

An Escalating Competition

The Militarization of Space. U.S. Policy, 1945–1984. PAUL B. STARES. Cornell University Press, Ithaca, NY, 1985. 334 pp. \$25. Cornell Studies in Security Affairs.

Paul Stares has given us a thorough, balanced, and revealing history of the Soviet-American "space race" at a time when it is particularly important to have such a study. In *The Militarization of Space* he takes us step by step—with helpful tables and charts—through the developing competition, from the origins of the American military space program after World War II to the struggle raging today, nationally and internationally, over the Anti-Satellite Weapons (ASAT) and Strategic Defense Initiative (SDI) policies of the Reagan administration. In so doing Stares makes a genuine effort to do justice to the interests and doctrines of the contending parties (such as the several military organizations on both sides) and to examine the strategic implications of their attitudes and technologies. He also strives mightily to break down the barriers of secrecy and to tell the full story—much of which has not been told before. He presents his work at an especially crucial moment, for there are reasons to believe that our leaders are taking us across an ominous watershed with regard to space weaponry.

The Militarization of Space is the enlargement of a doctoral thesis Stares undertook at Lancaster University in England during the early 1980's. It is based upon study of numerous governmental materials, including congressional hearings and reports, speeches and press releases of the Executive Office, and documents pried loose from various agencies under the Freedom of Information Act. It is strengthened by research in the Eisenhower, Kennedy, and Johnson libraries and by more than 100 interviews with former members of the bureaucracy and armed forces (who, unfortunately for the record, are identified in the notes by only a Greek letter). It profits further from careful probing of the *New York Times*, the *Washington Post*, and technical journals like *Aviation Week and Space Technology*.

The central point of the book is that, contrary to widespread impression, "space has been an integral part of the superpower arms race for over 25 years" (p. 13). Indeed, according to Stares, since the launching of Sputnik in 1957 the United States and the Soviet Union have steadily expanded their military use of space, to the point where both now rely heavily on satellites in sup-

port of their defense establishments. Since the early 1960's approximately two-thirds of the 3000 payloads put into orbit by the two countries have been of a military nature, consciously designed to increase the effectiveness of terrestrial weapons by means of reconnaissance, early warning, communication, navigation, weather forecasting, or geodetic data gathering. As Stares notes, "Military satellites not only play a crucial role in the maintenance of the armed peace. . . but are also vital to the planning and prosecution of warfare at almost every level" (p. 14).

All this has happened despite, or at least in accompaniment with, extreme secrecy on the part of the governments involved. The Soviet Union refuses to this day to admit the existence of a military component to its space program, and the United States releases only very limited information about its military operations beyond the atmosphere. From 1962 to 1978, for example, the American government refused to acknowledge that it was engaged in military reconnaissance from space. Between 1972 and 1979 the Department of Defense classified every reference to the fact that it was conducting antisatellite research.

Yet, Stares contends, even with change and secrecy on both sides, the military exploitation of space remained remarkably stable and uncompetitive until the late 1970's. Despite a flurry of American weapons research immediately after Sputnik, both Russia and the United States have tended until recently to develop space systems in accord with their own informational requirements rather than in response to the activities of the other. American anxiety following Sputnik gave way by 1967 to a more relaxed attitude as the Soviet space program matured slowly and the Kremlin dropped its opposition to satellite reconnaissance while agreeing to a United Nations resolution (later a multilateral treaty) banning deployment of weapons of mass destruction in space. Subsequently, from 1968 to 1975, even the testing of a Soviet ASAT (until 1971) could not disturb American equanimity as the Vietnam War, better superpower relations, and greater efficiencies in our space program came into play. It was only after 1976 that the decline of détente, Russia's new strategic parity, and its interventionist policy in the Third World (as well as growing American dependence on satellites and the rise of new defensive weapons technologies) rendered the United States sensi-

tive to the Soviet decision of that year to resume satellite interceptor testing.

Thus, Stares argues, in contrast to a number of observers, the long absence of "active" armaments in space was due not so much to tacit understandings or informal bargains as to "a convergence of national interests, military disincentives, and technical constraints, which were buttressed at important times by formal agreements" (pp. 237–238). There was clearly no guarantee that this historical configuration would continue to exist. Indeed, Stares asserts, in the late 1970's the factors that had stymied the growth of an arms race in space began to change, as, in particular, technological innovation occurred and incentives increased for both sides to create antisatellite weapons. As a result, we are faced today with a weapons competition which, because of the pace of research and development, is increasingly difficult to stop or control and will be destabilizing to the international system in the extreme.

Plausible and thoughtful, *The Militarization of Space* is an impressive if disturbing book. Though the author might have done more to examine the broad political-economic context of decision-making, he makes a good case for his view that a multiplicity of factors is responsible for the level of intensity in the arms race. Though he suggests that it will be extremely difficult to reverse the current trends regarding ASAT's in the same way the momentum for an ABM system was curtailed, Stares offers hope that there is still a chance for meaningful moratoriums or limitations. In sum, he shows us the configuration of factors, he underlines the burgeoning dangers, and he puts it to us to close the Pandora's box of space weaponry before all its evils have escaped.

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Pollution and Politics

Acid Rain and Friendly Neighbors. The Policy Dispute between Canada and the United States. JURGEN SCHMANDT and HILLIARD RODERICK, Eds. Duke University Press, Durham, NC, 1985. xiv, 333 pp., illus. \$45. Duke Press Policy Studies.

If yet another illustration of the problem of pollutants transported long distances through the earth's atmosphere were needed the recent nuclear accident at Chernobyl has provided it. However well recognized the scientific aspects of long-range transport phenomena, though, the political and insti-