

towards the more engaging stance of a public intellectual with a message and a direction, in the end it doesn't happen. Perhaps there is resistance on his part, fearing that the jargon of the public intellectual will constitute an illicit influence (the way alcohol, drugs, and cults are an influence) and thus potentially be incompatible with the freedom-promoting culture he desires. But surely we can have cultural leaders even in a culture of this sort. If there are to be such cultural leaders, they will have to bear a striking resemblance to Hartman.

#### Works Cited

Mill, J.S. *On Liberty. In Utilitarianism, On Liberty, Considerations on Representative Government.* Edited by Geraint Williams. London: J.M. Dent, 1993.

*John Rudisill*

*A Carnival For Science: Essays on Science, Technology, and Development..*  
By Shiv Visvanathan. Delhi: Oxford University Press, 1997.

*A Carnival For Science* is an insightful and elegantly written collection of essays from one of India's finest post-modern critics of science. Trained in the sociology and philosophy of science, Visvanathan has devoted his attention in this book to the "development agenda" of modern science, explicitly identifying modernism, development, and science as interlinked and potentially genocidal forces in the world. In making this argument, Visvanathan argues that science and politics are inseparable, and to localize science would also have the effect of decentralizing government. In spite of the polemical tone of his thesis, Visvanathan's writing is often entertaining and even delightful as his essays move from a fictional account of a crisis of simultaneously blooming bamboo clumps over thousand of acres of forest (and the attendant rats which come to feed on it) to rewriting Gandhi to Oppenheimer and atomic physics.

Cultural historians in the U.S. often speak of modernism encountering a crisis of confidence, usually placed between 1965-75, after which the validity of expertise (scientific and governmental) was never quite the same. This is thought to have ushered in the period of post-modernism, characterized by a multiplicity of competing narratives (none pre-eminent), experimentation, and a general skepticism on the part of academics, and the U.S. public, towards totalizing narratives of any sort. Visvanathan follows a similar trajectory in his analysis of Indian science and society in the last fifty years (the length of its independence). From the early happy days of the Indian Republic had come the various crises of the 1960s and 70s, including defeat by China in a war and a

declared dictatorship for two years in the mid-70s. "Yet despite riots, despite famines and the Emergency, we somehow clung to the one myth, the one assumption that none of us would give up: our self-image as a democracy" (1-2). But by now, Visvanathan tells us, even this last myth is fading nearly to the point of no return, and "there is a general feeling that underlying modernity was the social contract between the nation-state and modern western science and both were engaged in a soap opera called development. This process was becoming life threatening and even genocidal" (6). For the sake of Indian democracy, a post-modern consciousness must spread through Indian science replacing the "strait-jacket" of (western science based, genocidal, development-oriented) modernism with playfulness. As western science underlies western models of development, a different imagining of science would result in a different model of development. This would then lead to a different vision of Indian society and politics, a different vision of what the future might hold.

Visvanathan is not shy in putting science at the center of his concerns about the future of Indian society, but we must not lose sight of the fact that for Visvanathan, reforming science is saving democracy. He is not concerned with science in and of itself, but with the future of Indian democracy. In the late twentieth century, he argues, science has come to permeate politics - from decisions about atomic bombs to hydro-electric power plants, from bio-prospecting to health care. To save the moral core of Indian politics, then, he calls for a "carnival for science."

In many ways, Indian nationalist movements from the pre-World War II period exemplified the qualities Visvanathan so desires now: "National movements had shades of the carnivalesque; they overturned authority, and ridiculed those who imitated the colonialists" (3). This is probably the clearest passage explaining what Visvanathan means by a carnival for science — an overturning of authority, a ridiculing of western science, "a mosaic, a collage, a celebration, a conversation" (3). Visvanathan also gives us an idea of what he hopes for in a "carnival" when he describes the NGOs who momentarily sprang up following the Bhopal gas disaster: "For a brief while there was a festival of voluntarism, a carnival of counter-experts....It was raucous, quarrelsome, anarchic personalized talk, which fused fact and value and abrogated the divorce between observer and observed. The professionalized state watched this with embarrassment..." (10). Ideally, a "carnival for science" could permanently do away with the monolithic professionalized state, which is dependent upon and representative of western development models, and replace it with a diversity of locally situated practices and theories. A carnival for science would become a carnival for government.

The first essay, "A Carnival for Science," introduces Visvanathan's themes and his broad suggestions for locally situated and playful science, his carnival. This first essay is the only essay written specifically for this book, the remaining six essays having been first published in various journals. In spite of this, the essays fit together remarkably well, with essays two to four focused upon proving his thesis (the interconnectedness of western science, modernism, and

development, and the devastating effects of this troika) and essays five to seven providing suggestions for how India (and the rest of the world) might think past this current development/science paradigm. The first essays call upon Western medicine, Nazi Germany, and the science of genetics to demonstrate the vivisectional nature of western science. These essays demonstrate Visvanathan's broad knowledge of the history and sociology of science. His writing truly takes off, however, in the second section of this book. His fifth essay, "Atomic Physics: The Career of an Imagination," is a true masterpiece and the heart of his argument. In this essay, Visvanathan uses the writings of Robert Jungk as a springboard for his own discussion of the development and future of "big science," as represented by atomic physics. Skillfully intertwining literary analysis, cultural criticism, and history, he makes a powerful argument for what he calls "a new imagination" of science and its role in the world. The last two essays in the book are imaginative offerings, in which Visvanathan's creativity is given free rein as he speculates on Gandhi and Bamboo.

Though Visvanathan is widely recognized among scholars of South Asia and of Indian development, he deserves a much wider audience. His thinking is sophisticated and his writing often delightful. His work would be of interest to many different academic communities, in particular, scholars of cultural studies and post-modernity. Whether you find him persuasive or disturbing, *A Carnival for Science* will certainly clarify your own thoughts on the relationship between science, society, and development in the twentieth century.

*Mike Lewis*