

"A lady has penetrated to the core of our hospital system, and is determined to effect a permanent lodgment. The advanced guard of the Amazonian army which has so often threatened our ranks, on paper, has already carried the outposts and entered the camp."

The admission of women into the British Medical Association marked an important stage in the enfranchisement of women in medicine. The part played by Elizabeth Garrett Anderson was significant, as the essentially conservative pioneer who represented the acceptable face of practising women doctors to the (male) profession. Indeed, the shift in policy by the profession—if it can be seen as a concerted or collective endeavour at all—was characterised by the forces of circumstance and a desire to control the marginal

forces of unregulated doctors, whatever their sex. In the debate a hundred years ago on the admission of women to the association, the march of progress was tempered by pragmatic self interest, a combination without which no revolution is guaranteed success.

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- 4 Blake C. *The charge of the parasols: women's entry to the medical profession.* London: Women's Press, 1991.
- 5 Admission of ladies to meetings of the British Medical Association. *BMJ* 1878;i:175.
- 6 The admission of ladies to the British Medical Association [editorial]. *BMJ* 1878;ii:234.
- 7 Extraordinary general meeting. *BMJ* 1892;ii:262.
- 8 The admission of women to the association. *BMJ* 1892;ii:383.
- 9 A lady amongst the students. *Lancet* 1861;ii:16.

Princess Vera Gedroits: military surgeon, poet, and author

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Princess Vera as professor of surgery in Kiev, a post she held from 1929 to 1932.

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The name of Princess Vera Gedroits is now no more than an obscure reference in old surgical textbooks,¹ but her story deserves to be told.

She was born in Kiev on 7 April 1876 and her family lived on an estate in Slobodishche in the district of Bryansk. As was the custom, her early education was at home, followed by finishing school in St Petersburg. Well before the 1905 revolution the city was the scene of various underground organisations. Vera took part in the illegal meetings of V A Veinshtok, but after this circle was broken up in 1892 she was sent back home to remain under police supervision. She managed a reprieve and made for Switzerland, a favourite refuge for women from Russia who wanted to study medicine.² She studied medicine in Lausanne, completing her studies in 1898 at the age of 22, obtaining almost a complete set of top marks in her final examinations. Perhaps still wary of being tracked down, she had three different addresses in three terms and altered her name.³

After qualification Vera worked for a while in Professor Roux's clinic but did not settle, returning to Russia in 1900. In 1904 only 3.4% of Russian doctors were women.⁴ She published a variety of medical papers but because of her previous connections she came under the attention of the police (the dreaded Okhrana). Possibly because of this and from a sense of adventure she volunteered as a surgeon for a hospital

train organised by the Red Cross. This supplemented the Russian army's medical department and was well supported by wealthy Russians, acting partly through altruism or possibly for the hope of some reward. The central committee was in St Petersburg and under the patronage of the empress, who not only ensured that the staff was chosen from the city's best surgeons but also gave over rooms in the Winter Palace for sewing bandages.

The War Office's report on the Russo-Japanese war said of Vera:

Among those who went to the Front in the service of the Red Cross as surgeons [was] the Princess Gedroits, chief surgeon of the hospital train furnished by the associated nobility of 40 Russian "governments," who was always at the front, operating in a specially constructed car, till the enemy's fire threatened the train.⁵

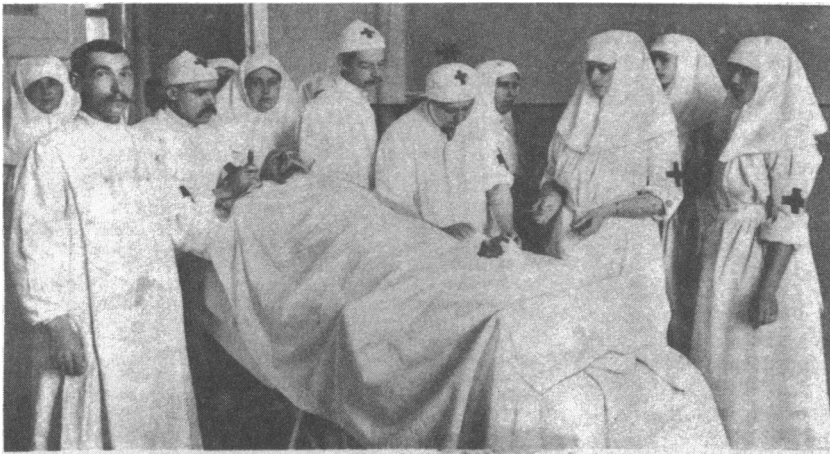
This was no small risk. Dr Marcou, physician to the Troitzky Hospital, St Petersburg, cynically wrote of the field ambulances that "the most notable result of their employment has been that not a few of the medical officers in charge of them have been killed in action."⁶ In this they were perhaps not best served by the instructions for the Russian army: "Military ambulances and hospitals are recognised to be neutral only so long as sick and wounded may be therein. Their neutrality ceases if they are defended by a military force."⁷

The conclusions of the joint reports written at the end of the war were that healthy fit troops fighting under modern conditions could expect a minimum annual rate of wastage through wounds or illness among the field army of 55%, exclusive of prisoners.⁸ It is hard to see where the optimism with which the protagonists approached the first world war eight years later was based. The infantry of the 1st army lost 96.7% of its officers and 67% of its men as killed and wounded during the first 13 months of the war. These figures were the result of the widespread use of modern destructive instruments of war, in particular the machine gun. The surgeons lost 12 of their number (two killed, seven missing, and three suicides) and 21 were wounded; 28 were taken prisoner, of whom 20 were subsequently released by the Japanese.

Vera presented the results of her work to the Society of Military Doctors on 27 July 1905, making the following points, all of which have current military relevance. The closer a hospital was to the battlefield the more productive was its work, and such a hospital could look after those patients who would be returned



Princess Doctor Vera Gedroits (right) in the company of officers of the Imperial Army (probably 1904-5)



Е. И. В. ГОСУДАРЫНЯ ИМПЕРАТРИЦА АЛЕКСАНДРА ФЕОДОРОВНА подаетъ инструменты во время операции въ Царскоесельскомъ Дворцовомъ Лазаретѣ. Позади стоятъ княгиня ОЛЬГА НИКОЛАЕВНА и ТАТИАНА НИКОЛАЕВНА. Оперируетъ д-ръ мед. княгиня Гедройтс*. Со ВСЕМНОГОСВѢТЛИВѢЙШАГО дозволенія издана въ газетѣ „Вечернее Время“, Е. А. Суворина. Съ фот. худ. П. И. Волкова.

The caption of this archive photograph reads, "Her Imperial Majesty the Empress Alexandra Fedorovna hands the instruments during an operation in the Tsarskoe Selo Palace Hospital. Behind the Empress stand Grand Duchess Olga Nikolaevna and Tatiana Nikolaevna. The operating surgeon is Doctor Princess Gedroits [asterisk]. With gracious permission for inclusion in the newspaper *Evening Times*" (probably 1904-5)

to active duty and those too ill to be evacuated further rearward.⁸ Her written report ran, with illustrations and diagrams, to 57 pages. Her audit of the first month of operation, 28 September to 28 October 1904, shows that 1255 patients were admitted. Of these, 138 had bullet wounds to the head and 61 to the abdomen. Surgical operations were performed in tents smeared over with clay against the cold. As Vera says, "To set up the tents in 22 degrees of frost was difficult."

By January 1905 an adapted railway carriage was being used as an operating theatre. In its first six days of use Vera did 56 major surgical operations. It was here that she demonstrated the advantage of early exploration of all penetrating abdominal wounds. Her work was not without risk—at one stage the army resolved not to retreat until all the wounded had been evacuated, and then to attempt to break through the enemy line. This was achieved, but not without being fired on. Vera received royal recognition, being appointed in 1909 a senior "ordinator" at the hospitals at Tsarskoe Selo and Pavlovsk, where she looked after the children of the imperial family.

At the imperial court

Evidence of Vera's work and influence is given in various memoirs of the time. One concerns a riding accident in the grounds of the imperial palace at Tsarskoe Selo. "Princess Gedroits who was in charge of the Court hospital was telephoned, and she examined the patient, diagnosing a slight injury to the back to which she would return the following day."⁹

In January 1915 a train from Tsarskoe Selo to Petrograd conveying a friend of the empress, Madame Vyubova, was derailed, possibly through sabotage. She was knocked unconscious and taken by the empress to the military hospital named after her, which caused a stir as the wounded officers considered it beneath their dignity to share their hospital with a woman. There was a further stir the next day when Madame Vyubova began to receive visitors—among them Rasputin. The daughter of the general practitioner who asked for Princess Vera's surgical opinion relates: "Mademoiselle Gedroits, looking a bit like a man with her great height, was an imposing woman, and as Rasputin showed no sign to wish to move she took him by the shoulders and pushed him out into the corridor, shutting the door in his face."¹⁰

The fact that Vera kept her job illustrates her self confidence and the esteem in which she was held.

She is recalled through the eyes of a young boy who

fell ill on the same train. His usual doctor could not attend him and so Dr Princess Gedroits was called. Her fee was double the customary five roubles, "emphasising that she was not only the top children's physician but also the personal physician to the royal children." The boy describes how "the old maid" (she would in fact have been 41) entered "dressed in masculine fashion, smoking cigarettes and speaking in a deep voice," thus living up to her nickname of the Georges Sand of Tsarskoe Selo. She diagnosed colic, for which she prescribed some medicine, but she stated that the best medicine would be "six of the best," which she herself offered to apply.¹⁰

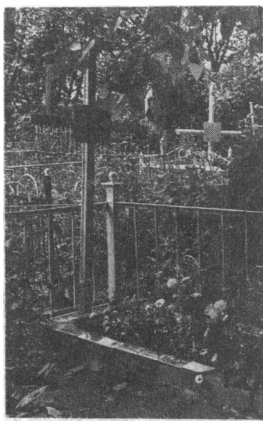
A lady of letters

Despite this fearsome reputation Vera had a literary talent, privately publishing in 1910 *Poems and Fairytales* under the pseudonym Sergei Gedroits.¹¹ Not all her work was fictional. In the same year she published *Pages from the Life of a Factory Doctor*. After joining the Guild of Poets in 1911 she sponsored publication of a journal named *Giperborei* (ГИПЕРБОРЕИ, from the Greek hyperboreios meaning an inhabitant from the far north; it is the name often given to a Russian or an eastern Slav by the rest of Europe). Her work also appeared in various other collections, including *New Journal for All*, *Theosophical News*, *Northern Notes*, and *Precepts*.¹² In 1913 she published via the Guild of Poets a personal collection of poems entitled *Veg*—a pun on her initials and "the way" (German). As an example of her favour in the imperial court, the copy which is now in the New York Public Library is the presentation copy to the grand duchess Tatyana Nikolayevna and has the label of the library in Alexander Palace, Tsarskoe Selo. This was followed in 1914 by a cycle of poems called *The Red Angel*, which stylistically relate to the tradition of folk poetry. She also had other written work published: *Chinese Tales* appeared in the magazine *Precepts* (1913) and in *The Contemporary* (1915). By 1918 she was publishing her *Galitsian Stories* in *Znamya Truda* (The Banner of Labour). Galitsia is a part of the Ukraine, a country she was to return to.

War, revolution, and university life

Despite all the other claims on her time Vera had continued the work on hernias that she had learnt from Roux in Switzerland. Like much of her efforts this went unrecorded and unheeded, but can still be found in the archives in Kiev.¹³ She amplified this work into a thesis for the doctorate of medicine, University of Moscow, which she achieved in 1912.¹⁴ Before this she had written up her experiences as an industrial doctor when working at the Maltsev factories.¹⁵ She had thus laid the foundations at an early stage for an academic career. This was reinforced by the book she published at the outset of the first world war, *Surgical Discussions for Nurses and Doctors*.¹⁶ There is a telling sentence emphasising the lesson she had learnt in the Russo-Japanese war and which it took many months of bitter fighting and countless casualties on the western front to teach: "Abdominal injuries always necessitate surgical intervention and examination."¹⁷

Vera's experience in the Russo-Japanese war prepared her well for the first world war, and during the years 1917-8 she was a surgeon to the 6th Simbirsk Rifle Division (Simbirsk is a region of Siberia). After being wounded she was evacuated to Kiev. She survived the troubled times after the war and revolution and established herself as an academic surgeon. In 1924 she published a work on the biological foundations of nutrition¹⁸ and also worked on more traditional surgical topics such as the surgical treatment of



Princess Vera's grave in the Korchevatskii cemetery on the outskirts of Kiev is marked by a metal cross in the Catholic rather than the Russian Orthodox style, befitting her Catholic origins

tuberculosis of the knee.¹⁹ In 1929 she was appointed professor of surgery at the University of Kiev. This was quite an achievement for a princess. She had started to write her memoirs, which were very fictionalised but related to fact. They make up a cycle under the general title *Life* published in 1930 and 1931 but dealing only with her life up to 1904. She died in Kiev in 1932 at the age of 56. Who knows what she may have written about her later years, which surely must have been as full and exciting as any of the other professors of surgery about whom so much has been written.

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Themistocles Gluck: an unrecognised genius

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The nineteenth century witnessed the introduction of the foundations of modern surgery—namely, anaesthesia and asepsis. Total joint replacement, one of the most successful operations of modern times, is generally considered a development of the twentieth century. Yet the first total joint replacement was performed in Berlin in 1890. The tuberculous knee joint of a 17 year old woman was replaced by a hinged ivory prosthesis (fig 1). The surgeon was Themistocles Gluck (fig 2), whose pioneering work was dismissed during his lifetime and remains largely unrecognised to this day.

The early days

Themistocles Gluck was born in Romania in 1853, the son of a famous German doctor who was the attending physician to the royal family. In 1873 Gluck started his preclinical medical studies in Leipzig and then continued in Berlin in 1875, where his teachers included Virchow, His, and von Langenbeck. From an early stage Gluck was interested in tissue replacement, and in 1878 he won a prize for research on nerve nutrition and regeneration that had been conducted with the help of Virchow.¹ After graduating he became the last assistant to von Langenbeck. Gluck obtained his higher surgical degree in 1882 and received the title of university professor in 1883, but he was unable to continue his university career. Langenbeck retired and was replaced by von Bergmann, who could find no place for the young Gluck. Gluck then worked for a short time in Bucharest but returned after his hopes of a surgical chair there were dashed. He practised industrial medicine in Berlin until 1890, when he was appointed to the post of head of surgery at the Emperor Frederick Paediatric Hospital in Berlin.²

Gluck's early experimental work concerned organ resection and transplantation. His thesis was entitled "On the extirpation of organs" and his main hypothesis was that after the loss of one of a paired organ the remaining organ would take over the total function. Tendons and nerves were harvested from cadavers, disinfected, and transplanted into recipient animal donors. Gluck saw no ethical dilemma in transplantation and speculated on the size of a tissue transplant that could be tolerated by humans. After experimenting

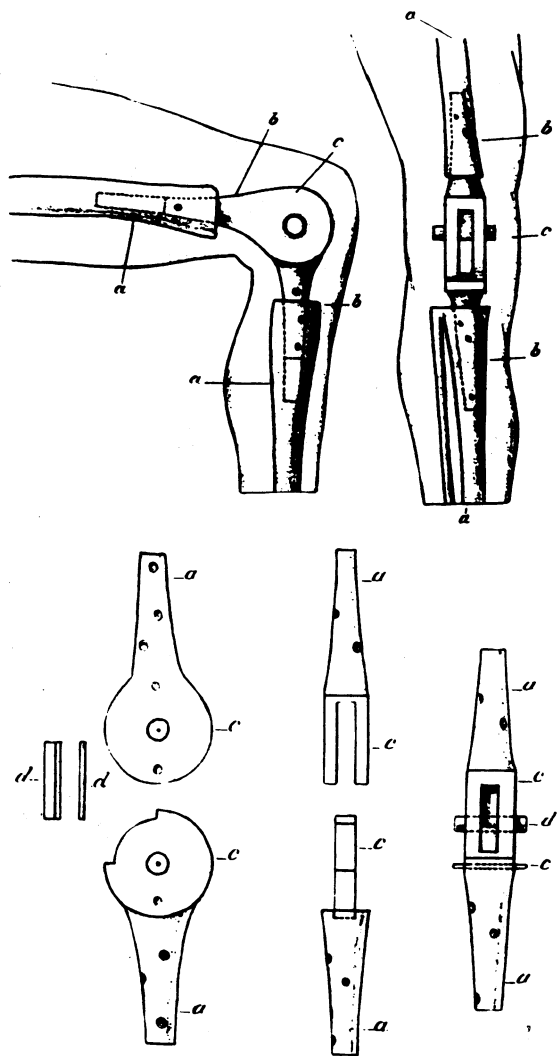


FIG 1—Ivory total knee arthroplasty, with exploded view of knee prosthesis showing slots for horizontal fixation pegs

with autologous transplantation and heterologous transplants in animals he began to work with foreign materials. He successfully bridged tendon, muscle,

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