

## Revenge of the Nerds

Christopher Nolan, dir., *Oppenheimer*, Universal City, CA: Universal Pictures, 2023. 70 mm, 180 min.

Coreen McGuire and Joseph D. Martin\*

Ruth Schwartz Cowan, in *A Social History of American Technology* (Oxford, 1997), distinguishes between two types of historical myth. Myths are literally false, inviting historians to play myth-slayer. But myths also make meaning. They reinscribe community identity by codifying shared ideals and aspirations, their literal truth-value notwithstanding. Historians should take these sorts of myths very seriously indeed.

Christopher Nolan's *Oppenheimer* is a vehicle for both varieties. Although based on *American Prometheus*, Kai Bird and Martin J. Sherwin's rigorous biography (Knopf, 2005), it includes its share of misrepresentations. More interesting for our purposes, though, it is truck with myths of the second type. *Oppenheimer* responds with admirable critical sensibility to the mythological image of the scientist in general, and to the mythos of J. Robert Oppenheimer in particular. But while it self-consciously confronts the idea of

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Oppenheimer as an American Prometheus it makes myths of its own, and so provides an opportunity to reflect on the contemporary image of science, and its history.

Two bureaucratic proceedings frame the plot: the 1954 Atomic Energy Committee (AEC) kangaroo court that stripped Oppenheimer of his security clearance, and the 1959 Senate confirmation hearing for President Dwight D. Eisenhower's nominee for Secretary of Commerce, quondam AEC Chairman Lewis Strauss. In an early scene, the AEC panel's needling prompts Oppenheimer to relive the 1920s. As an immature American postgraduate student at Cambridge University, he struggles with laboratory work. His cack-handedness with the glassware provokes the ire of his tutor, Patrick Blackett, and Oppenheimer responds by leaving a cyanide-laced apple on his desk (which he scrambles to remove once regaining his cool). That apple—symbol of the Fall, of knowledge of good and evil—which Oppenheimer plants before racing to claw it back, foreshadows his flirtations with Communism in the 1930s, his work on the Manhattan Project, and the tragedies they authored together.

In Berkeley, fresh from his PhD in Göttingen with the quantum revolution in tow, Oppie recounts his difficulties in Cambridge to his lover, the psychiatrist and communist Jean Tatlock. “You just needed to get laid,” Tatlock responds laconically. And laid he gets, with his carnal misadventures providing the backdrop to the well-known (to this audience) part of the story: his left-wing political activities, directorship of Los Alamos, subsequent forays into government advising, and eventual crucifixion by the AEC. His repeated liaisons with Tatlock following his marriage to Katherine (Kitty) Puening in 1940 are positioned as precipitating Tatlock's death, leading to Kitty's vehement condemnation to a devastated Robert: “You don't get to commit the sin and then have us all feel sorry for you that it had consequences.” It is the consequences of diverse sins and the morality of those who

committed them that each hearing interrogates, resulting in a complex portrait of both Oppenheimer and Strauss.

*Oppenheimer* is a tragedy, and the essence of tragedy, per Alfred North Whitehead, is not misery and misfortune per se, but their inevitability. The outcome of Oppenheimer's hearing is foreordained by his own arrogance, which inspires Strauss to array occult government forces against him. But Strauss too gets his tragic act. His flaw is vindictiveness, and his nomination is doomed by the rancor his actions provoke within the scientific community. These two classical tragedies interweave throughout, and in shuttling between them, the film gets a great many of the facts right—much of the dialogue is ripped directly from the hearing transcripts. But it also exaggerates and omits. Fiction can be forgiven embellishment in service of drama and narrative. At the same time, the nature of those inaccuracies can reveal what sort of mythmaking is at work.

*Oppenheimer* wrestles throughout with the myth of scientist as prophet. Science's collective nature is emphasized in the portrayal of Los Alamos bustling with contributors of varying importance. These cameos hint at how a close research community became 'big science' and provides history of physics character bingo—"hey there's Feynman with his bongos!" The unblushing depiction of Oppenheimer's flaws also suggests a challenge to the lone genius canard, yet biopics necessarily venerate individual achievement and Nolan wants to have his cake and eat it too. Oppenheimer often appears in the archetypal stance of the genius scientist (entranced by blackboard chalk calculations) and quantum visions haunt his dreams. And there's no cake for Oppie; a martini and cigarette lifestyle is starkly evident in Cillian Murphy's increasingly gaunt frame and hollow eyes, as well as in I. I. Rabi's repeated exhortations to "eat" (he offers oranges, not apples). Through their relationship, Nolan explores the heterogeneity of American Jewish identity and responses to the war, as well as exploiting the ascetic ideal.

It is important that Oppenheimer is *so* very thin, because this enhances his epistemological status; as Steven Shapin explains in *Science Incarnate*, “the portrayal of our culture’s most highly esteemed knowers and forms of knowledge as disembodied has been one of the major resources we have for displaying the truth, objectivity, and potency of knowledge” (Chicago, 1998, p. 23). In their final encounter, Oppenheimer’s bodily abstraction is literally, nakedly, positioned opposite Tatlock, whose body is highlighted prominently by Nolan’s signature low-key lighting and whose noisy bathtub drowning further condemns her as embodied.

Furthering this trope, Puening is depicted as beautiful and brilliant, yet incapable of caring for her infant. The idea of knowledge as abstract and objective is gendered, and masculine scientific standards of objective rationality are depicted in opposition to emotional embodiment, linking Oppenheimer’s self-denial with truth and prophetic knowledge. With these gendered epistemologies so central to the film’s meaning, any subversion of them—such as Manhattan Project chemist Lilli Hornig brushing aside her husband’s paternalistic anxiety over radiation’s effects on her reproductive system with the observation that his own gonads are much more exposed—comes across as feeble.

The tragedy of Strauss also bolsters one of the film’s most potent myths. Nolan casts David L. Hill, who testified against Strauss’s confirmation, as the giant slayer. In Rami Malik’s hands, he is a demure amanuensis to Leo Szilard and a serial victim of Oppenheimer’s haughty disregard for those he deems of little consequence. But it is Hill’s bombshell testimony in a packed hearing room that exposes the disdain in which the scientific community holds Strauss and decisively tips the balance against his confirmation.

Hill’s historical testimony was indeed sharply critical of Strauss, but he faced a somewhat more subdued scene. He began his remarks by asking incredulously whether the anemic attendance from the members of the Senate Committee on Interstate and Foreign

Commerce could possibly represent a quorum. Nor was Hill's testimony decisive. The committee in fact recommended Strauss's confirmation, only for the full Senate to vote it down. Strauss had earned a reputation, especially among Democratic lawmakers, who controlled the chamber, as officious and duplicitous. And opposition from organized labor and the energy industry, deriving from Strauss's secretive and maladroit handling of a power plant commission, did more than the grumblings of a few physicists to scupper his chances.

The mythical element of this part of the story is the role of science in policy—a matter that provokes considerable angst in our present context. Although viewers might sympathize with Strauss over the condescension Oppenheimer directs his way, he is nevertheless the villain; we are invited to cheer the revenge of the nerds. The myth that Strauss was laid low by opposition from physicists mirrors the myth that the success of the Manhattan Project's—principally a massive exercise in engineering and industrial production—was down to the physicists. Presenting it as a close community and the choice to show the bomb's effects only in testing add to this sense of physicists occupying a world apart. But in our world, engineers, metallurgists, and technicians made the bomb, and industrialists, labor leaders and politicians unmade Strauss.

These myths, by their very falsity, reveal a larger cultural yearning for science to be more than it is. "Theory will only take you so far" is the film's mantra, but its myth is the dream that maybe it could take us just that little bit further. How tragic that the weightiest lessons are the hardest won. Nuclear arms cannot end all war. No weapon is so horrific that no one will ever use it. The genie can't be coaxed back into the bottle. Knowledge of a consequence is insufficient to avoid it. And the pursuit of a just cause is no guarantor of just conduct. How sweet to think that it might be otherwise, and that a far-seeing prophet could prove it in chalk.

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