

mon Lefschetz—*Academic Press*, 134 p., diagrams, \$5.50. Monograph gives detailed and elementary account of Liapunov's direct (second) method for the study of nonlinear systems.

STORIES FROM UNDER THE SKY—John Madson—*Iowa State Univ. Press*, 205 p., illus., \$3.95. Stories about coons, shrews, mallards and other wildlife along the upper Mississippi.

SUPERSONIC AERODYNAMICS: A Theoretical Introduction—Edward R. C. Miles—*Dover*, 255 p., diagrams, paper, \$1.45. First published in 1950.

THEORY OF PSYCHOANALYTIC TECHNIQUE—Karl Menninger—*Science Editions*, 206 p., diagrams, paper, \$1.65. Reprint, explores the foundations of actual treatment techniques.

THERMODYNAMICS—Gilbert Newton Lewis and Merle Randall; rev. by Kenneth S. Pitzer and

Leo Brewer—*McGraw*, 2nd ed., 723 p., \$12.50. Updated classic in chemical literature, incorporates major advances in recent decades, presentation of material is designed as an introduction to research.

VACUUM TUBE CIRCUITS FOR THE ELECTRONIC EXPERIMENTER—Julian M. Sienkiewicz—*Ziff-Davis*, 177 p., illus., \$4.95. Explains operation of diodes, triodes, tetrodes and pentodes, covers construction practices and presents 50 basic vacuum tube circuits.

YOU CAN SURVIVE THE BOMB—Col. Mel Lawrence with John Clark Kimball—*Quadrangle Bks.*, 194 p., illus., \$3.95. Simply written, do-it-yourself advice, with appendix of tables on surface bursts and radii, shelter manufacturers, survival foods and civil defense offices.

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#### POLITICAL SCIENCE

## U.S. Disarmament Goals

► THE UNITED STATES program for general and complete world disarmament eventually will require negotiations with all nations, including Red China. This is a fact of life recognized by the newly created Arms Control and Disarmament Agency.

"Obviously no meaningful arms reduction and disarmament agreement could be negotiated without every nation, including Red China, being a party to it," William C. Foster, head of the agency, acknowledged.

To get all nations to lay down their arms and give up force as a means of settling differences admittedly appears to be impossible. The role of the peacemaker has, in fact, been severely handicapped by the resumption of nuclear tests by Russia and continued failure to negotiate a nuclear test ban agreement between East and West, as well as the conflict in the Congo and Southeast Asia, the Berlin crisis, the French-Algerian dispute, the Portugal-Angola tensions, the unrest in Cuba and the Dominican Republic, the border clashes between Red China and India, and the lack of stability in the Middle East.

However, Mr. Foster's actions indicate that he firmly believes world disarmament not only is possible but that it can and, indeed, must be achieved. In the two months since his appointment, he has begun to set up the complex machinery to work out a detailed program for arms control, based on proposals made by the President before the United Nations in September, that can lead the way to total disarmament.

In formulating this program, he has assigned science and scientists a major role. "The age of atom and space, with both its promise and peril, is a creation of science and technology. The scientific community has, therefore, both the responsibility and the opportunity to make certain that their contributions may serve rather than destroy mankind," he said.

Preliminary research by the Agency's office of science and technology has suggested that, among other first step measures, arms limitation could usefully begin with strategic nuclear delivery vehicles with "inspection proportionate to disarmament."

The large size of nuclear delivery vehicles

and the sites required for effective delivery may make it possible to devise a system of inspection by means of satellites. Unmanned satellite inspectors, it may be assumed, know no party lines or political bias.

Inspection is the key to the whole problem of disarmament and the Agency's efforts in this area are to establish effective inspection systems whose objectivity is beyond question. A program for manned inspection teams, working within the framework of the United Nations on a rotating basis to assure impartiality, is under study. A limitation of arms under proper inspection could bring a halt to the continuing arms race, which already has dangerously reduced world stability and security, for it would set a pattern of adherence to agreements essential to mutual trust. Disarmament and even arms control, the Agency believes, must be done on a step-by-step basis.

While the Soviets are on record as opposed to any step-by-step disarmament program with inspection and have publicly taken the "all or nothing" approach, their representatives have conceded that disarmament cannot be implemented all at once and that first steps will have to be taken. In fact, Aleksei Adzhubei, editor of *Izvestia* and Premier Khrushchev's son-in-law, told President Kennedy last month that "the Soviet Government does not exclude the possibility of reaching agreement on a number of measures which may decrease the danger of war and which could be effected in the nearest future."

The measures Adzhubei proposed included, among others, the freezing of military budgets, renunciation of the use of nuclear weapons, the establishment of a nuclear free zone, and a nonaggression pact between NATO and Warsaw pact countries.

Any meaningful agreement on arms control, however limited, between the Soviet Union and the United States in which countries from both East and West will participate conceivably could be extended by similar arrangements between NATO and the Warsaw Pact countries. President Kennedy is known to favor improved relations between these two blocs and told Khrushchev's son-in-law, "I think it would

be helpful if NATO and the Warsaw Pact engaged in a commitment to live in peace with each other." The Administration has publicly recognized that such an agreement could mean a decline in the military buildup on both sides. It might, eventually, even mean the elimination of nuclear arms on a global basis.

The establishment of a nuclear free zone in Central Europe, as proposed under the Polish Rapacki plan favored by the Soviet Union, is too limited to be significant, it is believed. As has been noted, the countries involved—Poland, Czechoslovakia, East Germany and West Germany—presently have no nuclear capability. For denuclearization to be practical in any sense, it must be applied to an area as wide and far reaching as the firing range of an ICBM. And the U.S. disarmament agency intends for any denuclearization plan it may propose to be eminently practical.

The arms control and disarmament goals of the United States already have been defined many times by the President. Their achievement now is Mr. Foster's responsibility. To aid him, the Administration and Congress have made it possible for him to draw upon any Government agency and resource needed.

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#### PUBLIC SAFETY

## U.S. Accidents Take 90,000 Lives Annually

► ACCIDENTS annually take a toll of 90,000 human lives and disable 9,000,000 in the United States, the National Safety Council reported.

Most of this tragic waste of life and limb can be prevented, the Council studies have shown, and prevention can begin in the home where many of the accidents occur. The principal victims of home accidents are persons under five and over 65.

The Council, a non-profit organization now in its 48th year, was chartered by Congress in 1953. Working with industry, state and municipal authorities, and civic groups, it has been responsible for the dramatic decline in accident death rates in the last generation.

In the last ten years, there has been a 7% reduction in the number of disabling on-the-job injuries per 100,000 workers.

For the last seven years work deaths have been constant in spite of a 9% increase in the nation's total work force and the introduction of many new technologies and materials. Most large companies have worked with the Council on safety programs, but similar programs must be instituted in the many small companies that do not have them, the Council states.

Howard Pyle, National Safety Council president, has said that "an accident statistic is a single human tragedy multiplied to a point of indifference." He pointed out that news and national sympathy will be concerned with one man or a family in danger, but taken as a whole 90,000 deaths move people less. The aim of the Council is to combat this indifference.

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