

# The new nuclear agenda

William Walker

**Stopping the Spread of Nuclear Weapons: The Past and Prospects.** By David Fischer. *Routledge: 1992. Pp. 336. £40.*

**Plutonium and Security: The Military Aspects of the Plutonium Economy.** Edited by Frank Barnaby. *Macmillan: 1992. Pp. 296. £47.50.*

FROM the mid-1950s to the late 1980s, attempts to regulate the development and deployment of nuclear weaponry occurred in two largely distinct international frameworks. The first, nuclear arms control, involved the negotiation of a series of bilateral treaties between the dominant nuclear powers, the United States and the Soviet Union. The primary function of the control was to bring

practised over the past three decades has become anachronistic. The great challenge now is to extend existing non-proliferation policy so that it becomes a truly universal framework for disarmament. Furthermore, managing the processes of disarmament, whether in relation to Iraq, North Korea and the remaining threshold countries, or the Ukraine, Kazakhstan and Belarus, or

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Russia, the United States and the other states in possession of nuclear weapons, is the most important task now facing the international community.

It is David Fischer's misfortune that this fundamental change in perspective happened after his book was completed in late 1990. The book is nevertheless one that every student of nuclear affairs should acquire. It has three particular merits. The first is the quality of its historical narrative. Fischer's long and distinguished career at the International Atomic Energy Agency (IAEA), and his subsequent role as everyone's favourite adviser, means that he has been in the thick of most of the important developments in nuclear relations since the 1950s. The book's second

virtue is Fischer's detailed examination of the various facets of the nonproliferation regime (or system as he prefers to call it), and especially of the safeguards system on which he is the leading authority. Finally, the book is scrupulously balanced and fair. Although some will find the author too kind to the nuclear industry, there is little of the partisanship and special pleading that mar so many other books on the subject.

My one disappointment is that Fischer says so little about the great personalities in this field — the great facilitators, as well as the awkward customers such as S. Eklund and B. Goldschmidt. Fischer has known them all and has a fund of anecdotes. Besides the entertainment of learning more about them, there is an important question that remains un-

answered in his, as in other, historical accounts: how much has personal influence and prejudice affected the course of nuclear relations? We must wish Fischer a long life so that he will one day feel free to set down on paper his memories of these colourful individuals.

*Plutonium and Security* is a more specialized book, but in some respects it is more prescient. Its focus is plutonium, which, along with highly enriched uranium, is the material used in the fission stage of nuclear weapons. Chapters by D. Albright and by F. Berkhout cover an important problem that will soon be upon us — the huge flows of plutonium that will result from the operation of the new reprocessing plants at Sellafield in Britain and La Hague in France. Over the past 30 years, around 120 tonnes of plutonium have been separated from civil spent fuels around the world. During the next ten years, 190 tonnes will be separated from these plants alone. Although not covered in this book, this problem will be made still more acute by the extraction of further large quantities of plutonium (perhaps as much as 150 tonnes) from dismantled warheads in Russia and the United States.

The nuclear industry is working hard to develop ways of using plutonium as a reactor fuel. So far, the effort is proving to be an uphill struggle; plutonium fuels are likely to remain much more expensive than uranium fuels, and agencies and governments that engage in plutonium recycling court political unpopularity. The consequence is that much of the plutonium becoming available will have to be dealt with as a waste, rather than as the asset that it has always been assumed to be.

The rest of the book is a mixed bag. Three chapters stand out. One is by Warren Donnelly on the history of US plutonium policy — the retreat from reprocessing and plutonium economies. Another is the excellent discussion by James Lovett of the effort and ingenuity that has gone into developing techniques for safeguarding large reprocessing plants. The third is Gordon Thompson's examination of proposals for halting production of weapon-grade plutonium and uranium in the nuclear-weapon states. This cut-off is today almost a reality; it is to be hoped that the remaining production of plutonium in Russia, and of highly enriched uranium in France, will end soon.

Both of these books are worthwhile contributions, although to read them is to realize how radically the nuclear agenda has changed in the past few months. □

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Atomic disposal — soldiers load a warhead into a container on a military truck in the Ukraine in an effort to make the Ukraine a nuclear-free zone (January 1992).

greater stability and predictability to the nuclear relationship between East and West, while allowing either side to continue modernizing and expanding its nuclear forces. The second framework was that provided by a nuclear nonproliferation policy, involving in particular the Euratom Treaty and the Nuclear Non-Proliferation Treaty (NPT), their associated safeguards systems, and the trade regulations set out in the NPT and the Nuclear Suppliers' Guidelines. The main function of the policy was to maintain a condition of perpetual abstinence among countries that did not already possess nuclear weapons.

With the break-up of the Soviet Union and the huge nuclear arms reductions that are following in its wake, this dualism is breaking down. Arms control as