



DETERRENCE, SECOND STRIKE AND CREDIBILITY **REVISITING INDIA'S NUCLEAR STRATEGY DEBATE**



Rajesh Basrur

Professor, S. Rajaratnam School of International Studies (RSIS), Singapore

The past few years have produced considerable debate over India's nuclear strategy and posture. Much of it has revolved around the credibility of India's nuclear arsenal (Chari, 2014; Global Security Newswire, 2009; Joshi, 2014; Koithara, 2012; Menon, 2014; O'Donnell and Pant, 2014; Prakash, 2012; Prakash, 2014; Rajaraman, 2014; Saran, 2013; Saran and Sharma, 2013). This is an important question because it goes to the heart of India's capacity to deter its adversaries. Is the Indian deterrent properly organized? Are its capabilities enough? What makes a deterrent credible? The on-going debate has produced three broad positions: that India's nuclear weapons are inadequate

for deterrence; that they are sufficient to meet the requirements of minimum deterrence; and that weapons development is reaching for excessive capabilities. But to resolve such a debate, it is first necessary to know: how *does* deterrence work? For all the differences aired, there is remarkably little or no disagreement on the meaning and fundamental requirements of minimum deterrence. Everyone seems to agree that the central principle of deterrence is "assured/secure second strike capability." From this flow the criteria for assessing the effectiveness of an arsenal: the survivability, reliability and accuracy of weapons, plus an efficient system of command control. The needs of the arsenal – its hardware (weapons systems) and software (organization) are determined by these canons of deterrence.

Dr Rajesh Basrur is a Professor of International Relations and Coordinator of the South Asia Programme at S. Rajaratnam School of International Studies, Nanyang Technological University in Singapore. He is also the author of *Minimum Deterrence and India's Nuclear Security & South Asia's Cold War: Nuclear Weapons and Conflict in Comparative Perspective*.

Views expressed are author's.

Where do these tenets come from? Essentially, they are derived from the Cold War era, when strategists grappled with the question of what it takes to deter. More precisely, they are drawn from American writings of that period about the requirements of nuclear deterrence (Soviet writings were not readily accessible). But it seems odd that we should place so much reliance on a mode of thought that



produced more than 30,000 nuclear warheads in the United States alone. It could be argued, of course, that the number of weapons produced has little or nothing to do with the assumptions and logic of deterrence thinking, but that was manifestly not the case. The entire edifice of American nuclear weapons doctrine and practice was built around very clear-cut thinking that was logically connected to judgments on the requirements of an effective deterrent force. To deter, so it went (and still goes), one has to survive a first strike and be sure to retaliate sufficiently well to create large-scale damage.

I

DETERRENCE: INDIAN THEORIZING

Indian theorizing about the requirements of deterrence, drawing heavily from American strategic literature, rests almost entirely on an uncritical acceptance of this edifice. It is time to take a closer look. The foundational concept of assured second strike capability and its derivatives emerged from a series of seminal writings that emanated from the American strategic establishment in the 1950s and 1960s, notably from the RAND Corporation. Though a number of thinkers were involved, no one better represents the intellectual bedrock of American nuclear doctrine and strategy than Albert Wohlstetter, whose 1958 paper on the "Delicate Balance of Terror" – more widely disseminated in a *Foreign Affairs* article in 1959 – presents the core precepts of deterrence as he saw them (Wohlstetter, 1958; Wohlstetter, 1959).

Indian theorizing about the requirements of deterrence, drawing heavily from American strategic literature, rests almost entirely on an uncritical acceptance of this edifice. It is time to take a closer look.

This brief looks at an alternative intellectual framework that has been largely ignored in the contemporary literature on nuclear deterrence – a set of ideas drawn from the writings of Patrick Blackett (Blackett, 1961; Blackett, 1962). These writings offer a powerful critique of the notion that secure second strike capability is vital to the working of nuclear deterrence and provide a sound intellectual basis for a truly minimalist approach toward nuclear deterrence. Blackett's credentials are impeccable: he was a reputed nuclear physicist (awarded the Nobel Prize in 1948), but also served with the Royal Navy during World War II, making him – in his own words – "the only atomic scientist to have been brought up as a professional fighting man." (Howard, 1991) He was critical of Wohlstetter and provided an alternative basis for thinking about the requirements of nuclear deterrence which in effect rejected the notion that second strike capability is the *sine qua non* of successful nuclear deterrence. His debate with Wohlstetter is instructive because it draws attention to the roots of the question "how much is enough?" As will become evident, Blackett's analysis was more insightful than Wohlstetter's. And, importantly, half a century after these ideas were enunciated, there is a body of accumulated evidence on the working of deterrence that is strongly supportive of Blackett's ideas. Indian strategists would do well to consider Blackett's analysis with care.

BLACKETT'S INDIA LINKS

Ironically, policy circles were familiar with Blackett's views on nuclear weapons. He was a personal friend of Prime Minister Jawaharlal Nehru and often stayed at Nehru's home on his visits to the country. Nehru appointed him defence advisor, in which capacity he produced a report on the organisation of India's defence apparatus (Blackett, 1948). The report, which led to the establishment of the Defence Science Organization, later the Defence Research and Development Organisation (DRDO), was warmly received by Nehru (Letter, 1948).

The Indian Prime Minister was also familiar with Blackett's views on nuclear weapons and acknowledged that he had read the latter's book, *Atomic Weapons and East-West*

Relations, "with considerable profit." (Letter, 1957) Blackett was also close to Homi Bhabha, often called the father of the Indian nuclear programme and a strong advocate of nuclear weapons for India, though Blackett himself had reservations about the value of nuclear weapons (Speech, 1974).

Public and professional awareness of Blackett's views on nuclear weapons was also not lacking in India. His book on the *Military and Political Consequences of Atomic Energy* was critically reviewed in an Indian journal, *The Thought*, in April 1949 (Review, 1949). Interestingly, a review of *Atomic Weapons and East-West Relations* in the 17 July 1960 issue of *Sainik Samachar* (= *Military News*), the journal of the Indian armed forces, refers approvingly to the author's "plea for the reduction of nuclear weapons to the absolute minimum." (Karunakaran, 1960)

Blackett's position on nuclear weapons finds an echo in contemporary India in numerous ways. He was a staunch campaigner for nuclear disarmament and an early advocate of No First Use (Howard, 1985). Above all, his vigorously argued case for minimum deterrence is of immense value today. Clearly, Blackett's views on nuclear deterrence were well known in India, but unfortunately, faded into virtual oblivion among Indian strategists because there was no serious interest in developing a nuclear deterrent during the Nehru era. It is time for a second look.

BLACKETT'S REJECTION OF WOHLSTETTER

Blackett offered a systematic refutation of the conception of deterrence that was predominant in American universities and in think tanks like the RAND Corporation. He was particularly severe on Wohlstetter, whose views on the requirements of deterrence crystallized into official doctrine and produced the central tenet of "secure second strike capability" that quickly became deeply embedded in most strategic thinking about nuclear weapons in the United States and later elsewhere (Blackett, 1961; Blackett, 1962; Wohlstetter, 1958; Wohlstetter, 1959). The chief points made by Blackett were as follows:

First, one need not threaten to obliterate the

Blackett's position on nuclear weapons finds an echo in contemporary India in numerous ways. He was a staunch campaigner for nuclear disarmament and an early advocate of No First Use. Above all, his vigorously argued case for minimum deterrence is of immense value today

opponent's society in order to deter. While Wohlstetter believed that the Soviet Union survived World War II after 20 million deaths and would therefore be hard to deter, Blackett held that, *for precisely that reason*, a state expecting such high levels of damage would be reluctant to contemplate nuclear war.

Second, a nuclear surprise attack that destroys much of one's arsenal is extremely unlikely to happen. Wohlstetter's reasoning was based on the American experience of Pearl Harbour, i.e. the possibility of catastrophic damage inflicted by a similar surprise attack. Blackett, on the other hand, held that, realistically speaking, a nuclear surprise attack is extraordinarily difficult to unleash. The attacker would have to fire large numbers of missiles virtually simultaneously – a technically (and one would presume politically) difficult proposition – or else the adversary would be warned. Besides, intelligence on the exact locations of targets (including mobile targets such as bomber aircraft) would have to be extraordinarily detailed and precise. Also, the attacker would have to assume that the adversary would receive no intelligence warning whatsoever of an impending attack. All of this makes serious contemplation of a surprise attack very unlikely.

Third, Wohlstetter held that an attacker who struck first would have the advantage, which meant that the defender, in order to deter effectively, would have to (a) absorb the strike and have enough forces to retaliate; and (b) ensure that surviving retaliatory forces would be sufficiently strong to cause the desired damage by means of a successful second strike. The clear inference was that

relative quantities and quality matter a great deal: the nuclear balance is important in ensuring that one has sufficient survivable weapons. In response, Blackett asserted that, even if a first strike was 90% successful, the defender could still retaliate effectively and cause millions of deaths. Given that the number of deaths required to deter is not huge and that the likelihood of surprise is limited, "the aggressor could hardly be considered sane if it made such an aggression." (Blackett, 1961)

The overarching argument put forward by Blackett was that the choices before an aggressor state are stark: only if it is fully confident that there will be no retaliation can it take the risk of striking first – and no one can be that certain. Thus, deterrence rests ultimately not on the defender's certainty of hitting back after absorbing a first strike, but on the aggressor's *uncertainty of being able to avoid retaliation*. It follows that elaborate calculations about the distribution of forces are superfluous. Even if the two sides are numerically unequal in the size and capabilities of their nuclear arsenals, a "stronger" power cannot risk the possibility of retaliation by a "weaker" one because it

cannot know in advance the level of retaliation that it may have to face. In short, most arguments about assured second strike capability are not in tune with the reality faced by policy makers.

II NUCLEAR HISTORY: WHY BLACKETT WAS RIGHT

Blackett's argument and his dismissal of Wohlstetter's conception of the requirements of nuclear deterrence were deductive (as indeed were Wohlstetter's ideas). Today, we have the benefit of more than six decades of historical experience from which we can draw evidence as to the correctness of his views. True, it is hard to prove successful cases of deterrence. If it works, it will do so by a state *not* committing an act and the only real proof would come from a decision maker who admits to having been deterred – an admission that few political leaders are likely to make. Nevertheless, evidence by inference is available from instances when nuclear-armed states have been drawn into confrontations. The key question is: does the

Nuclear Pair in Confrontation (“Stronger” country named first in 6 cases)	“Stronger” Country's Warheads	“Weaker” Country's Warheads	Percentage of “Weaker” to “Stronger” Country's Warheads
US v USSR: Berlin Crisis, 1961	22,229	2,492	11.21
US v USSR: Cuban Missile Crisis, 1962	25,540	3,346	13.10
US v China: mid-1960s (data for 1969)	27,552	50	0.18
USSR v China, 1969	10,671	50	0.47
India v Pakistan, 1999	8	8	100.0
Pakistan v India, 2001-02	26	23	88.4
US v North Korea, 2006	7,853 ^a	8	0.10

Source: Robert S. Norris and Hans M. Kristensen, "Global Nuclear Inventories, 1945-2013," *Bulletin of the Atomic Scientists*, 69, 5 (2013), pp. 75-81, at p. 78, Figure 2.

^a US figures exclude warheads that were stored but intact.

distribution of nuclear forces matter in determining the outcomes of such confrontations? A historical review shows that it does not.

Power Distribution and Crisis Outcomes

Major face-offs involving threats of war and occasionally actual fighting have occurred between five pairs of nuclear powers on seven occasions:

United States v Soviet Union: the Berlin Crisis (1961) and the Cuban Missile Crisis (1962);

United States v China: intermittent clashes during the Vietnam War (mid-1960s);

Soviet Union v China: border conflict (1969);

India v Pakistan: the Kargil conflict (1999) and Operation *Parakram* (=Victory; 2001-02);

United States v North Korea: nuclear threats and expectation of a US first strike (2006).

As the previous Table shows, in only one of these relationships (India v Pakistan) was there a fairly equal distribution of nuclear capabilities. The others all involved a skewed distribution of forces that, in conventional terms, would have favoured the “stronger” side. In practice, none of these episodes resulted in a “win” for either side. All of them provide evidence that policy makers sought primarily to avoid war regardless of the distribution of power, which was in the majority of cases highly unequal.

The evidence is compelling: the distribution of forces has no bearing on crisis outcomes. In only two of the cases – both involving India and Pakistan – were capabilities (in terms of warhead numbers) balanced. In the rest, the distribution was skewed. Yet, in every case, the outcome was not favourable for the “stronger” side. Some claims have been made that the US “won” the 1962 confrontation over Cuba, but these overlook the willingness of the Kennedy Administration to provide a *quid pro quo* and agree to withdraw missiles from Turkey in exchange for the removal of Soviet missiles from Cuba.

In the Berlin Crisis, President Kennedy actually discussed the possibility of war, including the feasibility of a nuclear first strike, but drew back because there was no certainty that it could be controlled and prevented from escalating to a nuclear exchange

DECISION MAKING IN CRISES

More specific – though unsurprisingly, usually indirect – evidence comes from available information on the decision making that occurred during several of these confrontations.

In the Berlin Crisis, President Kennedy actually discussed the possibility of war, including the feasibility of a nuclear first strike, but drew back because there was no certainty that it could be controlled and prevented from escalating to a nuclear exchange (Garthoff, 1961; Kaplan, 2001). The decision was taken not to risk nuclear war in spite of the knowledge that American forces were far greater in quantity and quality than those of the Soviet Union. Kennedy also initiated direct backchannel efforts (bypassing the US and Soviet bureaucracies) to defuse the crisis and both sides agreed to withdraw. In the Cuban Missile Crisis, the same story was repeated: confrontation, force alerts, war planning, backchannel diplomacy, and compromise (Munton and Welch, 2007). Notably, the US did not respond with force when its U2 aircraft was shot down over Cuba during the heat of the crisis.

Similarly, Sino-Soviet border tension led to a series of armed clashes between March and August 1969. Soviet leaders were so furious that they discussed the possibility of using nuclear weapons (Robinson, 1981; Robinson, 2003). Minister of Defence Andrei Grechko is reported to have favoured a massive first strike, while others preferred a limited strike against Chinese nuclear targets. But in the end, notwithstanding Soviet nuclear “superiority,” Brezhnev settled for nuclear

deployment and did not go further (Chang, 1990).

With respect to US-North Korean relations, in 2006, neo-conservative supporters and even former Clinton officials pressed for a preemptive strike, but Bush, on consulting the military, found the option unacceptable. Vice President Dick Cheney warned that “if you're going to launch strikes at another nation, you'd better be prepared to not just fire one shot.” (Sanger, 2006a) As an unnamed official put it, “It sounds good... until you ask yourself the question, what good is a strike if it leaves their nuclear capability untouched?” (Sanger, 2006b)

III

CONCLUSIONS AND POLICY IMPLICATIONS

Blackett's argument was clearly right: it does not take much to deter. Apparently weak states can and do deter apparently strong ones without exception, even when the “imbalance” between them is extreme. The entire calculus that underlies the central principle of deterrence orthodoxy – that “secure second strike capability” is vital for effective deterrence – lacks empirical grounding. All deterrence is, in this sense, minimum deterrence. Even a small risk of retaliation posed to a potential aggressor suffices to deter because it poses the risk of very high-level damage within a very short

The concept of “assured/secure second strike capability” may be discarded as it is empty of meaningful content. There is no evidence whatsoever that this principle actually works. Its primary function is to encourage the open-ended expansion of nuclear arsenals, which may benefit the sectional interests of specific organisations, but not national security interests

time frame – a calculus that challenges any potential political gain arising from war. Furthermore, one cannot have confidence in relying on controlled or “tactical” uses of nuclear weapons. The risk of escalation in the fog of war means that any crossing of the nuclear threshold can very quickly result in indiscriminate mass destruction. Logically, there is no need for deterrence to rest on assured retaliation or to worry overly about the “vulnerability” of one's forces.

Indian policy makers and strategists need to rethink the intellectual foundations of nuclear deterrence. A number of critical points need to be contemplated with care.

- * Serious consideration needs to be given to a more realistic doctrine that rests on the principles outlined by Blackett and confirmed by historical experience across the board. A Study Group comprising civilian and military experts should be appointed to articulate a truly minimalist doctrine of deterrence. The construction of an optimal minimum deterrence doctrine should be based on extensive debate over the ideas of minimalists like Blackett and General K. Sundarji as well as a careful scrutiny of strategic history.
- * The concept of “assured/secure second strike capability” may be discarded as it is empty of meaningful content. There is no evidence whatsoever that this principle actually works. Its primary function is to encourage the open-ended expansion of nuclear arsenals, which may benefit the sectional interests of specific organisations, but not national security interests. One immediate result: research and development on weapons systems will have to be based on fresh criteria. Standard justifications based on

Wohlstetterian thinking will not do.

- * The term “credible” should be dropped from the nomenclature of Indian deterrence doctrine. If states with less than 1% of the forces possessed by their rivals can exercise deterrence, then “credibility” is of doubtful strategic meaning. One has only to look at one’s own perception of adversaries: do Indian decision makers worry very much about the credibility of their adversaries’ weapons? This approach logically encourages minimalist perceptions of deterrence requirements.
- * Careful consideration needs to be given to the numbers and types of weapons systems desirable for effective deterrence. Excessive augmentation of capabilities wastes resources that would be better utilised for other needs.
- * Above all, it is time for civilian officials to obtain a better understanding of the requirements of nuclear deterrence. Nuclear weapons constitute a unique kind of instrument of force, one which has obliterated the gap between political decision makers and military practitioners of war. Political responsibility requires that civilian policy makers come to grips with the complexities of the “nuclear revolution.”

The author would like to thank PR Chari for his insightful comments on an earlier draft of this brief.

REFERENCES

NB: Documents from the Archives of the Royal Society, London, are abbreviated to ARS, doc, followed by the number of the document.

Blackett, P. M. S., (1962), “The Real Road to Disarmament: the Military Background to the Geneva Talks,” *New Statesman*, 2 March: 295-9.

Nuclear weapons constitute a unique kind of instrument of force, one which has obliterated the gap between political decision makers and military practitioners of war. Political responsibility requires that civilian policy makers come to grips with the complexities of the “nuclear revolution.”

Blackett, P. M. S. (1961), “Critique of Some Contemporary Defence Thinking,” *Encounter*, April: 9-17.

Blackett, P. M. S. (1948), A Report to the Hon’ble the Defence Minister on Scientific Problem of Defence in Relation to the Needs of the Indian Armed Forces, New Delhi, 10 September, ARS, document no. PB/7/1/1/2 G4.

Chang, Gordon H. (1990), *Friends and Enemies: The United States, China and the Soviet Union, 1948-1972* (Stanford, CA: Stanford University Press).

Chari, P. R. (2014), “India’s Nuclear Doctrine: Stirrings of Change,” *Carnegie Endowment for International Peace*, Washington, DC, June 4 [Online: web] Accessed 9 July 2014, URL: <http://carnegieendowment.org/2014/06/04/india-s-nuclear-doctrine-stirrings-of-change/hcks>.

Garthoff, Raymond L. (1984), “Berlin 1961: The Record Corrected,” *Foreign Policy*, 84 (Fall), pp. 142-156.

Global Security Newswire, (2009), “Indian Scientist’s Remark Kicks Off Debate over Nuclear Test Agenda,” [Online: web] Accessed 22 June 2014, URL: <http://www.nti.org/gsn/article/indian-scientists-remark-kicks-off-debate-over-nuclear-test-agenda/>.

Howard, Michael (1991) “P. M. S. Blackett,” in John Baylis and John Garnett, eds. *Makers of Nuclear Strategy* (London: Pinter).

Howard, Michael (1985), “Blackett and the Origins of Nuclear Strategy,” *The Blackett Memorial Lecture 1984*, *Journal of the Operational Research Society*, 36 (2): 89-95.

Joshi, Manoj (2014), "Updating India's Nuclear Posture," Observer Research Foundation, New Delhi [Online: web] Accessed 11 April 2014, URL: <http://orfonline.org/cms/sites/orfonline/modules/amalysis/AnalysisDetail.htm?cmaid=65296&mmacmaid=65297>.

Kaplan, Fred (2001), "JFK's First Strike Plan," Atlantic Monthly (October): 81-86.

Karunakaran, C. K., (1960), "Atoms and Man," Sainik Samachar, 17 July, ARS doc. no. PB/8/27/ H53-56.

Koithara, Verghese (2012), *Managing India's Nuclear Forces* (Washington, DC: Brookings Institution Press).

Letter (1948) from Nehru to Blackett, 26 September, Archives of the Royal Society, London, doc. no. PB/7/1/1/2 G5.

Letter (1957) from Nehru to Blackett, 23 January, ARS doc. no. PB/8/27 H53-56.

Menon, Raja (2014), "A Mismatch of Nuclear Doctrines," Hindu, 22 January [Online: web] Accessed 22 January 2014, URL: <http://www.thehindu.com/opinion/op-ed/a-mismatch-of-nuclear-doctrines/article5602609.ece>

Munton, Don and David A. Welch (2007), *The Cuban Missile Crisis: A Concise History* (Oxford: Oxford University Press, 2007).

O'Donnell, Frank and Harsh V. Pant (2014), "Evolution of India's Agni-V Missile: Bureaucratic Politics and Nuclear Ambiguity," Asian Survey, 54 (3): 584-610.

Prakash, Arun (2014), *India's Nuclear Deterrent: The More Things Change...*, Policy Report, March, S. Rajaratnam School of International Studies, Nanyang Technological University, Singapore, [Online: web] Accessed 22 June 2014, URL: http://www.rsis.edu.sg/publications/policy_report/Policy%20Report%20-%202014-04-24%20-%20India%27s%20Nuclear%20Deterrent_WEB.pdf.

Prakash, Arun (2012), "9 Minutes to Midnight," Force, July 12: 4, 6, 8.

Rajaraman, R (2014), "Minimum Deterrent and Large Arsenal," Hindu, July 2 [Online: web] Accessed 9 July 2014, URL: <http://www.thehindu.com/opinion/op-ed/minimum-deterrent-and-large-arsenal/article6167350.ece>.

www.thehindu.com/opinion/op-ed/minimum-deterrent-and-large-arsenal/article6167350.ece.

Review (1949; untitled) *The Thought*, Delhi, 16-4-49, ARS doc. no. PB/12/3/7 4a.

Robinson, Thomas (2003), "The Sino-Soviet Border Conflict of 1969: New Evidence Three Decades Later," in Mark A. Ryan, David Michael Finkelstein, and Michael A. McDevitt, eds., *Chinese Warfighting: The PLA Experience since 1949* (Armonk, NY: M. E. Sharpe).

Robinson, Thomas (1981), "The Sino-Soviet Border Conflict," in Stephen S. Kaplan, ed., *Diplomacy and Power: Soviet Armed Forces As A Political Instrument* (Washington, DC: Brookings Institution, 1981).

Sanger, David E. (2006a), "Don't Shoot. We're Not Ready," *New York Times*, August 3.

Sanger, David E. (2006b), "Bush's Vision Collides with Post-Iraq Realities," *New York Times*, July 10.

Saran, Shyam (2013), "Is India's Nuclear Deterrent Credible?" *Indian Review of Global Affairs*, 25 April, [Online: web] Accessed 22 June 2014, URL: <http://www.irgamag.com/component/k2/item/2400-is-india-%E2%80%99s-nuclear-deterrent-credible>

Saran, Shyam and Sheel Kant Sharma (2013), "Deterrence Is Not A Fantasy," 3 October, *Indian Express*, [Online: web] Accessed 22 June 2014, URL: <http://archive.indianexpress.com/news/deterrence-is-not-a-fantasy/1177440/>.

Speech (1975) by M. G. K. Menon, Memorial Meeting for Lord Blackett at the Royal Society on 31 October 1974, Notes and Records of the Royal Society of London, March 1975, ARS doc. no. PB/1/10A.

