1   THE RISE AND FALL OF DETERRENCE

Origins

Manipulating another's behaviour through threats is a natural phenomenon. The fittest often survive through persuading potential predators that they are too fast to be caught, that they will fight back if they are, and that even if they can be overwhelmed, they are inedible. Some of these forms of natural deterrence can be quite subtle, and even rely on confusing opponents. The owl eyes on the wings of the Caligo butterfly serve to persuade birds to keep their distance. Monarch butterflies have to make some sacrifices to sustain deterrence because bluejays only learn not to eat them after their first attempt makes them sick. When one jumping spider approaches another, leg-waving behaviour is used to mark out territory. There is a fly that has acquired wing markings that resemble the legs of the jumping spider, and an ability to create the impression of leg-waving sufficient to persuade a potentially predatory spider that it is in the presence of another so that it backs away.[1] These examples indicate that deterrence can be instinctive and still be based on bluff, but for the purposes of this book deterrence is concerned with deliberate attempts to manipulate the behaviour of others through conditional threats.

The first such attempt, if the Bible is taken literally, followed the creation. The first words used, spoken by God to man, contain a deterrent threat. To his opening promise – 'you may eat from any fruit in the garden' – was added a critical exception. If you eat the fruit of the 'Tree of Conscience', God warned Adam, 'you will be doomed to die'. This first deterrent threat was followed by the first deterrence failure, as Eve tasted the forbidden fruit and persuaded Adam to do the same, and then by an example of lax enforcement, as the pair were banished from Eden but allowed a much delayed death. The rest of the Bible is concerned with God's attempt to regain authority over the beings he had created. Clerics have for centuries used the promise of heaven and the threat of hell to remind believers of the need to conduct their earthly lives with a view to how they might be rewarded or punished for eternity in the next.

The idea that demonstrations of military strength might lead adversaries to restrain themselves was reflected in the Roman motto of *Si vis pacem, para bellum* (if you wish for peace, prepare for war). This has always been the standard argument for maintaining a war-like appearance even while denying war-like intentions. Yet the word 'deterrence', at least in its origins, goes beyond encouraging prudent calculations in others. Its etymology starts with the Latin *deterre* – to frighten from or away. English usage developed reasonably consistently in references, from the caution that results from an appreciation of possible hazards in almost any setting to attempts to induce caution by threats of pain. There is thus an instrumental sense to the concept: to scare off another with a purpose. Can the act of scaring another be dispassionate and cold-blooded? This is what strategic deterrence appears to require.

The confidence that another's calculations might be readily manipulated to prevent them doing harm looms large in the thinking of the utilitarian philosopher Jeremy Bentham, whose ideas developed during the late eighteenth century. He attacked the notion that punishments should be ad hoc, arguing instead that a deterrent effect could be

developed if there was both a degree of clarity and predictability in sentencing along with proportionality between the crime and the punishment. As a utilitarian he supposed that criminals, along with everybody else, were rational and self-interested, and could calculate when the costs of punishment would outweigh the potential benefits of crime.

Bentham used a term that was common at the time, but which has now passed out of use: determent. This is defined by the *Oxford English Dictionary* as being 'The action or fact of deterring, a means of deterring; a deterring circumstance'. According to Bentham:

> In so far as by the act of punishment exercised on the delinquent, other persons at large are considered as deterred from the commission of acts of the like obnoxious description, and the act of punishment is in consequence considered as endued with the quality of DETERMENT. It is by the impression made on the will of those persons, an impression made in this case not by the act itself, but by the idea of it, accompanied with the eventual expectation of a similar EVIL, as about to be eventually produced in their own instances, that the ultimately intentional result is considered as produced: and in this case it is also said to be produced by the EXAMPLE, or by the force of EXAMPLE.[2]

Determent remains a potentially useful word for it describes a situation in which what was intended has been achieved. Over time, however, it has been replaced by the word that describes the strategy intended to produce the effect: deterrence. By the end of the nineteenth century the term 'deterrence' was being used to refer to the policy of influencing the behaviour of potential wrongdoers through the prospect of punishment.

The criminological model is often employed, not only in terms of needing to prevent aggressive actions outside of international law, but also in terms of a direct analogy with the domestic system of criminal justice. In the first authoritative presentation of the doctrine of deterrence by the US Government in 1954, Secretary of State John Foster Dulles,

a lawyer who was inclined to see all aspects of foreign policy as branches of criminal law, set out the analogy:

> We keep locks on our doors; but we do not have an armed guard in every home. We rely principally on a community security system so well equipped to punish any who break in and steal that, in fact, would-be-aggressors are generally deterred. That is the way of getting maximum protection at bearable cost.[3]

The analogy was of dubious relevance. The obvious difference between security in the domestic and international spheres is that the international lacks a supreme authority able to make and enforce laws, backed by a monopoly of legitimate violence. More seriously, by this time, with the Soviet Union having tested its own nuclear weapons, a policy of deterrence through punishment was always going to be problematic. The likely offenders would have formidable and equivalent means of counter-punishment. Despite these problems, utilitarianism infuses the analysis of deterrence in strategic studies.

Celebration

Contemporary strategic usage is normally traced back to the early airpower theorists of the 1920s and 1930s who wondered whether the only way to prevent air raids on a massive scale was to demonstrate a capacity to retaliate in kind. The gloomy assumption as put by a British Prime Minister, was that the 'bomber will always get through', unstoppable by any defensive measures, causing immense damage to physical infrastructure and public morale when they did so. This encouraged the view that only the prospect of retaliation in kind – an eye for an eye – could act as any sort of restraint. Although the experience of the Second World War revealed a more complex relationship between offence and defence than the theorists had anticipated, in the post-war world this

original formulation seemed to be more pertinent than ever. This was because of nuclear weapons. The more it became evident that there was no way to fight a nuclear war without a high risk of utter catastrophe the more discretion began to triumph over valour, and the more compelling became schemes for avoiding war as a means of deciding disputes, even if the differences were thereby left unresolved. As a result, for four decades deterrence dominated debate about grand strategy on both sides of the Iron Curtain, acquiring all the trappings of an orthodoxy.

The first hypothetical thoughts in Britain and the USA about atomic bombs were framed in deterrent terms, as a necessary counter to a prospective German bomb. The sudden and spectacular introduction of the weapons in August 1945 pushed to the fore the idea that future wars might be prevented through the prospect of the intense destruction made possible by the processes of nuclear fission. At the same time there was no great confidence in this. There had, after all, been two world wars in the course of thirty years, and the experience of the first had been thought to be sufficiently bad to serve as a persuasive argument against a second. The gloomy logic was that the arrival of nuclear weapons simply meant that the next world war would finish off the destructive job the previous two had not quite completed. The early official view, and one shared by the general public and the bulk of those scientists responsible for the bomb's creation, was that the only safe course was to prohibit the future use of nuclear power for military purposes.

The failure of disarmament efforts against the backdrop of the developing cold war obliged governments to consider the implications of living with the bomb in a conflictual world. Support for the view that the prospect was not necessarily as dire as had been at first assumed was found in a group around Bernard Brodie, who had made his name as a naval strategist. They argued that here was a power terrible enough to give even the most reckless and aggressive pause for thought. 'Thus far', Brodie observed in 1946, 'the chief purpose of our military establishment has been to win wars.

From now on its chief purpose must be to avert them.'[4] Interestingly, Brodie used the old-fashioned word 'determent' in his edited book, *The Absolute Weapon*, rather than deterrence. While contemporary deterrence theory is traced back to this book, its actual impact at the time was modest. The idea really took root during the early 1950s as the weapons themselves became more plentiful and moved to even more awesome levels of destructive power with the invention of thermonuclear (fusion/hydrogen) weapons, each capable of turning whole cities into rubble. Initially, the USA enjoyed an impressive superiority in nuclear capabilities. At this stage deterrence displayed, at least for the short term, a rough and ready credibility. What is striking is how deterrence policy lasted beyond the short term, and in particular survived the development of Soviet long-range missiles and bombers able to reach the continental United States, which, it had been assumed, would remove its credibility.

To understand its durability a number of important presentational features can be noted. First, deterrence sounded robust without being reckless. Forces were not being used to compel a change in the status quo but only to contain an enemy. As the cold war began to grip international affairs during the late 1940s, the doctrine of containment was first adumbrated, committing the United States to work to prevent further westward expansion by the Soviet Union into Europe. Given the balance of power, neither the rollback nor the appeasement of communism was acceptable. Containment assumed that communism was naturally expansionist and so could only be held through the threat of force and, if necessary, the realization of this threat at those points where it looked as if it might break out of its limits. It seemed to be the only option – and containment as an objective lent itself to deterrence as a method. Deterrence anticipated aggression, and therefore guarded against being caught by surprise, but it could still be presented as essentially reactive.

Second, it was hard to think of a better way to make sense of a nuclear inventory. As Henry Kissinger later observed:

'The nuclear age turned strategy into deterrence, and deterrence into an esoteric intellectual exercise.'[5] Nuclear weapons appeared to be the means by which the costs could be raised high enough to persuade Moscow not to think about aggression without too much exertion on behalf of the allies. The United States did not develop nuclear weapons in order to deter – but rather in order to win the Second World War and then to exploit the strategic advantage gained though the investment. So long as the USA had superiority, the power of these weapons seemed sufficient to stop any aggressor in its tracks. Once the Soviet Union also acquired a nuclear arsenal, then the advantage was lost, but by this time the political situation had stabilized. If a war had been unavoidable, there would have been every reason to find military alternatives to nuclear weapons. The main threat to this standoff was presumed to be one side stealing a march on the other through some development in weapons technology, or else the clever manipulation of the standoff at the higher levels of escalation by taking risks at the lower levels.

During the 1950s Western governments encouraged the view that they were really prepared to contemplate nuclear war in the battle against totalitarian communism, and discouraged too much speculation as to whether this was little more than bluff. They talked up their own recklessness, as evidenced by another of John Foster Dulles's comments, about the need to be ready 'to go to the brink' during a crisis. In fact, by this time they already supposed that Moscow was unlikely to risk total war and was settling down for the 'long haul' of ideological competition and indirect subversion. Neither side seemed likely to push too hard if the result was almost bound to be mutual suicide. So long as the strategy was deterrence, then nuclear weapons seemed appropriate. Actual nuclear use would be a catastrophe, offending strategic logic as well as ethical principles. But the faint possibility of use, precisely because it would be so catastrophic, left a formidable imprint. Throughout the cold war the nuclear overhang reinforced a sense that the main benefit of force

lay in what was held in reserve. The military capacity of the West was never to be used to its full extent. The mind-set was one in which it had become too dangerous to prepare to crush enemies with overwhelming force. Military moves should be designed to create a superior bargaining position. So by the 1970s, with all considerations of force in the West, and not just with nuclear weapons, there was 'a predominance of the latent over the manifest, of the oblique over the direct, of the limited over the general'.[6]

The pertinence of this thought bothered strategists throughout the cold war – yet deterrence seemed to work, maybe better in practice than in theory. This was its third presentational feature. The prospect of nuclear war evidently encouraged a welcome caution all round. War was avoided because politicians made the effort to do so, aware of the consequences of failure. If, as it seemed, there was no way of getting out of the nuclear age, then deterrence made the best of a bad job. While it was often difficult to explain exactly how deterrence had worked its magic, and historians could point to some terrifying moments when catastrophe was only just round the corner, the third world war did not happen, and the fact that the superpowers were scared of the prospect of such a war surely had something to do with its failure to materialize. Total war was avoided, if not all war, and this success benefited not only the United States but also its allies, its potential enemies and the world in general.

Exactly where credit should be given for the 'long peace'[7] remains a matter for debate. Michael Howard judged that it was 'beyond doubt that we effectively deterred the Soviet Union from using military force to achieve its political objectives', adding that 'we have become rather expert at deterrence'. At least one eminent political scientist questioned whether nuclear weapons had played any part at all; few cold war historians were prepared to go so far.[8] Given the undoubted existence of deep antagonism between East and West, it seemed grudging not to attribute at least some of the credit for avoiding yet another total war to the dread of

global conflagration involving nuclear exchanges and to the policies adopted, at times by both sides, to reinforce this dread by means of deliberate deterrence.

The fourth presentational advantage enjoyed by deterrence was a reflection of institutional inertia. The durability of the cold war, and in particular the ideological divide at its heart, ensured that there was a relatively tight framework within which all questions of foreign policy and force planning were viewed. This was embedded in the major security organizations, confirmed by every NATO communiqué, Pentagon report and foreign minister's speech, and inculcated into generations of officers, diplomats and politicians, so that it became almost beyond reflection. As every increase in, or recasting of, defence provision and peacetime posturing could be rationalized as being designed to persuade others not to start a war, there was little undertaken that could not be described as deterrence.

Overstretch

Within this framework, deterrence became a matter of any possible contributions to the preservation of the status quo. It was seen to be so benign in its effects that its supporters became ever more ambitious on its behalf. What was to be deterred? The answer moved from strategic war to minor provocations; from specific hostile acts to all hostile acts; from hostile acts directed against oneself to those directed against allies, and even the enemy's enemies; from hostile acts that had yet to materialize to those already set in motion. How were these to be deterred? The answer moved from threats of overwhelming force to a prospect of mutual destruction; from disproportionate to proportionate retaliation; from setting definite obstacles to aggression to warnings that should aggression occur the consequences could be beyond calculation. Because it covered allies, deterrence was, from the start, 'extended'; because it covered potential enemies it was 'mutual'. Deterrent threats had been

employed at times of crisis, when they had become 'immediate', and then had a lingering impact of a 'general' nature. They had been designed to persuade the enemy through 'denial' that gains would be hard to come by, and through 'punishment' that whatever gains might be obtained would soon be outweighed through the imposition of intolerable pain.

Too little deterrence courted disaster; too much might slide into an aggressive posture, at least in the eyes of potential opponents. Attempts to define these higher and lower points, in relationship to prevailing assessments of the strategic balance, became the main business of the Western policy community for the duration of the cold war. Quite distinctive and often opposed policies could all be described as deterrent. The advocates of particular measures would explain how they conformed to this authoritative idea, whether or not this claim was a true reflection of its inspiration or had any validity at all.

Once deterrence became doctrine, then it was elevated to the status of a general theory of strategic relationships, and was defended and attacked on that basis. The institutionalization and inertia, and the lack of major war, gradually removed the sense of the dynamic interaction between the political context and the instruments of power that is at the heart of strategy. This dynamic was only experienced spasmodically and at the margins of the cold war. Deterrence might have begun after the Second World War as a particular means of persuading the Soviet Union not to start a third, and could be considered as a type of strategic move that might fit a variety of scenarios, but it eventually expanded to take in the range of policies for managing the military dimension of the cold war. These policies were at times self-contradictory and confused. They had simultaneously to scare another superpower into acting cautiously while at the same time rendering the superpower relationship less scary and more reassuring.

The initial, rather simple formulation became complicated by two developments. First, the circumstances which might

lead to an East–West clash took on increasing complexity, so the problem came to be posed in terms of managing crises rather than simply blocking aggression. Second, the Soviet Union acquired its own nuclear weapons, so the issue of when and how to initiate nuclear strikes was complicated by the probability of Soviet retaliation in kind. This became more complicated still with the arrival of thermonuclear weapons, which made possible 'city-busting' by a single weapon. It could be argued that the net effect of these complications was a grand clarification of the improbability of fighting a nuclear war and emerging as a viable society at its conclusion.

Nonetheless, refinements in the weapons, including munitions designed for battlefield use and missiles delivering warheads of ever longer range and improved accuracy, encouraged the belief that this improbability could be turned into a possibility. Strategists began to work out ever fancier forms of targeting designed to disarm an opponent before retaliation was possible or at least to knock him sufficiently off balance so that an advantageous diplomatic settlement might be reached. The scenarios they devised often managed to combine the most sophisticated technical analysis with the crudest psychological and political presumptions, so their influence on actual policy-making is still hard to discern.

In the 1960s the role of nuclear weapons in securing superpower restraint came to be recognized as 'mutual assured destruction'. So long as both sides were confident that they could inflict utter hell on the other, then a wider political equilibrium would be possible. There was, however, at the heart of this concept an awkward thought, which is why its critics seized on the acronym 'MAD'. If a nuclear war meant an inevitable slide into the ultimate catastrophe, then who would be irrational enough to set it in motion? Tom Schelling answered that this could come about through 'threats that leave something to chance', daring the enemy to recover a losing position by taking even greater risks. Such a situation conducive to irrationality would be generated. This raised the question of whether such a progressive loss

of control might be set in motion by incidents that were comparatively trivial, marked by confusion rather than unremitting belligerence?[9]

So policies had to cover not only how nuclear weapons might be used in anger but also how they might be configured to send appropriately calming diplomatic messages to anxious allies, even as a steely resolve was being conveyed to adversaries. The deterrent threats might work best if there was a degree of automaticity in nuclear use, once the defined line of aggression had been crossed, yet every possible safeguard had to be in place to ensure no use when no line had been crossed, even though those in command had mistaken innocent or unrelated activities for hostile action. Automaticity had to be qualified to allow for the risk of poor control procedures combined with other technical and political mishaps. To reduce such risks, attention was given to ways by which international agreements might bring extra clarity, order and stability to the process. In short, and apart from occasional flurries, deterrence became not so much geared to the urgent avoidance of war as to the preservation of a sort of stability based on the fact that the nuclear age generated great wariness in the breasts of policy-makers.

Decline

In practice, the East–West strategic relationship in *all* its aspects carried sufficient disincentives to discourage precipitate action by either side. No political aspirations appeared to be worth total war. This strategic relationship turned out to be sufficiently robust in its essentials to survive new technologies and doctrines. With the stakes so high and the dangers so clear for all concerned, it is reasonable to suspect that nuclear deterrence was never truly tested, except perhaps in the early 1950s and early 1960s, although there was a flurry of tension and anxiety in the early 1980s. Then some senior people in the Reagan Administration talked as if they believed that a nuclear war might be lost and won,

by deliberating on forms of nuclear employment, and some senior people in the Soviet Government took this conviction seriously. The existence of a usable nuclear arsenal provided reminders of the dangers of revived antagonism, but the practical difficulties of describing how it could ever be sensibly used discouraged recklessness. McGeorge Bundy, formerly President Kennedy's national security adviser, had long been dubious about the foreign policy value of extensive nuclear arsenals and concerned that the more esoteric strategic debates lost touch with reality. In 1983 he observed that: 'As long as each side has thermonuclear weapons that *could* be used against the opponent, even after the strongest possible preemptive attack, existential deterrence is strong and it rests on uncertainty about what could happen.'[10] This introduced the proposition that deterrence flowed not so much from specific preparations for employment or doctrinal pronouncements but from an overall sense that once any superpower war began there could be no knowing what might happen. As there was sufficient chance that the outcome would be catastrophic, it was best not to take the risk of finding out. This notion proved to be extremely seductive – not only because of its intuitive plausibility, but because it solved all those perplexing problems of nuclear policy by rendering them virtually irrelevant, so long as they did not stray too far into the realms of recklessness and foolishness. Although in policy-making circles it was still extremely difficult to think of ways to assess the size and composition of nuclear arsenals except by reference to the assumed requirements of actual exchanges, as evidenced in numerous debates in Washington over new weapons systems, these debates eventually required a routine quality. The scenarios were becoming drained of credibility as the original concept lost much of its intellectual rigour, while everything was still rationalized in terms of the requirements of deterrence.

Eventually, weariness began to surround deterrence, reflecting moral unease about such dependence upon threats of mass destruction and the nagging fear that even in the

absence of any active belligerence on the part of either super-power, something could still go terribly wrong. A parallel history developed around the cold war, drawing attention to the possibility of hair-raising incidents in the event of misread messages, faulty early warning signals, pilots off course, poor communications and faults in command – any one of which might have triggered an inadvertent catastrophe. Calls grew for radical disarmament, although unless this was complete it was hard to guarantee safety, or else an attempt to find technical fixes to reduce the nuclear danger, of which the most notorious was President Reagan's strategic defence initiative (SDI), based on the idea that it was better to 'protect than avenge'. Reagan was the first US President who did not really believe in deterrence, and became a not-so-closet nuclear abolitionist.

It is possible to chart the shifting attitudes towards deterrence by examining the three great debates in the United States on ballistic missile defence. The first great debate, over 1965–72, concluding with the signature of the ABM (anti-ballistic missile) treaty, saw a system justified in terms of deterrence, and in particular one that protected the American second-strike capability. The next debate, which lasted from 1983 to 1988, was prompted by President Reagan's strategic defence initiative. Here the rationale was anti-deterrence, at least on the President's part, although the project gained some support from those who believed that with a more modest objective it could serve deterrence. The Russians feared that it would support a first-strike capability but also, and more realistically, that by one way or another the US military would benefit from the stimulus given to new technologies. It was not the anti-deterrence rationale that undermined the project but its confused and futuristic quality, especially when it came to demonstrating what the system would actually protect. It required an enemy sufficiently threatening to warrant the effort but not so substantial as to overwhelm the proposed system, or clever enough to circumvent it. As such an enemy could not be guaranteed, the non-deterrence anti-offensive weapon rationale led

naturally, including in Reagan's mind, to a case for abolishing all offensive weapons. If the aim was to protect rather than avenge, the disarmament solution made more sense than a hardware solution.

In the post-cold war world the demands might have seemed to be even less severe, perhaps even to the point of insignificance. Certainly, if deterrence was about nuclear weapons, then it was hard to see any conflicts around in which any interests, at least Western interests, would be sufficiently at stake to warrant issuing nuclear threats. Even with potential nuclear threats from relatively weak states that have yet even to demonstrate the requisite capability, there is strikingly low expectation that they can be dealt with through deterrence. This was evident in proposals for a national missile defence (NMD) system that gained prominence in the late 1990s. This had a much more modest objective than previous defensive systems, with neither Russia nor China as the focus, but other hostile states that were unable to take on the United States and its allies in regular battle and that were seeking their own minimalist form of nuclear deterrence. NMD was posed as a challenge to the growing dependence of weaker states on nuclear deterrence as a counter to the overwhelming conventional strength of the West. Without any suggestion that it might sustain Western deterrent strategies, NMD betrayed a lack of confidence in deterrence, specifically that in the face of clear threats (indeed complete elimination should they dare to mount some attack on the United States) certain states could be relied upon to act rationally. It also represented a challenge to the deterrent policies of others. If an interest in nuclear weapons of weak but 'rogue' states such as North Korea could be attributed to their lack of alternative means of persuading the United States to leave them alone, then a national missile defence system, if effective, could undermine their attempts at deterrence. This was to some extent how China, minded of its dispute with Taiwan, viewed the American programme, and it would be wrong to say that this was wholly absent in the Bush Administration's thinking,

whatever was said officially. Russia, with its larger arsenal, could be more relaxed about NMD. Nonetheless, with their conventional forces in steep decline and the intentions of the West suspect, Russian generals concluded that they were bound to rely on nuclear deterrence.

Three Waves

It was therefore circumstances – there was nothing much that needed deterring – rather than questionable theory that was responsible for the eventual American shift away from a deterrence posture. Even so, the sustained intellectual critique left its mark and deterrence theory found itself in a damaged state.

As the cold war drew to a close, the essence of deterrence had become fuzzy, its boundaries increasingly elastic and the demands being placed on it expansive. The awkward doubts that had been articulated almost as soon as it was adopted as the official orthodoxy were no closer to being satisfied. Could deterrence be durable in either its extended or its mutual forms or be reliable in a crisis? Would it be eroded over the long haul? Could threats of denial be afforded? Could threats to punish in the face of equivalent threats of counter-punishment ever be credible? Theoretically, these doubts always appeared formidable, and so they stimulated considerable anxiety in policy-making circles, and restlessness in academic circles.

In the late 1970s, Robert Jervis identified 'three waves' of deterrence thinking in the USA. The first wave 'came and went in the early years of the nuclear era', including the pre-liminary writings of Bernard Brodie. Eventually, the over-bearing presence of nuclear weapons reinforced the view that total war could now only be threatened but never fought. This left behind the obvious thought that if nuclear war could not be fought, how could it be threatened? These thoughts were only explored in any depth, leading to the theoretical elaboration of the concept, following its adoption

as the default strategy of the United States for the conduct of the cold war. Jervis called this the second wave, and it 'crested in the late 1950s'. The theory was developed through reflection on the twists and turns of East–West relations and, in particular, the impact of nuclear weapons and the gradual erosion of American superiority. Precisely because they were dealing with nuclear strategy, there was no basis for an inductive theory. 'Second-wave' theory was geared to operating within a reasonably stable bipolar relationship (though it did not necessarily feel so stable at the time) within which deterrence seemed to be a natural approach. By the time it entered its most creative phase, the critical commitments had been made and the essentials of a nuclear deterrence posture had been established. There seemed to be little point to theorizing about how a strategic relationship of this sort might come to be established in the first place when the core problematic was that it existed and somehow had to be survived. Theorizing was taken to a high level of abstraction, but no attempt was made to verify its central propositions until the 'third wave' began in the 1970s.[11]

By this time, the 'rational actor' model of decision-making, upon which deterrence appeared to depend, was under challenge in the academic community. There were all sorts of reasons to doubt the inevitable rationality of governments, let alone the extent to which they might usefully be viewed in a unitary form. Rationality was susceptible, in the new, vogue terminology, to 'groupthink', 'bureaucratic politics' and 'misperception'.[12] The more the literature of social psychology was examined, looking at threats from the perspective of the target, the less confidence there could be: 'Accumulating empirical evidence from laboratory experimentation suggests that decisionmakers systematically violate the strict behavioral expectations of rationality.'[13]

Academics, anxious to cut deterrence down to size, argued instead for a foreign policy based less on military threats and more on positive inducements and nuanced diplomacy, especially as the core East–West antagonism shrank in importance

and the interests at stake in particular crises appeared to be more secondary than vital. In the first substantial 'third-wave' critique, based on case studies, Alexander George and Richard Smoke claimed that deterrence had led to an exaggerated role for the military dimension in US foreign policy and had discouraged attempts to transcend the cold war.[14] As the cold war concluded, Richard Ned Lebow and Janice Gross Stein summed up this line of thought, explaining how the United States had 'overdosed' on deterrence: distorting strategy by encouraging an exaggerated view of the importance of demonstrating 'resolve' in the face of challenges that would otherwise be recognized as minor; participating in an arms race; and aggravating and sustaining the degree of antagonism in the political relationship with the Soviet Union.[15]

So long as the focus was on deterring the Soviet Union and its allies, the analytical concerns could be dismissed as academic quibbles. It might not be known for certain that Moscow was being deterred, but this was not an area where many were inclined to take risks. Those who worried that measures taken in the name of deterrence could appear provocative occasionally got a hearing, but during the course of the cold war direct forms of communication between East and West offered means of providing reassurance that intentions were honourable and also helped reinforce the strategy by clarifying the areas where vital interests were at stake. With hindsight it is possible to identify moments when the reassuring messages were not getting through and relations were reaching a dangerous state. At the time, each side felt that its military posture was perfectly reasonable and not at all provocative.

The end of the cold war appeared to bring the debate on deterrence to a juddering halt. By the start of the 1990s the communists had lost their states, not to NATO aggression but to communism's own internal contradictions. The United States was left as the sole superpower. It no longer needed to fear challenges from the conventional military power of others. In the decade after the Soviet fall, liberal capitalism

produced regular and impressive levels of economic growth, thereby apparently confirming the West's ideological superiority. Nuclear weapons would not play a central role in Western strategy: requirements could largely be met by conventional systems, so there was no need to rationalize their use. Deterrence was no longer needed. Even in East Asia, where communist parties retained their governing position, if not their ideological purity, international relations calmed down. New threats could be discerned. Here the problem was not so much would-be great powers challenging the status quo but, rather, a variety of delinquent states and shadowy terrorist groups, animated by vicious ideologies and deep hatreds. Clearly, classical deterrence was not going to work with such groups but that did not mean that the concepts could not be updated to cope with the new situation.[16]

When out of this tumult came a terrifying attack which caught the United States by surprise, President George W. Bush concluded that security threats such as these might not be deterrable at all. In a landmark speech of June 2002, he explained to the graduates of the US Military Academy, West Point, that they would fight the developing war on terror. They would confront an enemy that, unlike those of the past, lacked 'great armies and great industrial capabilities', but could get access to the most dangerous technologies. They might be 'weak states and small groups' intending to blackmail or harm the United States and its friends. The problem, according to Bush, was that such enemies could be beyond deterrence or containment because they have no 'nation or citizens to defend'. As the Administration concluded that pre-emption was a better way of dealing with such threats, many of those who had criticized deterrence before began to see merit in an approach that at least did not involve an early resort to war. The arguments of the critics were appropriated to help make the case not for more conciliatory policies, but for more robust ones. Charles Krauthammer chided the left for their conversion to a doctrine that they once deplored. He referred to 'deterrence nostalgics' who forgot their own earlier arguments about how close to the brink of

Armageddon the world had on occasion come during the cold war, or about the debilitating psychological effects of living under the nuclear cloud.[17]

Like all fallen kings, once toppled from its throne, deterrence appeared to be rather ordinary and dull. A good indication of its inherent dullness was the lack of movies made that showed deterrence at work. A number had been made about nuclear war (*Dr Strangelove*, *Fail-safe*, *War Games*). These normally revolved around the failure or near-failure of deterrence for reasons which appear to have little to do with international politics but rather with crazed leaders or with defects in systems designed to protect against unauthorized missile launches. One exception might be the quasi-documentary, *Thirteen Days*, dealing with the October 1962 Cuban missile crisis, which portrays the military as itching for war and applauds the cool politicians and diplomats for their appropriate combination of restraint and resolve. The only film entitled *Deterrence*, directed by Rod Lurie and released by Paramount to poor reviews in 1998, was also about a failure of deterrence, in this case another Iraqi invasion of Kuwait in 2007. It concludes with simultaneous nuclear exchanges which leave Baghdad vaporized and US cities surviving after weapons hit them but fortunately fail to detonate.

A doctrine that is so associated with continuity and the status quo, which occupies a middle ground between appeasement and aggression, celebrates caution above all else, and for that property alone is beloved by officials and diplomats, was never likely to inspire a popular following. Campaigners might march behind banners demanding peace and disarmament, the media might get excited by talk of war and conflict, but successful deterrence, marked by nothing much happening, is unlikely to get the pulse racing. It has no natural political constituency. As theory and practice, its best years appeared to be past, summed up by Colin Cray's reference to a condition of semi-retirement.[18] Does that mean it can be written off as a strategy of historical interest but no contemporary application?