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Mixing Politics and Science: Lessons Learned

by J. Scott Turner

Stalin and the Scientists: A History of Triumph and Tragedy, 1905–1953, Simon Ings, 2017, Grove Atlantic Press, pp. 528, $25.00 hardcover.

Freedom's Laboratory: The Cold War Struggle for the Soul of Science, Audra J Wolfe, 2020, Johns Hopkins University Press, pp. 312 pages, $22.00 softcover.

Trofim Denisovich Lysenko is the central character of an oft-told morality play about science, pseudoscience, and political corruption of science. You may have heard it: here's the plot. Lysenko was an agronomist in the 1930s Soviet Union. He had some crackpot ideas about evolution that no real scientist took seriously. Josef Stalin liked him, though, and made him the king of Soviet science. From his new elevated perch, Lysenko purged the real scientists who had opposed him. His most prominent victim was the geneticist Nikolai Vavilov, who was a real scientist, so he was sent by Lysenko to die in the Gulag.

There's just enough truth in this narrative to make it plausible. Lysenko did benefit from basking in the glow of Stalin's approval. Vavilov did die in a Soviet labor camp. Soviet agriculture was dealt a serious blow by Stalin throwing his weight behind some dubious theories of inheritance. Yet, the plot of the morality play has never rung quite true. Like the lurid narrative of *Reefer Madness,* which warned teenagers that pot smoking would make them crazed rapists and murderers, the Lysenko narrative has been convenient drapery for a variety of high horses. Darwinists, COVID-19 skeptics, paranoiacs fretting about the "right-wing attack" on science, Never-Trumpers, BLM activists, even Freudians, have all rattled the chains of Lysenko's ghost. Heck, even I've done it.[1]

I could go on—my reprint file is full of such examples—but you get the point. The Lysenko narrative has become useful, not for its actual history, but for the broad range of opportunities it presents for glib moralizing. But

what's the real story? And what lessons can we draw from the real story?

Here is where Simon Ings' recent book, *Stalin and the Scientists* comes in. Ings is not an academic or a biologist. Rather, he is a journalist, writer, storyteller, and historian of science who describes himself as an explorer of "the ruins of history." And Russian science presents Ings with a very rich landscape of ruins to explore. In his wanderings, he is guided by the following conundrum: "[by] the time Stalin died ... the Soviet Union boasted the largest and best-funded scientific establishment in history ... at once the glory and the laughingstock of the intellectual world." Now there's a contradiction to explore!

What emerges from Ings' wander through the Soviet ruins of history is not so much a black-hat-white-hat morality play, but a Sophoclean tragedy. Both Vavilov and Lysenko were mere mortals being pushed to their fateful ends by the Olympian gods and countless demigods of the Stalinist state. Both scientists represented different perspectives on the great question of inheritance and evolution, a question that, by the way, persists to this day. Vavilov, the geneticist, looked to the genetic determinants of function as the tool to pull Soviet agriculture up from its feudalist roots. The favored tool of Lysenko, the physiologist, was adaptive potential, life's remarkable ability to thrive in a range of unpredictable physical environments. Scientifically, the two are contradictory: genes are agents of continuity and specification, adaptation is a phenomenon of flexibility and opportunity. Neither tool itself can crack the problem, because neither is entirely correct, nor entirely incorrect. Truth lies somewhere in a contested in-between.

Vavilov and Lysenko were set on their tragic course by one tool (adaptability) being deemed more congenial to Marxist ideology than the other (genetic determinism). Understood in this way, both Lysenko and Vavilov come off more as human characters, each with their own flaws and virtues. Was Vavilov the innocent victim of a power-hungry Lysenko? Both Lysenko and Vavilov were skilled political players of the game of Russian science, and both were quite capable of throwing elbows in the scramble for influence and prestige in the shifting political landscape of Stalinist science. Were Lysenko and Vavilov at odds in the fight of "real" science versus "pseudoscience?" If anything, Vavilov saw value in Lysenko's thinking (more so than most present-day critics of Lysenko do), with Vavilov often defending Lysenko to his colleagues and smoothing Lysenko's upward career. In the end, both were driven by the perversities of the Stalinist regime to their respective tragic ends, Vavilov to his death in the Gulag, and Lysenko to the backwaters of Soviet science, left as blind and as voiceless as Oedipus.[2] Ings' book is the first I have read that sets the Lysenko narrative in its proper tragic dimension. For that reason alone, his book deserves a read. The rich history he paints of the Stalinist era of Soviet science is icing on the cake.

Audra Wolfe's *Freedom's Laboratory* takes us on a tour through our own "ruins of history," American science post World-War II through the Cold War. Like Stalin-era Soviet science, American postwar science was negotiating a new relationship between government and science. Prior to the war, the federal government had mostly stayed out of university science (basic science, as it was coined then). During the war, however, basic science had helped enormously in securing Allied victory, prompting the logical follow-up: could science also help secure the peace? "Yes," was the answer that prevailed, beginning a flirtation that soon blossomed into infatuation, and the prospects of a match filled with hope and possibility. Let us marry our fortunes together. Science would bring its rich intellectual dowry, and in return, the government would supply security, riches, power, and influence. That is how science and government came to pledge their respective troths, consummated with the establishment of the National Science Foundation in 1950.

It proved to be an uneasy match. Basic science's rich dowry was drawn from a long tradition of intellectual independence and distance from politics. "Securing the peace," in contrast, was an inherently political project, shaped in the aftermath of the war by the competition for geopolitical supremacy between the United States and its erstwhile ally, the Soviet Union. The marriage was marked from the beginning by irreconcilable differences, with the free-spirited and headstrong science inevitably coming to be dominated by its stodgy government partner which had cash and power and the determination to have its way. Thus, came science to be impaled on the very sharp horns of a dilemma: how to maintain its cherished intellectual independence while being dependent upon a paymaster that sees it useful. And the dependence was substantial: in the first two decades of the marriage, government funding of basic science went from being a few percent of the total prior to the war to a 60-80 percent share postwar.

Wolfe's book masterfully outlines the twists and turns in the ongoing tension sitting at the heart of the developing "government-academic partnership," the anodyne circumlocution that has come to describe the uneasy marriage. In the honeymoon phase of the early 1950s, science was a useful tool in the U.S. outreach to the newly decolonizing and developing world. *Our* science was successful precisely because *our* political system guaranteed freedom of thought, of speech, of press—from which *our* prosperity flowed naturally. Contrast this with *their* science, which was governed by a repressive political system and impoverishment. In the global competition between the American imperium and the Soviets for the wavering countries of the post-colonial world, the choice was clear: align with *us,* not with *them.*

For most of the 1950s, scientists and science were enlisted primarily as arm candy in the government's program of

"cultural diplomacy." Scientists and science could be trotted out as "cultural ambassadors," as diplomatic attachés, or participants in scientific exchange programs. Many scientists participated in these efforts in good faith, and good things came from it. But behind the glitz, support for these show ponies came through shadowy networks of cutouts and shell companies in collusion with the State Department, the National Academies of Science, the National Science Foundation, and the nascent CIA. Wolfe takes us through these networks in clinical detail, examining every cleft and cavity and tracing out the undeniable connections and influence. It's an eye-opening exploration, like finding the shadowy horse thief in your family tree.

If Soviet science was marked by tragedy, the American government-science partnership was, to echo Marx, imbued with farce. American science ambassadors were often regarded by their host countries as spies or dupes. In the propaganda war with the Soviets, the Americans often found themselves outfoxed by their wily Soviet counterparts: shades of *Our Man in Havana*. Where Stalin brought ruthless thuggery to Soviet science, the Americans brought ham-fisted ineptitude. Wolfe brings the receipts and lays them out in systematic detail.

As I was reading Ings' book, I was struck by how *familiar* the Soviet science ecosystem seemed to be, how similar to our own. Could it be? Where my feeling of familiarity was mostly impressionist, Wolfe's *Freedom's Laboratory* hardened that impression into realism: once you recognize the parallels, they cannot be unseen, and a great swath of the travails of modern American science come into sharp focus. Both Soviet and American science were straddled on the horns of a sharp and irreconcilable dilemma. As the historian John M. Barry pithily phrased it: "when you mix science and politics, you get … politics."[3] All else is pretense.

In tracing the history of post-war American science, Wolfe puts considerable flesh onto the bones of Barry's aphorism. So, for example, the premise of science as a tool of cultural diplomacy depended strongly on a picture of science as somehow divorced from politics. It's a picture of science that most scientists, including I, take very seriously. It's a commitment that science's government "partners" take less seriously, however. Once the Soviets detonated their own thermonuclear bomb and launched *Sputnik,* the show marriage of science and the American government was plunged into a crisis. The cultural diplomacy and internationalism of the early 1950s went out the window, and what had been an admirable commitment to intellectual freedom now became suspect. Thus, Robert Oppenheimer and Linus Pauling, both scientists of the utmost intellectual credibility, once courted as scientific celebrities, and prominent campaigners for nuclear disarmament and world government, found themselves on the outs and under suspicion for acting on principles

that only recently had been virtues. Sound familiar? Neither man managed the transition well. Oppenheimer came off as an untrustworthy political naïf. Pauling became a political nuisance and health food crank. Both were diminished because of the unresolvable dilemma of government and science. Wolfe's book is full of similar stories, all leading to the same conclusion: in the government-science partnership, scientists can never be partners, only slaves to their political paymasters. There is no middle ground to be straddled here.

There was no shortage of efforts to straddle the dilemma, however, and Wolfe meticulously outlines the contortions both scientists and governments twisted themselves into nevertheless. Eventually, American science broke under the strain. Throughout the 1950s, American scientists began to sort into two divergent camps: those who saw science as a tool of political activism, and those who insisted that politics should be kept out of science. Philip Handler, who was President of the National Academy of Sciences from 1961 to 1981, fell strongly into the apolitical science camp (although his motives were compromised by ongoing cooperative science programs with the Soviet Union and other countries). When Handler was asked for a statement in support of Soviet *refuseniks* like Andrei Sakharov, he refused, citing a need to keep political questions out of science. His stand painted both the NAS and Handler himself as heartless, cold, and out of touch with the realities of Soviet oppression. Was Handler on the right side of the question, or were his critics? There is no clear answer.

For its part, the federal government engaged in its own acrobatic straddling act. The CIA maintained and strengthened its shadowy network of cutout foundations and organizations to launder funds to scientific societies, academic publishers, universities, the National Academies, and authors of textbooks. An example of contemporary relevance was the U.S. Agency for International Development, established by President Kennedy in 1961. At the time, USAID served largely as a CIA front, motivated to enlist humanitarian aid in closing the so-called "missile gap" with the Soviets. As we have learned recently, USAID has maintained its rogue tradition, although its aims have changed from imaginary missile gaps to imaginary equity gaps.

Such eruptions aside, the essential immiscibility of science and politics has corrupted science systemically, among the most serious consequences being the abandonment by scientists themselves of science's cardinal virtues: objectivity, empiricism, and rationality. Through the 1960s, the increasing revelations of the secretive reach of U.S. intelligence agencies into the sciences, and the willing participation of scientists in the schemes, cast the cardinal virtues as just so much phony posturing. From this came the reactionary attitude that science's cardinal virtues themselves were only power plays to perpetuate white supremacy, patriarchy,

and heteronormativity. The dilemma has broken American science.

Take, for example, the political action group *Science for the People,* which emerged from this political miasma in 1969. Its aim was to disrupt scientific meetings to expose scientists deemed collaborators in the American imperium. In this quest, they had the support of several prominent academics, such as the evolutionary biologists Richard Lewontin and Stephen Jay Gould, who chose as their prime target their Harvard colleague Edward O. Wilson, for his supposedly impure thoughts about sociobiology. *Science for the People* are at it still today, even though their focus has shifted to the Israel-Hamas conflict, with science shoehorned in as convenient pretext, as in "Wonder and the Life of Palestinian Astronomy," whatever that is.[4]

While *Science for the People* began (and continues) as a fringe group, the ideology that begat them has made its own long march through the institutions, so that American science today is now stridently and unapologetically woke, to use that well-worn word. No longer is it considered even possible that science can be independent of politics: science has been thoroughly colonized by an alien ideology.

The colonization is illustrated by a fascinating figure who plays a prominent role in both Ings' and Wolfe's books: Hermann Muller, the 1946 Nobel laureate who discovered X-ray-induced genetic mutations. Muller was an outspoken Marxist and anti-capitalist. In 1932, he left the United States for Berlin, one step ahead of the FBI, which was investigating his part in a radical student newspaper. Unluckily, he arrived in Berlin just in time for the rise of the Nazis, prompting his move in 1934 to what he supposed would be the more congenial environs of Leningrad, just in time for the Lysenko-Vavilov controversy to begin to boil. Stalin was particularly displeased by Muller's advocacy of eugenics, so in 1937, now one step ahead of the Soviet authorities, he decamped for Edinburgh, followed by short stints in Madrid and Paris, eventually landing at Indiana University.

Throughout these ill-starred peregrinations, Muller was a vociferous defender of science's utter need for "complete freedom of inquiry and of criticism" to thrive. We can admire the consistency, but he was caught, like everyone else, on the horns of that dilemma of politics and science. Like everyone else, he did not manage it very well.

In the late 1940s, for example, Muller worked with Theodosius Dobzhansky, a fellow geneticist and Russian emigré to the United States, to draft an anti-Lysenko resolution that both hoped would be endorsed by the boards of the Genetics Society of America and the American Institute for Biological Sciences. Both Muller and Dobzhansky assumed its passage would be a slam-dunk, but to the dismay of both, neither society endorsed it, arguing that the resolution's political nature would compromise the societies' scientific missions. The prestige and considerable scientific

accomplishments of both men could not carry their political agenda forward. The two were invited to take their politics elsewhere.

Agree or disagree with the motivations of the respective boards in this dispute, they were arguably motivated by a principle: science should rise above politics. Contrast that principled stand with the last two decades, which have been marked by the near universal and craven capitulation of the entire science establishment to the demands of the anti-science ideology of diversity, equity, and inclusion (DEI). The AAAS (American Association for the Advancement of Science) has gone fully woke, and nearly all the professional societies that represent the various branches of science have dutifully followed suit. Along with them has been the capitulation of universities, funding agencies, and politicians, who have no qualms about imposing this inherently political agenda on its supposedly independent scientists. And most remarkably, it is scientists themselves who have come to be the most vociferous critics of science's cardinal virtues, deriding them as quaint notions irrelevant to science's "real" mission of political activism. Science is now fully colonized, the venture financed by the gushers of government money that have been flowing into the sciences since the 1950s.

In this context, the high-minded calls for intellectual freedom coming from the present-day scientific community ring hollow, especially when the loudest calls are made when any proposals are made to rein in government spending on science. When the first Trump administration proposed a rollback in subsidies to college administrations (otherwise known as indirect costs), more than a million "scientists" hit the streets worldwide in the 2017 March for Science. The event was full of *sturm und drang* about the "end of science." The real concern was the end of funding. We're about to see a repeat in the second Trump administration, with the Stand Up for Science rally in March 2025, which *Scientific American* assures us will "protest Trump attacks on research." Again, the protest is about Trump's attack on federal research funding, which is not the same thing as research. In 2025, as it was in 2017, the narrative is the same. Don't touch our funding, or cancer will remain uncured, meteors will strike the Earth, airliners will fall out of the sky.

Through such spectacles, American science has now become its own "glory and laughingstock" of our intellectual world. We might have escaped the nightmarish aspects of Soviet science, but American science is now approaching its own farcical denouement: oleaginous self-flattery coupled with obsequious begging for other peoples' money. American science now is arguably just one more little piggie among many jockeying for position at the public trough.

American science has now become a laughingstock. The question before all now is: how will we (or rather shall we even) restore its glory?

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