

convention was the one convention in which a delegate suggested that abstract theory be the measure of an acceptable constitution. The suggestion was voted down by a nigh-unanimous convention.

The closing two chapters of the book take up the questions whether it is plausible that the founders, the great majority of whom were committed Christians dedicated to Christian teaching, intended to establish a religious regime such as that which the Supreme Court has legislated in the second half of the twentieth century (of course not!); and whether the thirteenth, fourteenth, and fifteenth amendments were intended by Congress and the state legislatures to nationalize all-important questions of governance (of course not!).

A review such as this can merely hint at the learning displayed in *Original Intentions*. Inevitably, the ethic displayed in his work and the identities of his enemies testify that his performance of his civic duties was exemplary.

1. Eugene D. Genovese, *The Slaveholders' Dilemma: Freedom and Progress in Southern Conservative Thought, 1820-1860* (Columbia, S.C., 1992), 13. 2. Bradford, xv. 3. John Dickinson of Delaware finally asks Madison, "You see the consequence of pushing things too far?" Bradford, 7. 4. I made a similar argument about another important incident in Madison's life in "A Troublesome Legacy: James Madison and 1798," Master's Thesis, University of Virginia (1994). 5. For the regnant academic argument, see Gordon S. Wood, *The Radicalism of the American Revolution: How a Revolution Transformed a Monarchical Society into a Democratic One Unlike Any That Had Ever Existed* (New York, 1992). This seriously flawed work, whose title seems so improbable, was so fashionable as to be voted all the major historical prizes. 6. Bradford often refers to Raoul Berger, *Government by Judiciary: The Transformation of the Fourteenth Amendment* (Cambridge, Mass., and London, 1977), which makes the general point. Also essential are the same author's *The Fourteenth Amendment and the Bill of Rights* (Norman, Okla., and London, 1989), which exposes the application of certain Bill of Rights provisions by the federal courts against the states and the assumption of a broad range of powers by Congress as usurpations, and *Federalism: The Founders' Design* (Norman and London, 1987), which proves that states' rights are republican rights. 7. Of course,

"We're the first generation moral enough to live up to the constitution's obvious meaning" has a certain (unsavory) appeal. 8. The most common (because easiest?) distortion is to rely on the opinions of only one or two men as paradigmatic, as in Edmund S. Morgan, *Inventing the People: The Rise of Popular Sovereignty in England and America* (New York and London, 1988). Gordon S. Wood, *The Creation of the American Republic, 1776-1787* (New York and London, 1969) is the leading text today. Its guiding assumptions are that the constitution had one meaning and that the Federalists obscured that meaning, thereby securing ratification of a document that would not otherwise have been approved. (Both of these books won leading historical awards.) Each of these assumptions is impossible if we assume, as Bradford here shows the founders did, that the understanding of the ratifying conventions determines the constitution's meaning. When the possibility of different experiences in different states is considered, as in *The Constitution and the States: The Role of the Original Thirteen in the Framing and Adoption of the Federal Constitution*, ed. Patrick T. Conley and John P. Kaminski (Madison, 1988), the question is why each state came to adopt the one constitution; the questions whether they had disparate understandings and how that should affect constitutional adjudication are never raised. 9. Bradford, 44-45. 10. Bradford, 47. 11. Bradford, 56-58. 12. Bradford, 62-63. 13. He even made the case for the positive goodness of slavery, fully thirty years before Nathaniel Macon supposedly led the way on that score. Bradford, 64. 14. Bradford, 64.

Science versus Theology

JOHN C. CAIAZZA

Understanding the Present: Science and the Soul of Modern Man, by Bryan Appleyard, *New York: Doubleday, 1992. 235 pp. \$23.50.*

This book, by Sunday *London Times* columnist Bryan Appleyard, has stirred controversy in both England and America. In England it was attacked by *Nature*, the foremost British scientific journal, as "a very dangerous book," and was the topic of a formal debate by novelist Fay Weldon and a prominent biologist. In this country the book was the subject of a critical 3,000 word review in *The New York Re-*

view of Books by Timothy Ferris of the University of California, Berkeley. Previously, Ferris had debated Appleyard, once in front of a live audience in New York City and again for the television cameras on CNN.

Why controversy over a book that is a history of ideas of the shadowy verge where scientific discovery meets the concerns and trend-lines of general culture? One answer is that the educated lay public has shown an appetite for such books lately, the best-known example being Allan Bloom's *Closing of the American Mind* (1987). The reference to Bloom's book is not incidental, as the subtitle of Appleyard's book shows—"Science and the Soul of Modern Man." (The fact that the public shows an appetite for books about the soul written by learned men is a sign for some optimism in these benighted days.) The other reason for the interest in this book is that Appleyard has a point, one which is easy to miss, namely, that as important to the understanding of our culture's and our souls' present miseries as the influence of rock music or deconstructionism, is the impact of modern empirical science.

Appleyard argues that the ego, the central "I" of personal knowledge and living reality, has been displaced by both the theory and the application of modern empirical science. Descartes separated the ego and the mind from external reality, including our own bodies, a displacement required by scientific method so that human beings could become experimental observers of physical reality. The effect of the Copernican doctrine, as Pascal and Freud noted, was to displace man from the center of the vivid Dantesque universe, with heaven literally above his head and hell literally beneath his feet, to the periphery of a small planet circling about a nondescript star in the cold vastness of empty space. The net effect of Copernicanism and many other discoveries, including evolution and DNA,

Appleyard argues, was to suborn and eliminate the human element in physical reality altogether, from which have come a host of miseries, including the separation of fact from value, a diminished sense of self, the virtual abolition of traditional religion, the impertinent invasion of technology, and, finally, a pervasive sense of despair.

That all these miseries exist to one degree or another there is no doubt, and Appleyard makes his case with insight and vigor, displaying a sound knowledge of the cultural impact of science from the Enlightenment up through the late twentieth century. Along the way, he discusses a range of topics from Cartesian metaphysics to artificial intelligence to the religious element in environmentalism in an informed and perceptive manner. Appleyard is also a writer on art (one of his previous books was a biography of the composer Richard Rogers), which gives him a special advantage in writing about the impact of science on the soul of modern man. Comparing our ability to comprehend the internal machinery of an automobile versus the electronic incomprehensibility of the insides of a computer, he writes:

At this point the machine becomes an indecipherable black box which in addition is likely to be cheap enough to be replaced rather than repaired. Its mechanism is something we have neither need nor competence to explore—the machine becomes as irreducible, as absolute as a natural object...or as ourselves. It is no longer something to which we have to relate in the way that we may have done in the past to cars. Rather it is like a rock or a plant, a part of the natural environment which we pick up in passing and discard when it has expired. It has no interior with which we need concern ourselves.

Despite Appleyard's strengths as a writer, there remains a legitimate doubt, as Ferris points out in his review, that such a phenomenon as contemporary

cultural demoralization is the result of modern science and technology (which is not to accept Ferris's essentially benign view of the cultural impact of science, a sort of Whig history which connects science with progress, toleration and democracy). The picture may not be as black as Appleyard paints it, for he accepts the terms of the enemy's propaganda when he assumes that science is essentially materialistic and deterministic. In fact, Appleyard's case is based on "hard science," the kind of physicalist determinism and scientific triumphalism espoused by a Stephen Hawking and a Carl Sagan. Appleyard writes as if these men are right, in essence accepting their case but then railing against what he sees are the tragic results of science's Faustian bargain, the onslaught of well-intentioned but relentless materialism and the elimination of anything recognizably human from the physical universe.

This book can be seen as the latest engagement in what one nineteenth-century historian called "the warfare between science and theology." While Appleyard is on the side of the angels, his view of theology is bleak, almost despairing. In his view, Catholicism is a stage of the cultural history of the West now surpassed—he says that orthodox religion of all kinds is moribund—and assumes that the unity of revelation and reason in the high Middle Ages is permanently lost. In effect, Appleyard's theology is anti-sacramental, precluding the presence of the divine in the human by reducing such a presence to "magic." Thus, he argues against the doctrine of Transubstantiation as if the issue were the validity of Aristotelian metaphysics, rather than the possibility of discerning the presence of the divine Person in worldly elements.

Appleyard identifies Protestantism with individualism and the modern project, stating that it provides "the most dynamic image of faith's struggle against the inroads of science." Bereft of any

hope of experiencing the divine in the material, the Word in the flesh, Appleyard concludes that Kierkegaard's notion of Christian faith as "authentic choice" provides the best and only defense of faith against scientism. He relies on faith as a redoubt, simply refusing to accept the authority of modern science, an attitude which becomes a form of the pre-Medieval formula "Credo quia impossibilia." Such is the price of accepting the enemy's terms in warfare that Appleyard must be content to live amidst the onslaught of scientific materialism in a castle of the authentic self, able only to call to other castles when the noise of the intervening battle permits. The book might almost be subtitled "The Failure of the Liberal Protestant Imagination."

Appleyard denies hope even while he describes recent developments in science that bode well for the future of Western culture. He describes some of these new discoveries, including quantum mechanics, relativity, and chaos theory in a chapter entitled "New Wonders...New Meaning?" But the question mark explains it all. Like a good Calvinist, Appleyard cannot bring himself to find joy in the fact that the tight box of mechanical causality constructed after the first comprehensive scientific systematization by Newton has been smashed twice in this century, once by relativity and again by quantum indeterminacy. Nor does he derive any hope from the challenge to scientific sufficiency from environmentalists or from the more general sense in our culture that science brings mankind enormous power but not the wisdom to use it. The authority of science is declining, a cultural fact which the appearance of this book and the interest it has generated indicate.

What Appleyard is lamenting as much as anything is the lack of our culture's unity, of its fragmentation into a materialistic universe in which humane perspective and values have no meaning.

While he ascribes this deficiency to the influence of science as a unified force of materialism that reduces values to subjectivity, his diagnosis may be wrong. In fact, science, like much authority in our culture, currently speaks with a variety of contrary voices emanating from its different fields. Thus, genetics, full of recent successes, inspires its practitioners (Monod, Dawkins) to proclaim the classic scientific position of determinism. Yet quantum physics speaks of acausality, while chaos theory is hardly a fortress of determinism. The social sciences, which Appleyard barely mentions, speak with a different set of voices, fulfilling ideological ends of social analysis and control. It is not the unity of scientific explanation, but its diversity with which we must now deal.

Science once spoke with a single voice, and when it did, it was the guarantor of human knowledge in Western culture. When Jefferson spoke of "self-evident" truths, the chief exemplar of such truth that he had in mind was Newton's mechanical system. The decline of the authority of science in the twentieth century has seen the rise of irrationalism, superstition, and nature worship. Scientific rationality is, unfortunately, the only kind of rationality we know, and now we are losing faith in it. The recent decline of discourse among contending viewpoints and groups who simply shout slogans at each other is a consequence of our declining faith in reason, which poses obvious cultural, social, and political dangers. The chief danger may be that as we lose faith in science, we will not find modes of reason, more humane and more open to the reality of moral law and religious revelation, to replace it. For all the validity of his warnings about the negative effects of scientific reason, Bryan Appleyard does not have anything else to replace it.

The Real End of Ideology

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The Soviet Tragedy: A History of Socialism in Russia, 1917-1991, by Martin Malia, *New York: The Free Press, 1994. x + 575 pp. \$24.95.*

Did you feel euphoria when the Berlin Wall came down? When Boris Yeltsin stood atop a tank, victorious? When the hammer-and-sickle was lowered from the Kremlin tower? Did you think then that the whole world, and not just the dying Soviet empire, was changing? If so, hold that thought. In times of enormous upheaval, it is difficult to see the forest for the trees. Because those charged professionally with interpreting events bring to the task different assumptions about the nature of reality, they offer conflicting analyses. Not all of them can be right.

We are indeed living through what history books will eventually record as one of the greatest of world-historical transitions. Not only is our dehumanizing twentieth century ending, but the whole modern era deriving from the Enlightenment is drawing to a close. Ideas of progress and human perfectibility have proven a snare and a delusion. Autonomous reason demonstrates its inadequacy to comprehend the realities of the human condition.

The crucial event of our time is the demise of Communism. The Soviet experiment was the most distinctive historical feature of our short twentieth century, which we do well to date 1917-1991. Its collapse was quick, total, and almost universally unanticipated. More importantly, the Marxism-Leninism which inspired it and which was the most influential of modern ways of imagining the future, is thoroughly discredited. Only in Western academic hothouses does the Marxist fantasy persist, and even there some true believers have lost the faith.