

# Stealing science's clothes

Dorothy Nelkin

**Conjuring Science: Scientific Symbols and Cultural Meanings in American Life.** By Christopher P. Toumey. *Rutgers University Press: 1996. Pp. 197. \$47 (hbk); \$16.95 (pbk).*

CHRISTOPHER Toumey's field, the anthropology of science, is under siege in the United States, a target in the so-called 'science wars'. Studying science as a human activity and scientists as a cultural community, anthropologists scrutinize the human dimensions of scientific work. This is a problem for some scientists who prefer the traditional view of science as a way of knowing that is free of human constraints. They have attacked the field of science studies as a post-modernist fad.

Given the heat generated by the science wars, they have been difficult for science-studies scholars to ignore. I therefore approached *Conjuring Science* with eager anticipation. How would Toumey deal with the science wars? Well, in his very first chapter, he explicitly distances himself from the debate: "I have little to say here about those post-modernist questions that ask whether science is real. The headbanging disputes that have set deconstructionists against positivists are not for me."

Toumey focuses less on science than on what science stands for in American society. How does it fit into the American democratic culture? How is science used in the context of American values? Toumey observes a remarkable contradiction between the extraordinary popular respect for scientific authority on the one hand and what he sees as antisience tendencies on the other. Americans, he says, appropriate not the content of science but its appearance. They are 'conjuring' science, invoking its images and its authority without proper comprehension, to bestow scientific credibility on commodities or ideas.

Toumey develops his argument coherently and colourfully by providing several examples of how science is appropriated in controversies. He describes disputes over fluoridation, AIDS policy, cold fusion and creationism. In each case, the key issues are not scientific but social; they include impersonal bureaucracies, the failure of governments to protect individuals, or the violation of moral or religious theories. Yet, he points out, in each controversy participants enlist science to support their causes. Moreover, in each case, science serves many different and sometimes conflicting agendas. And the meanings attributed to science may have nothing to do with its actual content.

Toumey writes well. His book is fun to read and his examples of the "looting of

science for its images and metaphors" capture the dynamics of a familiar problem. Scientific entities (the gene, for example) often assume cultural meanings that have little relationship to their scientific content. But Toumey underestimates the role of scientists themselves as conjurers — the way they cultivate the social meaning of their work.

Although Toumey tries to distance himself from "post-modernist questions", he cannot avoid them. By separating the world of scientists from the social world, he enters the "headbanging disputes", and mainly on the side of positivists. Arguing that the value of science to the public is contingent on cultural meanings, he ignores the cultural meanings imposed by scientists. Observing that people "hijack" scientific symbols, he implies that scientists value science only for its truth. But do not scientists draw moral and philosophical lessons from science that extend well beyond its content? Are not scientists engaged in conjuring when they promise miracles such as cures for genetic disease? What about the sociobiologists who draw moral and philosophical lessons from their theories? Scientists often 'hijack' religious imagery: the genome is the 'bible' or the

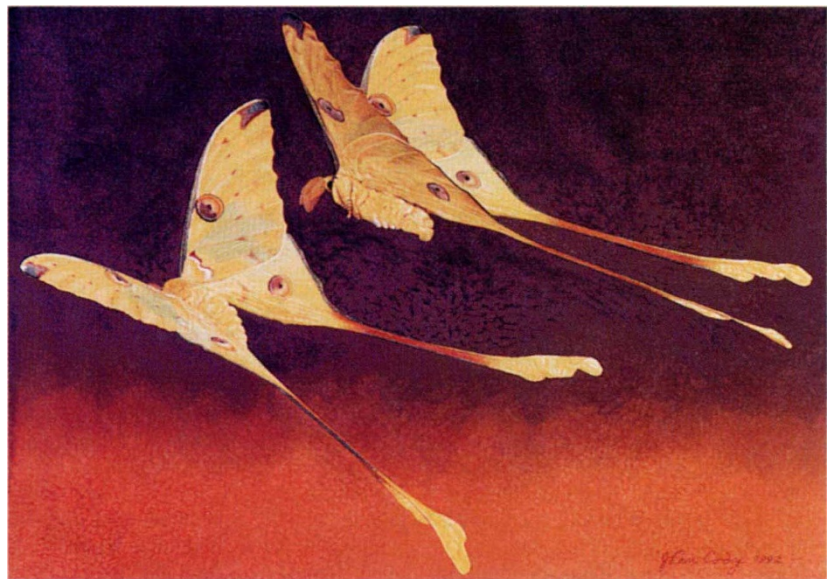
'book of Man'; the subatomic quark is the 'God particle'. They too are appropriating the compelling concepts of one belief system to meet the needs of another.

Toumey places blame for conjuring on sensational journalism, the popularization of weak science and the mediocre state of science education. Greater science literacy, he says, can be a solution, providing citizens with the tools for self-protection. Here he accepts the assumptions of scientists who believe that a public better informed about science would be less likely to question scientific priorities. But the problem may be less a lack of science literacy than a weakness of critical judgement. Perhaps it is literacy, not science literacy, that may encourage clear and independent thinking.

Toumey's book is interesting, creative and important, because he documents a prevalent and sometimes dangerous social tendency, the appropriation of scientific images for political and social goals. But equally important and sometimes more subtle are the similar tendencies among scientists.

That Toumey finds it necessary to dissociate himself from the postmodernist analyses that would raise such questions serves only to narrow his perspective. It also suggests that the science wars are influencing the field of science studies, intimidating those scholars who would look critically at the cultural assumptions underlying scientific work. □

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