

What is also interesting, though, is how even inside Germany different professional communities came to very different views concerning the capacity of radiation to heal or to harm. Occupational health physicians recognized early on that radon was the most likely cause of miners' lung cancer, but spa health physicists—often working in the immediate proximity of the mines—tended to argue that the radioactive gas was more likely to heal the body than to harm it. Spa health physicists by 1939 had published evidence that even a millionth of a gram of radium lodged in the body could lead to death, but they usually maintained that the radon breathed in spas (e.g., from mineral springs) was entirely safe. Elaborate theories were put forward to explain how radon enlivened the body: a 1938 review of German radon therapy, for example, claimed that the radioactive gas “promotes oxidation” and “stimulates cells and tissues without injuring them very much.” Radon therapy was described as “a special form of shock therapy,” awakening and augmenting the body's own natural healing powers.⁹⁸

Nazi ideology, of course, placed a higher value on certain people's health than on others, and this can be seen in correspondence concerning whom to employ in the mines. On November 19, 1938, SS Oberführer and Regierungspräsident Hans Krebs wrote to Himmler, asking him to install concentration camp prisoners in Joachimsthal to free “our poor Sudeten German miners” from work that was killing them in their forties. Himmler agreed on the condition that the prisoners be released after two to three years if they showed good conduct, though it is not yet clear whether such proposals were ever implemented.⁹⁹

One thing we do know is that tens of thousands of political prisoners worked in the Joachimsthal mines after the war, producing 90,000 tons of uranium for the Soviet atomic arsenal and many thousands of deaths from lung cancer.¹⁰⁰ The Schneeberg mines were also exploited, generating an estimated 200,000 tons for the Soviet nuclear effort (sold cheap to the Russians as part of Germany's war reparations). These were enormous undertakings: the uranium mining operation in East Germany alone, for example (code-named *Wismut*—literally “bismuth” in both German and

Russian) in 1949 employed 80,000 men and women, many of whom had started work as forced laborers.¹⁰¹ More than half a million people eventually worked for *Wismut* at one time or another, until the unification of Germany in 1989 closed most of the shafts.¹⁰²

The Schneeberg area is now the target of Europe's largest environmental cleanup, an effort to bring to an end one of the world's most horrendous health and safety nightmares. In the early 1990s, the director of Germany's Federal Office of Radiation Protection forecast an eventual death toll among miners in the Schneeberg region in the neighborhood of 10,000 to 15,000 from radiation-induced lung cancer, and perhaps twice this many from silicosis.¹⁰³ (DDR health officials had already recognized 5,200 lung cancer deaths caused by radiation exposure prior to 1989.)¹⁰⁴ Radon is also high in the houses built on or near the abandoned tunnels riddling the region. German environmental authorities recommend no more than 250 Bq per cubic meter of indoor air, but houses have been found with four hundred times that level. As in certain parts of the United States, radon is common even in homes some distance from the mines—a consequence of the natural seepage from rocks and soils underlying foundations.¹⁰⁵

Another interesting aspect of the Schneeberg uranium story is that the Americans who originally occupied the area were seemingly unaware of its military significance. American officials were divided over whether it would be possible to monopolize the post-war supply of uranium: General Leslie R. Groves in 1945 maintained that there was “no uranium in Russia,” though James B. Conant and Vannevar Bush, administrators of the Manhattan Project, advised war secretary Henry L. Stimson as early as the fall of 1944 that it would not be hard for foreign nations to gain access to bomb-grade metal.¹⁰⁶ American officials seem to have overlooked the uranium in the region, perhaps because the abortive German atomic bomb project had neglected domestic sources in favor of Belgian Congo deposits.

The oversight is curious, given that fear of German control of the Joachimsthal mines had originally stimulated Albert Einstein to draft his famous letter to President Roosevelt about the possibility