

Reducing Nuclear Dangers after the AQ Khanspiracy

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Abstract

The essay defines Pakistan's brazen retailing of sensitive nuclear technologies as Bomb Process Outsourcing (BPO) and places it in a larger perspective. It offers a short retrospective of the development and manufacture of nuclear weapons by the P-5 in which significant manpower and materials were 'foreign'. This is true of the programmes of Israel, Iraq, South Africa, Argentina and Brazil as well. Pakistan, has now, contributed to North Korea, Libya and Iran.

The essay is skeptical about claims made about the 'successes' posted under the non-proliferation or counter-proliferation regime and argues that Libya and Iran making a clean breast is due to economic-political-security accommodation between them and USA.

It contends that the Pakistani BPO poses nuclear dangers more to Europe and Asia than USA. However, the establishment and the electoral system are fanning the BPO flames for short-term sectoral and political gains.

The Pak BPO constitutes one of the most serious threats to international peace and security. To reduce the nuclear dangers posed by the Pak BPO, the essay recommends immediate consideration by the Security Council and collective action under Chapter VII of the UN Charter. If the Council is deadlocked, an emergency session of the UNGAT could be convened. Additionally, an international conference needs to be convened as soon as possible on 'Reducing the Nuclear Danger'. This was accepted at the Millennium Summit in September 2000.

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Models with Feet of Clay

The new BPO of maximum fear to USA is *Bomb Process Outsourcing*, especially after the AQ Khan exposé of February 2004. But why be afraid? Is it really new? It is a hypocritical nuclear jungle out there and one is tempted

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to ask: Let who is pure, cast the first anti-nuclear stone; and not wait for an answer.

The history of the Manhattan Project shows how uranium was obtained from South Africa, heavy water from Norway, design data for the Hanford plutonium-producing reactors from Canada, theoretical and experimental nuclear data from European expatriates, mainly Jewish. In a sense, the US nuclear arsenal could be called European, even universal. The techniques adopted could invite the contemporary phrase, Business Process Outsourcing.

So, if AQ Khan has resorted to BPO, purloined a centrifuge design from Netherlands, exploited grey market cupidity, bypassed export control regulations and distributed largesse from the billions of ‘Secret Service Funds’ of West Asian origin — while tucking some away for a monsoonish day — why hyper-ventilate now? He worked against odds in putting together the first cascade in Sihala in 1977-78 and there was no guarantee of success or support. He started as a rank outsider in a field monopolized by successive Chairmen of the Pak AEC who misled many Presidents/Prime Ministers about Pakistan’s nuclear capability through the plutonium route. The fact is that Pakistan did not have even an unsafeguarded plutonium ‘kettle’ (one was commissioned recently, courtesy China) or an unsafeguarded fuel reprocessing plant to credibly produce weapons-grade plutonium. AQ Khan came as a breath of fresh air, demonstrated the Dutch-pinched uranium enrichment capability in a mini-cascade of centrifuges at Sihala through mini outsourcing. And, went on to build the larger cascade at Kahuta; unsafeguarded all the way. Pakistan is entitled to have treated him as a hero when a number of charlatans strutted on the stage and claimed non-existent capabilities to an unquestioning leadership and a credulous public while both wrapped themselves in the tattered flannels of nuclear delusion. From the Pak perspective he delivered; at least till yesterday when nemesis overtook hubris. A ‘hero’ of yesteryears stands rubbished overnight.

The brazenness of AQ Khan’s actions as CEO of a ‘private’ No. 2 Nuclear Proliferation Initiative Ltd — limited to Islamic countries and some friends in North Korea, so far — is breath-taking. It has left USA in a state of compromise due to its pursuit of Al Qaida and (partially Taliban) elements in Pakistan with its new Major Non-NATO Ally (MNNA). This, in effect, means condoning — and indirect support of — a very serious ‘material breach’ of assurances given by Pakistan to the US which would invite a number of sanctions mandated under US law.

An Embarrassing, Short Retrospective

A short retrospective would reveal how, from being the single nuclear hyper power in 1945, US has opposed — and later, lived with — proliferation from within the Western world. This occurred when UK and France went nuclear. The Soviet Union benefited from information and technology leaked by Left-oriented scientists in USA, UK and Canada. Meanwhile, the communist world saw camaraderie and comradely proliferation from USSR to China. More recently, the Wen Ho Lee episode has revealed the leakage of W 88 (miniaturised) warhead designs from Los Alamos to China's advantage. There was much hand-wringing and some increase in security measures in the US.

The chain reaction continued and in a non-comradely but 'national interest' way, China has provided Pakistan with sensitive nuclear trigger know-how and high technology transfer in missile areas.

Let us look a little further. The West German uranium enrichment process (nozzle technology) showed up in South Africa. Israel's nuclear capability is known to involve France via the Dimona reactor. Further, 200 kg of weapons-grade uranium (enough for at least 10 fission bombs) went missing from Pennsylvania only to land up in Israel. This was unquestionably a very early, very major 'material breach' involving the lead non-proliferation crusader, USA.

Germany and Italy continue to be non-nuclear though a lot of quiet grey nuclear commerce involving their companies and Pakistan has occurred — with or without the knowledge of the Governments. There has been some speculation over the source of heavy water for commissioning India's indigenous Madras Atomic Power Plant I when the indigenous heavy water plants under-produced.

We may also note that many countries have had nuclear weapons stationed on their territory, including Japan. Some still do, despite downsizing and the availability of US long-range vectors which reduce the need for overseas basing and pre-positioning.

Clearly, US nuclear monopoly stood severely diluted in the decades before 1995 due to overt and covert complicity of the nuclear weapon states themselves. It is rather ironical that the much lauded but ineffective NPT has been conferred the ambrosial gift of eternal life in 1995. Grey area nuclear

commerce will thrive in the future as long as discriminatory regimes live side-by-side with the non-fulfillment of treaty obligations by the nuclear weapon states on the reduction and elimination of nuclear weapons.

If one honestly investigates the evolution of the nuclear weapon programmes of UK, France, USSR and China — apart from those of Israel, South Africa, Pakistan, North Korea, Iraq, Iran, Libya, Argentina and Brazil — the deeply tangled web of documented and undocumented, discreet and indiscreet BPO would comprehensively expose the hollowness of the touted spectrum of nuclear control measures.

We may recall, since administration memories tend to be selective if not fickle, that Nazir Ahmed Vaid, a Pakistani, was nabbed in Texas in 1984 when illegally trying to ship krytrons (manufactured by the US firm, EG&G) to Pakistan. Krytrons are high speed electronic switches used for triggering near-simultaneously in detonation (usually less than 1 microsecond) of the high explosive package around a nuclear weapon core to increase uranium density and in turn, create super-criticality of the initially sub-critical nuclear core. Plea bargaining was entered into and Nazir was safely returned to Pakistan. This ironic action is a bit like a captured killer shark being returned to the sea. [Details of the activities of the clandestine procurement network operated world wide, by the Special Works Organisation (SWO) under the Pakistan Army for AQ Khan's uranium project were available in the media (both print and TV) since 1977, at least].

Let us squarely accept the fact that nuclear globalisation has occurred rather earlier than economic liberalisation. Praise be to Busharraf, Osama bin Laden and AQ Khan in forcing the P-5 to accept nuclear reality after going through the denial syndrome typical of alcoholics and drug addicts.

Asian Skepticism

There is a large body of persuasive evidence to make informed circles in Asia justifiably skeptical about the seriousness or effectiveness of 'international' non-proliferation and counter-proliferation initiatives of four decades and more. We have been witness to the play in Pakistan of USA's principle-challenged geo-politics and its misleading non-proliferation rhetoric. This has been a truly odd couple, a dangerous pair of strange bedfellows.

The adventure of throwing the Soviets out of Kabul led US policy-makers to throw out the Symington Amendment in December 1979 as well. Add the

many ineffective amendments/sanctions which were not meant to be implemented seriously and the sinister dalliance with the Taliban/Al Qaida. Should then, the world be surprised that mutant monsters were ushered into existence with US mid-wifery?

There is sudden awareness that, if AQ Khan's international clientele execute their anti-US agenda, it could be the end of American civilisation, as Americans know it. To handle this threat, warmed up leftovers prepared from the offal of the holy cows of non-proliferation regimes are being off-loaded as counter-proliferation miracle cures. Strange it is that the law of conservation of irony, truly, is as eternal as the NPT after 1995.

False Non-Proliferation Claims in Recent Times

The Madison Avenue approach of USA and its followers involves the USP (Unique Selling Proposition) that non-proliferation has actually worked. Instances cited in recent times include: CIS members signing up as non-nuclear signatories to the NPT while nuclear cores were whisked off to Texas or Moscow; South Africa's (exactly) six-and-half nuclear weapon cores being given up to unknown but safe recipients on the eve of black majority rule; Argentina and Brazil abandoning their programme after 1983 when Argentina came under civil rule. And, wonder of wonders, NPT signatories like Libya and Iran have squealed *mea culpa* or *peccavi*. Pardon us, AQ Khan (and others) gave us technology with a nod and a wink from the Pakistani establishment of the day (and its successors) for ideological and monetary considerations.

There are claims that the Additional Protocol to the Blue Book safeguards under the NPT (initiated in 1993 and in force from 1997) is actually the magician's wand which pulled out some nuclear mini-rabbits out of Iran and Libya. Can this hypothesis be stood on its nuclear head? The *cognoscenti* know that each of these countries had *uniquely* different political/economic reasons (or incentives) for pulling off from the nuclear brink.

Though late in the day, let us recognise that the political economy of countries is a 2-key system, really, with politics being the first and economics the second. These keys are precisely those which were completely ignored by the fabled drafters of the NPT. By engraving in granite and worshipping *technological fixes* of dubious effectiveness, the P-5 has treated the world to a misleading side-show for nearly 36 years. Members of the Nuclear Suppliers

Group and signatories to the NPT need, at a minimum, to publicly admit that the cited successes of the non-proliferation regime based on these fixes are basically false.

The prime factor in proliferation is a leadership's perceptions of nuclear insecurity irrespective of the form of governance and whether these are based on fed fears of entrenched elites or are rooted in reality from actual threats. When such threats have *not* diminished with time and the international non-proliferation system has done precious little, the go-ahead signal could be expected in such a government along with phased financial authorizations and review procedures. The latter part of the signal would strongly involve the state of the economy with balancing of affordability, possible economic pain and finding the resources, internal and external. The key point is, that the international system's technical fixes and procedures, defective as they are at birth, can do sweet nothing. We have seen the Swiss father of the Zangger trigger list recommending approval of an export licence to Pakistan for items associated with a uranium hexafluoride plant directly connected with Kahuta. It is like the Pope approving one of the cardinal sins. And the fact that Dr Zangger actually recommended clearance of this transaction speaks volumes about 'legal niceties' and export control regulations, of precept and practice.

Secondly, when a country teeters on the brink of economic disaster like Argentina after the Falklands War, even corrupt politicians and bureaucrats could be easily persuaded to toe the non-proliferation line. A nuclear weapons programme doesn't keep the economic wolf away from the door and knowledge dawns, with wisdom lingering on, hopefully. But to parade the Argentine and Brazilian cases as indicative of a non-proliferation policy success is creative interpretation of the truth.

The coming clean of Libya and Iran has more to do with flexing of US military muscle through the Iraq invasion of 2003 and threats over regime changes in the area as a whole. Both countries were *not* on the verge of an economic disaster but kept their nuclear weapon programmes alive for decades while exposing the ineffectiveness of the nuclear non-proliferation regimes. Much else would have preceded the US invasion of Iraq in 2003 and occurred in the shadows. What made Libya spill the beans? It will be months if not years before the contents of the quiet dialogues of the past few years between USA with Libya and Iran would surface. It is permissible to speculate that the softening has many factors. First, there is the coupled prospect of a less

belligerent Libya and a less anti-US policy foreshadowing a change of guard in Tripoli. Second, Libya has extended cooperation to USA on the counter-terrorism front; quite unimaginable in earlier times. Third, compensation for Lockerbie victims has been settled. Fourth, in some vague *quid pro quo*, it is likely that sanctions against Libya may be removed and the US oil industry may see some resumption of earlier ties. Fifth, there is likelihood of a quiet assurance from USA of a non-attack on Libya which could reduce Libya's sense of insecurity. Sixth, all these factors may have been wrapped up in the public presentation of the abandonment of the Libyan nuclear weapon programme as another non-proliferation success story. Incidentally, it is obvious that Israel has received a significant bonanza through this abandonment while it keeps its own nuclear arsenal without a cap or roll-back.

Similarly, USA needs considerable unofficial help from Iran in handling the plate of the Shia hot potato in the administration of post-invasion Iraq. This, of course, is best handled by quiet diplomacy, far away from the glare of publicized press conferences so that the contours of mutual accommodation could be explored and clinched. Is that all? Not likely. Iran's support of the Hezbollah and its impact on Israel's security would also have been addressed. Thirdly, the 'feared' export of the Iranian Islamic revolution to other parts of the world need to be assuaged. Fourthly, the peaceful and not-so-peaceful nuclear and missile projects of Iran — under execution with a bit on the side from Pakistan, China, Russia and North Korea — is another good candidate in the US agenda for the many quiet meetings that have taken place between Iran and USA. What *quid pro quo* would Iran have demanded? At a minimum, a US assurance that US won't attack Iran and no games played for a regime change. Both would reduce Iran's feeling of insecurity. In the process if Iran gives up its nuclear ghost and ends up fingering Pakistan, the only comment that can be made is that these are strange political, economic and security times. We have to expect the unexpected.

What do the nuclear coffee dregs tell us about the nuclear *volte face* of Libya and Iran, both NPT signatories? They have clearly and successfully pursued their nuclear weapon programmes despite the publicised effectiveness of the non-proliferation regimes. Secondly, both have changed course due to the quiet *political and security accommodation with USA*.

Is the BPO Fear of USA Justified?

Hardly. Understandable and true that the US psyche was deeply scarred after 9/11. It also helped rally the country around the flag of vulnerability to catastrophic terrorism. And the volume of the clarion call has been boosted by injecting WsMD into the terrorist's quiver: first because of some crude drawings seized in Afghanistan; secondly, due to the involvement of two Pakistani nuclear engineers with Osama which surfaced in end 2001; and, now, because of AQ Khan's profligacy involving the 'diffusion' of centrifuge technology and Chinese trigger designs to some known countries and possibly, some unnamed non-State actors.

It is relevant to recall that a far, more serious situation involving several 100s, if not 1000s, of Soviet nuclear weapons prevailed after the collapse of the USSR. Physical security was in a shambles; pilfered parts/materials were up for sale and catalogues were widely circulated. It looked like a garage sale of an unimaginable variety. USA, then, worked closely with Russia and through some open, some closed methods whisked away nuclear pits from some of the CIS to Amarillo (Texas) or to Moscow. Economic inducements were generously included in the operation. There is still a lingering suspicion that not all weapons or parts could have been covered; however, the international community has to accept the assertions of USA and Russia that everything is alright now.

On the eve of majority rule in South Africa, six and a half nuclear cores were whisked away to safety under a 'projected' IAEA operation. It had a lot of German and US fingerprints.

Regarding AQ Khan's centrifuge designs floating in interesting places and their impact on US security, the following reasoned assessments from the technical and security perspectives can be offered. Technically, even if centrifuge parts and DIY manuals are available, a centrifuge cascade cannot be put together like a Lego kit. The destinations mentioned in the media do not have the local or expatriate technicians, engineers and scientists from a number of disciplines to assemble a cascade. Where are the inverters and control instrumentation systems? Where are the jigs, fixtures, tools and test instruments? Assume that little elves working did the trick overnight. Where is the gas handling system; and, more fundamentally, where is the assured supply or local manufacture of uranium hexafluoride, the feed material for the cascade? Wherefrom have the destinations mentioned in the Khan expose

got ammonium diuranate (i.e., refined ore in the form of ‘yellow cake’), which is the starting material for making hexafluoride? And, would there be uninterrupted supplies? To dig deeper, if Iran, Libya, or North Korea procure yellow cake in significant quantities, the supplier and recipient have to inform IAEA. If it is a clandestine transaction, the potential suppliers are well known and can be easily tracked down — unlike the dodgy UK document of a Niger sale of uranium to Iraq seen recently. (In the case of Pakistan, at least, we know that a turnkey 200 tonne hexafluoride plant was set up by CES Kalthof of Germany).

Let us go beyond and assume that another batch of night-shift elves have solved these technical problems and, presto, produced weapons-grade hexafluoride. The next question is: where is the Uranium Metal Facility to convert it into metal? Where is the machining centre to make parts of the nuclear core (or pit)? If a third batch of elves is brought in, one would need a fourth batch to produce the high explosive (inert) segment and trigger; plus a fifth batch to work out the arming and fuzing sub-systems. To sum it up, such Elf-Reliance financed by Pelf-Reliance would be very infirm. These are straight-forward technical issues which go beyond the shipment of a few centrifuge parts or trigger design drawings (translated into Arabic from Chinese, perhaps) and strongly indicate that realisation of actual weapons and execution of a nuclear attack in USA is a very very distant prospect.

Assume next that the weapon in a large number of disassembled parts is to be smuggled into mainland USA in line with nightmare scenarios in fiction. With increased international cooperation, sharing of intelligence and the oppressively strict security measures in force at US ports and airports, this will be a logistics difficulty of the highest magnitude. Add the additional facility provided under the Proliferation Security Initiative (PSI) for boarding and seizure on the high seas of WsMD and missile contraband. The cumulative probability that a weapon could be made elsewhere, smuggled as parts and assembled for detonation in USA would be vanishing small. But to the frightened, every shadow would be a ghost.

This analysis would, hence, indicate that the BPO fear of USA is quite unfounded — even if paranoids could have real fears. It is quite valid to assume that this type of analysis would have been undertaken in USA and the conclusion wouldn’t be different.

But the US policy orientation does not appear to be guided by such an analysis and the reasons are not difficult to find. Having made non-proliferation and counter-proliferation as cornerstones of foreign policy, it would be embarrassing for USA to admit that the threat was actually '*misoverestimated*'. In election year, it also makes sense to fan the sputtering flame of insecurity in building up Fortress America and push for a string of budgetary increases. As life in USA returns to normalcy, its citizens may tend to forget 9/11, and shrug their shoulders as they go about their work. But 9/11 should not be allowed to be forgotten from the political canvas. Those memories and images would not be allowed to fade away, more so in an election year where projection of a firm leader may have electoral advantages. Here, projecting and embellishing the (false) image of a highly unlikely catastrophic nuclear attack on mainland USA would help. The persuaders are not hidden.

The international community would be well advised to accept justifications of US policy and actions with due analysis even if a tendency to toe (or mistletoe) the US line exists. And note the advice contained in the lines: "Lady, be wary of Cupid/ And take heed of the caution in this verse/To let a fool kiss you is stupid/To let a kiss fool you is worse".

Can the Nuclear Danger from the Pakistani BPO be Reduced?

After AQ Khan was 'pardoned' by Gen Musharraf in February 2004, Islamabad said that Pakistan would cooperate with IAEA but not hand over any documents about the Iran and Libya transactions. Media reports said that the IAEA formally sought Pakistan's agreement in March 2004 to inspect Pakistan's nuclear establishments in this regard. Melissa Fleming, IAEA's spokesperson said that the agency expects cooperation from Pakistan in the ongoing investigations on proliferation and illegal nuclear exports. She later said that no such request was made! Meanwhile, Pakistani officials said that there is "no need for inspections" since Pakistan is already a "declared nuclear country". Dr M Mohammed El Baradei, DG. IAEA said that he expected cooperation for 'environmental sampling' and in comparing Pakistani centrifuge components with those available in the "international black market" which landed up in Iran and Libya. These developments indicate that the cooperation which Pakistan may extend would be rather limited.

En passant, it is useful to recall that India, Libya, Malaysia, Mauritius and Sudan co-sponsored a draft UNGA Resolution on "Reducing Nuclear

Danger” in October 2001. It was passed. Earlier, in March 2000 at the Millennium Assembly, the UN Secretary General had proposed an international conference for identification of ways to eliminate nuclear dangers. The consensus Declaration at the Summit (September 8, 2000) had resolved to convene an international conference. But the conference has not been held so far because of the resistance of USA and other major powers who have displayed a move away from internationalism. A press release dated September 27, 2002 said that the UN Secretary-General had concluded that “the time is not yet ripe” for interim measures which could lead to the convening of an international conference on reducing nuclear dangers. He also appealed to members to overcome their differences. Almost two years later, the IAEA has started investigations into the fallout from Pakistan’s retailing of nuclear weapons technology. If the time is not ripe now, one wonders whether a ripe time will ever come. The urgency to hold this international conference is multiplied several fold by the AQ Khan’s BPO and the international threat/danger it represents. Without sounding alarmist, the assertion to the international community would be that tomorrow may really be too late.

In a very clear sense, the sordid and dangerous retailing by AQ Khan of purloined technology for uranium enrichment along with the gifted one from China for fission weapon triggers undoubtedly constitute the most serious threat to international peace and security. It is several orders of magnitude higher than Iraq’s or Libya’s nuclear weapons programmes. It has high potential danger for a number of countries in the world. Europe would be in this danger list, especially NATO partners who have supported the US invasion of Iraq or the countries of Eastern Europe who are new NATO entrants. They all need to read the subliminal messages in the Madrid blasts of March 2004 in the wake of the AQ Khan BPO. India, Russia, China, Japan, Indonesia, Malaysia, Philippines, non-NATO allies Thailand and Jordan are also very likely candidates to face the dangers. Some countries in West Asia, Central Asia and South America may also land up in such a list. The point is that the high danger zone is global, not local or regional, and it needs an international plan of action. And, thus, the bell tolls more for thee and me; and less for citizens of USA.

Without a shadow of doubt, such retail transactions directly invite the provisions of Chapter VII of the UN Charter. Hence, it would be desirable for the UN Security Council to meet, discuss and pass appropriate Resolutions

for collective action. If a Permanent Member of the Council (e.g., USA, China or UK) applies the veto, the hollowness of its non/counter-proliferation policies and practices would stand further exposed.

The next available (weak) step at the international level is for the UN General Assembly to meet under UNGA Resolution 377 (V) when the Security Council is dead-locked due to the veto exercised by some (or all) the Permanent Members and the Council is unable to exercise its “primary responsibility for maintenance of international peace and security ...” This is the “Uniting for (International) Peace” Resolution adopted in 1950 which enables the UNGA to “consider (such a) matter immediately with a view to making appropriate recommendations to Members for collective measures ...”

Even if the UNGA Resolution is not passed, the conscience of the world would have been strongly aroused despite its sense of futility and impotence over the cynically dangerous games played by the P-5 in apparently advancing ‘their interests’ at the cost of the global. Regardless, individual member states may also like to consider taking action under their national laws. They could do so under loose coordination of such actions in a type of ‘other’ collectivism. The ‘other’ refers, of course, to non-proliferation collectivism outside ineffective cartelised regimes like the Nuclear Suppliers Group, the Missile Technology Control Regime and the brand-new Proliferation Security Initiative. The road would be paved for a new, practical, effective, non-discriminatory international non-proliferation order to be debated and concluded in the UN so that the nuclear danger is actually reduced. The overdue convening of an international conference proposed by India and four other countries in October 2001 should not be allowed to be stalled any further. The old order will have to yield to the new.

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