This chapter focuses on the Cold War and the military, political, technological and strategic aspects of the superpower rivalry as theorised by the Strategic Studies core of ISS. The central theme of that story is how nuclear weapons influenced, and were influenced by, the rivalry between the US and the Soviet Union.

The distinct field of study we are calling ISS did not crystallise out until the mid-to-late 1940s, and neither the field nor the concept of security were fully formed and accepted from day one. What emerged in the US, and to a lesser extent Europe, during the 1940s and 1950s was a category of work at the intersection of military expertise and university based social science, aimed at addressing the policy problems arising from nuclear weapons and the broad-spectrum challenge posed to the West by the Soviet Union. These problems were seen as urgent. Because of their crucial contributions during the Second World War, civilian experts, mainly physicists and social scientists, could now specialise in military issues under the heading of security, which unlike ‘war’ or ‘defence’ nicely bridged the military and non-military aspects of the subject. As well as having relevant technical expertise not possessed by the military, a large and influential civilian cohort helped to address specifically American concerns about the dangers of society becoming militarised by a long-term struggle (Lasswell, 1941, 1950; Huntington, 1957; Deudney, 1995, 2007: 161 ff.). One of the reasons why this was a uniquely American moment was that this period was when the US left behind its traditional foreign policy of political isolationism and entered into long-term struggles and commitments as the central player in the global balance of power.

This momentous transition explains why the development of ISS was encouraged by US government funding for ‘strategic’ research. Not only was permanent global strategic engagement a new game for the US in a way that it was not for other countries, but nuclear weapons opened a new game for everyone. As succinctly put by Betts (1997: 14), ‘Nuclear war
spurred theorizing because it was inherently more theoretical than empirical: none had ever occurred’. As it began to be clear that the Cold War could become a drawn-out, all-encompassing and existential struggle, the idea took hold that one needed a form of integrated understanding, where different forms of knowledge could be combined. This was a major part of the reasoning behind the US National Security Act of 1947 (in addition to closer coordination of the services plus intelligence reform). When the US moved towards institutionalising an unprecedented level of military mobilisation, this could not be done purely in terms of ‘war’ or ‘defence’ without the spectre of the garrison state (Lasswell, 1941) threatening the values of American liberalism. This is a central part of the explanation for the rise of the term ‘security’ to cover mobilisation in more inclusive and ‘civilian’ terms (Wæver 2004b, 2006), and it conditioned a particular space for civilian expertise in a military-centred universe. This nexus of peculiarly American concerns explains a lot about the origins of ISS.

The first decade after the Second World War is described by David A. Baldwin (1995: 121–122) as ‘the most creative and exciting period in the entire history of security studies’, perhaps because ‘no single research question dominated the field’, hence there was a broader consideration of non-military techniques of statecraft and of domestic affairs than later became the norm. As the Cold War went on and Security Studies went through its so-called golden age between 1955 and 1965, these conceptual discussions receded and the sub-field became almost exclusively devoted to the study of nuclear weapons and bipolar rivalry. One of the central plotlines of this chapter is how the Strategic Studies understanding of the state, dangers and insecurities became institutionalised to such an extent that the majority of Strategic Studies literature felt no need to explicitly discuss its conceptualisation of security.

This did not, however, mean that there were no debates within ISS and the four questions laid out in chapter 2 resurfaced in discussions of the rationality of states in general, and the Soviet Union in particular, and hence over the way in which security politics should be understood. There was also a recurring concern with the significance of societal cohesion, in the West as well as the Soviet Union. While there was general agreement that the latter was the enemy of the US and the so-called Free World, there were rich discussions of the interplay between technology and amity/enmity which had an impact both on how Cold War contestations of Strategic Studies were made and on post-Cold War debates on the role of the state and military technology. ISS was simultaneously productive, influential and fashionable. With its core centred around game
theory and nuclear deterrence, it had the appearance of being methodologically coherent, and because of the explicit link to public policy it was also generously funded. This ‘golden age’ was the formative period of the new sub-field, and therefore defined the position from which subsequent studies of the subject had to proceed.

The main goal of this chapter is to show in more detail how the five driving forces can explain both the initial demand for ISS, its first conceptually driven decade and its continued evolution through the golden age of Strategic Studies and into the later parts of the Cold War. The detailed story of how nuclear strategy evolved during its first four decades has been told by Freedman (1981a), and it is not our intention to repeat that effort here. Instead, we want to locate the main themes of that literature within a broad brush story of the historical background to the literature of ISS. But the Cold War period is not just interesting as history. It established the meaning of what ‘international security’ is about, and did so with sufficient depth that this still serves as the centre of gravity around which the many subsequent widening and deepening debates within ISS revolve.

Great power politics: the Cold War and bipolarity

The Cold War emerged during the mid-to-late 1940s as the new power structure created by the outcome of the Second World War settled into place. Its two big defining features came into play almost simultaneously: nuclear weapons and a rivalry between the US and the Soviet Union. This rivalry was made exceptionally intense not only because they were the big winners of the 1939–45 war, overawing all of the other erstwhile great powers, but also because they were the champions of mutually exclusive ideologies (democratic capitalism, totalitarian communism) each of which claimed to own the future of humankind. This rivalry, and the fact that the US and the Soviet Union quickly became by far the largest holders of nuclear weapons, was captured in the concepts of superpower and bipolarity. One enduring question of both the Strategic Studies and IR theory debates was whether the simple fact of bipolarity, or the existence of nuclear weapons, did more to explain the character of the Cold War (Waltz, 1964; Goldgeier and McFaul, 1992: 469, 490). Was bipolarity stable simply because a two-party, zero-sum game eliminated much of the uncertainty and possibility of miscalculation from superpower relations, as Waltz (1979) so famously maintained? Or was bipolarity intrinsically unstable, as suggested by Classical bipolarities: wars to the death between
Athens and Sparta, and Rome and Carthage? If bipolarity was unstable, then only the fear of national obliteration posed by nuclear weapons stopped it from spiralling into war.

There was some challenge to the bipolar framing from China after Mao’s break with Moscow in the late 1950s, with some thinking of China as a third power, at least in Asia, because of its willingness to challenge both superpowers (Hinton, 1975; Segal, 1982). Yet the bipolar framework held firm throughout the more than four decades of the Cold War. Japan and Western Europe were closely allied with the US and accepted its military dominance and leadership. Even when they surpassed the Soviet Union economically, both remained politically weak, and the US remained very much the dominant partner in both the North Atlantic Treaty Organization (NATO) and the bilateral alliance with Japan. With the brief exception of the ‘Japan as number 1’ flourish in the late 1980s, neither sought to, nor was thought able to, challenge bipolarity. The huge superpower military establishments and arsenals of nuclear weapons sustained it even after the economic challenge from the Soviet Union (which seemed formidable in the 1950s and 1960s) had faded into palpable backwardness and decline. This meant that right to the end of the Cold War, bipolarity stood as the general framing for nearly all strategic theorising. Whether it was about deterrence, arms racing, arms control or alliances, the underpinning assumption of Cold War Strategic Studies was bipolarity (Buzan, 1987a: 173–177). This assumption is extraordinarily prominent in deterrence theory, and goes some way to explaining the attractions of game theory, especially ‘chicken’ and ‘the prisoner’s dilemma’ (Snyder, 1971). These two games depend on two-player assumptions (without which they quickly get too complicated) and thus mirror bipolarity. Bipolarity also explains US and Soviet sensitivity to nuclear proliferation, which more than anything else could threaten their status and privileges as the only members of ‘the big two’ club.

The bipolar framing of the Cold War manifested itself in the geostrategic policy of containment. The rivalry between the US and the Soviet Union developed from the ceasefire lines of the Second World War, and quickly settled into a US attempt to ring the Soviet bloc with allies (NATO, Japan, Iran, Pakistan, South Korea, Thailand, Taiwan, etc.) to prevent further expansion of the communist world. The Soviet response was to try to breach, or jump over, these containment barriers. This strongly territorial formation explains the significance of crises in Berlin, Korea, Cuba, the Middle East and Vietnam, all of which were seen as crucial to maintaining or breaching the lines of containment. Once China emerged as a
power opposed to both the US and the Soviet Union, a secondary game of containment opened up with the Soviet Union trying to contain China by making alliances with India and Vietnam. The communist victory in China was initially seen in the West as a big victory for Moscow, but by the mid-1970s China could be seen in Washington as part of the containment of the Soviet Union.

Two of the other analytical components of great power politics laid out in chapter 3 are the patterns of amity and enmity among the great powers and their degree of involvement and interventionism. In Cold War ISS these two components were deeply intertwined in that the Soviet Union was viewed as a hostile enemy Other whose communist ideology professed the downfall of capitalist societies and the subsequent spread of communism to the whole planet. In the West, and especially in the US, a characterisation of the Soviet Union as a ruthless and implacable opponent requiring long-term containment and vigorous ideological challenge quickly became sedimented as the foundation of US policy. Part of this rivalry was the necessity to prove false the Marxist projection of capitalism as exploitative, polarising and doomed to terminal crisis. The broad-spectrum nature of the challenge from the Soviet Union was a key reason for the shift to policies based around the concept of national security (Smoke, 1975; Yergin, 1978; Neocleous, 2006a), which itself became an ongoing subject of debate in the literature (Wolfers, 1952; Buzan, 1983). Kennan’s (1947) powerful ‘X’ article was instrumental in setting this path, and his image of the Soviet Union remained deeply influential through to the end of the Cold War. Although constituting its foreign policy and intentions in radically different terms, the US shared the Soviet Union’s interventionist – and messianic – stance, in that it, too, believed in the eventual downfall of the opponent’s political and economic system and the rise of a global order based on its own model. As in communist ideology, this stance was grounded in an economic analysis combined with an unquestioned normative certainty about the virtues of one’s own societal mode of organisation.

Yet if there was general consensus that the Soviet Union was radically opposed to the West, and the US in particular, there were still crucial differences as to how Soviet Otherness and enmity was constituted. These differences grew out of more general assumptions about the state and the international system and thus also pointed to different ways in which nuclear bipolarity could be managed. The first line of discussion was over how to define Soviet intentions. Kennan famously held in this ‘X-article’ in 1947 that the Soviet leadership was inextricably tied to an ideology of
communist superiority and capitalist downfall. Hence one should take no expressions of trust and accommodation at face value but view them as tactics in the battle for long-term domination. Soviet officials were like ‘toy automobiles’ unable to break from the party line and ‘unamenable to argument or reason which comes to them from outside sources’ (Kennan, 1947: 574). Kennan’s remedy was an unwavering containment of the Soviet Union ‘at every point where they show signs of encroaching upon the interests of a peaceful and stable world’ (Kennan, 1947: 581). Others argued that the Soviet Union took a much less aggressive stance. The founding father of Neorealist theory, Waltz held, for example, that the Soviet Union had ‘assumed a posture of passive deterrence vis-à-vis her major adversary, whom she quite sensibly does not want to fight’ (Waltz, 1964: 885). Waltz came to a different view of the Soviet Union, not because he held a more amiable view of Soviet ideology and its leaders, but because in his theory, bipolarity exerted a disciplining effect on the leaders of great power states that ‘will strongly encourage them to act in ways better than their characters might otherwise lead one to expect’ (Waltz, 1964: 907).

Two further assumptions underlay Waltz’s structural analysis. First was that international polarity held a stronger explanatory power than unit-level factors like ideology or the composition of a state’s leadership. Second was the view that the Soviet Union was fundamentally a rational actor capable of understanding that managing nuclear bipolarity rather than embarking on an expansionist military policy would be in its own best interest.

In the later period of the Cold War, the debate over rationality was influenced by a growing concern with the extent to which the Soviet Union was in several important respects a different type of actor from the US, with different concerns and understandings (Kolcowicz, 1971; Ermarth, 1978; Snow, 1979; Gray, 1980; Holloway, 1980; Erickson, 1982; Hanson, 1982/3). Was the Soviet Union ruthless, expansionary and driven by revolutionary fervour, or was it essentially defensive and moved by feelings of inferiority to the West? What difference did Russian military culture and tradition make, and did the Soviets understand concepts such as deterrence in the same way as Western theorists and policymakers did? Did the Russian language, indeed, have a word for deterrence? Could the Soviets be trusted to pursue apparent joint interests in survival and accident avoidance, or was the Kremlin not to be trusted to keep agreements, and to be assumed as always seeking strategic advantage under the guise of arms control? Did they calculate ‘unacceptable damage’ in the same way as Americans did, or was the Soviet Union, and even
more so Mao’s China, a hard and ruthless player, prepared to accept huge casualties, while the US was relatively soft and easy to threaten?

Waltzian Neorealism was built on the assumption that states, including the Soviet Union, were rational actors, and other scholars such as Jervis held that Soviet military doctrine was not that dissimilar to that of American military officials, that their ‘ideas are not particularly Russian or particularly Marxist but simply those one would expect from people charged with protecting society and winning wars’ (Jervis, 1979/80: 630). The Russians understood ‘very well the potency of the American threat to destroy their society’; the difference between the two countries resided rather in the different distributions of power between civilian and military leadership (Jervis, 1979/80: 630). Others agreed with Kennan that more fundamental differences between the East and West were to be found. According to Colin S. Gray (1980: 139), there were ‘no functional Soviet equivalents to the Western theories of deterrence, limited war, and arms control, just as the key Western concepts spawned by those theories – stability, escalation control, bargaining, sufficiency/adequacy, and the rest – appear to play no identifiable role in guiding Soviet military planning’. Those who emphasised Soviet difference fell into two broad camps: there were those who, like Kennan, linked Soviet enmity to the communist ideology of its leadership, while arguing that the Russian people were inadequately represented by this ideology and would eventually topple ‘their’ leaders. Others like Gray claimed that what explained the adoption of this ideology was ‘a Russian national political character marked by cunning, brutality, and submissiveness’ and that Soviet strategic culture was thus ‘at root, Russian rather than Marxist-Leninist’ (Gray, 1980: 142). Although couched in more concrete, empirical terms, these discussions foreshadowed later ISS debates over the significance of cultural factors versus material capabilities, and of the importance of societal cohesion and ‘national identity fit’ between governors and governed.

There was no easy way of settling such questions: Western access to the Soviet Union and China was severely restricted and estimates of their intentions were thus deduced from a combination of these countries’ observed behaviour, and assumptions about ideology, national identity and structure of government. The tricky thing was that behaviour often lent itself to multiple interpretations depending on which deeper assumptions about actor rationality and the specific views of the enemy other ISS analysts held. Underneath these debates was also a more fundamental analytical difference between Neorealist explanations located at the level of the international structure where actor rationality was a basic ontological
assumption, and unit-level explanations that allowed for a greater range of ‘irrational’ behaviours where ‘rationality’ itself was contextualised and changing over time and space. Game theory, which constituted an important part of ISS – particularly since the absence of nuclear exchanges between the superpowers created an analytical space for the modelling of hypothetical encounters – can be seen as taking up a middle ground. Most games allowed for multiple (initial) forms of state rationality (cooperative, deceiving, secretive, distrustful, etc.), but also often positioned the ability of states to recognise the virtues of cooperative behaviour if games were played repeatedly, hence becoming more ‘rational’ (Jervis, 1978). As a consequence, at the core of ISS were diverging empirical as well as normative views of how the patterns of amity and enmity could evolve, leaving the dispute about them as part of what differentiated hardliners, moderates and pursuers of peace (more on this in chapter 5). One should note that ISS deterrence logic, the difference between particular approaches above notwithstanding, always entailed a fundamental ambiguity. A minimum of common understanding and rationality between the two great powers had on the one hand to be assumed for deterrence to work. If the Soviet Union was flat out unpredictable and insane it would not make much difference which strategies the West adopted and it might well be the safest thing to do to initiate a preventive attack. On the other hand, deterrence logic always retained an element of uncertainty at its core: even if the Soviets were presumably sufficiently rational not to attack out of the blue, how could one know for sure? The advent, spread and development of nuclear weaponry made the answers to these questions of the utmost importance.

The technological imperative: the nuclear revolution in military affairs

The development of Cold War Strategic Studies took place in a context in which the bipolar power political framework of the Cold War became broadly stable, but the technology surrounding nuclear weapons was highly dynamic. Nuclear weapons technology (meaning not just the warheads themselves, but also their delivery systems) underwent very rapid and dramatic development throughout the Cold War, and indeed beyond, generating an ongoing strategic imperative that lay at the heart of the problematique of ISS. Discussion of the evolutions of military technology and their strategic consequences became the principal concern of the literature (Brodie, 1976; Snow, 1979; Martin, 1980; Luttwak,
1980a; Buzan, 1987a). During these decades, nuclear weapons and many of their associated systems were in the middle stage of the classic ‘S-curve’ of technological development where improvements are rapid before the technology matures and its performances level out. To get a sense of this ‘S-curve’ think of the long and very slow development of aircraft during the nineteenth century, the extremely rapid developments in range, speed, size, altitude and reliability from the Wright brothers’ flight in 1903 to Concorde and the SR-71 in the 1970s, and the levelling out thereafter.

Explosive power multiplied many times. Accuracies of delivery shrank from several kilometres to a few metres. Unstopable ballistic missiles replaced vulnerable bombers as the principal carrier of nuclear weapons, in the process reducing potential delivery times from many hours to thirty minutes or less. The power-to-weight ratios of warheads improved hugely, meaning first that smaller rockets could carry the same payloads, and later that one rocket could carry many warheads. Smaller, lighter warheads meant that nuclear weapons could be mounted onto tactical missiles and even put into artillery shells. Missiles became not only more accurate, but more reliable, and with solid instead of liquid fuel having response times of seconds rather than hours. All of these developments enabled missiles to be sent to sea in submarines, making them very difficult to detect, and potentially shortening the warning time between launch and arrival to a few minutes. Rocket, radar and guidance technology improved to the point where it became technically possible, and in the US context politically necessary, to think about developing ABM systems. All of this was neatly summed up by Brown’s (1977: 153) observation that:

> For thousands of years before [1945] firepower had been so scarce a resource that the supreme test of generalship lay in conserving it for application at the crucial time and place. Suddenly it promised to become so abundant that it would be madness ever to release more than the tiniest fraction of the total quantity available.

By the late 1970s the superpowers had accumulated many tens of thousands of nuclear warheads, so the point about the ‘tiniest fraction’ was not merely rhetorical.

As noted above, bipolarity conditioned the whole argument about nuclear deterrence, but this general truth was moderated by the specific nature of the military balance between the US and the Soviet Union, which varied over time. Until the mid-1950s, the US had a monopoly
first of nuclear weapons, and then of long-range bombers with which to deliver them. Deterrence was easy for the US under these conditions, with the Soviets having only their conventional military superiority and nuclear threats in Europe to offer a counter-threat. The launching of Sputnik in 1957 changed all this, by demonstrating that the Soviet Union had mastered (if not yet deployed) rocket technologies that would enable them to strike the US quickly and unstoppably, and also threaten the then largely bomber-based US nuclear forces. From the late 1950s onwards, and as anticipated by the early writers on the nuclear age, the game was increasingly one of mutual nuclear deterrence with the Soviet Union moving steadily towards a general nuclear parity with the US. This process was not smooth. Large uncertainties were introduced not just by technological developments, but also by misinformation about who had deployed what: the bomber and missile ‘gaps’ of the mid and late 1950s, in which Soviet secrecy and American domestic politics combined to produce huge US overreactions to non-existent Soviet ‘leads’. During the 1950s and 1960s the basic rules and dynamics of mutual nuclear deterrence were worked out in detail (Kissinger, 1957; Wohlstetter, 1959; Kahn, 1960, 1962; Schelling, 1960), though many had been anticipated by earlier writers responding to the first arrival of nuclear weapons (Brodie, 1946, 1949; Blackett, 1948). Whether these theoretically elegant rules of the game would actually work during a real crisis was an ongoing question. Could decision-makers stay rational in a crisis (Green, 1966; Allison, 1971; Jervis, 1976)? Would the armed forces actually follow the official policy, or would their implementation of orders in effect create escalation? During the 1970s the US more or less accepted nuclear parity with the Soviet Union as the basis for arms control negotiations, though this position was rolled back during the increased tension of the so-called ‘Second Cold War’ from the late 1970s to the mid-1980s, when the Reagan administration pursued defences against ballistic missiles and other aspects of warfighting strategy as a way of reasserting US superiority.

Technological developments locked the superpowers into a fierce arms race with both quantitative (how many missiles/warheads?) and also qualitative (how accurate, how quickly delivered, how well protected against pre-emptive attacks?) dimensions (Wohlstetter, 1974). They also generated an accompanying space race, in which the two superpowers competed to be first to master orbital, then manned orbital and interplanetary probes, and finally moon-landing technologies. Arms racing not surprisingly became another staple topic in the literature (Huntington, 1958;
Gray, 1971, 1974; Bellany, 1975; Rattinger, 1976; Holлист, 1977; Russett, 1983: Levine and Carlton, 1986; Buzan, 1987a: 69–131), giving yet more weight to what seemed to be the material driving forces defining the strategic agenda. There were obvious comparisons to be made between earlier arms races, such as the famous naval rivalry between Britain and Germany before 1914, and the nuclear race between the superpowers. Both reflected the continuous pressure of rapid technological development on military options that had been a feature of international relations since the industrial revolution (Buzan, 1987a). Like earlier industrial arms races, the superpower one was driven not just by action–reaction between rivals, and more or less autonomous improvements in technology, but also by the lobbying power of arms industries and military establishments. Eisenhower’s warning about the influence of a ‘military–industrial complex’ (MIC) in American life unfolded into a whole literature on how domestic politics influenced what sorts and amounts of weapons the superpowers acquired (Kurth, 1973; Rosen, 1973; Allison and Morris, 1975; Freedman, 1981a: ch. 22; Evangelista, 1984, 1988; Buzan, 1987a: 94–113; McNaugher, 1987).

An interesting theme in the literature on the MIC was that while the US had an MIC, and so faced the problem of domestic industrial and military interests taking advantage of the Cold War to further their own goals, the Soviet Union virtually was an MIC, with a large part of its economy devoted to the production of military power. That the US was a capitalist democracy mattered, and played importantly into the general American enthusiasm for – and belief in – technological and scientific solutions (Wæver and Buzan, 2007: 386). On the one hand, one might think that capitalist political economies, with their general preference for capital over labour, would naturally lean towards high technology solutions to military challenges. The logic of capitalism points to capital intensive solutions regardless of whether the problem is production or destruction, a leaning reinforced by a democracy’s natural desire to minimise risks to its citizen/soldiers. On the other hand, the very awareness of the MIC in the US reflected a keen and sustained interest in the economics of defence. Despite the ‘gold-plated’ reputation of US military procurement, the strategic debates were not just driven by new developments in technology and calculations of Soviet military capability. Discussions about possible new technologies were also much concerned with cost-effectiveness, and calculations about how to achieve desired military goals in the most economic fashion (Kapstein, 1992). And while the US was not close to the Soviet model of being an MIC, it is clear that the large and sustained US
military expenditure served Keynesian purposes (i.e. the state channelling large sums of public money into the economy) for the US economy that it would have been ideologically difficult for US governments to do without making themselves vulnerable to charges of socialism or big-government. In other words, military spending in the US played the same role that government spending on industrial policy played in most other Western states. Unlike in Europe, where there was no ideological barrier to Keynesian state spending, this element of military Keynesianism in the US eased the politics of military budgets (Russett, 1983).

But regardless of whether the development and acquisition of new military technology was driven domestically or by arms racing, the fear was that failure to keep up would make one’s nuclear forces vulnerable to first strike by the enemy. Any such development would neutralise the effects of mutual deterrence by fear of retaliation on which both sides relied. For example, if one’s missiles were liquid-fuelled, and took an hour to launch, but one’s opponent could launch a surprise attack which would give only thirty minutes’ warning, then the opponent had powerful incentives to strike first. From this foundational insecurity arose a huge and elaborate body of theory and argument about incentives to attack (or not) under various conditions of nuclear balance, and the need to create a ‘secure second strike’ force able to retaliate even after a major first strike (Wohlstetter, 1959; Rosecrance, 1975; Howard, 1979; Jervis, 1979, 1979/80; Art, 1980; Gray, 1980; Lodal, 1980; Weltman, 1981/2; George, 1984; Allison et al., 1985). Formal theoretic ways of thinking were called in to help in understanding the ‘game’ of deterrence and bipolar superpower rivalry (Snyder, 1971; Jervis, 1978).

Much of this literature was heavily dependent on the assumptions of rationality laid out above (Steinbruner, 1976; Snyder, 1978) to work out the great chains of if–then propositions that characterised deterrence theory: if A attacks B in a given way, what is B’s best response, and what would A then do in reply, and then . . . and then . . . The foundational insecurity here was that of being disarmed by one’s opponent in a first strike (a so-called ‘counterforce’ strike). This fear was real in the early phases of the Cold War when nuclear arsenals were relatively small, slow to launch and not well protected. It diminished from the later 1960s as nuclear arsenals got larger and much harder to attack (particularly when missiles were put into submarines), giving an effective secure second strike. But it was replaced by another, more subtle, fear known as the ex ante ex post dilemma (Rosecrance, 1975: 11–12; Steinbruner, 1976: 231–234). This envisaged a counterforce attack by one side (B) against
the other (A) in which A loses more of its nuclear weapons than B uses in its first strike. Such an outcome was plausible if the attacker used the multiple warhead missiles that became widely available during the 1970s. If B attacked with ten missiles each with ten warheads, it might eliminate up to 100 of A’s missiles. The dilemma is about what A would then do. It is not completely disarmed, and could either retaliate by striking B’s missile silos or B’s cities. Attacking B’s silos would be potentially wasteful of A’s remaining missiles because it is unclear which ones are empty and which ones are still holding missiles. The chances of eliminating B’s ability to retaliate would thus be slim. Alternatively, escalating by attacking B’s cities would mean effectively committing suicide, because B would then be able to use its remaining missiles to retaliate and destroy A’s cities. Would rationality suggest that A should not retaliate in the first place, thereby having to accept the attack without making any retaliation? To do that might indeed be rational, but the possibility of it undermined the whole structure of deterrence by seeming to give incentives for aggressors to make counterforce first strikes. Getting these great chains of reasoning right was seen as crucial to developing the best military options that would deter the enemy from attacking in the first place.

The seeming impossibility of working out plausible rational responses across the entire range of complexities thrown up by nuclear war scenarios, led to an increasing acceptance that the effectiveness of deterrence lay in the possibility, or even likelihood, of irrational behaviour. Not many continued to believe that the rationality assumption would hold once nuclear exchanges, even limited ones, began. The ‘threat that leaves something to chance’ (Schelling, 1960: ch. 8) was a theoretically sophisticated answer to the otherwise unsolvable ex ante ex post policy dilemma. Potential attackers would be deterred precisely by the fear of an irrational response, whether on the individual level (anger, revenge), or the bureaucratic one (breakdown in command and control). But if deterrence depended on irrationality, then much of the incentive for elaborate theoretical scenario spinning, and thus for Strategic Studies itself, went out the window.

The whole edifice of deterrence theory was also continuously under pressure from new developments in technology that might make one more, or less, vulnerable to attack, and often the arguments were about which types of technology to pursue (or not) in order to improve one’s position. Much ink was spilled among other technological choices over the costs and benefits of putting multiple warheads on missiles; of pursuing high levels of accuracy with so-called precision-guided munitions; of developing supersonic bombers; of developing neutron bombs.
to produce a lot of radiation and little blast, so killing people but not destroying property); of deploying cruise missiles; and of building elaborate protected hiding places for land-based intercontinental ballistic missiles.

One of the fiercest, and still ongoing, debates of this sort was about ABM, aka BMD, systems, under argument since the late 1960s (Stone, 1968; Brodie, 1978; Lodal, 1980; Independent Commission on Disarmament and Security Issues, 1982; Glaser, 1984, 1985; Hoffman, 1985), and still today (Glaser and Fetter, 2001; Powell, 2003; Karp, 2004). Part of the argument was about whether it could be done or not with existing or likely technology, and involved everything from particle beams mounted on orbiting satellites to super-fast interceptor rockets and elaborate radars. But the more interesting theoretical part was about what impact deployment of an effective, or even partly effective, BMD would have on strategic nuclear stability. The immediate allure was that BMD offered an escape from the whole logic of deterrence, and especially from having one’s population held hostage under the grim, but supposedly stabilising, logic of the Cold War’s most notorious acronym, MAD (Mutually Assured Destruction). It could thus be posed as a return to national defence by blocking an attack. One obvious problem was that this defensive measure would give its first possessor a free hand to launch an offensive first strike against its rival without fear of retaliation. Another was that, unit for unit, BMD was always going to be much more expensive to deploy than offensive missiles because shooting down missiles was intrinsically and massively more difficult than simply firing them from one place to another. Moves towards BMD thus threatened to trigger an unending arms race in which BMD deployments would be countered by the addition of enough offensive missiles equipped with penetration aids to swamp the system. In the event, and mainly because mastering the technology looked like a fabulously expensive venture of very uncertain outcome, the two superpowers deferred this issue in the ABM Treaty of 1972, which restricted deployment but not research. Ronald Reagan’s SDI in the early 1980s, designed partly as an attempted escape from MAD, and partly to roll back the strategic parity that the US had accorded the Soviet Union during the 1970s, put BMD back onto the US agenda, where it has remained ever since. With its promise of escape from MAD, BMD proved particularly attractive in US domestic politics, helped there by its appeal to enthusiasm for technological fixes, and its amenability to being staged as defensive (the protests of strategists about its destabilising consequences notwithstanding).
In addition to the pressures from rapidly evolving technologies, there was an ongoing fundamental disagreement about the basic nature of nuclear deterrence itself, and whether it was easy or difficult to achieve (Jervis, 1979/80; Gray, 1980; Lodal, 1980; Buzan, 1987a: 173–196). In part this overlapped with the technology debates, but apart from assuming the existence of deliverable nuclear weapons it was not heavily dependent on their details. Some thought that nuclear weapons made deterrence easy, because any even half-rational actor would be given extremely serious pause by the prospect of obliteration. In other words, possession of a nuclear arsenal sufficient for ‘assured destruction’ would basically suffice, leading to a so-called ‘minimum deterrence’ strategy. Others, taking a maximum deterrence approach, calculated that a ruthless rational actor (as Kennan had postulated the Soviet Union to be) would require not only a threat of high damage, but also a near certain probability that such a retaliation would be delivered, before deterrence could be effective. Because of the ex ante ex post dilemma outlined above, providing a high certainty of retaliation under conditions of mutual deterrence was difficult. Logic might dictate that retaliating after being struck was an irrational act, thus opening the opportunity for the ruthless aggressor to think about attacking in the first place.

Minimum deterrence offered a kind of stability in easy parity, and also economy, but at the risk of vulnerability to utterly ruthless opponents prepared to gamble in the face of huge threats to their own survival. Its logic also provided incentives for so-called ‘horizontal’ nuclear proliferation (the spread of nuclear weapons to states not previously possessing them), making it seem fairly straightforward for lesser powers to acquire a great equaliser (Waltz, 1981). Bipolarity defined a nuclear club of two, and associated nuclear weapons with superpower status. Britain, France and China had, by the early 1960s, joined the nuclear club, obliging the two superpowers to assert their difference by acquiring much bigger nuclear arsenals than the new arrivals. One of the few things the US and the Soviet Union agreed on was that they did not want additional nuclear powers. This concern was initially focused on other industrialised states, particularly Germany and Japan, but during the 1970s shifted more to Third World states such as Argentina, Brazil and India, and also to Israel and the Middle East, and South Africa. Any horizontal proliferation not only questioned the superpowers’ status, and complicated their options for military interventions, but also raised the risk of nuclear war, whether intentional or accidental. In what became the leading example of superpower cooperation during the Cold War, the US and the Soviet Union led
the way in promoting a nuclear non-proliferation regime which tried to promote the spread of civil nuclear technology while blocking the acquisition of military nuclear capabilities by other states. Although mainly subordinate to the agenda driven by expanding and evolving superpower nuclear arsenals, horizontal nuclear (non-)proliferation became a large and elaborate subject in its own right within the Cold War ISS literature, which we will look at in chapter 5.

In contrast to minimum deterrence, maximum deterrence thinking offered higher entrance costs to would-be nuclear weapon states, and an expensive, open-ended arms race to existing nuclear weapon states. The supposed gain was to close loopholes against extreme aggressors who might take risks along the lines of the *ex ante ex post* dilemma, or try to find other ways around the military paralysis of nuclear deterrence by, for example, making small, swift, military attacks. Dealing with this contingency generated demands for huge and elaborate forces capable of responding to aggression at any level, and of maintaining ‘escalation dominance’ throughout a complicated and possibly extended spectrum of conventional and nuclear warfighting. Maximum deterrence thinking rested on the assumption of a highly aggressive, risk-taking and opportunistic opponent. Given the experiences of the Second World War (the successful surprise attacks by Japan on the US and by Germany on the Soviet Union), this assumption was not historically unreasonable, and was supported by the understanding of the Soviet Union in the US embedded by Kennan. Maximum deterrence thinking was pushed along by three factors: a certainty-seeking understanding of the logic of bipolar deterrence plus a high threat perception of the Soviet Union; successful lobbying within the US by the MIC (Kurth, 1973); and the problem of extended deterrence that arose when the US guarantees to protect Europe had to be implemented in the face of a growing Soviet ability to strike the US with nuclear weapons.

Extended deterrence (ED) links the technological driver to the great power politics theme discussed above. Mutual nuclear deterrence exclusively between the US and the Soviet Union was a fairly straightforward proposition, albeit with some pretty complicated ramifications. But during the period when it had a nuclear monopoly, the US took on an obligation to defend Western Europe from the Soviet Union (embodied in the 1949 NATO alliance). Extending the US nuclear umbrella was uncomplicated when the US nuclear monopoly made deterrence easy, even in the face of much superior Soviet conventional military strength in Europe. But it became fiendishly difficult when the Soviets also acquired the
capability to threaten the US with nuclear weapons. How could the European allies believe that the US would retaliate against the Soviet Union for, say, an attack on West Germany, when the consequence could be Soviet retaliation against American cities? This question and its many variants haunted Western strategic thinking from Sputnik onwards (Beaufre, 1965; Rosecrance, 1975; Snyder, 1978; Jervis, 1979/80; Gray, 1980; Martin 1980; Cordesman, 1982; George, 1984; Huth and Russett, 1984; Allison et al., 1985; Huth, 1988). It was also central to the literature on NATO and its recurrent discontents over especially nuclear strategy, which was another major theme in the ISS literature (Luttwak, 1980a; Bertram, 1981/2; Freedman, 1981/2; Hoffmann, 1981/2; Treverton, 1983; Duffield, 1991; Zagare and Kilgour, 1995).

The questions arising from ED were addressed, though not settled, in various ways. Uncertainty over the US nuclear guarantee provided incentives for the European powers to acquire their own nuclear deterrents (which Britain had already done, and France proceeded to do), and made for a kind of permanent crisis in NATO about the credibility of its deterrent posture and the division of labour between the US and its European allies. Mainly it pushed the US into taking various measures to strengthen its commitment (by basing its own troops in Europe in substantial numbers), and to increase the risks to the Soviet Union of ‘salami tactics’ (taking one slice at a time and so staying below the threshold at which nuclear weapons would be used) by such measures as integrating so-called ‘tactical’ nuclear weapons (‘tactical’ being mainly defined by short or intermediate, rather than intercontinental range) into NATO’s forward deployments. ‘Flexible response’, as this doctrine came to be known, led inexorably towards the logic of maximum deterrence by trying to find force deployments able to meet all of the possible types and levels of Soviet threat to Europe. Since NATO never managed to match Soviet conventional strength in Europe, the commitment to extended deterrence fed the nuclear logic that strengthened maximum deterrence thinking and policy in the US. Europe was always the main issue in extended deterrence, but the problem affected US relations with other allies such as South Korea and Japan, which were also under its nuclear umbrella.

Extended deterrence and flexible response spurred another concern intrinsic to the whole logic of maximum deterrence, and also linked to rival superpower interventions in crises and conflicts in the Third World: escalation and how to control it (Ball, 1981; Clark, 1982; George, 1984; Allison et al., 1985). The practice of extended deterrence inevitably led to scenarios about low-level warfighting in response to local aggression,
The pressure of current affairs and ‘events’

Bipolarity and nuclear weapons certainly set the main framing for the evolution of ISS during its first four decades, but they were not the only driving forces in play. Looking first to the constitutive events that impacted Strategic Studies, the end of the Second World War and the rise of the Soviet Union and the US as antagonistic superpowers was, of
course, the foundational event that the discipline set out to both explain and advise policy-makers about. As the Cold War unfolded, a mixture of constitutive and significant critical events worked to reinforce this view of the Soviet Union while also expanding the scope of ISS. The events that made a significant impact on the evolution of ISS were: Berlin (the Soviet blockade of West Berlin in 1948–49, and the building of the Berlin Wall in 1961), the Korean War (1950–53), the Cuba Missile Crisis (1962), the Middle Eastern oil crisis (1973) and the Vietnam War (1964–75). One might add the Suez Crisis (1956) generated by Egyptian President Nasser’s nationalisation of the Suez Canal, which pitched long-term allies Britain and the US against each other and confirmed bipolarity and the inability of the European powers to operate independently from the US. It also inaugurated US engagement in the Middle East, but it did not have a major impact on the ISS literature as such. The launching of Sputnik (1957) and other key technological innovations have been covered under technology.

The crises in Berlin and Korea served mainly as constitutive events that confirmed in the West the expansionist view of the Soviet Union (and China) and the need for containment. The war in Korea inaugurated a major rearmament in the US and up to a point Europe. It consolidated the idea in the West of a ‘communist bloc’, and provided a real example of the extended deterrence and containment problems that NATO faced in Europe. US possession of nuclear weapons deterred neither the North from invading the South, nor the Chinese from intervening against the US counter-invasion of the North. Containment clearly had to involve both conventional and nuclear capabilities.

The crisis caused by the Soviet emplacement of nuclear-armed missiles in Cuba in 1962 brought the world closer to nuclear war than it has been before or since. It was consequently the biggest ‘event’ for the evolution of ISS during the Cold War. Not only did the crisis generate a substantial literature of its own that continued long after the ending of the Cold War, it also provided lessons that impacted on the ISS debates in several different ways, thus making it both a constitutive and a significant critical event that expanded the topics on the agenda of ISS (Horelick, 1964; Abel, 1966; Kennedy, 1969; Allison, 1971; Dinerstein, 1976; Snyder, 1978; Lebow, 1983/4; Landi et al., 1984; Trachtenberg, 1985; Garthoff, 1988; Allyn et al., 1989/90; Scott and Smith, 1994; Weldes, 1996; Bernstein, 2000; Pressman, 2001). Most obviously, the Cuba Missile Crisis generated an interest in crisis management as a key area of concern within ISS. It underlined the dangers of escalation in an
action–reaction process and exposed the need for reliable means of communication between Washington and Moscow. This need was quickly met by the installation of a ‘hot line’. The crisis provided a neat template for looking at the reality of how decisions get made, and questioning the rationality assumptions central to deterrence theory (Allison, 1971; Janis, 1972; Jervis, 1976). Knowledge of the various military response options considered by the US, and the effectiveness of the naval ‘quarantine’ of Cuba by the US, fed into and validated the utility of ‘flexible response’ then being discussed by NATO, but the underlying concern was understanding the actual and potential production of irrationality in foreign policy-making, especially in the US. It could be argued that the experience of staring into the nuclear abyss for days on end sensitised both policymakers and the ISS community, not to mention the peace researchers and activists, to the need for management of the nuclear arms race. Cuba demonstrated the common interest of the two superpowers in survival, and so paved the way for the rising interest in arms control and détente that began during the 1960s.

Like the Cuba crisis, the Middle East crisis of 1973 again underlined the problem of unwanted escalation, though this time not in a direct confrontation between the superpowers, but as a consequence of both being drawn into regional conflicts on behalf of their allies. By the early 1970s, nuclear forces on both sides were much larger than a decade earlier, much more based on missiles, and with much more sophisticated warning systems and shorter response times. As both superpowers got involved in the conflict between Israel and its neighbours, the interlocking of their alert systems signalled a new form of escalation problem in which automated systems and protocols could ratchet up levels of alert as each side reacted to the other. The intense time pressures within the logic and technology of nuclear deterrence seemed to necessitate such automation, but doing so then created a danger of unwanted escalation all the way to war.

The ability of events to found, expand and reorient a field of research is often only fully detectable in hindsight. In retrospect, perhaps the main impact of the 1973 Middle East crisis was, especially in the US, to put economic security and international terrorism onto the ISS agenda (Nye, 1974; Knorr and Trager, 1977) as well as introduce ‘interdependence’ and International Political Economy into IR, and up to a point ISS, agendas (Keohane and Nye, 1977; Gilpin, 1981). The use of the ‘oil weapon’ by the Arab states forced the US to notice that Western prosperity and US hegemony depended on the availability of cheap oil, much of it from
the Third World (IISS, 1975a, 1975b; Maull, 1975; Odell, 1975; Krapels, 1977). More broadly, this triggered awareness that denial of access to other strategic resources by cartels seeking political leverage could, and in some views should, be seen as a strategic threat (Connelly and Perlman, 1975; Foley and Nassim, 1976). Less visible at the time was the fact that this crisis drew the US much more deeply into the Middle East on the side of Israel, thus creating a set of acutely contradictory objectives (support for Israel and maintenance of stable relations with the oil-producing states) which would increasingly entrap US foreign policy over the subsequent decades. The ongoing crisis between Israel on the one hand, and the Palestinians in particular, and the Arab states generally, on the other, bred terrorism, and how to respond to it, as a new subject within ISS (Dugard, 1974; Bell, 1975; Fromkin, 1975; Stern, 1975/6; Clutterbuck, 1976; Pierre, 1976; Wohlstetter, 1976; Hopple, 1982; Wilkinson, 1986; Wilkinson and Stewart, 1987). Because this literature was mainly focused on the relatively localised terrorism stemming from the Arab–Israel conflict, it was largely marginal to the central strategic preoccupations of Cold War Strategic Studies.

The most significant candidate for the category of deferred critical events was substantial intra-Third World events such as the Iran–Iraq War during the 1980s. Third World security was largely discussed as part of the superpowers’ global rivalry, and this perhaps explains the relative lack of concern about Western support for anti-communist military dictatorships. Only a few ISS writers, to be further discussed in chapter 5, pointed to the security concerns of Third World states in their own right (Girling, 1980; Kolodziej and Harkavy, 1982; Ayoob, 1984; Thomas, 1987; Azar and Moon, 1988). Many relatively minor superpower engagements in Africa, Central America or elsewhere just became small parts of the general literature without making much impact on its main lines of thought (e.g. IISS, 1981). In a general sense, this literature might be seen as a response to decolonisation as a broad ‘event’, but without the ability to fundamentally change the basic scope or analytical assumptions which characterised Cold War ISS.

The war in Vietnam constituted a particularly critical case, but for an event of such scale and political controversy it made surprisingly little impact on the ISS literature, thus making it the strongest single incident of a deferred critical event. There were rather few articles in IR or Strategic Studies journals (Fishel, 1966; Hunter and Windsor, 1968; Thompson, 1969; Goodman, 1972), and the IISS did not devote even one Adelphi Paper to it. In the Cold War context, the Vietnam War was
primarily about US containment policy and the ‘domino theory’ fear that allowing a breach anywhere in the US wall around the communist world would result in a cascade of conversions to communism in the Third World. Along with events in Africa and Central America, it gave rise to a sub-literature on guerrilla war and counterinsurgency (Johnson, 1968a, 1968b; Soderlund, 1970), and cruelly exposed the difficulties for the US in fighting limited wars in the periphery as part of containment (Mack, 1975). It also highlighted the limits of the abstract strategic theory then at its height in relation to deterrence, but seemingly useless in a war where body counts and battles won seemed to bear no direct relationship to the politics of victory and defeat (Gray, 1982b: 90). Perhaps most importantly, the defeat suffered by the US in the Vietnam War generated a sustained doubt in the US about the utility of force in general, and US ability to fight limited wars in the Third World in particular – the so-called ‘Vietnam syndrome’ (Herring, 1991/2). In the postmortem literature on what went wrong two key lessons crystallised: technological preponderance did not win wars, and domestic cohesion was essential, both to the enemy’s ability to suffer high levels of casualties and for the ability of Western media to sway the support of the public (Cooper, 1970; Kalb and Abel, 1971; Ravenal, 1974, 1974/5; Grinter, 1975; Fromkin and Chace, 1984/5).

In the main, superpower concerns dominated, and the discussion of the Third World within ISS was therefore mainly tied into its consequences for the central balance. The literature focused on five possible effects: containment (how would instabilities and conflict in the Third World affect the structure of superpower spheres of influence?), extended deterrence (could Third World allies be supported by superpowers extending their nuclear umbrella to them?), escalation (was there a danger that the central stability of deterrence could be upset by the superpowers being drawn into Third World conflicts between their clients and allies?), nuclear proliferation (see above and chapter 5) and economic security (could Third World supplier cartels disrupt the Western economy by raising prices or restricting supply?). Consideration of deterrence logics outside the superpower framework was rare (Rosen, 1977; Waltz, 1981).

The internal dynamics of academic debates

In a broad brush perspective, the internal academic dynamic of Strategic Studies across the duration of the Cold War can almost be seen as following the same ‘S-curve’ described for technology earlier in this chapter. It had
a slow start, a dramatic period of development and then a levelling off. Stimulated by nuclear weapons and the Cold War, it begins to gather strength during the 1940s and 1950s, reaching a kind of peak in the 1950s and 1960s golden age with a string of classic books centred around nuclear deterrence (Brodie, 1946, 1959; Kissinger, 1957; Osgood, 1957; Kahn, 1960, 1962; Rapoport, 1960, 1964; Schelling, 1960, 1966; Snyder, 1961; Singer, 1962; Green, 1966; Morgan, 1977). There were inputs from many disciplines and a real sense of excitement driven by the intrinsic intellectual interest of the problem, the sense of fear and urgency about what choices to make in practice, and the high public profile and generous resourcing of nuclear strategy.

But by the 1970s, the main breakthrough work had been done, and some of the enthusiasm was waning as both the superpower relationship and Strategic Studies itself became more routine and institutionalised. The theoretical debates about deterrence were beginning to sink under the weight of their own logical complexity (Freedman, 1991). The nuclear balance had reached a kind of stalemate which seemed fairly stable, and about which there did not seem all that much more new to say except for responses to technological developments, most notably in defences against ballistic missiles. Mainstream Strategic Studies literature succumbed to hectic empiricism, in which the main job of analysts was to keep up with ever-changing technologies and political developments. On a deeper level, some academics and some policy-makers drifted towards a kind of exhausted acceptance of existential or general deterrence, where the main effect came not from ever more elaborate and less credible preparations to meet every contingency, but from the simple existence of nuclear weapons and fear of them being used (Waltz, 1981; Morgan, 1983; Freedman, 1988).

As noted above, one of the distinctive features of Strategic Studies (and ISS more broadly) was and is the involvement of civilians in strategic thinking, an involvement which produced a number of distinctive outputs. Systems analysis, for example, which was a method for solving problems of force structure and resource allocation, was based on economic theory as well as on operations research developed by natural scientists, engineers and economists during the Second World War (Smoke, 1975: 290–293). Several pioneering RAND studies were implemented into policy, notably the famous ‘air bases’ study by Wohlstetter, a mathematician, and his associates (1954). Some of the leading representatives of this way of thinking entered the Kennedy administration labelled as McNamara’s ‘whiz kids’ (Kaplan 1983; Brodie 1965). From there, this method and
related RAND techniques like the ‘Planning-Programming-Budgeting-System’ ‘spread through most of the federal government’ (Smoke, 1975: 292).

This unfolding of Strategic Studies meshed with both the problem-solving disposition of American social science generally, and its preference for values of ‘objective’ science (quantification and hard theory) as opposed to the traditionalism (history) and normative approaches (academic and activist) that were the main approaches in Europe. Wæver (Wæver and Buzan, 2007: 388; see also Smoke, 1975) argues that:

Under a Cold War situation with a booming US economy, a mood of technological optimism and a willingness to support social science as part of the solution to social challenges (including not only the Cold War struggle but social problems of all kinds), the reward was high for new approaches that seemed to move IR in the direction of the use of scientific methods and tools ranging from coding of events data allowing for computerized data processing through cybernetic models and experimental psychology to game theory. Deterrence theory became a success story in this context for two reasons. On the one hand, it produced a seemingly productive (‘progressive’) research programme where theoretical work produced ever new and more complex problems which could in turn be dealt with by new theoretical moves. On the other hand, all this seemed highly useful because the theories actually produced their own reality of abstractions, the world of ‘secure second strike capability’, ‘extended deterrence’ and ‘escalation dominance’.

There was a noteworthy synergy between the commitment of Strategic Studies to ‘scientific’ methods (positivism, quantification, game theory) and the parallel enthusiasm in much of American Political Science and IR for ‘behaviouralism’ which sought not just to bring the epistemology and methods of the natural sciences into the social ones, but to judge what counted as knowledge by those standards. Here golden age Strategic Studies with its system theories, game theory and quantification was in the vanguard, showing the rest of IR what could (and should) be done. The steady absorption of Strategic Studies into the expanding and consolidating field of IR was facilitated by this synergy.

Moving from the golden age to the full forty-five years of Cold War Strategic Studies, the general commitment to ‘scientific’ methods and positivist, rationalist forms of scholarship comprised quite a diverse set of analytical and methodological approaches. Waltzian structural Neorealism drew explicitly on micro-economics, with its rational actor assumptions taken from the level of the individual human being or firm, and
applied these to states. Structural Realism as well as Strategic Studies more broadly lent itself to quantitative studies of large data-sets, a methodology aided by the introduction of computers in the 1950s and 1960s, as well as to comparative case-studies which became the norm in the influential journal *International Security* published from 1976. Game theory constituted yet another form of scientific scholarship based not on the correlates deduced from data-sets or historical case-studies, but on the running through of different scenarios and mathematical equations built around different actor assumptions and the prospects for conflict or cooperation. The fact that no nuclear exchanges took place, and hence did not generate quantifiable data, made game theory particularly suited for the development of deterrence theory. As game theory evolved during the 1950s and 1960s it was also greatly aided – and in fact spurred – by the construction of computers powerful enough to run games through a large number of cycles (Edwards, 1996). One should note, though, that a large part of what was written on international security did not evoke high theory or complicated deductive or quantitative techniques but came in the form of rather straightforward empiricist scholarship with contemporary history and policy problem-solving as the principal framings.

The passions for ‘scientific’ method were mainly, though as we shall show in the next chapter not exclusively, American. In Europe, though again not exclusively, there was more support for historical and normative approaches. This epistemological clash was represented by the famous exchange between Hedley Bull (1966), who defended ‘traditional’ methods and was sceptical about scientific ones, and Morton Kaplan (1966) who defended the behavioural move. In the event, however, it was normative differences that were the most prominent dividing feature of the discourse about nuclear weapons and, as with the methodological divide, this largely resulted in the formation of two sides shouting past each other (the opposition to Strategic Studies is surveyed in the next chapter). In general the two sides stuck to their positions, though in the self-reflections on the state of the field (Bull, 1968; Gray, 1977, 1982a, 1982b; Booth, 1979; Howard, 1979; Freedman, 1984b) that were a staple of the Strategic Studies literature, there was some attempt to address the normative critiques of Strategic Studies from Peace Research.

Although dominated by American scholars, Strategic Studies was by no means an exclusively US field. Some innovative thinking was done in Europe, perhaps most notably Hedley Bull’s (1961) path-breaking work on arms control. British and French military thinkers made some impact on both deterrence theory generally, and on the more self-interested topics

**Institutionalisation**

The story of how a new field, ISS, arose and became established is not ‘only’ one of great power politics, technology, events and academic debates. It is also crucially a story of how the field became institutionalised, how it achieved a standing and a legitimacy that allowed it to build research programmes, get funding, find outlets for the dissemination of its results and make researchers self-identify as ‘security scholars’. Institutionalisation can thus be seen as a driving force that is at first produced through the successful interplay of the four others, but which also, once the process of institutionalisation gains ground, becomes a driving force in its own right. A field which is strongly institutionalised is one with good chances of succeeding in the competition for funds, policy influence and prestige. Institutionalisation may be a conservative force, but it may also be a driving force that pushes ISS in new directions.

A general idea of how this institutionalisation occurred can be gained from looking at five different aspects of it: the establishment of ISS courses and institutes within universities; the creation of specialist sections within academic associations; the development of specialist ISS journals; the founding of ISS think-tanks; and the setting up of funding programmes (by government and foundations) aimed at promoting ISS. It is not within our resources to tell this story comprehensively, particularly at the level of how concrete research networks were formed, but we can certainly demonstrate the general pattern. Here we focus mainly on the institutionalisation of Strategic Studies itself: the story is of how a new field arises and becomes established.

Prior to the formation of a field of ISS there had, of course, been a long tradition of studying war that security scholars could draw upon. The Royal United Services Institute (RUSI) was founded in 1831 on the initiative of the Duke of Wellington to study naval and military science, and its journal dates from 1857. The US Army War College is more than
a century old. As already noted, the ISS that emerged as a self-conscious field after the Second World War in part built on this tradition, but as noted above was also distinctive in purpose and personnel, and carried the new label and wider orientation of international security. Broadly speaking, the development and institutionalisation of ISS proceeded in parallel with that of IR more widely as a field/discipline distinct from Political Science, History and International Law – distinct here meaning having its own academic associations, departments, degrees and journals. ISS did not start as part of IR, and some of its early key thinkers, for example Schelling, probably never thought of themselves as part of IR. But their many overlaps, synergies, shared personnel and intertwined processes of institutionalisation steadily drew them together. By the late 1960s, ISS had become one of the major sub-fields of IR without anyone really noticing this happening. It was not uncommon for major figures in IR theory, such as Bull, Jervis and Waltz, also to be active writers in ISS.

A few of the institutions in which ISS was to be pursued existed before the Second World War (e.g. the Brookings Institution think-tank founded in 1927), but most of them came into being as the subject of ISS developed, a process that is still ongoing. The US Army formed a Strategic Studies research group in the mid-1950s, which during the 1970s became the Strategic Studies Institute of the US Army War College. The International Institute for Strategic Studies (IISS) was founded in London in 1958. In universities, the Institute of War and Peace Studies at Columbia University was established in 1951, and the Department of War Studies at King’s College London also in the 1950s. The Mershon Center for International Security Studies at Ohio State University was inaugurated in 1967, consolidating programmes on defence and national security that dated back to the mid-1950s, funded by a private bequest. On the government side of things, the US established an Arms Control and Disarmament Agency (ACDA) in 1961, and in 1965 the Indian Defence Ministry set up the Institute for Defence Studies and Analyses (IDSA). In its ‘Survey of Strategic Studies’ (1970) the IISS listed 128 places in 29 countries where research in Strategic Studies (interestingly including Peace Research) was being pursued. Most of these were in the West and Japan, with the US accounting for 20 and the UK 13, but Eastern European and some Third World countries also had significant representation.

The 1970s and 1980s continued this trend, with ever more think-tanks, university programmes and institutes coming into being. Stanford University’s Arms Control and Disarmament Program was founded in 1970,
and the Oxford University Strategic Studies Group in 1971. The International Security Studies section of the International Studies Association (ISA) was also set up in 1971, the Institute of Strategic Studies Islamabad in 1973, the Canadian Institute of Strategic Studies in 1976, and the Center for Peace and Security Studies, Georgetown University and the Center for Strategic Studies, Tel Aviv University, both in 1977. In Geneva, the Programme for Strategic and International Security Studies was started in 1978 as part of the Graduate Institute of International Studies. In the US, a National Defense University was formed in 1976 by the merger of earlier programmes and in 1984 this created its own research arm, the Institute for National Strategic Studies. Johns Hopkins University formalised its Strategic Studies programme in 1980 and the Committee on International Security Studies of the American Academy of Arts and Sciences began to function during the late 1980s. A benchmark for how widely and deeply ISS had become institutionalised by the late 1980s was the establishment in 1987 of Women in International Security (WIIS) based in Georgetown University and dedicated to increasing the influence of women in foreign and defence affairs. It has subsequently expanded to 1,400 members – women and men – in over thirty-five countries from academia, think-tanks, the diplomatic corps, the intelligence community, the military, government, non-governmental organisations, international organisations, the media and the private sector (http://wiis.georgetown.edu/about/ – accessed 2 January 2007).

Think-tanks and foundations also played a crucial role in supporting the birth and Cold War evolution of Strategic Studies. Some think-tanks undertook work that fell squarely within ISS itself, with RAND and the IISS being the most prominent examples. Others were significant in that they sponsored academic programmes and university centres. As noted in chapter 3, foundations and think-tanks are often listed along a Liberal–Conservative ideological spectrum, and as a rough general rule, Conservative institutions would be stronger supporters of conventional Strategic Studies, while Liberal institutions have, relatively speaking, been more generous in their funding of Peace Research, Arms Control and, from the early 1980s, programmes devoted to the rethinking of the concept of security itself. That said, some foundations bridged these divides by providing support for Strategic Studies as well as for Peace Research and Arms Control. Think-tanks and foundations differed and differ furthermore in how explicitly ideologically they conceive of themselves with, for instance, the American Enterprise Institute and the John M. Olin Foundation taking an explicitly political–normative position, while others such
as the Brookings Institution or Ford Foundation emphasise political ideology less while highlighting their contributions to academic knowledge production.

Institutionally, foundations and think-tanks are often interwoven as foundation grants are essential to the upkeeping and growth of think-tanks. Looking to the key think-tanks and foundations which underwrote traditional Cold War ISS, the question of where to draw the line between ISS and the policy world becomes a crucial, but also a blurred, one. A narrow definition of what falls within the ambit of the institutionalisation of ISS would look exclusively to those think-tanks and foundations which either conducted or funded academic research, whereas a broader definition would incorporate those institutions that more explicitly target policy-makers in a manner that mixes academic knowledge and policy advice/advocacy. Starting from a more narrow definition, the cases of RAND and IISS noted above are the most prominent examples of think-tanks with a clear academic status which impacted core elements of ISS. RAND’s contribution to game theory and deterrence thinking during the golden age of Strategic Studies has already been noted, and although later decades did not produce similar path-breaking theoretical contributions, RAND continued to make a crucial input at the level of empirical security analysis. Locating RAND on the political landscape of security institutions, its strong reliance on government contracts has led some to view it as compliant with, and hence politically skewed towards, state policies, while others have viewed it as less ideologically driven and pointed to it being supported by a variety of foundations including Ford, Bill and Melinda Gates, and the Pew Charitable Trusts (Oren, 2003). Looking to the UK, the IISS, which was during the Cold War perhaps the premier specialist Strategic Studies think-tank, was the source of several key periodicals in the field (Survival, Adelphi Papers, The Military Balance, Strategic Survey).

Broadening the scope to cover think-tanks known for their more explicit Conservative ideological agenda and hence often a stronger focus on influencing policy and public debate, rather than on ‘pure’ ISS theory work, we find first the American Enterprise Institute, a think-tank founded in 1943 as a promoter of free enterprise capitalism. The American Enterprise Institute was and is a large recipient of money from Conservative foundations, including the John M. Olin Foundation, the Sarah Scaife Foundation, the Smith Richardson Foundation, and the Lynde and Harry Bradley Foundation (www.aei.org/ – last accessed 16 November 2007). The importance of the American Enterprise Institute fellows has not been
so much in the key field of ISS theory, but as individuals combining the roles of academic analysts, policy advisors and public intellectuals. Some of the most prominent fellows associated with the American Enterprise Institute during the Cold War were Richard Perle, Assistant Secretary of Defense for International Security Policy under Reagan, and Irving Kristol, the founding father of the Neo-Conservative movement which rose to a prominent position with the election of George W. Bush in 2000 (Williams, 2005). The confluence of think-tanks and the policy world was further indicated by the claim that the American Enterprise Institute played a key role in developing and implementing President Reagan’s contested policy in Nicaragua in the 1980s when the CIA trained the ‘Contra’ insurgents.

Another prominent Conservative think-tank is the Heritage Foundation, founded in 1973 by an initial grant from beer magnate Joseph Coors, defined by Abelson (1996: 49) as the archetypal advocacy think-tank (www.heritage.org/ – last accessed 16 November 2007). The Heritage Foundation has also been supported by major Conservative foundations including the Sarah Scaife and the John M. Olin foundations and like the American Enterprise Institute has been linked with the Reagan administration’s support for anti-communist forces in Nicaragua, Guatemala and El Salvador. That competition between like-minded institutions is also a challenge to foundations is evidenced by the prominent Olin Foundation’s decision to support the Heritage Foundation rather than the American Enterprise Institute in 1986. The Center for Strategic and International Studies (CSIS) founded in 1962 through the Conservative Sarah Scaife Foundation should be mentioned as an example of an institution first based at a university (Georgetown University’s School of Foreign Service), but whose (perceived) ideological agenda led the university to cut ties in 1986. Other prominent think-tanks/policy institutes based at universities include the Conservative Hoover Institution founded in 1919 through a donation to Stanford University made by Herbert Hoover to support the Hoover War Collection. Finally, at the end of the Cold War, the United States Institute of Peace was founded in 1986 through an act signed by President Reagan.

An important think-tank operating with strong academic credentials and an explicitly political agenda is the Hudson Institute, founded in 1961 by prominent RAND strategist Herman Kahn (www.hudson.org/ – last accessed 16 November 2007). The Hudson Institute was explicitly concerned with what it saw as left-wing nuclear pessimism arguing both the necessity and feasibility of nuclear deterrence. Prior to his death in
1983, Kahn expressed support for Reagan’s agenda as well as optimism regarding the strategic use of space. Until the end of the Cold War the Hudson Institute received substantial government contracts and support from major Conservative foundations.

Not all think-tanks had explicitly ideological agendas and some carried out work that fell in part within Strategic Studies, in part within more critical approaches to arms control (see chapter 5). These included the Brookings Institution, the Council on Foreign Relations which also publishes *Foreign Affairs*, the London-based Royal Institute of International Affairs – Chatham House (founded in 1920), the Woodrow Wilson International Center for Scholars, established by the American Congress in 1968, and national institutes of international affairs, such as the Finnish Institute of International Affairs (1961), the Swedish Institute for International Affairs (1938), and the Norwegian Institute of International Affairs (1959).

As this short account of how think-tanks contributed to the institutionalisation of ISS shows, telling the story of think-tanks is also telling the story of the significance of major foundations. Chapter 3 provided a list of the largest Liberal and Conservative foundations, and although we should be careful not to overdraw the distinction between the two as far as providing funding for ISS is concerned, it should be clear from the account above that Conservative foundations, most prominently the Lynde and Harry Bradley Foundation, the John M. Olin Foundation, the Sarah Scaife Foundation and the Smith Richardson Foundation played key roles in supporting think-tanks. But foundations also made grants to universities, thereby directly impacting the institutionalisation of ISS in another way. Most significant in this respect is probably the John M. Olin Foundation, founded in 1953 by John M. Olin, who turned a small family company into one of America’s largest suppliers of guns, ammunition and chemicals (Wooster, 2006). John M. Olin retained tight control over the foundation, thus, when his alma mater, Cornell, ‘capitulated’ to student protesters in 1969, Olin stopped his contributions (which all combined had come to five million dollars). His fear that the foundation might drift from his Conservative agenda also led him to disband it by 2005. During the 1970s and 1980s the foundation had an important impact on ISS: it provided, for example, funding for the International Security Program at Yale, and the John M. Olin Institute for Strategic Studies at Harvard, which began in 1989.

Although ISS did eventually develop a whole suite of specialised publications, including a number of textbooks (Baylis *et al.*, 1975, 1987;
initially the academic discussions about international security took place in less specialised journals. An indication of this can be seen in a selection of key articles in the evolution of ISS (Buzan and Hansen, 2007). This shows that the debates about international security occurred not just in IR and foreign policy journals such as *World Politics*, *International Affairs*, *International Studies Quarterly* and *Foreign Affairs*, but also in Political Science journals such as the *American Political Science Review* and *Political Studies Quarterly*, and general social science and humanities journals such as *Daedalus*. Interestingly, the first specialist ISS journal appeared in Europe, *Survival* in 1958, with the main US entry *International Security* not starting until 1976. Others followed: *Terrorism/Studies in Conflict and Terrorism* (1977), *Journal of Strategic Studies* (1978), *Arms Control/Contemporary Security Policy* (1980), *Intelligence and National Security* (1986), *Terrorism and Political Violence* (1988) and *Security Studies* (1990), and these can be seen both as an expression of how prominent ISS had become and as part of a wider process of expanding numbers of IR journals generally. These more specialised journals certainly facilitated an expansion of the ISS literature, but they did not acquire anything like a monopoly position. The general IR journals remained important forums for ISS debates, including later arrivals such as the *British Journal of International Studies* (1975) (later *Review of International Studies*), the *European Journal of International Relations* (1995) and *Cooperation and Conflict* (1965).

By the end of the Cold War, Strategic Studies had put down deep institutional roots. As a student, you could take courses, and sometimes whole degrees, in it at hundreds of universities. From there, you could look to jobs in teaching, media, research, public policy, think-tanks, government and the military. Once courses and degrees and think-tanks had been institutionalised, they fed student demand for ISS, not just because they seemed interesting and relevant to major questions of the day, but because they offered good careers. In the US, ISS had become one of the big two subjects within IR, more or less dividing the field with IPE on the basis of a division of labour between the conflictual and cooperative aspect of international relations (Caporaso, 1995; Wæver and Buzan, 2007). Interestingly, as this division of labour itself became institutionalised into separate journals and associations it stunted the development of the economic security literature that came out of the Middle East oil crisis.

In sum, over the four decades of the Cold War, and not least because of its intimate connection to the public policy problems generated by the
Cold War, Strategic Studies had acquired formidable weight and momentum. The success of its institutionalisation combined with its linkage to the military problems of the Cold War meant that when the Berlin Wall fell, Strategic Studies in particular, and ISS in general, were faced with an existential crisis. How could all this survive once its core problem was no longer there? More on this in chapters 6 and 7. In Figure 4.1 we illustrate the main driving forces that impacted the birth and evolution of Cold War Strategic Studies, their main content and interplay. Those circles with a thicker line exerted a particularly strong impact.

**Conclusions**

Looking to the five driving forces, the main drivers behind this foundational stage of ISS were thus unquestionably great power politics and
technology. These two driving forces highlight the way in which the enemy image of the USSR became fixed in the US at an early stage, and how this played into the impact of nuclear weapons, and the rapidly evolving technology associated with them. The other three driving forces were, however, by no means unimportant. Events were significant first of all because it was key events in the mid and late 1940s and early 1950s which produced the very Cold War that Strategic Studies was founded upon. Throughout the Cold War there was a series of events that fortified the view of the Soviet Union as an enemy, but also expanded the agenda of ISS. The two most critical events during the Cold War that challenged the geographical and sectoral scope of Strategic Studies were wars in the Third World, most crucially the Vietnam War, and the oil crisis of the 1970s. Turning to the importance of internal academic debates, this is a less crucial driving force in that for most of the Cold War, mainstream ISS (Strategic Studies) had little interest in epistemological questions, though there was a de facto predominance of rational, empirical and positivist approaches, albeit often mixed in with elements of history, as with Classical Realist IR. To a large extent, this literature was driven by the policy problems facing mainly the US, and to a lesser extent those of its allies (e.g. Beaufre, 1965). Yet if the Cold War saw few of the epistemological discussions that we have become accustomed to since the 1980s, the diversity of disciplines that impacted early ISS was still significant for constituting both the scope and methodology of the field. The driving force of institutionalisation finally laid out the way in which Strategic Studies and ISS developed as an academic field, how it received substantial public and private funding and how think-tanks and venues for teaching and publication underpinned its birth and growth.

As the Cold War came to an end, the operation and interaction of the five driving forces began to change dramatically. Current affairs and events, which had largely made their impact within the context of the Cold War, were completely overshadowed by the cosmic central collapse of both ideological and political–military bipolarity. From the mid-1980s, as Gorbachev began to reverse the image projected by the Soviet Union, developments in great power politics became the dominant driver. The Cold War itself began to wind down, taking with it the debates about the nature of the Soviet Union, the sense of urgency that had attached to deterrence theory, containment policy and extended deterrence, and even much of the fear of nuclear weapons that had dominated ISS since the beginning of the nuclear era. There had already been some decline in the pressure from the technological driver as nuclear weapons and their delivery systems became technologically mature, levelling out at the top of
the ‘S-curve’ from the late 1970s onwards. But as we will show in chapter 6, the winding down of the Cold War did not take away an ongoing preoccupation with new military technologies, and neither did it remove concern about nuclear weapons. As the focus on superpower arsenals receded, that on horizontal proliferation became more prominent.

As already noted, the ending of the Cold War posed a possible crisis for the extremely successful institutionalisation of Strategic Studies, which now faced hard questions about its relevance, resourcing and bureaucratic survival on anything like its 1980s scale. It also derailed the internal dynamics of academic and policy debates. The 1980s intellectual drift of Strategic Studies into an unattractive choice between an existential deterrence dependent on irrationality, and a full-spectrum deterrence dependent on a sustained rationality so complex as to make its plausibility questionable, was simply swept away. With the Cold War gone, these questions became of only theoretical interest. And since Strategic Studies had lived on its linkage to public policy questions, theoretical interest was not nearly enough to sustain engagement by the large establishment that had grown up during the Cold War. Gone also was the whole problem of managing extended deterrence that had so much defined political and intellectual tensions across the Atlantic. With the Soviet Union disappearing as a threat, Europe no longer needed US protection. The problem with NATO shifted from how to share the burdens and risks of extended deterrence to whether NATO was necessary at all, and if it was, then for what?

With the end of the Cold War, Strategic Studies faced a crisis born of the very success that its marriage to the superpower nuclear rivalry had given it. Despite this crisis, it was the Cold War development of ISS that set the template for ‘international security’ to which all of the contemporary and subsequent wideners and deepeners had to relate. But before we look at how ISS rose from the ashes of the ending of the Cold War, let us turn to the Cold War approaches which questioned Strategic Studies’ reading of nuclear deterrence, the nature of the state, and the privilege accorded to state-centric, military security.