



How the quest to preserve Lenin's body helps the living

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The most significant — and perhaps macabre — relic of Soviet Communism resides on Red Square in Moscow. Those hearty enough to enter will be gobsmacked to find a glass sarcophagus containing a superbly preserved body of the controversial leader Vladimir Lenin, comfortably resting in a blue, woolen suit.

Such observances are especially fitting today, the 96th anniversary of his death in 1924.

In the first decades of the last century, this Russian lawyer, radical, political theorist, and social leader — whose real name was Vladimir Ilyich Ulyanov — took several pages from Karl Marx's work and added his own spin. He led the October Revolution in Russia in 1917, and founded the Soviet Union and the Comintern or Communist International.

Lenin served stormy tenures as head of Soviet Russia from 1917 to 1922 and as head of the Soviet Union from until his death, most likely from a massive stroke, in 1924. He was only a few months shy of his 54th birthday.

Nearly a century later, a team of anatomists, biochemists, and surgeons work around the clock to maintain what remains of Lenin's body. Called the Mausoleum group, they work at the Moscow Center for Scientific Research and Teaching Methods in Biochemical Technologies.

From the 1920s until 1991, preserving Lenin's body was a scientific priority for the former Soviet Union. During this period, the Mausoleum group consisted of more than 200 scientists and technicians. Since the fall of Communism in the 1990s, however, the funding and staffing has dropped considerably. To help make ends meet, the same group conducts other research and maintains the well-preserved bodies of Ho Chi Minh of Vietnam and Kim Il-Sung and Kim Jong-Il of North Korea.

Alexei Yurchak, a professor of anthropology at the University of California, Berkeley, has helped illuminate these processes — and the discoveries that come from them — in his writings, including a 2015 paper called “Bodies of Lenin: The hidden science of communist sovereignty.”

On the day Lenin died, his successors began planning a state funeral and ceremonial burial. Lenin and his family were quite firm in their requests not to create a sense of hero worship around his memory. Indeed, his wife Nadezhda Krupskaya wrote in the Jan. 30, 1924 issue of the Pravda newspaper: “I have a big favor to ask of you; do not let your grief for Il'ich go into the external adoration of his personality. Do not erect monuments to him, build palaces in his name, organize magnificent ceremonies in his memory — to all this he, during his lifetime, paid so little attention. All this was a burden to him.”

Lenin's body was placed on view for about a week. Because of the extremely cold temperatures in Moscow that year, the undertakers were amazed to note how little deterioration there was in his corpse. They went as far as to predict that decomposition would not become a problem until the warmer temperatures of spring.

This “frozen state” gave the party leadership a much longer period to consider what to do with Lenin's body. Many were opposed to doing anything more than a burial in Red Square. Other party members, however, pointed to the long lines of people who still wanted to bid farewell to their leader; more than 500,000 people had already queued up to pay their respects. After much discussion, the Party collectively decided that a tomb containing Lenin's body should become a site of world pilgrimage for the working class.

In March of 1924, Vladimir Vorob'ev, a physician, and Boris Zbarskii, a biochemist, of the Moscow Medical Institute, were asked to apply their newly developed biochemical method of embalming on Lenin's body. By July, they were able to report that the corpse could remain in good shape indefinitely, as long as it was re-embalmed and cared for at regular intervals. This discovery represented a smashing success for Soviet science.

Thus, the corpse of Lenin was transformed from the remains of a once-living person into a monument to the Russian Revolution and the Communist way of life. Even today, nearly 30 years after the demise of the U.S.S.R., Lenin's Mausoleum—just beyond the foreboding walls of the Kremlin and heavily protected by a goose-stepping honor guard—remains one of Moscow's most visited tourist sites. Last year, more than 2.5 million people entered the carefully monitored and environmentally controlled tomb.

All that is preserved of Lenin's body, incidentally, is his skeleton, skin, muscle tissues, and outward "form." His vital organs and his brain were all removed for study at autopsy, directly upon his death.

Armchair pathologists, by the way, are still arguing over whether Lenin died of a stroke or the neurological complications of tertiary syphilis—or both. During his final months, he demonstrated many symptoms of neuro-syphilis, including terrible headaches, seizures, nausea, insomnia and partial paralysis. Lenin may also have been briefly dosed with Salvarsan, the arsenical compound developed by Dr. Paul Ehrlich in 1909 to treat syphilis in the pre-antibiotic era.

Unfortunately, we may never know the precise answer, unless the Moscow Institute of the Brain releases their precise post-mortem findings. Until then, the autopsy slices of Lenin's brain remain locked away.

During the 1924 autopsy, the pathologists also removed all of Lenin's arteries and veins. Thus, the preservation team could not infuse embalming fluids through those vessels—the most common way to deliver such chemicals through a body. Instead, they developed micro-injection techniques where individual hypodermic syringes filled with embalming agents were injected directly into the portion of the body that required preservation at any given time. They also invented a two-layered "rubber suit" to fit over the corpse in order to keep a thin layer of embalming agents circulating around his body at all times. The dark, business suit Lenin currently "wears" was specifically tailored to fit over the rubber suit.

Every other year, the entire corpse is re-embalmed by submerging it in several different solutions: glycerol, formaldehyde, potassium acetate, alcohol, hydrogen peroxide, acetic acid, and acetic sodium. Each submersion takes about six weeks.

Lenin's body is constantly under surveillance for areas of deterioration and immediate repair. Painstaking attention is paid to the corpse's external features. According to Yurchak's findings, Lenin now has artificial eyelashes because his were damaged in an early embalming process. His nose, face, eye sockets, and several other parts of his body have been "re-sculpted," with a material made of paraffin, glycerin and carotene, to help keep his facial appearance close to its original, and far more lively, look. You don't have to be an admirer of Lenin to appreciate the stunning visual impression achieved by his keepers.

Over the last century, the Lenin preservation laboratory has created a long list of biological preservation techniques. Yurchak also documented how these scientists have developed many measures that help living people, including new equipment designed to keep blood flowing through donor kidneys prior to their transplantation and even a noninvasive skin test to measure cholesterol.

All this is to say that while Lenin has been dead almost twice as long as he lived, a great deal of science, public history, political theater and fascination has been generated by what remains in Moscow today.

Editor's note: *This story has been updated to reflect the contributions of the scholarship by Alexei Yurchak.*

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