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Research Report

Pakistan as a nuclear power: Nuclear risks, regional conflicts and the dominant role of the military

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and Security Affairs

Oliver Thränert / Christian Wagner

Pakistan as a Nuclear Power

Nuclear Risks, Regional Conflicts and the
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**Pakistan as a Nuclear Power
Nuclear Risks, Regional Conflicts and the
Dominant Role of the Military**

Of all the states currently in possession of nuclear weapons, Pakistan is undoubtedly the most unstable. Although sensationalist scenarios of Pakistan's nuclear weapons falling into the hands of extremists may be exaggerated, it is nevertheless correct that the central authorities in Islamabad are not fully in control of several areas on the border to Afghanistan. The Islamists operating there have visibly expanded their action radius in the last several years. The terrorist organisation Al Qaeda also continues to be active in Pakistan.

Pakistan's 1998 nuclear-weapons tests were condemned by the international community. Only Osama Bin Laden made a point of congratulating the Pakistani people since, in his view, it is the right of Muslims to possess nuclear weapons. Members of his organisation made contact with Pakistan's nuclear scientists in order to be initiated into the secrets of making nuclear weapons. Already in 1998 Bin Laden declared that it was the religious duty of every Muslim to make nuclear weapons available for the higher purposes of Islam. Unsurprisingly, it was above all the USA, doubtless number one on Al Qaeda's nuclear target list, that was greatly concerned about the security of Pakistan's nuclear arsenal. After all, the network of the now famous Abdul Qadeer Khan, the "father of Pakistan's bomb", had for years illegally supplied North Korea, Iran and Libya as well as possibly other states and even non-governmental actors with the necessary equipment and know-how for making nuclear weapons.

Moreover, Pakistan remains in a political conflict with its arch-rival India, which also possesses nuclear weapons. The two sides started their rapprochement in 2003 but the Kashmir question, the core of the conflict, remains unresolved. The Kargil War in 1999 and the crisis of 2001-02 after the failed attack on the Indian parliament by terrorists illustrate just how explosive the two countries' relations are. Massive intervention, above all by America, was required in both cases to prevent a nuclear catastrophe. The Mumbai attack in November 2008 was a further attempt to provoke a war between the two states.

Pakistan thus poses a double danger: on the one hand its nuclear arsenal may not be adequately safeguarded against unauthorised access. On the other hand there is still the threat of a military confrontation with India, which could escalate into nuclear war. This cannot but affect Germany and its European partners. Nuclear weapons in the hands of terrorist groups would acutely endanger its security. And the use of nuclear weapons in South Asia would directly affect Germany not only through the likely nuclear fallout. Above all, the nuclear taboo that has endured since 1945 would have been broken, with far-reaching consequences for the international order. Against this background our study deals with three questions of overriding importance:

- ▶ How secure are Pakistan's nuclear weapons and nuclear facilities?
- ▶ How stable is the domestic political situation in Pakistan?
- ▶ What are the likely prospects for the Pakistan-India conflict?

Our study comes to the following results:

1. Since the 1998 nuclear tests Pakistan has made considerable progress in the safeguarding of its nuclear weapons and nuclear facilities. Since then there has been a clearly organised command structure under the direction of the National Command Authority, which is formally chaired by the President. In times of crisis, however, the armed forces are likely to be in charge. Not only are Pakistan's nuclear weapons stored separately from the delivery systems, but the fissile cores are separated from the other war-head components. All parts are kept in well-protected areas, whose security has been massively upgraded with American assistance. As the Pakistani leadership has to date avoided cooperating with the USA too closely in questions of nuclear security, it is hard to estimate how effective the American support programmes are. The dangers connected with the immediate physical protection of the nuclear weapons are superseded, it seems, by the risk of Pakistan's nuclear programmes being infiltrated by extremists. It remains to be seen whether the safeguard programmes that have been initiated so far will be successful. Islamabad enacted comprehensive new export control laws after the machinations of the Khan network became known in 2003, but it is not clear whether they are being effectively implemented.

2. Despite the steadily growing threat from extremists manifested in increased attacks by Islamist

groups, and although the influence of the central government in the tribal areas on the border to Afghanistan is somewhat declining, the Pakistani state is by no means at risk of collapsing. Islamist groups and parties are still a minority in Pakistani society. The share of the vote that goes to religious parties does not amount to much more than ten percent, and the figures given for the number of Koran schools (Madrasahs) need to be adjusted significantly downwards. But existing religious rivalries and ethnic conflicts in the country ensure that Pakistan will continue to struggle for political stability under its new President, Asif Ali Zardari. The question of nuclear security places further constraints on democracy. Democratic change towards civilian control of the armed forces is fraught with the danger of destabilisation and a rift in the army occurring in a transition period, with unforeseeable consequences for the security of the nuclear weapons. It remains to be seen whether the international community will side with the democratic forces in such a conflict and thus accept a weakening of nuclear security, or whether it will come down in favour of the strategic protection of the nuclear weapons and thus indirectly back the armed forces.

3. In 2003 Pakistan and India began to take significant steps towards rapprochement. No lasting solutions have yet been found for the Kashmir conflict that is so central, but a range of confidence-building measures have already been implemented. Although bilateral relations are better than ever before, the Pakistani army still has a particular interest in maintaining tension in the relationship to India. Whether both states' possession of nuclear weapons has been decisive for the positive developments in their relationship is a moot point. Considerable potential for conflict could be created between the two adversaries in the years to come by the tangible results of Indo-US rapprochement – in particular the consequences of nuclear cooperation – but also by India's conventional rearmament and Indian efforts to develop a missile defence system.

Pakistan's Nuclear-Weapons Programme

Historical Outline

The acquisition of a research reactor in the framework of the US "Atoms for Peace" Programme in the early 1960s was the beginning of Pakistan's nuclear-weapons programme. Canada delivered a second facility in 1972 – a natural uranium reactor for producing electricity. Although Islamabad at first used the programme to pursue purely civilian goals, military ambitions soon mingled with them. As early as 1965 Pakistan's Foreign Minister Zulfikar Ali Bhutto pointed out in a newspaper interview that his country would be forced to develop nuclear weapons if India became a nuclear power. Interestingly, the Pakistani military rejected such plans at the time. It feared that the high costs of a nuclear-weapons programme would be a drain on conventional arms programmes.

After the lost war against India in 1971, as a result of which today's Bangladesh split off from Pakistan, Bhutto, who had become prime minister, invited Pakistan's most prominent nuclear scientists to his house in Multan in January 1972 and called on them to have a nuclear-weapons programme up and running within five years. Bhutto considered that nuclear weapons would restore Pakistan's dignity and power vis-à-vis India. Furthermore, he was of the view that nuclear weapons would lend him, as civilian prime minister, greater weight in dealings with the army. But this calculation soon proved to be erroneous. Ever since Zia ul-Haq's military coup in 1977, if not earlier, the nuclear-weapons programme has been completely in the hands of the military. Civilian governments such as those of Prime Minister Benazir Bhutto (1988–90 and 1993–96) and Nawaz Sharif (1990–93 and 1996–99) were unable to take control of the nuclear decision-making mechanisms even during crises in which the use of nuclear weapons was considered an option.

In reaction to the Indian nuclear test of 1974, which was officially declared to be a "peaceful nuclear explosion", Pakistan stepped up its nuclear-weapons programme. Emulating the example of its arch-enemy, Pakistan wanted to build an ostensibly civilian nuclear complex that was to include components for producing plutonium through reprocessing. Like New Delhi,

Islamabad refused to accede to the Nuclear Non-Proliferation Treaty, which would have meant renouncing the military nuclear option. But the Indian test had put the international community on the alert. The USA initiated the formation of the Nuclear Suppliers Group with the goal of restricting access to militarily useable nuclear technologies, especially those for producing plutonium through reprocessing.

At this point, A. Q. Khan, who has since achieved international notoriety, entered the scene. Khan had gained experience with the construction of uranium-enrichment centrifuges in the Netherlands. In September 1974 he offered the Pakistani government his assistance. This was the starting point for Pakistan's uranium enrichment programme, which was run under the code word "Project 706". When Khan returned to Pakistan for good in 1975 he brought with him designs and components for G1 and G2 centrifuges. More importantly, Khan, who ran the uranium enrichment project as of 1976, was in possession of extensive lists of firms. With their aid he built up a broad network in the years that followed for obtaining almost all the necessary elements for his enrichment programme. While the industrialised countries were going to considerable lengths to block the plutonium path – France, for example, withdrew in 1978 from a project to build a reprocessing facility – Pakistan was already circumventing export controls to secretly import relevant goods, concentrating on the uranium path to the bomb. This notwithstanding, Pakistan never completely abandoned the plutonium path. In 1980 a production facility for heavy water was built and in 1981–82 a small reprocessing facility went into operation. In 1987 Khan announced in a newspaper interview for the first time that his country had acquired the capability to build nuclear weapons.

After India carried out a total of five nuclear-weapons tests on 11 and 13 May 1998, Pakistan replied on 28 and 30 May 1998 with a series of six test explosions. Seismological data indicates that Pakistan gave inflated figures on the explosive power of the weapons it used. Some of the detonations may even have been partial failures. It is furthermore debatable,

whether some of the tests involved plutonium in addition to those with highly enriched uranium.

Pakistan started its nuclear-weapons programme from a very low technological level. Islamabad was therefore dependent on international support from day one onwards. The project was supported financially by other Islamic countries such as Iran, Libya and Saudi Arabia. Although Pakistani governments since the 1980s no longer speak of "the Islamic bomb" as Bhutto once did, and the nuclear-weapons project has become a national enterprise promoted by the lobby of nuclear physicists and engineers and run by high-ranking secular military officers, Saudi Arabia, for example, has continued its financial aid to this day.

China's aid, which began as early as the 1960s, was greatly significant in technological terms. Over the following two decades Beijing seems to have aided Pakistan in overcoming problems that arose in uranium enrichment. Since the late 1990s China has also been helping to build heavy-water reactors, which are significant for the production of plutonium. Finally, Beijing delivered the blueprints for at least one of the two nuclear-warhead designs used by Islamabad. According to recent publications, China even put its nuclear test site at Pakistan's disposal, allowing it to carry out a nuclear explosion there on 26 May 1990.¹

The Current Nuclear Arsenal and Possible Developments

Both of the warhead types in Pakistan's arsenal are implosion-type weapons. According to the information available, the amount of highly enriched uranium per warhead varies from 5 to 20 kg. The first type is designed exclusively for aircraft bombs, while the second can be mounted on ballistic missiles as well. Like other nuclear states, Pakistan is also interested in building plutonium bombs, and modern designs with greater effectiveness would be employed here. Reports that Pakistan has already succeeded in developing

such devices, which are technologically more demanding than the uranium bomb, have not been confirmed. In spite of this, claims are repeatedly made in the international press about the existence of three to five plutonium bombs. The total number of nuclear weapons already produced by Pakistan is difficult to estimate. Forty to fifty is a likely number.

These nuclear weapons can be delivered to the target area by various aircraft such as the F-16 (purchased from the USA), Mirage III and V (France) and A-5 (China). Over and above that, Pakistan has a variety of ground-launched ballistic missiles of different ranges at its disposal. Pakistan has bought the North Korean Nodong single-stage liquid-fuel rocket with a range of around 1,500 km and has put it into service practically unaltered. There are reports of the development of a Ghauri III on the basis of the North Korean Taepodong, which has a range of up to 3,000 km. Pakistan's solid-fuel missiles were developed in close cooperation with China. The single-stage Shaheen I missile with a range of around 750 km, based on the Chinese M-9, and the double-stage Shaheen II with a range of around 2,000 km deserve particular mention (the latter has been tested but not yet put into service). The "Babur" cruise missile with a range of around 500 km is also under development, modelled on the Chinese DH-10, which in turn is a copy of the American Tomahawk. In addition to a ground-launched version, air- and sea-launched versions also appear to be in planning.

Clearly Pakistan is planning to further develop its range of launch systems capable of delivering a nuclear payload and is also looking to enlarge its stock of nuclear weapons. It has around 1,300 to 1,500 kg of highly enriched uranium and over 90 kg of plutonium at its disposal. This could suffice for 75–90 more warheads. Pakistan is said to have the capacity to produce at least 100 kg of highly enriched uranium annually in its uranium enrichment facility in Kahuta, enough for 5–6 nuclear weapons. According to US information, further enrichment facilities exist in Golra, Sihala and Gadwal, but their production capacities are not exactly known. Apparently, Pakistan is scaling up its uranium enrichment capacity.

Moreover, the country is expanding its plutonium production for weapons purposes. This seems to be linked to a strategic decision to improve the destructiveness and deliverability of its nuclear arsenal. While the heavy-water reactor Khashab I intended for plutonium production only operates sporadically, the Khashab II reactor seems to be finished and may be

¹ The International Institute for Strategic Studies (IISS), *Nuclear Black Markets: Pakistan, A. Q. Khan and the Rise of Proliferation Networks. An Assessment*, London 2007; Paul Kerr and Mary Beth Nikitin, *Pakistan's Nuclear Weapons: Proliferation and Security Issues*, Washington, D.C.: Congressional Research Service, Report for Congress, updated November 14, 2007; William J. Broad, "Deadly Nuclear Club Growing More Slowly than Feared", *International Herald Tribune*, 9 December 2008.

intended to replace it. The construction of a third reactor, Kushab III, has progressed more quickly than anticipated by international experts. In addition, Pakistan is also expanding its plutonium separation capability. US officials believe that Pakistan currently has the fastest-growing nuclear weapons programme in the world.²

The Nuclear Doctrine

As far as nuclear issues are concerned, the Pakistani elite – military and civilian alike – are completely fixed on India's capabilities. The aim is to confront arch-enemy India, which is far superior in terms of economic power, population, military might as well as territory, with an effective deterrent capability, also as a way of demonstrating Pakistan's own dignity and power. Two episodes may serve to illustrate this point.

In order to prevent Pakistan from carrying out nuclear explosions in reply to India's tests of May 1998, the Clinton Administration made the leadership in Islamabad an economically lucrative offer – and threatened strict sanctions if it refused. Pakistan's leadership was unimpressed and determined to prove the country's nuclear parity with India. Moreover, Islamabad feared that the Hindu nationalist government in New Delhi at the time was motivated by the goal of destroying Pakistan as a nation. A high-level American delegation was brusquely turned away on its visit to Islamabad and Pakistan's nuclear-weapons tests followed swiftly.

The second example concerns the shift in Pakistan's policy after the events of 11 September 2001. At the time Washington demanded that Pakistan end its support for the Taliban in Afghanistan. And, to be sure, Islamabad sided with the USA in the war against international terrorism declared by President Bush. Pakistan's then President, Pervez Musharraf, gives an interesting reason for this in his memoirs: the USA

² See Robert S. Norris and Hans M. Kristensen, "Pakistan's Nuclear Forces, 2007", *The Bulletin of the Atomic Scientists*, vol. 63, no. 3 (May/June 2007), 71–74. On the issue of Pakistan's possible plutonium bombs see most recently Farhan Bokhari, "Pakistan Aims for Nuclear Acceptance", *Financial Times*, 28 August 2008, p. 6; David Albright and Paul Brannan, *Pakistan Expanding Plutonium Separation Facility Near Rawalpindi*, Washington, D.C.: Institute for Science and International Security (ISIS), 19 May 2009 (ISIS Imagery Brief); David Albright, Paul Brannan and Robert Kelley, *Pakistan Expanding Dera Ghazi Khan Nuclear Site: Time for U.S. to Call for Limits*, Washington, D.C.: ISIS, 19 May 2009 (ISIS Imagery Brief).

would not tolerate a nuclear Pakistan that refused to support America in the war on terrorism, he calculated. Otherwise Washington would attempt to disable Pakistan's nuclear weapons and the country would lose its hard-won nuclear parity with India.³

Pakistan has never published its nuclear doctrine; it justifies this in particular with the need to keep India guessing as to when and why Pakistan would use its nuclear weapons. Its lack of transparency in this regard, Islamabad argues, helps to enhance deterrence. The Chairman of Pakistan's Strategic Plans Division, General Khalid Ahmed Kidwai, has however occasionally mentioned scenarios in which Pakistan might use its nuclear weapons: if India attacked Pakistan and occupied a large part of its territory; if India destroyed a large part of Pakistan's armed forces; if India imposed an economic blockade on Pakistan – evidently meaning primarily a sea blockade; and if India attempted to politically destabilise Pakistan on a large scale through subversion.

As Pakistan sees it, nuclear weapons are the best way of guaranteeing peace and stability and of preventing Indian belligerence; nuclear weapons are to preserve Pakistan's territorial integrity as well as its national independence and sovereignty. At the same time they are weapons of last resort, not intended to be used pre-emptively in an emerging crisis. And since nuclear weapons are considered weapons of deterrence, not of warfare, nuclear parity with India is not necessary. Pakistan emphasises a central concern time and time again, including at official level: it is interested in credible minimum deterrence. This by no means implies, in Pakistan's view, that the necessary minimum for effective deterrence, which is a fluid notion, should be defined immutably, independent of Indian nuclear capabilities. Although Pakistan, given its limited economic capabilities, seeks to avoid an arms race with India, Pakistani observers see minimum deterrence as a dynamic concept that has to be geared towards Indian developments; it must be ensured that Pakistan's nuclear weapons survive an attack at all events so as to be able to deal an effective second strike. As has been shown, Pakistan's minimum deterrence doctrine does not prevent the country from increasing its nuclear capacities.

Whereas India has renounced a nuclear first strike option, Pakistan for its part categorically rejects any such restraint. Islamabad refrains from the use of

³ See Bruce Riedel, "South Asia's Nuclear Decade", *Survival*, vol. 50, no. 2 (April/May 2008), 107–126.

nuclear weapons against non-nuclear states, but it keeps all options open towards nuclear powers and in reaction to any chemical or biological attacks. The reason for this is that Pakistan is inferior to India in conventional weapons and also lacks strategic depth. India should be aware, so the argument goes, that Pakistan could escalate the conflict to nuclear war if it felt cornered. Although Pakistan's new President Asif Ali Zardari has suggested that his country should give up the idea of a nuclear first strike in its military doctrine in future, it is more than questionable whether the Pakistani military is really willing to go along with such a grave change in its nuclear planning.

Pakistan has not disclosed its nuclear targeting plans, but one can assume that it has particularly the big Indian population centres in its sights. Above all the capital New Delhi should be able to be destroyed. The relatively poor targeting precision of Pakistan's currently launch-ready missiles also speaks in favour of such a countervalue strategy directed primarily against the civilian population. As the nuclear-armed forces are presumably deployed in rear areas for security reasons, major Indian cities such as Calcutta will only be within range of Pakistani missiles once the Shaheen II has become operational. Pakistan is steadily working to increase its missiles' range and precision. Its aim is to be able to strike at Indian industrial centres, military complexes, defence installations and military bases in the not too distant future.⁴

India in particular accuses Pakistan of wanting to use nuclear weapons at least indirectly for offensive purposes as well. Under the protection of its nuclear umbrella, it says, Islamabad is considering low-intensity conventional operations in anticipation that India will not react for fear of nuclear escalation, and the Kargil War is cited as an example. In the spring of

1999 Pakistani troops seized Indian posts in the mountains of Kashmir that were unused during the winter. Thereupon the Indian army launched a full-scale offensive to retake the occupied positions. A second example was the attempt by Pakistani-supported terrorists in 2001–02 to seize the Indian Parliament. Both incidents involved a risk of nuclear escalation. Pakistan's aggressive action did not pay off either time. On the contrary: Islamabad suffered stinging diplomatic defeats in so far as Washington quite clearly took New Delhi's side in both instances. There is no evidence, however, that these experiences have changed the thinking of Pakistani military planners.⁵

⁴ See Rizwan Zeb, "David versus Goliath. Pakistan's Nuclear Doctrine: Motivations, Principles and Future", *Defense and Security Analysis*, vol. 22, no. 4 (December 2006), 387–408; Zafar Ali, *Pakistan's Nuclear Assets and Threats of Terrorism: How Grave Is the Danger?*, Washington, D.C.: The Henry L. Stimson Center, July 2007; George Perkovich, *Could Anything Be Done to Stop Them? Lessons from Pakistan*, Washington, D.C.: Nonproliferation Policy Education Center, 2006; Gregory S. Jones, "Pakistan's 'Minimum Deterrent' Nuclear Force Requirements", in: Henry D. Sokolski (ed.), *Pakistan's Nuclear Future: Worries beyond War*, Carlisle: U.S. Army War College, Strategic Studies Institute, January 2008, 87–128; Peter R. Lavoy, "Islamabad's Nuclear Posture: Its Premises and Implementation" (see Jones above), 129–165; Sharon Squassoni, "The New Disarmament Discussion", *Current History*, (January 2009), 33–38.

⁵ See Smutri S. Pattanaik, "Pakistan's Nuclear Strategy", *Strategic Analysis*, vol. 26, no. 1 (January–March 2003), 8–22; Ashley J. Tellis, "U.S. Strategy: Assisting Pakistan's Transformation", *Washington Quarterly*, vol. 28, no. 1 (Winter 2004–05), 97–116.

How Secure Are Pakistan's Nuclear Weapons and Nuclear Facilities?

Four sets of problems are significant when analysing the security of Pakistan's nuclear weapons and nuclear facilities: command and control; protection against theft and unauthorised use; the insider problem; and the safeguarding of fissile material – the latter also being tied up with the issue of export controls.

Command and Control

Prior to the 1998 nuclear-weapons tests Pakistan did not have a well-organised nuclear command and control structure. According to a number of reliable sources, from 1975 there was apparently only one committee entrusted with nuclear affairs, whose members were not known. Speculation has it that there were no more than half a dozen decision-makers meeting under the chairmanship of the President.⁶

This changed fundamentally when the National Command Authority (NCA) was established in March 1999. Since November 2000 all the bodies involved in the nuclear decision-making processes – including the Strategic Plans Division and the strategic command of the individual armed services – have been under its control. The NCA under the chairmanship of the President has ten members.⁷

The NCA formulates the national nuclear strategy, is in charge of the development of all nuclear-armed forces and is responsible for nuclear target planning. In addition to making important personnel decisions to do with the nuclear-weapons programme it is also the decision-making body on nuclear disarmament and arms control. Other tasks of the NCA are to watch over the implementation of export controls and to ensure the security of the nuclear installations, including the nuclear materials stored there. In a decree shortly before the state of emergency was lifted in December 2007, President Musharraf strengthened the

position of the NCA and placed it on a firmer legal basis. As Chair of the NCA he was vested with complete authority over the nuclear programme. The position of the President in the nuclear command and control structure was thus decisively strengthened.

The day-to-day management of Pakistan's strategic potential and capabilities is incumbent on the Strategic Plans Division, which functions as a permanent secretariat of the NCA and reports directly to the President and the Prime Minister. This organisation, which has about fifty officers on staff, is headed by a retired lieutenant general. The Strategic Plans Division elaborates policy guidelines, including those for the physical security of all nuclear facilities (military and civilian alike) as well as for the development and maintenance of strategic command and communication links. It also makes recommendations to the government on disarmament and arms control policy. Western observers assess that the Strategic Plans Division is a well-functioning organisation with professional staff.⁸

Given the highly centralised command structure, it is improbable that the authority to use nuclear weapons in a crisis would be delegated to field commanders at an early stage. Pakistan has introduced numerical codes for safeguarding the chain of order and command for nuclear weapons. What is more, there are strict checks to monitor the identity of the respective order-givers. The numerical codes are presumably administered by the secret service of the army, the Inter-Services Intelligence (ISI). Outsiders have no knowledge of the distribution of these codes in the chain of command or of how frequently they are changed. In any case a two-person rule is in effect (in some cases probably a three-person rule), intended

⁶ See IISS, *Nuclear Black Markets* [see footnote 1], p. 108.

⁷ These are the President, the Prime Minister, the Defence Minister, the Minister of the Interior, the Finance Minister, the Chair of the Joint Chiefs of Staff Committee, the Director-General of the Strategic Plans Division and the commanders of the three individual armed services.

⁸ See Kenneth N. Luongo and Naem Salik, "Building Confidence in Pakistan's Nuclear Security", *Arms Control Today*, vol. 37, no. 10 (December 2007), 11–17; Zafar Iqbal Cheema, *The Domestic Governance of Nuclear Weapons: The Case of Pakistan*, Geneva: Geneva Centre for the Democratic Control of Armed Forces (DCAF), February 2008 (Case Study Report).

to prevent unauthorised orders from being carried out.⁹

Pakistani politicians and experts often accuse the USA and other Western countries of wanting to undermine Pakistan's credibility with their publicly expressed concerns about the security of command and control of the nuclear weapons. The dangers, they say, are actually much smaller than the West regularly accuses. Like every nuclear power, Pakistan has to constantly work to improve the command and control of its nuclear weapons.¹⁰

Indeed, Pakistan has made undeniable progress. Unlike the period before the nuclear tests of 1998, the responsibility for its nuclear weapons is now more clearly structured and organised. Even so, deficiencies and ambiguities remain. One weak point is certainly Pakistan's land- and space-based communications systems. These are robust to the extent that they are designed to be redundant and individual failures can be compensated for. But the links between the systems are not guaranteed in the event of nuclear escalation. Moreover, these communications systems are relatively easy to disrupt using electronic countermeasures.¹¹

Last but not least, the real relevance of the NCA in times of crisis and war is unclear. Although the NCA is nominally supposed to decide about the use of nuclear weapons, Western observers believe that it is exclusively the military who calls the shots in wartime. The fundamental purpose of the NCA seems to be more to generate positive PR in peacetime. Civilians are therefore also likely to have a say in it.¹²

Protection against Theft and Unauthorised Use

There was visible anxiety after 11 September 2001 at the latest, especially in the USA, that terrorists in Pakistan could gain access to weapons-grade fissile material or even complete nuclear weapons and would not hesitate to launch an open attack on a nuclear-weapons depot. Pakistan dismissed these

fears as unfounded time and time again and refused corresponding offers of help. This was probably because Islamabad wanted to rule out the possibility of the Americans interfering in Pakistan's nuclear affairs, which could have led to the exposure of all manner of secrets to do with the national nuclear-weapons programme. After much hesitation Islamabad finally agreed to cooperate with Washington in order to improve the safeguarding of nuclear installations and storage sites. However, even today the USA seems to have no direct access to these locations.

At present there are probably six storage sites in Pakistan for nuclear-weapons components. There are also likely to be dummy installations containing no weapons or weapon components at all. Since the nuclear weapons are stored apart from the delivery systems and the fissile cores are separate from the rest of the warheads, the weapons cannot be put to use immediately. This in itself provides an important degree of protection against access by unauthorised persons.

These depots are located in very large areas surrounded by multiple security zones and protected by barriers and detectors. The physical security of these sites has been greatly improved in recent years thanks to the cooperation with the USA. The Bush administration invested over 100 million US dollars in corresponding programmes, with the individual measures being organised by the Department of Energy and the Department of Defense in Washington. Experience acquired in the scope of many different projects for safeguarding nuclear weapons and fissile material in Russia was able to be applied here. Deliveries to Pakistan included helicopters, burglar sensors, computer systems and night-vision devices. The Pakistani authorities did not always reveal to their American partners where and how this aid was used, however, so its effectiveness is difficult to judge. Pakistani engineers and safeguarding staff were also trained in the USA.

Pakistan has restructured the relevant agencies and also reallocated responsibilities for the physical protection of its nuclear weapons. A security department was established, headed by a two-star general and employing around 1,000 staff. This unit is attached to the Strategic Plans Division. It is responsible not only for the security of the nuclear sites but also for counter-espionage. Additionally, following the American example, an emergency team has been established that can react immediately in the event of theft of nuclear material or acts of sabotage.

⁹ See Shaun Gregory, *The Security of Nuclear Weapons in Pakistan*, Bradford: Pakistan Security Research Unit (PSRU), 18 November 2007 (Brief no. 22).

¹⁰ See Zafar Ali, *Pakistan's Nuclear Assets* [see footnote 4].

¹¹ See Shaun Gregory, "Nuclear Command and Control in Pakistan", *Defense and Security Analysis*, vol. 23, no. 3 (September 2007), 315–330.

¹² See Zeeshan Haider, "Pakistan's Nuclear Command Stays Unchanged: Official", *Reuters*, 8 April 2008.

The present state of physical security of Pakistan's nuclear weapons and their components is difficult to assess. The high-ranking Pakistani military officers in charge point out that, to date, there has not been a single instance of theft of nuclear materials or other radioactive substances in Pakistan. Extremists or terrorists have allegedly not attempted to gain access to nuclear weapons or their components. Despite the security improvements described, America's concerns have by no means been dispelled. Washington is evidently discussing to what extent Pakistan's restrictive information policy on its nuclear-weapons programme has undermined the effectiveness of the corresponding American support programmes.

Three areas remain particularly critical: accounting of nuclear material, the transport of nuclear-weapons components and the handling of nuclear weapons in times of crisis. Firstly, Pakistan has yet to produce figures on the amount of fissile material in the country. It thus cannot be excluded that substances useable for making weapons have already been stolen from civilian or military nuclear installations and ended up in the wrong hands. Secondly, the nuclear-weapons components are evidently transported back and forth between various sites with some frequency. Safeguarding such transports is problematic in so far as the containers used for this purpose could easily be damaged by armour-penetrating weapons, for instance. For this reason Pakistan now wants to purchase specially protected vehicles. Thirdly, in times of crisis or even war the various components are likely to be put together to make complete nuclear weapons, and this would increase the danger of theft. This problem is likely to be further exacerbated in future. India has been honing its intelligence and reconnaissance capabilities and is clearly in a position to identify and prevent transports of Pakistan's nuclear-weapons components. Therefore Pakistan possibly sees itself increasingly forced to assemble its nuclear weapons in the early stages of a crisis in order to maintain its nuclear second-strike capability.

In order to prevent the detonation of stolen nuclear weapons and exclude any other unauthorised use, the USA (and probably other nuclear powers as well) have installed Permissive Action Links (PAL) on their nuclear weapons. These mechanisms lock the weapons system until the corresponding code is entered. The weapon becomes unserviceable if anyone attempts to detonate it without entering the correct code. Considerations by the Bush Administration to make PAL technology available to Pakistan were discarded in the

end for a variety of reasons. The State Department argued that technology transfer of this kind was incompatible with the Nuclear Non-Proliferation Treaty, which bans nuclear states from supporting other countries in pursuing their nuclear-weapons programmes. The Department of Energy and the Pentagon were worried that, in providing PAL technology, the USA would be allowing Pakistan to gain too many detailed insights into the design of American nuclear weapons, as these security devices were embedded deeply in the weapons' designs. What is more, the USA feared that know-how gained in this way could make its way via Pakistan to China. Nor was Pakistan's leadership interested in technological cooperation of this kind, since it would inevitably have required that American experts have direct access to Pakistan's nuclear weapons. Islamabad also feared that the USA, by installing PAL on Pakistan's nuclear weapons, could secretly create the technological wherewithal for disabling Pakistan's nuclear arsenal whenever Washington desired.

Pakistan has evidently produced indigenous safeguarding systems. The Chairman of the Strategic Plans Division, the retired General Kidwai, announced that Pakistan's warheads were fitted with a code-based lock. According to Pakistani sources these are functional equivalents of the American PAL. The USA may have indirectly aided the Pakistani military in the development of such devices.¹³

The Insider Problem

Nuclear weapons and weapons-grade material also need to be protected, not least, from misuse by insiders. It is essential to prevent the theft and proliferation of nuclear weapons, weapons-grade materials and relevant expertise for making nuclear weapons through staff of the nuclear complex and members of the armed forces. This problem is acutely felt in a country such as Pakistan, where corruption remains rife and Islamist ideas have gained in influence in

¹³ See IISS, *Nuclear Black Markets* [see footnote 1], pp. 114ff; Matthew Bunn, *Securing the Bomb 2007*, Washington, D.C.: Nuclear Threat Initiative, 2007, pp. 30f; Luongo and Salik, "Building Confidence" [see footnote 8]; Zafar Ali, *Pakistan's Nuclear Assets* [see footnote 4]; Joby Warrick, "Pakistan Nuclear Security Questioned", *Washington Post*, 11 November 2007, p. A01; David E. Sanger and William J. Broad, "U.S. Secretly Aids Pakistan in Guarding Nuclear Arms", *New York Times*, 18 November 2007.

recent years in many parts of society, including at universities and research institutes. The nuclear complex with its total of around 70,000 staff, including 7–8,000 scientists, is not immune to corruption or to Islamist ideas. There thus exists the danger that unreliable persons could pass on nuclear material or relevant know-how to Al Qaeda or other terrorist organisations. This is shown by the example of two retired nuclear scientists who met up with Osama Bin Laden and other Al Qaeda members in Afghanistan prior to 11 September 2001. One of them, Sultan Mahmood, an Islamist who resigned from his post as director of Pakistan's Atomic Energy Commission in 1999, is said to have even shown Bin Laden designs – albeit rather rough ones – for making nuclear weapons.

Recent American reports suggest that Pakistani scientists who have been trained abroad, some of whom are followers of radical Islamist ideologies, return home hoping to find employment in Pakistan's nuclear complex. Radical Islamic groups may attempt to plant sleeper agents who gain access to crucial nuclear know-how and apply it for terrorist organisations when the time is ripe. Such persons could also purloin weapons-grade material from laboratories gradually, in minute amounts.¹⁴

Groups could also form within the armed forces and strive to gain unauthorised access to nuclear weapons or weapons-grade material. The Pakistani military has always been orientated towards the West and has often been severely criticised for this by the Islamists. The currently dominant generation of senior officers, who are now on average in their mid fifties, was trained in the USA and is therefore considered a bastion against Islamist infiltration. It is questionable, however, whether the following generation of officers is equally orientated towards the West. When Washington clearly distanced itself from Pakistan in the phase between the end of the Cold War and 11 September 2001, exchange programmes with young Pakistani officers were terminated and Washington's hitherto exceedingly close military relations with a whole generation of officers were severed. Given the turbulent history of American-Pakistani relations, many of the younger Pakistani officers do not believe

that the USA is seriously interested in maintaining a durable relationship with Pakistan.¹⁵

Religious ideas had already spread in the army during the policy of Islamisation that began under the military rule of Zia ul-Haq in the late 1970s. It therefore comes as no surprise that the ISI supported religiously motivated groups, and these became an important instrument of Pakistan's foreign policy. This was the case with the mujahedin in the war against the Soviet Union in Afghanistan, for example, and with Islamist groups in Kashmir and the Taliban in Afghanistan. Parts of the middle generation of officers, who also work in the ISI, are probably much more receptive to Islamist and anti-American ideas. A connection between the military, the secret services and religious extremists therefore cannot be completely ruled out. After all, officers and secret-service staff were involved in attacks on President Musharraf in the past. Should rival power centres develop one day within the armed forces, access to nuclear weapons could become a bone of contention between them.

Like the overall command and control systems for nuclear weapons, the security screening of staff employed in the nuclear complex was also substantially restructured by the late 1990s. A central staff screening programme was installed in stages, with American assistance, but was not operational until after 11 September 2001. The Strategic Plans Division gathers information on all employees of the nuclear complex, including retirees. Various intelligence agencies are also involved in the screening of staff.

It is conjectured that only Punjabis are accepted as staff in the nuclear complex on principle – not Pash-tuns. All applicants are subjected to extensive tests, involving their families as well, that can take up to a year. Only after successfully passing these investigations are employees allowed to work at sensitive installations. Screening then continues at regular intervals. The security clearance has to be renewed every two years and also whenever a staff member is moved to a different department. Nuclear scientists in active service, but also those in retirement, have to undergo a special screening process prior to trips abroad in order to ensure as far as possible that nuclear-weapons expertise does not leave the country.

¹⁴ See David E. Sanger, "Obama's Worst Pakistan Nightmare", *International Herald Tribune*, 12 January 2009, pp. A01 and A03.

¹⁵ See Peter Rudolf, Christian Wagner and Christian Fröhlich, *Die USA und Pakistan. Probleme einer Partnerschaft*, Berlin: Stiftung Wissenschaft und Politik, June 2008 (SWP-Studie 15/2008).

Although the staff screening programme is strongly oriented towards American models, there are significant differences. Unlike in the USA, where substance abuse represents a serious security problem, the screening in Pakistan places special emphasis on applicants' religious views. Here a fundamental issue is to distinguish whether an individual applicant is merely a devout Muslim or subscribes to Islamist ideology. The intensity of the screening or the criteria, by which personnel decisions are made, are not known to outsiders. How many staff members have been dismissed as a result of staff screening measures in the nuclear complex is also unknown.

It is exceedingly difficult to estimate how large the insider problem really is and how it will develop. At any rate, for a terrorist organisation it would simply not be enough to infiltrate one or a few persons into Pakistan's nuclear complex in order to circumvent the security controls and gain access to nuclear-weapons components or weapons-grade materials.¹⁶

The Safeguarding of Civilian Facilities and the Issue of Export Controls

Not only the control of access to Pakistan's nuclear weapons and the power of disposal over them is of interest in terms of international security but also the safe handling of fissile material in civilian nuclear facilities and effective controls to prevent the export of corresponding equipment and materials. This aspect is particularly relevant in Pakistan's case, seeing as A. Q. Khan, who achieved a certain claim to fame, represented the first known case of a private figure – driven primarily by the profit motive, but also by nationalist and religious ideas – selling goods for use in nuclear-weapons projects through the network he had created.

Pakistan's civilian nuclear programme is relatively small in scale. Only about 2.4% of Pakistan's electricity is produced in nuclear power plants. At present only an ageing heavy-water reactor of Canadian origin (KANUPP) and a pressurised water reactor imported from China (Chasma 1) are in operation. In addition there are two research reactors near Rawalpindi. The International Atomic Energy Agency (IAEA) monitors

all these facilities. Whereas IAEA inspectors visit the two research reactors once per year, inspections of the KANUPP and Chasma reactors take place every three months. Pakistan cooperates closely with the IAEA experts, in some respects above and beyond what is prescribed. However, Islamabad has only accredited eighteen of a total of about 220 IAEA inspectors for these activities. Another reactor (Chasma 2) has been under construction since December 2005; it is due to be completed in 2011 and a safeguards agreement has already been signed with the IAEA. As Pakistan plans to significantly expand the civilian use of nuclear energy, eleven more nuclear reactors are to be bought from China by 2030.¹⁷

Since January 2001 all civilian nuclear activities have been under the surveillance of the Pakistan Nuclear Regulatory Authority (PNRA) and monitored with regard to nuclear security. Although the physical protection of nuclear facilities and the training of their personnel have been improved in the meantime, a further increase in quality is required. The PNRA instituted a five-year plan in 2006 in order to achieve this. One focus of the plan is the monitoring of radioactive substances and the localisation and safeguarding of nuclear materials that have not yet been registered. An accident coordination centre for nuclear installations has also been established at the national level in Islamabad. Additionally, regional centres are to be established in order to arrive at the scene of an accident as quickly as possible. Regular national inspections are intended to prevent improper handling of radioactive substances during their use, storage and transport, and also so as to rule out theft. The PNRA cooperates with the IAEA to implement the five-year plan. A mission dispatched by the Vienna agency advises Pakistani experts, for example on the purchase of equipment for improving the security of nuclear facilities. It also holds training courses and workshops for Pakistani trainers, who later pass on their knowledge to local staff. Pakistan voluntarily paid 500,000 US dollars into the IAEA Nuclear Security Fund in order to finance these measures. According to IAEA experts, cooperation with the Pakistani authorities proceeds smoothly. Islamabad evidently takes nuclear security and improvements thereof very seriously, but most of its measures are still in their infancy.¹⁸

¹⁶ See Gregory, *The Security of Nuclear Weapons in Pakistan* [see footnote 9]; Luongo and Salik, "Building Confidence" [see footnote 8]; Peter Wonacott, "Inside Pakistan's Drive to Guard It's A-Bombs", *Wall Street Journal*, 29 November 2007, p. A1.

¹⁷ See World Nuclear Association, *Nuclear Power in Pakistan*, October 2008, www.world-nuclear.org/info/inf108.html (downloaded 8 January 2009).

¹⁸ Luongo and Salik, "Building Confidence" [see footnote 8]; Kerr and Nikitin, *Pakistan's Nuclear Weapons* [see footnote 1].

The illegal activities of A. Q. Khan's import-export network uncovered in late 2003 made Pakistan a hub of nuclear proliferation. Know-how and materials for enriching uranium and making nuclear weapons were delivered to Iran, Iraq, North Korea and Libya, and possibly to other countries. To what extent this was a specific policy of the government or merely personal initiative, remains disputed. Hendrina Khan, A. Q. Khan's spouse, claimed in the media that the Pakistani armed forces and secret services actively supported the exports.¹⁹ The government in Islamabad has officially considered the case closed since May 2006. Nonetheless, many questions remain unanswered. Light has not yet been shed on all activities of the network, and it cannot even be excluded that they are continuing. Not one of the accused has ever been questioned by any other than Pakistani authorities.²⁰

Following the 1998 nuclear tests and the 1999 military coup under General Musharraf, Pakistan began to improve its export controls in 2000 as a result of increased American pressure. In this year uniform export control guidelines were introduced for the first time, compliance with which was centrally monitored by the Strategic Plans Division. Previously the various nuclear organisations had acted independently of each other.

In September 2004 Pakistan adopted new export control laws intended to monitor the export of goods, technologies, materials and equipment able to be used for making nuclear weapons, biological weapons and delivery systems (corresponding legislation on chemical weapons had already been enacted in connection with Pakistan joining the Chemical Weapons Convention). Relevant control lists are based on the guidelines of international export control regimes such as

the Missile Technology Control Regime (MTCR) or the lists drafted by the Nuclear Suppliers Group (NSG) and the Australian Group (AG). Pakistan's laws also include end-user clauses and threats of punishment in the case of infringements. As stipulated in United Nations (UN) Security Council Resolution 1540, Pakistan submitted a comprehensive report on its new export control legislation in October 2004.²¹ A corresponding authority with around 8,000 staff was established to monitor compliance with the laws. The USA provided substantial support in formulating the legislation and setting up the monitoring body.²² One can safely assume that the current Pakistani leadership has a great interest in preventing the illegal spread of materials, equipment and know-how for making nuclear weapons, but it remains to be seen how effective the instituted measures will be.

¹⁹ Hendrina Khan, "In den Rücken gestochen" [Stabbed in the Back], *Der Spiegel*, no. 33 (2008), 105–106. According to recent press reports the network was also in possession of detailed plans for building nuclear warheads that would have been suitable for medium-range missiles of North Korean origin, for example for Pakistan's Ghauri or the Iranian Shahab 3. It has not yet been possible to establish whether or not this design was delivered to Iran or other clients. On this question see David E. Sanger and William J. Broad, "Officials Fear Bomb Design Went to Others", *New York Times*, 16 June 2008, p. 16.

²⁰ See Monika Heupel, *Das A.Q.-Khan-Netzwerk*, Berlin: Stiftung Wissenschaft und Politik, May 2008 (SWP-Studie 14/2008); Bruno Tertrais, "Khan's Nuclear Exports: Was There a State Strategy?", in: Sokolski (ed.), *Pakistan's Nuclear Future* [see footnote 4], pp. 13–57; IISS, *Nuclear Black Markets* [see footnote 1], pp. 65ff.

²¹ See Note verbale dated 27 October 2004 from the Permanent Mission of Pakistan to the United Nations addressed to the Chairman of the 1540 Committee, Security Council S/AC.44/2004/(02)22 of 5 November 2004.

²² See Zafar Ali, *Pakistan's Nuclear Assets* [see footnote 4].

The Domestic Dimension: “Talibanisation” of Nuclear Pakistan?

Although Pakistan has made considerable progress in the protection of its nuclear weapons, including improvements in command and control and the safeguarding of its civilian and nuclear installations, the country’s domestic stability is of decisive significance. All the measures described above will only have lasting success if Pakistan’s state structures remain intact. The armed clashes between the army and Al Qaeda and Taliban groups in the tribal areas on the border to Afghanistan strike at the very root of the Pakistani state.

The Founding of Pakistan

Pakistan was founded in 1947 in the course of the decolonisation of British India on the basis of religion. The new state comprised not only the areas inhabited by a Muslim majority in the north-west of British India, but also those in the east – in the Ganges delta that was later to become Bangladesh. The two parts of the country were separated from each other by more than 1,600 kilometres of Indian territory. The independence and partition of British India was accompanied by large-scale migrations, in which around ten to fifteen million people left their homes. The massacres and atrocities committed by religious fanatics on both sides claimed up to a million lives.²³

Pakistan’s borders were debatable in many places. Afghanistan refused to recognise the Durand Line that the British had laid down as the border and raised claims to the Pashtun areas in the North-West Frontier Province (NWFP). Furthermore, the self-governing tribal areas created by the British – the Federally Administered Tribal Areas (FATA) – were retained and remained largely separate from the administration and jurisdiction of the central state. Pakistan also had a number of border disputes with India, the most serious of which was sparked off by the conflict over

the status of Kashmir and was the cause of the first war between the two countries in 1947–48.

The elite of the Muslim League in northern India, which under the leadership of M. A. Jinnah had achieved independence, went to West Pakistan and had to come to an accommodation there with the ethnic groups and parties of the Punjabis, Sindhis, Baloch and Pashtuns, whose interest in independence had only been limited. Compared with ethnically heterogeneous West Pakistan, the Bengali population of East Pakistan was ethnically, culturally and linguistically much more homogeneous. The Bengalis made up around fifty-four percent of the population and thus the majority. The political, economic and military elite, on the other hand, was concentrated in the western part.

Jinnah’s vision of the Muslims of South Asia having a state of their own remained unfulfilled not only in territorial but also in political terms. Various lines of conflict emerged in the newly-formed state that were to shape Pakistan’s political development. The status of religion in the new country was one divisive issue; the interrelations between the ethnic groups was another; and the relationship between the democratic parties and the military – a third.²⁴

The Struggle of State-Building and Nation-Building: Religion vs Ethnicity

Although Jinnah had fought for and won the existence of Pakistan on the basis of religious affiliation, he favoured a liberal and secular conception of the state. In contrast, orthodox groups and thinkers such as the Islamic scholar Abul Ala Maududi demanded a state based on Islamic principles. The dispute between the supporters of these different ideas was of little significance at first. The liberal traditions of south-Asian Islam meant that the demands of the religious parties received little support in the new state, whose administration and economy were dominated by Muslim

²³ On the historical development see Stephen P. Cohen, *The Idea of Pakistan*, Washington, D.C. 2005; Christophe Jaffrelot (ed.), *Pakistan. Nationalism without a Nation?*, London 2002; Ian Talbot, *Pakistan. A Modern History*, London 1999.

²⁴ See Shahid Javed Burki, *Pakistan. The Continuing Search for Nationhood*, Boulder 1991; Louis D. Hayes, *The Struggle for Legitimacy in Pakistan*, Lahore 1986.

immigrants from India (muhajirs) and Punjabis. The well-organised Jamaat-e-Islami (JI), which Maududi had founded as early as 1941, served as a rallying point for orthodox Muslims. Jamaat Ulema-i-Islam (JUI), whose roots lay in the north Indian Deoband school, found its adherents among the Pashtuns and muhajirs in Karachi, while Jamaat Ulema-i-Pakistan (JUP) represented the liberal, popular-religious spectrum of Pakistanis with their Sufis and holy shrines.²⁵

The representation of the various ethnic groups in the new state held much greater potential for political conflict than the issue of religion. The attempt to introduce Urdu as the sole national language caused violent unrest in Bengali-speaking East Pakistan in 1952. In 1955 the four provinces of West Pakistan were amalgamated (*one-unit scheme*) in order to put the two parts of the country politically on an equal footing, which de facto meant discrimination against the eastern part. In 1956 the first constitution was passed. But before the national elections scheduled for 1959 could be held, General Ayub Khan seized power in a military coup in 1958.

The latent tensions between the two parts of the country broke out into the open following the first democratic elections in 1970. The military and political leadership of West Pakistan refused to step down and hand government to the East Pakistani Awami League (AL), which had won a clear victory. The AL leadership was arrested during talks and the military began to violently suppress protests in East Pakistan. The conflict escalated into a civil war, which after India's military intervention in favour of East Pakistan in December 1971 escalated into the third Indo-Pakistan war. After a short phase of fighting Pakistan capitulated, thus suffering not only a military but also a political disaster.

Tensions between religious and ethnic identities also ran high in the new state of Pakistan after 1971. The religious parties experienced their most sustained growth in the phases of military rule under General Zia ul-Haq (1977–1988) and General Pervez Musharraf (1999–2008). Zia pursued a policy of Islamisation in order to give his military regime a broader base. After the Soviet invasion of Afghanistan in 1979 he received extensive military support from the USA aimed at bolstering Afghan resistance. The USA supplied the military hardware, Saudi Arabia and the Gulf States

made financial contributions, and Pakistan's secret service trained the volunteers from the Arabic world in the region bordering Afghanistan for the "holy war" against the Soviet Union.

After the withdrawal of the Soviet troops in 1989 the Pakistani military made a fateful decision with far-reaching consequences: it used the jihad infrastructure to further its national interests in the conflict with India. In the late 1980s the army leadership around General Aslam Beg, who had succeeded Zia ul-Haq as Chief of Army Staff (COAS) after the latter's murder in August 1988, formulated the goal of gaining control of Afghanistan in order to win "strategic depth" in the event of another war with India over Kashmir.²⁶ Afghanistan, in this strategy, was to serve as a safe haven for Islamist groups. After the end of the Afghanistan war the ISI infiltrated former mujahedin into the Indian part of Kashmir. The consequence was a hitherto unseen escalation of violence, even if one recalls the various flare-ups in bilateral relations with India. In view of the dominance of the army in matters of foreign and security policy, the democratic governments in the 1990s also supported this policy. Under the government of Benazir Bhutto the ISI supported the creation of the Taliban which became the most important domestic factor in the Afghan Civil War in the 1990s and took power in Kabul in 1996. Pakistan thus supported, as it had in Kashmir, a strongly religious Pashtun group, whose members had largely received their training in Koran schools in Pakistan. The Pakistani army leadership evidently used this support in an attempt to counter the ethno-nationalist demands raised by Pashtun-dominated Afghan governments in the 1950s and 1960s.

The governments of Nawaz Sharif and the Pakistan Muslim League (PML) also regularly cooperated with the religious parties; these have never won a large percentage of the vote in elections but have always been significant as coalition partners for the major parties. Furthermore, the religious parties were well organised, especially in the big cities, and highlighted their causes through mass demonstrations. Pakistan's government, which maintains close relations to the Taliban, was one of the few to officially recognise the Taliban regime in Kabul.

This pattern of the ISI supporting Islamist groups in Kashmir and Afghanistan and the political parties

²⁵ See Boris Wilke, *Die religiösen Kräfte in Pakistan. Dynamik von Politik und Religion in der Weltgesellschaft*, Berlin: Stiftung Wissenschaft und Politik, April 2006 (SWP-Studie 10/2006).

²⁶ See Rifaat Hussain, "Pakistan's Relation with Afghanistan: Continuity and Change", *Strategic Studies (Islamabad)*, vol. 22, no. 4 (Winter 2002), 43–75.

largely tolerating this strategy initially remained intact after Musharraf's coup against the government of Nawaz Sharif in October 1999.

The Army, Religion and the War on Terrorism

This foreign policy strategy could no longer be maintained after the attacks of 11 September 2001. Under pressure from Washington, Musharraf swiftly sided with the USA and participated in its war on terrorism. He subsequently distanced himself from the Taliban but maintained his support for the Islamist groups in Kashmir.

The military intervention by the international community in Afghanistan also had repercussions on Pakistan. In 2002 the Muttahida Majlis-e-Amal (MMA), an alliance of six Islamist parties that had formed before the elections, achieved around eleven percent of the vote – the best result of an Islamist party at national level until then. The electoral success of the MMA, which was now able to form the provincial government in the NWFP, can partly be explained as a reaction to the international military operation in Afghanistan in 2001, which was harshly criticised by Pashtuns in the border region. Ballot-rigging by the ISI was also of some assistance. Musharraf was prepared to accept this party's successes so that he could present himself and his regime as a "last bastion of the West" against the Islamist threat.²⁷ Portraying the MMA as a threat in this way did not at all prevent Musharraf from collaborating with it politically, for example in the winter of 2003–04, when it helped carry through far-reaching constitutional amendments that extended his powers as president. This strategy followed the policy of the military, practised for many years, of instrumentalising Islamist groups for domestic and foreign-policy purposes.²⁸ In the conflicts with India, for example, the armed forces repeatedly fell back on Islamist groups.

In the meantime there are increasing signs that the "genie of Islamism", which the military let out of the bottle at the latest with its support of the Taliban, can no longer be put back in. A partial Islamisation of the

Pashtun tribal areas has begun as a consequence of supporting the mujahedin in the war against the Soviet Union. The absence of government control over the FATA allowed foreign fighters to settle in the tribal region and marry into the tribes. In some areas the traditional tribal leaders (maliks) have had to cede their authority to religious leaders (mullahs). Even Al Qaeda cadres found safe havens in the FATA after the 2001 military intervention in Afghanistan. A number of groups with different objectives are now operating there: the Taliban, who want to take power in Kabul again; Al Qaeda, that launches attacks aimed primarily at the USA and its allies; and the so-called Pakistani Taliban, who are striving to found an Islamic state in Pakistan.

But the many years of support for the Islamist groups also had repercussions on parts of the ISI. Evidently not all members of the army and secret service followed Musharraf's foreign-policy shift after 11 September 2001, which was accompanied by a general abandonment of the Taliban. Musharraf himself had to admit under international pressure that former ISI officers had cooperated with parts of the Taliban.

The army leadership long displayed an ambivalent attitude towards fighting the militant groups in the FATA. Since 2001 Pakistan has managed to arrest a number of Al Qaeda leaders and extradite them to the USA, but overall it has few resounding successes to show in the war against the Taliban. The Afghan government and also NATO criticised Pakistan for the support it is obviously still giving to the Taliban. At the same time, since the beginning of their military operations in the spring of 2004, the Pakistani armed forces have stationed more than 80,000 soldiers in the FATA and so far have suffered heavy casualties, including over 1,000 dead.

The background to Pakistan's ambivalence here is a fundamental dilemma stemming from the conflict with India. The army leadership obviously wants to preserve its influence in Afghanistan. In geostrategic terms the presence of the USA and the international community in Afghanistan remains of utmost significance for Pakistan. If they pulled out of the country due to a further escalation of the civil war or as a result of a peaceful settlement, the military fears that Afghanistan could re-establish its traditionally friendly relations to India, and Pakistan would be threatened with "encirclement" by India. For this reason Islamabad also criticises India's involvement in Afghanistan, which is already substantial today.

²⁷ The title of Musharraf's autobiography "In the Line of Fire" – borrowed from the Hollywood film of the same name – is also suggestive of this strategy.

²⁸ See Frédéric Grare, *Pakistan: The Myth of an Islamist Peril*, Washington, D.C., February 2006 (Carnegie Endowment Policy Brief no. 45).

For example, the Indian consulates near the Pakistani border allegedly give support to the rebel movements in Balochistan. These considerations also explain why parts of the Afghan Taliban continue to enjoy a degree of freedom in Pakistan, while foreign fighters, Al Qaeda and the Pakistani Taliban, who oppose the government in Islamabad, are combatted. The Pakistani military uses this strategy in an attempt to ensure lasting influence in Afghanistan while at the same time catering to US demands that it contribute to the war on terrorism. The demand occasionally articulated by Pakistan that the Taliban must be given a greater stake in the government in Kabul is associated with the hope that its involvement will impede the building of closer relations with India. Another aspect that dampens the combative commitment of the Pakistani army are the casualties to be feared among the Pashtun civilian population in the tribal areas. Since Pashtuns make up the second-largest group in Pakistan’s armed forces, such casualties could stir up discontent in the army.

Signs are mounting that the army and secret service have meanwhile lost control of the FATA and have substantially less influence on the militant groups there. As such, the rather artificial distinction often made in Pakistan between Al Qaeda, the Afghan and the Pakistani Taliban is also clearly losing significance. Many moderate tribal leaders who used to collaborate with the government have been killed, and Islamist groups have pursued a policy of “Talibanisation” in the tribal areas of North and South Waziristan as well as in the adjacent districts of the NWFP. Given this lack of success and faced with growing pressure from the international community to end the infiltration of Afghanistan, in 2007 Pakistan modified its strategy in the war on terrorism:

1. Politically, the government attempts on the one hand to achieve a political solution by negotiating with the militant groups. But the various agreements, such as that of September 2006 in North Waziristan, have brought no lasting success and not ended the infiltration of Afghanistan. On the other hand there are ideas of integrating the FATA into the Pakistani state in the long term, though it is contentious whether this should really be done – and if so, how. It is also controversial whether the FATA should be merged with the neighbouring NWFP or whether it would be better to make it a province in its own right, which would allow Pakistan’s laws to be extended to the FATA. This would also allow the parties to elec-

tioneer there. Also there are suggestions of restoring the former status quo. To this end the traditional tribal leaders (maliks) should be supported so as to counterbalance the extremist mullahs.

2. The economic and social development of the FATA, the most underdeveloped areas of Pakistan, is to be sped up. The USA alone will provide around 750 million dollars for this purpose over the next five years. The Pakistani government is planning to invest a similar amount. A large part of this money will probably disappear into the extensive networks of corruption and patronage. But the prospects of development are also meant as an opportunity to conduce individual tribes to cooperate with the government in the fight against the militants.

3. Military pressure is to be increased on those extremist groups that are not prepared to hold talks. The army, whose troops have not been trained for a guerrilla war but rather for conventional war against India, has suffered heavy losses to date. For this reason paramilitary units such as the Frontier Corps (FC), who are traditionally recruited from the tribes, are to be used in their place and increasingly employed in the battle against terrorism. Furthermore, the tribes loyal to the government are going over to establishing their own militias (*lashkars*) for the war against the militant groups. They are supported by the army, like in the spring of 2007 when fighting broke out with Uzbek groups. In recent years the war has thus increasingly been transformed into a tribal war.

Although the attacks of Islamist groups are spreading, their ideas still do not command widespread support in Pakistani society. The Islamist parties, which have their strongholds in the Pashtun areas of the NWFP and Balochistan, play only a limited role in so far as Pashtuns make up no more than fifteen to twenty percent of the Pakistani population. Even among the Pashtuns there are strong liberal and secular groups alongside the religious forces. The parties of the MMA no longer stood for election together in the February 2008 polls due to internal differences. The most influential group in the alliance, Jamaat Ulema-i-Islam (JUI-F), received only six seats in parliament. And in the NWFP the secular Awami National Party (ANP) won the majority and since then has formed Pakistan’s government.

The widespread anti-Americanism in Pakistan, which according to surveys is among the strongest in the world, should not be misinterpreted as a sign of

the impending Islamisation of the country.²⁹ This high level of anti-American sentiment cannot be explained by Islamist tendencies alone because the supporters of the religious parties make up little more than ten percent of the population. These results also reflect the criticism by moderate circles in Pakistani society, represented by the two large mainstream parties. Their supporters criticise the USA for applying double standards towards democratic development in Pakistan – the USA has called time and time again for a fostering of democracy, but it has often supported the Pakistani military to the detriment of the political parties. A third group with anti-American attitudes are presumably the conservative nationalist circles. Their criticism was ignited above all by the USA proving to be an unreliable partner in foreign-policy matters and leaving Pakistan in the lurch when it came to safeguarding its interests, for example in the wars against India in 1965, 1971 and 1999. Since questions of foreign policy only interest a minority in Pakistani society, one can assume that the last-mentioned group consists predominantly of military officers and security experts. Despite being numerically small, its members have weight in forming public opinion and their views are echoed in the media.

The Koran schools (Madrassas) are increasingly well attended by young people, and this is often cited as evidence of the Islamisation of Pakistani society. While it is true that these schools continue to be very attractive for the poorer sections of society, since they offer students board and lodging in addition to education, the number of students at Koran schools makes up no more than one percent of the total student population of the country according to recent estimates.³⁰

The situation in Pakistan remains ambiguous. On the one hand there is no likelihood of a “Talibanisation” of the state, and scenarios that envisage the international community soon having to deal with a failed nuclear state in the process of collapse – and one dominated by Islamists to boot – are exaggerated. But on the other hand Pakistan’s domestic political situation continues to be precarious even after Musharraf’s removal. Although Asif Ali Zardari, the Vice-Chairman of the Pakistan Peoples Party who was elected president in September 2008, enjoys broad political support based on new political alliances, he

has yet to present a coherent strategy for combatting the militant groups. The energy and economic crisis spreading at present also poses the danger of further sections of the urban population falling victim to radical ideas.³¹ Whether the new president will be more successful than his predecessor in fighting the extremists, above all in the tribal areas, remains to be seen. In future Pakistan is likely to be what it always has been: a country shaped by religious rivalries and ethnic conflicts, a state struggling for political stability.

²⁹ See Jim Lobe, “Pakistanis See US As Greatest Threat”, *Asia Times Online*, 8 January 2008.

³⁰ See Lisa Curtis, *U.S. Aid to Pakistan: Countering Extremism through Education Reform*, Washington, D.C.: The Heritage Foundation, 9 May 2007 (Heritage Lecture no. 1029).

³¹ See Christian Wagner and Boris Wilke, *Pakistan nach Musharraf: Beginn der Ära Zardari?*, Berlin: Stiftung Wissenschaft und Politik, September 2008 (SWP Comments 70/2008).

Perspectives on the Pakistan-India Conflict

No other conflict since independence in 1947 has had such a lasting influence on Pakistan's foreign policy as that with India over Kashmir. The territorial conflict over this former kingdom has been exacerbated by Kashmir's symbolic significance for India's and Pakistan's different conceptions of the state. This explains the intensity with which both sides have fought over the economically rather insignificant region for more than sixty years. Jinnah achieved the independence of Pakistan on the basis of the two-nation theory against the bitter resistance of the Indian National Congress, which at that time was under the leadership of Gandhi and Nehru. The Muslims saw themselves as a nation with their own religion and tradition, and consequently they claimed the right to a state of their own.³²

The Dominance of the Kashmir Conflict

In the course of the decolonisation of British India the over 500 princely states, of which Kashmir was also one, were given a special status. Each ruler was allowed to decide whether he would join one of the new states, India or Pakistan, or preferred to remain independent. Since many of these "states" were just a few square kilometres in size and completely surrounded by Indian or Pakistani territory, most of them became part of one of the two new states. Kashmir had a predominantly Muslim population but was ruled by a Hindu dynasty. After domestic political disturbances the king joined the Indian Union on 26 October 1947 and in return received military assistance from India in the war against the rebel tribal fighters, who in turn were supported by Pakistan. These clashes gave rise to the first Indo-Pakistan war, which was ended by a UN-brokered ceasefire in January 1949. Since then, Kashmir has been divided between India and Pakistan.

³² On the historical development see Sumantra Bose, *Kashmir: Roots of Conflict, Paths to Peace*, Cambridge, Mass. 2003; Sumit Ganguly, *Conflict Unending. India-Pakistan Tensions since 1947*, Oxford/New York 2002; Alastair Lamb, *Birth of a Tragedy: Kashmir 1947*, Hertingfordbury 1994; Robert G. Wirsing, *Kashmir in the Shadow of War: Regional Rivalries in a Nuclear Age*, Armonk 2003.

The part controlled by Pakistan consists of the Northern Areas and the formally independent state of Azad Kashmir.

For Pakistan, Kashmir with its Muslim majority was a central element for the consummation of its founding idea, according to which all the Muslims of the subcontinent should live in one state. But the Indian Union, which considered itself a secular state, also saw in Kashmir a confirmation of its conception of the state, according to which all religious communities should have a place in the newly founded state. The Kashmir conflict continues to shape relations between India and Pakistan today. Kashmir has been at the centre of three of the four wars that the countries have waged war against each other (1947–48, 1965, 1971 and 1999) and has also been the cause of countless armed incidents and bilateral crises, the last being in the summer of 2002. In this respect, Indian-Pakistani relations have long been a "hostage" to the Kashmir conflict. Only with the rapprochement after 2003 were economic relations extended, confidence-building measures undertaken for the first time and travel opportunities for the civilian population improved. This has placed the bilateral relationship on a significantly broader basis.

The fact that Pakistan feels threatened by India and is inferior to it in conventional terms has contributed decisively to consolidating the domestic political role of the Pakistani army. After the first coup, which brought General Ayub Khan to power in 1958, Pakistan developed into a "garrison state",³³ and military-bureaucratic regimes ruled the country for about forty years until 2007. The claim to Kashmir played a central role in this period in creating a sense of identity in Pakistan's ethnically and religiously fragmented society. The conflict with India served the armed forces not least as justification for constantly high arms expenditure.

But India has failed to capitalise politically on its conventional military superiority. The Pakistani Prime Minister Z.A. Bhutto, who assumed office after the

³³ See Robert Laporte, jr., "Succession in Pakistan: Continuity and Change in a Garrison State", *Asian Survey*, vol. 9, no. 11 (November 1969), 842–861.

capitulation of Pakistan's armed forces in December 1971, managed to prevent a final settlement of the Kashmir conflict in the subsequent peace negotiations. Although the Simla Agreement concluded on 2 July 1972 redefined the Line of Control in Kashmir, the Indian Prime Minister Indira Gandhi relinquished the demand that the Line of Control be made the permanent border between the two countries – evidently out of consideration for the domestic political pressures that Bhutto was facing.³⁴ Despite its military defeat, Islamabad was thus able to notch up an important political success in the Kashmir issue. The achieved result has caused conflicts between the two rival neighbours time and again. Given the dominant role of the military in foreign policy and security matters there has been no fundamental improvement in bilateral relations with India during the periods of democratic government in Pakistan.

Rapprochement since 2003

Bilateral relations got off to a fresh start in April 2003 when the Indian Prime Minister Atal Bihari Vajpayee, speaking in Srinagar, the capital of Indian-administered Kashmir, unexpectedly offered the Pakistani leadership new talks. This initiated a change in Pakistan's foreign policy towards India that no one had dared to hope for. Three factors were decisive for Pakistan accepting the offer. Firstly, the crises of 1999 and 2002 had not brought Pakistan any success in the Kashmir issue on the international stage. Secondly, Islamabad's efforts to denounce India's human rights violations in Kashmir in the context of the post-9/11 terrorism discourse as "state terrorism" had been to no avail; it was unable to mobilise international support in the Kashmir question in this way. And thirdly, the Iraq War that began in the spring of 2003, which the USA justified as a measure in the war against international terrorism, provoked a debate in Pakistan about whether Pakistan itself could end up as a theatre of operations in the American war on terrorism.

After Presidents Musharraf and Vajpayee had agreed to a ceasefire in the autumn of 2003, as early as January 2004 the two arranged to open what was termed a *composite dialogue*. Furthermore, Musharraf

promised in a joint declaration to do all in his power to prevent terrorist attacks being launched from Pakistan's territory again. At their summit in New Delhi in April 2005 the Indian Prime Minister Manmohan Singh and President Musharraf declared the peace process "irreversible" and reached agreement on the essentials of a deal that would allow settlement of the Kashmir conflict. Through corresponding changes in the two countries' constitutions the internal autonomy of the Indian and the Pakistani parts of Kashmir could be expanded, giving the Kashmiris a degree of self-government exceeding that of an Indian state or a Pakistani province.³⁵

The earthquake in Kashmir in October 2005 further accelerated the process of rapprochement. India and Pakistan now reached agreement on the installation of border crossings for the civilian population on the Line of Control in Kashmir which was thus opened up for the first time. They thus implemented an important step towards the establishment of a *soft border*, fully in the spirit of the spring 2005 agreements. In August 2007 trade began between the two parts of Kashmir across the Line of Control, leading to a further improvement in bilateral relations.

Up until July 2008 a total of five rounds of talks took place within the framework of the *composite dialogue*, in which the two sides agreed on trust-building measures such as the easing of travel restrictions, new transport links in Kashmir, Punjab and elsewhere, as well as the extension of economic, cultural and scientific cooperation. Although there has been no breakthrough in the Kashmir question so far, backroom negotiations have enabled both sides to bring their points of view closer together.³⁶ Furthermore, in June 2007 President Musharraf raised the possibility for the first time of a withdrawal of Pakistani units from Kashmir. In July 2007 Prime Minister Manmohan Singh spoke out in favour of joint use of the land and water resources in Kashmir. At the same time, India exercised great restraint in commenting on the various political crises in Pakistan in the course of 2007. In January 2008, with an eye to the discussion on the possible collapse of Pakistan and the danger of a proliferation of nuclear material to Islamist groups,

³⁵ See Christian Wagner, *Eine "Roadmap" für Kashmir?*, Berlin: Stiftung Wissenschaft und Politik, April 2005 (SWP Comments 18/2005).

³⁶ See "Governments of Both Countries Now Have to Decide on a Time to Disclose a Solution...", Interview with Pakistan's Foreign Minister Khurshid Kasuri, *Friday Times* (Lahore), 1–7 July 2007.

³⁴ See Amitabh Mattoo, "Next Steps in Kashmir", in: Karan R. Sawhny (ed.), *Kashmir. How Far Can Vajpayee and Musharraf Go?*, New Delhi 2001, pp. 27–44.

the Indian Foreign Minister Pranab Mukherjee emphasised the significance of a stable Pakistan.³⁷ The new government in Islamabad indicated after the elections in February 2008 that it hoped to continue the process of rapprochement with India ushered in by President Musharraf.³⁸

A series of attacks by militant groups in Indian cities, including New Delhi in 2005, Mumbai and Varanasi in 2006, as well as on the new rail link with Pakistan in 2007, were aimed at sabotaging the process of rapprochement. Dialogue was interrupted for a short time after the attacks but not ended. Even the new flare-up of unrest in Indian Kashmir with isolated gunbattles at the Line of Control in the summer of 2008 have not yet dampened the good bilateral relations.³⁹ The announcement by the new Pakistani government that it would open the economy to Indian investors ought to put relations with India on a completely new footing – if the corresponding projects are implemented.⁴⁰ This gives rise to the hope that the suspension of dialogue following the attack in Mumbai in November 2008 will only be temporary. In the run-up to the elections in 2009 the Indian government postponed several rounds of talks with Pakistan and increased international pressure on it to take action against the terrorists who presumably came from Pakistan.

Successful conclusion of the negotiations on the construction of a gas pipeline from Iran via Pakistan to India (IPI) would lead to a further improvement in relations. This project, which has been discussed again and again since the 1990s, has also been given a new lease of life since 2003. The construction of the pipeline would significantly strengthen economic ties between India and Pakistan and would at the same time be an important trust-building measure. In 2005 India, Pakistan and Iran set up a working group to look into the planning, financing and implementation of the project. The pipeline is to be around 2,700 kilometres long; construction costs are estimated at five to seven billion US dollars. Despite various political irritations caused in part by Iran's tense relations to the international community due to its nuclear pro-

³⁷ See "India Favours Strong, Stable Pak: Mukherjee", *The Hindu* (Chennai), 4 January 2008.

³⁸ See "The War on Terror Is Our War", *Friday Times* (Lahore), 4–10 April 2008.

³⁹ See Nirupama Subramanian, "We Want Better Ties with India: Gilani", *The Hindu* (Chennai), 15 August 2008.

⁴⁰ See Nirupama Subramanian, "Pakistan New Trade Policy Allows FDI from India", *The Hindu* (Madras), 20 July 2008.

gramme, the negotiations have made considerable progress.

India is concerned above all about the security of supply. Firstly, India fears that energy supplies from Iran could be blocked if there were a renewed military conflict with Pakistan. Secondly, the pipeline is planned to run through Pakistan's Balochistan province where armed rebel movements have been active for several years; the insurgents demands greater autonomy or even full independence and have repeatedly attacked gas pipelines in the region. Given these reservations, in 2004 the Pakistani government gave security guarantees and assured India that its energy supplies would not be interrupted even in the event of conflict.⁴¹

It remains one of Musharraf's greatest foreign-policy achievements to have placed Pakistan's relations to India on a new footing. But the personal interests of Pakistan's military, that still profits from the tense relationship with India, will continue to be influential. In the longer term it remains to be seen whether the intensification of economic relations with India will lead to the formation in Pakistan of new political interest groups that give economic ideas priority over foreign-policy and security concerns.

Nuclear Weapons and Political Stability in South Asia

One group of knowledgeable observers – often referred to as "proliferation optimists" – has advanced the thesis that the possession of nuclear weapons by both sides has been decisive for the positive development of Pakistan-India relations. It was partly due to this factor, they argue, that neither the Kargil War of 1999 nor the crisis resulting from the attempted occupation of the Indian parliament by Islamic extremists in 2001–02 led to escalation. Since then, they say, the possession of nuclear weapons has been the main determinant motivating both sides to embark on a new era of détente. In short, in this view, nuclear weapons have contributed to stabilising South Asia.

In contrast, the "proliferation pessimists" argue that nuclear weapons have had a destabilising effect. For example, Pakistan probably only dared to engage in the Kargil War – a limited conventional operation – because its nuclear-weapons umbrella made it feel safe

⁴¹ See B. Muralidhar Reddy, "Kasuri Offers Guarantees on Gas Line to India", *The Hindu* (Madras), 29 December 2004.

from an Indian escalation of the crisis. This aggressive Pakistani action, as India sees it, led New Delhi to draw consequences and prepare rapid conventional strikes for similar incidents in future; these, of course, bring with them the risk of escalation. The fact that the Kargil War did not develop into a larger armed conflict had nothing to do with nuclear weapons, so this line of argument goes. For New Delhi it was more important to win over world opinion to India's view and make the point that Pakistan alone was to blame for the war. Although Indian-Pakistani relations have improved markedly since 2002-03, the situation created by the Kashmir conflict remains precarious. The role of nuclear weapons in easing tension between Pakistan and India is overestimated, since economic and domestic political considerations are more significant for India, so the argument goes.⁴²

However one ultimately judges this controversy and whichever argumentation one finds more convincing, three factors could favour Pakistani nuclear rearmament and lead to a destabilisation of Indian-Pakistani relations: US-Indian nuclear cooperation and its consequences, India's intensified conventional rearmament and Indian developments in missile defence.

US-Indian Nuclear Cooperation

On 1 October 2008, after a long debate, the US Senate gave its seal of approval to the Indo-US civilian nuclear agreement. This put an end to India's very real international isolation in the nuclear field following its nuclear test of 1974. This development has had considerable influence on the political debate in Pakistan because there is a widespread and growing feeling of isolation – India has been recognised by the USA as a nuclear power “through the back door” on the basis of the agreement, although it still remains outside the Non-Proliferation Treaty (NPT). Pakistan, by way of contrast, is still denied this recognition. Worse still: Washington has repeatedly made it crystal clear that Pakistan cannot count on preferential treatment of this kind. Pakistan's feeling of neglect resulting from this is at the same time bound up with the concern that the USA could now give unreserved support to India in its rise to become a global power. Islamabad

therefore says that the US-Indian nuclear deal is discriminatory and unacceptable. The Pakistani leadership also fears that US-Indian nuclear cooperation could upset the regional balance in South Asia. If this fear proves justified, the leadership says off the record, Islamabad will have to rethink its nuclear options. In an official statement the NCA even threatened to launch a nuclear arms race.⁴³

In concrete terms Pakistan fears that India could import low-enriched uranium for its civilian reactors under its agreement with the USA. This would allow it to use its reservoir of natural uranium for nuclear-weapons projects and proceed with nuclear rearmament. Without American cooperation, at any rate, India would not be in a position to use significant amounts of its natural uranium for military purposes. Another factor is that India can be expected to reprocess the nuclear fuel supplied by the USA. Not even new Indian nuclear tests would necessarily harm cooperation with the USA. Pakistan sees the Bush Administration's motives in developing this nuclear cooperation as an endeavour to build up India as a counterweight to China in Asia. Washington has thus opened India the path to nuclear rearmament without sufficiently weighing the consequences of these measures for Pakistan. If India intensifies its nuclear rearmament Pakistan will have to invest in strengthening its own nuclear capabilities to prevent India from gaining a first-strike capability. The building up of sea-based nuclear capabilities in particular is perceived as necessary in order to secure the survival of Pakistan's nuclear deterrent capability in the face of India's growing nuclear potential.⁴⁴

There are grounds to doubt whether Pakistan's fears are justified. Since the 1998 nuclear tests India has not built another plutonium reactor and has not shown any interest in other ways of increasing the production of fissile material for weapons purposes. This is compatible with India's strategic debate, which is strongly influenced by the idea of minimum nuclear deterrence. It therefore seems rather unlikely that the planned Indo-US nuclear cooperation will be used as a vehicle for a nuclear rearmament programme.

⁴² On this controversy see most recently Sumit Ganguly, “Nuclear Stability in South Asia”, *International Security*, vol. 33, no. 2 (Autumn 2008), 45–70; S. Paul Kapur, “Ten Years of Instability in a Nuclear South Asia” (see Kapur), 71–94.

⁴³ See Glenn Kessler, “Senate Backs Far-Reaching Nuclear Trade Deal with India”, *Washington Post*, 2 December 2008, p. A17; Henry D. Sokolski, “What Not to Do after the Pakistani Coup”, *National Review Online*, 6 December 2007, <http://article.nationalreview.com/?q=ZDY4NjM2M2FjYzk5YWRjYTFhZjI5MDlhZTgzODk3YTI=> (downloaded 5 June 2008).

⁴⁴ See Zeb, “David versus Goliath” [see footnote 4].

Especially since the Indian leadership seems in no way willing to get into a nuclear arms race with China.⁴⁵

Against this background it cannot be excluded that the fears expressed by Pakistan go beyond the comprehensible feeling of neglect and are intended primarily to justify nuclear endeavours of its own that have already been planned. But US-Indian nuclear cooperation really cannot be seen as a potential cause of an Indian-Pakistani nuclear arms race.

India's Conventional Rearmament

At present around 1.3 million Indian soldiers face a mere 620,000 or so Pakistani troops (see table). This conventional imbalance is likely to shift further in India's favour in the years to come, as India increases its military expenditure against the backdrop of its steady economic growth.

At the same time, India has not yet developed the capacity to produce complex modern arms. Its efforts are directed above all towards reducing its traditional dependence on Russian arms sales in the course of intensified armaments cooperation with the USA. The intended nuclear cooperation and the concomitant revision of mutual relations are giving rise to a broad range of related activities. Joint strategic interests are an important basis for US-Indian cooperation. Both states want to find ways to repel Chinese hegemonic aspirations. Moreover, both sides have a shared interest in keeping shipping routes open in the Indian Ocean and ensuring the security of international trade. The maritime cooperation of the two countries is therefore also being stepped up.⁴⁶

India is striving in particular to improve its capabilities to carry out pinpointed conventional strikes. This explains its interest in improved intelligence and reconnaissance capabilities as well as modern bombers. With Pakistan in mind, the 1999 Kargil War and the terrorist attack on the Indian Parliament in December 2001 (evidently supported by Islamabad) play an important role. In India's view, both events demonstrated Pakistan's calculation that it was able to conduct limited conventional operations against India because New Delhi feared nuclear escalation and would thus find it hard to respond. The regime in

⁴⁵ See Jones, "Pakistan's 'Minimum Deterrent'" [see footnote 4].

⁴⁶ See Deba R. Mohanty, "Making Sense of the Indian Arms Dynamic: A Survey of Military Efforts", *Sicherheit und Frieden*, vol. 25, no. 3 (2007), 139–146.

Pakistan is regarded by at least parts of the Indian strategic elite as revisionist, and many in New Delhi expect renewed Pakistani attacks.

Table
Strength of the armed forces and level of military expenditure in India and Pakistan

	<i>India</i>	<i>Pakistan</i>
Total armed forces personnel	1,316,000	619,000
– army	1,100,000	550,000
– navy	55,000	24,000
– air force	161,000	45,000
Paramilitary units	1,300,586	302,000
Defence budget 2006 (in billions of US dollars)	22.3	4.14
Military expenditure relative to GDP 2005	3.0%	3.4%

Sources: International Institute for Strategic Studies (IISS), *The Military Balance 2007*; Stockholm International Peace Research Institute (SIPRI), *Yearbook 2006*.

In order to be better prepared for such threats in future the Indian army has developed a new doctrine for limited conventional warfare entitled "Cold Start". It represents an at least partial departure from the traditionally defensive orientation of the Indian armed forces. In essence it is about acquiring the capability to conduct effective conventional strikes against Pakistan – attacks that are so limited that they offer Islamabad no justification to escalate to the nuclear level. This is to be achieved through swift operations and amassed firepower. The Pakistani armed forces are to be dealt significant losses in a short space of time and parts of Pakistani territory occupied in order to gain a bargaining chip for subsequent negotiations. Highly mobile army units stationed on the border to Pakistan are to ensure the success of such operations. Although Indian forces have already held several exercises to practice the new guidelines, "Cold Start" is currently still more of a concept than a reality.

India's conventional arms and in particular the new developments in military doctrine may have an intrinsically destabilising effect in so far as Pakistan sees them as jeopardising its security. Pakistani military planners are increasingly worried that India could be able to identify and hit strategic targets in Pakistan. "Cold Start" is even interpreted by some as an Indian attempt to reverse the division of British India and eliminate Pakistan. Faced with this threat,

Islamabad may feel obliged to put its armed forces in a permanently high state of readiness.

Islamabad could react to an Indian “Cold Start” operation and escalate into a nuclear conflict at a relatively early stage, not least due to Pakistan’s lack of strategic depth. After all, “Cold Start” anticipates a rapid occupation of Pakistani territory to a depth of 50 to 80 km. While New Delhi’s war plans clearly make efforts to respect the Red Lines drawn by Pakistan in order to avoid escalation, Pakistan’s nuclear doctrine – as described – considers the capture of a large part of Pakistani territory by Indian armed forces to be a reason to resort to nuclear weapons. The doctrine leaves open how much ground Pakistan would have to lose before it reacted in this way, and high-ranking Pakistani officers remain vague on this point. If India really succeeded in carrying out a rapid conventional operation, Islamabad would have to assume India was intending to seize a large swathe of its territory. It would probably see itself forced to escalate to nuclear war. In order to make this threat credible in advance and deter an Indian “Cold Start” operation, Pakistan would have to lower the nuclear threshold and also strive to develop refined nuclear options, which would definitely include the use of tactical nuclear weapons. India’s conventional arms developments could thus induce Pakistan’s nuclear rearmament. If the imbalance between Pakistan and India in terms of conventional weapons becomes even more pronounced, this could increasingly destabilise the region and add to the danger of limited crises escalating to the nuclear level.⁴⁷

India’s Missile Defence Plans

If India undertakes serious efforts to improve its missile defence capabilities, this could also have a destabilising influence on the nuclear balance with its rival Pakistan. However, New Delhi would be dependent on substantial American or Israeli support for realising such an endeavour. If New Delhi were successful, Islamabad could see itself forced to intensify its programmes to develop and build ballistic missiles in order to guarantee Pakistan’s own second-strike

capability despite the existence of Indian missile defence. This could potentially be achieved by Pakistan strengthening its offensive ballistic forces and thus saturating the Indian defence systems. Pakistan could also be expected to intensify existing cruise-missile projects such as the Babur system currently under development, since these weapons are capable of penetrating anti-ballistic missile defences.

India aspires to a missile defence system not so much in order to protect itself against the threat from Pakistan but more so as to defend itself against the growing nuclear might of China. At the same time, India is primarily interested in defending its metropolises and other large cities. Pakistan would have to pose a credible threat to precisely these targets in order to have an assured nuclear second-strike capability.

New Delhi is interested in buying American PAC-3, Russian S-300/400 and American-Israeli Arrow missile systems. US President Bush and Indian Prime Minister Vajpayee published a joint declaration in January 2004 that also mentioned expanding dialogue and cooperation on missile defence. Indian experts have taken part in American computer simulations demonstrating the capabilities of missile defence systems and have also observed US missile-defence launches. But until now Washington refuses to supply India with complete modern missile defence systems.

According to Indian sources, a Prithvi short-range missile was successfully intercepted as early as December 2007 by a domestically produced defensive missile using a radar system developed in cooperation with Israel. But considerably more progress will need to be made in developing a longer-range radar system and faster interceptors (solid-fuel powered if possible) in order to shoot down Pakistani missiles like the Shaheen II with ranges of over 2,000 km. At the moment India is still miles away from these goals. The costs of an effective defence system would be very high as well, but India still seems willing to pursue the path of developing its own missile defence system. It is evidently relying on cooperation with the USA in important areas such as radar, command and control, communication and computer technologies. India has already purchased a modern early-warning radar system for missile defence from Israel.

Although India’s missile defence projects are still in their infancy in many respects, their implementation at least in the medium to long term would be perceived by Pakistan as a threat to its own deterrent capability. In the end, South Asia could be affected by

⁴⁷ See Walter C. Ladwig III, “A Cold Start for Hot Wars? The Indian Army’s New Limited War Doctrine”, *International Security*, vol. 32, no. 3 (Winter 2007/08), 158–190; Sumit Ganguly, “War, Nuclear Weapons, and Crisis Stability in South Asia”, *Security Studies*, vol. 17 (2008), 164–184; Kapur, *Ten Years of Instability* [see footnote 42].

precisely what the ABM Treaty helped to avoid: an arms-race dynamic involving not only offensive but also defensive systems.⁴⁸

48 See Jones, "Pakistan's 'Minimum Deterrent'" [see footnote 4]; Ganguly, "War, Nuclear Weapons, and Crisis Stability" [see footnote 47]; Raj Chengappa, "The New Shield", *India Today International*, 24 December 2007, pp. 40–43; "Indo-US Defence Ties: Tasting the Lockheed Blend", *domain-b.com* (Mumbai), 8 February 2008, www.domain-b.com/industry/defence/20080208_indo_us.html (retrieved on 28 May 2008).

Outlook: Democracy, the Military and the Bomb

As far as is publicly known, the technological means for safeguarding nuclear weapons in Pakistan should be sufficient to prevent unauthorised persons gaining access to individual components. The army leadership is aware of the strategic and global value of the nuclear weapons and therefore will keep doing everything in its power to ensure their security under all circumstances. For this reason the USA in particular will continue to rely on close nuclear cooperation with the army.

Regardless of this, the security of Pakistan's nuclear weapons remains precarious because the social environment is marked by instability. In the autumn of 2001 former President Musharraf summed up Pakistan's strategic interests with the catchwords Afghanistan, Kashmir and the "nuclear assets".⁴⁹ With the protection of the nuclear weapons in mind, the army leadership has not been afraid to gradually withdraw support in recent years from long-standing allies such as the Taliban and Islamist groups in Kashmir. But for the time being there can be no question of a long-term stabilisation of Pakistani society. Pakistan is not at risk of collapsing, and the influence of Islamist extremists is not growing to anything near the extent that Western observers sometimes claim; nonetheless, the new President Zardari faces enormous political challenges. Economic reforms are essential, above all else, and the position of the government in the war on terrorism must be strengthened. These tasks can only be mastered with massive backing from the armed forces. In this respect Pakistan remains a "garrison democracy", in which the decisive political and economic framework is set by the military.⁵⁰ Parallel to this there is a much greater challenge also connected with the issue of the nuclear weapons: how to institute a long-term reform of the Pakistani armed forces so as to end the connections to Islamist groups such as the Taliban or Lashkar-e-Toiba (LeT). This is a process that presumably only the army leadership itself will be able to tackle and it is likely to

remain beyond the influence of Pakistan's civilian government. The international community is called on here to further improve its cooperation with the military in order to decisively repulse the religious elements and reconsolidate the traditionally pro-Western orientation of the Pakistani armed forces.

The interest of the Pakistani military in preserving its prominent position coincides with the international community's interest in effective safeguards on Pakistan's nuclear weapons and effective protection against their use. International efforts to consolidate democracy in Pakistan, which would necessitate civilian parties' control of the military, are therefore clearly limited. In the event of a clash between the democratic parties and the military in Pakistan it is virtually inconceivable that the international community would side with the civilian forces if this involved even the slightest danger of the country's nuclear potential getting out of control. This leads us to a sobering realisation: that "the bomb" is a major obstacle to Pakistani democracy, which would involve civilian control of the military and the nuclear weapons. Control over the nuclear potential remains the army leadership's bargaining chip, with which it protects its privileged position in Pakistan.

This is an awkward state of affairs in so far as it cements the military's great influence on Pakistan's foreign policy, especially on relations to India. Despite all the improvements in mutual relations, one must not fail to recognise that Pakistan's army profits in domestic political terms from the tense relationship to the country's arch-rival. Therefore the army is likely to remain an obstacle to fundamental and lasting change in Pakistan-India relations. Future military confrontation in South Asia thus remains in the realm of the possible, nuclear escalation included.

⁴⁹ See "We've Saved Our Core Interests: Afghan Policy Based on Principles: CE", *Dawn* (Karachi), 20 November 2001.

⁵⁰ See Christian Wagner, *Die Perspektiven für Demokratie in Pakistan*, Berlin: Stiftung Wissenschaft und Politik, January 2008 (SWP Comments 5/2008).

Abbreviations

ABM	Anti-Ballistic Missile
AG	Australian Group
AL	Awami League
ANP	Awami National Party
DCAF	Geneva Centre for the Democratic Control of Armed Forces
FATA	Federally Administered Tribal Areas
FC	Frontier Corps
GDP	Gross Domestic Product
IAEA	International Atomic Energy Agency
IISS	The International Institute for Strategic Studies (London)
IPI	Iran-Pakistan-India (Pipeline)
ISI	Inter-Services Intelligence
ISIS	Institute for Science and International Security (Washington, D.C.)
JI	Jamaat-e-Islami (Islamic Block)
JUI	Jamaat Ulema-i-Islam (Assembly of Islamic Clergy)
JUI-F	Jamaat Ulema-i-Islam (JUI faction under the leadership of Fazl-ur-Rehman)
JUP	Jamaat Ulema-i-Pakistan (Assembly of Pakistani Clergy)
KANUPP	Karachi Nuclear Power Plant
LeT	Lashkar-e-Toiba (Army of the Pure)
MMA	Muttahida Majlis-e-Amal (United Council of Action)
MTCR	Missile Technology Control Regime
NCA	National Command Authority
NSG	Nuclear Suppliers Group
NPT	Non-Proliferation Treaty
NWFP	North-West Frontier Province
PAL	Permissive Action Links
PML	Pakistan Muslim League
PNRA	Pakistan Nuclear Regulatory Authority
PSRU	Pakistan Security Research Unit (Bradford)
SIPRI	Stockholm International Peace Research Institute (Solna)
UN	United Nations