



Mad, Bad and Dangerous: The Scientist and the Cinema
By Christopher Frayling
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French philosopher Jean Baudrillard has given us the *simulacrum* as one of the defining characteristics of (post)modern society. A simulacrum is a representation that has completely displaced the original it is meant to represent; it has come to seem much more real than its underlying reality (1). Christopher Frayling's new book about the portrayal of the scientist in popular culture — according to the author, the first full-length book to tackle this topic — neatly reflects Baudrillard's conception. Frayling argues that the popular image of science and the scientist is almost entirely defined by the cinema and other mass media. The power of cinematic images to penetrate the collective psyche, coupled with the fact that scientists have generally been unwilling and/or unable to compete with convincing narratives of their own (Culture, like Nature, abhors a vacuum), have brought us to the point where "the public's view of science is shaped more by film and television and newspaper headlines than by anything else."

Of course, the relationship between the cinema and science is not a new topic: it has provided material for a vast number of essays and books over the years (2). But Frayling's take is a little different. Based on his examination of science-themed movies, from *Metropolis* to *The Matrix*, along with the strong similarities in how schoolchildren describe and portray scientists in surveys carried out from 1957 to 2003, he claims that iconic images of the scientist in cinema have become "part of the cultural drinking water." In particular, key features have survived more or less unchanged: even though the dominant paradigm of the cinematic scientist has evolved considerably through the 20th century, the same conventional stereotypes are found in a wide variety of genres. From tales of mad scientists such as Henry Frankenstein and his successors, to the hagiographic "bio-pics" of famous scientists popular in the late 30's and 40's,

such as Pasteur, Ehrlich, Alexander Graham Bell, Edison, and Madame Curie, the scientist is shown as a misfit, single-mindedly focused on his (sometimes, but rarely, her) work, isolated from society in general and from the scientific establishment in particular. As Frayling concludes, “[T]he mad scientist and the saintly one are in some ways two sides of the same Hollywood coin.”

Frayling’s basic contention, that cinematic images have remarkable staying power, certainly rings true. Anyone would instantly recognize Boris Karloff as Frankenstein’s monster, from the 1931 James Whale version. Another of his examples will be familiar to readers of a certain generation: the illustration of a nuclear chain reaction by way of a table covered with ping pong ball-loaded mousetraps in Disney’s *Our Friend the Atom*, which I haven’t seen for nearly 50 years but still remember vividly. On a more detailed level, his arguments might have been made a little more convincing. The thematic organization of his film survey sometimes seems arbitrary and forced; also he goes a little too far in trying to separate popular from literary culture. After all, many of the films he considers have origins in “highbrow” literature. (Indeed, the very title of the book has neither scientific nor cinematic ancestry — “mad, bad and dangerous to know” comes from a description of Byron by one of his (female) acquaintances.)

A couple more minor quibbles: there is very little real science, and what is presented is often a little bit off (e.g., that Einstein’s 1905 paper on special relativity was experimentally confirmed in 1919 — Eddington’s 1919 solar eclipse observations were taken as confirmation of the theory of *general* relativity; the main components of the Strategic Defense Initiative are identified as “heat-seeking lasers”). Also the generally lively and entertaining writing style is periodically marred by interminable run-on sentences that cry out for the intervention of a more assertive copy editor.

But these are not major problems, as Frayling gives us valuable insights about a very real problem. He also offers suggestions for corrective action, although he does not appear to be very sanguine about the likelihood of success. As he repeatedly points out, positive and/or realistic portrayals of scientific practice may be hard to reconcile with the demands of effective dramatic representation. He cites an early example, H. G. Wells’ *Things to Come* (1936), a utopian futuristic movie produced as deliberate counterpoint to the 1927 dystopian *Metropolis*, but, unlike the latter, a total flop. On the other hand, he has not paid much attention to the recent multiplication and fragmentation of popular culture. As public reliance on mainstream cinema and network TV is increasingly supplanted by hundreds of satellite/cable channels and the internet, new opportunities for loosening the decades-long hold of the stereotypical scientific image might well open up.

Finally, I would carry Frayling’s concerns even further on one point. If he is correct, that the representation of the scientist as anti-establishment outsider is deeply embedded in public opinion, might not that contribute to explaining why scientists who adopt heterodox positions, in arenas ranging from global warming to intelligent design, seem to command so much attention in the US (3)? Frayling (who is English) draws no such conclusion; on the contrary, he quotes one

commentator: “All these debates about ‘creation science’ versus ‘Darwin’ are almost beside the point. The real creation myth of modern times is not Darwin, not Genesis; it is *Frankenstein*.” Maybe so; but on this side of the Atlantic, it certainly doesn’t look that way right now.

References and Notes

1. J. Baudrillard, “Simulacra and Simulations” in J. Baudrillard, *Selected Writings*, (Stanford University Press, Stanford, CA, 1998, pp.166-184), also available at <http://www.egs.edu/faculty/ baudrillard/ baudrillard-simulacra-and-simulations.html>.
2. For example, the Society for Literature, Science, and the Arts, an organization focused on the social and cultural dimensions of science and technology, invariably has several sessions on science and film at its annual conferences; for recent programs see the website <http://www.litsci.org/>.
3. See C. Mooney, *The Republican War on Science* (Basic Books, New York, 2005); reviewed by Naomi Oreskes in the 7 October 2005 issue of *Science*.