

The A.Q. Khan Network and its Fourth Customer

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AQ Khan: the basics

- Head of Pakistan's uranium enrichment program, 1976-2001, celebrated as "father of the bomb"
- Had acquired centrifuge technology from URENCO
- On Feb. 4, 2004, confessed to re-selling technology to other countries

Some unresolved questions

- How autonomous was A.Q. Khan from the Pakistani government and military?
- What were Khan's motives?
- How many customers did Khan have, and who were they?

Sources of evidence

- IAEA reports
- Other investigations, research
- Official Pakistani accounts
- The Khan dossier

Context of the interrogation

- AQ Khan placed under house arrest in Jan. 2004
- Interrogated by heads of ISI, SPD
- Senior KRL figures had been arrested and held incommunicado since late Nov. 2003

Khan's three versions

- The military made me do it
- The Dubai middlemen actually did it; I just witnessed parts of it
- I was solely responsible for the good stuff; the bad stuff was the responsibility of top military officers, dead or absent people, and the Dubai middlemen

1st version, before house arrest

‘Tell them [journalists] the bastards first used us and now [are] playing dirty games with us....

‘I believe they want to make me a scapegoat ...

‘They might try to get rid of me to cover up all the things (dirty) they got done by me in connection with Iran, Libya & N. Korea.’

(Letter from AQ Khan to his wife, dated Dec. 10, 2003)

2nd version: Blaming the Dubai middlemen

‘Khan's official biographer, Zahid Malik, said in an interview Thursday that Khan, with whom he spoke earlier this week, does not dispute that blueprints and technical specifications may have found their way from Pakistan to Iran and Libya. Khan acknowledges providing such material to **Dubai-based middlemen**, who needed the documents to shop for nuclear-related components in Germany, the Netherlands and Britain on Pakistan's behalf, Malik said.

‘Khan now believes, Malik said, that "when those middlemen or manufacturers came to know of the nuclear ambitions of Iran and Libya, they approached the concerned authorities of those countries" and passed along the documents originally provided by Khan.’

(John Lancaster and Kamran Khan, “Pakistan Fires
Top Nuclear Scientist,” Washington Post, Feb. 1, 2004)

The 3rd version: Taking full credit for “the Project”

- “Without my knowledge and experience, Pakistan could never - repeat never - have become a nuclear power. It was only because of my initiative, knowledge and achievements that our nation can walk straight and tall today!”
- “I personally supervised each and every aspect of the Project and prepared the drawings and specifications to give to the suppliers. I trained hundreds of scientists and engineers who were initially totally ignorant of this high technology.”

(from “Statement by Dr A Q Khan, March 2004”)

The 3rd version: Taking full credit for China deal

- “Our mastery of this most advanced and invaluable technology enabled us to sign a historic contract for a giant plant in China. Because of my assistance to the Chinese, they in turn helped Munir Ahmed Khan in various projects that had been stagnating for years (i.e. UF6, Reprocessing, Conversion, Production Reactor etc.).”

(from “Statement by Dr A Q Khan, March 2004”)

The 3rd version: Blaming the dead or absent

- “In 1989 or 1990 COAS, Gen. Aslam Beg, promised to give the Iranians a few weapons and technology in lieu of 10 years of our defence budget... I was out of station... Gen. Imtiaz [Ahmed] advised me to get components... The components and drawings were handed over to the late Dr. M.Z. Niazi for further disposal.... a confidante of Benazir Bhutto and Gen. Imtiaz [Ahmed].”
- “The Iranians went on their own to buy, process or manufacture components and equipment. We did not hear from them for years. Some 10 odd years ago Tahir asked for some P-1 components from Farooq (KRL). I don’t remember the exact details.”

The 3rd version: Blaming the dead or absent (ctd.)

- “During Gen. Zia’s rule, Benazir, her family, Gen. Imtiaz [Ahmed] and Dr. Niazi were financially supported by Col. Gaddafi.... I believe that one set of the drawings and components given by me was given to the Iranians and the other to the Libyans.”
- “Dr. Z.K. Niazi used to travel between Dubai, Tripoli and London and in Dubai he became friendly with Farooq of Sri Lanka.... He probably brought a Libyan in contact with Farooq and asked him to arrange a meeting during one of my trips to Turkey.”

(from “Statement by Dr A Q Khan, March 2004”)

The 3rd version: Blaming his Dubai associates

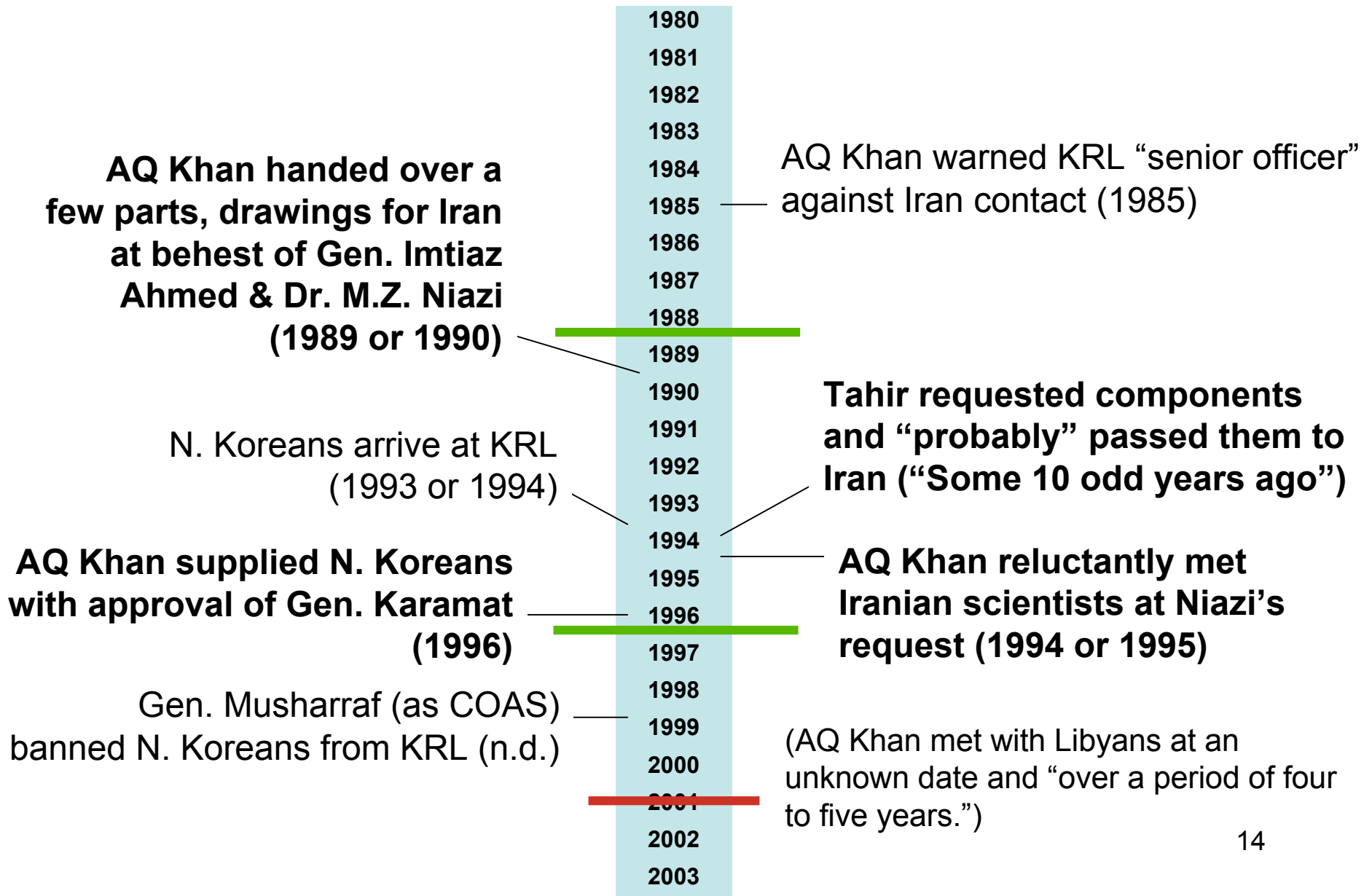
- “[D]uring one of our trips to Turkey... Tahir (nephew of Farooq) said that his uncle had phoned to say that a gentleman from Libya was there to see us.... I met this same gentleman at dinner at Tahir’s place once or twice more over a period of 4 to 5 years.... I was aware that Tahir was assisting him with the placing of orders according to the supplier’s quotations. **It was business between user and supplier. The suppliers had all the drawings that we had originally given them as well as their own modified drawings and were, thus, in a position to supply the requested or suggested products, make their own suggestions and/or submit quotations.**” [emphasis added]

The 3rd version: Blaming Gen. Karamat

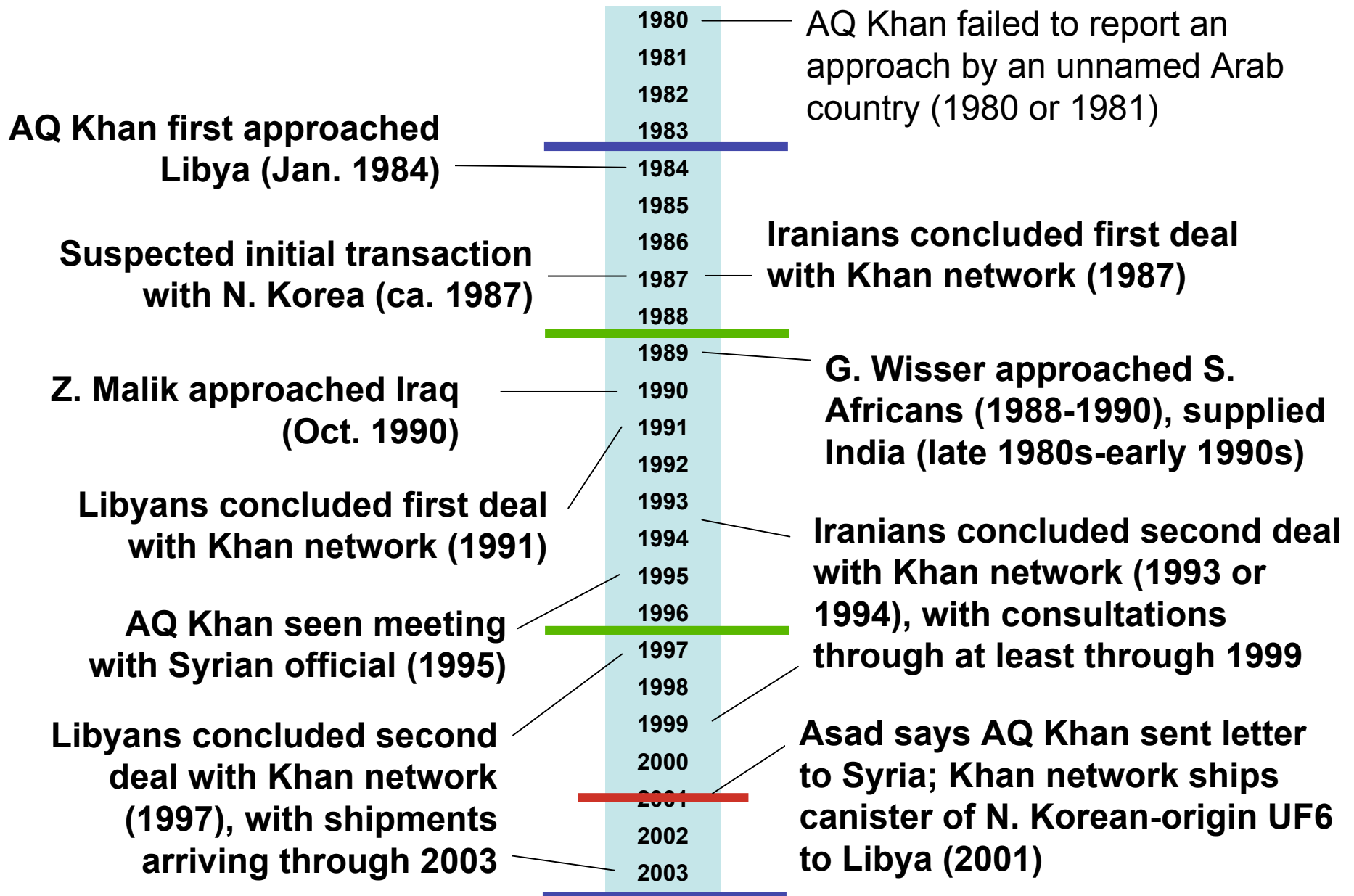
- “In the meantime Gen. [Jehangir] Karamat became COAS and said to me that he needed more money for the same secret funds and that I should talk to Gen. Kang [Tae-yun]. Gen. Kang came back to me after a few days and said that his boss was willing to give a further \$ 2.5 million, provided we helped them with the enrichment technology... I informed Gen. J. Karamat; he agreed and gave me a go-ahead. I asked my people to prepare 20 outdated P-1 machines and gave them. Since they were working in the plant and were familiar with the P-2 machines, they asked for 4 of these too. I discussed the matter with the COAS and obtained his approval.”

(from “Statement by Dr A Q Khan, March 2004”)

Timeline of AQ Khan's version



What investigations have found



Why did he do it?

- Wealth and comfort
- More importantly: being honored and admired
 - “There is a tremendous amount of love, and it is obvious everywhere. Wherever I go, people show a lot of love and affection. I believe the most important thing is what my country, my people, think of me. I don’t care what other people think of me. Once I’m gone, my name and my prestige and the love and affection that I have in this country will remain forever.”

(Quoted in Simon Henderson, “We Can Do It Ourselves,”
Bulletin of the Atomic Scientists, Sep. 1993, pp. 27-32.)

Honors and philanthropy

	1980	
	1981	
	1982	
	1983	
	1984	11 gold medals or gold crowns awarded by various civic or other organizations between March 1984 and Jan. 1991
	1985	
	1986	
	1987	
	1988	
	1989	Presidential decorations awarded in 1989, 1996, 1998
Project Director, GIK Institute of Science and Technology as of 1990	1990	
	1991	Honorary doctorates awarded in 1993, 1998, 1999, 1999, 2000, and 2001
"Substantial support" for establishment of 24 educational or research institutions	1992	
	1993	
	1994	
	1995	52 gold medals or gold crowns awarded by various civic or other organizations between June 1997 and Sep. 2003
Construction or improvement of 12 mosques and one tomb	1996	
	1997	
	1998	
	1999	
Establishment of community health NGO, unspecified support for six others	2000	15 educational or research institutions, four buildings, 13 ed. awards named in his honor
	2001	
	2002	
	2003	

AQ Khan's rationalizations

- “When I got back, Gen. Imtiaz advised me to get components of two old (P-1) discarded machines and pack them into boxes together with 2 sets of drawings prepared by the late Mr. Khokhar. **These drawings on their own were not sufficiently detailed to enable mastery of this difficult technology.**”
- “The spirit behind giving some assistance to Iran or Libya was to maintain friendly relations between them and us. **At no time did I seriously believe that they were capable of mastering this technology** as they didn't have the required infra-structure, the trained manpower or the technical know-how.”

(from “Statement by Dr A Q Khan, March 2004”)

Thanks to Scott Kemp (Princeton U.) for sharing crucial insights into this question.

AQ Khan's rationalizations (ctd)

- The North Koreans “already had a production reactor and were producing plutonium. They had also manufactured a few weapons as, according to Gen. Kang’s boss, they had received Kg 200 plutonium and weapon designs from the Russians in the mid-fifties after the Korean War. They had shown Dr. Mirza and me the perfect nuclear weapon, technologically more advanced than ours. They wanted this technology only for fuel for the power reactors as it cost only 1/10 of that of the diffusion process and required only low capital investment. They were not interested in weapon-grade production of material and did not ask any questions or for drawings for specially designed cascades for weapon-grade material.”

(from “Statement by Dr A Q Khan, March 2004”)

How many customers?

- ‘Most troubling are orders, invoices and manifests found in Khan's overseas records describing shipments that cannot be accounted for by known customers. U.S. and IAEA investigators have several suspects for a "fourth customer" -- officials named Syria, Egypt, Sudan, Saudi Arabia and Kuwait in approximate order of interest -- but no substantial evidence has surfaced.’ (Gellman/Linzer, WP, 10/26/04)
- ‘Critical components and specialized tools destined for Libya’s nuclear weapons program disappeared before arrival in 2003 and international investigators now suspect that they were diverted to another country, according to court records and investigators.’ (Frantz, LAT, 4/22/05)

How many customers? (ctd.)

- ‘[Urs] Tinner himself had pondered the existence of an unknown customer. Before the move to Malaysia, when Tahir had claimed to to have sold off all the equipment in Dubai, Tinner wondered just where it might have gone. But Tinner said he had no idea whether there was another customer.’ (Collins/Frantz, 2011, p. 71)
- ‘Perhaps because of his anxiety, [Tinner] could not bring himself to carry out Kinsman’s instructions to pres Khan for information about the fourth customer. Every time he started to ask, Tinner changed his mind.’ (Collins/Frantz, 2011, p. 78)
- ‘What concerned the IAEA officials was the discovery that the CIA had been pressuring the Tinnings to find out more about the network’s elusive fourth customer. The IAEA had been worried for month that there was at least one other buyer. They had taken some solace in the idea that the Americans probably knew at least something about the identity of the other customer.’
(Collins/Frantz, 2011, p. 78)

How many customers? (ctd.)

- Why do investigators believe there was a fourth customer for the Khan network?
- The members of the A.Q. Khan network would refer to “the fourth customer.” It was their code language. We don’t know who was meant. We do know about an offer to Iraq in 1991. There were interactions with the Syrians as well. But we still don’t know who the fourth customer was.
- Khan gave a statement about his activities to the Pakistani authorities in early 2004. It’s been described in the news media as mentioning Iran, Libya, and North Korea. Why would Khan’s statement be silent about the fourth customer?
- We don’t know. At one point, the Pakistanis said they were prepared to share the entire record of his interrogation with some redactions. It’s a document that runs for hundreds of pages. But after Musharraf left office, the offer did not materialize.

Hiding in plain sight?

- 5.19 In the late 1980's and early 1990's, Accused No 2 commissioned one of his employees to produce flow meter units which were specifically designed for a UF6 application. These systems were delivered to India. Due to problems which the client encountered with the units, the employee and another person were sent by Accused No 2 to India itself to make adjustments to the instruments.

(From "The State Versus Daniel Geiges and Gerhard Wisser: Summary of Substantial Facts," 2006, available at www.isis-online.org)

Hiding in plain sight? (ctd.)

- ‘Now, findings. Unfortunately, all proliferation, unfortunately, [took place] under the supervision or orders of Dr A.Q. No government official, no military man is involved.... The proliferation started in the 80's and Dr A Q Khan retired, roughly, around 2001 and it ended around that time.
- **‘Another thing that came to the fore was that an entire underworld was involved... If all the nuclear powers of the world are reviewed from the start, all of them established themselves through the underworld. We have also acquired it through the underworld. India has also acquired it through the underworld.**
- ‘Pakistan cannot be pinpointed as such. So, there is an underworld, which also exists in European countries, is in Asian countries.... However, here is a root in Pakistan, but the fabrication is being carried out in Europe and other countries. And Dubai serves as a transportation center. So, it is an underworld that is working. It is working from here. European countries are involved.... And Pakistanis are also involved...’

(From Musharraf remarks of Feb. 5, 2004)

Hiding in plain sight? (ctd.)

- ‘There is little doubt that A.Q. was the central figure in the proliferation network, but he was assisted over the years by a number of money-seeking freelancers from other countries, mostly in Europe, in manufacturing, procuring, and distributing to countries like Iran and Libya materials and components related to centrifuge technology. According to A.Q., these people included nationals of Switzerland, Holland, Britain, and Sri Lanka. Several of these individuals based in Dubai and Europe were simultaneously also pursuing their own business agendas independently. Ironically, the network based in Dubai had employed several Indians, some of whom have since vanished. There is a strong probability that the Indian uranium enrichment program may have its roots in the Dubai-based network and could be a copy of the Pakistani centrifuge design.’

Passages to compare

- ‘Several of these individuals based in Dubai and Europe were simultaneously also pursuing their own business agendas independently. Ironically, the network based in Dubai had employed several Indians, some of whom have since vanished. There is a strong probability that the Indian uranium enrichment program may have its roots in the Dubai-based network and could be a copy of the Pakistani centrifuge design.’ (Musharraf, 2006, p. 295)
- ‘Khan now believes, Malik said, that "when those middlemen or manufacturers came to know of the nuclear ambitions of Iran and Libya, they approached the concerned authorities of those countries" and passed along the documents originally provided by Khan.’ (Lancaster/Khan, WP, Feb. 1, 2004)

Blaming the dead or absent

- ‘Farooq (Sri Lanka) was the main contact with the Libyans through Dr. Niazi. He brought the suppliers in contact with them and gave copies of all the drawings etc. which Dr. A.Q. Khan had kept in Dubai for discussions with the suppliers. These drawings also included those of the device, as Dr. Khan was ordering components from England, Switzerland etc. His own old notes were also kept there for necessary use. Farooq and/or Tahir had access to the flat as they were maintaining it and they must have given copies of all the papers to the Libyans. The Libyans gave Farooq/Tahir \$ 5 million, some of which they gave to Dr. Niazi, some they transferred to India, Singapore etc. and some was put in the account of the fictitious Haider Zaman.’ (‘ISI document,’ n.d.)
- ‘In 1991 or 1992 Farook cheated Tahir and fled to Singapore with all the money they had in their bank accounts. He later blackmailed Tahir.’ (Email interview with AQ Khan, *Weltwoche*, Jan. 2009)

Blaming the dead or absent (ctd.)

- ‘Another member of the so-called network whose name has been mentioned only in passing was Chacha (Uncle) Mohammad Farooq, paternal uncle of B.S.A. Tahir,- Chief Financial Officer of the network and Khan’s deputy.... “The Ba...d died of cancer that he deserved,” according to Dr. Khan.
- ‘Farooq split with his nephew in mid-1990’s and the two were engaged in a legal row ending in a settlement paying him a hefty amount. Chacha Farooq is known to have blackmailed Tahir in 2003 on the ground that a CIA team was in Srilanka to demand his extradition.
- “Chacha Farooq was a CIA agent,” a 2-star general told me during a rare interview granted for my book. Dr. Khan concurred.
- ‘The general said that after Dr. Khan Saga, Pakistani intelligence agencies tried to locate Chacha Farooq but it appeared that he had disappeared in thin air.’ (*Express Tribune*, Jan. 2011)

Why did India come up?

- 'India was a latecomer in enrichment. It started a programme in early 1970's but after the success of its plutonium bomb in 1974, work on enrichment slowed down. Soon after the news leaked regarding Pakistan's activities in the enrichment field, India restarted its programme in late 1970's using strikingly similar technology which Pakistan had adopted which is a strange coincidence.'

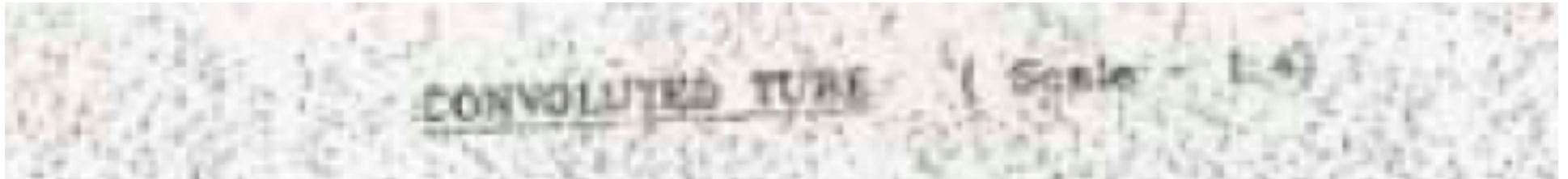
(Munir Ahmed Khan, "India's nuclear strengths and weaknesses," *The News*, May 6, 1998)

Why did India come up? (ctd.)

- ‘What happened sometime around 1980 was that a foreign government from an Arab country contacted Dr. AQ Khan and said that if you give us nuclear technology, we will give you quite a lot in return. After this offer, Dr. A.Q. Khan tried to work secretly from the Government of Pakistan. Dr GD Alam further said that in this regard, Dr. A.Q Khan took him and some other people into confidence. “At this, I (Alam) told AQ Khan that presently we are performing our duty of service to the nation and if we were to accept the offer of the foreign government and if the Government of Pakistan finds out, which it eventually will, so it will have two negative consequences. One will be that while doing good work for Pakistan, we will become traitors, and if the foreign country who is contacting us acquires technology from us and transfers it onwards to India, then what will happen?”’

(Interview with Ghulam Dastagir Alam, *Lashkar*, June 12, 1998)

The centrifuge design question



Indian Nuclear Export Controls and Information Security:
Important Questions Remain
David Albright and Paul Brannan, September 18, 2008

http://isis-online.org/uploads/isis-reports/documents/India_18September2008.pdf

The centrifuge design question (ctd)

These centrifuge generations may be similar to early generation Urenco machines and similar machines developed in Pakistan.

Original machines	Pakistan centrifuges	Material	Separative power	Possible Indian centrifuges
SNOR/CNOR	P-1	Aluminum	2-3 SWU/year	IC-1
G-2	P-2	Maraging Steel	5-6 SWU/year	IC-2
4-M	P-3	Maraging Steel	12 SWU/year	IC-3
SLM(TC-10)	P-4	Maraging Steel	21 SWU/year	IC-4

Alexander Glaser, Zia Mian and M.V. Ramana,
“India developing new centrifuges and increasing enrichment capacity,” June 4, 2010

http://www.fissilematerials.org/blog/2010/06/india_developing_new_cent.html

Reasons to think it was India

- Khan's lack of compunctions, ability to rationalize dealings
- The suspicions of others in Pakistan
- The flow-meter transaction
- Flimsy excuses offered during the interrogation
- Indian centrifuge design information
- The special sensitivity of the identity of the fourth customer: could not be named or admitted to

Postscript

- ISLAMABAD (Kyodo) -- The Syrian government approached disgraced Pakistani nuclear scientist A.Q. Khan twice -- in 1980 and 2002 -- for assistance in its clandestine nuclear program, but the moves were rejected, Khan recently told Kyodo News.

Postscript (ctd.)

- ‘When people buy and sell certain commodities, they are usually known according to their business: e.g., sabzi-farosh (vegetable-seller), gandum-farosh (wheat-seller), motiwala (seller of pearls), etc. In this Land of the Pure we now have a new breed known as “watan-farosh” (sellers of the country). Such people also go by the name of ghaddar, or traitor. As a matter of fact, the title indicates something more detestable than a traitor as he betrays a group of people or community while watan-farosh sells the pride, respect, dignity sovereignty and assets of the country....
- ‘When Musharraf, a conscienceless dictator, staged a coup, all those who were selfish and self-centred joined him. He sold the sovereignty of the country, had innocent women, children and religious scholars killed, had the 80-year-old-senior citizen, Nawab Akbar Bugti, killed, sold Pakistani nationals to the USA for bounty, which fact he proudly mentioned in his autobiography. He sold Dr Aafia Siddiqui to the Americans and received millions of dollars from the Americans through the CIA for his autobiography, which was full of false claims and outright lies. The Americans are experts at patronising their stooges with millions of dollars from secret funds and through the CIA. There was a time when brave, patriotic people were considered heroes and loved by the people of the country.’

Postscript (ctd.)

- ‘Those who are familiar with Urdu literature will know of Nawab Shabbir Hassan Khan Josh, the famous revolutionary poet of India (who is buried in H-8, Islamabad). He once wrote that there was probably no-one as unfortunate as he was because he was selling his knowledge. In fact, he had not sold his knowledge. On the contrary, he had written rebellious poems against the British and was sent to jail for this patriotic act.
- ‘Josh spoke of selling his knowledge (note: not his conscience) because once, at the insistence of film director W Z Ahmad, he wrote a song for the film Ek Raat. They were instant hits and one of them, sung by the singer of the old days Sitara Devi, “Dunya ye hi dunya hey to kia yaad rahy gee” (“if this is the world, then I wonder if it will be fondly remembered”) is still fondly remembered. He somehow always regretted having written those songs and never talked of writing against payment again.’

(Dr A Q Khan, “Selling of ethics and morality,” *The News*, Jan. 2, 2012)

