists, and scientists, was built up over the years after the founding of the institute (Richter, 2006, pp. 341–344). The term "pantheon of brains" was coined by the famous neurologist Vladimir Mikhailovich Bekhterev in 1927 for his collection of elite brains in the Leningrad Institut Mozga.[4] Shortly after Bekhterev's death in December 1927, Commissar Semashko decided that the Leningrad pantheon of brains should be transferred to Moscow and added to the collection at the Moscow brain institute.

Vogt's most important and successful scientific researchers were Sarkisov and Filimonov, both of whom — at the zenith of their scientific careers — became highly respected members of the USSR Academy of Medical Sciences. Well educated and trained at Russian medical universities and clinics, they were ideal candidates who could easily integrate into the collaboration model envisioned by Vogt. Sarkisov was only 31 years old in 1926 when he was appointed to work at Institut Mozga. He had joined the Communist Party at an early age and was considered to be an ideologically reliable specialist. Therefore, when the institute was founded, he was appointed as Vogt's deputy and as the institute's managing director in all administrative matters. In 1936, Sarkisov succeeded Vogt as director of the Moscow brain research institute and remained director until his death in 1971.

The nearly five years older and more experienced Filimonov joined the institute at the end of 1927. Filimonov was just as important a scientist as Sarkisov and likewise played a significant role in the scientific development of Institut Mozga. In contrast to most of his younger colleagues, Filimonov already had a few significant scientific achievements to his name before he was appointed to the institute. Filimonov primarily investigated the phylogenesis and the ontogenesis of the central nervous system and contributed greatly toward

[4]The relation between Vogt and his Russian colleague Bekhterev was determined by a latent rivalry: In contrast to Vogt, who never gained the desired predicate "Interacademic Brain Institute" of the Brain Commission for his institute, Bekhterev (1908) took this hurdle effortlessly for his institute in St. Petersburg.

Figure 2. The Institut Mozga in the Igumnov-Mansion on the Bol'shaia Iakimanka, Moscow, 1927–1935 (Archive Dr. Richter).

clarifying the question about the individual variability of the human cerebral cortex. He directed the morphological (anatomical-histological) department at Institut Mozga and held the position of deputy director together with Sarkisov during Vogt's directorship.

Vogt managed to direct Institut Mozga during his stays in Moscow. In the interim periods, his Russian deputy Sarkisov took over. Although Vogt stayed in Moscow several times in 1925, each for a period of a few weeks, his visits in the subsequent years were limited to official occasions. As the interim periods grew longer and longer, Vogt directed Institut Mozga from his Berlin institute. He mostly made use of the Russian personnel, who frequently visited his Berlin institute for study purposes, to receive reports from and to pass on his decisions to Moscow. An extensive letter correspondence bequeathed to the Vogt estate attests to Vogt's constant willingness to tend to the needs of his Russian institute.

Vogt reported twice on the progress attained at Institut Mozga and the first results of its investigations: firstly in 1927, when the institute was opened ceremoniously in its new accommodations on Bol'shaia Iakimanka and, secondly in 1929, when Vogt delivered his official "First Report on the Work of the Moscow Institute for Brain Research" to the Soviet authorities. The focus of Vogt's reports then were the still scanty results from his microscopic investigations of sections from Lenin's brain carried out in Moscow and the examination of the microphotographs sent to Berlin from Moscow. In his own words, he declared: "In layer III of the brain cortex, in many cortical areas, especially in the deeper regions of this layer, I found pyramidal cells of a size I have never before observed and in a number that I have never before observed" (Vogt, 1929, p. 110).

Figure 3. Cover of the Journal *Meditsinskii Rabotnik* (Medical Worker) (1927) No. 47: "Prof. Fokht za izucheniem srezov mozga Lenina" (Professor Vogt investigating histological sections from Lenin's brain) (Vogt estate).

The conclusion Vogt arrived at from this observation that "our brain anatomical results show Lenin to have been a *mental athlete*" is one of the most frequently cited statements in the history of science — at least for historians dealing in their work with the Vogt's investigation of Lenin's brain. After Vogt's first report, (Vogt, 1927), it provoked as much attention by the public as harsh criticism by the scientific community. The publicity accorded to Vogt's statement, however, owes less to its intellectual substance than to its obvious lack of persuasive power (Bentivoglio et al., 1998; Hagner, 2004, pp. 252–253). In view of the fact that Vogt had practically announced *verbatim* the same results two years earlier — in November 1927, at the inauguration of the premises for Institut Mozga on Bol'shaia Iakimanka (Mingazzini, 1928) — the statement more or less amounted to an admission that no significant insights had been added to these findings in the subsequent two years and that secondary findings, at least on this object, were hardly to be expected in the foreseeable future.

In 1929, Vogt could boast that the collection had received another 13 elite brains (apart from Lenin's brain) for a total of 14 elite brains. Among these were the brains of the Armenian composer Aleksandr Afanasevich Spendiarov, the physician and politician Aleksandr Aleksandrovich Bogdanov, the publicist Ivan Ivanovich Skvortsov-Stepanov, as well as Vogt's Russian colleague, the recently deceased neurologist Grigori Ivanovich

Rossolimo. Until 1936 when Institut Mozga gave its final report on the results of the investigation on Lenin's brain, many other brains were added to this collection, especially the brains initially collected by Bekhterev, including Bekhterev's own brain (Blinkov & Poliakov, 1938, p. 676). For the sake of comparison, the investigations on Lenin's brain included the brains of the Russian poets Vladimir Vladimirovich Maiakovski, Eduard Bagritski and Andrei Bely, of the French writer Henri Barbusse, the Russian politician Anatoli Lunacharski, the German politician Clara Zetkin, the Russian novelist Maksim Gor'ki, and the Leningrad physiologist and Nobel prizewinner Ivan Petrovich Pavlov, among others (Spivak, 2001).

In subsequent years, developments began to emerge in the prevailing political conditions that would increasingly put constraints on the scope of collaboration. Already in 1928, vehement political frictions were on the rise in the Soviet Union as a result of the growing Stalinization of Soviet life, which imposed upon Soviet citizens an ideology of exclusion from international development. In 1930–1931, these frictions reached a tentative climax that reduced international scientific collaboration to its lowest level.

Vogt's appearance in November 1929 was his last official action in Institut Mozga. The takeover of the institute in March 1930 by the Communist Academy deprived Vogt of any future influence on the destiny of his institute. Since Institut Mozga was a Soviet Russian institute and not a German-Russian joint undertaking, neutralizing Vogt was a bitter setback for the development of the institute. But it was legally correct and therefore could not be challenged. During his stay in Moscow in 1929, Vogt was already informed of the

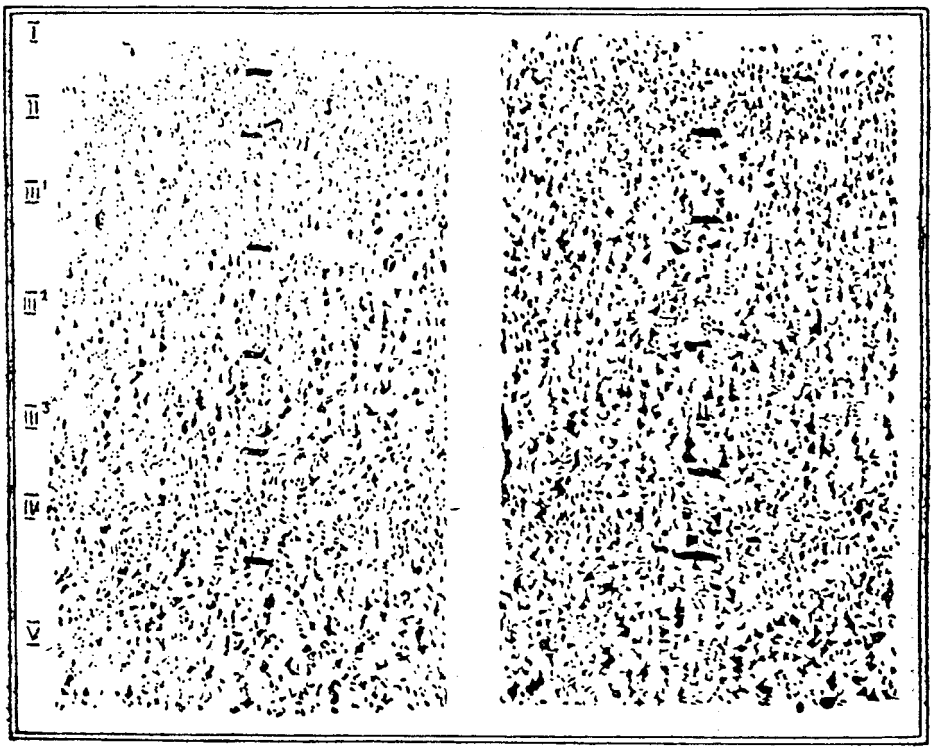

Figure 4. Microphotogaphical records of two histological cuttings through the brain cortex. Left: brain cortex of a "normal" (average) man; right: Lenin's brain cortex (Prozorovskii, 1929).

Soviet government's intentions to remove Institut Mozga in the near future from the association of Narkomzdrav's scientific institutes and to subordinate it to the Communist Academy.

In his protests, Vogt, as director of the institute, could refer to the still existing contract, but the protests no longer had any effect. For whatever reasons and upon whose initiative the Moscow Institute for Brain Research owes its resurrection two years later cannot be reconstructed from currently available documents. Vogt credited it to the success of his protests; more likely, however, in the spring of 1932, the hard ideological wave in the Soviet Union had temporarily subsided, and this made new, more reasonable arrangements possible for a short time.

In April 1932, the Central Committee's Politburo of the Communist Party passed the resolution to reestablish Institut Mozga as an independent institute and again to offer Vogt the post of institute director (APRF, f. 3, op. 22, d. 310, l. 41). In executing this directive, the Presidium of the Central Executive Committee ordered on May 1932 that Institut Mozga be reestablished and incorporated into the association of scientific institutes maintained by its scientific committee. In the end, Institut Mozga emerged from this two-year intermezzo stronger than before. While the institute had employed only 6 workers in 1929, in May 1932 it had 20 employees, among them 6 scientists, 7 laboratory technicians and preparators, and 2 photographers (GARF, f. 7668, op. 1, d. 433, l. 7–14).

General neuroanatomical and neurophysiological investigations and research on the ontogenetic and phylogenetic developmental processes of the human and animal brain became again the central focus. Aside from brain anatomical research in its brain architectonics department, Institut Mozga, thanks to its informal relations with the Berlin Brain Research Institute, which had never really been interrupted, had made good progress in setting up a neurophysiological department, and it soon achieved significant results in EEG research. An innovation from the Berlin institute was also groundbreaking here for Institut Mozga: from the very start, the neurophysiological department, headed by Sarkisov, was able to use a high-performance measuring device, the multichannel neurograph recently developed by Jan Friedrich Tönnies at the Berlin institute (Richter, 1996, pp. 385–386). With the neurograph, the institute was able to regain its previous scientific status at a higher level and provide lasting proof of its right to exist.

Only one thing had fundamentally changed in 1932: the investigation of Lenin's brain in particular and the elite brain research in general was no longer mentioned as on the institute's research agenda. Merely the collection of elite brains still remained on the list (GARF, f. 7668, op. 1, d. 546, l. 33–35). Quietly and on the side, however, the institute personnel determinedly pursued the work commenced on Lenin's brain and brought it more or less to an end in 1936. The procedure for submitting the final report resembled more an act of state than an event in the history of science. On May 27, 1936, the Soviet head of state Mikhail Ivanovich Kalinin informed the Politburo of the Communist Party of the content of the final report on the investigation of Lenin's brain. The document signed by the deputy director of Institut Mozga, S. A. Sarkisov, summarized on about six typewritten pages the results of the investigation conducted since 1925. The report referred to a material collection consisting of 15 photographic albums, each with 50 microphotographs and an explanatory text with over 150 pages (APRF, f. 3, op. 22, d. 310, l. 54–63).

Seven years after Vogt had presented his findings, his Russian students had made considerable progress. By means of the cytological characteristics already identified by Vogt in the vertical direction, Sarkisov and his team were able to make statements for the first time about the horizontal cytoarchitectonics of Lenin's cerebral cortex. The contents

of their findings we owe to a report later published by Oleg Sergeevich Adrianov and his collaborators (Adrianov et al., 1993). The investigations led, among others, to the following results:

1. "The measurement of the furrows of the frontal lobes and the furrows of the other lobes yielded the highest percentual value for V. I. Lenin's brain in comparison with other [. . .] brains investigated along these lines. [. . .] Likewise the lower parietal lobe is extremely convoluted and deviates greatly from the average brain in this respect. [. . .] The temporal lobes also exhibit a large number of furrows."
2. "In V. I. Lenin's brain, we found very large cells, especially in the III layer, in the frontal region, notably in areas 10 and 46, in the lower parietal region, in the upper temporal region, in the temporal-parietal-occipital region adjacent to area 19, and in the postcentral region."
3. "We came up with important results in the evaluation of the organizational level of the brain of V. I. Lenin by comparing the size of the frontal and temporal regions and the areas they form with the corresponding square measure of other brains. The frontal region in the brain of Vladimir Ilyich occupies 25.5% of the entire surface, in the brain of Skvortsov-Stepanov 24.0%, and in the brain of Maiakovski 23.5%. What is of particular interest here is that the dominance of the frontal region in Vladimir Ilyich's brain mainly benefits the size of the areas connected with the particularly high-developed functions of this region. Area 10 in Lenin's brain cortex p.e. occupies 6.3 % of the entire brain surface, in Bogdanov's brain 6 %, in Skvortsov-Stepanov's 5.8 % and in Maiakovski's brain 4.2 %. "

The report deduced the significance of these results from the fact that the frontal region, just like the lower parietal lobe, is of major importance for the higher nervous functions. Overall, the frontal area is functionally significant for acts of willpower and concentration; the lower convolution of the frontal lobe together with parts of the temporal lobe is important for speaking processes (Broca's and Wernicke's speech centers). The processes of recognition and behavior are also localized in the parietal lobe.

With these results, Vogt's Russian colleagues were able to fully confirm his initial findings from the years 1927 and 1929. In the end, they also took over his interpretation that located the origins of the associative systems mostly in the cells of layer III in the cortex. Hence, this layer plays a major role in higher nervous activity and in extremely high-developed functions of the intellect. Only the findings described in point 3 involved new insights.

Conspicuous in the final report is that the results are only depicted as comparative quantities in comparison with other "elite brains." Any reference to so-called "normal brains" is missing. Furthermore, the correlation of anatomical results with Lenin's personality characteristics, which Vogt had intended, was left out (Richter, 2000a, p. 92). Lastly, any results of Vogt's initial endeavors to carry out a comparison with brains from other ethnic groups, which Vogt called "race brains," were omitted. Much later, in his book on structure and functions of the brain, Sarkisov confirmed that he and his colleagues in Institut Mozga did not recognize some racial differences in the brain structures (Sarkisov, 1964).

These reports were not able to provoke protests from specialist circles; they have immediately vanished — labelled "soveršenno sekretno" (i.e., absolutely confidential) — into the Kremlin's safes (Petersdorf, 1998). The meager information on findings of the investigation of Lenin's brain remained a unique event; reports on any results in investigations of other brains in the institute's collection have never been published.

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