

I.M. Sechenov: The Patriarch of Russian Physiology

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Using quotations from Russian (e.g., Mechnikov and Pavlov) and western European (e.g., Ludwig) sources of his friends and colleagues, as well as from his autobiography, this paper describes the life and personality of Ivan Mikhailovich Sechenov (1829–1905), who became well known because of his central inhibition theory (1862). He trained in several European centers, including Vienna, where he worked with Carl Ludwig (1816–1895), with whom he corresponded for several decades.

Keywords history of medicine, neurophysiology, Sechenov, inhibition

The nineteenth century may legitimately be called the golden age of Russian literature and the spring of Russian natural science. It is highlighted by a large number of distinguished names, including that of the outstanding physiologist, psychologist, and thinker Ivan Mikhailovich Sechenov (1829–1905) (Fig. 1).

The scientist's career began shortly before the abolition of serfdom. Later he recollected the atmosphere that reigned at the time in Russian society: "Everybody knew that the great act of liberation of millions of slaves would soon come, and everybody awaited it with agitation; we breathed much more freely than before, new expectations sprang up, and new demands arose. Indeed, it was a very happy time" (Sechenov, 1907, p. 1156).

It was also a happy time for science, in particular natural science: suffice it to name such giants as D. Mendeleev, A. Butlerov, I. Mechnikov, and A. Kovalevskii. And in this circle of brilliant minds, Sechenov occupies a special place. His basic works in neurophysiology, physicochemistry of the blood, his psycho-physiological treatises, and his concept of the sociocultural determination of behavior continue to influence the development of physiology, psychology, medicine, and epistemology, while the interdisciplinary approach to research he suggested has found a wide response in modern science.

Sechenov's discovery of central inhibition in 1862 was an outstanding achievement in neurophysiology. Not only did it widen knowledge of the function of the nervous system but also shed new light on the regulation of the life activity of organisms. In his classical treatise *Reflexes of the Cerebrum* (Sechenov, 1908), which I.P. Pavlov described as a "flight of genius," Sechenov, as he put it himself, succeeded "in introducing the physiological cornerstones of psychic processes." He revealed the reflexive nature of conscious and subconscious activity and showed that physiological processes, which may be studied

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Figure 1. Ivan Mikhailovich Sechenov (1829–1905).

by objective methods, determine psychic phenomena. Outstripping time, we may note that this concept, which won worldwide acclaim, prompted the Russian authorities to stigmatize the scientist an “out-and-out materialist” and a “philosopher of nihilism.”

Sechenov was born on August 1, 1829, in the village of Teplyi Stan, Kurmysh *uezd* (district), Simbirsk province (now the town of Sechenovo, Nizhni Novgorod oblast). He was the youngest (eighth) child of a retired officer and nobleman Mikhail Alekseevich and Anis’ya Egorovna, a peasant’s daughter. In his declining years, Sechenov wrote on recalling his paternal home: “Nothing but the erudition of family members, the integrity of the goals they pursue, and the affectionate relations of the elders and the young are the only possible source of a family’s freedom and unconstraint” (Sechenov, 1907, p. 28). The atmosphere of “erudition” was sustained, too, by the Sechenovs’ neighbors, and among them well-known scientists including Krylovs, Lyapunovs, and Filatovs. The judge of Kurmysh district, P.I. Skorobogatov, a lover of literature who kept an eye out for all new books, was a friend of the family. Once he brought the Sechenovs N.V. Gogol’s *Dead Souls*, which had just been published, and organized a family reading of the poem.

Like most children of noble families of that time, Sechenov received a good home education, spoke fluent French and German (later learning English and Italian) and at 14 years of age was admitted without any special effort to the Main Engineering School of St. Petersburg. Here he studied physics, chemistry, and mathematics under the tutelage of academician M.V. Ostrogradskii. “Were I to join the physics and mathematics faculty of the university right after finishing the engineering school,” to quote Sechenov himself, “I might have become a fairly good physicist, but fate willed differently” (Sechenov, 1907, p. 18). He did join the university, but that came later, after serving two years in the environs of Kiev with the field engineers on finishing school in 1848. In Kiev, Sechenov met Olga Aleksandrovna (surname unknown), an educated young woman whose home he entered, as he confessed himself:

As a young man swimming inertly with the current ... without a clear idea where it may take [him].... From her home ... [he] departed with a ready plan

where to go and what to do.... I joined the university, and the very one she considered most advanced, in order to learn medicine and help my fellow men. (Sechenov, 1907, p. 41)

But Sechenov studied more than medicine at Moscow University. He regularly attended the lectures of T.N. Granovskii and P.M. Kudryavtsev, the eminent historians who were professors at the Faculty of History and Philology. Granovskii, a brilliant orator and the most prominent of Moscow's Westerners, was the idol of the youth of that time. That was a very important moment in the biography of the future scientist; it shaped his vision of the world and his interest in humanitarian and social disciplines: history, philology, philosophy, and psychology. As B.M. Lyapunov, an academician and student of Slavic languages (one of the sons of the Lyapunovs who were the Sechenovs' neighbors), rightly said of his elder friend, "He was not only profoundly perceptive in his chosen profession, but was also fond of science in general and had the knack of understanding and appreciating not only natural sciences but also social sciences and the humanities. He had friends among historians, philosophers, and men of letters" (Lyapunov, 1944, p. 38). Sechenov was aware that Lyapunov was interested in linguistics and advised him to join St. Petersburg University; in fact, he took him personally to see his friend, the outstanding linguist I.V. Yagich.

What Lyapunov said about Sechenov's friends does not only apply to the period of his student life in Moscow. If one may say so, he was always lucky in that sense and always had gifted and extraordinary friends. Suffice it to recall some of his closest friends, the scientists S.P. Botkin, Mendeleev, Butlerov, and Mechnikov; the Kovalevskii brothers; N.A. Umov; and composer (and chemist) A.P. Borodin. He had contacts with N.A. Nekrasov, I.S. Turgenev, A. Grigor'ev, and P.M. Dostoyevsky.¹ He knew N.G. Chernyshevsky and the artists A.A. Ivanov and I.E. Repin. His lively relations with distinguished people had an unquestionable effect on his development as a personality and scientist. Genuine giants of European science and exponents of various physiological schools including J. Mueller, H. Helmholtz, E. Du Bois-Reymond, C. Ludwig, and C. Bernard were Sechenov's tutors during his studies abroad from 1856 to 1860.

A few more famous names of those he was close friends with in his declining years, when a professor of Moscow University, were A.G. Stoletov, A.I. Chuprov, K.A. Timiryazev, M.A. Menzbir, and N.D. Zelinskii.

In due course we will refer in greater detail to his relationship with his tutor Ludwig and his closest friend Mechnikov. At this point, however, let us note that Sechenov attached great importance to the milieu, having felt its influence from his own experience. In his *Reflexes of the Cerebrum* he wrote:

The character of the psychic content derives 999/1000 from the upbringing in the broadest sense of the word.... Of course, this does not go to say that a fool can be turned into a clever person.... My idea is that a European upbringing in a European environment turns a Black, Lapp, or Bashkir into a person who

¹In his *Autobiographical Notes* Sechenov recalls a festive banquet in connection with the ending of the Russo-Turkish War in 1878 in honor of General F.F. Radetskii. Like Dostoyevsky and Sechenov, the general was a graduate of the Main Engineering School. "Dostoyevsky whispered in my ear," Sechenov recalled, "that I should pronounce a toast to the fathers and mothers of the Russian soldier, that is, to the people of Russia; that toast was the last at the banquet. After the meal, I had the pleasure of meeting some of my former tutors, who were now gray-haired generals ... and their friends" (Sechenov, 1907, p. 168).

differs very little in psychic content from an educated European. (Sechenov, 1908, p. 111)

One hardly needs to prove the importance of personal contacts of young people with scientists and equally the role of international scientific collaboration. As Pavlov stressed in his speech at the opening of the 15th International Physiological Congress on August 9, 1935, “I know the impact of the influence of such assemblies of scientists on the rising generation from my own experience, from my young years.... The sight of worldwide research in person must have a tremendously exciting impact on young people” (Pavlov, 1936). Sechenov could legitimately say the same of himself. No other Russian (and not only Russian) physiologist had the good fortune to work with exponents of such a variety of scientific schools and classics of world physiology. He met them during his stay abroad where he went “in preparation for a professorial career” as soon as he finished Moscow University. But most important of all, he met an extraordinary person and scientist, whom he called his “incomparable tutor and friend.”

C. Ludwig (1816–1895), professor of the Vienna Medico-Surgical Military Academy and founder of a scientific school (among whose students were Germans, Brits, Americans, Russians, and Scandinavians), specialized in the physiology of blood circulation, introduced a graphic method of registering physiological functions and discovered the secretory nerves of the salivary glands. Sechenov came to Ludwig’s laboratory (as he put it, “without any recommendation”) in the spring of 1858:

Speaking to me about my intention of looking into the influence of alcohol on the blood circulation and the consumption of oxygen by the blood, he in a way subjected me to an examination in physiology, and my answers evidently satisfied him because he let me join his laboratory. I was given a place in the workshop with all his Vienna students. By the winter of 1858, I was already a frequent guest of Ludwig’s family. From that time my dear tutor’s liking for me did not cease until his death in the form of warm and sympathetic letters responding to the various little upheavals of my life. (Sechenov, 1907, pp. 93, 98–99)

His colleagues and students remember Ludwig as a jolly and cheerful person who liked to chat when working and tell funny stories from university life about eccentric professors. He questioned Sechenov about Russia and, furthermore, had a fairly good knowledge of Russian writers. M.Yu. Lermontov was his special favorite. One day Sechenov recited Lermontov’s “Gifts of the Terek” by heart at his request. Ludwig used to invite his Russian student to assist or to simply be present at experiments that he was readying for demonstration at lectures. A. Rollet, subsequent professor of physiology at Graz, was Sechenov’s fellow student in Ludwig’s laboratory and a close friend. They lived an entire year together in Vienna.

Sechenov devoted no few pages to his relationship with Ludwig in his *Autobiographical Notes*. They were kindred souls, had the same views on the role of science and the scientist in society, had the same views on international scientific collaboration, espoused the same outlook on freedom of creativity and were unanimous in their judgment of people. Following Ludwig’s example, Sechenov lost no time in organizing a laboratory and a school of physiologists on returning home, and he devoted himself to bringing up young scientists. His correspondence with Ludwig lasted for more than 30 years, from 1859 to 1891. A volume of Sechenov’s selected works was published in 1935 for the 15th International Congress of Physiologists, which contained a biographical piece on Sechenov (by

M.N. Shaternikov) and nine of Ludwig's letters to his favorite student (the first from Vienna was dated May 14, 1859, and the last from Leipzig was dated November 6, 1891), that showed that Sechenov confided all his joys and afflictions to his tutor and could always count on the latter's support (Fig. 2).

The letters shed new light on certain events of Sechenov's life. It is commonly held, for instance, that in 1869 Sechenov decided to quit the Medico-Surgical Academy because Mechnikov and A.E. Golubev had been blackballed there. But we learn from Ludwig's letter of November 2, 1864, that he had thought of doing it earlier, when Russian women who wanted a higher medical education were forbidden to attend lectures and to receive practical instruction at the said academy. Sechenov was outraged; he, for one, had first admitted women, namely, M.A. Bokova and N.P. Suslova, to his laboratory. He had poured out his heart to Ludwig, who wrote in his reply:

I am very sorry that ladies are forbidden to study physiology in your country. What is on the minds of these troublemakers? Such measures may precipitate specific talk in Petersburg. I hope that this time the resolution of the cultured society will be stronger than that of the police. When society wants something in earnest, a handful of bureaucrats cannot prevent it from getting what it wants; at least that is what often happened in our country. What grieves me still more, however, is that you are taking this so close to heart and are even thinking of leaving the academy. You are doing useful work there and must keep your place there. (Sechenov, 1935, p. xxi).

The Blackballing of Mechnikov and Golubev was the last straw for him. Sechenov resigned from the Academy in protest of the injustice of the authorities and his colleagues.

An earlier letter of Ludwig's dated July 29, 1859, addressed to Heidelberg, was also noteworthy. Sechenov had gone there at the end of April to work in Helmholtz's laboratory. Evidently, he felt less comfortable there than in Vienna; so much so that he had intended to return to the Austrian capital. Ludwig wrote:

I am compelled to advise you. Let me say that I would be delighted if you returned to Vienna and continued your work here in winter. No one would rejoice more over your coming than I. But precisely because I am so interested

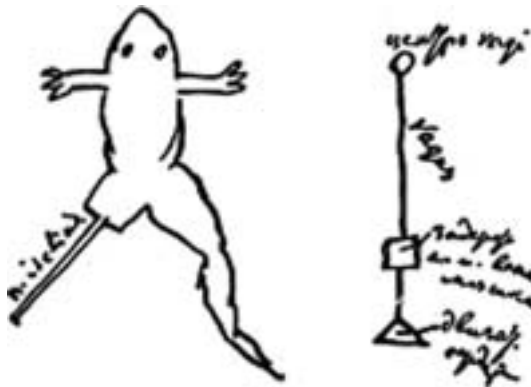


Figure 2. Drawing by Sechenov for one of his experiments.

in your returning, I am afraid that I would be too egoistic and advise you too insistently not to come. Remember that you set yourself the goal of studying chemistry, and, if you cannot do it in Heidelberg, choose some other place but do not change your plan, it is a very good one. I would suggest you examine products of decomposition or saline compounds of some substance that is easy to find on sale, even if you repeat something you have already done: you will learn the degree of precision required to obtain valid scientific results and will acquire many techniques that will be useful in any research of that kind. Besides, personal contacts with Helmholtz will be very fruitful; in the coming winter the points of contact between you and him may increase; even now he wrote me that he thinks highly of you. In any case there you will come closer to the sphere of thinking we cannot lead you to.... Work where you feel freest in spirit, because there you will achieve the best results. That is why no advantages of your stay will benefit you if for some intrinsic reasons you are unable to make the most of them. Possibly, you have met no compatriots in Heidelberg, or the little town is too boring. (Sechenov, 1935, p. xii)

Here are a few more excerpts from Ludwig's letters. Here is his response to the criticism of *Reflexes of the Cerebrum*: "What is this they printed in the papers about you? I was told your works were put under special surveillance. Such things are intolerable in relation to so loyal a son of his country as you" (Sechenov, 1935, p. xviii).

Referring to Sechenov's discovery of central inhibition, Ludwig writes to him that he had also dealt with the subject for many years and adds: "To be sure, I care little over priority, as you know, and I am pleased by the fact that the matter was rightly solved" (Sechenov, 1935, p. xvi).

Finally, a few lines from a letter dated November 6, 1891, after Ludwig learned that following P.P. Sheremetevskii's sudden death, Sechenov was appointed professor of physiology at Moscow University:

I feared that someone more uncongenial would be put above you. Your letter has relieved me.... Need I say that I am happy over your embarking on a path worthy of your capacities; I can hardly find words to express my satisfaction. Suffice it to write that you are again where we want to see you. Living and teaching in Moscow, among the people you love and among splendid colleagues. You are starting out on a new era, a richer and happier one than all those before it. Your new discovery, when I finally get an article on the subject, will help me in many ways; so far we knew very little of what a solution happens to be.

Yesterday, I met our common friend Ostwald and told him of your successes, both external and internal. He sends you greetings and congratulations, and my wife asks me to do likewise on her behalf. She has long been attached to you. When still in Vienna, you so affectionately spent much time with our children.... Devoted to you as ever, Yours, C. Ludwig (Sechenov, 1935, pp. xxix, xxx)

Mechnikov was Sechenov's closest friend. They first met in Sorrento, Italy, in the summer of 1865, where 20-year-old Mechnikov came with A. Kovalevskii specially to visit Sechenov.

I was immediately impressed by his remarkable appearance. Dark eyes of extraordinary beauty sparkled on his wide, homely, dark-complexioned

pockmarked face of a somewhat moderate Mongoloid type. The eyes expressed profound intelligence and special depth combined with extraordinary kindness. The conversation was immediately of a businesslike scientific character; he let us know of the results of his latest work on the physiology of nerve centers. We departed completely charmed with our new acquaintance and at once recognized Sechenov as a “tutor.” (Mechnikov, 1959, p. 63)

That was how their friendship began. For more than six years they worked together at Odessa’s Novorossiisk University and met frequently in St. Petersburg, Graz, and Paris where they saw each other daily and had long conversations at the Pasteur Institute. They met last in Moscow in 1897 during the 12th International Medical Congress. Mechnikov wrote of this meeting: “We met alone in his home in order to have another heart-to-heart talk and to recollect the past with the same warm emotions” (Mechnikov, 1959, p. 74).

Sechenov produced his main psychological works in Odessa. Mechnikov was the first to learn of them. In the evenings, Sechenov invited him to his home and read him the articles he wrote for *Vestnik Evropy* (Europe’s Herald), whereupon they went out to have dinner at some restaurant. Mechnikov recollected:

Ever since the time he was an officer and then a student, Sechenov retained his fondness for eating out, and it gave him much pleasure to visit restaurants to enjoy half a bottle of red wine; he became talkative and liked to speak to the restaurateur, especially if he was an Italian and they could converse in Italian. The view of the sea and the warm nights of Odessa reminded him so much of Italy. (Mechnikov, 1959, pp. 68–69)

In his *Pages of Memories*, written on the tenth anniversary of Sechenov’s death, Mechnikov refers with deep affection to his elder friend. Not only does he produce an appreciation of the latter’s scientific and public activity and deep devotion to science; he also describes him as a “lofty, pure personality” and a strong-willed and at the same time unusually kind man with a “very soft heart” who would not tolerate excess strictness toward students and was “cruel” only to frogs, the main object of his research and who was always liberal minded and foreign to politics.

Sechenov, for his part, spoke most commendably of Mechnikov, whom he at once identified as a gifted scientist. Nominating 24-year-old Mechnikov to the post of staff professor in the Department of Zoology at the Medico-Surgical Academy, Sechenov said:

Regardless of his many independent works on the subject, which give Mechnikov indisputable rights to the said department, the scientist will, I am deeply convinced, be especially beneficial for the students of our academy: as we know, he is an embryologist and histologist and has profoundly studied the history of the development of animal parasites. It is to Mechnikov’s great credit, too, that he is well read on physiological and histological subjects. Lastly ... at the university he enjoys the reputation of a splendid tutor. (Sechenov, 1907, p. 148)

Despite this glowing recommendation, however, the young man was blackballed, and very soon both tutor and student transferred to Novorossiisk University in Odessa. Here at the home of N.A. Umov, a young professor of mathematical physics, a salon of scientists gathered from time to time, of which Mechnikov was the moving spirit. Daily contacts with him prompted Sechenov to say:

Of all the young people I happen to know, I have never met a more fascinating young man than Mechnikov for the keenness of his intellect, inexhaustible wit, and diversity of education. He is as vital, engaging, and versatile in friendly company as he is serious and productive in science.... His heart is in the right place as concerns his relatives and friends and lives up to all his other gifts. With no additional earnings to rely on, he took his sick wife to Madeira on his sole professor's salary, hoping to save her and denying himself many things, and never said a word of this to anyone. He was a music lover and sang many classical pieces; he was fond of the theater, but did not like to attend tragedies because he wept uncontrollably. (Sechenov, 1907, pp. 148, 149)

At Novorossiisk University, Sechenov headed the department of physiology from 1871 to 1876, and then he occupied the same post in St. Petersburg (1876–1889) and Moscow (1889–1901) Universities. In St. Petersburg, he was the tutor of N.E. Vvedenskii (later, founder of his own physiological school), who spoke most warmly of his tutor: “As in life so in his special works, Sechenov lived and worked impelled by intrinsic convictions and his intrinsic vocation” (Vvedenskii, 1963). Practically all people who had contact with Sechenov called attention to this feature, typical of a true scientist. Of interest, too, are the remembrances of Sechenov by A.F. Samoilov (Fig. 3), one of his Moscow students who followed his vocation, had in the fall of 1894 left Pavlov's laboratory at the Institute of Experimental Medicine and transferred to Moscow University's physiological laboratory. Samoilov wrote:

His appearance, manners, behavior, and significance that sounded in everything he said corresponded to Sechenov's charming personality. To say that I saw an elderly man of an average height and strong constitution, dry, with large facial features slightly pockmarked and an especially strange pale, greenish color of the



Figure 3. A.F. Samoilov in the early 1890s.

skin of his face is, in effect, to say nothing. Sechenov has to be seen. His eyes and their keen look are indescribable. His face is alive and eloquently reflects his mood, which happens to change fairly often. His face was beautiful when he was kind or, more precisely, when he was in a good mood. He liked to be kind. He valued the kindness of others, and in substance, too, was a kind man, though his short temper, hypochondria, and even a kind of suspiciousness prevented him from always maintaining his natural kindness. He could be very strict at times and was in his way magnificent at the moments of strictness and severity, rage and outrage, which burst forth especially when he noted the injustices of the authorities. At such moments his eyes literally showered sparks. (Samoilov, 1967, pp. 257, 258)

Elsewhere, Samoilov described the state Sechenov was in when he received word of Helmholtz's passing away:

Sechenov appeared as usual at 9 in the morning. He was wearing a black tailcoat, such as are worn on special occasions, was paler than usual, and meant to read a lecture about Helmholtz.... But he could not read the lecture to the end and had to break it off because he began to sob. He walked out of the auditorium. His face was deathly pale; tears streamed down his face. Sobbing convulsively, he kept repeating with a catch in his voice: "A man like that gone." An elderly man, a man who had seen and experienced so much, weeping over the death of an acquaintance as though he had lost a close and kindred person. Later, when I got to know Sechenov better and read his work, I was able to understand and appreciate the above more deeply. In addition to blood relationship, there is no less strong feeling of spiritual kinship. I think the essence of Helmholtz the physiologist, physiologist-philosopher, and the essence of Sechenov were close and kindred both in the manner and range of their thinking, which attracted and excited them, and in their ability to assert their position of sober naturalists in fields where philosophers' speculation had heretofore reigned. (Samoilov, 1967, p. 259)

In his *Autobiographical Notes* Sechenov confesses that all his life he disliked birthdays and celebrations in someone's honor. He opposed jubilees in principle and all his 45 years served science and society without ever agreeing to public celebrations in connection with his person. At the same time, he attached importance to his colleagues' opinion of his works. In 1869, for example, when he was elected an honorary member of St. Petersburg University, Sechenov expressed his "profoundest thanks for the great honor." "I consider this election," he wrote to K.F. Kessler, the university rector, on February 8, 1869, "the greatest award I have ever received because I am accustomed to counting Russian universities the chief breeding ground of goodness and truth in our country." It may be noted that Sechenov refused to take part in elections to the Academy of Sciences in 1860, and explained it thus:

I know my real worth, and I know that I am being elected according to the principle of "better a small fish than no fish at all." I have no reason to think that I will turn out to be worthy of such a high honor in my subsequent activity, and I do not want to live with my ears red and therefore firmly refuse. (Sechenov, 1907, pp. 118–119)

His real fame came to Sechenov after his death (he died on November 2, 1905, in Moscow, where he was buried in Vagan'kovskoe Cemetery. In 1940 the body was

transferred to Novodevich'e Cemetery). An important part in this was played by Pavlov, who, although he was not Sechenov's student, met him often at meetings of the St. Petersburg Society of Naturalists and at congresses of Russian naturalists and physicians.² Pavlov never failed to note that Sechenov was the founder of Russian physiology and creator of the first physiological school in Russia. "Before Sechenov's time a professor of physiology in Russia was merely a teacher who transmitted the results of the work of European physiologists. Sechenov was, above all, himself an eminent scientist, having discovered one of the key elements of the nervous system: the inhibition phenomena" (Pavlov, 1970b, pp. 1–2). Subsequently, Pavlov said: "The facts of inhibition attracted the attention of the scientific world for the first time 50 years ago thanks to the Russian intelligence of the patriarch of Russian physiology, Prof. Ivan Sechenov, which was the first important Russian physiological achievement" (Pavlov, 1970b, p. 32).

In his "Introduction" to *Twenty Years' Experience of Objective Study of Animal Behavior (Higher Nervous Activity)*, Pavlov admitted that in his early years he was influenced by Sechenov's *Reflexes of the Cerebrum*, which he said, "was a truly extraordinary attempt for that time ... to perceive our subjective world in purely physiological terms Strain and the joy of discovery coupled possibly with some personal emotion³ spurred what was a flight of Sechenov's genius hardly to be exaggerated" (Pavlov, 1999, p. 311).

After his election as chairperson of the Society of Russian Physicians in 1907, Pavlov immediately said the Society would hold annual festive conferences in memory of Sechenov. In December 1929, on Pavlov's initiative, a festive assembly was held on the 100th anniversary of the great scientist's birth. At a special sitting, his students — Shaternikov, Samoilov, R.E. Tur, and N.N. Malyshev — made reports and spoke of their remembrances. In 1935, in connection with the 15th International Congress of Physiologists (Leningrad and Moscow), again on Pavlov's initiative, Sechenov's *Selected Works* were published in Russian and English, and a medal was coined with the portrayal of the founder of Russian physiology.

Yet another fact speaks of Pavlov's affection and respect for Sechenov: in a letter to Shaternikov he asks him to send portraits of the scientist from different years and, if possible, help obtain a copy of his portrait by Repin painted in 1889 (the original was deposited in the Tret'yakov Gallery) in order to hang it in the office of the President of the USSR Academy of Sciences. The artist had worked on the portrait at intervals (for the first portrait of 1884 was less successful), which may be gleaned from Sechenov's own letter to his wife: "Met N.V. Stasova, who asked on her own and Repin's behalf that I should devote about two hours to him to complete the portrait" (cited from Koshtayants, 1946, p. 330). As for other portraits, and, in particular, the one in which Sechenov is portrayed among his students when he was professor of the Medico-Surgical Academy, Pavlov wanted it to "occupy the first place on the walls of the academy's physiological laboratory. It is ... its best and most valuable adornment" (Pavlov, 1970a, p. 69).

²When Pavlov was awarded the Nobel Prize, Sechenov was among the first to express his admiration. "Please accept my heartfelt greetings and congratulations, my dear Ivan Petrovich for the brilliant conclusion of your fruitful 25-year activity that has imparted such bright sparkle to the Russian name. Let God grant you to work as successfully in the future for the glory of our homeland" (Pavlov, 1970a, p. 67).

³Pavlov assumed that at the time he wrote *Reflexes of the Cerebrum* Sechenov was gripped by emotions of love; for this reason, he was interested in the scientist's personal affairs and in particular, his marriage to M.A. Bokova.

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