REPORT

The Twenty Years’ Crisis of Nuclear South Asia, 1998–2018: A Workshop Report

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ABSTRACT

In May 2018, the Liu Institute for Global Issues, part of the School of Public Policy and Global Affairs at the University of British Columbia, together with Princeton University’s Program on Science and Global Security ran a workshop on the twenty years since the May 1998 nuclear weapons tests by India and Pakistan. The workshop addressed three broad themes central to understanding nuclear dangers in South Asia: how to understand South Asian nuclear dynamics since 1998, the present and near future of nuclear South Asia, and finally the scope for civil society-led change in nuclear South Asia.

INTRODUCTION

Twenty years ago, over a period of three weeks in May 1998, India and Pakistan carried out a series of nuclear weapon tests. There were tests on 11 May and 13 May 1998 by India, one of which was claimed to be a test of a two-stage thermonuclear weapon. India’s Prime Minister, Atal Bihari Vajpayee of the Hindu nationalist party Bharatiya Janata Party, which had come to power only two months earlier, later said “These tests were essential for ensuring a credible nuclear deterrent for India’s national security in the foreseeable future.”

Then on 28 May and 30 May 1998, Pakistan carried out its nuclear weapon tests. Prime Minister Nawaz Sharif of the conservative nationalist Pakistan Muslim League, who had taken office in 1997, said Pakistan “felt compelled to acquire a matching capability” and that the tests were meant to “establish nuclear deterrence” and “served the cause of peace and stability in our region.”

On 6 June 1998, the United Nations Security Council unanimously passed Resolution 1172, which condemned the tests and expressed deep concern at the risk of a nuclear arms race in South Asia. It called on Pakistan and India “immediately to stop their nuclear weapon development programmes, to refrain from weaponisation or from the deployment of nuclear weapons, to cease development of ballistic missiles...”

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capable of delivering nuclear weapons and any further production of fissile material for nuclear weapons, to confirm their policies not to export equipment, materials or technology that could contribute to weapons of mass destruction or missiles capable of delivering them and to undertake appropriate commitments in that regard.” The Resolution also urged “India and Pakistan to exercise maximum restraint and to avoid threatening military movements, cross-border violations, or other provocations in order to prevent an aggravation of the situation.” The two countries announced a moratorium on further nuclear weapon testing. There were no subsequent commitments to further limit nuclear weapon programs.

There initially was widespread public support for the nuclear tests in both countries, with most political parties and much of the media in India and Pakistan largely supportive of the tests. Over time, the early public displays of enthusiasm for nuclear weapons have subsided into lacklustre commemorations and sporadic media coverage of the anniversary of the nuclear weapon tests of 1998. One official institutional shift has been the incorporation of nuclear weapons systems as national symbols in the ceremonial military parades in each country to mark on national holidays. This has gone hand in hand with the growth of aggressive nationalisms in both countries over the last two decades.

There were some public protests and the mobilization of opposition in each country to the nuclear tests, but this was largely confined to a small group of academics, anti-nuclear activists, left-wing parties and progressive civil society groups (Kothari and Mian 2003; Ramana and Reddy 2003). In Pakistan, several city-based peace groups emerged in reaction to the 1998 tests. Later in early 1999, they were brought together under the Pakistan Peace Coalition. India’s national Coalition for Nuclear Disarmament and Peace (CNDP) was formed in November 2000 at a convention that brought together 115 groups many of which had responded actively to the 1998 tests. PPC and CNDP undertook educational and mobilization initiatives inside the respective country as well as in collaboration with each other. Both became much less active after a few years.

The United States, the European Union and other countries imposed sanctions for carrying out the tests on both countries, including restricting funding by international development banks. These sanctions were lifted quickly. Starting in early 2000, the United States very publicly set aside concerns about India’s nuclear weapons to embrace India as a new political and strategic ally in the effort to contain the rise of China. The United States responded to the attacks of 11 September 2001 by prioritizing its need for Pakistan’s support for the war in Afghanistan over concerns both about Pakistan’s nuclear weapons activities and the military coup of October 1999 that overthrew Nawaz Sharif and brought General Musharraf to power.

In the wake of the nuclear tests came nuclear crises. India and Pakistan went to war between May and July 1999 after Pakistan sent forces across the Line of Control into the Kargil region of India-held Kashmir. The war ended with Pakistan feeling compelled to withdraw its forces in Kargil as they faced defeat and international concern about the possible escalation of the conflict to nuclear war. Then, following an attack on India’s Parliament on 13 December 2001 there was a major 14 month long military crisis in

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3 Security Council Condemns Nuclear Tests by India and Pakistan,” 6 June 1998. https://www.un.org/press/en/1998/sc6528.doc.htm.
2001–2002, with large-scale deployments along the border, which led many to expect war. No military crisis as severe as these has emerged since then between the two states despite events that could in principle have led to escalation. Most notably, India was restrained in its response to the 2008 attacks on Mumbai which killed almost 200 people by Islamist militants affiliated with the Lashkar-e-Taiba, a Pakistani group with ties to the state.

Meanwhile, throughout the past two decades, India and Pakistan have been working on building up their nuclear arsenals, but have carried out no further nuclear weapon tests. It has been estimated that India’s stockpile has grown from about 3 weapons in 1998 to 140 weapons as of 2018 (Kristensen and Norris 2013; Kristensen and Norris 2018). In this same twenty-year period, Pakistan’s arsenal is estimated to have grown from about 2 weapons to 150 weapons, as of 2018. Both countries now appear to have developed nuclear weapons that can be delivered by a triad: by aircraft, by land-based missiles, and from submarines at sea, although some of these capabilities are still being tested. India and Pakistan also have built up their infrastructure for producing plutonium and highly enriched uranium – the key ingredients for nuclear weapons. Finally, both countries have put in place military, technical and political institutional structures and operating principles and financial resources for managing the growth and possible use of their arsenals.

**Workshop Description**

The one and half day workshop covered three major themes.

The first theme involved understanding South Asian nuclear dynamics since 1998. This focused on the related questions of whether developments in the nuclear complexes in India and Pakistan since 1998 had been as expected with regards to weapons systems, weapons capabilities, fissile material production, nuclear postures and policies, and to what extent there had been unexpected developments. The discussion also focused on whether there were signs of what could be interpreted as processes of nuclear learning or innovation as opposed to mimetic processes in which India and Pakistan selected from and copied existing types of nuclear weapons systems, capabilities, postures and policies associated with other nuclear weapon states at various stages of their development. The final topic discussed was whether there had been any major nuclear crises since those of 1999 and 2001–2002 and, if none, to what extent this could be seen as the result of a “nuclear crisis ratchet effect” where the experience of nuclear crises affected subsequent behaviour by inducing caution or fuelling confidence about crisis behaviour and outcomes.

The second major theme of the workshop was the present and near future of nuclear South Asia. The questions here related to assessing the current nuclear situation, identifying key drivers and what could be expected looking forward, including whether the present dynamics are expected to persist, slow down, stop, or go into reverse.

The third and final broad theme of the workshop concerned the scope for interventions, civil society agency and change in nuclear South Asia. The main focus was the experience of the past 20 years with regard to civil society and democratic processes in shaping nuclear debates and nuclear policies in India and Pakistan. This included an assessment of what has worked and what has not worked so far in the efforts by anti-
nuclear movements in South Asia. A final concern was whether anti-nuclear groups had resources or prospective windows of opportunity to try something new or different or whether it required waiting for circumstances to change.

The discussion during the workshop is briefly summarised below and organized around four broad sets of issues.

**Divergent Expectations and Understandings**

One major debate among participants concerned the question of whether it was possible to uniquely specify a set of expectations about what India and Pakistan would do after the May 1998 tests, prior to those events. Some participants felt that the two countries were expected to follow the Cold War trajectory. This meant that although India and Pakistan were officially making statements about only having a capability for minimum deterrence, both were expected to build a large number of weapons and expand the race. Others were surprised at the on-going expansion because the political science and strategic literature in the 1990s predicted that India and Pakistan would adopt a different approach from the traditional nuclear weapon states with a relatively limited arsenal. Those in the latter camp have been surprised by, for example the two countries desiring to build a triad of delivery vehicles. Those in the former group attribute the statements about only desiring a minimal nuclear arsenal to technical constraints: limited availability of fissile materials (plutonium and highly enriched uranium) and only a limited number of potential delivery vehicles.

A second debate was concerned with Pakistan’s ability to make nuclear weapons, which has implications for thinking about other countries acquiring nuclear weapons in the future. Some thought that Pakistani scientific manpower was inadequate and the only way the country could have produced nuclear weapons was because it received substantial help from China. Others felt that China’s role may have served to only accelerate the development of Pakistan’s nuclear weapons and was not a decisive factor. This was because making nuclear weapons is no longer as challenging as it may have been in the 1950s and 1960s, and since then it has been possible for proliferant states to acquire much of the necessary fissile material production and missile technology from other countries. Regardless of the debate of what should have been expected of the two countries in 1998, today both countries are seen to be following an open-ended arms race of the kind that characterized the Cold war albeit on a much smaller scale.

**Nuclear Drivers: Technology, Policy and Institutions**

Another set of discussions during the workshop concerned the drivers for nuclear developments in India and Pakistan. Three possible contenders are technological momentum, policy choices made by national leaders and political parties, and institutional interests. If the first factor is the dominant driver, then India and Pakistan would essentially develop all the different kinds of weapons and delivery vehicles they are capable of developing and the arsenal would keep on growing in size and sophistication. The importance of the second factor was apparent in India’s weapons tests of May 1998, which was decided by the Bharatiya Janata Party that had come to power a few weeks earlier. Finally, bureaucratic and institutional interests determine various aspects of the
nuclear arsenal, such as the relative importance given to the different arms of the triad, the division of control between the civilian leadership and the military, and the pursuit of policies and resources to create additional and new weapon systems, capabilities and facilities on the part of the nuclear weapons research, development and production complex.

Both countries have seen the rise of a new set of nuclear policy focused think tanks and academic programs that increasingly dominate the public narrative on nuclear weapons policy. They tend to advocate a belligerent, expansive nuclear arsenal and postures, based on conservative readings of classic Cold War American nuclear strategic texts, and oppose disarmament and arms control measures.

The relative importance of these three different factors was debated, although it was recognized that the importance varied between India and Pakistan. But depending on the relative importance, one can envision different futures. For example, if technological development is the primary driver, then doctrine or policy will not affect the trajectory.

**From the Outside In: The Changing Global Context of Nuclear South Asia**

What happens in India and Pakistan is strongly shaped by two powerful countries outside the region: China and the United States of America. The debate over the role of China in shaping Pakistan’s nuclear arsenal has already been described. But looking to the future, some suggested that the architecture of the Chinese arsenal, which is very different from the US triad, might have an impact on how Pakistan’s nuclear arsenal evolves. However, others pointed out that China’s nuclear postures were themselves evolving, and the country was modernizing its arsenal. Earlier economic development was the priority for China’s leadership, and nuclear weapons were sidelined, but in the past two decades, a larger and rapidly growing economy has allowed a major commitment to modernization of China’s military and nuclear weapons capabilities. Others pointed out that after the Kargil war, the dynamic had changed, leading to, for example, Pakistan’s development of tactical nuclear weapons.

The role of China in South Asia is also changing, especially since Xi Jinping came to power and started initiatives like One Belt One Road. As a result, China has been responsible for large capital flows into Pakistan. In comparison, although the Indian and Chinese economies are getting more integrated, that is seen as a problem in India because of its growing trade deficit and dependence on Chinese products.

The role of the United States has changed a lot since the attacks of 11 September 2001, which had a huge impact on South Asian politics. In Pakistan, especially, General Pervez Musharraf was forced to join the United States in some of its actions in Afghanistan, which led to significant domestic strife and concern about the possibility of nuclear weapons reaching the hands of terrorists. On the Indian side, the major development came with the US-India nuclear deal that demonstrated that the two countries were entering into a new level of strategic relationship.

Although clearly in relative decline compared to its power and influence at the end of the Cold War and the decade that followed, the United States still shapes the discussion and the framework of South Asian security and will continue to be involved in South and East Asia unless an Asian security system is established. The relationship between these two countries, the United States and China, is itself evolving, including in
the military dimension. India and Pakistan will have to adjust to these changes and fit into US and Chinese policy rather than expect to drive these policies.

From the Ground Up: Civil Society, Media and Democracy

Both India and Pakistan have seen the growth of peace movements in the aftermath of the nuclear tests. But these have not managed to change policy in any significant way. They operate more as irritants, reminding the public about the dangers and costs of nuclear weapons development and trying to delegitimize the governments in their efforts.

In both countries, there have been significant challenges. In India, the character of middle class, which is somewhat different from Western nuclear states, has been a limiting factor in the effectiveness of the peace movement. In Pakistan, the peace movement faced a very strong, at times harsh, reaction from the state, mostly in the form of harassment and personal intimidation, as well as from the public.

Peace groups have found it hard to gain access to a media that has become less interested in covering nuclear policy, except during crisis, and is anyway increasingly fragmented and losing its audience to social media. The traditional print news media has ceased to offer a critical independent voice, in part because of changing business models, which has contributed to a normalization of nuclear weapons in both countries.

In both countries, there has been greater involvement by a larger set of people when there were struggles against nuclear power plants and other facilities at specific locations. In India, the struggle against the Koodankulam nuclear plant that was constructed by Russia is well known. In Pakistan, there was some mobilization against the nuclear power plants being built by China in Karachi and there was even a legal case that resulted in a temporary stay order against the construction of the plant, but it was later removed. The power plants have now been brought under the China-Pakistan Economic Corridor (CPEC), which makes it harder to resist.

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Global Affairs, University of British Columbia) from Canada. All discussions at the workshop were on a strict not-for-attribution basis. However, some of the presentations at the workshop are being written up and will be published in a future issue of this journal.

**Disclosure Statement**

No potential conflict of interest was reported by the authors.

**Notes on Contributors**

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**References**

Kothari, S., and Z. Mian, eds. 2003. *Out of the Nuclear Shadow, Revised and Updated*. 2nd ed. Karachi: Oxford University Press.

Kristensen, H. M., and R. S. Norris. 2013. “Global Nuclear Weapons Inventories, 1945–2013.” *Bulletin of the Atomic Scientists* 69 (5): 75–81. doi:10.1177/0096340213501363.

Kristensen, H. M., and R. S. Norris. 2018. “Status of World Nuclear Forces,” June 2018. Federation of American Scientists. [https://fas.org/issues/nuclear-weapons/status-world-nuclear-forces](https://fas.org/issues/nuclear-weapons/status-world-nuclear-forces)

Ramana, M. V., and C. R. Reddy. 2003. *Prisoners of the Nuclear Dream*. Hyderabad: Orient Longman.