Science & Technology

ASSESSING THE NUCLEAR AGE
edited by Len Ackland and Steven McGuire
Educational Foundation for Nuclear Science & Univ. of Chicago, 1986
382 pp. $29.95 cloth, $12.95 paper

Forty-one years after the bombings of Hiroshima and Nagasaki, the United States and the Soviet Union deploy 50,000 nuclear warheads—enough megatons to obliterate each other and threaten conditions for life on the planet.

The 41 essays presented here, most appearing in the 40th anniversary issue of the *Bulletin of Atomic Scientists*, examine the superpowers' arms race and the many effects of nuclear weapons on society, science, and international relations. Nobel laureate Hans Bethe questions the "technological imperative"—as seen in the H-bomb program and more recently in President Reagan's "Star Wars" antimissile efforts—which says that new weapons systems must be developed to avert the threat of nuclear war. Bethe charges that this approach leads not to security but only to the development of more offensive weapons. Disagreeing, Michael May, associate director of Livermore Laboratory, argues that weapons were "bound to come," not only as a result of what is known in physics but also of what is demanded by contemporary politics. Labs must develop weapons while governments negotiate to restrict them.

Some of the essays offer strategies to reduce international tensions. Political scientist Mary Kaldor suggests that both the Soviet Union and America "disengage" from Europe to "increase the accountability of [European] governments to their citizens." Most of the authors strike a reasonable tone on a subject that many find unthinkable even after four decades of the Atomic Age.

THE CHIMPANZEES OF GOMBE: Patterns of Behavior
by Jane Goodall
Harvard, 1986
673 pp. $30

In the Shadow of Man (1971) first brought the public's attention to the remarkable research of Jane Goodall, a young Englishwoman who in 1960 journeyed to Tanzania's Lake Tanganyika to study man's closest primate relative, the chimpanzee.

The present volume is not only a comprehensive update of her fieldwork (now the longest continuous field study of any animal) but also a readable survey of significant research on the subject of *Pan troglodytes schweinfurthii*. A stout, fact-filled tome, her book has all the scholarly trappings—diagrams, maps, tables—and proceeds in orderly fashion through various aspects of chim-

Compressed-Lips Face (display)

Full Closed Grin (fear/excitement)

panzee behavior, from territoriality to mating. But it is animated by something more rare than scholarly thoroughness—Goodall's ability to capture the individual and social dramas of the Gombe chimps' lives. One shares the author's fascination as she describes complex power struggles, lasting bonds of affection, or remarkable tool-using skills ("Not only did the 'dentist,' Belle, clean the teeth of a young male with twigs, she actually performed an extraction, removing a loose deciduous premolar in one and a half minutes"). Of particular interest are Goodall's revisions of her earlier impressions about the nature of the chimpanzee. Having in recent years witnessed acts of murderous violence (including infanticide), she no longer thinks, as she did 15 years ago, that "chimpanzees [are] far more peaceable than humans."

MEMOIR OF A THINKING RADISH: An Autobiography
by Peter Medawar
Oxford, 1986
209 pp. $17.95

In an earlier book, *Pluto's Republic* (1982), biologist Medawar averred that the lives of scientists "almost always make dull reading." His own autobiographical ramble is a happy exception. One puts this book down convinced that Medawar's Nobel Prize–winning work in immunology was as much the product of a flinty, independent nature as of a formidable brain. To demonstrate that human skin could be transplanted without being rejected, for example, he and his colleagues first had to overcome the deeply rooted notion that "the normal rejection reaction was part of the [human] genetic make-up."

He had faced prejudice before: The son of a Lebanese father and English mother, he suffered the snobbery and racism of his peers at boarding school before going on to do brilliant work at Oxford. He encountered similiar attitudes when he became engaged to Jean Taylor, his wife and collaborator since 1937. Years of trial-and-error laboratory work preceded the great breakthrough in immunology and the Nobel in 1960. Medawar's discovery that "no real life research is one long march of triumph" was valuable: It provided the central themes of his many books on the methods and practice of science—his belief, for instance, in the importance of false starts and faulty hypotheses, and the need for collegiality among scientists. Medawar suffered several strokes during the mid-1970s, but his literary output has never flagged.