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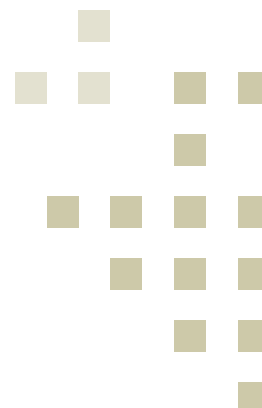
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From Alamogordo to Reliable Replacement Warheads

Sverre Lodgaard

[Abstract] The paper discusses three important legacies that the first nuclear age, that of the Cold War, left behind: (1) the recurrent attempts at threat inflation and the corresponding politics of fear; (2) enormous stocks of poorly protected weapons and fissile materials; and (3) a vision of a world free of nuclear weapons. It goes on to explain the characteristics of the second nuclear age, a notion that Paul Bracken introduced after the testing in South Asia in 1998. Finally, it discusses two basic conditions for the international non-proliferation regime to function effectively: *leadership* and *compatibility with the distribution of power* in the international system. The latter is primarily about the rise of Asia in international affairs.

Introduction

This paper addresses the legacies of the first nuclear age - those of the Cold War; the characteristics of the second nuclear age, the notion that Paul Bracken introduced after the testing in South Asia in 1998; and the political conditions under which the international non-proliferation regime may be effective.

The first nuclear age left three important legacies that impact on the second. First, the recurrent attempts at threat inflation and the corresponding politics of fear. You have all been taught that both in Washington and Moscow, policies were made on the basis of worst-case analysis. Often, it was actually worse than that: policies were made in reference to images *deliberately construed* to justify enhanced arms build-up. Advocacy substituted for analysis. That practice became deeply ingrained and has kept influencing security affairs till this day. Second, the arms race left enormous stocks of weapons and fissile materials behind, much of it without adequate protection. Risks connected with lax controls fed into push and pull for nuclear proliferation both in the state and non-state paradigm, and still do. Third, as the Cold War drew to a close, the superpower leaders offered a vision of a world without nuclear weapons, in all earnest – a vision that has just been revived, twenty years later.

The first nuclear age

Threat inflation and the politics of fear

To illustrate the practice of threat inflation a few examples may be in order, starting in the United States.

In the spring of 1950, Paul Nitze and his staff prepared “NSC-68: United States Objectives and Programs for National Security”. It claimed that should a major war occur that year, the Soviet Union could immediately overrun Western Europe, drive toward the oil-rich areas of the Near and Middle East, consolidate communist gains in the Far East, launch air attacks against Britain and air and sea attacks against the shipping lanes of both the Atlantic and the Pacific, and attack selected targets in Alaska, Canada and the United States with nuclear weapons. While sceptical at first, the Korean War helped persuade Truman to endorse the report, leading to a fourfold increase in the defence budget. Thus began a new budget practice prioritising defence over all else. Most administrations after Truman have determined defence requirements first, and then allocated the rest to domestic needs. The weapons laboratories did not wait for others to define the needs. They made them up as they went along.

In 1957, the Gaither panel conducted a similar exercise. The NSC-68 had identified 1954 as the year of maximum danger: the Gaither Report moved it

¹ Richard, Rhodes, *Arsenals of Folly*, Alfred A. Knoph, New York, 2007, p. 83 – quoting Leon Smith at Sandia and John S. Foster of the Lawrence Livermore Laboratory.

forward to 1959, predicting that a catastrophic missile gap was in the making. Presidential candidate John Kennedy took it on board, appealing to fear for political advantage. When incoming Secretary of Defence McNamara found that there was a missile gap, but in US favour, the president noted that the politics of the matter already necessitated 1000 Minuteman missiles.

In 1976, CIA chief George Bush appointed three so-called “B-teams” to review the data and conclusions of the CIA’s own “A teams” that prepared the 1976 National Intelligence Estimate. The real initiators of the review were John Foster and Edward Teller, both of the Lawrence Livermore Laboratory, and both holding the view that intelligence officers should deliberately try to influence policy by emphasising the worst that the Soviet Union could do. The conclusions lived up to it: “While hoping to crash the ‘capitalist’ realm by other than military means, the Soviet Union is nevertheless preparing for a Third World War as if it were unavoidable... Within the ten year period of the National Estimate the Soviets may well expect to achieve a degree of military superiority which would permit a dramatically more aggressive pursuit of their hegemonial objectives”. The B teams’ allegations about Soviet weapon systems were all wrong – but that, in a sense, is beside the point.

At first, the B teams had little impact. But their conclusions were followed up by the Committee on the Present Danger. SALT II was not ratified, and the politics of fear played into the hands of Ronald Reagan. The arms race got another major spin, exacerbated by an emerging classical dilemma: while the (Soviet) challenger said it aimed at parity, the (US) hegemon saw a rising curve threatening to overtake its own. The result was an annual 10 per cent increase in US military expenditures from 1980 to 1986 – and renewed fear in Moscow about US superiority and nuclear war.

When the nuclear age began, the Soviet Union was on its knees, much inferior to the United States. The feeling of inferiority haunted Soviet leaders all through the Cold War. Soviet politics of fear emanated from the inferiority complex and the self-interests of a military sector that grew to about one half of its GNP – quite possibly more – eventually breaking the back of Soviet economy.

Nevertheless, up to the Cuban crisis of 1962, Soviet policies were to some extent budget-driven, conservative and cautious. The crisis that year became a turning point. Swallowing their humiliating retreat, the Soviet leaders were determined to deny the US another dictate. Vasily Kuznetsov, the diplomat who negotiated the crisis settlement for the USSR, said that much to his American counterpart: “...I want to tell you something. You will never do this to us again.”² For the US leaders, the outcome confirmed the importance of strategic superiority. They could better afford it: US military expenditures peaked in the 1960s at 11 per cent of GNP.

Old habits die hard. In 1998, the Commission to Assess the Ballistic Missile Threat to the United States, better known as the Rumsfeld Commission, focused on the dangers posed by rogue states developing ballistic missiles capable of reaching the US, arguing that the US intelligence community had

2 As quoted in Richard Rhodes, *op.cit.*, p.94.

underestimated these threats.³ Proponents of missile defence used the findings to push their case. The Commission grouped Iraq, Iran and North Korea together because they all pursued missile programmes based on Soviet Scuds: some observers therefore see a line from its report to the “axis of evil”. In due course, missile defence deployments in Alaska and California were justified in reference to North Korea and the planned deployments in Poland and Czechia in reference to Iran. In Russia, President Putin is riding high on a nationalistic trend, upgrading external threats and capitalising on his own strongman image.

Remnants of the Cold War

When the duel was over and the Berlin Wall came down, forty years of arms racing had produced 70 000 nuclear weapons and huge amounts of highly enriched uranium and plutonium. The collapse of the Soviet Union, which had based its nuclear management on physical control without any rigorous material accountancy, caused grave concerns about proliferation to state and non-state entities. Later, the discovery of the Qadeer Khan network widened it into a concern *tous azimuth*: firms and individuals from more than 30 countries on four continents had contributed to the network – but nothing seems to have come from the former Soviet Union. All in a sudden, effective implementation of Art. I of the NPT, obliging suppliers not to assist others in the acquisition of nuclear weapons, became an issue of the highest order.⁴

The Hiroshima bomb had not been tested. By shooting two significant amounts of highly enriched uranium at each other, the weapon designers knew that a nuclear explosion would follow. For terrorists, HEU is therefore believed to be the fissile material of choice. In the state paradigm, most of the newcomers have chosen to test, but Israel and South Africa adopted policies of ambiguity and opacity.

Risk is probability times outcome. The probability of catastrophic terrorism is a function of time. The outcome may be a question of what a nuclear explosion will do to an urban area, i.e. another Hiroshima. Even more, it may be a question of how the US would *react* to a nuclear explosion in one of its cities. 9/11 hit a raw nerve in its government machinery and changed the world: the reactions to an act of nuclear terrorism may be even more dramatic. Somehow, the superpower would probably strike in revenge; its political system may change very much for the worse, and so may that of others; and the world economy would suffer. The consequences are actually hard to imagine.

Reykjavik

As the Cold War began to wind down, a spectacular attempt was made to rid the world of nuclear weapons. Michael Gorbachev and Ronald Reagan shared the objective of a nuclear weapon-free world, and had a go at it in Reykjavik in October 1986.

³ <http://www.fas.org/irp/threat/missile/rumsfeld/execsum.htm>.

⁴ The article applies to individuals and non-governmental units as well as to governments, the latter being responsible for the behaviour of the former.

Gorbachev sought direct dialogue with the United States at the highest level. Reagan, too, preferred to do business that way. He shied away from bottom-up summits issuing communiqués that had been negotiated in advance. Reykjavik was therefore cast in a top-down mode: without it, there would have been no chance of getting around old habits blocking new departures toward cooperative security.⁵

The stumbling block was Reagan's star wars programme. In his correspondence to Gorbachev of 25 July, 1986, he had proposed that the side that wished to deploy strategic defences should be obligated to present a plan for sharing the benefits of them and for eliminating offensive ballistic missiles. If the missiles were eliminated *before* deployment of defences against them, then no capability for a first strike would exist. Deployment of defences would be justified, anyway, as an insurance policy against cheating or against some other power that might acquire offensive strategic missiles. Reagan's rationale was much different from the Bush administration's rationale for ballistic missile defence, which does not envisage to share it with others, and which can best be described the way President Nixon justified the ABM Treaty of 1972: "If you have a shield, it is easier to use the sword."

Reflecting on the issue that thwarted the high ambitions of the leaders, Anatoly Dobrynin writes: "As an eyewitness to Reykjavik, I feel Gorbachev was no less responsible than Reagan for its failure because he held SDI hostage for the success of the meeting. He held good cards with impressive disarmament proposals, and he could have played them far better if he had not been as stubborn on SDI as Reagan. It could have been postponed for further consideration if they had reached agreement on a deep reduction of nuclear weapons, and as a matter of fact Gorbachev followed that bargaining strategy in later negotiations toward the end of the Reagan administration".⁷ Gorbachev had been told by his science advisors that for 10 per cent of the cost of a missile shield they could overwhelm it, but he had probably promised the military-industrial establishment – which played up the threat beyond reason – to stay opposed.⁸

George Shultz met the critics of Reykjavik and the proponents of *status quo* asking "What's so good about a world where you can be wiped out in

⁵ Gorbachev was seized of the Palme Commission notion of common security. The Commission had emphasised that in the nuclear age, security was something the parties had to seek together, to mutual advantage. It was not something one party could achieve at the expense of the other. Disarmament had to proceed through a series of win-win stages. Gorbachev proposed a timeline for elimination of all nuclear weapons by the year 2000. *Common Security: a Programme for Disarmament*, report from the International Commission on Disarmament and Security Issues (ICDSI, under the chairmanship of Olof Palme), Pan Books, London 1982.

⁶ George P. Shultz, *op.cit.*, p. 754.

⁷ Anatoly Dobrynin, *op.cit.*, p. 622.

⁸ In his memoirs, Gorbachev says that "...our generals and even some people in the Foreign Ministry and in our negotiating team in Geneva...were firmly stuck in the logic of antagonism, and the military sought to protect their corporate interests". Michail Gorbachev, *Memoirs*, Doubleday, 1995, pp 415-416.

thirty minutes?”⁹ When commemorating Reykjavik 20 years later, he was joined by three other US leaders. Together, Shultz, Kissinger, Nunn and Perry published an article in the Wall Street Journal that revives the goal of a nuclear weapon-free world, inviting and legitimising public discussion of how to conduct nuclear disarmament to zero.¹⁰

The second nuclear age

Post-war periods are periods of opportunity.¹¹ In the early 1990s, the arms race abated, but remained *in recess*. The numbers of deployed nuclear weapons were substantially reduced; many of them were kept in reserve or withdrawn to central storage; others were dismantled. Dismantling is a time-consuming process still going on, in the US at a rate of about 250 per year. By and large the nuclear doctrines remained the same, but for a while there was a lull in the practice of threat inflation. In Russia, this no longer made sense because there were no resources to follow up on it. Russia had to behave the way small states have often been compelled to, i.e. adapt official threat perceptions to the means available. In the United States, President Clinton seized on the opportunities that globalisation offered and used America’s strength to expand its influence throughout the world,¹² without triggering much countervailing power to speak of. The neoconservatives probably hated him so much that they did not see it. They perceived of themselves as the first ones to translate superior American power into clear-cut national gains. By the mid-1990s, the window of opportunity began to close.

In 2000, shortly after the nuclear testing in South Asia, Paul Bracken spelt out the characteristics of the second nuclear age.¹³ Bracken noted its Asian roots, Asia being on the rise in very substantial ways; the multiplicity of actors involved; and the pursuit by Asian countries of weapon systems

⁹ George P. Shultz, *op.cit.*, p. 780. In his account of the meeting, George Shultz writes that “The achievements at the Reykjavik summit were greater than those in any US-Soviet meeting before, but the popular perception of the outcome in Iceland at the time was one of near disaster or near farce. Over the years, that perception hardened into accepted truth”.⁹ Gorbachev notes that Margaret Thatcher rushed her fences: “We must not allow a second Reykjavik to happen.”⁹ There was something unreal about it all, in part because it had not dawned on those who received the news that the Cold War was about to end. There had been some 25 communications back and forth in preparation of the summit, but they were secret ones at high level, so when the news was out, it took governments and public opinion by surprise. It was met with incredulity because the leaders had been thinking big in unconventional ways.

¹⁰ “Kissinger, Shultz, Perry and Nunn call for a World Free of Nuclear Weapons”, *Wall Street Journal*, 4. January, 2007.

¹¹ Karl Deutsch described such periods in information terms, as periods when the ratio of current to background information is very high. The background information – what can be drawn from the archives – is rendered largely irrelevant, leaving decision-makers to act on the basis of contemporary information flows.

¹² Zbigniew Brzezinski, *Second Chance*, BasicBooks, New York, 2007.

¹³ Paul Bracken, “The Second Nuclear Age”, *Foreign Affairs*, November/December 2000.

that can be used to exploit Western vulnerabilities, notably ballistic missiles and nuclear weapons. Today, the revival of civilian nuclear power and the risk of nuclear terrorism must be added. They are largely, but far from only, Asian phenomena. At the moment, eighteen of thirty-one power reactors under construction are in Asia, and projections confirm and strengthen the Asian share of the total. International terrorism has strong roots in Asia, and the Qadeer Khan network had its origin and hub there.

Asian states are beholden to the notion of state sovereignty. They behave very much the way the founders of the United Nations envisaged in 1945, applying strict interpretations of the principle of non-interference in internal affairs. India, the largest democracy in the world, is no exception: the US–India nuclear cooperation deal illustrates its determination not to let the United States constrain its nuclear weapon programmes and policies. The starkest illustration of the commitment to non-interference is China’s search for energy supplies, pointedly going for oil and gas irrespective of the seller governments’ domestic conduct, good or bad. This is another important factor facilitating cooperation between Asian countries “on the rise”.

Russia is also exercising the Asian option. The border with China has been agreed, and China’s and Russia’s economic growth are strong stimuli of trade and economic cooperation. The Shanghai Cooperation Organisation, comprising Russia, China and four Central Asian states as members and Pakistan, Iran and Mongolia as observers, addresses a broad agenda of energy cooperation, trade, political consultations and joint military exercises. Iran’s affiliation with it is of particular interest in view of the conflict over its nuclear programme. Russia and Iran support China’s position on the Taiwan issue; China and Iran support Russia in Chechnya; and for Russia and China it is essential that Iran does not fall into the hands of the Americans again. In a sense, Iran is at the geopolitical interface between the Western world and Asia. Russia’s close relationship with India is of long standing, and the economic growth of both of them adds substance to it.

Regime requirements

Leadership

For international regimes to function properly, important actors have to exercise leadership. During the Cold War, the depository states took responsibility for the NPT in their special way, disregarding the disarmament obligation of art. VI. Recently, there has been no leadership at all.

Nuclear weapons are usually regarded as a source of strength. However, they can also be seen as signs of weakness and vulnerability. The history of the nuclear age speaks of it. The Soviet Union built nuclear weapons to overcome its inferiority in relation to the USA, and Russia has assigned a wider role to its nuclear forces to compensate for conventional weakness. For the UK and France, nuclear weapons served to underwrite their big power status, which otherwise rests on shaky ground. China reacted to US and Soviet nuclear weapons and currently modernises its arsenal to offset the US missile defence programme. India justified its tests in reference to China and Pakistan in reference to India. For North Korea the matter is regime survival, and

for Israel the nuclear arsenal is the ultimate national insurance premium. When considering how best to facilitate nuclear disarmament, it is this perspective that provides the best guide to what to do.

Two corollaries appear obvious. First, while all parties to the NPT are obliged to work for nuclear disarmament, US leadership is vital. The political chain reaction started in the US, and reversal of it also has to begin in this country. The logic of the argument rests in the fact that the nuclear weapon acquisitions of the other big powers can be fully understood only in reference to that of the US, coming back to the country of origin. The realism of it lies in the fact that the US is strong on so many dimensions, and in a category of its own when it comes to high technology military strength. Therefore, Washington ought to have the confidence to seriously contemplate the idea of a world without nuclear weapons.

On three occasions recently, it has in fact proven to have that self-confidence. First, at the US–Soviet summit meeting in Reykjavik. Second, the idea was entertained in the 1990s, i.a. on the note that in a world without nuclear weapons the US would emerge even stronger, for nobody is in the neighbourhood of matching US conventional strength. Third, it was reiterated just recently by the four former US leaders, who were encouraged by three former national security advisors; supported by Senators Obama and Hagel; and endorsed in principle by Hillary Clinton who argues for dramatic cuts in US and Russian arsenals. All of this has, *nota bene*, fallen on deaf ears with the current administration. The US political landscape has become polarised also in this regard. Much is at stake in the forthcoming elections. Without major US contributions to the implementation of art.VI of the NPT, the Treaty may not survive.

Second, it follows that the weakest and most vulnerable ones are the hardest to convince about the merits of nuclear weapon freedom. The role of nuclear weapons for regime survival (North Korea, possibly Iran) and national survival (Israel), i.e. for countries under dire threat and in warlike conditions, is most difficult to abolish. In South Asia, there are difficult and delicate conflicts and asymmetries as well. In these cases, it is not enough to eliminate the nuclear arsenals of those that are higher up the chain. Credible security assurances in the form of peace agreements and conventional force adjustments are of the essence.

World order considerations

Another condition for international regimes to function properly is that they reflect the distribution of power in the international system reasonably well. If not, they are likely to fall apart. In recent years, power constellations have changed in ways that are not well reflected in non-proliferation policies. While there is much to suggest that the grand bargain from the 1960s – non-proliferation, disarmament and peaceful uses of nuclear energy – remains valid, the political agenda to implement it needs comprehensive overhaul. The question is not how to accommodate the non-proliferation regime to another stable configuration of power – the Cold War has not been succeeded by any new “order” in the strict sense of that term – but to tune it to

processes and trends that have changed the international political map and continue to do so.

Many nations outside the Western world define themselves in relation to the West. Given the dominance of the West in world affairs, anything else would have been a surprise. Many of them assimilate and integrate with it; others have stood up in opposition to one or more of the Western powers. The United States tries to induce China, India and other states on the rise to advance their interests within Western-led global governance structures by giving them greater roles and voting weights. The challengers are encouraged to become responsible stakeholders in existing institutions.¹⁴ Most of them respond positively and try to gain greater influence in these organisations.

They have come to entertain other options, too. Rather than shaping their identities in relation to the West, they are enhancing relations among themselves, thus making the West less relevant. Western countries are not the only ones using globalisation to promote their interests. Asian and other countries in the South use the connectivity that it offers to promote a world *without* the West.¹⁵ For instance, trade between the largest and wealthiest countries in the developing world is growing significantly faster than world trade, the BRIC countries (Brazil, Russia, India and China) being the engines; the India-Brazil-South Africa (IBSA) Dialogue Forum aims to promote South-South trade, information exchange and application of technologies and skills, and to build consensus on issues of international importance; nurtured by Bush administration policies, the Non-aligned Movement has found new life; and the Shanghai Cooperation Organisation (SCO) has a comprehensive agenda and high ambitions. Many Asian states are on a steep upward slope economically, politically and militarily, and four of them are declared nuclear weapon states. Most of them pursue cooperation with and without the West simultaneously.

In East Asia, the rise of China has evolved very smoothly. Other countries in the region accommodate to it, apparently without much fear. China's more than 20 000 km long borders with 13 neighbouring countries have all been agreed except the one with India, where significant progress toward a solution has been made. The region has not been absorbed in balance of power politics. In the nuclear field, there is a certain potential for competition between China and India. In large measure, however, their nuclear policies tap into global strategic considerations, but China remains weary of getting locked into any arms competition, be it with the United States or anybody else. On issues of armaments and disarmament, China, India and Russia are increasingly self-confident and effective in protecting and promoting their national interests on the global scene.

These are increasingly important features of the world to which the non-proliferation regime has to adapt.

¹⁴ Daniel W. Drexner, "The New New World Order", *Foreign Affairs*, March/April 2007, pp. 34-46.

¹⁵ Naazneen Barma, Ely Ratner and Steven Weber, "A World Without the West", *The National Interest*, July/August 2007.

Policies of nuclear disarmament

There are common concerns all around the globe about the risks of nuclear proliferation, nuclear war and nuclear terrorism. In principle, if not in practice, there is broad agreement that in the long term, the best way to address them is through nuclear arms control and disarmament.

Long lists of arms control and disarmament measures have been thoroughly examined and proposed over the years, most recently by the Weapons of Mass Destruction Commission and by the four former US leaders. Technically, virtually all stones may have been turned, most of them many times over. The question I am coming to is this: can arms control and disarmament policies that were conceived in the first nuclear age of the Cold War succeed under the political circumstances that underpin the second?

For instance, Russia and the United States have conducted 1000 nuclear weapon tests each: India 5. The advanced nuclear weapon states are increasingly sophisticated in simulating nuclear explosions: the latecomers do not have the same capabilities. Will the CTBT be accepted under such circumstances? Will it have to be supplemented by NWS commitments not to introduce new types of weapons? Or should the sequencing be different, going for further substantial cuts first and trying to clinch a CTBT later? Similar questions can be asked of the FMCT, the MTCR, and the recent US–Russia proposal to make the INF Treaty universal. In 1987, when the INF agreement was concluded, few others had land-based missiles of intermediate range. Today, Saudi Arabia, Iran, Pakistan, India, North Korea and others have made such vehicles their delivery systems of choice and would be much affected, while the US and Russia have a range of other delivery systems with their navies and air forces to rely upon. To Western voices arguing nuclear disarmament, Asians say “go ahead”. If the response is an arms control agenda that constrains them while leaving the usual suspects largely off the hook, initiatives may quickly go sour. If the initial response is major cuts in US and Russian arsenals, the prospects are probably better.

To save the NPT, I have proposed that in the autumn of 2009 – mid-way between the inauguration of a new US president and the 2010 review conference of the Treaty – a high-level UN meeting should be convened to confirm the validity of the three pillars on which it is based – non-proliferation, disarmament and peaceful uses – and to seek agreement on approaches to the implementation of art. VI. I am not doing so in the belief that policies of exceptionalism, unilateralism and coalitions of the willing will suddenly be abandoned, but in the hope that they will soon be significantly modified in favour of multilaterally negotiated international agreements – of which the NPT occupies the centre stage.