
Jacobs's method of argument is peculiar, if not off-putting. Her book is framed as a modified Socratic dialogue whose characters are, among others, a novelist, a lawyer, a biologist, and an environmental activist. At first they doubt the existence of the two syndromes, but gradually through their discussions they come to agree that Jacobs is right and that these two systems do dictate human behavior.

Some readers may be slow to join in this celebration. So much of Jacob's book is taken up with establishing her two systems that she fails to notice all the kinds of human behaviors and actions that they cannot explain: altruism, paternalism, ethnic solidarity, religion, and rituals, to name a few. Nor does her theorizing account for why system abuses occur or indeed for much of what else transpires in the real world. Why is there, for example, insider trading or a savings-and-loan debacle? In interviews, Jacobs has faulted President Clinton's plan to jump-start the American economy as an inappropriate mixing of guardian and commercial syndromes. But when she proposes her own solutions—"Government's role is to create a good climate for new ideas and honest trade"—she sounds like a campaign stump politician afraid to discuss specifics. And, ironically, for a self-professed champion of democratic values, Jacobs seems inadvertently to have ruled out the democratic possibility: Constitutions, political parties, or individual rights, after all, are intrinsic to neither of her systems of survival.

Science & Technology

THE END OF PHYSICS: The Myth of a Unified Theory. By David Lindley. Basic. 275 pp. \$25

Ancient astronomers, Pythagoras among them, found it aesthetically pleasing that the heavenly bodies orbited in perfect circles—so pleasing, indeed, that they interpreted their observations

to support this "truth." Not until the work of Copernicus, Kepler, and Newton (who showed such orbits to be elliptical) did scientific observation consistently produce theories, instead of the other way around. Today, however, physicists are once again formulating elegant theories with little regard for observation or at least without the benefit of empirically verifiable data. As Lindley, a senior editor at *Science*, points out, the existence of such phenomena as the quark, dark matter, and a finite universe can be established only mathematically.

"How can it be that mathematics," Einstein once asked, "being a product of human thought which is independent of experience, is so admirably appropriate to the objects of reality?" That question, even more now than when Einstein was alive, vexes contemporary physicists. Today they contrive ever more arcane theories in pursuit of a "unified theory" or "Theory of Everything"—a grand set of metaprinciples that will account for the complete contents of the universe. The more purely mathematical the pursuit becomes, the more postmodern particle physics seems to resemble premodern science: that is, less an empirical science and more a kind of mathematical aesthetics. Noted Cambridge University physicist Stephen Hawking predicated his "quantum cosmology" on the model of a closed universe because, at bottom, he feels that finiteness is neater than infiniteness. But, as Lindley asks, what can be the utility of a "theory that looks attractive but contains no additional power of prediction, and makes no statements that can be tested?" Lindley is not completely dismissive: "Perhaps physicists will one day find a [unified] theory of such compelling beauty that its truth cannot be denied." Even so, he adds, "this theory of everything, this myth, will indeed spell the end of physics, not because physics has at last been able to explain everything in the universe, but because physics has reached the end of all things it has the power to explain."