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International Conference and Workshop on Nuclear History

30 October 2016

Indian Assessments of Pakistan's Nuclear Weapons Program in 1970s

Chairman Mr. Banuri, Prof. David Holloway, Dr. Christian Ostermann, Fellow panellists, other distinguished guests, ladies and gentlemen. It is my proud privilege to be a part of this joint endeavour to chronicle the international history of nuclear weapons in our region by the Centre for Security, Strategy and Policy Research (CSSPR), University of Lahore and Nuclear Proliferation International History Project (NPIHP), Woodrow Wilson Center. I am highly thankful to the CSSPR and NPIHP, particularly to Dr. Rabia Akhtar and Dr. Ostermann, for inviting me to this august gathering and allowing me to share some of my ongoing research. That this workshop is taking place in Lahore, one of the most historic cities of South Asia and which signifies the syncretic culture of this region, must be equally celebrated. It is just my misfortune that I could not make it Lahore.

As we all know, we are in what Paul Braken calls the 'second nuclear age'. The origins of the second nuclear age are contested; analysts are unsure whether India's 1974 Peaceful Nuclear Explosion (PNE) or the 1998 nuclear tests in South Asia are its harbingers. However, there is generally an agreement on its characteristics. Led by nuclear resurgence in Asia, this nuclear age is distinct from the Cold War in many ways. The 1998 South Asian nuclear tests broke

the Cold War monopoly of the accepted nuclear powers as enshrined in the Nuclear Non-proliferation Treaty (NPT). Unlike the Cold War where the two superpowers spearheaded the global nuclear race, the current nuclear transition is manifested in a number of states going nuclear. This n-player game has consequences not only for global nuclear proliferation but also for strategic stability. Further, this nuclear transition is not taking place in a vacuum; a complex web of institutions, organizations and treaties – collectively called the global nuclear non-proliferation regime – channel state behaviour in the second nuclear age. Lastly, these new nuclear states do not behave in accordance with rulebooks of the Cold War. Today, nuclear deterrence is being availed to undertake ever riskier foreign and military policies. If deterrence induced caution among superpowers, the same cannot be said for some new nuclear states.

The second nuclear age is therefore a reason enough for all of us to dig deeper into the historical origins of this new phenomenon in global nuclear politics, mostly because unlike the Cold War we now have a direct stake in contemporary nuclear politics. Though policy analysis is a great tool to understand the dynamics of the unfolding nuclear politics in Asia, as Ostermann and Nuti argue in the introduction of a recent special issue of the *Journal of Strategic Studies*, "the new nuclear history can make a critical contribution by forcing us to reconsider or reframe the theoretical premises of the concepts we apply to our understanding of the present – and with which we try to navigate the future." If this is true for global nuclear politics in general, it is particularly relevant for South Asia. For one, to use the analytical lens of Robert Jervis' famous work, perceptions and misperceptions of adversary's intentions and objectives is at the heart of the current turmoil in South Asia. As Charles Glaser argues, objective understanding of the adversary is inhibited by both cognitive dissonances of individual leadership but more importantly, because of the lack of national evaluative capabilities. Understanding each other's history may help in correcting lenses shaping both

individual and national perceptions of the self and other and therefore help in policy-making. Second, the extant literature tracing the nuclear history of South Asia is largely based on journalistic accounts and on oral history. It is in my humble opinion, suffers heavily from lack of primary documentation but also individual biases; in the process, creating legends rather than knowledge or what can be called 'opinionated histories.' Lack of systematic declassification of documents has hugely contributed to this problem. It has also forced indigenous scholars to understand the history of the region through foreign archives which may provide useful guidance but also creates enormous methodological difficulties, For example, what Pakistan and India actually did and what they communicated to Washington are two very different things altogether.

Yet, the situation is improving. First, a new dedicated group of young scholars from both sides of the border are increasingly breaking the boundaries of existing knowledge. NPIHP's contributions to this scholarship are indeed significant. Second, today, we have far better resources available to understand the historical dynamics of nuclear proliferation in South Asia. In my experience of archival research, which Dr. Giordana Pulcini will confirm, Indian archives provide a minefield of information, at least on the Indian side of the story.

In today's presentation, I will talk about the nuclear dynamics between India and Pakistan in the 1970s. I will particularly focus upon India's assessments of Pakistani nuclear program through the reports submitted by India's Joint Intelligence Committee (JIC), which is its highest intelligence coordinating agency, to the Cabinet Secretariat, the Indian government's highest decision-making body between 1974 and 1976. This small presentation must be read as a continuation of the ideas I have articulated in my previous working paper for the NPIHP titled, "the Imagined Arsenal: India's Nuclear Decision-making, 1973-76." It also includes some material from my forthcoming working paper: "India's Nuclear Submarine Program during the Cold War: Internal Dynamics, External Assistance and Shifting Motivations,

1968-1989." However, before coming to the substantive part of this presentation, I would like to put forward two caveats. First, doing archival research is not similar to providing country perspectives. The main task of historians, in my humble understanding, is to understand state behaviour rather than to provide its justifications. This disciplinary requirement guides my presentation. Second, if journalism is the first draft of history, archival research is just another draft, though advanced one. If history is to be considered as a scientific discipline, we have to acknowledge that there is nothing called the 'absolute truth.' In short, a historian has to begin his or her quest by acknowledging his limitations and fallibility. I therefore not only expect interventions on my research but would really welcome comments and questions.

India and Pakistan's Nuclear program, 1974-76

In May 1965, Zulfikar Ali Bhutto, in an interview to *Manchester Guardian* had argued that if India got a nuclear bomb, "we (Pakistan) will eat grass, even go hungry but we will get one of our own (nuclear bomb)." The context was the growing clamour in New Delhi to go nuclear after China's October 1964 nuclear test. However, for ten long years until May 1974, India refused to satisfy the necessary condition for Pakistan's nuclearisation laid down by Bhutto in 1965. However, as Adrian Levy and Catherine Scott-Clark have argued, Pakistan had found a reason to go nuclear after 1971: the war in Bangladesh had left Pakistan bifurcated. The beginnings of Pakistani nuclear weapons program in the early 1970s were a result of Islamabad's conventional insecurity. Where it fell short in conventional power, nuclear weapons would have sufficed: the existence of nuclear weapons could have allowed Pakistan to avoid another 1971-type military defeat. As this author has suggested in his previous working paper, both before and immediately after the 1974 PNE, India remained oblivious to the Pakistani nuclear program. Given that the PNE was neither accompanied by a concerted military program nor did it lead to immediate weaponization of India's nuclear capability, the May 1974 event cannot be considered as the 'orginal sin' in the nuclearisation

of South Asia. However, it did intensify Pakistan's quest for nuclear weapons. As Prime Minister Bhutto argued in December 1974, "If Pakistan is not able to acquire weapons (conventional), which can act as a deterrent; it must forgo spending on conventional weapons and make a big jump forward concentrating all its energies on acquiring the nuclear capability."

By 1975, Bhutto's 'big jump' was creating some ripples in New Delhi. In March 1975, the Joint Intelligence Committee (JIC) prepared a paper on "Pakistani Capability to Produce Nuclear Weapons." The JIC paper made a number of observations. First, that Pakistan's proposed "fuel element fabrication facility" and the "fuel reprocessing facility" will at least take three to five years to develop. Second, it acknowledged that as the international safeguard regime becomes stricter, it will be hard for Pakistan to obtain Plutonium from the proposed reprocessing plant. Third, difficulties in procuring fissile material notwithstanding, the major barrier to Pakistan's nuclear capability would be develop "the shaped explosive technology": the conventional trigger for nuclear weapons. The report, therefore, argued that "it can be safely assumed that unless Pakistan is helped with explosive technical knowhow of shaped explosives (Pu 239 or U 235) etc., Pakistan would not be in a position to explode a nuclear device at least for four from now." The JIC report also reflected upon the possibility of external help in Pakistani nuclear efforts. Though considered "remote", the "possibility of China helping Pakistan", as the report argued, "cannot be completely ruled out" and therefore "merits constant watch." In its final analysis, JIC came to a conclusion that there was a "possibility" of Pakistan "exploding its first nuclear device in four to five years time." However, it qualified this observation by expecting a long lag between an explosive demonstration and its conversion to nuclear weapons: "however, even after this development takes place, it may take considerable time before Pakistan can go for production of nuclear weapons."

At around the same time, the Indian foreign office was receiving information on possible Pakistan-China nuclear collaboration. From Ottawa, the Indian embassy sent details of Chinese scientists misusing Canadian supplied equipment to Pakistan. As the embassy had learnt from its sources in Ottawa, "Allegedly Pakistan had agreed to share the nuclear techniques learnt by them from the Canadians with the Chinese in exchange for military assistance as also due to political reasons even when Canadian supplied facilities were under safeguards. The major concern for the Canadians was the "theoretical possibility" of Pakistan going nuclear with China helping them in reprocessing Plutonium. This problem was compounded by China's aversion to the NPT. Similar concerns were raised by the Indian embassy in Beijing. In April 1975, the Indian Charge D' Affairs (CDA) at Beijing wrote to the Foreign office in New Delhi over the visit of Chinese Vice Premier Li Hsien-Nien to Pakistan from 20-25th April 1975: "collaboration in the nuclear field might have been one positive outcome of Li Hsien-Nien's visit to Pakistan", argued the Indian CDA. During this visit, the Chinese Vice Premier had visited some atomic facilities in Pakistan including the Karachi nuclear power station. The Indian CDA also connected Nien's visit to the Chinese scientific delegation led by Kuo Pei-Shen (Chairman, Institute of Physics at Chinese Academy of Sciences) which had visited Pakistan in December 1974. As the CDA argued, "it can be surmised that such collaboration (nuclear) would be advantageous to both countries." Chinese could get hold of "western knowhow in nuclear technologies", especially of the Canadians; it also gave Pakistan "opportunities which it has been seeking in the field from any place whatsoever."

Pakistan acquiring a nuclear capability could have been extremely disconcerting for Indian decision-makers. As the earlier telegram from Ottawa suggested, "the possibility of Pakistan manufacturing nuclear weapons with Chinese help would naturally have serious implications for our defence and military preparedness." New Delhi had lived with a Chinese nuclear

capability for a decade. With Pakistan, the need to go nuclear was never even felt. The reason behind this policy was that Indian decision-makers were satisfied with their conventional capabilities vis-a-vis both China and Pakistan. This is has been explained by the author in his previous working paper. A telling revelation of this thinking on nuclear weapons and Indian security is also available in the minutes of a conversation between Indian Foreign Secretary and British MP from Liechester, Greville Ewan Janner in August 1974, just three months after the 1974 PNE. During this meeting, Janner had specifically asked the Foreign Secretary on why India does not "justify (its) nuclear explosion (PNE) on the grounds that China possessed nuclear weapons." For the Indian Foreign Secretary, nuclear deterrence could not have been achieved by merely exploding a device; besides pointing out that India was against nuclear weapons, from a "practical point of view" it was not only expensive but also that "one can never have enough nuclear weapons and delivery systems to create an effective nuclear deterrent." When Janner prodded the Foreign Secretary on justifying India's nuclear explosion vis-a-vis Pakistan, the Foreign Secretary argued that "India had never felt the need for nuclear weapons to defend herself from Pakistan" and supported this argument through "India's experiences in the 1965 and 1971 war." These observations were in line with the views expressed by India's Ministry of Defense on the PNE in January 1975: the Indian military strategy was completely based upon conventional firepower. Even when in June 1973 Indira Gandhi had argued that "if the conditions require it, India would give serious considerations to converting its nuclear option to nuclear hardware," those conditions were not yet reached irrespective of the 1974 PNE. A successful Pakistani nuclear program could have provided India those conditions. But there was still some time before India would feel the heat of Pakistani endeavours.

In February 1976, The JIC once again studied the Pakistani nuclear program in order to review its 1975 study. In this 11 page report, the JIC perused in minute detail all aspects of

the Pakistani nuclear program: its nuclear reactor capability; its budget allocations; efforts on Uranium exploration; fuel fabrication facilities; heavy water production; fuel reprocessing capacity and finally its efforts on Uranium enrichment. On reactor capacity, the JIC noted that even when the average load factor of Karachi Natural Uranium Power Plant (KANUPP) has increased from 27 percent to 44.7 percent in last one year, the reactor also suffered due to "reactor poisoning" and leakage of Heavy Water. As far as the 600 Mega Watt Chasma plant was concerned, the work was still at preparatory stage: invitation of construction and equipment tenders and remote sensing of the site. However, negotiations for construction of the plant with German and French frims – Lahmeuel and Framatone – were not "fruitful." The report mentioned that Beijing has sent a team of 12 nuclear scientists to train Pakistani scientists in running reactors "which are going to be supplied by China." In this process, some Chinese material and equipment has also made its way into Pakistan. On Uranium exploration, the JIC report found that Pakistan has now entered the second stage. It had launched the first stage in 1974 which involved preliminary exploration of possible mines. Sulaiman range and areas around Dera Gazi Khan were identified. In the second phase, preparations have begun with the help of the IAEA and the UNDP to further explore the more promising of the two sites: the Sulaiman range. The report also suggested that some Turkish scientists were helping Pakistan in "radioactive exploration" and Canada had signed an agreement to conduct magnetic surveys of the site. As far as fuel fabrication capability was concerned, the JIC report argued that the facility at Mianwali was supposed to be finished by 1975. However, Canada, under its new policy, has held up the equipment since November 1974 and resupplies would only begin after a new safeguards agreement was signed.

JIC also referred to a possible sale of 50 kilograms of Uranium powder (Uo2) to PINSTEC by British Nuclear Fuel Limited for experimental studies. The report also touched upon Pakistan's efforts to procure Heavy Water from outside sources. Even when Canada had

supplied "some quantities" in late 1974, sourcing from other countries will only be met with disappointment, suggested the JIC. The reason was that a recent request by Pakistan for 5 tons of Heavy Water was referred to the IAEA by West Germany. As the report noted, "Heavy water is not likely to be available outside the safeguards treaty." It was also therefore that the report rubbished the claims of Luxemburg providing 400 kilo grams of Heavy Water to Pakistan.

The last two issues concerning Pakistani capability which the report studied were fuel reprocessing and Uranium enrichment. For any Pakistani nuclear capability, these elements were the prerequisites. But the JIC appears to have had little confidence in the success of Pakistani efforts to procure these technologies and material. On fuel reprocessing technology, the report stated that the Belge-Nuclearies, a Belgian firm, had been contracted by Pakistan to train fifteen of its scientists in reprocessing methods with the final objective of establishing a laboratory in Pakistan by 1977. Calling it a "training" exercise for Pakistani scientists, the JIC doesn't appear to be extremely concerned. The reason was that JIC had received "no indication that Pakistan has found a separation plant from any source." The French had not yet agreed even though the talks were "underway "for delivery of equipment to process and irradiate Plutonium." Yet again, the talks appeared stuck over safeguards, a factor which also translated into JIC opinion that it was "unlikely that any European country would supply Pakistan" with reprocessing facilities.

On Uranium Enrichment, the JIC stated that Pakistan was interested in "nozzle enrichment" process patented by a West German firm (STEAG Energy Services, ESSEN). The JIC observed that the West German Government "is not likely to approve any such commercial agreements till such time the strict safeguards are signed." However, it also tried to judge whether Pakistan could receive South African help in Uranium enrichment, given the fact during the 1975 Board meeting of the IAEA Pakistan and Iran had opposed South Africa's

expulsion from the agency. For the JIC, many West Asian countries were also interested in South African nuclear expertise on enriching Uranium and the technology could have found its way to Pakistan. "There may be secret deal or understanding with South Africa," argued the JIC and considered it as 'open question". Clearly, even when DR. A.Q. Khan had shifted his activities to Pakistan in 1975, the Indian intelligence had no clue about Pakistan's progress in Uranium enrichment. Clearly, the JIC was oblivious of AQ Khan's activities till this time.

Of the JIC's assessment of Pakistani capability, two observations are apparent. First, for the JIC, Pakistani efforts in its nuclear program were not meeting much success, at least till 1976. Second, the one factor which constantly harassed Pakistan was the issue of "safeguards." Ironic it was, but the emerging "safeguard" regime – intended primarily to hurt India's nuclear program – was helping New Delhi's cause as far as the Pakistani nuclear program was concerned. The JIC was very much in cognizance of this trend and reflected upon this factor at length under a sub-section titled "Effects of Nuclear Safeguards." Any negotiations between France and Pakistan over the reprocessing plant would be on lines similar to the trilateral agreement between signed between France, Republic of Korea (ROK) and the IAEA in early 1976, the JIC opined. If that be the case, then the reprocessing plant would be under life-long safeguards. The JIC was particularly concerned that Pakistan may try to amend Article 30 of the France-ROK-IAEA agreement so that perpetual safeguards are not applied. However, as the JIC argued that if Pakistan signs "such an agreement (the original France-ROK-IAEA agreement), there is very little likelihood of it ever producing an atomic explosion with the knowhow it obtains from France." The JIC also noted that with formation of the "London club", in any new nuclear agreement the members will "insist on perpetual safeguards." Though the danger of unilateral abrogation still existed, the JIC argued that

"Pakistan is slowly moving towards the new safeguards….when this agreement (France-Pakistan-IAEA) comes into force, Pakistan will be bound for it for 15 to 20 years."

In its conclusions therefore the JIC doesn't appear highly concerned over Pakistan's capability to produce nuclear weapons: "Pakistan's nuclear programme, it seems, has come to a standstill." The logic was simple. Agreeing to the safeguards meant abandonment of nuclear weapons program; non-acceptance would lead to non-cooperation by the Western countries. Yet there was dark-horse in the race: China. As the JIC argued, "If Pakistan at all succeeds in exploding a nuclear device within the next five years or so, it will probably be with the help of China which is the only nuclear power that is not the member of the IAEA and is known to oppose nuclear hegemony."

Concluding Thoughts:

Three important conclusions can be reached from the above discussion. First, it supports the author's arguments made in the earlier working paper that India's nuclear option remained non-weaponized in the immediate vicinity of the 1974 PNE largely because India did not experience a nuclear threat from either Pakistan or China. India had lived with the Chinese nuclear capability for a decade. By 1976, India and China were making attempts to normalise their relations most evident in the exchange of ambassadors in August 1976. Given Pakistan's history of revanchism in the sub-continent, nuclear weapons in the hands of Pakistan would have posed a serious threat to Indian security and would have surely forced the Indian Decision-makers to acquire a nuclear deterrent. But till 1976 this was not the case. It was only in 1979 that the JIC sounded the alarm bells to the Indian decision-makers on Pakistan mastering the Uranium enrichment technology and its ability to explode a nuclear device. It was therefore that Indian attitude towards weaponizing its nuclear option saw a gradual change in 1980s.

Second, it is also important to understand that India's own nuclear program underwent serious setbacks after 1974. For all its words of defiance, India showed amazing alacrity in accommodating Western concerns on safeguards and export controls. In June 1974, it agreed to extend the safeguard regime on Tarapur nuclear power plant. In July 1974, negotiations began in Ottawa for resolving the Canadian suspension on nuclear cooperation with India. These negotiations stretched over a period of approximately two years till May 1976, when Canada finally took a decision to terminate all nuclear cooperation with New Delhi. However, what is most interesting in these negotiations is the fact that by December 1974, India was ready to accept a package deal which entailed full scope safeguards over RAPS (Rajasthan Atomic Power Station) I and II in lieu of supply of material and equipment from Canada. India had also agreed to Canadian demand that till the 1975 NPT Review Conference, New Delhi should desist from any further PNE's. The deal however suffered on account of Canada's changing attitude as the negotiations on Nuclear Suppliers Group progressed in 1975. Second, Indian scientists had argued publicly after the 1974 PNE that it was indeed a very cheap affair. However, the scientific enclave was fully cognisant of the costs involved in pursuing a full-fledged military nuclear program. As Dr. Homi Sethna, Chairman of India's Atomic Energy Commission, told the Canadian High Commissioner in November 1974, "India had absolutely no intention of using nuclear energy for military purposes. Weapons program were very costly and even a modest one would involve an expenditure of 20000 crores." India also cancelled a number of nuclear cooperation agreements with countries such as Brazil, Argentina and Peru. Western pressure was largely responsible for New Delhi's decision.

Lastly, the emerging safeguard regime harmed India's nuclear program; however, it was also seen by Indian decision-makers as helpful agent in constricting Pakistan's nuclear weapons program. In fact, the conclusions reached by the JIC in 1976 signal that it was more than

satisfied with the impact of the new safeguards regime on Pakistani nuclear program. Of course, the Indian intelligence had come to know that Pakistan has acquired the technical knowhow for centrifuge process of uranium enrichment at Kahuta. Therefore when in April 1979, the JIC revised its estimates of Pakistani nuclear capability, the Indian decision-makers were left highly surprised. As the Indian Foreign Minister, Atal Bihari Vajpayee complained to U.S. Secretary of State, Cyrus Vance on 24 April 1979, "how was that inspite of laws and safeguards, Pakistan had managed to move ahead in acquiring a nuclear capability."

Thanks a lot for your kind patience.

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