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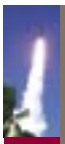

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Australia and Ballistic Missile Defence:
Our policy choices

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By Dr Richard Brabin-Smith, AO

What's this all about?

Whether we like it or not, there are high levels of commitment in the US, by both the Republican and Democrat parties, to develop defences against attack by ballistic missiles. What are the policy issues that this raises for Australia? What are the matters of principle and the practical policy choices? What is the priority for Australia to acquire its own capability against the risk of attack by ballistic missiles?

What's driving the US?

Concerns in the US over weapons of mass destruction (WMD) and means of delivery such as ballistic missiles have undergone considerable change over the past 15 years or so. Importantly, the end of the former Soviet Union has led to a much diminished risk of major nuclear war, and has allowed far easier accommodation between the US and Russia on a wide range of issues. Better relations between the US and Russia contributed to there having been little fuss when the US withdrew from the anti-ballistic missile treaty (ABMT).

But the US and Russia both retain large arsenals of nuclear-armed intercontinental ballistic missiles (ICBMs). They have many hundreds of missiles and several thousand nuclear warheads on both sides, with

Missile defence booster test, January 27, 2004. Photo courtesy Missile Defence Agency.

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sophisticated characteristics such as decoys and multiple, independently-targeted (MIRVed) re-entry vehicles. Further, the relationship between the two countries is not without its tensions and uncertainties. Therefore the risk of major nuclear war remains, and as a consequence so does the imperative to keep the nuclear balance stable.

And in spite of the efforts of the international community, proliferation of WMD and the means of delivery including ballistic missiles has continued. This has occurred at many different levels of capability, in areas such as range, warhead and decoys. So there is now a wider range of potential ballistic missile threats.

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In response to these developments US missile-defence plans have changed since the days of President Reagan and the Strategic Defence Initiative (SDI). The ambition of SDI ("Star Wars") was to defend against wholesale attack by thousands of sophisticated warheads; today's objectives are much more limited – tens of missiles and warheads, not hundreds or thousands. It is therefore quite misleading to use the term "Son of Star Wars" to describe the US' current missile defence programs.

Some of this change in perspective and ambition can be picked up from some of the name-changes over the period: from SDI to Global Protection against Limited Strike (GPALS), to National Missile Defence, and most recently to Missile Defence.

The current US missile defence program is focused both on limited defence of the US homeland and on the defence of allies and deployed forces overseas. Does the scale of the threat justify this kind of program? In the case of shorter-range theatre-level threats, it is difficult to overlook the fact that Iraq used shorter-range ballistic missiles to attack Israel, Saudi Arabia and coalition forces in the Gulf

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War in 1991, and in its war with Iran. This case, one might argue, is self-evident.

It is less straightforward in the case of longer-range attack, including on the US homeland. Here, the argument rests on judgements about how rogue states like North Korea would behave, on the reliability of intelligence assessments (especially against "hard targets"), and on whether it's credible that non-state players could acquire long-range missile capabilities or that missiles might be launched by accident or by dissident elements within missile-capable states. But in the end, whether this risk justifies a major investment in missile defences is primarily a matter for the citizens and taxpayers of the US to decide through their democratic processes.

And the evidence points to a high level of bipartisan support within the US for missile defence programs. While missile defence in the form of SDI started in the Reagan years, the subsequent less ambitious post-SDI programs adopted by President Bush continued under President Clinton, and, with some refocussing and better-integrated management, under President George W Bush. Although it is too early in the US 2004 election campaign for the details of the Democrats' position on missile defence to be clear, it's likely that support for missile defence in one form or another will continue to be bipartisan.

What has been Australia's position to date?

Australia has been involved in missile defence and associated matters for many years.

In particular through the Defence Support Program (DSP), formerly at the Joint Facility at Nurrungar and now in the form of a Relay Ground Station collocated with the Joint Facility at Pine Gap, we have played a major role in early warning and hence stability of the

strategic nuclear balance for more than thirty years. And on current plans, we will continue to play an important role in the new Space-based Infra-Red System (SBIRS), which will replace DSP over coming years.

Through the DSP system, Australia has already been involved in missile defence operations. In November 1991, Defence Minister Senator Robert Ray announced, inter alia, that *during Desert Storm, DSP detected the launch of Iraqi Scud missiles, provided timely warning to the civilian populations and coalition forces in Israel and Saudi Arabia, and helped safeguard property.*

The sentiment of the time is well reflected in a statement by Senator Ray in the Senate in January 1991 (before the role of DSP and Nurrungar in giving warning of Scud missile attack was more formally acknowledged), when he said that *[the Queensland antibases coalition] accuses me of allowing the Australian-American facilities at Nurrungar to be used to give early warning time to citizens of Israel that missiles are coming. If I am guilty of that, Mr President, that is my proudest moment in politics.*

And we should remember that elements of the ADF and other Australians were in the theatre that was subjected to these attacks.

The Labor Government's 1994 Defence White Paper observed that an area *with potential for scientific cooperation, especially with the United States, concerns defence against ballistic missiles. Such work would reflect the Government's policy of opposing the proliferation of such weapons.* In August 1995 in reply to a Question on Notice, Senator Ray's elaboration on this policy included reference to an exchange of letters between Australia and the US that had established a broad framework for cooperation between the Defence Science and Technology Organisation (DSTO) and the US Ballistic Missile Defense Organisation (BMDO), and foreshadowed a joint experiment at Woomera.

The defence policies of the Coalition's election platform for the 1996 General Election included cooperation between DSTO and the BMDO. The two organisations subsequently conducted, in particular, the major joint scientific trial known as DUNDEE ("Down Under Early Warning Experiment"), off the coast of northwest Australia, involving amongst other systems the Jindalee over-the-horizon-radar (OTHR) at Alice Springs.

More recently, both principal political parties have made statements on their policies for Australian involvement in missile defence, albeit with different points of emphasis. The Coalition Government has announced an intention to sign a Memorandum of Understanding with the US to facilitate cooperation on missile defence, and has conjectured that the planned air warfare destroyers and an updated Jindalee OTHR network (JORN) could have a role to play in this. The Labor Opposition has expressed support for in-theatre defence against ballistic missile attack, but has concerns over those aspects of missile defence that would protect the US homeland.

What does a missile defence system look like?

The capabilities needed for missile defence are extensive and diverse: we are looking in effect at a highly complex and integrated system of systems. The components include: intelligence; early warning; the tracking and intercepting of missiles during the boost, mid-course and terminal phases of their trajectories; and a highly responsive command and control system. Some components of the system, such as early warning, initial tracking and boost-phase intercept, would be applicable to all ranges of missile; other components, including some mid-course and terminal-phase interceptors, have more specific application, depending on the ballistic missile's range. Overall, because an effective counter to missile attack needs an integrated approach, any attempt to differentiate between a "theatre defence system" and a "national defence system" in this context would start to look artificial.

The difficulties of tracking and intercepting depend on many factors: in-coming missiles could have high levels of sophistication as regards counter-measures and re-entry vehicles; long-range missiles travel higher and

more quickly than short-range missiles and are therefore more difficult to hit; and there are geographical considerations that need to be taken into account for the tracking and intercepting of longer-range missiles during their boost and mid-course phases.

Current US intentions include the development and deployment of a broad range of sensors, trackers and interceptors, with a focus on getting a modest level of capability into service in the shorter term, and higher levels of capability beyond that. The Japanese Government and the British Labour Government have both made commitments to work with the US on missile defence.

The US' plans include a continuing role for DSP and the more capable SBIRS planned to replace it. This means that Australia will have an integral role in missile defence for as long as we continue our involvement in the DSP and SBIRS programs.

Some threshold issues

The key question is *will the nuclear balance be more or less stable once missile defence is in place?* The central issue here is scalability, that is, how feasible would it be for the US to scale up its missile defence systems to be able to handle hundreds or thousands of incoming ballistic missiles and warheads, and not just tens. US officials assure us that Russia is not concerned about the levels of capability planned for the US missile defence program. But the US will need to be very open on this point if it is to reassure allies and others that the nuclear balance remains stable, even in this less-risky post cold war era. Our Government will need to be persistent in seeking this information and in establishing an independent and informed view on the matter.

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Will missile defence lead eventually to weapons based in space? Weapons in space are not in prospect for the shorter or medium term; were this to become likely, it would be important to look at any consequences for destabilisation. There would continue to be a high premium on stability of the nuclear balance, and on the transparency of plans and levels of capability. But it would be important to avoid making any assessment merely on the basis that weapons based in space were regarded as anathema during the cold war. Some of the distinctions might become blurred: some missile defence systems already effect their intercepts in "space" (that is, well beyond the atmosphere), and the high-powered laser that the US is planning to deploy will be based in an aircraft flying at high altitude.

What about other modes of delivery for WMD? It would be naïf to believe that the US has not given consideration to the spectre of an adversary using unconventional ways to attack the US with WMD. Nevertheless, it would be useful if the US could say more publicly on this score, notwithstanding the sensitivities associated with the intelligence operations on which much would depend in the countering of, say, ship-borne WMD entering a major US port. Part of the answer would be that, irrespective of other potential means of delivery, ballistic missiles are a formidable threat in themselves, and therefore need to be addressed. Further, there is perhaps the issue of scale and the acceptance of some degree of risk; put crudely, it is less unacceptable to risk the death of tens of thousands than tens of millions.

Will missile defence cause further proliferation? Would China in particular feel compelled to expand its strategic nuclear forces as a direct result of the US' missile defence program? Perhaps, but there is a stronger argument that China would modernise its forces anyway, as its economy grows and its command of technology increases. China has the option to do this, should it wish to, even over the period of many years that it would take (solid-fuelled rockets, more missiles, more ICBM submarines, MIRVed warheads with decoys, and so on). If China wanted to become

a serious strategic competitor to the US, it would expect to develop nuclear forces in large numbers (several hundreds) and at high levels of sophistication, irrespective of the modest level of threat that US missile defences would be capable of countering. Again, however, our Government needs to establish and set out an independent position on this. And in the immediate term, to the extent that China sees its nuclear capabilities as a playable card in the *pas-de-trois* of Taiwan, the need to avoid miscalculation by any of the three principal players is reinforced. To help manage such issues, Australia needs to encourage the US to do more to recognise China's strategic legitimacy.

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What about other potential proliferants? Almost by definition, it is not possible to be confident about how rogue states will behave. This is a principal factor that has led the US to develop its plans for missile defence: the US cannot be sure that a minor proliferant would understand that, by threatening a major US city, it would itself invite massive and overwhelming retaliation and would therefore desist. Nevertheless, what ought to make potential proliferants pause for thought is that missile defence raises the entry level for an already-difficult area of endeavour, requiring the resources and commitment over many years that only the major powers can readily command. This argument is compelling.

... missile defence raises the entry level for an already-difficult area of endeavour ...

Would Australia's involvement in missile defence fuel regional proliferation? It is hard to fathom how Australia's involvement in or potential acquisition of defences against ballistic missiles would prompt an arms race in our more immediate region. The intent of such systems is defensive, not offensive; and it's not as if we would be seeking to protect the advantage of our own ballistic missiles. It would of course be important for the Australian Government to make our reasons and intentions clear to regional governments.

What are the choices for Australia?

Continue with what we are already doing.

This is the basic option: continue with intelligence cooperation through Pine Gap and the Australia—US relationship more generally and with the use of DSP data (and SBIRS in the future) to give alert and initial tracking. This would mean that DSP data would be used to warn the US – and third parties in appropriate circumstances – that ballistic missiles had been launched and were on their way, irrespective of

Australia's geography still helps...

the size of the attack and whether these were short range missiles or ICBMs. It would not as a policy differentiate between theatre defence and national defence – be the latter of the US or any other target country distant from the launch point. It would continue to support nuclear stability.

Restrict or stop what we are already doing.

It is barely conceivable that we would restrict the use of DSP data to only its original purpose of supporting stability of the nuclear balance through warning of massive ICBM attack (or that we would stop doing even that), or that we would differentiate between theatre and long-range attack. This would mean that we would not tell the US – or anyone else distant from the launch point – that their citizens and cities were under attack even by a few missiles. This is not credible. There is also the technical challenge of deciding within tens of seconds what the data is saying and whether to let it go forward (and who would make such a momentous decision?), when it could be all over and all too late within only a few minutes. This option would mean in practice the discontinuing of Australia's involvement in DSP/SBIRS – and in effect the repudiation of Australia's security relationship with the US. This is not a credible option for Australia.

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Conduct more joint scientific investigations.

There are important opportunities for us to build on the strength of the relationship in defence science between Australia and the US, especially in the areas of sensors (for example DSP, SBIRS, OTHR), real-time command and control, and data fusion. Much of this work could have wider application than missile defence alone. Further opportunities might arise were a test-range to be developed in Australia, or if the acquisition of a particular missile defence system were in prospect. This option would add a contemporary dimension to Australia—US interactions, and would help position Australia to move quickly to acquire missile defences should the need arise. But it would be important for this scientific work not to be at the expense of other priority scientific support to the ADF.

Move now to acquire a missile defence capability.

For what purpose might Australia move now to acquire defences against attack by ballistic missile? For the defence of Australia against attack from within our closer region (shorter-range missile attack)? For defence against attack from the wider region (longer-range attack)? To help in the defence of off-shore theatres to which elements of the ADF had deployed?

Who has the capability, motive or intent to attack us in this way? Many countries in the broader region have nuclear missile capabilities or programs, including China, India, Pakistan, North Korea, and perhaps others in the longer term. It is difficult, however, to conclude that the risk of attack would warrant major investment in Australia's own missile defences. The possible exception is North Korea, not for particular reasons but because its policies are opaque and its behaviours erratic, but even in this case the imagination has to stretch a long way – and Sydney is a very long way from Pyongyang. And while you wouldn't bank on it, North Korea could well vanish as a problem over the next few years.

The most credible threat would be against ADF deployments to distant theatres. We could reasonably expect the US to provide theatre defence for any off-shore operation needing protection against ballistic missile attack. Any Australian contribution in theatre would be marginal at best, and could well introduce complications in command and control. And the US might well prefer us to spend scarce defence dollars on other capabilities.

Current missile defence technology means there are few choices available to us if we did decide to buy missile defence. Most systems are still under development, and the

US is proceeding on the basis of a program of further and progressive improvements. Questions need to be addressed about overall effectiveness, although trials results continue to be encouraging.

It is not conceivable that Australia would acquire – or need – as comprehensive a system as that intended by the US. At most we could contemplate some protection against in-coming missiles in their terminal phase (for example missile systems each deployed to protect a major city), and perhaps some capacity for mid-course intercept. The capacity that we might seek for ourselves would depend on detailed assessments of the protection that the US system would already be giving to Australia, especially against long-range launches, and, as the 2000 Defence White Paper reminds us, we would also need to keep in mind the extended deterrence provided to Australia by US nuclear forces. "Our" system would need to be integrated with the US system in some way. The costs would be formidable, would require significant, perhaps massive, extra funding, and be very hard to justify.

And we would need to match the capabilities that we sought to the nature of the threat – which is a challenge in the absence of such a threat. For example, as currently planned, the naval AEGIS/SM3 system that the US is developing will have a capacity against missiles of range only up to 5500km or so, although further development might be expected to extend this capability. (Note in passing that the SM3 missile will have no capacity against targets within the atmosphere, such as aircraft and cruise missiles.)

Nevertheless, it is important to recognise that the lead-times for Australia to acquire a missile defence capability could well be many years, depending on the level of defence being sought and the option chosen. In so many areas of defence endeavour, the lead-times to acquire and bring into effective service can be long in comparison to the timescales in which "threats" could develop.

In this context, it is appropriate for the Government to entertain the thought that the AEGIS system planned for the new air warfare destroyers would offer options for us to develop an SM3 capability. Whether to take up such options would be for future decision but in the meantime could provide a focus for scientific cooperation between Australia and the US – and perhaps Japan.

And what do we conclude?

No matter who the next President, the US will continue to develop systems to protect its homeland, allies, and deployed forces from attack by ballistic missiles. There is scope to debate the overall justification for this program, with the arguments for theatre defence being less contestable than for the defence of the US homeland. But it is hard to see how Australia's security interests would be harmed by a US missile defence system, and it is ultimately a matter for US voters themselves to decide.

... a major statement in the Parliament is called for.

Because the level of missile defence capability that the US is planning is limited, it should neither upset the stability of the nuclear balance nor cause Russia or China to expand their strategic nuclear forces. But this is a key judgement. Our Government needs to satisfy itself independently that this is the case, and to explain it carefully to the Australian people; a major statement in the Parliament is called for.

There can be no doubt that an effective missile defence system would raise the threshold for serious entry into the club of proliferants or rogue states. This would do more to decrease the prospect of proliferation than to increase it.

The most persuasive option for Australia is to continue with our intelligence relationship and the use of DSP/SBIRS data to give alert and initial tracking.

The most persuasive option for Australia is to continue with our intelligence relationship and the use of DSP/SBIRS data to give alert and initial tracking. To do less, or to seek to differentiate between warning of massive ICBM attack, theatre attacks and US homeland attacks, fails the test of common sense and our national interest. We should also look out for opportunities to conduct more joint scientific investigations, as this will add to our understanding of missile defence, and of advanced defence technologies more generally, and add contemporary dimension to our relationship with the US.

But there is no need to go beyond this and to acquire our own systems. There is neither threat nor priority. The world would need to be significantly different for this judgement to change.

... there is no need ... to acquire our own systems. There is neither threat nor priority.

About the Author

Dr Richard Brabin-Smith spent some thirty years in the Australian Department of Defence in a variety of analytical and senior policy and management positions. His ten years at the level of Deputy Secretary included the positions of Chief Defence Scientist, and Deputy Secretary for Strategic Policy and the Annual Strategic Review. Other highlights of his career included a year in the Pentagon in Program Analysis and Evaluation, his participation in the Dibb review of defence capability in the mid-80s, and his participation in the Defence Efficiency Review in the mid-90s. He is now a Visiting Fellow at the Strategic and Defence Studies Centre at the Australian National University.

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