

Understanding the Present: Science and the Soul of Modern Man by Bryan Appleyard. London: Pan Books Ltd., 1993 (2nd ed.). 283 pp. £6.99 (p). (also published in the U.S.A. by Doubleday)

In this provocative history of modern science and our attempts to cope with it, the conservative English newspaper columnist Bryan Appleyard urges us to delve beneath the political, economic, and sociological descriptions of the day that we might better understand our present world and the scientific dynamic that drives it. Appleyard's stimulating and crisply written guide to 400 years of Western science aims to uncover what science has been, what it now is, and what it means.

The book is not a celebration of science. Appleyard is neither a Jacob Bronowski narrating the heroic ascent of man from magic to science, nor a Carl Sagan revealing the wonders of the cosmos and telling us how to live. He launches rather a counter-attack against these popular advocates of science as a way of life, offering instead an alternative tale. It is the tale of a culture being progressively overwhelmed and transformed by science, a story of struggle, decline, and ultimate defeat, of failed attempts to hold back "the cruel pessimism of science" (79). Through this tale, we are to come to understand "the appalling spiritual damage" that science has done and can still do (xviii).

Appleyard frames his case in starkly dramatic terms: "Scientists need to be observed and criticized more than any other members of society" (xvii). "Science, quietly and inexplicitly, is talking us into abandoning ourselves, our true selves" (xviii). This is language designed to boil the blood of the scientific community. The journal *Nature* called the book "dangerous," and in a London debate, biologist Lewis Wolpert accused Appleyard and his supporters of not having progressed from the position of Galileo's opponents. Appleyard's critique of science has been debated before an American audience on CNN and lauded by conservative MPs in the English House of Commons. In the preface to the second edition, Appleyard expresses his bewilderment at the passions aroused by the book and then proceeds to pour more oil on the fire by attributing them to "the awful violence of institutional paranoia" (xi).

Understanding the Present fuels further controversy by coupling its critique of science with a conservative political and cultural agenda. In a bold and contentious argument, Appleyard suggests that liberal democracy is the embodiment of a scientific society (xiii). To attribute a role to science in the rise of liberal democracy is, of course, not new. But Appleyard turns the argument into an accusation, writing out of twin convictions that modern liberal democracy is the product of scientific method, insight, and belief, and that both liberalism and scientific truth are inadequate guides to life. The "bland noncommittal world of liberalism" has created a spiritual vacuum that is dangerously unstable (14).

Despite its partisan tone, this book deserves the attention it has received. It does not intend to present a balanced, scholarly study of the interaction of

science and religion (see in this connection Ian Barbour's *Religion in an Age of Science*). But Appleyard is well informed and sets forth his primary concern forcefully and directly in language readily understood by the general reading public. The central issue of the long-term intellectual, spiritual and moral effects of the scientific revolution on our civilization remains as pressing to us today as it was in the nineteenth century, when Matthew Arnold heard at Dover Beach the "melancholy, long, withdrawing roar" of the retreating "sea of faith" (108).

Appleyard places the question of values, or more precisely, of value neutrality at the heart of his critique. He points to the "way in which science forces us to separate our values from our knowledge of the world" (80). The Enlightenment taught us that we make progress in science only when we free our knowledge of subjective elements. But this severance of knowledge and value — a philosophical commonplace for the past two hundred years — has, to Appleyard's way of thinking, terrible implications. Science threatens to conquer all other meanings and is "spiritually corrosive, burning away ancient authorities and traditions" (9).

Why then do people everywhere welcome so imperious a guest? Appleyard replies that though science tells us nothing about ourselves, or how we should live, and leaves us aching, anguished, and alone in a universe stripped of meaning, it is, nonetheless, seductively effective: "Whatever this appalling, comfortless knowledge meant, we could not deny it worked" (108). Nothing succeeds like success, and modern science has been "more successful and effective than any other form of human knowledge" (xii). Science wins our gratitude and admiration, Appleyard repeatedly reminds us, because it works.

At this point, some reviewers have objected that science is, after all, distinct from technology. Science has to do with knowledge; technology, with power. Science does not corrode human values, industry and politics do: see Timothy Ferris, "The case against science" (*The New York Review of Books*, May 13, 1993, p. 17) and Simon Wolff, "Science as the dustbin of hope" (*New Scientist*, May 30, 1992, p. 41). But Appleyard might well reply that such distinctions are too finely drawn, focusing upon the subjective motives of individual scientists, rather than upon science as it objectively manifests itself in society. And Appleyard sees, quite correctly I think, that it was the wedding of knowledge and power, theory and industry, which gave to science its special status. We all want what science can give us.

But science, Appleyard cautions, is not a harmless commodity. Its practical benefits are in no sense value-neutral. We are all familiar with what science has done to traditional societies: the imported penicillin cures the child, but proves fatal to the native community; science humiliates the local wisdom and subverts the religion and culture.

The best critique of science, it would seem, is its own history. In a tour of highlights and landmarks of philosophy and science, Appleyard traces a pattern of spiritual displacement in the history of the West from sixteenth- and

seventeenth-century astronomy and physics, through nineteenth-century biology up to twentieth-century psychoanalysis and computer science: first, we were displaced from the center of the cosmos, then robbed of our privileged position in creation, and finally, lost to ourselves, our innermost convictions interpreted as expressions of psychic disorder, our very intellect itself now subject, perhaps, to mechanical duplication. Everywhere it is the same: science separates our values from our knowledge of the world; in our search for goodness, purpose and meaning, we cannot look to the heavens, to nature, or even to our own selves (80).

Science is, according to Appleyard, always the adversary of religion and humane values, and the author offers no prospect that things might change. Science and religion occupy the same territory; conflict is inevitable; coexistence, impossible. Appleyard has no antenna for religious thought that seeks accommodation to science. Attempts at "modernization" from Thomas Aquinas to Paul Tillich carry with them common dangers of dilution and compromise (22, 98). Appleyard also casts a cold and wary eye on those eager to find handholds for a new spirituality in the lacunae of twentieth-century science. The popularizers of the new science may beckon us with the siren song of a world more extraordinary than "our reduced, modern idea of our lives had allowed" (247). But it is a trap, Appleyard warns: even the new science sells the same old "hollow mechanistic vision" of ourselves (248). Relativity, and quantum and chaos theory may reveal a new style in science and a universe that is dynamic, interconnected and a good deal more complex than Newton imagined. New developments in science do indeed seem to be moving beyond the Enlightenment's value-fact dichotomy. Yet Appleyard cautions against staking too much on particular scientific theories that may prove short-lived, and he can muster little enthusiasm for such New Age favorites as David Bohm and Fritjof Capra (190, 194). He rejects Green efforts to bridle technology as well: Environmentalism is "anti-progressive" and fails to recognize the "indisputable fact" that we are fundamentally "different from the rest of nature" (229).

Two developments in particular alarm Appleyard: first, that science "now answers questions *as if* it were a religion and its obvious effectiveness means that these answers are believed to be the Truth — again *as if* it were a religion" (228); second, that science has everywhere laid siege to our sense of self: "a hard, irreducible sense of our own self-awareness has been progressively denied us by the inroads of science both as a form of truth and as creator of our society" (231-2).

Understanding the Present had its genesis in a 1988 interview which Appleyard conducted with the present occupant of Newton's chair at the University of Cambridge, Stephen Hawking, and his wife, Jane Hawking. At that time, Hawking held out the prospect of a Theory of Everything, one or more equations from which the whole cosmos can be derived, and concluded his *Brief*

History of Time with the hope that we might then be able to answer the question of why it is that we and the universe exist: "If we find the answer to that, it would be the ultimate triumph of human reason — then we should know the mind of God."

Appleyard finds Hawking's position doubly troubling. On the one hand, Hawking's move to a "no-boundary condition" effectively eliminates both the necessity for a single event at the start of time and the need for God. Hawking's invocation of the mind of God is "the merest whisper of an afterthought, a functionless grace-note to round off the theory" (179). On the other hand, Appleyard fears the wider ambitions expressed in the quest for one simple, all-inclusive theory. Here science, in Appleyard's eyes, crosses the frontier separating it from religion. It is no longer content to show us what things are and how they work, it wants to tell us what things mean. Even hard science is now in the dubious business of answering "why" questions. (Appleyard confides to the reader that Jane Hawking, a devout Anglican, was distraught over the direction of her husband's thinking.)

Appleyard, it seems to me, exaggerates the dangers. In spite of its long tradition and recent vogue, the invocation of the deity by scientists has always been more ornamental than explanatory. And even a Theory of Everything would not, as Appleyard fears, allow us to "predict that a particular snowflake would fall on a particular blade of grass" (1). The descent to particulars remains far too perilous and uncertain for a Theory of Everything to be of much aid at the racetrack.

More to the point is Appleyard's concern about the status of the self. In the twentieth century, Appleyard asserts, "science and philosophy have formed an unholy alliance to defeat and discourage our sense of ourselves" (244). There are indeed numerous signs that we are returning to a climate of genetic determinism, and Appleyard may well be right when he argues that "the inviolability or otherwise of the human self is the complete and most pressing issue of contemporary knowledge" (222).

Appleyard seeks refuge from deterministic science by asserting, or rather by simply recognizing the primacy of the existing self. His last court of appeals is the world of ordinary language and life. He quotes approvingly Ludwig Wittgenstein's statement from his *Tractatus Logico-Philosophicus*: "We feel that even when all possible scientific questions have been answered, the problems of life remain completely untouched" (16). Appleyard takes this to mean that we need only see what is in plain view and get on with our lives. When we realize that we are free to stop doubting ourselves, we also discover that "we no longer have to subject ourselves to the suffocating demands of the scientific sense of ourselves" (247). Even the scientific view of the self is itself a convention and a choice (242). If biologists like Jacques Monod and Richard Dawkins wish to emphasize that people are machines then that is their choice (246). Such a choice is, for Appleyard, incoherent, for it does not consort with our innermost awareness of ourselves as existing individuals.

Appleyard points to the obvious fact that science is, after all, a part of us. It is one of the many things we desire and choose to do. The story that science is telling is only one of many stories we tell. In the end, the question is not so much what we mean to science, as what science means to us? By seeing science in this perspective, Appleyard hopes to humble and relativize it. Science must be "drawn back into the culture so that its worst abuses and most monstrous claims can be contained. So that, most of all, people can begin to understand good science, real science and use it and argue with it rather than be used and patronized by it" (xii).

Appleyard holds out the possibility of changes in personal attitude, but he offers no program. After all the arguments are over, Appleyard, like *Candide*, is left cultivating his own private garden. Again he quotes Wittgenstein: "If I have exhausted the justifications, I have reached bedrock and my spade is turned. Then I am inclined to say: 'This is simply what I do'" (249). Having rejected all forms of dialogue or mediation between science and religion, Appleyard leaves himself few other options.

Appleyard characterizes his own view as a "pre-religious argument for non-religious people" (229). He understands that intellectual-cannot create new faiths or revive old ones. We "cannot think our way to purpose and meaning" (231). Appleyard acknowledges the need for religion, but feels that religion has "become less available to people" (229) and therefore weakened as a political and moral force. The only real argument against scientific demands, Appleyard thinks, is "a straight assertion of a faith shared by fewer and fewer people with less and less conviction" (234). Religion, it would appear, can only confront science with its own story, but in a voice grown thin with the passage of time.

Time, according to Appleyard, is running out for scientific liberalism as well. "Science is still triumphant and our liberal societies are still scientific," but we have entered a phase of decadence. Liberalism fails to transmit "any value other than bland tolerance. It cannot defend itself and it cannot celebrate itself" (248). True to his conservative roots, Appleyard conflates his reading of the spiritual cost of science with a political sub-text from Allan Bloom on the price of multi-culturalism.

Appleyard concludes his book with some brave words about the self and culture, but leaves the reader only unhappy prospects of an unmediated conflict between religion and science and the "terminal decadence" of liberal democracy. The bleak contours of post-scientific society that Appleyard depicts betray disturbing, pre-Enlightenment features: intolerance, authoritarianism, and a view of the state as moral and spiritual provider. As I finished the book, I recalled a question once asked by Friedrich Schleiermacher, the

nineteenth-century German philosopher and theologian: "Should the knot of history so part that Christianity goes with barbarism and science with unbelief?"

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Abduction: Human Encounters With Aliens by John E. Mack. New York: Charles Scribner's Sons. 1994. 433 pp. \$22 (c). ISBN: 0-684-19539-9

Shortly after its publication, *Abduction: Human Encounters with Aliens* became the subject of a strange letter in *The New York Times Book Review*. Submitted by one James T. Anderson of Oakland, California, who identified himself as a long-time student of UFOs, the letter denounces the *Times'* review as a "signal failure in assessing the book." What made Anderson's remark so remarkable is that in his very next sentence he admits: "I have not yet read Dr. Mack's work."

I suspect Mr. Anderson has a great deal in common with the dozens of radio and television talk-show hosts who are leading the public debate on the abduction phenomenon. Looking at the "selling copy" inside the book's dust-jacket leads me to suspect the list of non-readers may also include everyone in the Scribner's publicity department. *Abduction* is not, as their sales hype claims, a book about "human encounters with aliens." Rather, as its author very clearly points out, it is a book about "our understanding of reality."

The fact that Dr. Mack sees his assignment in a more metaphysical than astrophysical light may deeply disappoint everyone who has awaited the book's arrival. Abductees will be disappointed because it falls considerably short of validating their belief in abduction as a *bona fide* physical event. Skeptics will be equally unhappy that the author has failed to banish ET to the same intellectual dung-heap as ghosts, goblins, and other things that go bump in the night.

If *Abduction* is less than its readers might have hoped for, it may be that the reputation of the book's author led us to expect too much. To those who have yet to be introduced, John E. Mack, M.D., is one of a handful of psychiatrists who takes seriously the claims of those who believe they have been spirited aboard alien spacecraft. His medical credentials, which include being a co-founder of the clinical psychiatry department at Cambridge Hospital, carry with them sufficient cachet to make even reluctant skeptics such as myself snap on their reality suspenders.

Then there are Dr. Mack's literary credentials. They tell us that even if his exploration of alien terrain leads to a dead end the trip will be a first-class journey, what my friends in publishing call "a good read." Dr. Mack is the author of several excellent books. They include his superbly crafted biography of the