

# A PERPETUAL MENACE

NUCLEAR WEAPONS AND INTERNATIONAL ORDER



WILLIAM WALKER

ROUTLEDGE

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# A Perpetual Menace

Written by a leading scholar in the field of nuclear weapons and international relations, this book examines 'the problem of order' arising from the existence of weapons of mass destruction.

This central problem of international order has its origins in the nineteenth century, when industrialization and the emergence of new sciences, technologies and administrative capabilities greatly expanded states' abilities to inflict injury, ushering in the era of total war. It became acute in the mid-twentieth century, with the invention of the atomic bomb and the pre-eminent role ascribed to nuclear weapons during the Cold War. It became more complex after the end of the Cold War, as power structures shifted, new insecurities emerged, prior ordering strategies were called into question, and as technologies relevant to weapons of mass destruction became more accessible to non-state actors as well as states.

William Walker explores how this problem is conceived by influential actors, how they have tried to fashion solutions in the face of many predicaments, and why those solutions have been deemed effective and ineffective, legitimate and illegitimate, in various times and contexts.

**William Walker** is Professor of International Relations at the University of St Andrews. His research interests include nuclear politics and the governance of technology.

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# **A Perpetual Menace**

Nuclear weapons and  
international order

**William Walker**

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**In fond memory of my father,  
Barclay Clibborn Walker,  
who died when he was much too young**





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# Prologue

## The Ship of Fools

Niels Bohr was a founding father of nuclear physics. In October 1943 he left Denmark and travelled via Sweden and England to the United States, where he spent the rest of the Second World War. On arrival, he was invited to join the Manhattan Project, which had been launched in great secrecy during the previous year to develop the atomic bomb. He declined. Although as keen as anyone to prevent Nazi Germany from winning a race to the bomb, he agonized over the consequences of its invention. His particular fear, justified by events, was that the Soviet Union would mount its own weapon programme in retaliation, sparking an arms race and possibly an even more terrible war. Although an ally at the time, the Soviet government had been rigorously excluded from the Manhattan Project and learned about it only through espionage.

Through intermediaries, Bohr sought meetings with Roosevelt and Churchill to express his concerns. In July 1944, a year before Hiroshima, he submitted a memorandum to President Roosevelt in which he warned that ‘any temporary advantage [gained from possession of the atomic bomb], however great, may be outweighed by a perpetual menace to human security’. He was right. The menace persists. As I draft this Prologue in December 2010, governments are worrying over the nuclear activities of Iran and North Korea, the presence of nuclear weapons in a Pakistan close to civil war, the dangers of nuclear terrorism, obstructions to arms control treaties and much else besides.

‘A perpetual menace’ therefore seems a fitting title for this book. The continuation of Bohr’s phrase is also significant. ‘Human security’ gained currency in the 1990s when there was a move inside and outside the United Nations to dethrone ‘national security’ and shift attention from the interests of the state to those of the individual. To my knowledge, Bohr was the first to adopt the term and for similar reasons. Bohr the humanist – ‘a man of unusual sensitiveness and feeling for the world in which he lived’ – understood that the life and well-being of every person on the planet would be jeopardized if nuclear weapons became an instrument of power politics.<sup>1</sup> Bohr the realist understood that ‘a competition prepared in secrecy’ could easily degenerate into a nuclear-armed

struggle for advantage if states failed to reach 'a universal agreement in true confidence' on the technology's international control.

It is of course the very menace of nuclear weapons that has made them attractive to ambitious or fearful states. It gives them their potency as instruments of deterrence and symbols of power and prestige. The menace of my title therefore has a double edge. The ultimate harm of nuclear annihilation is threatened to avoid the lesser but still dreadful harm of great conventional wars. Human survival has rested on a gamble that relations between nuclear-armed states, their behaviour towards other states and their handling of nuclear assets can be well enough managed to avoid – perpetually – the outbreak of nuclear war by accident or design. The absence of wars between great powers since 1945 may be considered to have justified the gamble, but it remains a gamble nonetheless. Furthermore, the adoption of nuclear weapons by some states has brought marked disparities in power and prestige, and in political rights and responsibilities, between states possessing and not possessing nuclear weapons. This has had many ramifications, as we shall see.

Simon Weller's use of the Ship of Fools in his cover design is therefore apt. In the medieval allegory, society is depicted as a ship carrying idiots and reprobates, unaware of their plight and pilotless on a choppy sea.<sup>2</sup> The allegory here is stretched because our ship carries the innocent and capable along with the deranged, and, far from being allowed to drift aimlessly, it is being piloted in acute awareness of mortal danger. Everything depends on keeping the ship afloat on an even keel and safely guided between the rocks. If the book's cover had been larger, several ships would have been depicted, some mightier than others, some jockeying for position and each with its own pilot. Although competing, they must cooperate to avoid catastrophe. To complicate matters, they are not sailing in a stable environment. The weather is often stormy, unexpected rocks lie just beneath the surface, maverick ships appear over the horizon and from time to time the pilots lose their bearings or behave recklessly. Avoidance of a grand shipwreck depends on the pilots' persistent but troubled search for new understandings, techniques, rules of behaviour and sources of discipline.

The allegorical ships are states operating within the anarchic states system. Rather than use nuclear weapons just to gain advantage over one another, states, like piloted ships, have been compelled to work together in the mutual interest. The nuclear weapon's advent created an exceptional, lasting, ordering imperative in international politics. Since the weapon could not be abolished, what limits should be placed, by whom, on its possession and use? How might the technology be applied for civil purposes without facilitating weapon proliferation? How might an order be constructed that was more than an imperial order of nuclear powers? How might the practice of international nuclear governance through norms, rules and institutions mesh with the traditional power play among states?

Finding answers to these and many other questions has marked the quest for a simultaneously effective, legitimate, tolerable and coherent international nuclear order that is the subject of this book. This quest has also been perpetual. It began during the Second World War, became intense during the Cold War and has continued through thick and thin to the present day, always in anxious anticipation of what the future may bring. There have been many disputes over the proper design, purpose and realization of this order, and indeed over whether its establishment is practical or desirable. A certain conception of order has nevertheless gained ascendancy during the nuclear age. My task is to illuminate it and explore its strengths and weaknesses. How has it been given substance at global, regional and national levels? How has it evolved in response to changing circumstances and to shocks and the awakenings that have followed them? Should it – can it – be superseded by an international order in which nuclear weapons are absent, achieved through a cooperative project of complete nuclear disarmament?

The first chapter introduces the reader to debates about the meaning of international order, and to the special problems and features of the international nuclear order and the manner of its evolution. The book's structure is described at its conclusion. Suffice it to say that ensuing chapters will examine, period by period, the role that nuclear technology has played in international politics and the struggles to create order in its presence. A book of this scope cannot be anything more than a work in progress. My hope is that practitioners, scholars, students and the general reader will find some valuable insights to encourage their own thoughts and actions.

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However, the book has a much longer gestation. It was by chance that I found myself, after studying for an electrical engineering degree at Edinburgh University and a brief spell as a design engineer, taking a Masters degree in the History and Social Studies of Science at the University of Sussex in 1973. My great good fortune was to be offered a job afterwards at the University's Science Policy Research Unit (SPRU), an extraordinarily creative institute that became the hub of an international effort to develop understandings of the role of technological change in economic and social life. I worked there for most of the next 20 years. Among the remarkable individuals who influenced me at SPRU were Charles Cooper, Giovanni Dosi, Chris Freeman, Jackie Fuller, Paul Gardiner, Jay Gershuny, Marie Jahoda, Mary Kaldor, Richard Nelson, Bill Page, Keith Pavitt, Julian Perry Robinson, Margaret Sharp, Luc Soete and John Surrey.

It was again by chance that Ian Smart recruited me in 1978 to work at Chatham House for two years as general dogsbody to the International Consultative Group on Nuclear Energy (ICGNE), a group of 15 senior diplomats from as many countries that he and Mason Willrich assembled in the forlorn hope that private ways could be found to end the furious controversy over the US government's 'Carter Policy'. Although my role was limited to organizing meetings and taking the minutes, it was a wonderful introduction to international nuclear affairs. Besides Ian and Mason, I benefited from long discussions with three members of ICGNE in particular – David Fischer, Bertrand Goldschmidt and Måns Lönnroth – the last of whom became co-author of my first book on the subject in the early 1980s.

Returning to SPRU, I worked intermittently on nuclear research projects during the 1980s and 1990s. The most enjoyable and important collaborative project of my career involved the work with David Albright and Frans Berkhout in the mid-1990s to develop knowledge of the scale, location and

regulation (or lack of it) of inventories of the principal nuclear weapon materials, plutonium and highly enriched uranium, wherever they might exist in the world. They resulted in the two volumes published by the Stockholm International Peace Research Institute (SIPRI) in 1993 and 1997.

My interest in international nuclear order, this book's subject, developed mainly after my move to the University of St Andrews in 1996. It was spurred partly by the need to teach an undergraduate course on international nuclear politics and from dissatisfaction with a literature that, although marvellous in so many ways, failed to provide the perspective that I believed was required. My colleagues Tony Lang, Nick Rengger and Gabriella Slomp have been invaluable sounding boards during the years in which the ideas have been developing. Thanks are also due to Ken Booth, Campbell Craig and especially Nick Wheeler at the University of Aberystwyth who read chapters in the book and provided valuable if often trenchant comments.

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My greatest debts are to Carolyn who has had the misfortune of living with me during the writing of this book but has given me wonderful support throughout, and to Richard who has lent encouragement from his home in Berlin and provided reason for our frequent visits to that marvellous city.



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# Abbreviations

ABM	anti-ballistic missile
ADA	Atomic Development Authority
CAS	Committee of Assurance of Supply
CD	Conference on Disarmament (Geneva)
CTBT	Comprehensive Nuclear Test-Ban Treaty
CWC	Chemical Weapons Convention
Euratom	European Atomic Energy Community
FMCT	Fissile Material Cut-Off Treaty
IAEA	International Atomic Energy Agency (Vienna)
ICBM	intercontinental ballistic missile
INF	Intermediate Nuclear Forces
INFCIRC	IAEA Information Circular
IPS	International Plutonium Storage
NATO	North Atlantic Treaty Organization
NNPA	Nuclear Non-Proliferation Act (US)
NNWS	non-nuclear weapon state or states
NPT	Nuclear Non-Proliferation Treaty
NSC	National Security Council (US)
NSG	Nuclear Suppliers' Guidelines
NSS	National Security Strategy (US)
NWS	nuclear weapon state or states
P5	permanent members, UN Security Council
SALT	Strategic Arms Limitation Treaty
SIPRI	Stockholm International Peace Research Institute
START	Strategic Arms Reduction Treaty
UN	United Nations
UNAEC	UN Atomic Energy Commission
UNMOVIC	UN Monitoring, Verification and Inspection Commission, Iraq
UNSC	UN Security Council
UNSCOM	UN Special Commission on Iraq
USAEC	US Atomic Energy Commission
WMD	weapon(s) of mass destruction

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# 1 Introduction

## The problems of nuclear order and their understanding

The end of great wars has traditionally been the occasion for grand initiatives to reshape the international order. The Thirty Years' War, which devastated central Europe in the early 17th century, was followed by the Treaty of Westphalia and formation of the system of secular, sovereign states. The Congress of Vienna after the Napoleonic Wars brought agreement on keeping the peace through the Concert of Europe or Congress System. The First World War gave rise to the Versailles Treaty and the League of Nations with its aspiration to end all war. Out of the Second World War came the United Nations (UN) and its Charter committing member states to the limitation of war and search for peace overseen by the UN Security Council.

The death and upheaval involved in great wars have therefore repeatedly focused attention on the political organization of the world – on its political order. Their occurrence has often been attributed to failure in its design. However, the search for solutions to the problem of war over the past two centuries has also been propelled by technological advances that have resulted in ever more lethal weapons and comprehensive forms of warfare. From the Crimean War onwards cooperative efforts have been made, some succeeding and some failing, to constrain the manner in which states engage in warfare and use technology for military purposes. In various conventions and treaties, states have elaborated rules of war, as in the Geneva and Hague Conventions, and sought to ban certain types of armament, as in the Geneva Protocol of 1925, which prohibited the use of chemical and bacteriological weapons.

These two impulses – to alter the political organization of the world and to regulate warfare and its technologies – were immediately evident after the atomic bomb's vivid display in the destruction of Hiroshima and Nagasaki in August 1945. Arriving at the end of a war of unprecedented range and ferocity, the atomic bomb seemed to portend an even greater catastrophe. Let it loose within the anarchic states system and humankind might find itself embarked on a journey 'from the depth of night to deepest night', to borrow a phrase from a novel of the time.<sup>1</sup> In history, societies had survived and recovered from devastating wars. They had even gloried in them. This was

different. Everyone and everything might perish in a war fought with nuclear weapons.

How to respond to the sudden emergence of this revolutionary technology became the subject of intense study and debate immediately after Hiroshima. Some advocated world government.<sup>2</sup> Great wars would belong in the past if rivalry between states and their drives to acquire weaponry could be ended. Other more pragmatic voices called for the submission of nuclear technology to an encompassing international control, removing it from warfare without tinkering with the states system's basic design.<sup>3</sup> The gates of the city should be opened to the civil use of nuclear technology, under a strong form of global governance, but firmly closed to its military appropriation. Still other voices called for the development of nuclear weapons into primary instruments of deterrence and power projection, citing their unparalleled capacity, suggested by the Pacific War's abrupt conclusion after Hiroshima and Nagasaki, to influence the behaviour of enemies.

These last voices became the most influential as the East–West rivalry and its alliance systems took root, and as the development, production and deployment of nuclear weapons were institutionalized in the US and USSR. Henceforth, states and their leaders would be confronted with a less radical but still extraordinarily difficult political task. Now that nuclear weapons were present in the largely unaltered states system, how could an international order, or set of orders, be established that would give confidence in human survival, attain broad international legitimacy, bring stability rather than incessant instability to relations among states, and satisfy their individual and common interests?

The quest for international order in the nuclear age is the subject of this book. My starting point is that, beyond basic survival, the achievement of *order* is – and has to be – the pre-eminent and perennial concern of states, and especially of the great powers among them, given the existence of this ultimate instrument of destruction and symbol of state power. Deterrence, non-proliferation, arms control, disarmament, counter-proliferation and the other common foci of international nuclear politics and discourse are aspects of the quest for order rather than primary objectives that can stand on their own. Nuclear weapons created an imperative within the states system. It placed the creation of order of an inclusive and comprehensive kind at or near the centre of global political inquiry and action.

This emphasis on order has been shared by most of the notable thinkers and practitioners of the nuclear age. It is telling that the first great book on nuclear politics and strategy, *The Absolute Weapon*, which Bernard Brodie edited in 1946, carried the sub-title *Atomic Power and World Order*. Wise observers have nevertheless understood that the pursuit of order in this context is inherently problematic, will always be contentious and entail political struggle, has to operate simultaneously at several levels (global, regional and local, inter-state and intra-state) and can probably never end. Pierre Hassner's reflection on the 20th century is cautionary: 'In this

century, we have discovered the fragility of humanity, in both senses of the term: on the one hand the fact that humanity could be destroyed by nuclear weapons, on the other that its conventions and moral codes could be blown apart by violence.’<sup>4</sup>

A number of questions follow when order is placed at the centre of inquiry, setting aside its definition for the moment. How has the problem of international order, and specifically of international *nuclear* order, been conceived, and what ‘solutions’ have been proposed, adopted and rejected? How have the conceptions and institutions of international nuclear order evolved and related to the wider international order? What forces and which actors have shaped them how, when and why? Why have the development and periodic redevelopment of this order been so difficult to negotiate? Why was the decade of apparent ‘progress’ after the Cold War’s end – involving, among other things, diminished reliance on nuclear deterrence, the conclusion of arms reduction treaties, the broadening and deepening of allegiance to the Nuclear Non-Proliferation Treaty (NPT), reform of the international safeguards and export control systems, and engagement of the UN Security Council in the enforcement of pertinent treaties and resolutions – followed by a decade of equally apparent ‘regress’. One has only to mention India, Pakistan and Israel, North Korea and Iran, the Bush administration’s embrace of regime change and preventive war, A.Q. Khan’s illicit supply network, 9/11 and the threat of nuclear terrorism, the Iraq war, and missile defence to conjure images of disorder and dissension.

The book is being written against the background of anxiety that, rather than regress being followed by progress in a typical action–reaction cycle, it will be succeeded this time by an unstoppable descent into a more profound and dangerous disorder. There are warnings that Cold War-style rivalries and arms races are returning, especially in Asia and the Middle East, with the complication of multiple competing states rather than the Cold War’s bipolarity; that nuclear proliferation, now possibly including the acquisition of nuclear materials and technologies by non-state actors, is accelerating and may be facilitated by a worldwide expansion of investment in nuclear power for electricity production; and that developments in technology and its global diffusion, combining with the weakness and corruption of many states and their governments, are beginning to defeat capacities to exercise effective regulatory control and to shape behaviour through international law.

Fear of this encompassing disorder is provoking opposite responses. One is to reach for and sharpen the sword: to maintain and strengthen nuclear deterrence and, in states that lack nuclear forces and the reliable protection of great powers, to hedge against proliferation in their neighbourhoods by acquiring capabilities, sometimes under the mantle of civil development, that will allow them to switch on weapon programmes if they are needed. The other response is to press for complete nuclear disarmament. An increasing refrain is that the dangers and instabilities

created by the presence *anywhere* of nuclear weapon capabilities now exceed any conceivable national or collective advantage, including any advantage gained from deterrence. The total elimination of nuclear weapons is claimed to be the only coherent option available to states. These opposing responses were expressed around the same time in statements by two groups of distinguished retired public servants in the United States and Europe. In an article of January 2007 in the *Wall Street Journal*, four eminent retired US statesmen called on governments to make the worldwide elimination of nuclear weapons a serious goal, a call echoed by President Obama in his Prague speech of April 2009 and by many other political leaders. In contrast, five former chiefs of armed forces encouraged, in a report submitted to the North Atlantic Treaty Organization (NATO), a recommitment to nuclear deterrence as part of a 'blueprint' for reform of western military strategies and structures.<sup>5</sup>

### **The logics of nuclear armament, disarmament and restraint**

These reactions were, in fact, manifestations of two logics that have waxed and waned but always coexisted since the beginning of the nuclear age – the logics of armament and disarmament. The former logic has involved states seeking political influence and esteem through possession of 'the absolute weapon', seeking protection in the competitive international system through nuclear deterrence and trying to gain or nullify strategic advantage through the development and deployment of advanced weaponry. The latter logic has involved states and peoples seeking protection against the ultimate catastrophe of nuclear war, seeking stability where the diffusion and development of nuclear technology for civil or military purposes has threatened instability and arms racing, trying to negate the inequalities and insecurities entailed by the division of states into 'haves' and 'have-nots' and trying to deny non-state actors any access to weapon materials, expertise and technology that might be used to promote their political or millenarian goals.

From the outset, argument has raged over which of these logics has and should have primacy. 'Realists' have tended to claim that, along with all other forms of armament, nuclear armament is a predictable condition of the anarchic states system. It is an unavoidable consequence of the security dilemma and of states' desires to balance power and avoid coercion or attack. Insofar as disarmament occurs, it is pursued in order to strip other states of their capacities to challenge the great powers or to disturb their interrelations (the two logics are sides of the same power-optimizing coin). Opponents of these viewpoints have argued with equal conviction that using nuclear weapons to achieve security or advantage is irrational, given the immense dangers that are involved, and immoral, given the scale and indiscriminate nature of killing that their use in war would entail. Furthermore, they have emphasized that the path of armament is

a choice rather than a structural imperative, one whose appropriateness is called into question by the decision of most states to renounce, through membership of the NPT, legal rights to possess nuclear weapons.

In the event, neither logic has succeeded in ousting the other. States have not been prepared to allow nuclear weapons to become a common currency of warfare and international relations, being unwilling to place trust in the rational use of nuclear weapons everywhere to balance power, or to trust in the ubiquity of effective control of nuclear forces. They have rejected Kenneth Waltz's surmise that 'more may be better' and that nuclear proliferation could gradually extend the absence of war in the international system.<sup>6</sup> But nor have states, or at least a sizeable number of powerful states, been prepared to discard nuclear weapons and the prestige and deterrence value that have been attached to them.

Instead, the central question of the nuclear age has, I shall argue, been how to draw states into another logic representing a pragmatic middle way – *a logic of restraint*. This has entailed accepting the presence of nuclear weapons in the world 'for the time being' whilst placing limits on their possession and usage, without unduly impeding either deterrence or the diffusion of nuclear materials and technologies for civil purposes. Installing and embedding this logic and rendering it tolerable have lain at the heart of the problem and project of nuclear order. In the face of various counter-currents, inherent predicaments and the constancy of change, the great question has been how to establish an international nuclear order embodying restraint that is and can remain both effective and legitimate, and that can therefore satisfy the interests and normative predilections of states of many sizes and kinds. In addition, how could that order satisfy basic human concerns about survival, about the moral life, and about living with secretive technocratic agencies that had attained extraordinary powers to kill, however responsibly they might behave?

That such an order could be constructed appeared, on the face of it, unlikely. It asked states to accept the drawing of a line between those that could and could not possess and use nuclear weapons, accept that legal rights and obligations would differ substantially on either side of the line, and thereby tolerate an institutionalized injustice. It asked nuclear-armed states and their political and military agencies to accept limitations on the usage of nuclear weapons in warfare, and limitations on the practice of deterrence, when strict military interests might advise otherwise, and when deterrence unavoidably relied on threats to use the weapon and on the adoption of decision-making processes that could not be collective and democratic in any sense. And it asked states to accept a broad diffusion of nuclear technologies and materials for application in the production of electricity or of the radioisotopes used in hospitals, when many of those technologies and materials were inherently 'dual-use', creating opportunities for ambiguity and deception through claims of innocent purpose, and when there were few secrets remaining on how to design a functioning nuclear warhead.

Although it always had its critics, an idea did form on how to shape an international nuclear order encompassing all states, whatever their character, capabilities and position in the international hierarchy. That idea is captured by the phrase ‘progressive limitation’. Raymond Aron expressed it well, if with a twist at the end of later relevance to the NPT: ‘[History] has gradually brought a certain order out of the anarchy common to all international systems, an order favouring the limitation of armed conflicts, subject to an oligarchy camouflaged by democratic phraseology’.<sup>7</sup> Despite the eternal competition among states, nuclear weapons would be used only *in extremis*; nuclear deterrence would become increasingly although not suffocatingly rule-bound through instruments of arms control; the norm of non-proliferation would become embedded as a growing band of states renounced their legal rights to possess nuclear arms and submitted their renunciations to stringent international verification; and the states already possessing nuclear arms would, as conditions improved and confidence grew, and in recognition of shared obligations, take steps to reduce their arsenals and eventually to re-establish a ‘world free of nuclear weapons’. Perhaps not coincidentally for the United States, the main architect of this order, the idea of progressive overcoming was redolent of the Christian story of original sin (the nuclear weapon’s invention, Hiroshima and Nagasaki) precipitating the fall (the Cold War) followed by eventual redemption (through political transformation and the weapon’s elimination).

Whatever this story’s relevance, the notion that the problem of nuclear weapons was capable of progressive limitation despite the anarchic nature of the international system gathered support. It attained authority and substance in three particular periods: immediately after Hiroshima and Nagasaki, when some of the means by which restraint could be instituted were imagined; during the 1960s and 1970s, when, among other things, the Soviets and Americans engaged seriously in arms control and the emergent order’s central vessel of norms, rules and political understandings – the NPT – was negotiated; and in the decade that followed Gorbachev and Reagan’s summit at Reykjavik in 1986, when the East–West conflict and arms race subsided, a nuclear-armed superpower (the USSR) collapsed and its political and military fragments were reconstituted, many nuclear weapons were removed from service and destroyed, the NPT’s membership and authority expanded and much else happened that gave hope that the threat of nuclear war might permanently be removed.

### **Images of disarray**

In the mid-1990s, no one predicted the disarray that lay ahead. A significant part of this book will be occupied with trying to understand why such an apparently promising situation turned, in a very short time, into the crisis that is talked about today. We shall find that it arose from a cocktail of developments, of which three deserve brief mention here.

Firstly, changes were happening in the international system, including globalization in various social domains, the weakening of many states, the emergence of radical movements prepared to use mass violence to achieve their aims, and the intensification of conflict in some regions, notable among them the Middle East and South Asia. These changes fuelled anxieties about nuclear proliferation and the aggressive purposes that nuclear technology might serve. Secondly, institutions supporting the international nuclear order proved unable to respond effectively enough to challenges that emerged in the 1990s, notably involving the attempted break-outs by Iraq, North Korea and Iran and break-ins by India and Pakistan. Weaknesses in the international safeguards and export control systems were exposed and the UN Security Council became divided over issues of intervention in the nuclear and other contexts. Thirdly, a rebellion developed within the United States against the institutional form that the international nuclear order had adopted, under US leadership, over the previous decades. This order was, in the view of its critics, more than ineffective. It was uncongenial to a United States which, in its 'hegemonic moment', should replace it with an order and ordering strategy that gave truer expression to American power, interests and values. The rebellion was already brewing during the Clinton administration's time in office, and 9/11 provided the conditions in which a radical shift in policy, rooted in a hierarchical, transformative conception of order, could be orchestrated. In the event, few dragons were slain, international institutions upon which everyone still relied were imperilled and the United States' own authority was weakened.

In the face of an apparent drift into dissension and disorder, it has recently been tempting to represent the past, present and future as a rise and fall of international nuclear order – a waxing and waning of the logic of mutual restraint – entailing a transition from a world-with-a-few to a world-with-many nuclear armed entities if decisive actions are not taken to arrest the decay. The metaphor of the tipping-point has become popular, implying irreversible movement into a different and much less congenial world where the nuclear weapon will become, if not exactly a conventional weapon, then an instrument of warfare and political game playing that is no longer confined to a small number of actors.

What can be observed is a struggle to stem this tide and orchestrate a shift in the opposite direction – towards lower levels of armament held by fewer nuclear-armed states, and back to ordering strategies that emphasize balance, mutual obligation and restraint, and through the cooperative strengthening of regulatory instruments of control. It has involved renewed calls for arms control, efforts to revitalize the NPT and demonstrate greater respect for its bargains, an attempt to strengthen and universalize regulatory instruments, and the United States' return to multilateralism under the Obama administration after the previous decade's sobering experiences. This return may be considered to confirm Daniel Deudney's contention that the default international politics in



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