

after all, would have the same right to life no matter if rape or incest or marital intercourse were the cause of conception, and no matter if bearing the fetus to term might endanger the mother's life. But most abortion foes, Dworkin points out, are willing to make certain exceptions.

Dworkin argues that people on both sides of the issue are secretly united by a devotion to "the sanctity of life" but divided by their different understanding of the sacred. Opponents of abortion see the biological "gift of life" itself as sacred; more liberally inclined folk tend to think that life is made sacred by human "investments" in it. In this view, writes Dworkin, "it may be more frustrating of life's miracle when an adult's ambitions, talents, training, and expectations are wasted because of an . . . unwanted pregnancy than when a fetus dies before any significant investment of that kind has been made." The "pro-choice" position, he argues, is thus really a spiritual view.

Unfortunately, Dworkin soon abandons his provocative venture into moral philosophy for the familiar terrain of rights and interests and constitutional law. For him, as for many other liberal thinkers, abortion (like euthanasia, to which he devotes far fewer pages) ultimately comes down to a clash over individual rights. The pregnant woman, in other words, has them; the fetus does not. Arguing that the "pro-choice" position is religious in character, he adds a new twist, contending that a woman's right to an abortion is grounded not in the sketchy right to privacy cited in the Supreme Court's *Roe v. Wade* decision of 1973 but in the First Amendment's protection of the free exercise of religion. (For

similar reasons he insists that "any honorable constitution" will guarantee individuals their right to die.) Dworkin's provocative case would have been stronger, however, had he subjected his own assumptions—especially those concerning what is sacred—to the same penetrating scrutiny he gives here to the "pro-life" position.

SYSTEMS OF SURVIVAL: A Dialogue on the Moral Foundations of Commerce and Politics. By Jane Jacobs. Random House. 236 pp. \$22

What is it that binds society together? Why don't corporations and governments descend into corruption and lawlessness? Jacobs, in a book as ambitious as her landmark *Death and Life of Great American Cities* (1961), ponders this question by examining various commercial and political systems throughout history. Unlike many philosophers who have tried to rest society on a single moral foundation, Jacobs uncovers two separate "systems of survival." On the one hand, a "commercial syndrome," which covers dealings in the marketplace, values working easily with strangers, respecting contracts, and promoting "inventiveness and novelty." The "guardian syndrome," on the other hand—represented by the military, the police, or any other organization of control—prizes obedience, discipline, loyalty, and shows of force. The alternating compatibility and conflict between the two systems allow society to function.

When people stay within their own syndromes—when corporations engage in free trade or when police concentrate on fighting crime and not, for example, meeting an arrest quota—the result, according to Jacobs, is overall success and prosperity for the society. But problems arise when the lines become blurred. The Mafia, for instance, is one of these "monstrous hybrids," a commercial entity that operates under a guardian mentality, adhering to a strict code of discipline, honor, and loyalty. The former Soviet Union, a guardian bureaucracy, strayed disastrously into the commercial syndrome when it undermined local officials by accepting kickbacks for not exposing shoddy workmanship or engaged in the falsification of production figures.



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."