

‘Trust-Building and the Nuclear Future’

Networking Symposium Report

*Department of International Politics, Aberystwyth University
7-8 September 2010*

Aims

The symposium’s main aim was to bring together early career researchers, established academics and practitioners working in the fields of trust research and/or nuclear politics. The meeting provided a forum for interaction between all three groups with a particular view to facilitating professional links for the early career researchers. It was also envisaged that the event should further contribute to enhancing collaboration between researchers across various social scientific disciplines.

The symposium was the first one in a series of three which are planned to take place over the course of the project on ‘The Challenges to Trust-Building in Nuclear Worlds.’ This annual event forms an integral part of the project. The project is a major three-year research initiative supported by Research Councils UK’s programme on ‘Global Uncertainties: Security for All in a Changing World.’ The project’s overall goal is to explore the contribution that multidisciplinary research on trust can make to opening up new policy options for promoting cooperation and security in the nuclear field.

The symposium was held in the Department of International Politics at Aberystwyth University. The event consisted of four sessions, two of which featured presentations by doctoral candidates and early career researchers and two of which gathered some of the leading scholars in the fields of trust research and nuclear weapons with policy practitioners. These sessions were devoted to the study of trust, regional nuclear dynamics, the future of the international nuclear non-proliferation regime, and the global nuclear future roundtable respectively. Each of the sessions began with short presentations followed by a discussion.

This report offers a summary of the initial presentations and the main points raised in discussion. The event was held under the Chatham House rule. As a result, ideas and opinions expressed in the debates and the roundtable are not attributed to particular speakers.

Programme

Tuesday, 7 September 2010

14:00 - 14:15 – Registration

14:15 - 14:30 – Introduction and welcome

- Nicholas J. Wheeler (Aberystwyth University)

14:30 - 16:00 – Session 1: ‘How to do research on trust and trust-building?’

Opening presentations:

- Guido Möllering (Max Planck Institute for the Study of Societies Cologne)
- Geoffrey Hosking (University College London)

16:00 - 16:30 – Coffee Break

16:30 - 18:00 – Session 2: ‘Conflict and cooperation in regional nuclear contexts’

Opening presentations:

- Sara Kutchesfahani (University College London) – ‘From Nuclear Rivalry to Nuclear Cooperation: The Case of Argentina and Brazil’
- Chris Kitchen (University of Sheffield) - ‘Identity as a Bedrock of Nuclear Trust: The Case of British Approaches to Iran’

Wednesday, 8 September 2010

8:45 - 10:15 – Session 3: ‘The Future of the Nuclear Nonproliferation Treaty’

Opening presentations:

- Hassan Elbahtimy (King’s College London) – ‘The Search for a Middle East Nuclear Weapons Free Zone’
- Matthew Harries (King’s College London) - ‘Disarmament and the Future of the NPT’
- Liviu Horovitz (ETH Zurich) – ‘Vision and Progress? NPT Policies and their Consequences’

10:15 - 10:30 – Coffee break

10:30 - 12:00 – Session 4: ‘Global Nuclear Future Roundtable’

Participants:

- Andrew Barlow (Foreign and Commonwealth Office)
- Ken Booth (Aberystwyth University)
- William Walker (University of St. Andrews)

12:00 – 13:00 - Lunch

Session 1 – How to do research on trust and trust-building?

Guido Möllering delivered a presentation entitled ‘So Many Roads to Studying and Building Trust: Blessing or Burden?’ He started by noting the distinction between interpersonal trust as opposed to international trust and asked whether states can trust as individuals do. The presentation outlined four basic areas of trust research structured along the lines of ‘trust base’ and ‘trustee’. Thus psychology focuses predominantly on personal affective trust, economics on specific calculative trust, sociology on generalized moralistic trust, and political science on institutional cognitive trust. The speaker offered his definition of trust as follows: ‘Trust is an ongoing process of building on reason, routine, and reflexivity, suspending irreducible social vulnerability and uncertainty as if they were favourably resolved, and maintaining thereby a state of favourable expectations towards the actions and intentions of more or less specific others.’ From this definition, Guido Möllering derived his conceptual device of the so-called ‘trust wheel’ connecting reason, reflexivity, and routine as key elements in the process of suspension of uncertainty. He argued that each of the elements is typically studied through a particular methodology: reason is examined through experiments focusing on cooperative behaviour; reflexivity is studied by ethnographic methods exploring trust-generating events; routine is researched with the help of surveys assessing trusting attitudes. Each of the three elements also generates a distinctive way of trust-building: reason by manipulation of rewards and changes of the game; reflexivity is connected to a strategy of supererogation, which can best be described as ‘paying more than one owes’; routine is best developed by repetition whereby sides get used to cooperation. In the concluding comments, Guido Möllering encouraged participants to think whether these strategies could be applied to the international level.

Geoffrey Hosking began his talk by outlining two types of trust. First, trust in persons which can be conceived as an expectation that others will not act harmfully to me. Second, trust in events that they will turn out in a way not harmful to me. The basis of these expectations can be either competence or moral character. Stressing the overlap between trust and confidence, the speaker asked whether trust could be reached at the international level and if so, whether confidence building measures were required beforehand. Geoffrey Hosking noted that there exist two main approaches to the study of trust: 1) An approach grounded in rational choice theory where trusting is needed in order to interact with people and thus find out about their trustworthiness. This approach could be applied to international relations where diplomats need to trust in order to work; 2) A normative approach based on the assumption that people live in a moral universe and trust others because they themselves want to be trusted. Following the work of the sociologist Piotr Sztompka, the speaker identified four conditions of trust: 1) Normative coherence; 2) Stability; 3) Openness; 4) Accountability. He emphasized that a process of trust-building requires positive input. In particular, one needs to be introspective about one’s own trustworthiness. The speaker then asked ‘how do states learn to trust each other?’ He argued that such a process might begin with a disaster showing the costs of distrust. Alternatively, the perception of a possible disaster might be sufficient and play a similar role. Such perception provides grounds for reaching an understanding, typically through secret contacts, that a common danger needs to be faced. This then can lead to the development of personal relationships where there is some level of interpersonal trust. Concessions are made, but need to be reasonable and there is a need for verification so that trust is not misplaced. Trust established at a narrow political level can then spill over to the rest of society. In the whole process, it is not enough to demand that the other does something to prove

trustworthiness, but one must also inquire into what actions one might take to establish trusting relationships.

Discussion

Cognitive requirements and biases

A participant asked about the ability of the self to recognize its own untrustworthy actions. This was recognized as a potential problem in international politics where sides might impose requirements on others to act in a trustworthy manner while being themselves unaware of their own untrustworthiness. The discussion also touched upon the role of emotions and gender in processes of trusting. The utility of such approaches was disputed on two grounds. Firstly, should the emotional bases of trust be accepted they would prove politically difficult, if not impossible, to apply. Secondly, gender is routinely studied and taken into account as a standard control variable in experiments measuring trusting attitudes and it has been shown to have no discernible effects.

Unequal relationships

It was noted that in the sphere of international politics, actors are inherently unequal in terms of their relative power. A question was asked, what this means for the possibility of trust at the international level? Two possibilities were suggested. First, the weak states can 'bandwagon'. This, however, raises the question whether in such situations relations are those of trust rather than subordination. Second, the strong states have special obligations to maintain trust in the international system. They can do it, as suggested in the writings of G. John Ikenberry, by binding themselves to institutions and upholding them at a greater cost. This would be in line with the trust-building strategy of supererogation outlined by Guido Möllering. In this way, the strong would be able to convey to the weak signals of generosity that might start or strengthen trust-building processes. The Marshall Plan following the World War II was given as an example.

Disasters, failures and trust-building

Part of the discussion revolved around the need of a disaster/failure in order for states to begin a trust-building process. Attention focused on what kind of conditions might turn a disaster/failure into an impetus for trust-building rather than serve as its impediment. Two types of potential disasters/failures in the nuclear sphere were noted: 1) the use of nuclear weapons; 2) the failure of the non-proliferation regime to prevent the spread of nuclear weapons. Literature on trust-repair might be helpful in understanding these dynamics. It usually stresses the need of both sides to acknowledge that trust failed but is required. At the international level it remains unclear what could get the repair process going. Recognition on both sides that the business-as-usual approach is no longer possible was named as one pre-condition.

Trust, distrust, and sources of conflicts

A participant observed that much of the discussion focused on distrust or lack of trust as a source of conflicts. But conflicts can have other origins. This should serve as a reminder that in some cases trust is impossible. It is also notable that countries institutionalize procedures based on distrust, for example passport

controls. This led to a suggestion that the levels of trust between states could be studied through the measure of enforced rules.

Trustworthiness and representativeness

Diplomats and negotiators form a view of trustworthiness of their partners but these groups are very narrow in terms of their representativeness of their respective states and societies. Is this a problem for trust at the international level?

Session 2 – Conflict and cooperation in regional nuclear contexts

Sara Kutchesfahani delivered a presentation based on her doctoral research examining the dynamics leading towards the easing of a nuclear rivalry between Argentina and Brazil. Between the 1950s and 1980s, Argentina and Brazil were widely suspected by the international community – as well as by each other – to be pursuing a covert nuclear weapons programme since (1) they were longstanding regional rivals living under military leaderships and had consistently competed for regional hegemony, (2) both nations had indigenously developed some aspects of the nuclear fuel cycle, and possessed nuclear facilities that were not subject to regional or international safeguards, and (3) both nations refused to get involved in the international nuclear non-proliferation regime by rejecting the NPT, full-scope IAEA safeguards, the Nuclear Suppliers Group (NSG), and the Tlatelolco Treaty. The two countries could have pursued nuclear weapons programmes but chose to remain non-nuclear. Instead, in a more than decade-long process they established a bi-national system of mutual inspections and verification of indigenous non-safeguarded nuclear installations. This process culminated in the creation of the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials (ABACC). The speaker outlined three predominant explanations for this development: 1) democratization; 2) economic liberalization; 3) trust- and confidence-building measures. She placed herself within the last group and focused in particular on the role played in the rapprochement by an Argentine and Brazilian non-proliferation epistemic community – a group of experts knowledgeable in the nuclear research issue area. Using data collected primarily from interviews with Argentinean and Brazilian decision makers as well as information accessed from open sources, the presentation analysed the process of how the Argentine-Brazilian epistemic community influenced Argentine and Brazilian decision makers to implement ABACC. It identified four steps in which the epistemic community played a role: 1) policy innovation; 2) policy diffusion; 3) policy selection; 4) policy persistence.

Chris Kitchen presented a paper derived from his doctoral research on the British-Iranian relationship. He argued that there is a clear absence of trust in British policy towards Iran, but that this lack of trust cannot be explained solely by the nature of Iranian conduct over its own nuclear programme. Instead, while the pattern of Iranian behaviour witnessed since its uranium enrichment activities were revealed to the wider world gives good cause for British suspicion, British views on the very identity of Iran as a state, and reflections on Britain's own identity, are crucial in helping to explain the depth of distrust towards Tehran. Britain's lack of trust towards Iran can be broken down into two core issues: 1) Distrust of Iran's stated intentions for its nuclear programme; 2) Deep suspicion of Iran as a potential responsible nuclear weapons state. In the first of these, Iranian conduct since 2002 has given rise to intense suspicion of its nuclear programme. Not only were nuclear sites initially concealed, but subsequent International Atomic Energy Agency (IAEA) reports have been consistently critical of Iranian failures to live up to international commitments. The IAEA has consequently

never been able to say with confidence that Iran is not pursuing nuclear weapons. Yet it has also been unable to conclude that Iran does seek an atomic bomb. Despite this ambiguity, Britain appears largely convinced of hostile Iranian intentions, believing that the nuclear programme is not configured for anything but weapons development and that Tehran is driven by its very nature and history to return to great power status via the shortcut of joining the exclusive “nuclear club”. British elites appear further to distrust an increasingly illegitimate, aggressive, deceptive and cunning Iranian leadership characteristically disposed to mislead and lie.

Britain also distrusts Iran as a potential nuclear weapons state, fearing widespread regional instability through immediate conflict and rapid nuclear weapons proliferation – an approach based on the view that other states also view Iran as inherently aggressive and threatening. Iranian nuclear weapons are thus viewed as a major threat to the Nuclear Non-Proliferation Treaty, to which Britain is firmly attached both as a crucial tool of international security management and as a component of an emerging rules-based world order. Yet similar negative understandings of Iran’s aggressive identity also drive fears of potential Iranian conduct as a nuclear-armed state. Britain does not believe Iran is likely to adopt a defensive posture, but would probably be emboldened to exploit its enhanced regional position and increase support to violent non-state groups in the Middle East. Furthermore, the blurred nature of authority in the Iranian state makes Iran difficult to predict. In addition, it makes potential crises more difficult to understand and manage, especially if they concern actions by the unaccountable and shadowy, yet aggressive Revolutionary Guard. Perceived instability, unaccountability and aggression as fundamental characteristics of the Iranian state are a potent combination fostering distrust of Iran.

Discussion

Epistemic communities

Participants raised questions about continuity/discontinuity of epistemic communities and their long-term impact on policy-making. It was noted that epistemic communities appear and change. Accordingly, one cannot speak of a single epistemic community but rather of specific points during which they are able to influence policy processes. Others asked about the potential of epistemic communities to play an active role in processes of trust-building. It was suggested that they may be well-suited to act in such a role, because their members have opportunities to meet, they share similar backgrounds and recognize each other in their issue-areas as experts. In these ways, interpersonal dynamics of trust could be developed and they could eventually be translated into state policies. This brought to the attention of participants the larger question of whether epistemic communities lead policy-making processes or, on the contrary, are only invited to participate once political decision-makers have come to such policy conclusions that members of an epistemic community can be used to actively advance these political decisions.

Britain-Iran

One set of questions revolved around theoretical and methodological questions connected to the study of identity. Participants asked about possible sources of a changed identity in Britain; about the relationship between identity and sources of distrust; about identities influencing perceptions of the British-Iranian relationship. Another set of questions was aimed at dissecting into greater detail interactions between the two countries. It was noted that a firm conviction ruled in Britain about Iranian motivations. Others noted that the British Government is

aware of various reasons and motivations influencing Iranian behaviour and the country is not viewed as a “black-box”. As a result there is a greater deal of questioning of Iranian goals and aims. It is nevertheless very difficult to even establish who the decisive political players are within the Iranian regime. Yet another set of questions dealt with the issue of initiating a trusting relationship with a highly disruptive actor such as Iran. The theoretical literature on trust suggests that actors should carry out repeated attempts to engage and only if they fail should an exit strategy be deployed. In international politics, however, there is no possibility to exit.

Session 3 – The Future of the Nuclear Nonproliferation Treaty

Hassan Elbahtimy opened the second day of the symposium with a talk on the prospects of establishing a Middle East Nuclear Weapons Free Zone (ME NWFZ). The speaker noted how the close connection between the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and the issue of a nuclear weapons free zone in the Middle East has become increasingly clear in NPT review conferences after 1995 and particularly during the last review conference in 2010. To understand the salience of the idea of the ME NWFZ within the NPT regime, the paper drew attention to changes, past and ongoing, at two levels. First, at the level of the formal nuclear non-proliferation regime whereby a norm calling for the establishment of NWFZ has been functionally incorporated in the treaty regime during the 1995 extension conference. This could be considered as part of a reformulation of the NPT in the post cold-war era. Second, changes underway at the level of regional nuclear order in the Middle East also push towards addressing the vulnerabilities inherent in that order. Iran has been advancing its own nuclear capabilities with evident assertiveness and dedication. Israel has been refusing to discuss its own nuclear arsenal or put its nuclear capabilities under international safeguards. Various other countries, including Iraq and Libya, have attempted to achieve a nuclear capability. The regional nuclear order can thus be characterized as unstable, imbalanced and increasingly unsustainable. This highlights the renewed impetus to address enduring difficulties of the regional nuclear order through the establishment of the Nuclear Weapons Free Zone in the Middle East.

Matthew Harries discussed in his paper the outcome of the 2010 Non-Proliferation Treaty Review Conference as it relates to nuclear disarmament, and drew conclusions about the conference’s implications for the future of the NPT. The presentation examined the US strategy of emphasising its commitment to nuclear disarmament obligations in the hope, firstly, of strengthening states’ attachment to the NPT, and, secondly, obtaining concessions on non-proliferation from non-nuclear-weapon states parties. The speaker summarised the disarmament-related outcomes of the Review Conference, and assessed the likelihood of their implementation. He argued that while there exists a broad agenda for nuclear disarmament, in substantive terms that agenda remains weak because of the presence of a number of unresolved questions – in particular, irreversibility, transparency and verifiability in disarmament, calls for a nuclear weapons convention, and demands for a reduction in the role of nuclear weapons. The paper reached four broad conclusions: 1) There is certainly evidence to suggest that progress on disarmament, and the proper communication of that progress, is a necessary condition for maintaining the health of the NPT; 2) However, the outcome of the conference indicated that the relationship between disarmament and non-proliferation is not a simple one. Concessions on strengthening non-proliferation cannot be ‘bought’; nor, indeed, is disarmament necessarily the most important factor in determining states’ willingness to reinforce the treaty. Thus, in the NPT context, although some pursuit of disarmament is in the interest of the nuclear-weapon states, the payoff for that pursuit

may not be immediately obvious; 3) Not only will some of the disarmament commitments made in the action plan from this review conference be hard to achieve, but significant follow-on actions from the United States are unlikely to be forthcoming in the short term, which suggests that the next review conference may be fairly acrimonious; 4) The simultaneous breadth and weakness of the disarmament agenda is a product not simply of intransigence by the nuclear weapon states, but of the continuing presence of unresolved questions about the principles under which disarmament is to be pursued.

Liviu Horovitz focused on the grim outlook which is frequently noted in a wide range of analyses of the NPT. These claim that absent urgent action the regime, under pressure from numerous directions, is doomed to imminent collapse. Contrary to this consensus, the speaker argued that developments over the last two years are inconsistent with such a conclusion. Concessions made by the Nuclear Weapon States (NWS) at the 2010 NPT Review Conference were very modest, while the response of the Non-Aligned Movement (NAM) and other Non Nuclear Weapon States (NNWS) provided very few indications of widespread fear for the future of the treaty. A closer scrutiny of the “collapse theory” suggests that while shocks fatally undermining the treaty cannot be ruled out, the more likely prognosis of a slow process of additional proliferation, the absence of dramatic steps on disarmament, or lack of technological benefits are all unlikely to undermine the NPT in the foreseeable future. Little has been written on how exactly the NPT would collapse. Assessing whether the treaty will fall apart equates to analyzing whether the reasons for treaty withdrawal will dramatically increase, leading to a wave of countries abandoning the NPT. While one could construct a scenario in which countries would abandon the treaty in protest but refrain from going nuclear, a cost-benefit analysis suggests that the more probable scenario is that of states leaving only to proceed on the road to acquiring their own nuclear weapons. There is little evidence to underpin the theories of falling dominoes and rampant proliferation. Instead of alarmism, the expert community should adopt a more pragmatic approach to the NPT. The speaker concluded that a more measured stance provides for a better opportunity to address the actual problems within the non-proliferation regime without the threat of the “imminent collapse” hovering over our heads.

Discussion

The US commitment to the NPT

In light of the moves of the Obama administration prior to the 2010 NPT Review Conference several participants questioned whether these moves were merely strategic and rhetorical devices aimed at ensuring success of the conference rather than expressions of a genuine commitment to the treaty. It was pointed out that the two are not mutually exclusive and while the commitment seemed quite sincere, there were indications of the US delegation “gaming” the system of the conference. The general preoccupation with the US position was questioned by some participants. Although the United States is the most transparent actor, they noted, behaviour of the rest of the P-5 was as important for the future of the treaty as that of the United States. Accordingly, scholars should pay more attention on these matters to China, France, Russia, and the United Kingdom. They suggested that the rest of the P-5 simultaneously looks up to the United States and hides behind its actions.

The Middle East Nuclear Weapons Free Zone

There was a solid agreement on the genesis of the issue within the NPT regime. Some noted, however, that Egypt as the driver of this agenda has not received

nearly as much attention as it should. Some participants questioned the logic of the zone with regard to ideas of universal nuclear disarmament. In particular, it was noted that in the NWFZ process Israel is being asked to unilaterally give up its presumed nuclear capabilities, while the P-5 always stress that their nuclear disarmament will have to be a multilateral process. The Middle East is singled out for regional disarmament but it is also the region where this goal is the least likely to succeed. Others asked whether the zone could be in Israel's interest as a way to contain Iran. Most everyone agreed that Iran's behaviour will have significant impact on the possibility of achieving the NWFZ.

Session 4 – Global Nuclear Future Roundtable

The concluding roundtable and the ensuing discussion provided a summary of the themes covered during the symposium. In addition, the session also introduced several issues not discussed in depth during the first three sessions. In particular, debate centred on the following: 1) Changing organizing principles of the non-proliferation regime; 2) Continued erosion of the non-proliferation regime; 3) Transitions influencing the non-proliferation regime.

Changing organizing principles of the non-proliferation regime

The origins of the regime dating back to the 1960s were based on two mechanisms preventing proliferation of nuclear weapons. First, it was the mechanism of mutual restraint among the two superpowers such as arms control agreements and the accompanying limitations on ballistic missile defences. The other mechanism relied on multilateral agreements and institutions such as the NPT and the IAEA. With the end of the Cold War these mechanisms began to unravel in the 1990s. The spread of ballistic missile technology brought about revived interest in ballistic missile defences. The end of the conflict between the two superpowers made limits on arsenals look unnecessary. A set of challenges that the NPT was not designed to deal with appeared – the fall of the Soviet Union, renaissance of civilian uses of nuclear technology, India and Pakistan openly testing their nuclear weapons, major problems of non-compliance with the NPT (Iran, Iraq, Libya, North Korea). A spectrum of possible future scenarios was discussed: 1) the NPT will break down as a result of these fundamental challenges not being met; 2) the NPT will continue to 'muddle through'; 3) substantial breakthroughs will be achieved on thorny issues such as Iran, North Korea, India-Pakistan, P-5 nuclear disarmament.

Continued erosion of the non-proliferation regime

In addition to factors mentioned with regard to the changing principles of the regime, additional undermining factors were identified. First, the relative impunity of breaching the regime was noted. Second, it was agreed that nuclear weapons continue to confer special status on those states that possess them. Given this context, it was suggested by some participants that the outcome of the 2010 NPT Review Conference can hardly be judged as a success, which it has mostly been proclaimed by the states and observers alike. Initiatives to halt the regime's erosion are at best half-hearted and at worst harmful. One participant noted the latter especially with regard to initiatives such as the 'letter of four'.¹ These calls

¹ These are open letters authored by former high-level officials calling for nuclear disarmament. See, for example, George P. Shultz, William J. Perry, Henry A. Kissinger and Sam Nunn, "A World Free of Nuclear

reinforce, he noted, the efficacy of nuclear deterrence by stressing that while it worked during the Cold War, the world today finds itself in a fundamentally different situation. This argument crucially ignores the fact that for some possessors of nuclear weapons their regional dynamics resemble that of the Cold War. This characteristic fits very well in the case of nuclear rivalry between India and Pakistan.

Transitions influencing the non-proliferation regime

Following the discussion on the erosion of the regime, it was noted that there has been a proliferation of exceptions to the rules, such as the US-India nuclear deal, which lead to the questioning of the rules' legitimacy. Is it merely power and might which decide about these exceptions? If so, this bodes ill for the regime, because states lose incentives to abide by the rules. While exceptions are touted as the means to bring states like India within the regime, it is at the same time made clear that they cannot and will not be offered to everyone. In this way, exceptions deepen the sense of injustice inherent in and reproduced by the current non-proliferation regime. Larger global power transitions are also at play with regard to the future of the regime. The United States is growing relatively weaker and is unable to sustain the regime on its own. On the other hand, rising powers will somehow need to be accommodated. The most difficult future transition will thus be an attempt to reshape relations among superpowers/great powers and forge a concert that could upkeep the regime. This would draw on the precedent of the U.S.-Soviet agreement creating the NPT. Paradoxically, the idea could be facilitated by the spread and diffusion of nuclear technology to non-state actors, as this development would reinforce the need for greater control of the technology. At the same time, the states which have granted themselves special privileges and exceptions from the regime (most notably the P-5) will have to show the willingness to bear disproportionately higher costs, much along the lines of the argument about trust and supererogation introduced in the opening presentation by Guido Möllering. This suggestion and the possibility of such cooperation was met with caution as multi-polar international systems are less predictable and stable than bipolar or hegemonial ones. Transition might also be required with regard to the thinking about the utility of nuclear weapons. In this regard, some participants questioned the value of nuclear deterrence. In the context of the devaluation of nuclear weapons, these participants stressed, the nuclear future might also depend on calculations whether nuclear weapons are affordable, the overall value of treaties and agreements among governments, or a possible occurrence of nuclear catastrophe/war. The economic costs were deemed as a limited factor because even extremely poor states devote significant resources to maintaining or developing nuclear arsenals (Pakistan; North Korea). The scenario of a nuclear conflict, on the contrary, could produce outcomes leading in two dramatically different directions. On the one hand, a nuclear conflict or catastrophe might encourage states to agree to a set of new limitations on the use and possession of nuclear weapons. On the other hand, a nuclear conflict could lead to the definitive collapse of the non-proliferation regime and usher the era of nuclear armament by many states.

Weapons," *The Wall Street Journal*, January 4, 2007, p. A15. This so-called "gang of four" wrote additional letters in the subsequent years. Former officials in other countries (e.g. Belgium, Germany) have followed this model.