

# SURPRISE DOWN UNDER: THE SECRET HISTORY OF AUSTRALIA'S NUCLEAR AMBITIONS

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Australia is widely considered to be a world leader in efforts to halt and reverse the spread of nuclear weapons.<sup>1</sup> The Australian government created the Canberra Commission, which called for the progressive abolition of nuclear weapons. It led the fight at the U.N. General Assembly to save the Comprehensive Test Ban Treaty (CTBT), and the year before, played a major role in efforts to extend the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) indefinitely. In short, Australia is a country whose nonproliferation credentials are impeccable.

But there is another side to this story. Newly declassified documents describe repeated attempts by elements within the Australian government to acquire nuclear weapons. In 1958, for example, Australian officials approached the British government regarding the purchase of

tactical nuclear weapons. In 1961, Australia proposed a secret agreement for the transfer of British nuclear weapons, and, throughout the 1960s, Australia took actions intended to keep its nuclear options open. It was not until 1973, when Australia ratified the NPT, that the country finally renounced the acquisition of nuclear weapons.

Over the course of four decades, Australia has gone from a country that once sought nuclear weapons to one that now supports their abolition. It is a remarkable story, and certainly one of the untold successes of the nuclear age. The Australian experience also raises important questions for theorists and policymakers. How is it that Australia went from nuclear aspirant to nonproliferation leader? What factors influenced the Australian government's nuclear decisionmaking? What does the Australian case suggest about the nature

of state behavior and the kinds of policies that are most likely to retard the spread of nuclear weapons?

This article attempts to answer some of these questions by examining two phases in Australian nuclear history: 1) the *attempted procurement* phase (1956-1963); and 2) the *indigenous capability* phase (1964-1972). The historical reconstruction of these events is made possible, in part, by newly released materials from the Australian National Archive and a set of unregistered documents released by Australia's Department of Foreign Affairs and Trade.<sup>2</sup> These materials provide an unusually detailed view of the internal processes of a country wrestling with its nuclear future. Using these and other sources, this study attempts to explain why the Australian government first sought and then renounced nuclear weapons.

## THE ATTEMPTED PROCUREMENT PHASE (1956-1963)

From 1956 to 1963, Australia's efforts to acquire nuclear weapons focused on procurement, i.e., gaining access to nuclear weapons via a third party. Procurement is thus distinct from indigenous development. It also differs from arrangements such as the North Atlantic Treaty Organization's (NATO's) dual key system, since Australia's intent was to acquire weapons that would be under purely national control.

During this phase, there were at least three initiatives pertaining to the procurement of nuclear weapons by elements within the Australian government. They included: 1) discussions regarding the purchase of tactical nuclear weapons; 2) the acquisition of a nuclear capable delivery system; and 3) a proposal for nuclear weapons on-demand. This section reviews each of these episodes, but begins with a brief overview.

### Australian Perspectives

In the 1950s, Australian thinking about nuclear weapons, like much of the thinking in Europe and the United States, included an expectation that nuclear weapons would spread and become a common feature of modern military forces.<sup>3</sup> Inside players in the world's capitals had already been told that France would likely join the nuclear club, and many began to anticipate that China would also gain membership. The belief that nuclear weapons would spread and that this spread would necessarily affect Australia could be seen in everything from army training manuals to statements by the prime minister.<sup>4</sup> One of the more authoritative assess-

ments came from the Defence Committee,<sup>5</sup> which concluded in 1958 that:

In the absence of disarmament agreements, it is inevitable that the trend towards nuclear weapons will continue and intensify. Present indications are that in the near future countries other than the U.K. and the U.S., e.g., France and Japan, will have the technological capacity to manufacture nuclear weapons and can be expected to develop this capacity successfully in the next few years.<sup>6</sup>

Evidence supporting these expectations was not difficult to find. The Australians had only to look at NATO. Indeed, the actions of NATO countries appear to have had a profound impact on nuclear thinking in Australia. At the time the Australian Defence Committee made its original recommendation to seek nuclear weapons, the United States had begun stationing tactical nuclear weapons in Europe, and a number of American allies—including Britain, France, Italy, and West Germany—were declaring their interest in gaining greater access to nuclear weapons and weapons-related information. The Eisenhower administration, in turn, signaled that it was open to some kind of “nuclear sharing.”<sup>7</sup> At a North Atlantic Council meeting, France, West Germany, and Italy even announced plans for the co-production of nuclear weapons.<sup>8</sup> Some years before, the United States had endorsed its “New Look” doctrine, which promoted nuclear weapons as a way to counter the rising costs of conventional forces, and the United Kingdom had announced that it would reduce expenditures on conventional weaponry in order to focus resources on its nuclear deterrent.<sup>9</sup> Australia had, in fact, hosted British nuclear tests on its ter-

ritory since 1952, though the Australians were not privy to any weapons-related information coming from the tests.<sup>10</sup>

Developments in Europe did not go unnoticed in Australia, and memos arguing for an Australian nuclear capability often cited developments in NATO.<sup>11</sup> Nuclear weapons proponents in Australia knew that the Americans had no intention of selling nuclear weapons, but the “nuclear sharing” controversy itself seemed to confirm that nuclear weapons were going to become an essential part of modern war-fighting and that any self-respecting advanced, industrialized country would have its own atomic arsenal.

Australian officials expected more and more countries to acquire nuclear weapons, but they also believed that nuclear weapons would play a growing role in the force structure of their existing nuclear allies, the United States and Great Britain. The Defence Committee report cited above went on to note that:

Nuclear weapons in various applications are being increasingly introduced into the armament of the great powers for employment in all aspects of offensive and defensive warfare. [...] Modern weapon systems are becoming so complex and costly that in many cases their adoption would not be justified unless they were given maximum effectiveness by the incorporation of nuclear warheads.<sup>12</sup>

The vertical proliferation of nuclear weapons throughout the allies' force structure encouraged the Australians to seek their own nuclear weapons. At first glance, this might seem counterintuitive. After all, if the allies had sufficient stocks of nuclear weapons for every contin-

gency imaginable, Australia would not need nuclear weapons of its own. Australian military and political leaders drew a different conclusion, however, and they did so for two reasons.

First, Australia's military officers argued that if Australia were going to be a full and respected participant in collective security arrangements such as the Australian, New Zealand, United States security treaty of 1951 (ANZUS) or the Southeast Asia Collective Defense Treaty (SEATO), then they had to be able to deploy and use the same weapons as their allies or face being relegated to a secondary role, with attendant diminution of status and political leverage. Second, if one believes that tactical weapons are really high-end conventional weapons, then it becomes easier to imagine their use as instruments for war-fighting. And indeed, Australian leaders espoused this view. In a world of limited nuclear wars, Australia did not want to find itself at a disadvantage.

The Ministry of Defence's interest in nuclear weapons was shared by other elements within the Australian government. Indeed, Australia's efforts to acquire nuclear weapons were, first and foremost, a consequence of lobbying by the defense establishment (particularly the Royal Australian Air Force (RAAF)), the civilian atomic energy authority, and the Ministry of Supply. It was the air service that first recommended the procurement of nuclear weapons and shepherded the concept through the policy process. Every time the proposal was derailed, it was the Ministry of Defence that took action to put it back on track. On four different occasions (November 1957, February 1958, August

1958, and September 1958), the Ministry of Defence—often at the urging of the Air Service—sought to revive the issue of nuclear weapons procurement.

### Attempts to Buy the Bomb

Australia first formally considered the subject of "a nuclear weapons capability for Australian forces" in 1956.<sup>13</sup> The initial proposal to seek nuclear weapons came from Athol Townley, the minister for air, who wrote to the defence minister requesting that Australia procure nuclear bombs for the RAAF's Canberra and Avon Sabre aircraft.<sup>14</sup> While Townley and his successor pushed the idea among their ministerial colleagues, Air Marshal F. R. W. "Shug" Scherger lobbied his fellow service officers in Australia and Britain. Marshal Scherger was chief of the air service and Australia's most enthusiastic advocate of a nuclear weapons capability.

The RAAF was not, however, the only service that favored a nuclear capability. Indeed, there seems to have been a general belief among military officers that Australia should have access to nuclear weapons. As a memo by the secretary of the Defence Department noted, the possession of nuclear weapons was "a question of very considerable importance to the Australian Services."<sup>15</sup>

In November 1956, the Cabinet's Defence Committee concluded that "the effectiveness of all three Australian Services would be considerably increased if they were equipped with low yield KT nuclear weapons." The Defence Minute went on to recommend that "an initial approach be made to the United Kingdom for agreement to obtain such weapons to be held by Australia."<sup>16</sup> The de-

cision to approach the United Kingdom was not the first time Australian leaders had expressed an interest in nuclear weapons, but it did represent the first formal finding that Australia should procure them.<sup>17</sup>

Following the Defence Committee's recommendation to seek tactical nuclear weapons, the Defence Department pressed Australian Prime Minister Robert Menzies to follow through on the recommendation.<sup>18</sup> In March 1957, the Australian government met with Sir Dermot Boyle, the British Air Chief, and Lord Carrington, Britain's Foreign Secretary for Commonwealth Relations. Prime Minister Menzies and the Commonwealth's ministers for defence and external affairs asked the visiting delegation whether Britain could "supply" Australia with atomic weapons. Boyle was pessimistic—"hardly a hope," he said, but he suggested to his hosts that the Australian government "put in a formal request to see what would happen."<sup>19</sup>

At this point, Prime Minister Menzies and his minister for external affairs were probably happy to let the issue lie. Menzies had raised the question of atomic weapons with the United Kingdom, but it is clear that he had no enthusiasm for the project. Menzies, Australia's longest serving prime minister, was a traditionalist, a man who had a strong affection for the *status quo*. He would have preferred that Australia continue as it always had, relying for its defense on its "great and powerful friends."<sup>20</sup>

Given Menzies's views, it is not surprising that a decision to move forward bogged down in the Prime Minister's Department for eight months.<sup>21</sup> The indefatigable Air

Marshal Scherger was not content to let matters languish, however. In August 1957, he made a direct, if informal, request to the British air marshal regarding the purchase of tactical nuclear weapons—a request that, in all likelihood, was made without the knowledge of the Australian prime minister.<sup>22</sup> This time, the British air marshal was much more optimistic about Australia's chances, and Scherger quickly reported the news to Canberra. In Scherger's version of events, however, it was Boyle that suggested the purchase of atomic weapons:

Sir Dermot stated that ...[he] thought that the UK would be able and glad to make such weapons available to us. I suggested that... the United Kingdom would no doubt desire to keep such weapons under their own control.... Sir Dermot's reply to this was [that] it may be possible for us to buy the weapons straight out.<sup>23</sup>

A month later, in September, the British air marshal wrote to Scherger, promising him that the U.K. chiefs of staff would back Australia's request:

This is to confirm what I told you on the telephone today, namely that the Chiefs of Staff have agreed that, should the Australian Government decide to build up a nuclear bomber force, the Chiefs of Staff would support the purchase of nuclear weapons from this country by the Australian Government....<sup>24</sup>

With the change in the British position, the Department of Defence stepped up its interdepartmental lobbying efforts. The department's campaign was aided by the fact that British Prime Minister Macmillan was scheduled to visit Canberra in January. This impending visit provided a deadline that helped push

along the decision process,<sup>25</sup> and in all, two proposals, were considered.

One proposal was made by Philip Baxter, the chairman of the AAEC, who presented a plan for the construction of a facility at Mt. Isa for the production of weapons-grade plutonium. Baxter argued that Britain could collaborate in the project, thereby providing the United Kingdom with an independent source of fissile material—while at the same time enabling Australia to achieve the basis for a nuclear weapons program. Baxter's plan was rejected in favor of the Defense Committee's original proposal to purchase tactical nuclear weapons from Britain.<sup>26</sup>

The British leader arrived in Australia in January 1958, and Prime Minister Menzies dutifully raised the issue of nuclear weapons for Australia. As the memorandum of the Menzies-Macmillan conversation reveals, Menzies's approach to Macmillan was soft, even by diplomatic standards:

Mr. Menzies raised for discussion the desirability or not of countries other than the three major Powers having their own nuclear capability. He said it may be possible for Australia to develop a capacity and that there may be internal pressures in that direction, e.g., from the Atomic Energy authority [sic]. He held considerable personal doubts about the wisdom of any such action....<sup>27</sup>

Having finally broached the subject with Macmillan, Menzies was probably satisfied with the response he received. The British prime minister replied that the United States wanted no additional nuclear powers and that the United Kingdom eventually hoped to rely on American nuclear weapons through a "key [to] the cupboard" arrangement.<sup>28</sup>

Instead of warheads, Macmillan offered to make more information about nuclear weapons available to the Australian military.<sup>29</sup>

#### *Refusing to Take "No" for an Answer*

The Menzies-Macmillan meeting had produced no tangible results, but that apparently did not discourage Australia's bomb advocates. The Defense Committee, meeting eight days after the prime ministers' meeting, recommended that the matter be *reopened* with the British government.<sup>30</sup> At the Defence Committee meeting, the services presented a united front:

The three Chiefs of Staff all expressed the view that Australia should seek to acquire nuclear weapons (as distinct from developing a nuclear production capacity), either under our own control or by some arrangement whereby we could be assured that nuclear weapons would be available for our defence.<sup>31</sup>

Menzies and Macmillan met for the second time on February 11, 1958, and again discussed nuclear weapons for Australia. The British prime minister voiced the view that any transfer of nuclear weapons information or technology should be postponed until after the U.S. Congress had finished its revisions of the McMahon Act. Macmillan feared that British-Australian nuclear cooperation might spook the Congress, leading it to renege on promises to loosen the law's restrictions on the sharing of nuclear information with allies. The British leader offered little beyond saying "that he saw no objection to an examination between the two air forces of the technical facilities side of using nuclear weapons in the South West and East Asian area."<sup>32</sup>

The Defense Committee met the following day on February 12, and concluded that Australia “require[s] additional information before [it] can examine the practicability or the desirability of possessing a nuclear capability....”<sup>33</sup> This was a step down from the Committee’s original finding two years earlier. What once was a request for nuclear weapons became a request for information about nuclear weapons.

Ignoring these setbacks, senior figures in the Australian military persisted. They appear to have continued their back channel discussions with British defense officials. These end runs so infuriated Menzies that in April 1958, he had his defence minister issue a rather remarkable edict barring further discussion of the matter:

No further action is to be taken by the Defence Committee or Chiefs of Staff Committee or the individual Chiefs of Staff to initiate discussions with United Kingdom authorities concerning the possibility of nuclear weapons being made available to us until specific approval is given by me....<sup>34</sup>

In early July 1958, the U.S. Congress passed its amendments to the McMahon Act, thus clearing the way for further discussions of U.K.-Australian nuclear cooperation. A month later, Menzies and other members of the Cabinet raised the issue with Aubrey Jones, Britain’s visiting minister of supply. According to the memorandum of conversation, Menzies asked about nuclear warheads for Australia.

Mr. Menzies inquired whether any scheme is contemplated whereby Australia might secure vehicles and warheads. Mr. Townley remarked that this was a question he proposed to take up

in some detail...[and asked] how the United Kingdom might respond to an Australian approach for the supply of tactical weapons.<sup>35</sup>

Jones answered that he thought the British “response would be very favorable,” but that American restrictions associated with the McMahon Act might still be a problem.<sup>36</sup> Toward the end of his conversation with Aubrey Jones, Menzies returned to the subject of nuclear weapons:

Mr. Menzies remarked that while he had no ambition to see Australia equipped with strategic nuclear weapons... he felt that possession of some tactical nuclear weapons would be inescapable.<sup>37</sup>

Those who supported nuclear weapons procurement had to be heartened. The British were back in play, and Prime Minister Menzies was pressing their cause with unexpected vigor. Indeed, the situation was more promising than the Australians realized.

#### *The British Position: Keeping it a Commonwealth Affair*

When the procurement of tactical nuclear weapons was first proposed, many officials in Australia doubted that Britain would share its atomic assets. British archival documents suggest, however, that the United Kingdom was favorably disposed to Australian requests for assistance with nuclear weapons. Indeed, the only thing more surprising than Australia’s interest in nuclear weapons was Britain’s willingness to provide them. In their dealings with Australians, British officials were cautious, preferring not to signal their interest until the details were worked out, but, in fact, key ministries in London supported the transfer of nuclear weapons.

British officials realized that the transfer of nuclear weapons to Australia would raise a number of thorny issues, including the “4th power problem” and the U.K.’s nuclear cooperation agreements with the Americans. These agreements required U.S. approval before Britain could transfer American-related information and technology. Despite these potential problems, the government was disposed to helping the Australians. In part, this reflected Australia’s status as a Commonwealth cousin, but British sympathies were also a consequence of more parochial interests, including a desire to sell Australia the British airplanes that would deliver the a-bombs.

The “bomber sales” argument was first raised by British Air Marshal Boyle,<sup>38</sup> who successfully persuaded his fellow chiefs of staff to endorse, in principle, a proposal to sell nuclear weapons to the Australians. When the Ministry of Defence rendered its judgment on the proposal, the economic argument was explicitly cited.

From the viewpoint of Commonwealth relations there was advantage in our supplying the bombs: it would also be economically advantageous, since apart from the bomb purchase, Australia would have to purchase a bomber force and might well be disposed to obtain this from us if we supplied the bombs.<sup>39</sup>

The Commonwealth Relations Office (CRO), in a brief for the Cabinet, also cited the benefit of bomber sales.<sup>40</sup> The CRO’s main concern, however, was the state of British-Australian relations. Britain did not want to lose leverage with Australia. After the Menzies-Macmillan meetings, the ministry wrote to the Deputy High Commission for Australia and described their concerns:

We know however that Sir P. McBride and the Chief of Air Staff... are quite keenly interested in starting up discussions about nuclear weapons either with us or the Americans sooner rather than later. There is certainly a risk that, if we make no move ourselves, the Australians may... come up with a proposal... [for] the Americans. It is very important that we should do whatever we can to ensure that the Australians go British over any equipment connected with nuclear weapons.... [...] In short, from the point of view of United Kingdom/Australian relations, it would be a great pity if we 'put this subject to bed' for too long.<sup>41</sup>

The CRO view was succinctly stated by Secretary of State for Commonwealth Relations in a letter to Prime Minister Macmillan. "I am sure it is right," surmised the secretary, that "we should encourage [Australia] to look to us as their potential supplier."<sup>42</sup>

The Ministry of Defence and the CRO were joined by a third ministry, the Ministry of Supply. Writing to the prime minister, the minister for supply explained that:

I appreciate the many difficulties in which the supply of these weapons would involve us.... I do, however, think it desirable that the Australians should continue to regard us as their potential supplier, and I would like to inform their Minister for Supply that we would look sympathetically at any request they might make and do our best to overcome the serious difficulties it would involve.<sup>43</sup>

As in other ministries, officials in supply worried that in the absence of a positive response "the Australians may feel that they are being brushed off altogether and will more

than ever turn their eyes eastward."<sup>44</sup> Following the Menzies-Jones meeting in August 1958, the ministry suggested that upcoming British-Australian talks on nuclear weapons should:

...be on the implied understanding that we shall in due course be prepared to supply the Australians with whatever it is that we have to offer. The discussions should be in terms of complete weapons systems such as O. R. 339 with Kiloton armament and developments of Bloodhound with nuclear warhead.<sup>45</sup>

Across all three British ministries—supply, defence, and commonwealth relations—one sees a desire for Australia to be seen as "a potential supplier." To keep the Australians from shopping elsewhere, it was considered "very desirable to keep the Australians in play."<sup>46</sup> Perhaps this is why some two weeks after the August 1958 Menzies-Jones meeting, it was Prime Minister Macmillan who contacted his Australian counterpart about nuclear weapons *and not the other way around*.

I hear that when Aubrey Jones met your Cabinet, the subject of nuclear weapons came up. [...] If you think that the time has now come to take matters further, I should be very glad to see what could be done."<sup>47</sup>

In March 1957, the Australian government first raised the issue of nuclear weapons with the United Kingdom. Remarkably, a year later, it was the British who were raising the issue with the Australians.

#### *A Temporary Retreat*

Menzies responded to Macmillan's letter three days later with a note drafted by the minister of defence. It reflects both the prime

minister's reluctance to acquire nuclear weapons and the Defence Ministry's interest in pursuing them:

Our interest is in the tactical weapons field and actual possession of the weapon does not arise at this stage. We are anxious, however, for information which would enable us to explore further the possibility of possessing a nuclear capability and to plan adequately our defense preparedness in the future.<sup>48</sup>

Menzies and Macmillan agreed that the next step would be discussions between the two air staffs. Air Marshal Scherger, who was already scheduled to go to the United Kingdom, departed for London to discuss nuclear weapons. The prime minister was explicitly assured by the minister of air that Scherger would not discuss the transfer of nuclear weapons, but instead, would only collect information about nuclear weapons.<sup>49</sup> These assurances were either not passed on to Scherger or they were ignored. In Scherger's meeting with G. W. Tuttle, Britain's deputy chief of the air staff, he explicitly raised the issue of procurement. In fact, at one point in the conversation, Scherger suggested a possible pricing scheme, suggesting that the Australians "should pay for the weapons they used."<sup>50</sup>

Scherger was probably encouraged by his trip, but once back home, little seems to have come of it. Indeed, it appears that by 1959, the drive for Australian nuclear weapons had stalled.<sup>51</sup> The government's reluctance to pursue the matter was evident in November 1959, when the Cabinet decided against asking the British to share information from a new round of nuclear tests that were planned for an Australian test site. The decision was based on the "gen-

eral policy that it is desirable to limit nuclear weapons capabilities to the few major powers.”<sup>52</sup>

Undaunted, the Ministry of Defence pushed on. In lieu of a political decision favoring acquisition, military advocates of nuclear weaponry shifted their focus to an area over which the Cabinet had less control: the procurement of delivery systems.

### The Search for Nuclear-Capable Delivery Systems

Australian proponents of nuclear weapons had, from the beginning, sought not only warheads but also their means of delivery. The original idea was to retrofit the RAAF’s fleet of Sabres and Canberra bombers with tactical nuclear weapons, but like any air force, the RAAF had already begun planning for future, nuclear-capable platforms. It hoped to acquire new bombers, strike aircraft and surface-to-air guided missiles—each with an ability to deliver nuclear weapons. Some British observers speculated that the government was seeking nuclear-capable delivery systems because their acquisition would increase the chances that the United Kingdom would transfer nuclear weapons.<sup>53</sup> This section details Australia’s search for a nuclear delivery system. As Australian documents make plain, the air service’s efforts to acquire a nuclear-capable delivery system were directly linked to their hopes for acquiring nuclear weapons.

#### *Bombers and Strike Aircraft*

In January 1958, the British air marshal reported to his fellow chiefs of staff that Australia had inquired about the purchase of a “V” bomber. In the 1950s, the British V bomb-

ers—the Valiant, Victor, and Vulcan—constituted the United Kingdom’s main nuclear strike force.<sup>54</sup> Australia’s inquiry, Boyle noted, made “no specific mention of atomic bombs,” but “was an indication of current Australian interest....”<sup>55</sup> Scherger, the Australian air marshal, again raised the issue of a V bomber in September of 1958, when visiting London on his nuclear fact-finding trip.<sup>56</sup> Australian interest was sufficiently serious that British officials even discussed the possibility of leasing the aircraft to the RAAF.<sup>57</sup>

By 1960, interest in nuclear capable aircraft shifted from the V bomber to the TSR-2.<sup>58</sup> The TSR-2 was supposed to be Britain’s most sophisticated plane, and Australian defence officials were inclined to favor it over its competitor, the American F-111. When the Australian and British defence ministers met in July 1961, Australia made clear the reason for its interest in the plane:

[Australian Defence Minister] Townley’s point was that, if Australia were to buy the T.S.R.II, they would wish to be sure that nuclear weapons would be available for use from it if the need should arise.<sup>59</sup>

In time, the TSR-2 ran into technical and financial difficulties, and the British government eventually canceled the project in 1965. Perhaps sensing these problems, the Australians opted for the F-111 and signed a deal with the United States in 1963. The F-111 could carry nuclear weapons, a fact not lost on the Australian buyers.<sup>60</sup>

#### *Missiles*

Perhaps the most interesting episode in Australia’s search for a nuclear weapons delivery system in-

volves the British Bloodhound. The Bloodhound, described as a surface-to-air guided missile, was developed by the British at the Woomera test range in Australia. As originally conceived, there were to be three stages of development. The Mark I and Mark II would carry conventional warheads, and the Mark III would carry a nuclear warhead.<sup>61</sup> Indeed, the Bloodhound Mark III was designed as “a weapon which is only effective with a nuclear warhead.”<sup>62</sup>

In 1960, Australia was shopping for missiles to shore up its northern defenses. The air and defence ministries narrowed the choice to two options: the American Nike and the British Bloodhound. According to British documents, the Australians were disposed to the Nike because it was already nuclear-capable and less expensive than the Bloodhound.<sup>63</sup>

The British Ministry of Defence was anxious to sell the Bloodhound to the Australians. U.K. officials feared that if the Australians rejected the Bloodhound, other potential customers would do likewise. After all, the weapon had been designed in Australia, although without Australian participation.<sup>64</sup> In London, the Ministry of Defence decided to mount a full-court press in order to save the program.<sup>65</sup>

The Australians were eventually persuaded to go with the Bloodhound. Within the year, however, the British Treasury put the Bloodhound on its hit list, declaring that Mark III (the nuclear version) would be terminated. British Defence officials protested. They argued that the Australians bought into Bloodhound precisely because the third stage consisted of a nuclear missile.<sup>66</sup> To

cancel the program, they suggested, might seriously damage British-Australian relations. Defence lost the argument, and the Mark III was canceled.

The British Ministry of Defence now worried about possible repercussions. Their concern was that Australia would no longer purchase U.K. defense items, and that it might adversely influence negotiations over continued use of the Woomera test range.<sup>67</sup> To make up for the Bloodhound incident, members of the Defence Ministry's Strategic Exports Committee suggested that Australia be allowed to participate in British research and development of atomic, biological, and chemical weapons. A similar proposal had been suggested by the CRO the year before. In fact, when the chair of the exports committee visited Washington, he "sounded the Americans about Australian association with Anglo/U.S. co-operation in development, but the Americans had not reacted."<sup>68</sup> It is unclear what became of the proposal. What is clear, is that the Bloodhound affair did not dissuade Australian officials from seeking nuclear weapons. Not a year had passed since the Bloodhound affair when Australians again began canvassing British officials for help in the nuclear field.<sup>69</sup>

Yet, despite of all these efforts, Australia was no closer to acquiring a nuclear weapon. Efforts by defence, supply, and the AAEC did not alter a basic political reality: Australia's Cabinet, and most particularly Prime Minister Menzies, had backed away from the nuclear option. In spite of the efforts of nuclear proponents, it appeared that Australia had returned to its previous posture—that of a convention-

ally armed country with conventional aspirations. What neither the bomb advocates nor opponents anticipated, however, was that world events would soon put the nuclear issue back on the agenda.

### **Nuclear Weapons on-Demand**

#### *Trying to Beat the Test Ban*

In 1961, negotiations over a Nuclear Test Ban Treaty (NTBT) again put the nuclear question before the Australian Cabinet. Work on the test ban had begun in the late 1950s, but by 1961, negotiations between the three nuclear powers—the United States, the Soviet Union, and Britain—had stalled. In an effort to revive the talks, London asked Canberra for permission to offer listening posts in Australia to the Soviet Union as part of a new round of diplomatic proposals. Earlier in the negotiations, the Soviet Union had insisted that the treaty include listening posts in Australia, since Australia had hosted a number of British nuclear tests.<sup>70</sup>

The Australian Cabinet took up the issue of the NTBT and listening posts in Australia at the behest of Prime Minister Menzies. Interestingly, Menzies—who three years earlier had been reticent to raise the subject—now argued that Australia should insist on a nuclear weapons on-demand agreement in return for joining the NTBT.

Menzies then suggested that Australia:

...secure now from the United Kingdom recognition of an obligation to allow Australia the right of access to United Kingdom nuclear weapon 'know how' (or preferably... the right to draw on the U.K. nuclear weapons stockpile) in the

event of important countries in the general Pacific and India Ocean areas acquiring nuclear capability.<sup>71</sup>

On June 13, 1961, the Cabinet endorsed Menzies's recommendation (Decision 1383), authorizing a reply to the British request that sought "recognition now of the United Kingdom's obligation to provide Australia, if ever necessary, with a nuclear capability."<sup>72</sup> In his letter to Macmillan, Menzies suggested that Britain either supply "full manufacturing data for the production of operational weapons" or "a more practical arrangement... for the supply of ready-made weapons."<sup>73</sup>

#### *To the Edge and Back*

In his reply, the British prime minister expressed sympathy for the Australian position but explained that various British-American agreements precluded him from granting the Australian request without first consulting the Americans. He offered to go to the Americans on Australia's behalf and suggested that, in the meantime, the British government could provide a briefing on nuclear strategy and tactics.<sup>74</sup>

On its face, the message was encouraging, but vague. It is not known how the message was interpreted by the Australians. In all likelihood, the Australians again underestimated Britain's willingness to help Australia secure access to nuclear weapons.<sup>75</sup>

After receiving Macmillan's message, the Cabinet proceeded with its plan to send the same proposal to the United States, in the person of Secretary of State Dean Rusk. Before the letter could be delivered, however, outside events intervened. On the first day of September—the very week that the letter to Rusk was to

be delivered—the Soviet Union resumed atmospheric testing. The United States and the Soviet Union continued to participate in test ban negotiations, but the prospect of an agreement looked dim.<sup>76</sup> After the Soviet test, the Australian government immediately decided to stop delivery on the letter to U.S. secretary of state.<sup>77</sup> The demise of the test ban meant there would be no listening posts on Australian territory, and thus no threat to Australia's nuclear option.

Five days after the Soviet test, on September 6, 1961, Menzies wrote back to the British prime minister. After acknowledging the constraints posed by British-American cooperative arrangements, Menzies replied to Macmillan's offer to lobby the Americans. Menzies suggested that the British prime minister put off the matter for now, and instead wait for a time "when circumstances are more propitious."<sup>78</sup>

From September 1961 until after the Chinese nuclear test in 1964, it appears that the Australian government took no additional steps to acquire access to nuclear weapons. It did reaffirm its right to possess nuclear weapons, however. In early 1962, for example, when a U.N. General Assembly resolution called on countries to publicly renounce atomic arms, Australia demurred. The best the government could offer was that it "had no plans to manufacture or acquire the weapons."<sup>79</sup>

### THE INDIGENOUS CAPABILITY PHASE (1964-1972)

From the mid-1950s to early 1960s, Australian interest in nuclear weapons centered on the procurement of weapons, not on indigenous manu-

facture. Beginning in 1964, the Australian government began to think seriously about what it would take to develop an Australian bomb. This section describes the government's initial steps to strengthen its nuclear option.

### Australian Perspectives

In the decade between 1963 and 1973, Australia's security declined in relative terms as a consequence of three major changes in the international environment. The first was China's entry into the nuclear club. Australian defense analysts believed that it would be years before China could deploy a "serious" nuclear arsenal, but found the development disturbing nonetheless. Australia considered China the most alien and potentially menacing of the area's regional players.<sup>80</sup> At the level of the formal decisionmaking process, it was the presence of a Chinese nuclear capability that became the entry point for arguments about Australian nuclear weapons.

The second event of consequence in this decade was Britain's decision to withdraw its troops from the Pacific. No forces "east of the Suez" meant that nuclear and conventionally equipped British military units in Malaysia and Singapore would no longer be available for the defense of Australia. The move represented a major change for the worse in Australia's strategic position.<sup>81</sup>

The third and potentially most threatening change in Australia's security environment was American disengagement from Vietnam.<sup>82</sup> Australia's participation in the Vietnam War was intended to keep the United States in Asia, but the Americans had grown weary of wars in far-off jungles.<sup>83</sup> The key event in

this regard was Johnson's announcement of a unilateral halt in the bombing of North Vietnam and his decision not to seek reelection. American documents from the period describe the effect this way:

One of Australia's 'powerful friends,' the U.K., was preparing to leave the scene. Would the other, the U.S. also drift away? [...] [Prime Minister] Gorton told the Liberal Party caucus and the press that he was convinced there would be a major U.S. retrenchment in Asia—possibly amounting to a return to pre-World War II isolationism—under the next U.S. administration, and that this might well necessitate abandonment of 'the Menzies concept of forward defense' in favor of 'an Israeli-type defence scheme.'<sup>84</sup>

In less than five years, Australia's most feared great power threat (China) had acquired nuclear weapons, and its two most important allies (Britain and the United States) had reduced their regional security commitments, with the former withdrawing completely. Most Australian leaders did not see an immediate threat to Australian security, but many felt more uncertain and anxious about Australia's future.

These changes in the security environment coincided with changes in political leadership, in particular the retirement of Prime Minister Menzies and the eventual ascension of John Gorton. Gorton represented a significant change in the defense views of Australia's executive. Gorton was a supporter of nuclear weapons for Australia, and it was he who first announced plans to expand Australia's nuclear infrastructure. Nuclear weapons fit well with Gorton's grand strategy, and they were favored by politicians who sup-

ported his bid for power.<sup>85</sup>

What had not changed during this period was the fact that important constituencies within the Australian government were still lobbying for an Australian nuclear weapons capability. The institutions that had favored nuclear weapons acquisition in the 1950s and early 1960s—the Ministry of Defence, the Department of Supply, the AAEC—were again at work supporting a nuclear option in the late 1960s and early 1970s. Commentators at the time pointed to what they called a “bomb lobby” and often described the debate over nuclear technology as a battle between ministries or departments.<sup>86</sup>

By the mid-1960s, the AAEC became the leading voice on nuclear affairs.<sup>87</sup> The chair of the AAEC was Sir Philip Baxter, credited by friend and critic alike for his bureaucratic acumen and influence over government policy. He was said to be “the dominant bureaucratic nuclear policy advisor.”<sup>88</sup> Baxter personally supported the concept of an Australian nuclear weapons capability and, perhaps more importantly, viewed the military’s interest in nuclear weapons as consonant with the AAEC’s need to expand its programs and budget.<sup>89</sup> A Defence-AAEC alliance in support of a nuclear weapons capability represented, therefore, a “co-occurrence of desires.”<sup>90</sup> Looking back, George Quester described the role of the AAEC this way:

Australia was thus close to becoming a country in which a small group of nuclear physicists could physically prepare a *de facto* nuclear-weapons option and veto a legal renunciation of such weapons. If the country’s political climate had remained favourable or even

indifferent, this scientific bureaucracy would probably have determined policy.<sup>91</sup>

These three elements—changes in the security environment, the rise of Gorton, and continued lobbying by pro-nuclear government officials—spurred Australia’s interest in an indigenous capability. It also set the stage for an intense intra-governmental struggle over the one issue that would forever determine Australia’s nuclear future: the NPT.

### Rethinking the Australian Bomb

After the Chinese atomic test and Britain’s first substantive steps to reduce its presence in Asia, Australian decisionmakers revisited the question of nuclear weapons, and for the first time, seriously considered the development of an indigenous nuclear weapons capability.<sup>92</sup> China detonated its first nuclear device on October 16, 1964. Three years earlier, Prime Minister Menzies had explicitly identified nuclear weapons acquisition by a regional power as a condition that could trigger an Australian decision to seek nuclear weapons.<sup>93</sup> The official Australian response to the Chinese test was muted, but a year later, in October 1965, the Cabinet ordered a study re-examining the nuclear option. Part of the study, a cost estimate of an indigenous weapons program, was conducted by the Department of Supply and the Australian Atomic Energy Commission.<sup>94</sup>

When Menzies retired three months later, in January 1966, Harold Holt became prime minister. Menzies’s retirement gave bomb advocates a new opportunity to press their cause.<sup>95</sup> Indeed, it was not long before the nuclear issue again im-

posed itself on the Cabinet’s agenda. Early in 1966, the United States submitted a request to the Australian government, asking that its bilateral safeguards arrangements with Australia be transferred to the International Atomic Energy Agency (IAEA). Australia maintained a small nuclear infrastructure including two research reactors: a 10 megawatt (MW) heavy-water moderated, enriched-uranium research reactor (HIFAR) and a smaller graphite and water moderated reactor for physics experiments (MOATA).

Holt’s government opposed the move “for fear [that] it would compromise a future nuclear weapons program.”<sup>96</sup> In particular, the Australians feared the prospect of IAEA inspectors roaming the country at will—a concern that later resurfaced during the debate over the NPT.<sup>97</sup> Australia’s opposition to the safeguards transfer was not expressed to the Americans, but it was sufficiently strong that members of the Cabinet thought it would be preferable to close the Lucas Heights research reactor rather than comply with the request.<sup>98</sup> The Holt government’s initial strategy was one of delay, until it could conduct a study of the likely impact of the change. Finally, in June, the Cabinet agreed to the request, but “only after being reassured by defence officials that acceptance of the IAEA safeguards ‘would not directly affect a weapons program.’”<sup>99</sup>

About the same time, the minister of national development proposed to the Cabinet that Australia construct a nuclear power reactor. The plan was opposed by the Prime Minister’s Department, which was most likely joined by the Treasury.<sup>100</sup> On its face,

the objective of the plan was to generate electricity, but according to one report, the “sub-plot of the struggle centered on the nuclear weapons possibilities of the technology.”<sup>101</sup> In the end, the proposal was rejected by the Cabinet.

Despite the rejection of the power plant proposal, the issue of nuclear weapons would not die. In January 1967, the chairman of the U.S. Atomic Energy Commission, Glenn Seaborg, visited Canberra. As his diary records, nuclear weapons were still a live option:

At dinner, Sir Leslie Martin (Australian AEC member and scientific adviser to the Department of Defense) told me that the Government of Australia was struggling with the decision of whether to produce a nuclear weapon.<sup>102</sup>

Later the following year, in April 1967, the minister of national development announced restrictions on the export of Australian uranium. The minister defended the restriction by saying that Australia needed the uranium so that it could pursue a military option without interference from outside suppliers.<sup>103</sup>

A month later, Holt and the Cabinet’s Defence Committee commissioned a study to assess the possibility of an “independent nuclear capability by manufacture... as well as possible arrangements with our allies.” Two reasons were given for the study: “the possibility of the emergence of additional nuclear powers,” and the probability that Australia would be asked to “subscribe to a non proliferation treaty.”<sup>104</sup>

How seriously Holt would have pursued the nuclear option is hard to assess. In December 1967, however, the prime minister, an avid sportsman, disappeared while swimming off Port

Phillip Bay near Melbourne (and was never found). The struggle to succeed the prematurely departed prime minister was primarily a battle between two mainstream Liberal Party leaders, Paul Hasluck and William McMahon. When neither minister could muster the required votes, the Liberal-Country Party coalition turned to John Gorton.

Gorton would become Australia’s most pro-nuclear prime minister.<sup>105</sup> As a senator, Gorton had given Gallois an Aussie twist, asking if Americans would be willing to trade San Francisco for Sydney. He argued that the government should “...secure for this country some measure of atomic or hydrogen defense.”<sup>106</sup> Gorton’s doubts about American and British security guarantees had likely grown since his early days as a senator. As Gorton took office, the British informed the Australians that they would accelerate their withdrawal from Asia, and U.S. President Johnson stunned the world with his March 1968 announcement that he would de-escalate the bombing of North Vietnam and not seek another term as president.

But, as fate would have it, Gorton’s ascent and Australia’s worsening security position coincided with the arrival of the treaty. Six months into Gorton’s tenure, in mid-1968, Australia was asked to sign the NPT, and thus renounce nuclear weapons.

### Gorton and the NPT

Like the earlier test ban treaty, the NPT was negotiated by the superpowers and asked the non-nuclear countries to give up their nuclear weapons option. And once again, it appeared that China, India, and other

key regional actors would not join the treaty.

Prime Minister Gorton asked the Defence Committee to convene a special “senior level Working Group” to recommend an Australia response.<sup>107</sup> Interestingly, as consideration of the NPT made its way up the organizational ladder, it met ever greater resistance. The 1967 study requested by Holt and conducted by the Department of Defence’s Joint Planning Committee (JPC) was completed in February 1968 and was thus available to the Working Group. The JPC study had concluded that “Australia should be prepared to sign such a treaty.”<sup>108</sup>

But the Working Group report, which was completed a month later, was more cautious. It recommended that Australia should indicate “a willingness to sign the treaty subject to understandings, qualifications and possible amendments.”<sup>109</sup> When the decision reached the Cabinet’s Defence Committee, it was anything but settled. Sir Henry Bland represented the Department of Defence and chaired the Committee’s deliberations. Bland took a position very different from his own Joint Planning Committee. According to notes taken at the meeting:

...it became clear that [Sir Henry] Bland was against Australia becoming party to the Treaty, and was trying to steer the discussion accordingly. There was also a disturbing tone from Bland that we ought to stand up to the Americans more. Baxter [head of the AAEC], took much the same line.<sup>110</sup>

As the Australian government’s attitude evolved, it appears that the focus increasingly became one of how to get around the Treaty. A then-classified U.S. study from 1968

reported, for example, that:

Australia was reluctant to give up her nuclear option, and Prime Minister Gorton expressed concern about the treaty during [Secretary of State Dean] Rusk's April visit to Canberra. A group of ACDA and AEC officials was sent out, and they found the Australians very interested in just how far they could go under the treaty toward developing a nuclear-weapons capability....<sup>111</sup>

For the next two years, from March 1968 to February 1970, divisions over the treaty prevented the Cabinet from taking any action. By mid-1969, a majority in the Cabinet opposed the treaty, but the apparent strategy of the NPT opponents was simply not to sign the treaty rather than openly reject it.<sup>112</sup> The internal debate over the treaty represented a conflict between two major coalitions. On one side were the prime minister, the minister of supply, the minister of national development (including the AAEC), and the minister of defence. They favored: 1) not signing the NPT; and 2) building an indigenous fuel cycle that would permit—at some point—the manufacture of nuclear weapons. Their efforts were opposed by the minister of external affairs, the minister of treasury, as well as dissident elements within the Department of Defence.<sup>113</sup>

With the issue of the NPT still unresolved, the government launched a program to build Australia's nuclear infrastructure. The cornerstone of this effort was a planned 500 MW nuclear power reactor at Jervis Bay.<sup>114</sup> In putting the project out for bid, government officials insisted that the reactor use natural uranium or, alternatively, that it be packaged with

an enrichment facility so that Australia would not have to depend on foreign supplies of nuclear fuel.<sup>115</sup> During this same period, Australia signed a secret nuclear cooperation agreement with France.<sup>116</sup> It also embarked on a project to use peaceful nuclear explosions for the construction of a harbor at Cape Keraudren.<sup>117</sup>

Gorton's public skepticism about the NPT, the government's plans for nuclear expansion, the peaceful nuclear explosions initiative, and France's reputation in the nuclear field led some to speculate that Australia had made a decision in favor of the bomb.<sup>118</sup> That conclusion seems unwarranted, but it is fair to say that 1969 represented a peak point in efforts to pursue an indigenous nuclear weapons capability.<sup>119</sup>

#### *Reversing Course*

On October 9, 1969, Prime Minister Gorton officially kicked off his election campaign. In the speech announcing his candidacy, Gorton declared his opposition to the NPT and promised that, in the absence of major changes, his government would not sign.<sup>120</sup> Four months later, however, on February 19, 1970, the prime minister announced that Australia would in fact sign the NPT.<sup>121</sup> His announcement, and the subsequent signature a month later, emphasized his reservations about the treaty and called attention to the withdrawal provision. Gorton went on to explain that:

...we wish to make it plain that our decision to sign is not to be taken in any way as a decision to ratify the treaty, and of course the treaty is not binding on us until it is ratified.<sup>122</sup>

Gough Whitlam, leader of the opposition Australia Labor Party, ridi-

culed Gorton for making the announcement in "the most grudging and graceless manner possible."<sup>123</sup> As it was, Australia was the second to last country to sign the treaty before it entered into force.<sup>124</sup>

At the time, the move was considered a conspicuous reversal of policy. This was not the first time Gorton had switched his public position on a major defense and foreign policy issue, but it was unexpected, nonetheless. Several explanations have been offered, all of which are based on limited evidence. Some journalists and NPT opponents suggested that it was U.S. pressure that compelled Australia to sign.<sup>125</sup> Others point to a change of heart within the AAEC, the leading opponent to the treaty.<sup>126</sup> A third explanation maintains that Gorton's decision to sign was a matter of intra-party politics, i.e., a consequence of changes within the ruling Liberal-Country Party coalition after the Australian elections of 1969.<sup>127</sup>

More persuasive, but far from conclusive, explanations point to two other factors. One is the momentum effect of late NPT signatures by Switzerland, Italy, Japan, and West Germany, "near-nuclear" states that had been highly critical of the treaty and had been reluctant to renounce their nuclear option.<sup>128</sup> Of particular significance was the Japanese decision: Australia's announcement that it would sign came a week after the Japanese signature.<sup>129</sup> The West German and Japanese signatures no doubt strengthened the hand of treaty proponents within the Cabinet, particularly the Ministry of External Affairs, which could argue that Australia was becoming isolated on the issue.<sup>130</sup> When Japan and West Germany signed the NPT, they ver-

bally reiterated their concerns about the treaty and attached a formal set of reservations with their signature. When Gorton announced that Australia would sign the treaty, he cited the Japanese and German example, declared that the treaty was non-binding until ratification, and included a set of reservations with Australia's signature.<sup>131</sup>

Another factor contributing to the reversal may have been the particular provisions of the NPT. Language in the treaty may have given Gorton a reason to sign in order to *maintain* his nuclear options. At the time, international law stipulated that a treaty was not binding until a country ratified it.<sup>132</sup> According to the NPT, those countries that signed the treaty before it went into force were not bound by the treaty until ratification, while those that signed the NPT after it came into force were bound from the time of signature.<sup>133</sup> Understood from this vantage point, Gorton's signature less than a month before the treaty came into force, was a way to preserve the country's nuclear options: Australia could sign, not be bound by the treaty, and be in a better position to pursue a nuclear capability.<sup>134</sup>

Regardless of the reason, it is clear that Gorton had no intention of bringing the NPT up for ratification, and he continued with plans for building a new power reactor.<sup>135</sup> Within the year, however, he was ousted as prime minister by forces within his own party. He continued in the government as minister of defence, but was succeeded as prime minister by McMahon, the former minister of the treasury and minister of external affairs.

McMahon had supported the NPT and was skeptical of plans to expand

the nuclear infrastructure. McMahon did not act on NPT ratification, but he indefinitely delayed plans for the nuclear reactor at Jervis Bay, citing the NPT and cost as reasons for suspending the project.<sup>136</sup>

### FROM NUCLEAR OPTION TO NUCLEAR ABSTINENCE (1972-1973)

McMahon's tenure as prime minister was short-lived. In a year's time, McMahon and the Liberal-Country Party were out of office, defeated by Labor in the 1972 elections.<sup>137</sup> The Australia Labor Party had for years, as a matter of opposition policy, supported NPT ratification, and Labor entered office "with a well-developed and unequivocal policy on nuclear proliferation."<sup>138</sup> The new prime minister wasted no time, moving to ratify the treaty and announcing that the Jervis Bay reactor was officially dead.<sup>139</sup>

The following year, India detonated a nuclear device. The test sent political shock waves throughout the world's capitals. Australia considered India a key regional power, and India's entry into the nuclear club—like China's a decade earlier—was unsettling to Australian officials.<sup>140</sup> The policy consequences, however, were quite different. The government, led by Labor, did not alter Australia's nuclear posture, and, if anything, publicly recommitted itself to the goal of nonproliferation.

In elections the following year, the Liberal Party won back the government. Some Liberal leaders had publicly discussed maintaining a nuclear option, but the change in government did not produce a change in policy.<sup>141</sup> Despite the Indian test, the new Liberal government, led by Malcolm Fraser (a former minister of defence)

maintained Australia's commitment to abstain from nuclear weapons.

In a four-year period from Prime Minister Gorton to Prime Minister Whitlam, Australian nuclear policy had shifted from one of autonomy to one of renunciation. It would be some years before Australia became a leader in nonproliferation, but, looking back, the ratification of the NPT marked a turning point, a decisive step away from nuclear weapons. After 1973, the subject of nuclear weapons was occasionally discussed, but it appears that no substantive action was taken in support of a nuclear weapons capability.<sup>142</sup> Moreover, Australia's civilian nuclear infrastructure remained limited.<sup>143</sup>

### LEARNING FROM AUSTRALIA

#### Australia and the Conventional Wisdom

Few scholars would have guessed that Australia wanted nuclear weapons. The surprise elicited by the Australian case illuminates the fact that we have certain expectations about how states behave. These expectations are based on our core assumptions about international relations. The fact that the Australian case runs counter to our expectations may suggest that there is something amiss with those assumptions. In particular, it raises questions about how we think about nuclear proliferation.

Most thinking about nuclear proliferation subscribes to a conventional wisdom. The conventional wisdom explains a country's decision to seek or abstain from nuclear weapons in terms of two analytic categories, motivation and capability.<sup>144</sup> *Motivational* explanations stress the im-

portance of security threats and prestige.<sup>145</sup> Explanations based on *capability* contend that proliferation is a consequence of advances in a country's nuclear infrastructure. States with little or no technical capability do not consider the development of nuclear weapons, while states with more advanced nuclear infrastructures find themselves drawn to nuclear weapons—in a moment of crisis or as a result of technical momentum. Motivation and technical capability are the touchstones for virtually all thinking about nuclear proliferation. The most common explanations for why states go nuclear, or why they remain non-nuclear, combine arguments about motivation and capability.

The Australian case raises serious questions about both aspects of conventional wisdom. While security threats played an important role in the government's deliberations, a longitudinal analysis reveals that Australia made some of its most persistent efforts to acquire nuclear weapons during the period when—by all accounts—it enjoyed its highest level of security, that is, from 1956-1961. Moreover, all of Australia's moves towards a nuclear weapons option came *in spite of* the ANZUS Treaty. Australia then gave up the nuclear option and ratified the NPT even as its security situation deteriorated and grew more uncertain. In short, level of threat and nuclear policy do not correspond to one another.

This is not to say that security threats played no role in Australian decisionmaking. It is clear that the Chinese nuclear capability, the British withdrawal, and concerns about the American commitment did, in fact, lead the government to take up

the issue of an indigenous nuclear capability. Still, threat does not explain the earlier procurement efforts from 1956 to 1958. Nor does it explain Australian moves away from a nuclear weapons capability: i.e., the Australians did not renounce nuclear weapons because the Chinese gave up theirs or because the United Kingdom canceled its withdrawal (neither of which occurred).

The motivational model does not perform as expected, but the technical model fares no better. Australia maintained only a modest nuclear infrastructure. It was not pushed towards the bomb because it possessed an advanced nuclear capability, but neither did its limited technological development dissuade it from aspiring to nuclear weapons.

Instead, it appears that other influences—bureaucratic politics, changes in executive leadership, and the perception of nuclear weapons—provide a better account of Australian nuclear decisionmaking. Of particular importance is the role of bureaucratic politics. Early theories of nuclear proliferation sometimes emphasized the role of bureaucratic politics, but it is a factor that has, until recently, been largely ignored.<sup>146</sup> The Australian case provides an instructive example of how bureaucratic alignments can either encourage or discourage the acquisition of nuclear weapons. Indeed, the story of Australian nuclear decisionmaking can be understood, in large measure, as a contest between two powerful coalitions: the military and the civilian atomic energy agency pushing the nuclear weapons option and the combined forces of the Department of External Affairs and Treasury opposing it. Macro events, whether external

(e.g., China's nuclear test) or internal (e.g., a prime minister's resignation) were used by bureaucratic actors as opportunities to advance their policy preferences.

### Lessons from Down Under

Whether in history, theory, or policy, Australia's experience provides issues for further consideration. As history, it demonstrates the potential value of looking in unexpected places. As theory, it highlights the role of people and politics, of the process tucked in between wanting and making a bomb. As policy, the Australian case recommends a broadening of the nonproliferation policy agenda beyond its focus on security threats and capability (i.e., security guarantees and export controls), so that other points of leverage—like bureaucratic politics—can be used to reduce the chance of proliferation.

The curious case of Australia also represents one of the more interesting transformations in the history of nuclear politics. In its own way, it demonstrates the tremendous capacity of states to change their behavior and beliefs, even on matters as central as nuclear weapons and national survival.

Finally, the Australian story illustrates the extent to which security dominates contemporary thinking about proliferation. American scholars, with rare exception,<sup>147</sup> never thought to investigate the Australian case. It was assumed that Australia had no reason to want nuclear weapons. The issue is not simply that the security model fails to explain Australia's experience. A singular focus on security has misled scholars, encouraging them to overlook all but theory-confirming examples of nuclear ambition.<sup>148</sup> In retrospect,

the surprise Down Under says as much about the contemporary study of nuclear decisionmaking as it does about Australia.

<sup>1</sup> My thanks to a number of people who provided helpful comments and support including William Potter, Ron Lehman, David Fischer, Scott Sagan, George Bunn, Kevin Clements, Chris Wilson, Desmond Ball and Andrew Mack, and Clay Moltz. Michael Barletta, in particular, was generous with his time and insights. Financial support for this research was provided by the Center for International studies at MIT and the Center for Global Security Research at Lawrence Livermore National Laboratory. Comments or requests for documents can be sent via e-mail to "jimwalsh@mit.edu."

<sup>2</sup> I am deeply indebted to Australia's Department of Foreign Affairs and Trade, and in particular, to its highly professional staffs in the Nonproliferation Section and the Archives Office. The Department's commitment to openness and scholarship marks an important change from past policy. On Australia's earlier penchant for secrecy, see Desmond Ball, "Australian Defense Decision-Making: Actors and Process," in Desmond Ball, ed., *Strategy and Defense: Australian Essays* (London: George Allen & Unwin, 1982), pp. 292-294. Ball, commenting on the "extraordinary closed nature of the decision-making process," observed that "Virtually everything pertaining to defence policy in Australia is classified..." (p. 294). See also B. D. Beddie, "Some Internal Political Problems," in *Australia's Defense and Foreign Policy*, Australian Institute of Political Science (Proceedings of 30th Summer School)(Sydney: Angus and Roberston, 1964), p. 143.

<sup>3</sup> Belief that nuclear weapons would spread was also common among nuclear advocates during the indigenous capability phase (1964-1973). For example, Alan Fairhall, minister of supply and later minister of defence during this period, expressed the "that the forces of scientific development will ineluctably lead to the spread of nuclear technology and that no Treaty can prevent it from being diverted to possible military use." *The Bulletin* (Sydney), June 29, 1968, p. 18.

<sup>4</sup> The Australian army believed that widespread possession of tactical nuclear weapons by enemy and ally alike would require new training. Training would be designed to address the tricky "problem of avoiding danger to our own troops from our own atomic weapons..." Australian Archives (ACT): A6456/3 R79/1; The Australian Military Forces Minute Paper, AHQ Directive—Nuclear Warfare, 1954, p. 1.

<sup>5</sup> The Defence Committee was Australia's most important defense policy making body, "the supreme co-ordinating committee," and its recommendations were typically endorsed by the Prime Minister and Cabinet. J.L. Richardson, "Australian Strategic and Defense Policies," in Gordon Greenwood and Norman Harper, eds., *Australia in World Affairs 1966-1970* (Vancouver: University of British Columbia Press, 1974), p. 267; Alan Reid, *The Gorton Experiment* (Sydney: Shakespeare Head Press, 1971), p. 191. On the Defence Committee, see T. B. Millar, *Australia's Defense* (New York: Melbourne University Press, 1965), p. 180.

<sup>6</sup> Australian Archives (ACT): A1209/80 58/5155; Memorandum by the Defence Committee, Nuclear Weapons for the Australian Forces, February 6, 1958, p. 3 (Top Secret - Guard).

<sup>7</sup> National Intelligence Estimate, NIE 20-58, The Outlook for Western Europe, July 29, 1958, in *Foreign Relations of the United States, 1958-1960* (hereafter, *FRUS, 1958-1960*), Volume VII, Part 1, Western European Integration and Security; Canada, (Washington: Government Printing Office, 1993), p. 63; and Editorial Note, in *FRUS, 1958-1960*, pp. 355-356.

<sup>8</sup> Leopoldo Nutti, "Italy and the Nuclear Choices of the Atlantic Alliance, 1955-63," in Beatrice Heuser and Robert O'Neill, eds., *Securing Peace in Europe 1945-62*, (New York: St. Martin's Press, 1992), pp. 230. More generally, see George-Henri Soutou, "Les Accords de 1957 et 1958: Vers une Communauté Stratégique et Nucleaire entre la France L'Allemagne et L'Italie?" in Maurice Vaisse, ed., *La France et L'Atome: Etudes d'Histoire Nucleaire* (Bruxelles: Bruylant, 1994), pp. 123-162.

<sup>9</sup> On Eisenhower's "new look," see, for example, Mark Trachtenberg, *History and Strategy* (Princeton: Princeton University Press, 1991), pp. 160-168. On the British strategy of emphasizing nuclear weapons, see Andrew J. Pierre, *Nuclear Politics: The British Experience with an Independent Nuclear Force, 1939-1970* (London: Oxford University Press, 1972), pp. 95-100.

<sup>10</sup> On the British nuclear tests in Australia, see Lorna Arnold, *A Very Special Relationship: British Atomic Weapon Trials in Australia* (London: HM Stationery Office, 1987); Brian Cathart, *Test of Greatness* (London: John Murray, 1994).

<sup>11</sup> See, for example, Australian Archives (ACT): A1209/23 57/4067, Draft Letter from the Ministry of Defence, to United Kingdom High Commissioner, Canberra, 1957 (Top Secret).

<sup>12</sup> Australian Archives (ACT): A1209/80 58/5155; Memorandum by the Defence Committee, Nuclear Weapons for the Australian Forces, February 6, 1958, p. 3 (Top Secret - Guard).

<sup>13</sup> The phrase "a nuclear weapons capability for Australian forces" is the title of the file folder series and the key word descriptor used

for most of the government's internal documents on this subject.

<sup>14</sup> Townley maintained that tactical nuclear weapons were needed for the RAAF's Canberra bombers because the Canberra had "limited conventional bomb carrying capacity and, therefore, limited hitting power. [...] Hence, if conventional bombs were used, a large number of Canberra sorties would be necessary." Australian Archives (ACT): A1945/13 186-5-3; Memo from Athol Townley, Minister for Air, to Philip McBride, Minister for Defence September 12, 1956, p. 1.

<sup>15</sup> Australian Archives (ACT): A1945/13 186-5-3; Memo from the Acting Secretary, to the Minister [of Defence], Undated, [1958], Not Submitted (Top Secret).

<sup>16</sup> Australian Archives (ACT): A1209/23, 57/4067; Procurement of Nuclear Weapons from the United States, Report by the Defence Committee, Defence Minute 233/1956, November 1956, pp. 2-3 (Top Secret).

<sup>17</sup> Interest in both the military and civilian applications of nuclear technology was first expressed by Dr. H. Evatt, Minister for External Affairs under the Chifley government. J. L. Symonds, *A History of British Atomic Tests in Australia* (Canberra: Australian Government Publications Service, 1985), p. 4. In 1954, the government asked the United States if Australia would be eligible to participate in the kind of "nuclear sharing" initiatives that were being discussed within NATO. Alice Cawte, *Atomic Australia: 1944-1990* (Kensington: New South Wales University Press, 1992), pp. 106-107. Army documents from that same year indicate that the Australian army was conducting defense planning on the assumption that it would, at some point, have its own nuclear weapons and would have to fight on a nuclear battlefield. See for example, Australian Archives (ACT): A6456/3 R79/1; The Australian Military Forces Minute Paper, AHQ Directive - Nuclear Warfare, 1954. In 1956, the Australian military went to their American counterparts for information regarding the use the atomic weapons by Australia's Avon Sabre aircraft. Australian Archives (ACT): A1945/13 186-5-3; Memo from Athol Townley, Minister for Air, to Philip McBride, Minister for Defence, September 12, 1956, p. 1.

<sup>18</sup> Australian Archives (ACT): A1209/23-57/4067; Letter from Sir Philip McBride, Defence Minister, to Prime Minister Menzies, Procurement of Nuclear Weapons for the Australian Forces, December 20, 1956 (Top Secret). Australian Archives (ACT): A1945/13 186-5-3; Letter from Mr. Casey, Minister for External Affairs to Sir Philip McBride, Minister for Defence, Procurement of Nuclear Weapons for the Australian Forces, February 21, 1957, p. 1 (Top Secret).

<sup>19</sup> Australian Archives (ACT): A1945/13,186-5-3; Extracts from Notes of Meeting in Cabinet Room at Parliament House, Canberra at 10:30 AM on Friday, March 15, 1957 (Top

Secret). The problem, Boyle explained, was Britain's limited supply of weapons.

<sup>20</sup> On Menzies famous phrase, see Alan Watt, *The Evolution of Australian Foreign Policy 1938-1965* (Cambridge: Cambridge University Press, 1967), pp. 168-169, 245; Desmond Ball and J. O. Langtry, "The Development of the Australian Defense Force," Desmond Ball, ed., *Strategy and Defense: Australian Essays* (London: George Allen & Unwin, 1982), p. 263.

<sup>21</sup> The Defence Department proposal to open talks with the High Commissioner for the Commonwealth languished in the Prime Minister's Department for eight months, from April 1957 to November 1957. Australian Archives (ACT): A1838/269, TS680/10/1; Memo from J. P. Quinn, External Affairs, to Mr. James Plimsoll, Assistant Secretary of External Affairs, Procurement of Nuclear Weapons for Australian Forces, December 20, 1957, p. 1.

<sup>22</sup> PRO: D0 35/8287; Cabinet: Prime Minister's Commonwealth Tour, Brief by the Commonwealth Relations Office, Supply of Kiloton Bombs to Australia, January/February 1958, GEN 622/1/60, December 18, 1957, p. 1.

<sup>23</sup> Australian Archives (ACT): A7942/1 N78-1; Memo from F. R. W. Scherger, Air Marshal, C. A. S., to Minister of Defence (Through Secretary), September 27, 1957, p. 1 (Top Secret).

<sup>24</sup> Australian Archives (ACT): A7942/1, N78-1; Letter from Air Chief Marshal Sir Dermot A. Boyle, Air Ministry, to Air Marshal F. R. W. Scherger, Chief of Air Staff, Royal Australian Air Force, September 10, 1957 (Top Secret).

<sup>25</sup> Australian Archives (ACT): A1945/13, 186-5-3; Memo from the Acting Secretary [Department of Defence], to Secretary of the Defence Committee, Procurement of Nuclear Weapons for Australian Forces, January 28, 1958 (Top Secret).

<sup>26</sup> Australian Archives (ACT): A1209/80, 58/5155; Minute by Defence Committee at Meeting Held on Thursday, 6th February, 1958, No. 18/1958, Nuclear Weapons for the Australian Forces - Plutonium Production in Australia, Agendum No. 16/1958 & Supps 1 & 2 (Top Secret).

<sup>27</sup> Australian Archives (ACT): A7942/1, N78-1; Meeting between Mr. Macmillan and Mr. Menzies at Parliament House, Canberra on 29th January, 1958, Supplementary record for strictly limited circulation, Nuclear Weapons (Top Secret).

<sup>28</sup> Under a "key of the cupboard" arrangement, Great Britain would draw on the American stockpile of atomic weapons as the situation required.

<sup>29</sup> Australian Archives (ACT): A7942/1, N78-1; Meeting between Mr. Macmillan and Mr. Menzies at Parliament House, Canberra on 29th January, 1958, Supplementary record for strictly limited circulation, Nuclear Weapons (Top Secret).

<sup>30</sup> Australian Archives (ACT): A1209/80, 58/

5155; Minute by Defence Committee at Meeting Held on Thursday, 6th February, 1958, No. 18/1958, Nuclear Weapons for the Australian Forces—Plutonium Production in Australia, Agendum No. 16/1958 & Supps 1 & 2 (Top Secret).

<sup>31</sup> Australian Archives (ACT): A1838/269 TS680-10-1; Memo from H. D. Anderson, Defence Liaison Branch to Mr. Heydon, External Affairs, Australian Development of Nuclear Weapons and Australian Access to Information on Nuclear Weapons, July 8, 1959, p. 1 (Top Secret).

<sup>32</sup> Australian Archives (ACT): A1945/13, 186-5-3; Minute Paper, Department of Defence, From the Secretary [Hicks] to the Minister, Overseas Visit by the Chief of the Air Staff - Discussions of Atomic Weapons, September 3, 1958 (Top Secret).

<sup>33</sup> Australian Archives (ACT): A1209/23, 57/4067; Department of Defence, Inwards Teletypewriter Message, from Hicks, Secretary of the Department of Defence, to Sir Allen Brown, Prime Minister's Department, Nuclear Weapons, September, 4, 1958, p. 1 (Top Secret and Personal).

<sup>34</sup> Australian Archives (ACT): A 7941/2, N15; Note by Defence Department, Question of Nuclear Capability for the Australian Forces, June 2, 1961, p. 1 (Top Secret).

<sup>35</sup> Australian Archives (ACT): A1838/269, TS680-10; Record of Discussions with Mr. Aubrey Jones, Minister of Supply in the United Kingdom Government, 13th August, 1958 (Top Secret).

<sup>36</sup> *Ibid.*

<sup>37</sup> *Ibid.*

<sup>38</sup> PRO: D0 35/8287; Chiefs of Staff Committee, Confidential Annex to C.O.S. (57)70th Meeting Held on Tuesday, September 10, 1957, p. 1 (Top Secret, Specially Restricted Circulation).

<sup>39</sup> PRO: D0 35/8287; Ministry of Defence, Supply of Nuclear Weapons to Australia, Record of a Meeting held November 18, 1957, p. 1 (Top Secret UK Eyes Only, 12/4/57).

<sup>40</sup> PRO: D0 35/8287; Cabinet: Prime Minister's Commonwealth Tour, Brief by the Commonwealth Relations Office, Supply of Kiloton Bombs to Australia, January/February 1958, GEN 622/1/60, December 18, 1957, p.1.

<sup>41</sup> PRO: D0 35/8287; Memo from CRO to N. Pritchard, [Deputy U. K. High Commissioner, Australia,] May 21, 1958 (s/o Top Secret).

<sup>42</sup> PRO: D0 35/8287; Draft Letter from the Secretary of State for Commonwealth Relations to Prime Minister Macmillan, [Undated] (Top Secret).

<sup>43</sup> PRO: D0 35/8287; Memo from Aubrey Jones, Minister of Supply to Prime Minister Macmillan, September 10, 1958 (Top Secret).

<sup>44</sup> PRO: D0 35/8287; Inward Telegram to Commonwealth Relations Office, from [Brian] Humphrey-Davies, [Air Ministry], to [L. J.] Dunnet, [Deputy Secretary of the Ministry of Supply], No. 713, August 14, 1958, pp. 1-2 (Top Secret).

<sup>45</sup> *Ibid.*, p. 1.

<sup>46</sup> *Ibid.*

<sup>47</sup> Australian Archives (ACT): A 18338/269, TS680-10-1; Memorandum from H. D. Anderson, External Affairs, to Mr. Heydon, Australian Development of Nuclear Weapons and Australian Access to Information on Nuclear Weapons, 8th July, 1959, p. 2 (Top Secret).

<sup>48</sup> Australian Archives (ACT): A1209/23, 57/4067; Letter from Prime Minister Menzies to Prime Minister Macmillan, September 4, 1958.

<sup>49</sup> See, for example, Australian Archives (ACT): A1945/13 186-5-3; Memo from F. M. Osborne, Minister of Air, to P. McBride, Minister for Defence, US and UK Arms Relations with Australia, August 26, 1958, p. 1.

<sup>50</sup> PRO: D0 35/8287; Note of Conversation between Air Marshal Sir Geoffrey Tuttle and Air Marshal Scherger, [1957], pp. 1-2 (Top Secret).

<sup>51</sup> Australian Archives (ACT): A 7941/2, N15; Note by Defence Department, Question of Nuclear Capability for the Australian Forces, June 2, 1961, p. 4 (Top Secret). See also Australian Archives (ACT): TS680-10-1; Australian Archives (ACT): A 18338/269; Memorandum from H. D. Anderson, External Affairs, to Mr. Heydon, Australian Development of Nuclear Weapons and Australian Access to Information on Nuclear Weapons, 8th July, 1959 (Top Secret).

<sup>52</sup> Australian Archives (ACT): A 7941/2, N15; Note by Defence Department, Question of Nuclear Capability for the Australian Forces, June 2, 1961, pp. 2-3 (Top Secret).

<sup>53</sup> PRO: DO 35/8288; Inward Telegram to Commonwealth Relations Office, No. 621, 13th August, 1959 (Secret).

<sup>54</sup> In 1956, the RAAF approached the US air force for information regarding the use of tactical nuclear weapons with the Avon Sabre aircraft. The USAF declined to respond, but about a year later, the Americans did agree to study the nuclear potential of the Sabre and Canberra bomber. Australian Archives (ACT): A1945/13 186-5-3; Memo from Athol Townley, Minister for Air, to Philip McBride, Minister for Defence, September 12, 1956, p. 1. On the American study, see Cawte, *Atomic Australia*, p. 108. On the V bombers, see Pierre, *Nuclear Politics: The British Experience with an Independent Nuclear Force, 1939-1970*, pp. 148-157.

<sup>55</sup> PRO: D0 35/8287; Chiefs of Staff Committee, Confidential Annex to C.O.S. (58) 4th Meeting Held on Monday, January, 13, 1958 (Top Secret).

<sup>56</sup> PRO: D0 35/8287; Memo from F. R. Carey, UK Joint Service Liaison Staff, to William S. Bates, Office of High Commissioner for the United Kingdom, Canberra, October 31, 1958, p. 2; Cawte, *Atomic Australia*, p. 108.

<sup>57</sup> PRO: D0 35/8287; Memo from Clark, CRO, to William S. Bates, Office of High Commissioner for the United Kingdom, Canberra, January 8, 1959.

<sup>58</sup> PRO: DO 35/8288; Committee Minutes,

Ministry of Defence, Co-operation with Australia in the Development of New Weapons, (S.E. (0)C / P(60)25) July 19, 1960, pp. 1, 5 (Secret).

<sup>59</sup> PRO: DO 35/8287; Memo from N. Pritchard, [Acting Deputy Under-Secretary of State, CRO], to the Secretary of State for Commonwealth Relations, July 20, 1961. pp. 1-2.

<sup>60</sup> Peter Howson, *The Howson Diaries: The Life of Politics*, Don Aitkin, ed. (Ringwood, Victoria: Viking Press, 1984), p. 386. Beale is more oblique in his explanation for the F-111 purchase, but a reader familiar with Beale's efforts to procure nuclear weapons can decipher his meaning. Beale, *This Inch of Time: Memoirs of Politics and Diplomacy*, pp. 170-176. By choosing the F-111 over the TSR-2, Australia hoped to avoid potential technical and cost problems, but the F-111 turned out to be a huge political headache. The F-111's developed their own technical problems, which led to delays, rising costs, and embarrassment for a number of ministers. In the end, Australia got the planes, but the experience was widely perceived as an object lesson in how not to procure foreign defense technology. On the F-111 saga, see also Gregory Pemberton, *All the Way: Australia's Road to Vietnam* (Sydney: Allen & Unwin, 1987), pp. 207-208; Reid, *The Gorton Experiment*, pp. 283-285; Craig Skehan, "Strike Bombers Lacked Hitting Power," *Sydney Morning Herald*, January 1, 1997 (<http://www.smh.com.au/index.html>).

<sup>61</sup> PRO: DO 35/8288; Draft Minute from Secretary of State to Prime Minister, March 21, 1960; PRO: DO 35/8288, Outward Telegram from Commonwealth Relations Office, Canberra, No. 471, March 30, 1960 (Top Secret).

<sup>62</sup> PRO: DO 35/8288; Outward Telegram from Commonwealth Relations Office to Canberra, No. 415, March 15, 1960 (Top Secret).

<sup>63</sup> PRO: DO 35/8288; Memorandum from N. Pritchard, [Deputy U.K. High Commissioner Australia] to T. W. Keeble, [Head of Defence and Western Department, CRO], Bloodhound, June 9, 1960, p. 2; PRO: DO 35/8288; Inward Telegram to Commonwealth Relations Office, No. 601, August 5, 1959, pp. 1-2; PRO: DO 35/8288; Inward Telegram to Commonwealth Relations Office, No. 621, August 13, 1959 (Secret).

<sup>64</sup> The British feared that the broader perception would be that the Australians had declined to purchase Bloodhound because they had inside knowledge of the missile's shortcomings.

<sup>65</sup> PRO: DO 35/8288; Brief for Minister of State, Defence Committee Meeting, March 9, 1960, D. (60)(9), Anti-aircraft Missiles, p. 1 (Top Secret). PRO: DO 35/8288; Memo from N. Pritchard, [Deputy U. K. High Commissioner, Australia], to S. Scott Hall, Head of UKMOAS, January 12, 1960, p. 1 (Secret).

<sup>66</sup> PRO: DO 35/8288; Incoming Telegram, No. 357, April 1, 1960 (Top Secret); PRO: DO 35/8288; Memorandum from N. Pritchard, [Deputy U.K. High Commissioner, Australia],

to T. W. Keeble, [Head of Defence and Western Department, CRO], Bloodhound, June 9, 1960, p. 2.

<sup>67</sup> Memo from N. Pritchard, [Deputy U. K. High Commissioner, Australia], to S. Scott Hall, Head of UKMOAS, January 12, 1960, p. 1 (Secret).

<sup>68</sup> PRO: DO 35/8288; Committee Minutes, Ministry of Defence, Co-operation with Australia in the Development of New Weapons, (S.E. (0)C / P(60)25), July 19, 1960, p. 3 (Secret). On the proposal from the CRO, see PRO: DO 35/8288; Inward Telegram to Commonwealth Relations Office, No. 621, August 13, 1959 (Secret).

<sup>69</sup> In 1961, Sir Ernest Titterton, visited London on behalf of the Ministry of Supply. The purpose of the visit was, in part, to jump-start British-Australian cooperation on nuclear weapons. Titterton first met with Roger Makins, the head of the United Kingdom Atomic Energy Authority. According to Makins, Titterton had been "asked by the Australian minister of Supply, Mr. Hulme, and by Mr. Knott, the Permanent Secretary at the Ministry of supply" to explore the issue of military nuclear cooperation. Titterton told Makins that "Depending on the advice Professor Titterton received, Mr. Hulme might or might not raise matters with Mr. Townley, the minister of Defence, and Sir Leslie Martin, the Chairman of the Australian Defence Policy Committee." Titterton speculated, however, that the minister of Supply "feels so strongly about the matter he that he might in any case see Mr. Menzies and urge that the U.K. should be approached." Titterton also cited "...high ranking Australian service officers, and Defence officials [who] were extremely restless about their defence position." The Australian emissary then put the matter directly to Makins: "Would the United Kingdom react favourably to an official but strictly confidential approach from Australia requesting information about U.K. nuclear weapons, to enable Australia to make certain military studies? Any information given would be kept to a very small committee of four or five people." PRO: DO 164/17; Memo from Roger Makins, Chair of the UKAEA, to [E. W.] Playfair, [Permanent Secretary, Ministry of Defence], July 19, 1961, p. 1. One day after Titterton met with Makins, the CRO reported that the Ministry of Defence received a letter requesting for information about nuclear weapons. It is unclear whether the letter came from Titterton and the Department of Supply or from another quarter within the Australian government. PRO: DO 164/17; Memo from N. Pritchard, [Acting Deputy Under-Secretary of State], CRO, to the Secretary of State for Commonwealth Relations, July 20, 1961. pp. 1-2.

<sup>70</sup> Australian Archives (ACT): A5818/2; Robert Menzies to the Cabinet, Nuclear Tests Conference: Control Posts in Australia, Submission No. 1156, V6, pp. 1-6 (Secret).

<sup>71</sup> Australian Archives (ACT): A5818/2; Robert Menzies to the Cabinet, Nuclear Tests Conference: Control Posts in Australia, Submission No. 1156, V6, p. 13 (Secret).

<sup>72</sup> Australian Archives (ACT): A5818/2; Cabinet Minute, Canberra, June 13, 1961, Decision No. 1383, Submission No. 1156, Nuclear Tests Conference: Control Posts in Australia, V6 (Secret).

<sup>73</sup> Australian Archives (ACT): A1838/269, TS852/10/4/2/3; Letter from Prime Minister Menzies to Prime Minister Macmillan, June 29, 1961, p. 2 (Secret).

<sup>74</sup> PRO: DO 164/17; Letter from Prime Minister Harold Macmillan to Prime Minister Robert Menzies, August 14, 1961.

<sup>75</sup> For example, see PRO: DO 164/17; Memo from the Secretary of State for Foreign Affairs to Prime Minister Harold Macmillan, [August 1961], pp. 1-2.

<sup>76</sup> Robert Gilpin, *American Scientists and Nuclear Weapons Policy* (Princeton: Princeton University Press, 1962), p. 253.

<sup>77</sup> Australian Archives (ACT): A1838/269, TS852/10/4/2/3; Cablegram for Despatch to AUSEMBA Washington, Department of External Affairs, For Ambassador from Minister, August 30, 1961 (Top Secret, Guard).

<sup>78</sup> PRO: DO 164/17; Inward Telegram to Commonwealth Relations Office from Canberra, No. 808, September 6, 1961 (Top Secret).

<sup>79</sup> T. B. Millar, "Australia: Recent Ratification," in Robert Lawrence and Joel Larus, eds., *Nuclear Proliferation: Phase II* (Wichita: University Press of Kansas, 1974), p. 72.

<sup>80</sup> On Australia's fear of China, see Alan Watt, *The Evolution of Australian Foreign Policy, 1938-1965* (Cambridge: Cambridge University Press, 1967), pp. 247-248; Gregory Clark, *In Fear of China* (London: Barrie & Rockliff, The Crest Press, 1967), p. 161-206, Alan Dupont, *Australia's Threat Perceptions: A Search for Security* (Canberra: Strategic and Defense Studies Center, Research School of Pacific Studies, The Australian National University, 1991), pp. 58-59. At the United Nations, Sir James Plimsoll explained Australia's reservations about a nonproliferation treaty by noting that "The authorities in Peking show no repugnance for nuclear war and, in fact flaunt before other countries of the region the willingness to contemplate nuclear war." Sir James Plimsoll, First Committee of the UNGA on March 25, 1965; *Current Notes on International Affairs* 36 (October 1965), p. 636.

<sup>81</sup> On the impact of the U.K. withdrawal, see T.B. Millar, ed., *Britain's Withdrawal from Asia: It's Implications for Australia*, Proceedings of a Seminar conducted by the Strategic and Defense Studies Centre 29-30 September 1967 (Canberra: The Australian National University, 1967).

<sup>82</sup> Australia's military was also concerned, especially during the first half of the 1960s, with a potential threat from Indonesia. The Sukarno government, before it was toppled in 1965, was perceived as erratic, anti-imperialist (i.e., anti-British), and anti-status quo. It declared

itself in "confrontation" with Britain over the federation of Malaysia, and also claimed that it would soon possess nuclear weapons. Moreover, with the "liberation" and absorption of West Irian, Indonesia now shared a land border with Australian territory.

<sup>83</sup> Hedley Bull, "Australia and the Great Powers in Asia," in Gordon Greenwood and Norman Harper, eds., *Australia in World Affairs 1966-1970* (Vancouver: University of British Columbia Press, 1974), p. 348.

<sup>84</sup> Scope Paper, Visit of John Gorton, Prime Minister of Australia, April 1, 1969, pp. 2, 4, attached to Memorandum for Mr. Henry Kissinger, the White House, Subject: Preparatory Meeting for the Visit of Prime Minister Gorton of Australia, March 14, 1969, Department of State Central Files, 1967-1969, Folder Pol 7, 3/1/69, Australia, Box 1842, U.S. National Archives.

<sup>85</sup> Gorton's pro-nuclear views found strong support among young and conservative members of the Liberal Party and with the Democratic Labor Party (DLP), a junior member of the Liberal-Country Party coalition. On the DLP—its views and influence—Lt. Col. F.L. Skinner, "An Alternative Defense and Foreign Policy," in Max Teichmann, ed., *Aspects of Australia's Defense* (Melbourne: The Political Studies Association, Monash University, 1966); Reid, *The Gorton Experiment*, pp. 140-150, 300-332; T. B. Millar, *Australian Foreign Policy* (Angus and Robertson, 1968), pp. 28-29.

<sup>86</sup> On the "bomb lobby," see S. Encel and Allan McKnight, "Bombs, Power Stations, and Proliferation," *Australian Quarterly* 42 (March 1970), p. 15; and Ball, "Australia and Nuclear Policy," p. 321. On nuclear policy as a fight between ministries, see for example, Millar, "Australia: Recent Ratification," p. 78; *Sydney Morning Herald*, February 28, 1970, p. 5; Jonathan Gaul, "Politics," *Canberra Times*, March 4, 1969, p. 2.

<sup>87</sup> For a history of the AAEC, see A. M. Moyal, "The Australian Atomic Energy Commission: A Case Study in Australian Science and Government," *Search* 6, (September 1975), pp. 365-383, Cawte, *Atomic Australia*; Michael Carr, "Australia and the Nuclear Question: A Survey of Government Attitudes, 1945-1975," Master's thesis, University of New South Wales, 1979, p. 110.

<sup>88</sup> Alan Wood, "Nuclear Differences in Canberra," *Australian Financial Review*, July 15, 1969, pp. 1, 4.

<sup>89</sup> For a thorough, if decidedly partisan, review of Baxter's statements, see Brian Martin, *Nuclear Knights* (Fyshwick: Union Offset Co., 1980). For an example of his views on nuclear weapons, see Robert Mundle, "We Must Have Best Weapons, Says Atom Chairman," *Australian*, March 20, 1968, p. 3.

<sup>90</sup> On the "coincidence of desires," see *Australian Financial Review*, May 14, 1967, p. 6 and Robert Sorby, "Jervis Bay's A-Day Deferred Again," *Australian Financial Review*, June 23,

1972.

<sup>91</sup> George Quester, *Politics of Nuclear Proliferation* (Baltimore: Johns Hopkins University Press, 1973), p. 164.

<sup>92</sup> Howson, *The Howson Diaries...*, pp. 181-183.

<sup>93</sup> Australian Archives (ACT): A5818/2; Robert Menzies to the Cabinet, Nuclear Tests Conference: Control Posts in Australia, Submission No. 1156, V6, pp. 7-8 (Secret).

<sup>94</sup> Archives of the Department of Foreign Affairs and Trade: Unregistered document; Paper by Department of Supply and A.A.E.C., Costs of a Nuclear Explosives Programme, p. 3 (Top Secret).

<sup>95</sup> Carr, "Australia and the Nuclear Question: A Survey of Government Attitudes, 1945-1975."

<sup>96</sup> "A-Bomb Option Was Prized by Canberra," *Daily Telegraph*, January 1, 1997, p. 16. I am indebted to John Simpson for providing me with the articles related to this episode.

<sup>97</sup> Don Greenless, "Options Stay Open on Nuclear Arsenal," *Australian*, January 1, 1997.

<sup>98</sup> "A-Bomb Option Was Prized by Canberra," *Daily Telegraph*, January 1, 1997, p. 16.

<sup>99</sup> Australian archival documents quoted in Don Greenless, "Options Stay Open on Nuclear Arsenal," *Australian*, January 1, 1997.

<sup>100</sup> Don Greenless, "Options Stay Open on Nuclear Arsenal," *Australian*, January 1, 1997.

<sup>101</sup> Ian Henderson, "Weapons a Sub-Plot in Nuclear Power Plant Story," *Australian*, January 1, 1997.

<sup>102</sup> Glenn T. Seaborg, *Stemming the Tide* (Lexington, MA: Lexington, 1987), p. 252.

<sup>103</sup> Commonwealth Parliamentary Debates, HR, Vol. 54, April 13, 1967, p. 1214. One newspaper commented that the "Federal Cabinet appears to have decided in principle that Australia should edge its way into the world nuclear club, or at least insure that it is not going to be relegated to minor power status in this part of the world if Japan and India seek admission to the club. ...This is the only rational conclusion to be drawn from the remarkable statements in parliament this week by the Minister for National Development, Mr. David Fairbairn." *Australia Financial Review*, April 14, 1967, p. 6. See also *Canberra Times*, July 14, 1969, p. 9.

<sup>104</sup> Archives of the Department of Foreign Affairs and Trade: Unregistered document; Report by the Joint Planning Committee at Meetings Concluding 2nd February, 1968, Department of Defence File No. 67/1017, Report No. 8/1968, An Independent Australian Nuclear Capability - Strategic Considerations, p. 1 (Top Secret AUSTEO).

<sup>105</sup> On Gorton's interest in nuclear weapons, see Alan Trengove, *John Grey Gorton, an Informal Biography* (North Melbourne: Cassel Australia LTD, 1969), pp. 204, 210; Cawte, *Atomic Australia*, p. 116.

<sup>106</sup> Desmond Crowley, ed., "On the Nuclear Threshold," *Current Affairs Bulletin*, 45, December 15, 1969, p. 24.

<sup>107</sup> Archives of the Department of Foreign Affairs and Trade: Unregistered document; Defence Committee, Agendum No. 9/1968, Non-Proliferation Treaty, G. L. Prentiss, Secretary Defence Committee, March 18, 1968 (Top Secret).

<sup>108</sup> Archives of the Department of Foreign Affairs and Trade: Unregistered document; Report by the Joint Planning Committee at Meetings Concluding 2nd February, 1968, Department of Defence File No. 67/1017, Report No. 8/1968, An Independent Australian Nuclear Capability - Strategic Considerations, Annex, p. 21 (Top Secret AUSTEO).

<sup>109</sup> Archives of the Department of Foreign Affairs and Trade: Unregistered document; Consolidated paper prepared for the Defence Committee, Non-Proliferation Treaty, March 1968, p. 35 (Top Secret), attached to Defence Committee Agendum No. 9/1968, Non-Proliferation Treaty, G. L. Prentiss, Secretary Defence Committee, March 18, 1968 (Top Secret).

<sup>110</sup> Archives of the Department of Foreign Affairs and Trade: Unregistered document; Memo from James Plimsoll to Minister of External Affairs, Non-Proliferation Treaty, 21 March 1968, [cover page] (Top Secret).

<sup>111</sup> The U.S. Arms Control and Disarmament Agency During the Johnson Administration (U), Volume I, Summary and Analysis of Principal Developments, [1968], pp. 90-91, Administrative History of U.S. ACDA, Box 1-2, Lyndon Baines Johnson Presidential Library.

<sup>112</sup> *The Bulletin* (Sydney), August 2, 1969, p. 23; "About Turn, Nuclear Quick March," *The Bulletin* (Sydney), February 28, 1970, pp. 21-22.

<sup>113</sup> Ian Fitchett, "Government Split on Signing of Nuclear Agreement," *Sydney Morning Herald*, March 3, 1969 p.1; Jonathan Gaul, "Australia Holds Back on Nuclear Treaty," *Canberra Times*, March 4, 1969, p. 2; *The Bulletin* (Sydney), "Australia (At Last) Goes Nuclear," August 2, 1969, p. 23.

<sup>114</sup> On the Jervis Bay reactor, see Jonathan Gaul, "Cabinet Considers \$100m Nuclear Station," *Canberra Times*, October 12, 1968, p. 1. Several people have contended that interest in the reactor was motivated, in large measure, because of the desire to develop a nuclear weapons option. Carr, "Australia and the Nuclear Question: A Survey of Government Attitudes, 1945-1975," p. 128; Encel and McKnight, "Bombs, Power Stations, and Proliferation," p. 16; Ian Bellany, *Australia in the Nuclear Age: National Defense and National Development*, (Sydney: Sydney University Press, 1972), pp. 81-82, 110. One newspaper maintained that "Defence was, in fact, the basic justification for the project at the time, and received Cabinet support for this reason." Robert Sorby, "Jervis Bay's A-Day Deferred Again," *Australian Financial Review*, June 23, 1972, p. 1. The Minister of Defence declared in 1968, for example, that he was "interested in the possibilities of atomic reactors to provide [energy

and]...fissionable products on which the future security of this country might depend." Jonathan Gaul, "Cabinet Considers \$100m Nuclear Station," *Canberra Times*, October 12, 1968, p. 1.

<sup>115</sup> On the desire for an independent fuel cycle, see Alan Wood, "Nuclear Differences in Canberra," *Australian Financial Review*, July 15, 1969, pp. 1, 4; Alan Wood, *Australian Financial Review*, July 18, 1969, p. 21. On the link between an interest in an independent fuel cycle and an interest in nuclear weapons, see Michael Symons, "Who Will Get our Nuclear Contract?" *Sydney Morning Herald*, January 2, 1970, p. 2; "Atom Body 'Pressure' Allegation," *Sydney Morning Herald*, July 16, 1969, p. 10. Arguing that natural uranium reactors were obviously uneconomical compared with the alternative reactor types, Richardson maintained that "There is little room for doubt that the real reasoning behind the demand for natural uranium reactors is not economic, but the unstated desire for a 'bomb option.'" J. L. Richardson, "Nuclear Follies," *Quadrant* 13 (May-June 1969), pp. 69-70.

<sup>116</sup> The *Sydney Morning Herald* reported that the agreement covered cooperation in the field of fast breeder reactors, and interpreted the move as an effort by the government to secure access to nuclear technology in the event that it did not sign the NPT. "France-Australia in Nuclear Energy Pact," *Sydney Morning Herald*, June 18, 1969, p. 5. Alan McKnight, a former Assistant Secretary of the Department of the Prime Minister and Executive Member of the AAEC (1958-1964) (and a Baxter critic) later speculated that "in the absence of other evidence, it is probable that the explanation [for the agreement] lies in the continuing desire of the present Australian Government to manufacture nuclear weapons and the willingness of the French to connive at this." Carr, "Australia and the Nuclear Question: A Survey of Government Attitudes, 1945-1975," p. 169.

<sup>117</sup> In February of 1969, the United States and Australia announced a joint program to study the feasibility of using peaceful nuclear explosives for the construction of a harbor at Cape Keraudren. The project was initiated by the United States, but American documents suggest that interest in Keraudren was not one-sided. Background paper, Peaceful Nuclear Explosion Projects, Attachment to Memo for Mr. Henry Kissinger, The White House, May 1, 1969, p. 2 (Secret/Exdis), p. 3, Department of State Central Files, 1967-1969, Folder Pol 7, 5/1/69, Australia, Box 1842, U.S. National Archives. See also Memo from Clay T. Whitehead to Richard L. Sneider, [NSC], May 5, 1969, Nixon White House Central Files, CO 10, Folder: Ex CO 10, Australia, Begin 5/6/69, Box 10, U.S. National Archives. Interest in peaceful nuclear explosions may have reflected a desire to acquire a nuclear weapons capability. The head of the AAEC, himself, pointed out the connection: "Nuclear

explosives...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." *Australian*, July 14, 1969, p. 3.

<sup>118</sup> On the government's objections to the NPT as a cover for its nuclear ambitions, see Bull, "In Support of the Non-Proliferation Treaty," p. 27; Richardson, "Australian Strategic and Defense Policies," pp. 251-252; Bellany, *Australia in the Nuclear Age: National Defense and National Development*, p. 109; David Solomon, "N-treaty: Now Is the Time to Sign," *Australian*, February 10, 1970, p. 9. Skeptics pointed out that Australia's objections concerning, for example, the threat of industrial seemed especially strange from a country that did not possess a single power reactor. On the suspicion stemming from Australia's multiple nuclear initiatives, see "Heading for the Bomb?" *Nation*, July 12, 1969, pp. 12-14; S. Encel, "To Sign or Not to Sign," *Australian*, July 17, 1969, p. 11; A. L. Burns, "Australia and the Nuclear Balance," in H. G. Gelber, ed., *Problems of Australian Defense* (Melbourne: Oxford University Press, 1970), p. 146.

<sup>119</sup> Bull, "Australia and the Nuclear Problem: Some Concluding Comments," p. 139; Burns, "Australia and the Nuclear Balance," p. 147; Desmond Ball, "Australia and Nuclear Policy," in Desmond Ball, ed., *Strategy and Defense: Australian Essays* (London: George Allen & Unwin, 1982), p. 321.

<sup>120</sup> Geoffrey Hutton, "Nuclear Pact's Odd Man Out," *The Age*, February 13, 1970, p. 2.

<sup>121</sup> *Current Notes on International Affairs* 41, (February 1970), pp. 70-72.

<sup>122</sup> Stan Hutchinson, "Australia to Sign Atom Pact," *Sydney Morning Herald*, February 19, 1970, pp. 1, 6.

<sup>123</sup> *Ibid.*

<sup>124</sup> W. J. Hudson, "The United Nations," in Gordon Greenwood and Norman Harper, eds., *Australia in World Affairs 1966-1970* (Vancouver: University of British Columbia Press, 1974), p. 212.

<sup>125</sup> Crowley, ed., "On the Nuclear Threshold," p. 21; Millar, "Australia: Recent Ratification," p. 75; Allan Barnes, "Scientists Had a Change of Heart," *The Age*, February 23, 1970, p. 7; Bennetts, "Australia to Sign Nuclear Treaty," *Canberra Times*, February 19, 1970, p. 1; *The Bulletin* (Sydney), June 29, 1968, p. 18; Alan Wood, *Australian Financial Review*, January 24, 1969, pp. 1, 7.

<sup>126</sup> Allan Barnes, "Scientists Had a Change of Heart," *The Age*, February 23, 1970, p. 7; Carr, "Australia and the Nuclear Question: A Survey of Government Attitudes, 1945-1975," p. 143; "Signing the Treaty," *Sydney Morning Herald*, February 20, 1970, p. 2; "About Turn, Nuclear Quick March," *The Bulletin* (Sydney), February 28, 1970, pp. 21-22; Richardson, "Australian Strategic and Defense Policies," p. 251. Some members of the Commission, or lower level scientists may have shifted posi-

tions, but Baxter, the predominant force at the AAEC continued to oppose the NPT, and maintained this position even after resigning from the Commission in 1972. See Martin, *Nuclear Knights*, p. 50, which cites Baxter's opposition to the NPT as late as 1976. Quester reports that the AAEC remained opposed to the Treaty even as it was ratified by a Labor government in 1973. See Quester, *Politics of Nuclear Proliferation*, p. 165.

<sup>127</sup> Cawte, *Atomic Australia*, p. 128.

<sup>128</sup> Stan Hutchinson, "Australia to Sign Atom Treaty," *Sydney Morning Herald*, February 19, 1970, p. 1; Robert Howard, "Foreign Policy Review," *Australian Quarterly* 42 (September 1970), pp. 115. These four signatures came after Gorton's October election speech opposing the NPT but before the Australian announcement.

<sup>129</sup> *Sydney Morning Herald*, May 12, 1969, p. 2; Crowley, ed., "On the Nuclear Threshold," p. 30. West Germany's signature came after a change in government following elections in 1969. Crowley, ed., "On the Nuclear Threshold," p. 24.

<sup>130</sup> Geoffrey Hutton, "Nuclear Pact's Odd Man Out," *The Age*, February 13, 1970, p. 2; "About Turn, Nuclear Quick March," *The Bulletin* (Sydney), February 28, 1970, pp. 21-22; Baxter, in an interview with Carr, says as much: "the fear of conspicuous isolation was the factor which most prompted the interdepartmental committee to eventually recommend signature." Carr, "Australia and the Nuclear Question: A Survey of Government Attitudes, 1945-1975," p. 140.

<sup>131</sup> John Bennetts, "Australia to Sign Nuclear Treaty," *Canberra Times*, February 19, 1970, p. 1; *Current Notes on International Affairs*, 41, (February 1970), pp. 70-72.

<sup>132</sup> This changed with the Vienna Convention.

<sup>133</sup> One interesting aspect of the NPT episode is the role of "deadlines," which focus the policy process and push political leaders towards decisions. In 1957, Macmillan's impending visit to Australia created an artificial deadline, the consequence of which was a decision to have Menzies raise the issue of nuclear weapons procurement. In 1970, the imminent entry into force of the NPT created another artificial deadline that forced a governmental response. Indeed, the newspapers of the day as well as Treaty advocates explicitly talked about "the coming deadline" and the need for Gorton to take action. See, for example, Geoffrey Hutton, "Nuclear Pact's Odd Man Out," *The Age*, February 13, 1970, p. 2; David Solomon, "N-treaty: Now Is the Time to Sign," *The Australian*, February 10, 1970, p. 9; "Treaty Signature Now Urgent Issue," *Canberra Times*, February 9, 1970, p. 3.

<sup>134</sup> Cawte, *Atomic Australia*, p. 129. The government had previously considered the sign-and-pursue-the-bomb strategy, but rightly feared that signing might be the first step on a slippery slope. According to one newspaper,

"Some of the Government's advisers believe that this would give us sufficient protection so that we could sign the treaty and retain our option. But the majority believe that to sign the treaty would certainly make this more difficult." *Sydney Morning Herald*, May 12, 1969, p. 2. Australia's interest in the sign-and-pursue option is reflected in the government's focus on the meaning of the word "manufacture." On this point, External Affairs argued that it was "... possible for a non-nuclear signatory of the treaty to carry its nuclear technology to the brink of making a nuclear explosive device" and still not contravene the Treaty. Archives of the Department of Foreign Affairs and Trade: Unregistered document; Memo from M.R. Booker, First Assistant Secretary, Division II, External Affairs, to the Minister for External Affairs, Draft Treaty on the Non-Proliferation of Nuclear Weapons, March 7, 1968, pp. 2-3 (Secret).

<sup>135</sup> On Gorton's disinterest in ratification, see John Bennetts, "Australia to Sign Nuclear Treaty," *Canberra Times*, February 19, 1970, p. 1.

<sup>136</sup> Letter to the editor from William McMahon, *Sydney Morning Herald*, September 3, 1975, p. 6.

<sup>137</sup> On McMahon's opposition to Gorton nuclear initiatives, see Ball, "Australia and Nuclear Policy," p. 322.

<sup>138</sup> On Labor's support of NPT, see *Sydney Morning Herald*, March 11, 1969, p. 12; Ball, "Australia and Nuclear Policy," p. 322.

<sup>139</sup> Millar described the NPT decision as largely ideological. Millar, "Australia: Recent Ratification," p. 81.

<sup>140</sup> Draft Cabinet Submission from Paul Hasluck, Minister of External Affairs, Draft Treaty on the Non-Proliferation of Nuclear Weapons, February 19, 1968, Attachment to memorandum from M. R. Booker, First Assistant Secretary, Div II, External Affairs, to Paul Hasluck, Minister of External Affairs, Non-Proliferation of Nuclear Weapons, 919/10/5, February 21, 1968, p. 13 (Top Secret).

<sup>141</sup> Henry Albinski, *Australian External Policy under Labor* (St. Lucia: Queensland Ress, 1977), p. 251, footnote 71.

<sup>142</sup> In 1984, the issue was raised by Labor Foreign Minister Bill Hayden. See Bill Hayden, *Hayden, An Autobiography* (Sydney: Angus and Robertson, 1996), pp. 422-423.

<sup>143</sup> Australia did, however, embark on an aggressive uranium export program. See for example, Richard Leaver, *Australian Uranium Policy and Non-Proliferation*, *Australian National University Peace Research Centre*, Working Paper #45 (Canberra: Australian National University, 1988); Russell Trood, "Australian Uranium Exports: Nuclear Issues and the Policy Process," in Boardman, Robert, and James Keeley, eds., *Nuclear Exports and World Politics: Policy and Regimes* (New York: St. Martin's Press, 1983); Cawte, *Atomic Australia*, pp. 135-170.

<sup>144</sup> For a review of motivational and capability

explanations, see Stephen M. Meyer, *The Dynamics of Nuclear Nonproliferation* (Chicago: University of Chicago, 1984); Stephen M. Meyer, "A Statistical Risk Model for Forecasting the Proliferation of Nuclear Weapons," in Dagobert L. Brito *et al.*, eds., *Strategies for Managing Nuclear Proliferation* (Lexington, MA: Lexington Books, 1983), pp. 225-226; William C. Potter, *Nuclear Power and Nonproliferation* (Cambridge, MA: Oelgeschlager, Gunn & Hain, 1982), pp. 131-144; Peter Lavoy, "Nuclear Myths and the Causes of Nuclear Proliferation," in Zachary S. Davis and Benjamin Frankel, eds., *The Proliferation Puzzle: Why Nuclear Weapons Spread (and What Results)* (London: Frank Cass, 1993), pp. 193-199.

<sup>145</sup> On security threats, in particular, as a cause of proliferation see, Scott Sagan, "Why Do States Build Nuclear Weapons? Three Models in Search of a Bomb," *International Security* 21 (Winter 1996-1997), pp. 54-63; Michael M. May, "Nuclear Weapons Supply and Demand," *American Scientist* 82 (November-December 1994), pp. 526-537; Benjamin Frankel, "The Brooding Shadow: Systemic Incentives and Nuclear Weapons Proliferation," in Davis and Frankel, eds., *The Proliferation Puzzle...*, pp. 37-78; Bradley A. Thayer, "The Causes of Nuclear Proliferation and the Nonproliferation Regime," *Security Studies* 4 (Spring 1995), pp. 463-519. Thayer asserts that "security is the only necessary and sufficient cause of nuclear proliferation" (p. 486).

<sup>146</sup> Studies of nuclear proliferation that have mentioned the potential contribution of bureaucratic politics include Richard Rosecrance, "International Stability and Nuclear Diffusion," in Richard Rosecrance, ed., *The Dispersion of Nuclear Weapons* (New York: Columbia Press, 1964); Richard K. Betts, "Incentives for Nuclear Weapons," in Joseph A. Yager, ed., *Nonproliferation and U.S. Foreign Policy* (Washington: Brookings Institution, 1980), pp. 135-144; Potter, *Nuclear Power and Nonproliferation*, p. 143. More recently, scholars have combined bureaucratic politics with historical sociology. See for example, Steven Flank, "Nonproliferation Policy: A Quintet for Two Violas?" *The Nonproliferation Review* 1 (Spring-Summer 1994); Steven Flank, "Exploding the Black Box: The Historical Sociology of Nuclear Proliferation," *Security Studies* 3 (Winter 1993-1994). See also Tanya Ogilvie-White, "Is There A Theory of Nuclear Proliferation? An Analysis of the Contemporary Debate," *The Nonproliferation Review* 4 (Fall 1996).

<sup>147</sup> One of the few Americans to discuss Australia is Quester, *Politics of Nuclear Proliferation*, pp. 159-166.

<sup>148</sup> I am indebted to Michael Barletta for first suggesting this idea to me.