Review: Industrialized Nature: Brute Force Technology and the Transformation of the Natural World

By Paul R. Josephson

Reviewed by Pramod K. Nayar
University of Hyderabad, India

.....

Paul R. Josephson. *Industrialized Nature: Brute Force Technology and the Transformation of the Natural World*. Washington, DC: Island/Shearwater, 2002. 311 pp. ISBN 1-55963-777-3 (cloth). US$25.00

In the chapter on fishery and other related aquaculture technologies, Paul Josephson begins with a simple yet harsh statement: "It is science that provides the basis for rational decisions about fish behavior and reproduction, about where and when to catch, and about the influence of water chemistry, currents, and the like on fisheries. Unfortunately, all too often, captains have used science only to locate schools of fish and capture them" (p. 198). This is an effective summation of his entire approach and concerns. Josephson's work, a comparative study of "brute force technologies" in Eurasia and North America, reveals the way in which national factors and scientific theories across the world have consistently undermined the biological basis of life and supplanted it with an industrial one. Brute force technologies, Josephson's term for the concrete-steel-PVC culture, transform nature into "readily available commodities ... more machine-like, more predictable" (p. 10), a transformation whose costs are not yet clear to humans. Brute force technologies are standard engineering practices and harsh chemical methods that are "unforgiving," a premature search for monocultures that is based on an incomplete understanding of the biological consequences of human activities (p. 12).

Josephson's opening chapter on dams in Soviet Russia and the United States explores the consequences of the "unwisdom" in altering the flow of rivers, the dredging of their shoals, and the general over-exploitation of water for electricity, navigation and fishing. Looking at geo-engineering projects such as the hydropower stations on the Volga, the works of the Tennessee Valley Authority, and the Grand Coulee Dam, Josephson demonstrates how state policy, ideas of national pride (especially in Stalinist Russia), and skewed definitions of "progress" caused massive geological and biological alterations in these countries. Josephson concludes that neither the American nor the Russian governments considered the social costs of this brute force of technology. Economy and social prosperity boomed when the Grand Coulee Dam works were under construction. After 1950, with construction work all but over, there was a 50% decline in population in three years.

Shifting focus to forestry management, Josephson looks at the way in which the lumbering and paper industry ignored the ecological viewpoint when seeking to transform forests into a source of "sustained yield." Reading the forestry management technologies in the Maine area of the United States and the Arkhangel region of the former Soviet Union, Josephson suggests that the ideology of progress was based on a flawed assumption-that modern scientific management would make the forest available for multiple uses for future generations (p. 74). Forestry specialists therefore transformed the forest into a "living machine" (p. 77).

In the chapter "Corridors of Modernization" Josephson looks at what he calls the "Cartesian grid of regularity and structure" (p. 131) imposed on the land in order to facilitate the easy movement of people and machines into the interior. Comparing Amazonian and Siberian development over the 20th century, Josephson discusses how the penetration into extensive forests and water resources, with its concomitant constructions-roads, railway lines, communication, and electricity grids-altered traditional ways of life and resulted in uneven economic growth that favored (only) these corridors.

In the concluding analytical chapter on fisheries management, Josephson looks at the practices in the United States, the former Soviet Union, Canada, and Norway. He notes particularly the impact of brute force technologies on the fish and their reproductive, migrational-and mere survival !-habits.

In his epilogue, Josephson summarizes his essential argument-which is not about brute force technologies alone. Josephson argues that brute force technologies invariably require "brute force politics" for full effect. The George W. Bush administration's exclusion of the public from decisions about energy policies, for instance, reflects this politics-technology imbrication. Decentralization, with an emphasis on local decision-making, greater participation and management is urgently required, according to Josephson.

What is fascinating about Josephson's study is the parallels he is able to draw between Soviet and American ways of thinking about nature and technology. Using a wealth of empirical studies-from housing to fish demographics-Josephson is able to detail a formidable account of the social impact of such techno-scientific thinking. Further, his comparative study also provides an insight into the ways in which politics (and politicians) work-whether in the USSR, the USA, or Amazonian Brazil. His reading of a variety of government reports, scientific studies, and opinion polls are astute and document the processes of the technologization-industrialization of nature. The nexus between profiteering business conglomerates/corporations, uncaring politicians, and myopic scientists across the globe are well documented-and teaches us never to trust any policy created by these so-

called human species. Finally, Josephson addresses technology not just in economic terms-though this is integral to his approach-but also in social terms. Thus he looks at the "depopulation narratives" of construction sites and the changes in lifestyle patterns and migratory movement alongside narratives of scientific advancement, economic prosperity, and the rhetoric of nationalism. This lends the book a historical sense which is social-historical rather than the (usually dry) economic-historical one.

After reading Josephson's account of the ways in which governments, scientists, and businesses combine to inflict maximum damage on nature, camouflaging the whole thing as "progress," one begins to see how a phrase/term such as "a federal undertaking" has unintended significant (funereal) overtones for the fauna and flora of the earth.

.....

Pramod K.Nayar <nayarpramod@hotmail.com>, Lecturer in English, Department of English, University of Hyderabad, Hyderabad, 500 046, India.