



Te Matataua

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Nuclear Weapons

The Great Restrainer or the Ultimate Paradox?

Following the highly visible and symbolic 'Fall of the Berlin Wall', and the subsequent summit meeting of Presidents Bush and Gorbachev at the end of 1989, the Cold War effectively ended. Some heralded the 'end of history', while governments looked to cash in on the 'peace dividend'; it also temporarily ended a 40 year obsession with nuclear weapons.

Paradoxically, nuclear weapons were supposedly a deterrent to a war that nobody wanted or was prepared to initiate. NATO planning was based around a Soviet invasion of Western Europe, and Soviet planning was based on a war started by NATO. If either side invaded the other, both were prepared to use nuclear weapons to stop it. Thus both sides were restrained from aggression against the other from fear of the consequences, which is the essence of deterrence.

After the Cold War, the possibility of nuclear war largely faded in people's minds, and when you stop thinking about something, typically, what follows is you stop investing in it.¹ This is more or less what happened, and a period of neglect occurred, where little attention was given to nuclear forces, apart from reducing the stockpile as an economy measure. In 1986 there were around 70,000 nuclear weapons globally and in early 2018 there were around 14,500, of which some 3,750 (more or less) were operationally deployed, with about half that number on alert for use at short notice.²

Once again though, the world is talking about nuclear weapons, and more specifically what their role is in the current climate of major power relations. Tensions between the United States (US), Russia and

China are rising, and the possibility of conflict is now widely and openly discussed, especially in US military journals. Consequently the issue of nuclear conflict is once again to the fore, resulting in a close look at their respective nuclear arsenals, and a reappraisal, or confirmation, of their status and role.



While highly likely that low key research and development of nuclear arsenals has continued post-Cold War, it is only more recently that rhetoric and public posturing has resurfaced. The *US Nuclear Posture Review* released in January 2018 represented a turnaround from the previous review of 2010 which, while calling for modernisation of selected existing systems, also stated an overall desire to reduce the stockpile and ultimately to eradicate nuclear weapons completely. The 2018 version did a *volte face* calling for new types of weapons and

delivery systems to be developed, existing systems to be modernised, and expanding the strategic envelope for their use. The *Review* saw no circumstances under which the US would reduce its nuclear weapons arsenal, perceiving 'an evolving and uncertain international security environment' as the reason for this.³

Russia was not slow in responding and around one month later publically declared its intent to modernise and upgrade its own nuclear arsenal. Both sides have committed to bringing back into service or introducing new 'non-strategic nuclear capabilities', in other words, low-yield tactical nuclear weapons with a yield of up to 20 kilotons or so. This is roughly the same size as the bomb dropped on Nagasaki in 1945. These low-yield weapons

virtually disappeared, at least publically, following the Intermediate Nuclear Forces Treaty of 1987. Some argue that these 'tactical' weapons have utility in an 'escalate to de-escalate strategy' as by detonating a 'small' battlefield device it demonstrates resolve and thus restrains escalation into a major nuclear exchange. Conversely, others argue that they merely lower the threshold for use, having supposed utility beyond the battlefield as a retaliatory weapon, for instance targeting leadership, in a 'limited' war. Russian strategists however do not believe a conflict with the US could be limited in scope, and that it would quickly become existential.

How much of this posturing will come to reality on both sides remains to be seen. It may simply be brinkmanship, while the costs involved are staggeringly expensive, even by major power standards. Meanwhile, China, a relatively modest player in the nuclear world, is quietly going about its business sitting on its own 280 or so nuclear warheads, (a lesser number than France possesses, by way of comparison), though a Pentagon report in August 2018 claims China is expanding its nuclear weapons programme with new types of nuclear capable missiles.

So, is the world about to embark on another nuclear arms race, such as we saw during the Cold War? Well...yes and no. Arms races of the future will be different to what they have been in the past; it will no longer be a numbers game as the concept of mass becomes relative in an environment of spiralling costs. So any arms races are more likely to be qualitative than quantitative. In other words we are unlikely to see major increases in the number of nuclear weapons, but their delivery systems will improve, making them 'more unstoppable', which in theory at least, increases their deterrence value.

Nuclear warheads currently in service have yields ranging from around 100 kilotons to 1.2 megatons (TNT equivalent). The largest bomb ever tested had a yield of 50 megatons (easily upgraded to 100 megatons by fitting a depleted uranium tamper). So what do these figures mean? Well, to use a local example, a 1 megaton device detonated at a height of around 10,000 feet over Epsom, which would minimise fallout through the fireball not touching the ground, would destroy or cause major damage over a 20 km radius (roughly Albany in the north to Manurewa in the south), with around 600-650,000 casualties. It should be noted that Auckland is far less densely populated than cities such as New York and Moscow. The US 'second-strike' strategy of the 1960s and 1970s estimated around 80 million Soviet casualties.

Postulations such as the above do however serve a point. The point being that such weapons have little value as a military weapon, but great value as a

political weapon. If this is what one bomb can do, then having large numbers of them doesn't matter so much, the fact you have them at all is what matters.⁴ Their main effect is, perhaps, to instil caution into statesmen in time of tension or conflict.

In the last 20 years or so nuclear weapons policy has focused on stemming proliferation, more recently on North Korea and Iran, and earlier on Libya and Iraq. The US contributes to non-proliferation of nuclear weapons through 'nuclear assurance', which is aimed at allies who look to the US to guarantee their security, through the 'nuclear umbrella' that the US provides. The US extends nuclear assurance commitments to more than 30 countries in Europe and NE Asia and probably others. The essence of assurance, is that those 'secured' do not need nuclear weapons of their own. For instance, US nuclear assurance is vital to Japan and South Korea, and probably Taiwan and Australia, who could hypothetically field their own nuclear weapons with little difficulty if they felt the US was moving away from its commitments. And while it is doubtful that the US would risk a retaliatory strike on the US homeland, on behalf of an ally, deployed capabilities exert an 'assurance effect'.⁵

Since 1949, when the Soviet Union exploded its first nuclear weapon, and ended the US's short-lived nuclear monopoly, much of the world was obsessed with the possibility of a 'nuclear Armageddon'. This hasn't eventuated and there is no real evidence to suggest history would have been much different in the absence of nuclear weapons. As such, episodes of successful deterrence are recorded as blanks in the pages of history books.⁶ And while nuclear weapons remain the ultimate paradox shrouded in ambiguity, one thing is certain; they are not going away, and until the world political order is somehow transformed, this will not change.⁷

Key Points

- Tension between the major powers is rising.
- Nuclear arsenals are being refreshed
- Quality, not quantity, will be the point of difference in future nuclear arms races.

References

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