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## A BOMB TICKS IN PAKISTAN

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LEAD: ARSHAD Z. PERVEZ, A DARK-HAIRED, PAKISTANI-BORN Canadian fond of polyester suits and known by the nickname Archie, hurried into the bar of Toronto's Hilton Harbour Castle hotel, fretting about the traffic. He was late for a rendezvous with John R. New, a balding middle-aged American who Pervez thought was a steel salesman.

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It was June 9, 1987. Seven months before, Pervez, a 42-year-old export-import trader, had met with Albert Tomley, international marketing manager of the Carpenter Steel Corporation of Reading, Pa., to inquire about buying 25 tons of a highly sensitive item: specially strengthened Maraging 350 steel. Tomley tipped off the United States Government, and customs agents set up a sting operation. John New, the "businessman" with whom Pervez was drinking in Toronto, was, in fact, an undercover agent.

Why, the Americans had asked several times, did Pervez's Pakistani client, a shady procurement firm headed by retired Pakistani Army Brigadier Inam ul-Haq, want this immensely strong steel? Pervez gave different answers. First he said that the steel would be melted down - implausible for such an expensive item. Later, Pervez said it would be used in the Pakistani space program, then in Karachi University's engineering department. Finally, he said it would be used to make high-speed turbines and compressors.

But American experts knew its real purpose: the steel would be shaped into super-strong, ultrafast gas centrifuges used to enrich uranium - the key ingredient in an atomic bomb.

The United States Government blocked an earlier Pakistani effort to export Maraging steel, but the Pakistanis had managed to acquire some in Europe.

Now they were trying again - defying American law and violating President Mohammad Zia ul-Haq's repeated assurances to the American Government that Pakistan had no nuclear weapons program.

As the months of haggling came to a head on that June evening in Toronto, Pervez and New moved upstairs to the privacy of New's room. The smell of New's cigars bothered Pervez; he would have been more bothered had he known that Frank J. Rovello, another undercover agent, was next door, videotaping the meeting through a camera concealed in the television set in New's room.

The talk turned to delivery dates and letters of credit. Pervez wanted to be sure of his personal rake-off, having arranged a big kickback - \$45,180 - by persuading Carpenter Steel to quote an inflated price and then skimming the profit.

Suddenly, Pervez expanded his shopping list. If this deal worked, he said, he wanted 11 more shipments of steel, \$2 million worth in all. And he wanted to buy beryllium - "for the oil industry," he said, but to New it was a dead give-away: beryllium is used as casing for the fissile material in an atomic bomb to increase its explosive power. Pervez suggested bars of (Continued on Page 76) beryllium be smuggled out concealed in the steel shipment.

As they discussed the final shady steps of the operation, Pervez had a fleeting worry. Eyeing New, he said: "You could be a spy."

"They don't hire spies that are bald-headed and have glasses," New said, waving him off. "They're all James Bond with the broads, you know."

It was then the Pakistani made a telling admission: "The Kahuta client is ready."

"It's going to the Kahuta plant," New nodded, secretly triumphant on hearing the magic word.

American intelligence had identified Kahuta, a sprawling, heavily guarded facility in the hills east of Rawalpindi, as the centerpiece of Pakistan's nuclear weapons program. It is at Kahuta that Pakistani scientists have fabricated the enriched uranium core of an atomic bomb.

In July, Pervez went to Pennsylvania to check the steel and to cash in his kickback. As he sat in his car with his wife and two children, customs agents arrested him.

PERVEZ'S ARREST set off a storm in Congress, with some Congressmen demanding an immediate halt to the huge American aid program to Pakistan. In August 1985, 14 months after three Pakistanis had been arrested in Houston trying to export triggering switches for atomic bombs, Congress had passed an amendment - dubbed the Solarz amendment after its sponsor, Representative Stephen J. Solarz, a Brooklyn Democrat - requiring aid be cut off to any country caught trying to export restricted American equipment for a nuclear weapons program. The Solarz amendment was intended to stop precisely the kind of operation Pervez and his Pakistani superiors had brazenly launched only a year later.

Although President Zia denied all Government involvement - fuming in a December press interview that the Pervez affair was "a cooked-up case"

arranged by the American Government to embarrass Pakistan - Pervez's notebooks contained entries identifying his project as "atom" and "military" and noting that "my expert is procurement manager for nuclear plant." And Pervez's files included a letter from Brigadier Inam urging him to remember "the national interest."

Despite this overwhelming evidence, on Dec. 18 - only a day after a Philadelphia jury convicted Pervez of conspiracy to export illegally beryllium and Maraging steel - a Congressional conference committee cleared the way for a massive new infusion of American aid to Pakistan. In January, President Reagan granted Pakistan a waiver from the aid cutoff imposed by the Solarz amendment, declaring that continued aid to Pakistan was "in the national interest."

To many Congressmen, the Pervez case forced an unpalatable either/or choice: either support the aid to Pakistan, thereby insuring the continued flow of arms to the mujaheddin rebels battling Soviet troops in neighboring Afghanistan; or vote for an aid cutoff, thus strengthening the American campaign to stop the spread of nuclear weapons - and perhaps preventing an incipient nuclear arms race between Pakistan and India. A minority argued that Washington could cut aid to Pakistan and still get aid to the Afghans.

Secretary of State George P. Shultz made a personal appeal to Congress: after President Reagan's summit talks with Soviet leader Mikhail S. Gorbachev, Shultz said, Moscow was on the verge of withdrawing from Afghanistan -this was no time to pull the rug out from under the Pakistani Government. In the end, a majority went along, but some prominent Democrats in the House, including Solarz, Howard E. Wolpe of Michigan, and Mel Levine of California, and in the Senate, including Ohio's John Glenn and California's Alan Cranston, vehemently protested.

"We have 132 nations who have pledged not to go the nuclear weapons route," Glenn said in an interview, referring to the signers of the Nuclear Non-Proliferation Treaty of 1968. "The danger of not keeping faith with those other nations - and seeing more of them go the nuclear weapons route - is a far greater danger to the world than being afraid to cut off the flow of aid to Afghanistan. It's the short-term versus the long-term."

In January, in a report compiled for the Carnegie Endowment for International Peace, 18 experts on nuclear proliferation underscored that long-term danger: "If present trends continue, an open-ended nuclear arms race in South Asia appears inevitable; arguably it has already begun," they wrote. "If the ongoing tensions between [ Pakistan and India ] cannot be eased . . . there is reasonable cause for concern that momentum will build for the integration of nuclear armaments into the armed forces of both nations. . . The inherent risk that nuclear weapons might be used would also grow."

BOTH PAKISTAN AND India are on the brink of building nuclear arsenals - although so far, according to American officials, Washington has no hard evidence that either country has actually assembled atomic bombs. Indeed, last Dec. 17, President Reagan certified to Congress - as he must each year to justify aid to Pakistan - that "Pakistan does not possess a nuclear explosive device."

But Administration officials told Congress last month that both countries have all the components as well as the technical ability to assemble nuclear weapons very quickly. Robert A. Peck, Deputy Assistant Secretary of State for Near Eastern and South Asian Affairs, said bluntly that "Pakistan has acquired the technical capabilities needed to possess a nuclear explosive device, but so far has not made the political decision to do so. . ."

The prevailing Government estimate is that it would take Pakistan at most a few weeks or months to assemble a bomb once President Zia gave the go-ahead. Some officials share Representative Solarz's view that it's more "a matter of hours or days." The different estimates largely depend on officials' uncertainty over whether the Pakistanis have yet taken one of the final steps - precision machining the uranium-metal core.

The American estimate is that by the end of 1987, Pakistan had produced enough fissionable weapons-grade uranium for four to six atomic bombs, and India enough plutonium for about 40. The Pakistanis, asserted Representative Solarz, "have the nuclear equivalent of a Saturday night special. It may not be technically elegant, but it's capable of doing the job."

The buildup continues, and Carnegie's task force of experts estimates that "by late 1990, Pakistan could have as many as 15 Hiroshima-size devices, while India might have produced more than 100."

Before 1986, India had a significant technical edge. It had tested a nuclear device in 1974; Pakistan has never held an atomic test, although since mid-1985, according to American officials, the Pakistanis have tested several of the carefully shaped, high-explosive implosion devices needed to achieve the explosive chain reaction in an atomic bomb.

American experts believe the Pakistanis do not need to test an actual bomb. Sometime during the early 1980's, they say, the Chinese gave the Pakistanis a reliable, tested bomb design, in exchange for Pakistan's sharing its modern uranium-enriching technology. During the last several years, Chinese scientists have reportedly visited or worked off and on at Pakistan's Kahuta facility.

The Chinese design, American officials say, enables Pakistan to produce a much more sophisticated atomic bomb than the crude five-ton weapon an American B-29 dropped on Hiroshima. American officials estimate that while India can make a bomb weighing less than a ton, Pakistan can make one weighing less than 400 pounds.

"The more sophisticated the design, the smaller can be the bomb," an American official explained. "So you can put it on more planes other than big, slow transports - in Pakistan's case, on American F-16's or French Mirage V's."

TWO KEY EVENTS served as the catalysts that drove Pakistan in its relentless campaign to build an atomic bomb. In 1971, India defeated Pakistan in the bloody war that gave Bangladesh, formerly East Pakistan, its independence. Three years later, India exploded its own nuclear device - prompting Zulfikar Ali Bhutto, then Pakistan's Prime Minister, to declare that Pakistanis would "eat grass" if necessary to match India.

The Pakistani drive to achieve rough nuclear parity with India has depended on a global network of clandestine agents, operating through dummy corporations and third countries, who have worked doggedly and ingeniously to acquire the embargoed, high-priced technology for "the hot box" (as Western agents refer to Pakistan's nuclear program). In one operation that lasted three years, for example, an entire raw uranium processing plant was exported from West Germany to Pakistan - piece by piece.

Since the mid-1970s, Western police and intelligence agents from Hong Kong to Houston have tracked the Pakistani network. In June 1984, three

Pakistanis were arrested in Houston for illegally trying to export 50 krytrons, ultra-high-speed electronic switches used in atomic bombs. Two turned state's evidence and the third pleaded guilty to a lesser charge, serving only three months in jail before being deported. Cables found in the defendant's possession linked him to the director of procurement for Pakistan's Atomic Energy Commission.

Last July, just a week after Pervez was arrested, an American couple, Arnold I. and Rona K. Mandel, were indicted in Sacramento on charges of illegally exporting \$993,000 worth of sensitive electronic equipment, including oscilloscopes used to analyze elements in an atomic bomb; some of it was bound for Pakistan.

In all of these cases, the Pakistani Government routinely denied any involvement.

THE CENTRAL, ALMOST legendary figure in the Pakistani scientific cabal is Dr. Abdul Qadeer Khan, a tall, urbane German-educated metallurgist who is the founder and director of the Kahuta uranium enrichment facility. During the early 1970's, Khan worked for a Dutch engineering firm where he gained access to classified uranium enrichment facilities in Almelo, the Netherlands. After he returned to Pakistan, the Dutch Government charged that he had taken with him designs for the enrichment process, as well as detailed lists of the equipment needed for uranium enrichment and their Western manufacturers -in short, the industrial blueprint for Kahuta.

At home, Khan is a prominent figure, hailed as "the Einstein of Pakistan." American officials say he has direct access to President Zia (who is believed to have taken a great interest in the nuclear program, despite his diplomatic pose of ignorance). Khan likes to boast, declaring in a press interview in March 1987, for example, that "what the C.I.A. has been saying about our possessing the bomb is correct. . . They told us Pakistan could never produce the bomb and they doubted my capabilities, but they now know we have it."

Around the same time, President Zia himself told Time magazine that "Pakistan can build a bomb whenever it wishes." Khan and Zia made their statements as India was conducting large-scale military exercises near the Pakistani frontier, and some American officials suspect the Pakistanis were warning New Delhi to beware of Pakistan's nuclear muscle.

But Zia hastened to add that his Government did not actually intend to make atomic bombs - playing on an ambivalence that has long kept the United States Government off balance.

OVER THE YEARS, ZIA HAS outfoxed Washington, cleverly moving Pakistan to the threshold of becoming a nuclear weapons state without forfeiting American aid. He has repeatedly brushed aside American "red lines" seeking to impose limits on his program, and refused demands to open the Kahuta plant to international inspection. As Solarz put it, "He's played this country like Jascha Heifetz played the violin."

Three American Presidents - Gerald R. Ford, Jimmy Carter and Ronald Reagan - have tried and failed to halt Pakistan's march toward an atomic bomb. In 1976, Ford sent then Secretary of State Henry A. Kissinger to try to talk Pakistan out of buying a plutonium reprocessing plant from France. Carter cut off aid the following year. After the United States persuaded France to cancel the deal, American aid was resumed; but Carter cut it off again in 1979, when he learned of the uranium enrichment plant being built at Kahuta.

In December 1979, the Soviet Union invaded Afghanistan and suddenly the policy equation was turned upside down: the following year Carter offered Zia \$400 million and Zia spurned it. In 1981, President Reagan promised Zia an enormous \$3.2 billion, six-year aid package. The Reagan Administration also persuaded Congress to grant Pakistan a six-year waiver of the law barring aid to a country that imports unsafeguarded enrichment technology. Zia was a vital ally, Reagan officials argued, and providing him with modern conventional arms would give him an incentive to slow down his atomic push.

By 1984, however, White House officials were receiving alarming intelligence reports from Kahuta. In August, President Reagan drafted a letter to Zia warning Pakistan not to cross "the red line" of enriching uranium above 5 percent. (Weapons grade is 90 percent enriched. Natural uranium is only 0.7 percent, but scientists say that reaching 5 percent is a critical ceiling, because it entails completing most of the work needed to reach weapons-grade.) But though some officials urged Reagan to issue an unambiguous warning, the President's letter, sent on Sept. 12, was a compromise - warning that if Zia crossed the 5 percent "red line," he would face unspecified "grave consequences."

In November 1984, according to American officials, President Zia gave written assurances to Reagan that the American limit would be respected. But Pakistan's Ambassador, Jamsheed K. A. Marker, insisted in a recent interview that "there was never a commitment on the percentage."

Within a year, American intelligence reported "the red line" had been violated. Yet when Reagan met Zia at the United Nations in October 1985, according to one senior adviser, the President did not challenge the Pakistani leader about the breach. By mid-1986, this official said, a Special National Intelligence Estimate concluded that Kahuta had gone all the way - it had produced weapons-grade uranium.

By late 1987, after Pervez's arrest and after Reagan's six-year aid package had run out, the debate over suspending or at least reducing American aid went public. At the heart of the debate was a basic disagreement over the central question: how much leverage can Washington reasonably expect to exert - foreign-aid program or not - when it comes to a matter that President Zia obviously regards as essential to Pakistan's national survival?

Shultz and Michael H. Armacost, Under Secretary of State for Political Affairs, argued that cutting aid to Pakistan would not stop President Zia's atomic program. What's more, State and Defense Department officials contended that an aid cutoff might provoke Zia, a proud nationalist, into actually testing a bomb to prove his independence, whereas continuing aid might convince him to refrain from crossing that final threshold.

As Armacost said in an interview, Pakistan is "a country that on one frontier has India, which has exploded a nuclear device, and on another frontier has the Soviet Union putting pressure on [ it ] through Afghanistan, and doing it daily." In this view, the very unpredictability of American aid has impelled Pakistan to seek a nuclear deterrent. Said Armacost: "The constant debates in Congress about cutting off aid, and our past aid cutoffs, plus the election of a new [ American ] President - all these have driven the Pakistanis not to rely totally on us. . ."

Glenn Solarz, Kenneth L. Adelman, then director of the Arms Control and Disarmament Agency, and some C.I.A. officials countered that even if American aid to Pakistan were cut, Zia would continue the aid flow to Afghan rebels. "The Paks are aiding the Afghan mujaheddin not as a favor to the United States but in their own interest," Solarz asserted. "They are desperate to get the three million Afghan refugees out of their country and the only way to do that is to get the Soviet Army out of Afghanistan."

As for the argument that cutting off aid would provoke Zia into testing a bomb, Solarz and the other dissenters argue that the Pakistanis have refrained from exploding a bomb not because they fear a response from Washington but one from New Delhi - that a test would set off an Indian response, possibly even a reprisal. "We know the Indians have a capability that exceeds ours," Pakistani Ambassador Marker acknowledged. "Right now, they have enough plutonium for at least 16 to 20 hydrogen bombs and there aren't 16 targets in all of Pakistan. So it doesn't make sense for us to test."

Finally, those who advocated an aid cutoff argued, the time had come for the United States to set an example for other would-be nuclear nations, to enforce the legal sanctions passed by Congress, and to protect the President's credibility. "It's terrible to have the President cock the trigger and not pull it," Adelman declared. "His credibility is on the line." But last December, neither the Administration nor the majority in Congress wanted to risk a rift with Pakistan - especially with the Soviet Union talking about withdrawing from Afghanistan. In the dying days of the 1987 Congress, a petition by Solarz and two dozen other House Democrats on cutting aid to Pakistan was sidetracked. And a conference committee shelved Senator Glenn's effort to condition the new Pakistani aid package on "verifiable" assurances that Pakistan was not producing weapons-grade uranium.

In mid-January, President Reagan set aside the final, embarrassing legal obstacle raised by the Pervez case, and the American aid program to Pakistan was resumed. When Archie Pervez was sentenced to five years in jail last month, it barely caused a ripple. Today, despite assurances from senior Pakistani officials that orders have been given to respect American laws, customs agents detect no slackening in the Pakistanis' hunt for hot technology.

"My sense is the Pakistani effort is not really hindered or halted by anything the U.S. does," said one senior customs official. Last month, Robert Peck of the State Department testified to Congress that, though some Pakistani operations have been stopped, "We are aware of some activities which give us cause for continuing concern."

But if Gorbachev begins to withdraw Soviet troops from Afghanistan by next May, as he has suggested he will, the specter of a nuclear arms race between India and Pakistan may bring more compelling pressures on American policy. Staunch advocates of nuclear nonproliferation believe that Soviet withdrawal will alter the political dynamics in Congress, and they are preparing to seize the opening.

IF THERE IS ONE LESSON those advocates might draw from the Pakistan story, it is that the drive for nuclear weapons is deeply bound up with the issue of national survival. Nations like Pakistan - as well as Israel and South Africa, which experts assert have advanced even further down the path of building nuclear arsenals - perceive themselves surrounded and menaced by enemies. They are therefore unwilling to forswear the nuclear option without durable security agreements.

During the last 40 years, the long and bitter tensions between India and Pakistan have three times flared into war, and have nearly done so on several other occasions. It is possible that the two states will continue to hover in their present, highly precarious situation - both on the brink of building nuclear arsenals. Or one of them, perhaps prompted by some incident, may break the barrier by testing a weapon.

There is a third possibility: that India and Pakistan, perhaps under diplomatic pressure from outside, will conclude an agreement to prevent an escalation of their nuclear arms race.

In 1985, Indian Prime Minister Rajiv Gandhi reached a verbal agreement with Zia that neither side would attack the other's nuclear facilities. But the understanding has never been formalized, and it did nothing to stop the nuclear competition.

Since then, Pakistan has offered to sign the Non-Proliferation Treaty if India does, to agree to a nuclear weapons-free zone in South Asia if India does, to accept outside inspection of its nuclear facilities if India does, and to forswear nuclear tests if India will.

So far, the Indians - who themselves are worried about China's nuclear forces - have been unwilling to put themselves on a par with the Pakistanis. India has resisted American entreaties to forswear nuclear testing or to sign the Non-Proliferation Treaty, arguing that this amounts to discrimination by the superpowers. Only if the big powers agree to stop testing will India go along.

In the opinion of many American diplomats and private experts, the situation demands a new diplomatic drive - involving Moscow as well as Washington - to press hard for a regional accord.

"What you're looking at is two de facto nuclear weapons countries looking across a common border," observed Leonard S. Spector, who chaired the group that wrote the Carnegie Endowment report. "Each has to take the other's nuclear capability very seriously and do some planning, and that starts them up the escalator: first, accumulate material; second, accumulate components; third, figure out where the weapons would be assembled and what planes would carry them, perhaps training pilots and doing military planning.

"So far we've been dealing with nuclear installations," Spector said. "It will go to militarization. That's where we're heading. The trick is to intervene now and stop that part of the process. We have to bring this thing around before both sides start building weapons and deploying them."