comment

Proliferation at Home

BRIAN MARTIN
Department of Mathematics, Faculty of Science, Australian National University, Canberra

One of the main planks of the Australian government's policy covering uranium exports is the imposition of strict safeguards to reduce the chance that other countries will use the uranium to help build nuclear weapons. Opponents of uranium mining have argued that existing safeguards against proliferation of nuclear weapons are totally inadequate – in the words of the Ranger Inquiry, 'existing safeguards may provide only the illusion of protection' – and that the only sure way to stop proliferation is to restrict the spread of the nuclear power industry. But neither side has seriously addressed the problem of proliferation at home: the possibility that Australia might obain nuclear weapons.

Several possible developments in Australia – nuclear power, uranium enrichment, or reprocessing of spent nuclear fuel – could lay a much stronger basis for Australian acquisition of nuclear weapons.

Sir Charles Court, then Premier of Western Australia, in 1978 announced a desire for a nuclear powered electricity generating unit in that state, despite the inadequate size of the electricity grid (Martin, 1982). This intention was reaffirmed under the state Liberal government, and the WA State Energy Commission undertook preliminary site assessments. Since the election of a Labor government in WA, however, nuclear power there is no longer under active consideration. Nuclear power has been contemplated also in other states from time to time. This has particularly been the case in Victoria (see Sutton, 1980), though once again the prospects for nuclear power have receded with the election of a state Labor government.

As the US Energy Research and Development Administration has demonstrated, it is possible to construct a nuclear weapon directly using plutonium produced in a nuclear power plant, though the yield may be low and unpredictable. Plutonium suitable for the manufacture of reasonably efficient nuclear weapons can be produced without much difficulty in a nuclear power plant by removing the fuel rods from the reactor after only a short time, thereby reducing contamination by the more unstable plutonium isotopes.

Uranium enrichment is another part of the nuclear fuel cycle which has been considered for Australia. The Uranium Enrichment Group of Australia in 1981 prepared a preliminary feasibility study for the establishment of a uranium enrichment industry in Australia. It then began a full feasibility study, but this has not been completed because the current federal government has declined to provide the necessary assistance. In any case, there is currently considerable overcapacity in world uranium enrichment facilities (Norman, 1984).

The proposed Australian enrichment plant would have been designed to enrich uranium only to the low level required for nuclear power reactors; but a plant based on the centrifuge method, the most likely possibility for Australia, could be adapted without too much difficulty to enrich uranium to the high level needed for nuclear weapons.

Another avenue for obtaining nuclear weapon material is nuclear fuel reprocessing, in which uranium and plutonium in spent fuel rods from nuclear power reactors are chemically separated from the high-level radioactive waste. Because reprocessing results in relatively pure plutonium, it provides a prime avenue for nuclear proliferation. Professor Ted Ringwood (1983, 15-19) has supported the establishment of reprocessing in Australia, but this proposal seems to have gained little political support.

The 'bomb lobby' in the late 1960s

Before looking further at the present situation, it is worthwhile reviewing the Australian debate of over a decade ago concerning nuclear power and nuclear weapons. It was in 1969 and 1970 that the influence of those groups favouring nuclear weapons for Australia – the 'bomb lobby' – reached its height. Desmond Ball (1979) has identified four main groups in the bomb lobby: certain right-wing Liberal and Country Party politicians; certain people in the nuclear research community, particularly in the Australian Atomic Energy Commission (AAEC); the Returned Services League (RSL); and a few individuals associated with the armed forces. The major issues at the time were the Non-Proliferation Treaty (NPT) and the possibility of a nuclear power plant for Australia.

The NPT was anathema to the bomb lobby because it would have strongly inhibited open opportunities for obtaining nuclear weapons. The Liberal-Country Party government for two years refused to declare its position. It is noteworthy that the Prime Minister, John Gorton, had spoken out in favour of nuclear weapons years earlier when he was a senator (Anon., 1969a). Finally in 1970 the government announced it would sign the NPT, but would not ratify the treaty until satisfaction was obtained concerning various reservations. It is ironic today that the primary reason offered then for opposing the signing of the NPT was that the treaty was not considered adequate to prevent proliferation. This stance is apparent in the revealing statements made by two nuclear scientist who were prominent in the NPT debate, Sir Ernest Titterton, then Professor of Nuclear Physics at the Australian National University, and Sir Philip Baxter, then Chairman of the AAEC, whose views are analysed in some detail in my study *Nuclear Knights* (Martin, 1980, 31-32, 49-51).

The government's grudging decision to sign the NPT in 1970 was a defeat for the bomb lobby. One reason for signing the treaty was to prevent the loss of Australian access to information on nuclear developments from the US and the UK (Barnes, 1970). The treaty was not ratified until after the Labor Party formed a government in 1972.

Besides the NPT, the other major issue that concerned the bomb lobby and which came to a head in the late 1960s was that of a nuclear power plant for Australia. The bomb lobby and the associated 'nuclear power lobby' favoured speedy construction of a power reactor on the ground that Australia then would be able, if desired, to produce nuclear weapons using plutonium from the reactor (Encel and McKnight, 1970). In June 1969 Prime Minister Gorton announced that Australia's first nuclear power station would be built at Jervis Bay.

The close connection between nuclear power and nuclear weapons was well recognised by those in the bomb lobby. For example, federal parliamentarian E.H. St John in 1968 advocated building a nuclear power station and using it to produce plutonium which would be stockpiled for possible nuclear weapons (Encel and McKnight, 1970). The link was also made clear in statements by Sir Ernest and by Sir Philip (Martin, 1980, 30-32, 48-49).

As it turned out, plans for the Jervis Bay reactor were deferred after William McMahon became Prime Minister in 1971. This was a second and very serious defeat for the bomb lobby (Barnes, 1971). The reasons for the decision to defer the reactor were primarily the high economic cost of the plant and the change in key decision-makers involved (Ball, 1979; Moyal, 1975). The reactor proposal was eventually cancelled by the Labor government.

Australia and the bomb in the 1980s

The issues raised in the debate of 1968-1971 are still relevant. The physical facilities of a nuclear power plant, uranium enrichment plant or reprocessing plan could be used to provide the raw material – plutonium or enriched uranium – essential for constructing nuclear weapons. In addition, the acquisition and training of personnel to design, operate and regulate such facilities would also provide the skilled labour necessary to move to the construction of nuclear weapons.

There are severe limitations in the effectiveness of current safeguards against using 'civilian' nuclear facilities to make nuclear weapons. This has been recognised by the Ranger Inquiry in Australia, the Flowers Commission in the UK, the US Office of Technology Assessment, the Stockholm International Peace Research Institute, and the International Nuclear Fuel Cycle Evaluation Committee. Indeed, the potential of the nuclear industry for laying a base for the acquisition of nuclear weapons was summarised well in a statement attributed to Sir Philip Baxter in 1969: 'The growth of this industry and the expertise and the facilities which it will create will provide a basis from which an Australian government, at any future date feeling that nuclear weapons were essential to provide this nation's security, could move with the minimum delay to provide such means of defence' (Anon., 1969b).

Some people have argued that this possibility is remote in Australia because there is no signficant political constituency pushing for nuclear weapons. It is true that some members of the bomb lobby have been quiet in recent years, following their defeats over the NPT and the Jervis Bay reactor. Furthermore, from the military point of view, the acquisition of nuclear weapons by Australia is widely seen as unnecessary or undesirable. J.O. Langtry and Desmond Ball (1981) have stated categorically that 'The option of developing nuclear weapons as the absolute deterrent has virtually no support within the Australian defence establishment'. The RSL continues to advocate consideration for Australia obtaining nuclear weapons, but with little current impact on policy-making.

Although an overt bomb lobby has not recently been conspicuous, influential opinion exists within the government and the Department of Defence that nuclear weapons should not be ruled out. This is precisely the current of thought revealed in a defence document called 'The strategic basis of Australian defence policy' revealed by *The National Times* in March 1984. Brian Toohey (1984) summarises the implications regarding Australian nuclear weapons in this way: 'The Hawke Government has accepted a defence planning document that says Australia should be in a position to develop nuclear weapons as quickly as any neighbour that looks like doing so.'

The policy document reveals a cavalier disregard for Australian government obligations under the NPT, giving the impression that the NPT would simply be ignored if the government decided to move towards a nuclear weapons capability. This disregard does not sit well with the government's heavy reliance on the NPT as the guarantee against military use of Australian uranium exports.

While there may be no influential groups actively pushing for Australian nuclear weapons, the acceptance of the 'strategic basis papers' suggests that neither is there much principled opposition to nuclear weapons in Cabinet or the Defence Department. Changes in political circumstances could well lead to a quick resurgence of the influence of the bomb lobby.

For example, if Indonesian nuclear weapons were to become a serious possibility, the pressures for an Australian bomb could become intense. This is not just a hypothetical possibility. In late 1981 it was reported that the Indonesian government may have begun a program to develop nuclear weapons, one reason for this apparently being their belief that Australia may have its own program (Toohey, 1981). One may also imagine the cries for nuclear weapons in the political aftermath of a nuclear war in the Middle East, or of a 'surgical' nuclear strike on US military bases in Australia.

Popular support for Australian nuclear weapons might not be hard to create and channel. An opinion poll reported in March 1981 that over one third of Australians favoured Australia having nuclear bombs (*Bulletin*, 1981) – similar to the level of support for this option a decade earlier (Anon., 1969a).

In a crisis situation in which pressures mounted for nuclear weapons, the military value or political rationality of obtaining them might remain quite low. But a decision could well be motivated for primarily emotional or domestic political reasons. The very existence of facilities – nuclear power, uranium enrichment, or reprocessing plants – which clearly showed that nuclear weapons would readily be obtained might well play a key role in swaying the debate towards the nuclear option.

The reasons for not having nuclear weapons are many, and include their low cost-effectiveness compared to other weapons for conventional Australian defence, their contribution to a regional nuclear arms race, and the immorality of using weapons of mass destruction. Furthermore, there are many other good reasons for not having nuclear power, uranium enrichment or reprocessing plants, including economics and environmental effects and their attractiveness as targets in the event of war. But good reasons may not be the basis for decision-making, especially in times of crisis. Nuclear power, uranium enrichment or reprocessing in Australia could lay the basis for an Australian bomb, whatever the good intentions of present planners. This possibility should therefore be taken into account in a full public debate before these parts of the nuclear fuel cycle are introduced to Australia. Proliferation is not something that can happen only somewhere else.

Acknowledgements

I thank Desmond Ball, John Carlin, Mark Diesendorf, Hugh Saddler, Rosemary Walters and Ian Watson for valuable comments in the development of this article.

References

ANON. (1969a) On the nuclear threshold, *Current Affairs Bulletin*, Dec., 19-31.

ANON. (1969b) We'll spend $5,000M on nuclear power 'by year 2000', *Australian*, 14 July, 3.

BALL, D.J. (1979) Australia and nuclear non-proliferation, *Current Affairs Bulletin*, April, 16-30.

BARNES, A. (1970) Scientists had a change of heart, *Age*, 23 February, 7.

BARNES, A. (1971) The bomb lobby defused – at least for a year, *Age*, 12 June, 13.

Bulletin (1981) 17 March, 42-43.

ENCEL, S. and McKNIGHT, A. (1970) Bombs, power stations and proliferation, *Australian Quarterly*, **42** (March) 15-26.

LANGTRY, J.O. and BALL, D. (1981) Australia's strategic situation and its implications for Australian industry, *Pacific Defence Reporter*, **8** (February) 36-42.

MARTIN, B. (1980) *Nuclear Knights*, Canberra, Rupert Public Interest Movement.

MARTIN, B. (1982) Nuclear power and the Western Australian electricity grid, *Search*, **13**, 132-136.

MOYAL, A.M. (1975) The Australian Atomic Energy Commission: A case study of Australian science and government, *Search*, **6**, 365-384.

NORMAN, C. (1984) Hard times in uranium enrichment, *Science*, **233** 1041-1043.

RINGWOOD, A.E. (1983) *Australia's uranium and the international nuclear industry*, Canberra: Research School of Earth Sciences, Australian National University.

SUTTON, P. (1980) *Victoria's Nuclear Countdown: State Government plans for a nuclear industry*,, Melbourne: Environment Action Centre.