

THE A.Q. KHAN NETWORK: CASE CLOSED?

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THE A.Q. KHAN NETWORK: CASE CLOSED?

THURSDAY, MAY 25, 2006

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON INTERNATIONAL TERRORISM
AND NONPROLIFERATION,
COMMITTEE ON INTERNATIONAL RELATIONS,
Washington, DC.

The Subcommittee met, pursuant to notice, at 2 o'clock p.m., in room 2255, Rayburn House Office Building, Hon. Edward R. Royce (Chairman of the Subcommittee) Presiding.

Mr. ROYCE. This hearing will come to order. The title of the hearing today is, "The A.Q. Khan Network: Is the case closed?" and that is what we want to explore, and that is why we have these witnesses here with us.

The A.Q. Khan network has been described as the "Wal-Mart of private sector proliferation for the world." Its handiwork has helped deliver to us two of the most threatening security challenges faced in the West, one is North Korea and the other is Iran.

A.Q. Khan, the so-called father of Pakistan's bomb, for over a decade ran a sophisticated and multinational clandestine network built around Pakistan's own nuclear weapons program, which provided advanced nuclear enrichment technology and expertise to a number of hostile countries, as well as to Libya, and perhaps others.

In October 2003, Italian authorities seized sophisticated centrifuge components bound for Libya aboard the ship *BBC China*, forcing the Pakistan Government and President Musharraf to confront A.Q. Khan and to confront A.Q. Khan's cohorts publicly. This should have been done years earlier.

Khan's network has done incalculable and potentially catastrophic damage to international security. It has opened an era in which many states, including among the most unstable and most hostile to the U.S., can now expect to develop nuclear weapons. This is the grim legacy of A.Q. Khan.

United States policy rightly attempts to work with and pressure the Pakistan Government on counterterrorism, proliferation and other concerns, but not to a destabilizing degree. The possibility of radical Islamists seizing control of Pakistan's Government and nuclear arsenal is a serious concern.

Four months after the *BBC China* was interdicted, Khan appeared on Pakistani television, and on that show he apologized. The following day, President Musharraf apparently felt compelled to call Khan a national hero. Or does he believe that? I wonder.

This month, Pakistan released Mohammad Farooq, who allegedly was responsible for coordinating the Khan network's foreign supply activities. He was the last of 12 or so detainees being held for their network involvement. There have been no Pakistani prosecutions of Khan's network members. Khan himself was pardoned by President Musharraf, and that sent a very unfortunate signal to would-be proliferators.

At the time of Farooq's release, the Pakistani Foreign Ministry announced in so many words that the Khan case was closed. It also said that Khan would remain off limits to foreign investigations, despite requests by the IAEA, the U.S. and others to interview him.

Pakistan receives some 700 million annually in United States aid. President Bush has designated Pakistan a major non-NATO ally. Given this support, the grave consequences of Khan's acts and his role in the Iranian military crisis of today, the United States and the international community should expect more from Pakistan's Government.

Khan claims to have acted without Pakistani Government support, yet former Pakistani President Zia spoke about acquiring and sharing nuclear technology, in his words, with the entire Islamic world. Khan advanced Zia's mission well. Some of Khan's exports were transported by Pakistani military aircraft. Many ask how can the network aggressively market its nuclear products, including the glossy brochures, without Pakistan's Government taking notice?

Either the Pakistani Government was complicit to some degree, or Khan was able to proliferate enrichment technology for years without attracting its attention. Both scenarios are deeply troubling. In light of what is now known about the Khan network, we should be gravely concerned about the security of Pakistan's nuclear arsenal. The idea that Pakistan should be offered the same civilian nuclear energy cooperation agreement being proposed for India is a non-starter.

Some question whether the A.Q. Khan network is truly out of business, asking if it is not merely hibernating. We would be foolish to rule out that chilling possibility. Vigilance and greater international pressure on Pakistan to air out the Khan network is in order, and that is what we intend to begin today.

I would like to turn to the Ranking Member of this Committee, Mr. Brad Sherman, for any opening statement he might have.

Mr. SHERMAN. Mr. Chairman, the purpose of Congress is to ask the questions the Administration doesn't want to answer, and the proof that we are fulfilling that duty is the fact that we are talking about A.Q. Khan and the Bush Administration hasn't sent anyone to these hearings. There is no greater proof that they would prefer that we simply say that the case has been closed.

As you point out, the case is not closed. Khan has not been personally questioned by any non-Pakistani investigators. The questions put to him have been a small number of questions coming from foreign investigators, and of course put forward to him to respond at his leisure. The IAEA and the U.S. have not had personal access to A.Q. Khan. This was a massive network, and we need to know more about it.

Khan's operatives appear to be free to go about their work. Now I am not unsympathetic to the position of Pakistani leaders seeking to chart their country down a relatively moderate path and confronting some institutional and public opposition, but we have soft-pedaled the proliferation issue with Pakistan for far too long, and the Bush Administration and its successors have to understand that Congress will insist that proliferation be at the top of our agenda with Pakistan, and that Congress will not provide benefits unless Pakistan controls its nuclear technology and stops illegal export of nuclear information and devices and materials.

Pakistan's status as a major non-NATO ally puts them among the very elite of those seeking a military relationship with the United States, and certainly that is inconsistent with how little information has been provided about A.Q. Khan. I would point out that we should also put nonproliferation at the top of our agenda with Russia and China, and not fail to connect it with the other issues such as Belarus when dealing with Russia, that we seem never to be able to bring up in the discussions of nonproliferation.

So I look forward to hearing our private witnesses here. I am thrilled that you are here. The only thing that would thrill me more is if the Bush Administration had sent a representative as well.

And I yield back.

Mr. ROYCE. Thank you, Mr. Sherman.

Mr. Ackerman, would you like to make an opening statement?

Mr. ACKERMAN. Thank you, Mr. Chairman. Thank you for the opportunity to sit on your Committee, thank you for conducting this hearing, and thank you to the Ranking Member as well.

Mr. Chairman, we know that Abdul Qadeer Khan ran an illegal international nuclear proliferation network, something that you cite, as I stated a couple of years ago, as a nuclear Wal-Mart, if you will, that sold nuclear equipment and related technologies to North Korea and Iran, two-thirds of the Axis of Evil, and also tried to sell it to the other third.

We also know that Dr. Khan sold nuclear equipment, related technology and bomb designs to Libya, and recently the CIA revealed that the Khan network also sold nuclear technology to Syria. That is what we do know, but it is what we don't know that should really scare us.

We don't know the full extent of the network. We don't know whether the network has been shut down or whether it still operates. We don't know how many other countries, entities or individuals are involved. We don't know whether Dr. Khan or any of his associates had contact with al Qaeda, as has been reported, or whether his associates transferred any nuclear equipment or technology to al Qaeda. We don't know the extent of the involvement of the figures would still be in the Pakistani Government and/or military. We don't know whether President Bush was aware of Dr. Khan's activities or whether he approved.

We don't know the answers to these questions because we haven't been able to interview Dr. Khan. Instead, we passed to the Government of Pakistan questions, they passed the questions to Dr. Khan, Dr. Khan passed the answers back to the Pakistani Government, the Pakistani Government passed the answers to us, or

perhaps he didn't and they didn't. If he did and they did, maybe the answers are true, and maybe they were just what the Pakistani Government wanted us to hear. We are not even sure that the answers came from Dr. Khan. We just don't know.

We have given Pakistan a get-out-of-jail-free card on the single worst case of proliferation in the past 50 years. All this was true last year, it is true now, and unless we start doing something differently, all of it will be true next year as well.

The Bush Administration argues that the single most significant threat facing the United States is terrorists armed with weapons of mass destruction. In Dr. Khan, we have all of the ingredients to realize that threat, and when it comes to Pakistan, the Administration seems unconcerned that Pakistan's nuclear technology may have been passed into the hands of al Qaeda.

We need to make it clear to Pakistan that resolving this issue is absolutely essential for the United States. To date, we have not done that. Instead, the response from Pakistan is to release Dr. Khan's associates from house arrest and declare the case closed.

Mr. Chairman, I think our policy with regard to Pakistan is very fatally flawed. While it is true that we need their cooperation in the war on terror, the price for that cooperation keeps going up. We have repeatedly waived sanctions against Pakistan and are in the midst of providing that military dictatorship a \$3 billion aid package, but apparently that is not enough.

We have also provided them with submarines surveillance planes and anti-tank missiles and anti-aircraft guns. Unless al Qaeda has suddenly started using submarines, tanks and jet fighters, I don't see what application these systems have in the war on terror, and now, even though the people affected by last year's earthquake are still living in tents, the Administration plans to go ahead with the sale of F-16s to Pakistan. Should they not be spending their nation's funds on the relief of those stricken by the earthquake.

I think it is fair to ask whether we have gotten better cooperation from Pakistan in the war on terror because of any of this. I don't think so. Is nuclear weapon technology in the hands of terrorists too high a price to pay for Pakistan's continued cooperation? I think the answer to that is clear. It is time to tell Pakistan that answers regarding A.Q. Khan's network are an absolute priority for the United States.

I offered an amendment last year in the Full Committee prohibiting the provision or sale of military equipment to Pakistan until we had a complete picture of the A.Q. Khan network. Unfortunately, the amendment was defeated. A year later, we are no closer to the truth about this network. Perhaps it is time to revisit that question.

Thank you, Mr. Chairman, and I look forward to hearing from our distinguished panel.

Mr. ROYCE. Thank you very much, Mr. Ackerman.

Let me introduce our panel.

David Albright is the founder and President of the Institute for Science and International Security here in Washington, DC. He has published numerous assessments in technical and policy journals, including the *Bulletin of the Atomic Energy Scientists*, *Science and Global Security*, *Washington Quarterly*, and *Arms Control Today*.

He has co-authored four books, including the groundbreaking *World Inventory of Plutonium and Highly Enriched Uranium*, and *Solving the North Korea Nuclear Puzzle*, which one leading expert on North Korea called the definitive unclassified analysis of the North Korean nuclear program.

Mr. Albright has testified many times on nuclear issues before the U.S. Congress. We welcome him back.

We also have Dr. Leonard Weiss. He is an independent researcher and writer on energy and nuclear nonproliferation issues and a consultant to the Center for Global Security Research at the Lawrence Livermore Laboratory. He began his career as a researcher in system theory and the theory of automatic control at the Research Institute of Advanced Studies in Baltimore.

For more than 20 years, Dr. Weiss worked as the Staff Director for John Glenn on the Government Affairs Committee and on the Subcommittee on Energy and Nuclear Proliferation. He played a key role in the Nuclear Nonproliferation Act. Beginning September 2006, Dr. Weiss will be a senior science fellow at the Center for International Security and Cooperation at Stanford.

Andrew Koch is an author and former Washington Bureau Chief for *Jane's Defense Weekly* and a Senior Vice President for Defense and Homeland Security Ascribed Strategies and Adviser. While a Washington Bureau Chief, he wrote award-winning stories about A.Q. Khan and Iranian attempts to build its nuclear program. Mr. Koch is an expert in tracking proliferation activities around the world. He brings more than a decade of experience in investigating illicit trafficking networks, particularly those involving Pakistan and Iran.

Mr. Koch is also writing a book and working on a documentary film about the A.Q. Khan network, how it occurred and its continued implications.

I am going to ask our witnesses if, since we are running on a very tight schedule, we have votes coming up, if they could summarize in 5 minutes because we have the written testimony, which we have read, and we will take this opportunity to begin with Dr. David Albright.

**STATEMENT OF MR. DAVID ALBRIGHT, PRESIDENT,
INSTITUTE FOR SCIENCE AND INTERNATIONAL SECURITY**

Mr. ALBRIGHT. Thank you, Mr. Chairman, for the opportunity to testify today.

I would start by saying that the case against the members of the A.Q. Khan network is not closed. There is considerable work to do to investigate and prosecute the members of the network.

I would like to submit my prepared testimony for the record and summarize two specific points from that testimony: First, a need for Pakistan to do more and, second, the need for the United States to do more; in particular, to provide assistance to the Swiss prosecution of three key operatives of the Khan network, Urs, Marco and Friedrich Tinner.

As you have laid out, there are many questions that remain about what Khan and his associates supplied other countries, particularly Iran. Specific questions involving Iran include the extent of centrifuge assistance, the logistics of that assistance, and the

possible supply of entire nuclear weapons designs. These areas remain especially troubling as we try to determine exactly how close Iran could be to building nuclear weapons and what sensitive information may remain in circulation around the world that could fall into the hands of other enemies of the United States.

In addition, the information shared by the Pakistani Government with the International Atomic Energy Agency and other governments appears so far to be incomplete. Unraveling the activities of the network and ensuring that it remains shut down require the Pakistani Government to provide more assistance to investigators, including giving the IAEA and affected governments direct access to question Khan—and I would add his associates—verbally. Greater cooperation from Pakistan would allow the agency, the IAEA, and affected governments to conduct more thorough investigations, to pursue more effectively the criminal prosecutions of individuals involved in the network, and to recover physical remnants of the procurement network that have not yet been found and provide the seeds for future nuclear weapons programs.

Although Pakistan has taken steps to create a national export control system and to place additional controls over its nuclear scientists, Islamabad has not faced up to the difficult task of actually implementing an effective import control system. One necessary step is to prosecute Pakistani members of the network to send a clear signal that Pakistan will punish illegal exporters severely, and thereby reduce the likelihood that someone will step into Khan's shoes. The fact that no prosecutions appear to be planned serves to increase suspicions that the Pakistani Government is hiding information about the network's activities, particularly information that could further embarrass itself or its military.

I would like now to turn to the second point. Although the focus today is on Pakistan's unanswered questions about the Khan network, the United States has been remiss in assisting the overseas prosecution of key members of the Khan network. The United States has ignored multiple requests from Swiss prosecutions for cooperation that have extended over a year. The Swiss Attorney General sent requests to the United States for legal assistance in its case against three key members of the Khan network, the Tinnars, and those requests came in over—the first ones came in over a year ago. So far the prosecutors have not received a reply or even a confirmation that the U.S. Government received the request.

Last fall I assisted the prosecutors in contacting Under Secretary of State Robert Joseph, writing him a letter requesting his assistance. In particular, the letter asked for help in obtaining information and documents about centrifuges and centrifuge-related equipment relative to the Swiss prosecution, and arranging a visit to the Oak Ridge National Laboratory to examine certain items removed from Libya by the United States. This letter, which was sent last February, has also remained unacknowledged and unanswered.

The Office of Attorney General in Switzerland is certainly disappointed over this matter. It is difficult to understand the actions of the U.S. Government. Its lack of assistance needlessly complicates this important investigation.

In contrast, Libyan authorities have greatly assisted Switzerland in its legal request, allowing a visit to Tripoli to interview witnesses in April 2006 and promising documents that are expected to aid in the case against the Tinnerns. Law enforcement agencies in the Far East and in South Africa have also cooperated with Swiss prosecutors.

I believe the United States should respond to the Swiss request for assistance as quickly as possible. To continue to ignore these requests undermines the vital prosecution of key members of the Khan network and risks undercutting support for Swiss cooperation in nonproliferation matters.

While historically Switzerland has been a problem on nonproliferation, in the last several years it has dramatically improved its record, and I would say is vital to achieving certain U.S. goals on nonproliferation even as we speak today.

In addition, I find this lack of cooperation frankly embarrassing to those of us who believe that the United States should take the lead in bringing members of the Khan network to justice for arming our enemies with nuclear weapons.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Albright follows:]

PREPARED STATEMENT OF MR. DAVID ALBRIGHT, PRESIDENT, INSTITUTE FOR SCIENCE AND INTERNATIONAL SECURITY

With the mounting confrontation over Iran's nuclear weapons program, the Middle East could be standing at the brink of war once again. An American decision to attack Iran to prevent Ayatollah Ali Khamenei from acquiring nuclear weapons would not only risk engulfing the region in conflict but would also dramatically increase the chances of Iranian-supported terrorists striking the United States at home and its interests abroad.

President George W. Bush would not be facing this terrible quandary if an international smuggling ring, headquartered in Pakistan, had not helped Iran's nuclear program for over a decade. At the head of the criminal syndicate was the Pakistani Abdul Qadeer Khan, known as the father of his country's nuclear bomb and a man who former CIA Director George Tenet called "just as dangerous as Osama Bin Laden."

Starting as an ingenious effort to sidestep western sanctions and outfit Pakistan with nuclear weapons, Khan and his ring of smugglers soon went global. The activity of this syndicate straddled four decades and involved countries, companies, secret bank accounts, and agents on four continents. Armed with a catalog filled with everything from whole gas centrifuge factories to nuclear weapon designs, this network helped outfit nuclear weapons programs in Libya, Iran, and North Korea and possibly aided Al Qaeda in its quest for nuclear weapons before the fall of the Taliban. Remnants of the Khan network may yet help other nuclear weapons programs and terrorist groups.

The operatives of the Khan network pedaled their wares and eluded authorities all over the world. As an example, consider Urs Tinner, a Swiss national, who organized the acquisition of manufacturing equipment in Europe and its shipment to a factory in Malaysia, where it was used to make centrifuge components, using centrifuge designs he provided. The parts were then shipped to Dubai and then on to Libya. Some of these components were the ones seized on the *BBC China* in October 2003. In a parallel effort, Urs, his brother Marco, and father Friedrich allegedly arranged for a centrifuge component to be made by an unsuspecting Swiss company using raw materials from abroad that had been ordered by a trading company in Singapore hired by Urs. The Tinnerns then arranged for the subcomponent to be sent to Turkey where another key player in the Khan network integrated it with other parts into a centrifuge motor assembly before shipping it to Dubai and then onward to Libya on the *BBC China*. In this case, U.S. intelligence agents were unaware that these parts were onboard the ship, and they eventually arrived in Libya.

Khan's actions have made the world far more dangerous. His ground-breaking methods to acquire and then help others build nuclear weapons dramatize a path to nuclear proliferation that poses the greatest threat to our security today. Too long

underappreciated, illicit nuclear trade is a scourge lying at the heart of all efforts by America's current enemies to build or expand a nuclear arsenal. Motivated by greed or fanaticism, nuclear smuggling rings continue to find ready customers willing to pay exorbitant prices. The busting of the Khan network has not stopped Pakistan, Iran, North Korea, and others from seeking items illegally for their nuclear weapons programs. With such deadly materials and expertise on the black market, terrorist groups may finally find a way to obtain a nuclear weapon. Finding effective ways to stop this illicit trade will be one of the most important priorities for decades to come.

I would now like to discuss three specific points:

1) The Case is Not Closed.

In early May 2006, a spokesperson for the Pakistani Foreign Ministry implied that Pakistan's investigation into the Khan matter was closed. The spokesperson stated that Pakistan had conducted a thorough investigation of Khan and his Pakistani accomplices and had shared its conclusions with the International Atomic Energy Agency (IAEA), the United States, and other countries.

However, the case is far from closed. Many questions remain about what Khan and his associates supplied other countries, particularly Iran. Specific questions involving Iran include the extent of centrifuge assistance, the logistics of that assistance, and the possible supply of nuclear weapon designs. These areas remain especially troubling as we try to determine exactly how close Iran could be to building nuclear weapons and what sensitive information may remain in circulation around the world that could fall into the hands of other enemies of the United States, including terrorists.

In addition, the information shared by the Pakistani government with the IAEA and other governments appears so far to be incomplete. Unraveling the activities of the network and ensuring that it remains shut down require the Pakistani government to provide more assistance to investigators, including giving the IAEA and affected governments direct access to question Khan and his associates verbally. Greater cooperation from Pakistan would allow the IAEA and affected governments to conduct more thorough investigations, to pursue more effectively criminal prosecutions of individuals involved in the network, and to recover physical remnants of the illicit procurement network that have not yet been found and that could provide the seeds for future, secret nuclear weapons programs.

Although Pakistan has taken steps to create a national export control system and to place additional controls over its nuclear scientists, Islamabad has not faced up to the difficult task of actually implementing an effective control system. One necessary step is to prosecute Pakistani members of the network to send a clear signal that Pakistan will punish illegal exporters severely and thereby reduce the likelihood that someone will step into Khan's shoes. The fact that no prosecutions appear to be planned serves to increase suspicions that the Pakistani government is hiding information about the network's activities, particularly information that could further embarrass itself or its military.

2) Key Questions Remain Unanswered.

Much has been learned about the Khan network through several intensive governmental, IAEA, and criminal investigations. However, many questions about the extent of the network still remain unanswered that are important in determining whether the network will rise again or remnants will become the seed for a new network.

While a number of individuals have been arrested or identified, investigators worldwide believe that other key participants may not yet have been identified out of an estimated total of 50 people who were actively involved in the network. Questions also remain about the full extent of these individuals' activities in manufacturing and supplying centrifuges and associated equipment. This task has become more complicated because many investigations of the network started slowly, giving members of the network a chance to cover their tracks or destroy evidence. There is growing recognition that network members may have destroyed many key internal documents and records.

Whether or not all the key workshops and companies have been identified also remains unknown. Moreover, it is possible that components or pre-forms for uranium-enrichment plants have been produced but were not delivered to Libya. Perhaps they have been sent to other, unknown customers.

Another complicating factor is that the network also supplied Pakistan's covert nuclear weapons programs. Pakistan has refused to tell investigators which items it imported from the network.

Questions remain about whether all the network's customers have been identified. Did Saudi Arabia, Syria, or other countries receive items from the network? Did terrorists receive any items? With regard to Iran, Libya, North Korea, only in the case of Libya do investigators have a relatively complete understanding of the items supplied by the Khan network.

Questions persist about who received nuclear weapon designs from Khan and his associates, and just what type of designs they provided. A priority is determining whether Iran and North Korea received these nuclear weapon designs.

The key to the success of Khan's network was its virtual library of centrifuge designs, detailed manufacturing manuals, and nuclear weapon designs. An important task for investigators is to retrieve as much of this information as possible. That effort requires, in turn, tracking down and prosecuting the members of the network with this kind of sensitive information. Given the ease of copying and hiding documents and digital files, this information may form the core of a future network aimed at secretly selling the wherewithal to build nuclear weapons.

3) The U.S. Government Needs to Cooperate With Swiss Prosecutions of the Tinnerns.

Although the focus today is on Pakistan and unanswered questions about the Khan network, the United States has been remiss in assisting the overseas prosecution of key members of the Khan network. The United States has ignored multiple requests from Swiss prosecutors for cooperation that have extended over a year.

The Swiss Attorney General sent requests to the United States for legal assistance in its case against Urs, Marco, and Friedrich Tinner in the spring and summer 2005. The prosecutors have not received a reply, or even a confirmation that the U.S. Government received the requests. Last fall, I assisted the prosecutors in contacting Under Secretary of State Robert Joseph and in writing him a letter requesting assistance. In particular, the letter asked for help in obtaining information and documents about centrifuges and centrifuge-related equipment relevant to the prosecution and arranging a visit to Oak Ridge National Laboratory to examine certain items removed from Libya by the United States. This letter, which was sent last February, has also remained unacknowledged and unanswered.

The Office of the Attorney General is disappointed over this matter. It is difficult to understand the actions of the U.S. Government. Its lack of assistance needlessly complicates this important investigation.

In contrast, Libyan authorities have greatly assisted Switzerland in its legal requests, allowing a visit to Tripoli to interview witnesses in April 2006 and promising documents that are expected to aid the case against the Tinnerns. Law enforcement agencies in the Far East and in South Africa have also cooperated with the Swiss prosecutors.

The United States should respond to the Swiss requests for assistance as quickly as possible. To continue to ignore these requests undermines the vital prosecution of key members of the Khan network and risks undercutting support for Swiss cooperation in non-proliferation matters. In addition, I find this lack of cooperation frankly embarrassing to the United States and those of us who believe that the United States should take the lead in bringing members of the Khan network to justice for arming our enemies with nuclear weapons.

Thank you Mr. Chairman.

Mr. ROYCE. Dr. Weiss.

STATEMENT OF LEONARD WEISS, PH.D., INDEPENDENT CONSULTANT

Mr. WEISS. Thank you, Mr. Chairman. Thank you for holding this hearings and thank you for the invitation to testify. I have submitted a long statement for the record and I will summarize it.

Mr. Chairman, 30 years ago I, as a staffer in the Senate, drafted a bill which became a law and which ended up cutting off military assistance to Pakistan because of its nuclear activities. That law, and many others that applied to Pakistan since then, have either been waived or eliminated, and having done so, we have given encouragement to the operations and the expansion of the Khan network.

At the Third Asia Security Conference in Singapore on June 5, 2004, Secretary of Defense Donald Rumsfeld said he was confident

that “The network has been dismantled.” In a CNN interview that took place on October 3, 2004, Secretary of State Condoleezza Rice said, “The important thing is that the A.Q. Khan network is out of business and people are being brought to justice.” And on May 2nd of this year, a Pakistani Foreign Ministry spokesman said that Pakistan’s investigation into the illicit nuclear smuggling ring led by A.Q. Khan is closed.

Well, it is true that some people are being brought to justice, but A.Q. Khan can’t be said to be one of them. His retirement to his multi-million dollar villa does not exactly constitute an appropriate sentence for his spreading the bomb to some of the worst governments on Earth.

To determine whether the Khan network has been dismantled and should be considered a closed case, there are a certain number of facts about it we need to know. First, this is a network that was developed over a period of more than 30 years. A 30-year-old clandestine effort does not easily collapse if there is great motivation for it to continue, and there is that motivation.

Khan’s professional base, Khan Research Laboratories at Kahuta, is the size of a small city containing thousands of scientists and engineers. Their work dovetails with that of the Pakistani Atomic Energy Commission and the Pakistan Intelligence Service to provide the technological and logistical support that is needed for the vast effort that is the Pakistani nuclear weapons program.

A.Q. Khan is a brilliant man, but there are others capable of taking his place, and they have reason to be motivated to seek outside support because Pakistan is still not self-sufficient in building nuclear weapons. It still needs specialized materials for the weapons themselves and for the production of fissile material for the weapons.

Recently the *Guardian*, a British newspaper, reported on the existence of a July 2005 document prepared by British, French, German and Belgian intelligence agencies for the European Union that says that since the beginning of 2004 the Pakistanis were making extensive efforts to procure materials and components for its nuclear and missile programs, and what is more, the range of its procurement goes beyond that required for its nuclear weapon program. The document lists 20 Pakistani Government entities active in the procurement effort and hundreds of companies around the world that are said to be involved in some aspect in the production of weapons of mass destruction. As long as Pakistan needs a network to provide it with materials and equipment for its own nuclear program, that same network can and will be used to spread the technology to others.

Second, we need to know more about Khan’s activities in other countries. Public statements made by former CIA Director Porter Goss and others suggest that we haven’t yet learned what we need to know from A.Q. Khan, but President Musharraf has refused to make Khan available for interrogation by the U.S. or by the IAEA. It is known that he and his associates visited Syria, Saudi Arabia, Egypt, Chad, Mali, Algeria, Niger and Sudan, among others. What did Khan do there? We need to know and in detail.

The bottom line, Mr. Chairman, is that we don't really know to what extent the Khan network has been rolled up, to what extent new additions to the network have been made, and whether increased surveillance of Pakistani nuclear activity is making much of a difference. There are few, if any, independent observers who believe that the network is shut down, and there is no question that additions to it are being actively sought. Only A.Q. Khan himself can fill in these gaps, and we are not putting sufficient pressure on General Musharraf to make Khan available to outside interrogators.

Instead of that, we are in the process of providing Musharraf with 24 F-16s in gratitude for his cooperation in the war on terror. This is a reprise of what we did in the 1980s, and it is a mistake. As in the 1980s, we have jumped back into bed with the Pakistanis, this time to help us fight al Qaeda instead of the Soviets, and I feel that we are getting the bad end of the deal. Bin Laden is still at large, the Taliban-led insurgency in Afghanistan is growing in strength, and much of what we accomplished in Afghanistan after 9/11 is in serious jeopardy, and we are once again, as in the 1980s, whitewashing Pakistani attempts of smuggling nuclear-related components out of the United States in violation of our laws.

Adding to this depressing picture, we have signed a nuclear agreement with India that will raise Pakistan's desire for more nuclear weapons, which means that it will seek additional assistance from outside. It may get some from China, and it will be seeking help from the network that has helped it in the past.

We cannot afford to be complacent about this. More Pakistani weapons means increased risk of nuclear weapons and nuclear materials falling into the hands of radical jihadist elements that exist in Pakistan.

But Pakistan should not be seen as the be all and end all of proliferation concerns. As long as there are countries and national groups seeking nuclear weapons, there will be attempts at bypassing export regulations, and we must be prepared for the possibility of Khan-like networks springing up in the future.

How can we prevent this? First, it is important to make export regulations as tight as possible worldwide and with severe penalties for violations. The U.N. has taken a step in this direction with the passage of Security Council Resolution 1540, which obligates all U.N. members to "refrain from providing any form of support to non-state actors that attempt to obtain WMD and their means of delivery." In so doing, states are to put in place appropriate, effective laws to carry out this obligation. This will be a multi-year effort requiring large amounts of funding to build an effective barrier to smugglers.

Second, improving global intelligence operations is a basic requirement if there is to be a proactive approach to stopping proliferators and Khan-like networks. Much cooperation is already going on, and this should be encouraged and expanded. Without good global intelligence, programs of interdiction of contraband, as exemplified by the Bush Administration's Proliferation Security Initiative, cannot be effective.

Finally, Mr. Chairman, the history of our relations with countries like Iran and Pakistan should tell us that we must not let the

drive for short-term foreign policy goals blind us to the long-term problems we may end up with. Trading off nonproliferation for a short-term Cold War victory in the 1980s has come back to haunt us. Doing it again in the name of war on terror will, in my view, have equally grave consequences. History tells us that today's enemy can be tomorrow's friend, and vice versa. In general, U.S. national security is best served by following policies that are least likely to result in the creation of either proliferators or terrorists, regardless of whose side we think they may be on.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Weiss follows:]

PREPARED STATEMENT OF LEONARD WEISS, PH.D., INDEPENDENT CONSULTANT

Mr. Chairman:

My name is Leonard Weiss. I am a researcher and writer on energy and nuclear nonproliferation issues and a consultant to the Center for Global Security Research at the Lawrence Livermore National Laboratory. My testimony is on behalf only of myself and no client, organization, or institution.

Some Legislative History Concerning Pakistan

For over twenty years I worked on Capitol Hill for Senator John Glenn (D-OH) as his staff director on the Senate Governmental Affairs Committee and its subcommittee on Energy and Nuclear Proliferation. During that period I wrote legislation for Senator Glenn that became the Nuclear Nonproliferation Act of 1978 and also the so-called Glenn amendment to the Foreign Assistance Act of 1961. The Glenn Amendment barred economic and military assistance to any country that imported or exported reprocessing equipment, materials, or technology, and was invoked against Pakistan by the Carter Administration in 1977. In 1978, the Symington Amendment, which barred similar assistance to any country that imported or exported unsafeguarded enrichment equipment, materials, or technology, was also invoked against Pakistan. Both cutoffs were the result of French-Pakistani deals that were subsequently cancelled, but not before considerable technology had been transferred. The Symington and Glenn amendments made the procurement of nuclear-related components and equipment riskier for Pakistan than before, but events coupled with bad U.S. policy in the 80s conspired to limit that risk.

As a result Pakistan was able to reap the fruits of the supply network that A. Q. Khan helped create following his return from the Netherlands with stolen blueprints and lists of suppliers for constructing a nuclear enrichment facility based on centrifuge technology.

U.S. Policy toward Pakistan and the Rise of the Khan Network

Mr. Chairman, one cannot separate the success of the Khan network in the 80s from the policies toward Pakistan pursued by the United States. The Glenn and Symington Amendments were both waived by administrative and Congressional action respectively after the Soviet invasion of Afghanistan. In order to help the Afghani Mujaheddin fight the Soviets, we arranged for the CIA to provide them with sophisticated arms delivered through the Pakistan Intelligence Service (ISI). The Mujaheddin contained a group of murderous thugs that included the Taliban and foreign jihadists organized and initially funded by Osama bin Laden. It is not an exaggeration to say that our assistance to the mujaheddin aided the rise of Al Qaeda. Pakistan's reward for its assistance was shipments of U.S. arms and F-16s, most of which were deployed near the border with India rather than where the Soviets might have attacked.

The lifting of sanctions against the Pakistanis coupled with a \$3.2 billion aid package sent them the message that they could continue their nuclear weapon acquisition activities with the U.S. government doing little to stand in their way as long as they continued funneling assistance to the Mujaheddin and did not embarrass us by setting off a nuclear explosion. That message helped embolden Pakistan to widen the Khan network and set off a new round of attempts on their part to get nuclear-related materials and components from other countries, including those with relatively tight export controls like the United States and Canada. Let me mention a few examples.

The Khan Network and Smuggling in the U.S.

In 1981, while the aid package was going through the legislative process, Pakistan attempted to smuggle 5,000 lbs. of zirconium, used for nuclear reactor fuel rods, out of the U.S. The shipment, marked as "mountaineering equipment", was stopped by U.S. Customs agents. It had no effect on Congressional passage of the aid package.

In 1984, a man named Nazir Ahmed Vaid was arrested for illegally attempting to export krytrons, which are used for nuclear triggers. Although the known intended recipient was the Pakistan Atomic Energy Commission, the indictment was rewritten to exclude any mention of the nuclear use of krytrons. Vaid was permitted to plea bargain to a reduced offense, thus avoiding a jury trial, and a gag order on the case was issued by the judge. He was found guilty of one count of export violation and quietly deported three weeks later.

Although this case had no effect on U.S. aid to Pakistan, it did cause the Congress to pass, in 1985, the Solarz Amendment to the Foreign Assistance Act, which prohibited military and economic assistance to any country that illegally exports or attempts to export U.S. items that would contribute significantly to the ability of that country to make a nuclear explosive device.

On the same day the Solarz Amendment was enacted, the Pressler Amendment was signed into law. The Pressler Amendment made continued military assistance to Pakistan contingent on an annual certification by the President that Pakistan did not possess a nuclear explosive device. It also required the President to certify that the U.S. assistance being given to Pakistan would significantly reduce the risk of Pakistan's possession of such a device, but the Reagan Administration ignored this requirement, realizing that the clear evidence of Pakistan's ongoing drive for the bomb meant they would have to halt assistance. This misfeasance was explained by falsely claiming that there was no difference in the two requirements in the Pressler Amendment. Congress chose not to challenge the Administration on this failure to carry out the law.

In any case, the passage of the Solarz and Pressler Amendments made no difference to the activities of Pakistan and A. Q. Khan. In 1987, a Canadian citizen of Pakistani extraction, named Arshed Pervez, was arrested for illegally attempting to buy and export a quantity of beryllium (used as a reflector in the core of nuclear weapons), along with 25 tons of maraging steel (a special steel used for constructing high-speed centrifuges) from an American manufacturer. He was convicted of the beryllium charge and of lying to investigators, but escaped conviction on the remaining charges on the grounds of entrapment, even though American intelligence officials found evidence that he was working for a retired Pakistani brigadier general and that the final customer was the Pakistani nuclear program. This was a clear violation of the Solarz Amendment, but no sanction ensued.

There may or may not have been an explicit connection, but it was around this time that A. Q. Khan had made arrangements with Iran to transfer centrifuge technology for Iran's clandestine work on uranium enrichment.

The Khan Network Reverses the Flow of Nuclear Materiel

Pakistan had the bomb by 1987, but the Reagan and the Bush I Administrations continued to make the determination that Pakistan did not possess a nuclear explosive device until 1990, when the last Soviet soldiers were leaving Afghanistan. But the military cutoff that ensued did not slow the activities of the Khan network. Now that Pakistan had the bomb and the means to produce fissile material, A. Q. Khan could embark on a stated mission to help other Islamic countries obtain nuclear weapons while enriching himself and continuing to obtain needed materials and components for the ongoing Pakistani weapon program.

Our intelligence agencies, although they had been tracking Khan's activities since the 80s, including intercepting communications going to and from some of the companies involved with the Khan network, claim to have been unaware that Khan had reversed the flow of nuclear trade involving Pakistan. This was not the first stumble of U.S. intelligence with respect to A. Q. Khan. According to former Dutch Premier Ruud Lubbers, the Netherlands government was prepared to arrest Khan in 1975 when he was caught spying at the Urenco enrichment facility in Almelo, but the CIA asked the Dutch government to let him go so that more information about his activities could be obtained. That allowed Khan to go on to a career in Pakistan that resulted in Pakistan manufacturing nuclear weapons, which made him a national hero whose birthday is celebrated in Mosques.

In any case, Khan began bringing Iranian scientists to Pakistan in 1988 for training in centrifuge enrichment technology and began issuing advertising brochures touting his laboratory's centrifuge-related equipment for sale. This brought a flood of responses. Khan must have realized that he could use the network he had created

for Pakistan's own program to sell nuclear weapon-related technology to other proliferating countries, and so he began using the middlemen in the Pakistani effort to send nuclear parts and supplies elsewhere. He even included bomb design in at least one instance (Libya), and probably others. He is known to have made at least 13 visits to North Korea, which probably included trade in missiles as well as nuclear technology since his laboratory was involved in the development of both technologies. Pakistan's President Musharraf has admitted that Khan delivered centrifuges to North Korea for nuclear enrichment purposes. While all of this was going on, Pakistan was preparing for a series of nuclear tests in response to those of India.

Pakistan Escapes Sanctions (Again)

Pakistan's nuclear tests in 1998, triggered additional and severe economic sanctions, which were removed via Congressional action in order to prevent what some predicted would be an economic collapse and serious political instability. The removal of the additional sanctions were unaccompanied by any demand that Pakistan's nuclear activity be cut back.

The military embargo on Pakistan lasted until after the 9/11 attack, and the need to go after Al Qaeda and bin Laden, whose headquarters was located in Afghanistan and protected by the Taliban. Musharraf was pressured to cooperate with the U.S. in removing the Taliban government (that he had helped install) by military force. He did so, and in return, all sanctions against Pakistan stemming from its nuclear program were removed. In addition, President Bush proposed a new aid program, including the sale of another batch of F-16s, and named Pakistan a "Major Non-NATO Ally".

Libya Trips up A. Q. Khan

Meanwhile, the Khan network's smooth operation hit a giant sized bump when, in 2003, a shipment of components for 1,000 high speed centrifuges that left Italy bound for Libya was seized on the high seas, and its cargo confiscated. As a result of the ensuing scandal, Libya, which had been dealing with the Khan network for years, decided to give up its nuclear program and cooperate with investigators in exposing all the elements of the Khan network it had been dealing with. The contraband shipment also included a nuclear weapon design that appeared to be the same one provided to Pakistan by China in 1983. A number of individuals who had been acting as middlemen in various countries were arrested and the first trial is about to begin in Germany.

The Libyan exposure put President Musharraf in a particularly difficult position, considering all the prevarications he had been issuing for years about Pakistan's nuclear activities, and so he responded by stripping A. Q. Khan of his official duties and placing him under house arrest, but pardoning him at the same time. Eleven associates of Khan at the Khan Research Laboratories were arrested at the same time, but the official line from President Musharraf is that the Khan network was and is a "rogue" operation carried out by A. Q. Khan with no involvement by the government or the military.

On the other hand, Musharraf has refused to make Khan available for interrogation by the U.S. or by the IAEA. It is known that he and his associates visited Syria, Saudi Arabia, Egypt, Chad, Mali, Nigeria, Niger, and Sudan. Some information has been passed from Musharraf to the U.S. based on Pakistani debriefings of Khan, but neither Pakistan nor the Bush Administration have made any public statements about what Khan may have said. There is one report of a briefing given to Pakistani journalists on February 1, 2004, by Lieutenant General Khalid Kidwai, Commander of Pakistan's Strategic Planning and Development Cell. In this briefing General Kidwai is reported to have said that A. Q. Khan signed a 12 page confession in which he admitted to providing Iran, Libya, and North Korea with technical assistance and high speed centrifuges for nuclear enrichment. Khan also supposedly said that he had the approval of then-army chief Aslan Beg to assist Iran and had support for his North Korean deals from two other former army chiefs, one of whom is currently the Pakistani Ambassador to the United States. None of this is verifiable without an independent investigation involving interviews with Khan himself.

What is the status of the Khan network today?

At the Third Asia Security Conference in Singapore on June 5, 2004, Secretary of Defense Donald Rumsfeld said he was confident that "the network has been dismantled." In a CNN interview that took place on October 3, 2004, Secretary of State Condoleezza Rice said, "The important thing is that the A. Q. Khan network is out of business, and people are being brought to justice."

Well, it is true that some people are being brought to justice, but A. Q. Khan can't be said to be one of them. His retirement to his multi-million dollar villa does not exactly constitute an appropriate sentence for his spreading the bomb to some of the worst governments on earth.

The Case of Asher Karni and Humayun Khan

More important, at least some parts of the network are definitely still functioning. In 2004, a South African electronics salesman and former Israeli army major named Asher Karni was arrested for violating export control laws in the illegal shipment of oscilloscopes and spark gap triggers to Pakistan from the U.S. via South Africa. The ultimate destination was a company described by U.S. officials as a front for Pakistan's nuclear weapon program. The records for the case have been sealed by a federal judge who imposed a gag order on all participants. When federal investigators asked for State Department permission to go to Pakistan to interrogate the head of the company, a man named Humayun Khan, permission was denied. Humayun Khan has been linked with several militant Islamic groups, including one that supports fighters in Kashmir. Asher Karni was ultimately convicted and is serving a three year prison sentence, but Humayun Khan, who was indicted, is still free in Pakistan at this time. In my view, Mr. Chairman, this was another case of a violation of the Solarz Amendment that is being ignored by the Bush Administration because it wants Musharraf's help in the war on terror.

To What Extent Has the Khan Network Been Rolled Up?

In judging the likelihood of whether the Khan network has been rolled up with no replacement of lost nodes, it is useful to recall that the Pakistani nuclear effort did not begin with A. Q. Khan. The effort began with then-Prime Minister Bhutto's famous meeting at Multan in 1972 where the decision to go for the bomb was made. That resulted in some high level resignations at the Pakistan Atomic Energy Commission (PAEC), including that of Nobel Prize winner Abdus Salam who was opposed to the weapons project. The PAEC directorship was then given to Munir Khan under whom A. Q. Khan briefly worked. The PAEC was to be the locus of bomb design and research. Obtaining foreign assistance was the responsibility of the ISI. It had set up a division for the clandestine procurement of military nuclear technology from abroad, including missile technology as well as nuclear. A. Q. Khan took over the nuclear enrichment project after his return from the Netherlands, although not without a bureaucratic struggle with Munir Khan. A. Q. Khan won that bureaucratic battle, and his success in producing a working centrifuge enrichment plant brought him power and fame in Pakistan. But he did not work alone. Khan Research Laboratories at Kahuta is the size of a small city, and there are large numbers of scientists and engineers working there who, with the assistance of the PAEC and ISI can carry out the work that Khan has been heading for all these years. And they have reason to be motivated.

Pakistan is still not self-sufficient in building nuclear weapons. It still needs specialized materials for the weapons themselves and for the production of fissile material for the weapons. There is no evidence that the arrests in conjunction with the revelations by Libya have shut down the network. Just last week, the Guardian, a British newspaper, reported on the existence of a July, 2005 document prepared by British, French, German, and Belgian intelligence agencies for the European Union, that said the Pakistanis were still shopping in Europe for such things as high-grade aluminum tubing for centrifuges, ring magnets for centrifuge rotors, and machine tools, chemicals, and equipment for producing liquid- and solid-fueled missiles. The document lists 20 Pakistani government offices, laboratories, companies, and trading organizations active in the procurement effort for the bomb program, and hundreds of companies around the world that are said to be involved in some aspect of the production of weapons of mass destruction.

To this should be added the disturbing information that investigators have been unable to account for all the equipment the Libyans purchased from the Khan network, as well as hundreds of millions of dollars worth of high tech equipment for military purposes that went to Sudan during the period that Khan was known to have visited that country.

The bottom line, Mr. Chairman, is that we don't really know to what extent the Khan network has been rolled up, to what extent new additions to the network have been made, and whether increased surveillance of Pakistani nuclear activity is making much of a difference. But an educated guess based on the unclassified literature is that a good part of the network is still intact, and that additions to it are being actively sought. To help deal with this situation requires more information from the Pakistanis themselves.

Public statements made by former CIA Director Porter Goss and others suggest we haven't yet learned what we need to know from General Musharraf, who continues to deny the U.S. and the IAEA access to A. Q. Khan. And we do not appear to be putting sufficient pressure on him.

U.S. Policy Risks Further Problems

We seem to have sold our souls to the Pakistanis again, this time to help us with Al Qaeda instead of the Soviets, and I fear we are once again getting the bad end of the deal. Bin Laden is still at large, the Taliban-led insurgency in Afghanistan is growing in strength, and much of what we thought we had accomplished in Afghanistan after 9-11 is in serious jeopardy.

Meanwhile, we have signed a nuclear agreement with India that is motivating Pakistan to increase its nuclear arsenal, which means it will need additional assistance from outside. It may get some from China, and it will be seeking help from the network that has helped it in the past. We cannot afford to be complacent about this. In the meantime, helping Pakistan to rejuvenate its F-16 fleet makes little sense. Pakistan violated the terms of the sale of F-16s in the 80s when it allowed China to examine the plane, and when it altered the plane's configuration in order to allow the carrying of nuclear warheads. There is no reason to assume the same thing won't happen again.

Mr. Chairman, one cannot stop proliferation without having and enforcing rules by which all must live. Letting countries we consider friends to make nuclear weapons, and reserving our power only to try to prevent those who are not our friends from making such weapons is a prescription for ultimate failure. We failed to stop the Pakistanis and failed to roll up the Khan network when it was possible to do so. We now face an increased risk of nuclear weapons and nuclear materials falling into the hands of radical jihadist elements that exist in Pakistan. Providing more incentives for Pakistan to make more weapons does not seem to me to make logical sense.

Preventing Future Khan-like Networks

But Pakistan should not be seen as the be-all and end-all of proliferation networks. As long as there are countries and sub-national groups seeking nuclear weapons there will be attempts at bypassing export regulations, and we must be prepared for the possibility of Khan-like networks springing up in the future. How can we prevent this?

First, it is important to make export regulations as tight as possible worldwide and with severe penalties for violations. The UN has taken a step in this direction with the passage of UNSC 1540, which obligates all UN members to "refrain from providing any form of support to non-state actors that attempt to develop, acquire, manufacture, possess, transport, transfer, or use" WMD and their means of delivery. In so doing, states are to put in place "appropriate effective" laws to carry out the aforementioned obligation. That means effective export controls, security and accounting, border controls, and criminal laws. A committee to monitor implementation has been formed, but this will be a multi-year effort requiring large amounts of funding to bring countries to the point where a global system, based on appropriate uniform standards, exists that is sufficiently robust to prevent another Khan network from operating effectively.

In addition, a global intelligence operation is a basic requirement if there is to be a pro-active approach to stopping proliferators and Khan-like networks from reaching their goals. Much cooperation is already going on, and this should be encouraged and expanded. Without good global intelligence, programs of interdiction of contraband, as exemplified by the Bush Administration's Proliferation Security Initiative, cannot be effective.

Finally, Mr. Chairman, the history of our relations with countries like Iran and Pakistan should tell us that actions to achieve short-term foreign policy goals must not overwhelm the need to understand and consider the longer term risks and consequences of such actions. In the end, nonproliferation and counter-terrorism policies are intertwined, and it is a mistake to trade off one policy principle for the other. History tells us that today's enemy can be tomorrow's friend and vice versa. In general, U.S. national security is best served by following policies that are least likely to result in the creation of either proliferators or terrorists, regardless of whose side we think they will be on.

Thank you, Mr. Chairman. I am ready to answer any questions.

Mr. ROYCE. Thank you, Mr. Weiss.

We now go to Mr. Koch, and I am going to summarize because we are going to be voting at 2:50.

STATEMENT OF MR. ANDREW KOCH, AUTHOR, FORMER WASHINGTON, DC, BUREAU CHIEF, "JANE'S DEFENSE WEEKLY"

Mr. KOCH. Thank you, I will be short.

In my view, the A.Q. Khan network is not a closed case. While parts of it may be under house arrest—for example, Khan and many of his associates are either under government control or being prosecuted in Europe—there are other tentacles that are still out there, unknown or yet to be prosecuted and, given the financial desire by potential proliferators, will at some point come back and be available as suppliers.

Why do I say that? First of all, I think it is important to step back a little bit and look at what Khan did and how he was able to go about his work. In many ways he took advantage of the downsides of globalization. His network was able to use the full convenience of our era today. He used front companies in different countries that have very pliant rules, used flexible communications and travel, and took advantage of the swiftness and anonymity of international finance. Most of the network participants were market savvy rather than geopolitically inspired, and therefore they are willing and able to sell to somebody with the desire to buy.

Secondly, you have to look at what is on going today. Pakistan has rebuilt its own supplier network, particularly in Europe, and Iran has done the same. A case in point of what is going on is something that was broken up by the Swiss authorities. There was a shipment of 60 tons of specialized aluminum steel that was being sent from a Russian supplier through several front companies in Dubai on to Pakistan and ultimately to Khan network customers. Now this was March 2004, a full 2 years after the Khan network had supposedly been shut down. The authorities, who were tipped off by Dutch intelligence to this, found out about that because one of Khan's known associates, a man named Hank Slebos, who the dealers were sloppy enough to have put his name on the bill of lading. Had they not done that, the steel would not have been intercepted, and in fact the suppliers tried again. They took Slebos' name off, used another associate in the U.K. who had not been formerly known to us, and they tried to ship it again. This time they tried directly from Russia to Dubai, where the authorities intercepted it.

This is just an illustration showing that if this was happening a full 2 years after the government cracked down and after supposedly we knew what was going on, that there are tentacles out there still able to produce for customers if the money is there.

The second aspect I would look at is what Khan's network is able to offer versus, for example, other supplier networks. In the case of the Iranian network, they are getting a lot of bits and pieces, but they are not able to get the full centrifuges or the complete kit when it comes from Dubai. They are only able to get individual things and it would take a very sophisticated program to put those things together. Khan was able to offer one-stop shopping. So the ability to intercept that one-stop shopping I would say is important.

The second thing is also to look at the culpability of the Pakistani Government, of what they knew and when, and what happened. In fact, I went to an arms show in November 2000 in which he was handing out these glossy brochures. This is clearly not the

work of one man to produce something like this, and in it he clearly states that Khan Research Laboratories is willing to offer a full range of nuclear products, including “complete ultra centrifuge machines.” On the back of this pamphlet and on an accompanying pamphlet it says more technical details. It clearly states that assistance is offered and provides contact numbers where you could go and get that assistance, and it says you can get a full range of help from assembling these machines to maintaining them and operating them.

This was in 2000. It was at a formal booth. Khan was not even there. So one has to wonder was this really Khan and a few people, or is this an institutionalized program that was happening? I would say certainly the evidence points to the latter.

If it was true that there was an institutionalized program, then what happened to those who are behind it? And that is the real question here.

Mr. ROYCE. And that was state-owned?

Mr. KOCH. That is correct. A lot of it is state-owned. It was a state-sponsored show. In fact, it was dominated by the Pakistani military. They comprised 70 percent of the attendees and most of the exhibitors.

One of the issues—skipping forward here—is what happened to potential new customers, as you mentioned, Mr. Sherman. In the case of Libya, we know that they ordered and paid for more pieces of centrifuge than they actually received, so there are some missing parts. We don’t know what happened to those parts. They could have been sold to North Korea or Iran, they could have been sold to unknown countries, or they could be in a warehouse somewhere with the perpetrators being scared off or possibly even destroying the evidence so they don’t face prosecution. But that is an issue we simply don’t know, and if we are not able to get to the bottom of who ultimately is behind the Khan network, then clearly these kind of materials would be able to be pulled out of hiding, if that is where they are, and sold again.

Within the community of international investigators, the predominant view right now is the following explanation: That Khan himself, with a couple of senior lieutenants, provided these devices directly to North Korea and Libya. However, there is another theory that is getting a lot of credence and something to be considered—that parts of the network that have yet to be uncovered were much more senior than previously believed. This alternate view believes that the simplicity with which Khan supposedly shuffled closely guarded nuclear goods around is not a reasonable explanation. It is simply too difficult, without more powerful forces working behind the scenes, and if that is so, that would not bode well for future networks and the ability of those networks to reconstitute themselves when international attention begins to wane.

Lastly, I would support the views of my colleagues here who said if that is true, it is going to take a lot of work to get to the bottom of this. It is going to take not only prosecutions in Europe but it is going to certainly take better cooperation by the Pakistani Government.

Thank you for the opportunity to testify.

[The prepared statement of Mr. Koch follows:]

PREPARED STATEMENT OF MR. ANDREW KOCH, AUTHOR, FORMER WASHINGTON, DC,
BUREAU CHIEF, "JANE'S DEFENSE WEEKLY"

Mr Chairman, good afternoon and thank you for giving me the opportunity to appear before the committee to discuss the nuclear supplier network headed by AQ Khan.

The story of how Pakistani nuclear scientist Abdul Qadeer Khan pilfered nuclear technology from Western Europe and helped propel Islamabad to becoming an atomic power is, by now, fairly well understood. But it is less well known that two years after President Bush said international investigators have "put an end to his criminal enterprise", it appears that portions of the network remain intact and possibly in operation.

I would like to focus my comments today on the question of whether Khan's associates—who stretched their operations from Asia to the Middle East, Africa, and Europe—are still in business. Their network was first created to feed Pakistan's nuclear program, and later, was used by Khan to feed foreign clients including Iran, Libya, and North Korea.

My testimony is based on interviews with those that have firsthand knowledge of the issue—the officials in over a dozen countries that are investigating the network as well as some of Khan's associates and their attorneys that have been prosecuted or are under investigation.

Although AQ Khan is under house arrest in Pakistan and many of his senior associates in the illicit smuggling network are currently in jail or under government control, the transfer of nuclear goods and services continues to be available to those with the will and resources to pay. These activities, driven by the continued demand and the active procurement attempts of at least Iran and Pakistan, encompass some individuals and companies that once supplied Khan's deals. But they also include new or different nuclear technology brokers, many of whom use the same or similar methods to evade international export controls intended to stop the flow of this critical technology.

The network was first established by Khan to help feed Pakistan's then nascent nuclear weapons program, and later used to supply external customers. It was not the first such network to sell nuclear goods and in fact many of the same European middlemen had been implicated in providing weapons technology to Iraq's pre-1991 Gulf War nuclear program. A few of these middlemen may have even sold nuclear goods to Pakistan's rival and neighbor in South Asia, India.

Still, the network that eventually evolved under Khan was significantly different from previous suppliers in that it provided one-stop shopping to would be customers—offering everything from the machines needed to create fissile material to the expertise to help run the facilities. And, in at least Libya's case, a nuclear weapon design was provided as well.

Also different was the audacious manner in which Khan operated. It went to such extremes that he had glossy brochures created to highlight the network's wares and had his staff distribute them widely to potential customers. I was handed an original copy of these brochures at a defense exhibition Pakistan hosted in November 2000 in the port city of Karachi by representatives of Khan Research Laboratories (KRL), which had a booth at the show. The KRL employees assured me that everything listed in the brochures—which include virtually all of the components necessary to create a uranium enrichment plant, as well as support services to maintain and operate it—were available.

How did it happen?

The Khan network made full use of the conveniences of the era: front companies in pliant jurisdictions, flexible communications and travel; swiftness and anonymity of international finance. Most of the network participants were market savvy rather than geopolitically inspired, and the culprits used the loopholes of the new global marketplace to sidestep international restrictions that were often too cumbersome or unwieldy to keep up with changing tactics.

The network, for example, exploited the vulnerabilities of globalization by end-running around national export controls. This was possible, in part, because the system in place to monitor international nuclear trade is not comprehensive. The existing measures also suffer from insufficient participation and lack of enforcement in many countries. The increasing spread of industrial capacity that is occurring today will only make this challenge more difficult. It is sophisticated engineering abilities and industrial capacity such as precision machine tooling, rather than the basic science of nuclear processes, that are the bottlenecks to a successful nuclear development program over the long term.

Ongoing activities

Today, Iran has rebuilt a network to supply prohibited goods for its nuclear and ballistic missile programs, principally from Europe and Russian firms and has included some of the Khan middlemen in the process. Tehran's new network is exploiting many of the same weaknesses and loopholes of the system that Khan's associates used, and may be a response to fill the gap after Khan was removed as a primary supplier.

German national police, for example, in March raided dozens of business locations suspected of being connected with illicit sales of nuclear-related goods to Iran in 2004 and 2005. In all, German authorities believe Iran has used as many as 100 front companies in Germany to help Tehran buy and illegally export a range of defense goods—from military items to nuclear technology. German authorities are prosecuting a number of other cases against those believed to have funneled nuclear goods and ballistic missile technology to Iran, as well as Libya and others.

Some of these other cases are part of Pakistani attempts to rebuild a network for supplying the needs of its own nuclear weapons program—which for years has relied on illicitly bought high-technology components. This heightened procurement activity by Pakistani agents has been ongoing since at least 2004.

What troubles European investigators, they say, is that Pakistan appears to be buying more nuclear bits and pieces than they need. Moreover, because many of the procurement agents had worked for Khan previously, there are linkages to them having been used to buy nuclear wares for Khan's foreign clients.

An alternate explanation, offered privately by several Pakistani officials, is that the newfound nuclear procurement push could be part of an effort to quietly rebuild parts of Islamabad's own uranium enrichment program at KRL in Kahuta if damage was done to the facility in last October's devastating earthquake. According to a letter written by former Pakistani President Ghulam Ishaq Khan, on at least three past occasions in the 1980s and 1990s, the Kahuta facility was forced to shutdown due to equipment damage and destruction cause by earthquakes. A similar occurrence may have happened last October.

These activities are critical, inspectors in Europe and elsewhere say, because they have evidence that at least parts of the Khan network have remained in operation long after it was publicly said to have been broken in 2002. Swiss police, for example, say they interrupted a plot in March 2004 to illegally ship 60 tons of specialized aluminum tubes—used for building parts of a centrifuge cascade to enrich uranium—from a Russian supplier through intermediaries in Western Europe and Dubai to Pakistan. Although entities involved in the Pakistani nuclear weapons program were the intended destination, it is possible these supplies could have ultimately been sent to Khan network customers.

The only reason the deal was discovered and stopped, Swiss authorities noted, is that the shippers were sloppy enough to include the name of Hank Slebos on the shipping bill. Slebos, who late last year was convicted of sending nuclear-related goods to Pakistan, had been under surveillance by Dutch intelligence officials for years and they tipped off the Swiss authorities. However, the Swiss police said, other parties to the deal dropped Slebos from the transaction and tried again using a middleman in the UK that was not previously known to be a Khan associate. They attempted to ship the pipes from Russia to Pakistan through Dubai, but the goods were seized in the UAE by government authorities.

This incident is just one illustration of what many inspectors working on the Khan affair believe—that parts of his former network remain intact, operating either on their own or with other similar networks built by national governments such as Iran.

In this light, it is troubling that the Pakistani government has publicly stated that investigations into the Khan affair are over. This is clearly not a view held by the rest of the international community. Pakistan should be urged to cooperate with international inspectors to resolve a number of major outstanding issues. They include:

- Did Khan provide more nuclear assistance to Iran than Tehran has declared. That technology could be the foundations of a secret atomic bomb project. Khan's deputy in the network, Buhary Seyed Abu Tahir, has told interrogators that Khan likely supplied three samples of the more advanced P-2 type uranium enrichment centrifuge to Iran. However, to date Tehran has continued to insist it received only drawings for the machines and the centrifuges have not been found. Tahir noted that the provision of such complete sample centrifuges was a standard procedure from Khan, and the pattern matches events in Libya. Based on these and other discrepancies, as well as Tehran's repeated attempts to cover up its P-2 program, there is reason to suspect that

Iran has a secret enrichment project based on the P-2. These concerns are exacerbated by the recent statement of Iranian President Mahmoud Ahmadinejad, who said Tehran is “presently conducting research” on the P-2 despite earlier Iranian claims that efforts to develop the machines had been scrapped in 2003. However, neither the US nor other international allies know of any physical locations for the project.

- Did Khan provide Iran and others with nuclear weapons designs? Investigators from the International Atomic Energy Agency (IAEA) discovered key documents in Iran that specifically point to activities that only have uses for building nuclear weapons. The documents, which Iran claims were provided by the Khan network, outline detailed steps on how to make the precisely machine hemispheres of uranium metal needed for a nuclear weapon. Such metallic spheres do not have any other known purposes. Iran only recently disclosed the documents and may have done so accidentally, raising concerns that Khan may have provided additional weaponization assistance as well. He had provided Libya designs for a nuclear warhead and investigators are wondering if Iran similarly received a copy they are still hiding. Iran denies receiving such designs.
- Did Khan supply any other country beyond North Korea, Libya and Iran?

A Hidden Nuclear Customer?

One of the key unsolved questions that international investigators are still wrestling with is what happened to a substantial amount of nuclear equipment—including key centrifuge parts such as rotors, pumps and ring magnets—that records show should have been sent to Libya but never arrived there. The missing items were paid and accounted for by Libya, but never received by Tripoli and only a few parts have since been found.

Explanations for the missing nuclear goods range from another still unknown buyer, to additional shipments to Iran and/or North Korea. The goods could also have been placed into storage or even destroyed by participants in the network that were scared-off after a number of associates were arrested or after they suspected they were being watched by government authorities. IAEA investigators believe some centrifuge parts will ultimately be found warehoused in Dubai, which has become an important hub of their investigation.

But the possibility of additional, yet to be revealed customers has investigators worried. Although little hard evidence of such a hidden customer has been found, those named as possibilities include Brazil, Egypt, India, Saudi Arabia and Syria.

As a recent US intelligence community report to congress notes, Pakistani officials have “confirmation” of claims that Khan offered Syria nuclear goods. Syrian representatives made initial overtures to Khan in the 1980s, but he is believed to have rejected their offers at that time. However, Khan is believed to have made at least one other trip to Syria in the late 1990s in addition to other contacts with what one of the investigators called “all of the right people” where he is seeking Syria as a customer. Investigators are concerned a deal might have been struck but the publicly available evidence regarding whether these meetings ever lead to anything is scant. Interestingly, several Israeli officials have recently told me they investigated the claims and are not overly concerned, also suggesting the evidence is weak.

Saudi Arabia has also been named by some officials as a possible customer in the Khan network, due in part to a large number of trips to the country undertaken by the Pakistani scientist and his top associates. Moreover, there have been a number of meetings between senior Saudi officials and their Pakistani counterparts on strategic security matters and the issue of nuclear weapons has been raised. One example, a trip by Saudi Prince Sultan bin Abdul Aziz to KRL, has received a lot of attention and has been cited by a number of senior, primarily Israeli, as evidence that Riyadh is considering a nuclear weapons program of some sort.

Those suspicions were amplified in 2005 when the Saudi government applied for, and was granted, an exemption to its safeguards obligation by the IAEA Board of Governors due to the country’s lack of nuclear facilities and activities. Despite substantial Western pressure, the Saudis requested to be placed under the small quantities protocol—a loop hole in the safeguards regime that effectively allows countries with no or extremely limited nuclear programs to avoid inspections—submitting just a declaration of their activities and holdings instead. Under the terms, the IAEA’s inspection powers to investigate in Saudi Arabia are limited, leaving inspections there to be more of an honor system than one with real teeth. Seventy five countries have been granted the exemption, but none are considered a proliferation risk due to limited technical and financial abilities to run a clandestine nuclear program.

However, with very limited technical or industrial capacity to rely on, an effective clandestine Saudi nuclear weapons program appears a very remote possibility. A

more likely scenario is an arrangement with Pakistan whereby Riyadh is afforded some sort of nuclear umbrella in the event that Iran gets the bomb. If true, the umbrella could entail a straight transfer to Saudi soil of nuclear weapons still under Pakistani military control or, more likely, a form of security guarantee not unlike those provided by the US to many allies during the Cold War.

Israeli officials have also talked of seeing "worrying signs" of nuclear ambitions in Algeria and Egypt, although they note that the evidence is highly circumstantial and any programs based on uranium enrichment would be in their infancy and are likely early steps to hedge against the possibility that Iran could go nuclear. Khan had ties to Egypt through nuclear-related conferences he hosted and parts of the Egyptian government outside of the Atomic Energy Commission have published a number of scientific papers suggesting they are thinking about hedging in the event they want to commence a nuclear weapons project in the future.

Conclusions

Although the arrests of AQ Khan, Tahir and several other top members of their nuclear smuggling network have eliminated a major source of atomic goods to would-be proliferators, it has not ended the trade in nuclear wares. In fact, evidence suggests the Khan network was run as more of a decentralized white-collar criminal group than a top-down organization, with the implication that participants in the network could remain undiscovered and fully able to operate again. As one senior international investigator recently told me about what is known to date: "there is no reason to believe this is the whole story".

One theory gaining credence and support among the investigators is that the parts of the network yet to be uncovered are more senior than previously believed. The simplicity in which the current predominant view explains how the Khan network easily shuffled closely guarded nuclear goods to Libya, Iran and North Korea is not reasonable, proponents of this alternate theory say, leading them to believe that more powerful forces were at work behind the scenes.

On the ground, the recently illicit procurement push by Iranian agents and to a lesser degree Pakistani ones suggests such a reconfiguration of suppliers is occurring, with the result that illicit trade in nuclear goods continues to be available for those with the means and desire to buy.

However, the good news is that the new suppliers are far from the one-stop-shopping Khan offered and insufficient by themselves for moving a nuclear weapons program very far forward. Much of the material seized and investigated in Germany and elsewhere, for example, involves basic materials and dual-used goods, not complete centrifuge designs, machines, or drawings.

Still, the equipment discovered missing after Libya began cooperating with investigators, and the possibility there could be additional unknown buyers for the nuclear goods, does raise serious concerns.

More work needs to be done to clarify what happened to this material and to answer other important unresolved questions. Such investigations will doubtlessly require international cooperation.

Finally, one positive development that has begun to take shape in the past few months is the cooperation several Khan associates have provided investigators, possibly including future testimony against their fellow culprits. Cooperation from these insiders may, ultimately, help reveal yet to be discovered trends of the network and untangle the maze of what happened to the missing centrifuge equipment.

Mr. ROYCE. Thank you, Mr. Koch.

Mr. Koch, let me ask you a quick question, and that is, two countries that we know of that A.Q. Khan traveled to were Egypt and Saudi Arabia. Are you concerned at all that the transfer of nuclear equipment to either of these countries may have occurred, or are we simply reacting to the stamped passport there? Give me your thoughts about Egypt and then Saudi Arabia.

Mr. KOCH. In the case of Egypt and Saudi Arabia, geopolitically, in terms of their desire and that of Iran, if Iran gets the bomb, both Egypt and Saudi Arabia would feel under pressure to do something about it to protect their own security. However, I think they have two different situations.

To build a nuclear weapon or to have a self-sustaining nuclear program, you need to have an infrastructure, you need to have an industrial infrastructure and you need to have an intellectual infra-

structure. Saudi Arabia doesn't have either. Egypt is a different story.

In the case of Saudi Arabia, I think it is more likely that if they were going to cut a deal with Pakistan it would be for some sort of nuclear umbrella or nuclear assurance provided by the Pakistanis, maybe not unlike what the United States provided to some of its allies during the Cold War—guaranteed securities.

Mr. ROYCE. Is the allegation that Iranian influences that the Saudis finance the original creation of the bomb itself would be heavily—

Mr. KOCH. That is the way it looks like, and again, if there was a quid pro quo, it doesn't look like it would be for technology but for the product—the security that the nuclear weapon provides.

Egypt is a different story. It looks like there are some early steps they have taken to hedge against the potential outcome that Iran does actually get a nuclear weapon.

Mr. ROYCE. What was China's role in assisting the Khan network? We know about the ring magnets that they originally sent to Pakistan, but once this network really got underway, any insight there? Dr. Weiss.

Mr. WEISS. Well, I am uncertain, beyond the ring magnets, exactly what assistance China gave Pakistan in terms of equipment, but we know that China provided a nuclear weapons design to Pakistan in 1983, which was the basis for Pakistan's first nuclear weapons, and we know that the Chinese technicians and engineers and scientists have been all over the enrichment facility at Kahuta in Pakistan over a period of time, so that there was obviously some sort of technology assistance perhaps going the other way, going from Pakistan to China as well as from China to Pakistan.

Mr. ROYCE. And we know that those same designs ended up in some other curious places, too.

Mr. WEISS. That is right. The weapon design that was found after the catch of the *BBC China* was in fact a Chinese design. It had Chinese markings on the papers, and it appears to be the same design that China probably provided to Pakistan in 1983.

Mr. ROYCE. Mr. Albright.

Mr. ALBRIGHT. I don't think there is any evidence that suggests that China was a willing partner with Khan. I think it is another case where if you provide something to a country in violation of standard norms, that that information can be misused.

I would add one thing. The Chinese bomb design that was found in Libya; there remain concerns that it could have also gone to Iran and North Korea, or more sophisticated designs could have been transferred.

Mr. ROYCE. I read about the allegation, which seems—

Mr. ALBRIGHT. Well, the Iranians deny it and Pakistan denies that it happened. So I would say it remains a question.

But I would also say in the case of Iran, based on an analysis of their missiles, there is a question whether the Khan network provided a more advanced nuclear weapons design than the one that was found in Libya.

Mr. ROYCE. I was going to ask Mr. Koch another question, and that was about that curious arms show that you attended and whether you just walked into it or whether you made your observa-

tions while you were there, because that information is certainly very—

Mr. KOCH. It was a public arms show. I was there as a reporter.

Mr. ROYCE. In Karachi?

Mr. KOCH. Yes, sir, and obviously it was a big surprise. Not many people paid attention to the Khan element because there was also a public display showing for the first time models of two of Pakistan's new missiles that had never been seen before, the Shaheen I and Shaheen II. But I happened to go by the booth and asked specifically about these, and I was assured that everything that was in this brochure was in fact available for sale. I did write it up—ultimately did write up an article. I didn't write it up while in Pakistan, as at the time it didn't seem like a particularly good idea to be doing so. But I also later confronted senior Pakistani officials from the SPD, which is the unit of the Pakistani army that is responsible for guarding their secrets and also guarding their nuclear arsenal. They completely denied that this happened, and until I produced the brochure they denied the brochure existed. It has been denial, denial, denial all the way along with them.

Mr. ROYCE. Before I move to Mr. Sherman, just a quick assessment about the security of Pakistan's nuclear arsenal. Any thoughts about how secure that arsenal would be in that part of the world?

Mr. WEISS. I think the bottom line is we probably don't know precisely how secure it is. We know that they keep different elements of the arsenal in different places in Pakistan, much like the United States did in its early nuclear days because the weapons were not put together as units. But there have been discussions that have taken place between the United States and Pakistan regarding the security of Pakistani nuclear weapons, and at least it has been reported that some information has passed from the United States to Pakistan on ways of protecting their weapons. Exactly, however, what information has been sent over is classified and I can't talk about it here.

Mr. ROYCE. Thank you, Mr. Weiss.

We will go to Mr. Sherman.

Mr. SHERMAN. Dr. Weiss, I can understand Pakistan maintaining a network to get the materials and technology it needs to build more bombs. What is harder to understand is why Pakistan would maintain a network to export technology or nuclear materials. One could imagine they would choose to do that to get money for government programs, one could imagine that they would do it to get money that could easily be put in the pockets of individuals, one could imagine that they are bartering for other nuclear technology or materials or centrifuges for some uranium or whatever. You put forward the idea that what is being maintained is a two-way street, not only Pakistan seeking but Pakistan disseminating. Why? I realize there should be some money in it, but there has got to be an easier way for Pakistan to make a buck.

Mr. WEISS. Well, that is one of the questions I want to ask A.Q. Khan, and we haven't been able to ask it because President Musharraf has not made him available.

But let me just say that there is some history to this. The fact of the matter is that there was an arrangement with North Korea

in which Pakistan received missiles, missile technology in return for transferring nuclear technology to North Korea.

Mr. SHERMAN. Is there anything Pakistan needs that a non-nuclear state could provide. I mean, obviously there was that transaction, but they have got that technology now.

Mr. WEISS. Well, I think the answer is that much of the—when you want to build nuclear weapons, there is a lot of dual use technology that goes into it, and any non-nuclear state could have companies within them to provide that kind of assistance.

Mr. SHERMAN. But there are certainly leading candidate states that we would expect would want to benefit from the Khan network. Iran would be at the top of the list. It is possible that there are still things that North Korea would like to get its hands on, although its program seems to be doing just fine, thank you. There are allegations in Egypt and others. But of those three states, which of those would have anything that Pakistan would need? I mean, I can't imagine that the best way to get dual use technology is to ask for a bill of lading addressed to Tehran.

Mr. WEISS. No. I think they are shopping for many items in Europe.

Mr. SHERMAN. That would be their imports part of this network. It is not like the Netherlands is going to want a centrifuge from Pakistan.

Mr. WEISS. No, but Pakistan is buying things which are in excess of, apparently, of what they need for their program, according to that intelligence report from the EU.

Now, the question is who, you are asking who would they sell it to?

Mr. SHERMAN. Yeah. Who would they give it to, and would they be doing it for any purpose other than just getting money?

Mr. WEISS. That is very hard to say, I mean, without knowing exactly to whom they are selling.

Mr. SHERMAN. Well, we have this general fear that the export part of this network would still exist, but it is really at this point speculation as to who Pakistan would be giving technology or nuclear materials to, or why, or what they would be getting for it. None of those questions do we have answers to.

Mr. WEISS. I think that is right in general.

Mr. SHERMAN. We have a well-founded suspicion that if they were exporting nuclear materials and technology before we found out about the A.Q. Khan network, that they might be doing the same—

Mr. WEISS. Well, let me say one thing about that. First, I think this is certainly clear that if they could get additional help to North Korea and to Iran in return for whatever those countries could provide, money or anything else, I am sure they would do so. The question that you are asking, however, brings up an issue. Even countries that have signed the NPT—and Iran happens to have been one of them—some may be interested in doing studies about how to make nuclear weapons, and they can go—

Mr. SHERMAN. Dr. Weiss, I am going to have to cut you short because I want to go to Mr. Albright with a question. And that question is, assume that a 15-kiloton nuclear weapon is exploded in a major American city, say Hiroshima size nuclear device, could we

reduce casualties by a sensible preparation and a civil defense program involving instructing our people what they might do in the very few seconds between the flash and the blast, stockpiling iodine tablets or any other treatments, providing advice on whether evacuation is called for, and rushing medical attention to the location? Could that and other civil defense steps reduce substantially the number of casualties we would face if everything we are worried about actually came to pass if a 15-kiloton weapon was exploded in an American city?

Mr. ALBRIGHT. Certainly preparation could reduce casualties. The problem is that it still could be that hundreds of thousands could die, and so I think when you look at this it is a little bit of a dilemma of the Cold War. Where do you put your resources? And I think there was optimism after 9/11 when this was looked at that you could deal with preparation and deal with prevention—

Mr. ROYCE. I am going to interrupt for 1 second. We are going to go to Mr. Tancredo for one question.

Mr. TANCREDO. Thank you, Mr. Chairman, for giving me the opportunity to ask just this question.

Apparently, from everything that you have said and the testimony that you have provided and from everything that we now know that is available to us in this kind of a setting, combined with the information that we have to assume is there and that we would not be privy to in this kind of a setting, it is intriguing to me as to why we put so much emphasis on the need to now question Mr. Khan again. Frankly, what did we think we could learn, especially questioning him under circumstances over which we would have very little control, in surroundings which we probably would not be able to create but we would have to take advantage of? Isn't it simply clear to everybody that the real—when you say get to the bottom of, Mr. Koch, is it not clear to everybody that getting to the bottom of this you will find the Pakistani Government? I mean, from everything you have said, that is it, that is what we need to know, and I think all the information is there. So shouldn't our emphasis, our energy, instead of worrying about trying to question him, which I wonder how productive that would be, let's think about what we should do as a country to force Pakistan to provide the information we need rather than kind of waste time in the other direction?

Mr. KOCH. Congressman, you are right. Clearly if questioning Khan under very tight guidelines—

Mr. ACKERMAN. You need Jack Bauer.

Mr. KOCH [continuing]. Such as they are now, the productivity may be limited. But there are other pieces of what is going on. In Pakistan, there are people, Mr. Farooq, that know a lot of the details and probably know some of the other people involved, even if they are still hiding that we aren't able to get to. As long as Pakistan doesn't allow us direct access, it is not going to happen.

Looking at what the IAEA has been able to accomplish alone is a key point as to how that works. They are dealing with a country that doesn't want to cooperate with them, and yet over the last couple of years, by very painstaking investigations and cross-checking, they have been able to slowly, piece by piece, bring out a lot of information about the Iranian nuclear weapons program that frankly

the United States intelligence or anybody else didn't know existed. So this kind of access was important to them.

Mr. TANCREDO. But we have got enough, it seems.

Mr. ALBRIGHT. No, there is not enough. There are many purposes that would be served by questioning Khan and his associates. One is there are questions about Iran's nuclear weapons program. If the Pakistani Government wants to tell these scientists to lie, they could certainly do that.

Mr. TANCREDO. Oh, I don't think they would do a thing like that.

Mr. ALBRIGHT. Well, there is a lot of information that they have been willing to provide through the written process, and it has been valuable.

The other is prosecutions. We don't know yet all the members of the Khan network. We estimate there were about 50 active players. I would challenge you to come up with 20 by name. I think the Intelligence Community knows more, but there are people out there. We did a search last summer of some members and we found that they were out at least on an Internet Web site advertising for centrifuge preforms. We don't know for who.

And so I think that it remains a priority to get to Khan. I think what you are saying is critical. We have to put pressure on Pakistan to make it a believable process, but I think that there are many reasons to get the information.

Mr. TANCREDO. Okay. Thank you, Mr. Chairman.

Mr. ROYCE. Back to Mr. Sherman.

Mr. WEISS. May I add one thing to that, please?

Mr. ROYCE. Yes, Dr. Weiss, and then we will go to Mr. Sherman.

Mr. WEISS. There is in fact one piece of information that would be nice to nail down that Khan apparently provided or at least it is reported that he provided. Some Pakistani journalists reported that he signed a 12-page confession in which he said that nuclear assistance to Iran was approved by the then Army Chief, Mirza Aslam Beg, and that the deal with North Korea was supported by two former Army chiefs, one of whom is now Pakistan's Ambassador to the United States. I would certainly like to know whether that is true, and one way of finding that out is to see whether A.Q. Khan has some documentation that would verify it. So that is certainly a good piece of information that we don't have.

Mr. SHERMAN. Returning to Mr. Albright, I certainly would want not to suggest that we reduce the resources that we devote to nonproliferation. We serve on this Subcommittee in large part because of our desire to increase the emphasis we put on nonproliferation and foreign policy and resources and diplomatic output we put into it. In fact, I would think if we told the American people they would have to concern themselves with civil defense, that that would surprise them and would increase the resources and diplomatic capital invested in our nonproliferation effort.

Returning to the questions, assuming we are talking a Hiroshima-size weapon exploding in an American city, could we through a well-designed civil defense program reduce casualties by 30, 40, 50 percent?

Mr. ALBRIGHT. No, I don't think so. Unfortunately, I don't think you can reduce it to that extent because the injuries are so quick,

and if the target is chosen deliberately to maximize casualties, I mean there is little that can be done to stop that initial onset.

Mr. SHERMAN. You think the casualties would come from the blast, but not radiation that people could, by moving themselves a few miles, avoid?

Mr. ALBRIGHT. I think this would happen too quickly. If it is a dirty bomb, then a lot can be done. But a nuclear weapon, there is unfortunately not a lot that can be done. You certainly have to deal with it after the fact, and the more preparation, the better—certainly there is going to be many who could die from radiation sickness if they are untreated. With modern methods most of those deaths can be prevented, and so there is a lot that can be done.

Mr. SHERMAN. Do a lot for those who would otherwise die of radiation sickness, but the other causes—I am going to yield to Mr. Ackerman.

Mr. ROYCE. Mr. Ackerman.

Mr. ACKERMAN. Thank you very much, Mr. Chairman. Could A.Q. Khan have run his network without General Musharraf knowing about it? Is the answer “yes” or is it “almost impossible” or “impossible” that he could have done that?

Mr. ALBRIGHT. It is hard to believe he wouldn't have known about it, hard to believe.

Mr. WEISS. I agree with that. I find it incredible to think that the Pakistani military would know about it and General Musharraf not know it. I think he would have known about it.

Mr. KOCH. I agree with that. I think it is merely impossible to believe that he wouldn't have known about it and probably for longer than simply when General Musharraf was President, but going back to several of his other senior tours of duty in the Pakistani army.

Mr. ACKERMAN. If we are not getting access to A.Q. Khan and Pakistan is not going to tell us about it, which is where we are, should we withhold some assistance to Pakistan until we get cooperation, or is there a different way to pressure Pakistan to get the access or the answers?

Mr. WEISS. I don't know whether withholding military assistance would pressure the Pakistanis into actually producing A.Q. Khan for interrogation, but I would say that it does not make a lot of sense to me to provide military assistance while we are seeking such information. I think the F-16s are particularly problematic for a number of reasons which go beyond the conduct of work. The Pakistanis, the last time they got F-16s from the United States, provided the planes—or at least a plane—for the Chinese military to examine in order to be able to figure out what the performance characteristics of the plane were.

Mr. ACKERMAN. I saw that in your statement. The Chinese actually altered the plane?

Mr. WEISS. The Pakistanis altered it so that it could carry nuclear weapons, and there is no reason to believe that they won't do the same again.

Mr. ACKERMAN. Where could we learn more about that?

Mr. WEISS. I think you can learn more about that from our intelligence agencies.

Mr. ACKERMAN. Thank you. Thank you, Mr. Chairman.

Mr. ROYCE. Thank you, Mr. Ackerman. One last question. I want to remind the Members that a copy of the brochure is in our packet here, "Dr. A.Q. Khan's Research Laboratories," and also just calling your attention to the front page, "Dr. A.Q. Khan Research Laboratories, Government of Pakistan."

The question has been asked, if we had complete information on exactly what Khan was planning with Iran, do you believe that would significantly alter the Intelligence Community's assessment on how much time the Iranians have, and a time line to create nuclear weapons? And the other question along the same lines, each of you are experts, how much confidence do you have in our current intelligence estimates about how long it would take for the Iranians to develop a nuclear stockpile and capabilities?

Mr. KOCH. Mr. Chairman, to answer your last question first, I don't believe that the United States intelligence community currently has a very good view of the Iranian program. I don't think it ever had a very good view. But there were some incidents that happened around the year 1999, 2000, that we may have lost in terms of human sources on the ground. What we know really has been through the IAEA, supplemented by our technical abilities, from what I gather. If you don't have that kind of view, it is difficult to walk through the uncertainties which are inherent in the estimate.

If we had perfect access to Khan, I think it would help at least get through some of the uncertainties. For example, does Iran secretly have a program based on the P2, the more advanced type of centrifuge that it looks like Khan provided, but we don't know for sure. The Iranians deny it.

Mr. ROYCE. Did we put that question to him, to the Pakistani Government? We do not have a definitive answer?

Mr. ALBRIGHT. A denial, just a denial. One thing I would add to that is, you know, the U.S. estimates are obviously classified so I don't know what they are. They have been reported publicly as a fairly broad range, euphemistically 5 or 10 years away. I think what would happen if we had better information is that estimate could be narrowed. I do believe that the estimate is pretty robust, that it is more consensual, it has been reviewed much more rigorously. The uncertainties are better understood.

Certainly they used a lot of information from IAEA to come up with that estimate. A lot of the U.S. people who made the estimate were the same people who criticized the Administration for their nuclear assessments prior to the 2003 Gulf War. They were at the center of that criticism, said it was wrong to say that Iraq had a major nuclear weapons program. They were people in the Department of Energy who did not believe the exaggerated claims. I would say that some of those people are very much involved in trying to understand the Iranian situation.

The other thing that would be gained by an honest interview with Khan and his associates is a better understanding of what Iran is planning or can do in terms of delivering nuclear weapons. The bomb issue typically revolves around how much highly enriched uranium can they produce and is it enough for a bomb. The other question is can they put a nuclear warhead on a ballistic missile.

The bomb design found in Libya is probably too big for the Iranian missile of choice. Iran has been doing work on a reentry vehicle, which has been trotted out in public and implies a smaller warhead than what could be accomplished from the Chinese design. And so the question is, did Khan provide that smaller design and, when Iran gets enough highly-enriched uranium, will it be able to put a warhead on a missile that will be much more threatening in the Middle East?

Mr. WEISS. It shouldn't be forgotten that the United States came very close to signing a nuclear cooperation agreement with Iran prior to the revolution that toppled the Shah. In fact, it almost went up to the White House for signature by the President when the revolution broke out. Now, the reason that it did not go through wasn't because of the revolution. It was because we discovered that the Shah had a nuclear weapons design team operating. Whatever that team did was inherited by the Ayatollah. The evidence seems to be that the Ayatollah wasn't interested for some years, but we don't really know that for sure, and therefore I think it is very hard to say exactly what the capabilities of the Iranians are, at least with respect to the design of a nuclear weapon and whether they really would need A.Q. Khan's design or the Chinese design in order to actually accomplish a design that could fit on a missile.

Mr. ROYCE. Dr. Weiss, Mr. Koch, Mr. Albright, thank you very much for traveling here to give your testimony today. We stand adjourned.

[Whereupon, at 3:08 p.m., the Subcommittee was adjourned.]

