

THE ANNUAL REGISTER

FOR THE YEAR 2008

THE ANNUAL REGISTER 250TH EDITION: A PERSONAL HISTORY

The 250th anniversary of The Annual Register is marked with a specially commissioned piece from M.R.D. Foot, b. 1919, army officer 1939-45, professor of modern history at Manchester University 1967-73, who served as the Royal Historical Society's representative on the advisory board of The Annual Register from 1972 to 2002. The article examines the history of the AR, concentrating particularly upon the post-war years, and assesses the significance of this historic publication today.

THIS is the 250th volume of *The Annual Register*. The Accademia dei Lincei in Italy has been publishing learned articles since the late Renaissance, and both the *London Gazette* and the *Proceedings of the Royal Society* are nearly a century older than *The Annual Register*; but even in this austere company the AR can hold up its head as a lasting contribution to humankind's understanding of the world in which it lives.

Edmund Burke, founder-editor of *The Annual Register*, wrote the original volume, covering 1758, which appeared in 1759. Every calendar year since has had its own volume. There were several rival versions of the AR in the late 18th century, one or two of them copying precise details of the original, down to the publisher's own title-page symbol; their existence forms a librarians' nightmare. But by the early 19th century there was one undisputed title, which has continued uninterrupted to the present day.

For the 200th edition, covering 1958 and duly appearing in 1959, Asa Briggs wrote a foreword in which he laid down the role of *The Annual Register* as an instance of contemporary history, safely renewed from year to year. It continues to provide a first serious historian's look at each calendar year's events, with addenda to establish the particular flavour of each year. Its authorship is now multiple—84 was last year's total of contributors—a necessary proliferation since Burke's day, when the editor wrote virtually the entire volume himself.

In 1947 a new editor, Sir Ivison Macadam—who succeeded Mortimer Epstein, editor since 1920, who had just died—introduced an advisory board, the members of which were to be nominated by various learned societies. Macadam explained,

in his preface to the 1947 volume, that this innovation was “a recognition of the need for specialisation in these complicated times”. It was my own honour and privilege to succeed Professor W.N. Medlicott as the Royal Historical Society’s member of this board, on which I had the delight of serving for over 30 years, thus acquiring some insights into the AR’s editorial process. The board meets regularly with the editor and the publisher, to discuss all aspects of the title, including the recruiting of contributors and the distribution of subjects in the forthcoming issue. The editor is usually glad of the board’s advice, but retains responsibility for the content, and uses his own initiative to fill in any gaps that accident may open up.

Over the years, the general body of contributors has built up some degree of collegiate feeling and has the opportunity to express this to the advisory board and the editor at an annual gathering over a dinner. Most of the AR’s contributors are academics or journalists; all of them are experts in their field. They share a belief that the AR is of lasting benefit to scholars. The body of contributors is in constant slow flux as the editor seeks to maintain and improve its quality; yet the book is remarkable for the consistency of authorship. Several of the AR’s current contributors have been associated with the title for more than a quarter of a century, and a handful for even longer.

Necessarily, the AR deals with the recent past, rather than with prospects for the future (although this anniversary edition does include a special forward-looking piece by Richard O’Brien, which follows this retrospective essay). *The Annual Register* reckons to provide an informed digest of what the world’s news media have presented as the principal events of the relevant year, before even contemporary historians have themselves published much that bears on the subject; exactly as Lord Briggs (not then ennobled) pointed out. As a rule, the AR provides the earliest authoritative historical coverage for each year. Unlike much of the news media, it rarely seeks to prophesy—its contributors are mindful of Macaulay’s remark that prophecy in politics is the most foolish occupation open to man—but it does record the forebodings of others. The environment chapter in 2003, for instance, gave prominence to a German report on the ghastly effects of the disappearance of the Gulf Stream, should that result from disproportionate carbon emissions, which upset the balance of nature. That humankind may now be teetering on the brink of an ecological catastrophe can have been inferred from the AR’s pages for at least a decade.

Later, more fully informed historians, working on archives that may not be released for 30 or 50 years or longer, may be able to modify or even to contradict the views that the AR puts forward, but those views remain as a testimony at least to what each age thinks of itself: what seem, at the time, to be the most impressive changes in world history and in the ways in which life is lived. The growth and decay of political parties can be traced in the AR’s pages; so can the careers of the most eminent public men and women. Part of the AR’s unique value lies in its ability to set these figures in their context and record who was thought significant at the time.

Even the most ardent apostles of Fernand Braudel, who drew attention to the *longue durée* rather than the transient event as the dominant factor in history,

should be prepared to admit that single events or single personalities do, now and again, shift the pace and direction of human development. The 20th century's history would have been entirely different had it not been for the presence of Lenin, Hitler, Einstein, Churchill, Roosevelt, and Mao. Similarly, social and industrial development sometimes stems from the work of single inventors and entrepreneurs, although the importance of these is not always apparent to contemporary observers.

Though the first earth satellite, the Soviet *Sputnik*, was duly recorded in the edition for 1957, not every major invention makes its mark in the AR immediately, because it is not always clear to the contemporary historian which innovations will endure. The Stockton to Darlington railway, now hailed as the opening of the powered railway age (there were railways, or at least rutways, in stone age Somerset), passed unnoticed in 1825, though the opening of the line from Liverpool to Manchester in 1830 attracted full comment. In fact, this was largely on account of the accidental death of the man who had secretly been running British spies into France in the Napoleonic wars, and is much better known for how he came to die: William Huskisson. Michael Faraday, on whose discoveries in electricity much of contemporary life is based, received a glowing obituary in 1867, but little other notice. Telephone, typewriter, bicycle, motor car, powered aircraft have made similar unheralded approaches to daily use. The Wright brothers' first powered flight in 1903 was unrecorded for that year, though Blériot's flight in an aircraft from Calais to Dover in 1909 was recorded (as had been a flight by balloon in the opposite direction, in 1785). I recall a meeting of the advisory board at which a new scientific adviser remarked that much of British industry was, by the time he was speaking, computer-regulated, but he had yet to see in the AR any mention of computers at all, a defect he remedied at once. The Internet was first discussed in the 1993 volume although, as the author of the information technology article noted, "the Internet was scarcely new", having evolved from a computer network established by the US defence department in 1969.

The ownership and copyright of *The Annual Register*, even before Burke's death, lay with its publishers, a consortium at first, settling down for over a century with the great house of Longman's. Longman's eventually became part of Pearson plc, a large publishing conglomerate, but the AR retained its Longman imprint. However, in 1995 the AR, along with the rest of the Longman current affairs list, was transferred to Cartermill, a division of Pearson, which was interested primarily in electronic publishing. After languishing for three years neglected by Cartermill, the AR was sold to Jonathan Hixon, a US publisher, as a minor part of a deal involving his purchase from Pearson of *Keesing's Record of World Events*.

Ructions followed. The chairman of the advisory board, the eminent H.V. Hodson, was unhappy that the AR had fallen into American ownership. Mr Hodson had succeeded Sir Ivison Macadam as the book's editor and chairman of the advisory board in 1973; in 1988, Mr Hodson had been succeeded as editor by

Alan Day but he retained, until his death in 1999, his position as chairman of the board, a post in which he was succeeded by Dr D.S. Lewis, the editor of *Keesing's Record of World Events*. Meanwhile, relations were deteriorating between the AR's new publisher, Mr Hixon, and its editor, Mr Day, with the result that the latter's contract was not renewed when it expired in 2000. Several contributors, including the invaluable Verena Hoffman, the assistant editor, resigned in sympathy with Mr Day. Most felt that the AR—as the Duke of Wellington once said of the King's government—must be carried on and held to their tasks. The AR survived this rocky period, with Dr Lewis stepping down from the chairmanship of the advisory board to take over as editor, the post he continues to hold, and James Bishop, the longest serving member of the advisory board, having joined in 1971, taking over as its chairman. The editorial capacities were broadened with the creation in 2002 of the post of deputy editor, which continues to be filled by Dr Wendy Slater.

Although he had not set out to acquire the AR, the new publisher took seriously his duties as custodian of such an historic title and was instrumental in making available its archive in electronic form. Indeed, Mr Hixon's interest in electronic publishing made the AR available to a wider readership than ever before. Under his stewardship, the entire 250-year archive was digitised and made available electronically to libraries and institutions throughout the world. In addition to holding an electronic archive, some libraries also continue to maintain their complete printed runs of the AR. The London Library, for example, shelves *The Annual Register* in print on either side of the fireplace of its main reading room in St James's Square, at hand for any scholar who needs to consult it.

At the end of 2005, Mr Hixon sold the AR to its current US publisher, ProQuest (formerly CSA). Whilst the company's headquarters are in Washington, DC, it has major branches in Oxford and Cambridge in the UK. Thus, Harry Hodson's dying wish—that the AR be brought back into British hands—has been nominally accomplished. The book's tone remains resolutely British, rather than American, although in recent years it has become more international in outlook. It has, for example, added to its longstanding listing of the British cabinet a list of the members of the cabinet of the president of the United States and, more recently still, a list of the members of the European Commission and the Nobel prizewinners for each year.

During the past half-century, there has been a major shift in world politics, seldom noticed by the news media: the number of the world's independent sovereign states has more than doubled. There were fewer than 80 in 1958; there are now more than 160. An after-effect of the 20th century's two world wars was that the governing elites of the world's great empires lost their will to govern. The Hohenzollern, Habsburg, Romanov, and Ottoman empires all dissolved in 1917-22; neither Hitler nor Mussolini could sustain their imperial attempts; the British and French empires had been broken up by the early 1960s, the Belgians gave up their Congo; and the Soviet empire that had succeeded the Tsars had collapsed by the end of 1991. Today's Russia keeps some degree of control over several successor

states and the USA enjoys huge influence in many parts of the world; but the general effect of the dissolution of empires has been the multiplication of small states, each with its own ensign, head of state, postage stamps, national anthem, and other symbols of independence.

It is not the first time in world history that there has been such a shift: think of the kingdoms that succeeded to Alexander the Great's empire after his unexpected death in 323 BC, or the proliferation of bodies that resulted from the collapse of the Roman empire in the west in 476 AD, or the many republics in South America that succeeded Spanish and Portuguese rule in that continent. The shift in the 20th century has been described as the fall of colonialism. Today, colonialism has a bad world press, deriving from Lenin's powerful pamphlet, *Imperialism: the highest stage of capitalism*, of 1916, which rested in turn on J.A. Hobson's book, *Imperialism: a study*, published in 1902. Far too few people have read the challenge to them both contained in Lionel Robbins's *The Economic Causes of War*, because Jonathan Cape published it at the outbreak of another world war in 1939 and it got few reviews and too little notice. I just overlapped with Robbins on the AR's advisory board, and can testify to his extraordinary blend of common sense and historical insight.

The AR makes it a rule to cover every independent state in the world. (The current editor must surely be glad that he does not have to cope with each of the 300 or so statelets that, before Napoleon's day, composed what in 1871 became a single Germany.) The AR's coverage of the world economy has grown steadily for about a century; the Royal Economic Society nominates a member of the editorial board, who helps to ensure its quality. As editor, Mr Day, an economist by background, made an important innovation in placing at the head of every country article a summary giving each country's size, population, form of government, head of state, capital city, language, currency, membership in main international bodies, and estimated gross national income per capita. This has increased the AR's value for diplomats, economists, commentators, and students of international affairs. The summaries exemplify the AR's working principles: accurate information, providing the foundation for informed and stylish analysis.

For most of the 19th and early 20th centuries, the AR devoted its early chapters to a summary of the course of English politics, and from about 1890 to about 1950 a sizeable section on the British Empire followed, before a chapter or two on "foreign history". Sir Ivison Macadam, who long worked at Chatham House (the Royal Institute of International Affairs) and directed it in the 1950s, as well as Mr Hodson, a fellow of All Souls and a former editor of the *Sunday Times*, both had worldwide interests and shifted the AR to a less wholly English outlook. US ownership has accentuated this welcome trend towards a more balanced survey of world affairs. The AR's range of contributors gives it a multiplicity of perspectives, which means that its growing global readership has the benefit of a view of the world from beyond specific country borders.

Moreover, since the foundation of the League of Nations in 1919 the AR has devoted increasing space to international organisations, now numerous. The book also conveys the flavour of each year by noting major achievements and trends in

literature, music, drama, opera, art, architecture, and sport, as well as science, religion, the law; and has added sections on film, radio, and television as they have developed. It takes care to shun the passion for celebrities that affects some of the news media, though great film stars such as Charlie Chaplin or Marlene Dietrich receive their entries in the longstanding obituary section. This now covers figures of genuine weight in the world; it used to be almost confined to royalty and members of Society. It now includes architects, judges, trade unionists, generals, actors, savants, authors, entrepreneurs, editors, singers: many sorts of personage of an adequate degree of distinction. Among these obituaries, one gem deserves lasting recall: the conservatoire at Milan once observed that the young Giuseppe Verdi, one of its unsuccessful students, had “no musical talent”.

The latest four editors (Macadam, Hodson, Day, and Lewis) have transformed the AR from what it had been from Burke’s day to Epstein’s—an English-centred summary of each year, with excursions on the main events abroad—into a much more global analysis, by experts, of worldwide developments. The principal trends in international politics—such as the dissolution of the Soviet Union; the inability of the USA to impose itself as the single superpower; the emergence of China and India from the wings onto the superpower stage; the diminution of Great Britain from great power to moderate standing; the intermittent authority of the United Nations, established to replace the League of Nations in 1945—can all be observed in the AR’s pages. So can the growth of terrorism, much enhanced in its danger by the rapidity of modern communications, as well as by the fanaticism of some of its practitioners. The arrival of the suicide bomber has upset a lot of security equations, which now need reformulating. A potential suicide bomber was once ready to attack Hitler, but was frustrated by one of the Fuhrer’s abrupt changes of programme; the genre has developed a good deal since. Moreover, the international trade in drugs, which goes far back, even before Burke’s time, has now proliferated so far that it has become entangled with other criminal enterprises and helps to supply them with money.

The 20th century’s two world wars, which it was conceited enough to call the first and second—there had been plenty before—received, of course, the AR’s full attention, as did the consequent revolutions in Russia, China, and elsewhere. (The 1917 volume had an engaging reference to “a certain M. Trotsky”, described as “the incarnation of Bolshevism”, who was to be heard of again.) The conclusion of the world war of 1939-45 was brought on by the first use of nuclear power in anger, at Hiroshima and Nagasaki in 1945. The last half-century has been the age of the hydrogen bomb, a weapon that makes the bombs used at Hiroshima and Nagasaki look puny; and the unspoken assumptions on which current international politics rest include the knowledge that these bombs exist, that several independent powers possess them, and that it is not inconceivable that they might one day be used. It is to this knowledge that an unusually long period of peace (at least nominal peace) between the world’s great powers is due. No sensible statesman is going to expose his country to bombardment by H-bombs. Unhappily for the world, not all leading statesmen are always sensible.

However, the post-1945 peace led to wars by proxy, with client states engaging in non-nuclear conflict, encouraged, armed, and advised by larger powers. These campaigns have been fully covered by the AR. The book has also reported on the more elusive asymmetrical combats between sovereign states and guerrilla fighters, motivated by a range of ideologies, from right to left, encompassing criminals, fanatics, and those motivated by the desire for national liberation. The resources of conventional armaments are not always enough against the angry temper of an aroused nation, as England long ago found out in Ireland, and the United States learned again in the 1960s and 1970s in South East Asia.

One of the great shifts in the international economy since the last world war has been the emergence of the oil-owning states of the Middle East as dominant influences upon much of world trade and development, because of the world's industries' reliance upon oil as a source of power. This domination cannot last for ever: either the oil will run out, or alternative sources of power will be developed, or both, before long. For now this imbalance remains, further complicated by religion, geography, and the recrudescence of piracy off the Horn of Africa, close to a major oil shipping route. These are all issues whose significance the AR's writers must try to assess, even as they are evolving around them. Despite the inherent difficulties of this task, the AR's experts frequently succeed with distinction, as illustrated by Paul Rayment's article on the world economy in the volume covering 2007. Even before it was clear that the world was entering a recession that threatens to be as severe as that of the 1930s, Mr Rayment put his finger on injudicious lending by banks to "subprime" mortgage holders in the USA as the start of the current rot. Taxpayers the rich world over will have to bear the consequences of this recklessness for some years yet.

For half a century it has been the task of the advisory board's representative from the Royal Historical Society to produce brief extracts from earlier volumes of *The Annual Register*, to remind readers of the AR's continuous coverage of the past. Philip Bell, senior research fellow at the University of Liverpool, in the 2008 edition picked from the volume for 1857 the view that the eruptions in India that year were not "a merely military mutiny...but something more". This is an issue still debated among historians, but worthy of notice as an instance of the AR's capacity for insight. The same perspicacity was manifest in the AR's recognition of Nazi Germany's anti-Semitic legislation in the mid-1930s. The passage from legislation to annihilation was marked by several gloomy reports in 1942-44, at a time when there was little public knowledge of the Holocaust. When the extent of the Nazi crime received worldwide attention in 1945 with the liberation of German concentration camps, the AR estimated the death toll as at least 4 million.

The AR has also consistently recorded the lighter side of human affairs. The sports covered within its pages have varied with the taste of the times. The Oxford and Cambridge boat race, first rowed at Henley in 1829, had, by this writer's childhood, become a principal London festival. A report of the race has sometimes taken up several pages, but in the volume for 2007 rowing did not appear in the sports chapter at all. In the 1890s, when Lord Rosebery's horses twice won

the Derby while he was prime minister, horse racing got plenty of attention, whereas in 2007 it got less than a page. When the Olympic games were revived in 1896, they received brief notice, with most attention centred on the long distance race, now known as the Marathon, which celebrated Pheidippides's original run from Marathon to Athens in 490BC. It was won by "a young peasant named Louis, from the village of Amarusi" in two hours and 58 minutes. In 1936 the games were only noticed as a great propaganda triumph for Germany, then already under Nazi domination.

More than 50 pages in the AR for 1851 went on listing the prize winners at the Great Exhibition in Joseph Paxton's Crystal Palace in Hyde Park. The same issue included over 30 pages of births and marriages, of those in or on the edge of Society, a practice long discarded by the book's modern editors. The Oxford and Cambridge class lists for the BA degree were then included as a matter of course. Much of the chronicle sections of mid-19th century *Annual Registers* were taken up by reports of natural disasters and by details of criminal trials: valuable material now for social historians and fascinating for the general reader. The Whitechapel murders of 1888, for instance, were noted briefly, but not attributed to Jack the Ripper, who claimed in letters to Scotland Yard to have delighted in them and whose exploits remain a lurid sensation to this day; how like the AR not to have used his sensationalist moniker.

In the past half-century it has become possible for the AR to include illustrations; most recently, illustrations in colour. This has been a welcome development. When colour illustrations, then much more expensive, were mooted in Longman's day, the publisher threatened to close the publication down if the advisory board persisted in requesting them. The book's current editor, backed by the publisher, has sought to use memorable photographs to highlight characteristic moments in each year, making the book more palatable to a visually more literate readership, less used than were our forefathers to handling long columns of dense print.

Everyone who writes for the AR is aware of its historical importance. Contributors to *The Annual Register* are writing for the record, and must strive to be as accurate as possible, even though they are routinely grappling with trends and developments, which are as yet unclear or incomplete. As A.E. Housman once reminded us all, "accuracy is a duty and not a virtue": a doctrine not often enough remembered by today's news media. Nevertheless, although authoritative in tone and content, in its modern format the AR is anything but dull or predictable. In addition to bringing expertise to bear upon their subjects, the writers frequently display a degree of wit and humour, which entertains as much as it informs. In this respect, and despite its great evolution over 250 years, the AR remains true to the founding principles of its first editor, Edmund Burke. Long may it flourish!

M.R.D. Foot

THE ANNUAL REGISTER 300TH EDITION: A PERSONAL FUTURE

To mark the 250th edition of The Annual Register, we publish a piece of informed speculation about how the AR—and the world—might be 50 years hence, on the occasion of the book's 300th edition. The article by Richard O'Brien, Partner, Outsights, who has been the Royal Economic Society's representative on the AR advisory board since 1995, looks at the emerging trends of 2008 to suggest potential futures. The piece is written from the perspective of an AR reader in 2059.

ONE of the great advantages of modern publishing is that we can instantly compile our own personalised version of *The Annual Register* on a theme of our choice, drawing on the erudite essays that are constantly fed into AROnline. This year, I have chosen as my theme "Spaces in the past 50 years". In true AR tradition, my personalised volume is based on the finest scholarship and is written in "plain English". It also always throws in enough anniversaries to remind me how long some things take to happen and how quickly the world can advance. My personal themed AR compilation supplements my regular AR from AROnline, which is also "personalised" but where the search engine decides what interests me: this at least keeps the information flow down to a manageable amount.

To develop my theme of "Spaces in the past 50 years", I have chosen to look at five spaces that extend my vision beyond a simple geographical review of the world. I have chosen to look at the new spaces that we now populate (on Earth, beyond the Earth, and in virtual reality); the spaces that we have had to abandon; and the developments in understanding what goes on inside our heads, in our "inner space". Hopefully, my personalised AR will give me some good ideas to discuss tomorrow evening with my great grandchildren, who somehow seem to be always one step ahead of me.

EMERGENT SPACES: THE POLES AND SIBERIA. Most of the coverage that the AR has given to the great emergent spaces of the 21st century—the North and South Poles and the Russian Far East—has been due to three interlinked reasons: governance, natural resources, and climate change. Fifty years ago there was intense focus on the melting Arctic ice, at the time the most visible manifestation of the impact of climate change as polar bears migrated and ice collapsed dramatically onto the last few tourist ships plying the region. We discovered our planet's climate history stored in the polar ice core readings. The melting of the polar ice, happening faster than expected, raised our sea levels and, most controversially, now does seem to be taking northern Europe closer to a new ice age, scientists always having been sharply divided on whether the North Atlantic "conveyor belt" of warm air would, indeed, shut down.

The Arctic governance question has been intense, ever since Russia dramatically planted its flag on the seabed 50 years ago (see AR 2008, p. 109). The Ilulis-

sat Declaration of 2008 (see Documents) between the five coastal states of Canada, Denmark, Norway, the Russian Federation, and the USA, agreed that the issues would be worked out within current legal regimes (such as the Law of the Sea Convention, the International Maritime Organisation, and the Arctic Council), as opposed to under a new regime or “Arctic treaty”. Whilst that has held up as a framing principle, the competition for Arctic resources has involved many more countries and allies—not least the EU, through Denmark, its sole representative amongst the “Arctic five”—because, unlike Antarctica, there has been little land emerging from the ice. Early estimates of the Arctic accounting for almost one-quarter of the world’s undiscovered, technically recoverable energy resources have, as always, proven very wide of the mark, and competition has intensified as the world’s resources have become closer to their much predicted “final depletion”. Policing the fabled Northwest Passage that opened in 2007 (see AR 2008, pp. 461, 465), bringing Asia much closer to Europe, has also had to be assured in a world of increasing sea piracy and crowded shipping lanes.

Literally at the other end of the world the change has been dramatic. The priest of Trinity Church, regarded back in 2008 as the only permanent resident of Antarctica (the population of which at the time fluctuated seasonally between 1,000 and 5,000), would have a hard time ministering to today’s population of 3 to 4 million, equivalent to around one-half to two-thirds of that of countries such as New Zealand, Ireland, or Denmark. For a human touch, I see that last year, in 2058, the first person to be born on the Antarctic landmass, (and, curiously, also the only person known to us to have been the first human born on any continent), returned from Argentina to celebrate his 80th birthday there. In four years time they are also planning to mark the 150th birthday of the first person to be born in the South Polar region itself. Indeed, as the AR celebrated its first quarter century in 1786, sealers on South Georgia were becoming the first semi-permanent residents of the region; and it was back in 1775 (when the AR was less than 20 years old) that Captain Cook was the first to see Antarctica. The continent has grown up with the AR (and, of course, “Antarctica” has been a separate editorial section in the AR for quite some time).

Inevitably, people, plus resources, and a landmass have raised the governance stakes. This year will mark the centenary of the signing of the first Antarctic Treaty (1 December 1959, see AR 1959, pp. 416-17), which has been the framework for intense debates in recent years. Antarctica remains a special place for the world’s scientists. Better access has cut the cost of research, but scientists complain about the changing conditions: no longer is it the pristine place un sullied by human habitation. Like the Arctic, the melting of the region has been seen as a major cause of the rising sea levels, whilst researchers, such as those at Cape Roberts, are learning much about our climate history from their ice core investigations, still important in trying to understand how mankind can alleviate climate change and what still lies ahead.

When the Poles were less accessible, the risks of serious conflict were limited, even between the major powers who could “afford” to travel there. That

has all changed. The major powers now struggle to police both regions, although, as a result, they have tended to reach settlements between themselves in order to focus on disruptive forces, to manage the influx of climate change refugees and resource speculators with easy access to technology, as well as to protect the wildlife diversity, itself changing, for climate change refugees are not only human.

The third great space to emerge from under the ice has been Siberia. Though it continues to be located entirely within one sovereign state, the Russian Federation, this has not diminished the governance or territorial controversies. As with other emergent spaces, control over the resources has been a key variable. At the advent of the 21st century, Siberia alone accounted for almost 90 per cent of Russia's natural gas production, 70 per cent of its oil and coal output, most of its reserves of non-ferrous and rare metals, and large amounts of explored chemicals. It had half of Russia's forests (many now consumed by fire), and more than half of its water and hydropower resources. Lake Baikal held 20 per cent of the world's freshwater reserves (whilst neighbouring China suffered from one of the world's worst water deficits). Retaining control over the region has been a challenge for Russia, not least as the Russians are now a minority in their own territory. If you visit today, you will notice that most of the population is Asian in origin, with the Chinese constituting the largest ethnic group. At first, much of the Chinese labour in the region was transient, but as numbers have increased more have stayed. The challenge of "dual integration" posed by President Vladimir Putin many years ago remains key: integration of this vast landmass and growing population into Russia, and of the area into the Asian region. In retrospect, that the integration has taken place without conflict has been a success.

The other success has been in tackling the great methane question. Fifty years ago, one of the enormous uncertainties was the impact of the methane—a gas with 20 times more impact as a greenhouse gas than CO₂—being released from the Arctic seabed and the melting tundra. As a resource, it was said to dwarf global coal reserves. Global co-operative investment in technology by the world's scientists, and in infrastructure by the energy industry and governments, has enabled much of the methane to be tapped and controlled in ways that were unforeseen in 2008.

Much of the region is physically changed from 50 years ago, as the tundra has melted and been replaced by the thermokarst landscape of rounded grass hillocks, the appearing and then disappearing lakes, the grass and scrubland, the landslips and exposed rocks. Access is still difficult, with the old infrastructure built on ice no longer usable and huge costs involved in connecting this space to the rest of the world, with the priorities lying in piping and transporting its resources.

DISAPPEARING SPACES. As the ice has melted, so coastal lands have "disappeared" below the sea. Low lying islands and the highly populated delta areas have been the first to be affected—Bangladesh, the Nile, the Chiang Jiang or Yangtze delta in China, the Godavari River delta in western India—areas where people have

been traditionally vulnerable. But it took a long time for people living by the sea, everywhere, to understand that their seas would rise too. With more than half the US population living in coastal cities, the magnitude of the potential “invasion” was slowly realised. It was not necessary to be hit by Hurricane Katrina (see AR 2005, pp. 121-24), or be already below sea level, to be at risk; much of urban life has been affected. The communities that have coped the best have generally done two things: assessing realistically the size of the threat and developing a comprehensive plan. Strategies for dealing with the threat have ranged from raising barriers, which produced some alleviation, to planned relocation, which turned out not to be so hard for those countries such as the USA, which has either built or remodelled 80 per cent of today’s buildings. The cost of rebuilding elsewhere, and better, clearly was not impossible, and it was sensible to build new capacity in safer areas for the additional millions in our cities. In the next 50 years the challenge will intensify in many ways, eroding coasts and the natural environment, not just our cities.

People are, however, seeking other ways of looking at the rise of sea levels, by starting to populate the sea itself. This idea has not really caught on yet, but as population and seas rise further then maybe 50 years from now we will have to think differently about the notion: we are still losing usable land to desertification, to falling water tables, and to mankind’s continued destruction of the quality of land. While some of the more dire predictions made in 2008 of the impact of climate change could be ignored as they concerned a date long in the future—2100—we now find ourselves more than halfway there.

OUTER SPACE. It is now just over a century since mankind achieved what once would have been purely a journey for the imagination: travelling into Space (a capital “S” is still warranted). Very recently, we have had a spate of centenary anniversaries. The year 2057 marked the centenary of the launch of the first man-made Earth satellite, the Soviet *Sputnik* (see AR 1957, pp. 468-70); in 2058 we celebrated 100 years since the first attempt at a direct hit on the Moon, the 100th birthday of the USA’s National Aeronautics and Space Administration (NASA), and the coining of the word “aerospace”; and this year, of course, marks 90 years since the first Moon landing (see AR 1969, pp. 376-81). Perhaps the initial leg of this journey was just over 150 years ago with the first powered flight in 1903. But since the flurry of the Soviet-US Space race, things seemed to slow down, budgets were cut, and Space became less important. With hindsight, we can see that this was a classic S-curve, where, after the first flurry of attention, and after the dramatic breakthrough and event, things settled down to consolidate, before the next advance was made.

Travel to Space has started to become routine, with civilians booking their tourism tickets and plans to develop space hotels. The famous nanotube Space elevator has been built. We have also seen 50 years of steadily pushing back the frontiers of our knowledge and achieving an even better familiarity with Space. Three dimensional mapping has helped people grasp the geography, while cheap microsattellites have slashed the cost of access to Space. We know so much more about the physical

attributes of the planets. We are now mining the Moon. Perhaps our familiarity with Space was raised several notches during the 2029 and 2036 close encounters with Apophis, the asteroid that threatened twice to collide with Earth.

We have extended our political and economic governance of Space. This has not been without its tensions, given the competition to lay claim to the resources of Space and the need to govern the territory where the world's communications network is located and where, now that access is so much easier, rogue elements could be devastatingly disruptive. It is also now 100 years since the first proposals were made to the UN to avoid Outer Space becoming a battleground. These were put into legislation a decade later, in 1967, with the Outer Space Treaty (see AR 1967, p. 143), which was modelled on its predecessor, the 1959 Antarctic Treaty, the first of these so-called non-armament treaties (see AR 1959, pp. 416-17). Keeping Outer Space conflict free in the past 50 years has been hard and the risks are clearly rising alongside the opportunities. Perhaps most disappointing are the new risks we have created, the immense Space debris problem not only constantly disrupting communications but also a greater potential danger to us than any asteroid.

INNER SPACE. If travel to Space was once a journey to the imagination, so also was the journey to somewhere much closer: into our minds, physically close, but far from being properly understood. Scientific revolutions have been truly phenomenal in the past 50 years, even if the famous "singularity" (the explosion of intelligence caused by self-improving machines) has not come to pass. We have been able to create artificial life. Robots are part of our daily lives and have "rights and responsibilities". Nanoscience has revolutionised the ways in which we can manipulate our environment. But one science that has truly taken us into uncharted territory has been neuroscience. Just as medicine floundered for centuries before the body itself was properly understood, so before the 21st century neuroscience was quite primitive. The real revolution for mankind, however, has come from the consequences of this development. Our understanding of how the mind works takes us so close to what we have labelled values, beliefs, or the soul, and challenges our own sense of personal responsibility. The advances have been shaped in combination with other sciences, such as the neuroimaging advances in information technology, the advances in biology and genomics, and the linking with behavioural sciences.

For the world's religions this has been as revolutionary as the advances in geology in the 19th century, when fossils challenged the stories of Noah's Flood and the theory of evolution challenged the Biblical story of the Creation. Already 50 years ago, as neuroscience began to be able to predict more of what people would think or do, our Nobel laureates were asking, "Is there free will after all?" Now we seem to take for granted our new knowledge about what we know: 50 years ago it was pretty clear that we were on the edge of some "tipping point". Coming alongside the new ability to create "artificial life"—the physical side of ourselves—mankind has truly been transformed.

In practical terms, it means that we can now treat and often avert many of the so-called diseases of old age, such as Alzheimer's and Parkinson's. This has proved crucial now that (in richer countries at least) we expect to live to at least

90 years and want to enjoy a full life. Becoming a centenarian is no longer so special, even though holding down a full time job at 100 is still quite remarkable. We are expected to work until 90 years old before we qualify for any full pension, although many people “retire” earlier if they have saved enough to be able to make that choice. We can now repair our brains with replacement parts, which have become as commonplace as other body part substitutes. IBM’s plan to create a “brain” by 2030, combining neuroscience with information technology, was completed well ahead of time. Again there has been a major practical advance: we can link our own brain signals directly to our computing equipment, now that we can identify the way in which particular brain signals work. It certainly seems to help those with brain injuries and the mentally impaired, where lost capabilities can be supplemented or “replaced”.

Some of our discoveries have perhaps not been a big surprise, but merely confirmed what we used to call “common sense” and observed behaviour. In the same way, the limited genetic information we gained some 50 years ago was no more predictive than just knowing about our parents and grandparents. Combined with other advances in cognitive psychology, genomics, and biology we can now manage behaviours much better: for example, drug additions can be both understood and treated. Perhaps predictably, this has not reduced our use of drugs, the variety of which has increased greatly, but only made us more liberal in their use, knowing that there is a “cure”.

Neuroscience has also taken communication to a new level: indeed, we now “talk to the animals” or, rather, we are better interpreting their sounds and influencing animals themselves. Animal rights groups have been strongly opposed to much of this work, especially that which has led to the greater use of animals in warfare. As ever, science has created new challenges for society simultaneously with the solutions that it has provided. Looking back, though, one great relief is that societies have at least not rejected science, something that has been a constant danger.

VIRTUAL SPACE: EVERYWHERE AND NOWHERE. The “net” is getting close to its centenary from its earliest creative days. Fifty years ago, it was well embedded in society, taken for granted in fact, and now we work in multiple worlds. In 2007, it was being said that “by 2050, the first child will be born that does not actually distinguish between the virtual world and the real world, because these virtual worlds will be that convincing.” Why did they think it would take that long? Whilst the success of the pioneering online commercial site, “Second Life”, was often dismissed with the counter-reaction of “get a life”, online activity soon became as acceptable as personal interaction, just as, over time, the telephone became a perfectly acceptable way of dealing with people.

It took a few more breakthroughs to get us where we are today. Embedding chips in everybody has been essential. First, it was made near essential as a means of monitoring and administering health to our bodies and of carrying private information and literally all that people once had to remember: a great improvement on a losable plastic card, memory stick, or any of the various devices one can see in

the online (virtual) museum. Secondly, data security has had to be well protected. It is still not perfect, but the legal world remains one step ahead of the illegal (yes, that distinction holds). Thirdly, socially we have had to accept that the virtual world is a truly alternative space in which to spend our lives. Fifty years ago “gaming” was one of the hot trends in information technology, creating new worlds in which people could play. In some senses, this was no different from the escapism enjoyed in films, art, and books for centuries; and, just as films and television were once believed to distort and influence people’s visions of reality, gaming became more than escapism, as people began to find it harder to differentiate between their real and their virtual lives. Meanwhile, so-called “reality TV” was often quite the opposite, with its artificially created environments in which to watch selected people play out a so-called life reflecting modern mores, a laboratory experiment deliberately cordoned off from the rest of us.

Ultimately, the big achievements of virtual space have been threefold. First, in the extension of who and what participates in the virtual world, linking humans with other forms of biological life and with artificial life. Secondly, in overcoming the danger that we would be smothered by the avalanche of knowledge: we take it for granted now, but managing the volume of data and the complexity of the connections has been an immense task. Thirdly, the fact that we have been able to deliver on the great hopes for artificial intelligence.

Because we now live our lives on- and offline, to use the old distinction, we have, as with all other spaces, had to develop governance mechanisms. Although it was developed by the US military in conjunction with relatively closed research environments, the Internet had a culture of openness and freedom, regarding governance as a necessary evil to be minimised. It now has the full trappings of governance, based on the early efforts of ICANN (Internet Corporation for Assigned Names and Numbers) and multilateral intergovernmental arrangements. There really is no distinction between online and offline governance, any more than there is any sense of difference between virtual and real. As many have said, it’s all in the mind, and one century and one decade after the publication of George Orwell’s *1984*, we each still have one of those, don’t we?

Richard O’Brien

1. 1. 2059

I 2008: THE YEAR IN REVIEW

THE year 2008 started with a broad international focus on two quite different issues—international security and the state of the global economy—and a more specific focus on the US presidential election campaign.

Concerning security, Pakistan's opposition leader Benazir Bhutto had been assassinated just four days before the start of the year and this resulted in a widespread concern over the potential for instability in that country. This was in the context of a winter of violence in Afghanistan, where the previous annual experience of a winter lull in the fighting had failed to materialise. Moreover, a steady increase in foreign troop deployments in Afghanistan had been accompanied by a greater recognition that the Federally Administered Tribal Areas (FATA) of western Pakistan were outside the control of the Pakistan government and had acquired the status of ungoverned space that was greatly useful to Taliban militias and their al-Qaida militant associates.

In Iraq, there was evidence at the start of the year that the “surge” in US troops was having some effect in limiting the violence, even if at least 1,000 civilians were still being killed each month, but a sudden increase in violence in the early weeks of 2008 suggested that optimism might be premature. Even so, there was still a widespread perception that the Iraq war might be diminishing, with the possible result being that the “war on terror” of the administration of US President George W. Bush was shifting its focus from Iraq to Afghanistan and western Pakistan. There was little pretence that the al-Qaida movement was in disarray, and concern that developments in Yemen, Somalia, and Afghanistan all suggested that this unusual trans-national entity had the capacity to evolve and adapt.

In relation to the world economy, the second half of 2007 had been a time of extraordinary upheaval, as the full impact of the “subprime” mortgage crisis in the USA became apparent and was having substantial effects across the world. The start of 2008 was therefore marked by considerable uncertainty and a palpable sense of unease. Optimistic assessments suggested that the crisis might be considerable but would be limited primarily to the financial sector, without having a great impact on the “real” economy of commodity markets, industry, and labour. Pessimistic assessments discounted this, predicting that 2008 would be the year in which an apparently internal financial crisis, limited primarily to the USA, was, in reality, the start of a global upheaval that was unpredictable in its impact, except that it would be long lasting and potentially as traumatic as that of the 1930s.

In the event, the more pessimistic assessments were closer to the actual experience of the year. Casualties in the USA included investment banks Bear Stearns, Merrill Lynch, and Lehman Brothers; the world's largest insurance company (AIG); and the two major federal mortgage institutions, Fannie Mae and Freddie Mac. Banks in Iceland collapsed, Russian oligarchs saw billions of dollars wiped

off the value of their assets, and banks and building societies in the UK and several other western European countries were forced to seek massive government bailouts that amounted to partial nationalisation. The parlous state of the international financial system was illustrated by the collapse in December of an investment business built up by a pillar of the New York financial establishment, Bernard L. Madoff. Investors lost US\$50 billion in a pyramid fraud, which had escaped the attention of the regulatory authorities for decades.

Perhaps most remarkable of all was the manner in which some of the financial giants of the USA were only saved by federal intervention that would have been declared akin to socialism just a few months earlier. The impact of the US financial crisis on global confidence was particularly marked because Wall Street had been seen as the living proof of the success of an untrammelled free market. That one of the world's leading financial centres could experience such manifest problems was an indication not just that confidence was misplaced but that there were deep seated problems with the entire global economy. This was supported by the rapid rise in unemployment in many countries towards the end of the year: in the United States alone, 2.6 million jobs were lost in 2008, the worst year since demobilisation in 1945. Multinational job losses were the real indicators that the world was moving into a period of recession that went far beyond a crisis in the financial sector.

The main focus for the financial crisis was upon its impact on the main economies, especially those of the North Atlantic community and East Asia. The primary response centred on the immediate effects of the crisis, with individual countries bringing in a range of measures to prevent collapse in their banking systems. Intergovernmental responses involved plans for improvements in international financial co-operation, including an effective early warning system and a more comprehensive framework for transnational responses. There were also plans drafted for an independent "college of supervisors" to provide systematic monitoring of the world's major companies and financial institutions. The emphasis throughout was on preventing a further deterioration in the status of the world's leading economies.

What these actions did not address was the more deep seated issue of rising global inequalities and the impact that the recession would have on the poorer communities that comprised the majority of the world's population. Most of the advanced economies, moreover, had well-developed welfare systems that provided some relief for the poorer sectors of their communities, whereas for most of the world such systems simply did not exist. The context for this issue was that the impressive economic growth of the world economy in recent decades did not bring socioeconomic justice; most of the fruits of economic progress were experienced by about one-fifth of the global population. This "elite" might be concentrated in the countries of the North Atlantic community, but it was transnational in the sense that it included probably close to 200 million people in China, over 100 million in India, and substantial minorities in Brazil, Russia and elsewhere. The most significant effect, if one rarely noted beyond specialist analysis,

was that this division had been widening year-on-year and had reached remarkable proportions. A study from the UN University's world institute for development economics research in Helsinki reported that the richest 10 per cent of the world's people owned 85 per cent of household wealth and that the poorest 50 per cent owned barely 1 per cent.

This trend towards a global elite of many hundreds of millions of people was accompanied by another trend, which was welcome in very many ways but which interacted with these growing divisions. This was the remarkable improvement in education, literacy, and communications across much of the South, a product of intense effort over many decades. The penetration of primary education into most communities had been truly impressive and, over the last decade, had at last included a greater degree of gender equality, but one of its primary effects was to ensure that people in marginalised communities were far more aware of their own marginalisation. This, in turn, readily led to resentment and anger.

Two examples of this effect were evident during 2008, in China and India. For many years China had experienced impressive economic growth, often of the order of a 10 per cent increase in GDP per annum, but that growth was highly unequal and concentrated primarily in major coastal cities. As a result there was a marked increase in social unrest that caused the authorities deep concern, even if this was largely unreported outside China. One governmental response was to establish a new network of well-equipped public order units, 600-strong paramilitary forces located in 32 cities across China in order to maintain control in times of civil disturbance. As the world economic crisis deepened during 2008, the Chinese authorities became hugely concerned that they would be unable to maintain their previously impressive levels of economic growth, with a consequent negative impact on social cohesion. One response in early November was to announce a two-year economic stimulus package valued at US\$586 billion. Much of this investment would be directed to rural areas, where the loss in remittances from migrant workers in cities was expected to have damaging social consequences.

The other major economy that was being watched with great concern was India, where the impressive economic growth had been even less evenly distributed than in China. A major effect of the wealth-poverty divide was a rise in the instances of civil unrest. These took the form both of revitalised secessionist movements, especially in north-east India, and a marked upsurge in activity by the neo-Maoist Naxalite movement. The Naxalites were originally active more than two decades previously and most analysts had assumed that they had declined to the point of obscurity. Their rebirth was remarkable: in 2008 they were active in 185 districts in 17 out of India's 26 states and were being described by Indian government sources as India's greatest internal security problem.

The world-wide socioeconomic divide, in combination with a more educated and knowledgeable population, also produced a strong reaction to the rapid increases in food prices in the early part of 2008. The last instance of a global food crisis was in 1973-74 but, unlike then, 2008 was marked by widespread food riots, especially in Africa and Central America.

By the end of the year, after many months of financial disarray, the actions of the major economies were focused almost entirely on their domestic situations, with little emphasis on international co-operation. Furthermore, what co-operation was developing scarcely related to the impact of the global recession on the world's poorer communities. The social and political consequences of this narrow outlook were unpredictable, but the evidence from China and India suggested that revolts from the margins were likely to grow.

In terms of the human consequences of warfare in 2008, the conflicts in the Darfur region of Sudan and the eastern area of the Democratic Republic of Congo were the worst anywhere in the world, with little immediate prospect of an end. In eastern Africa, the instability in Somalia became more widespread as Ethiopian troops failed to secure the greater Mogadishu region and African Union peacekeeping troops could only safeguard a small enclave within the capital. The government controlled very little territory and the Shahab Islamist faction continued to expand its areas of influence in the south and centre of the country. In the coastal areas of the north of Somalia there was no central control. Instead there was a marked rise in piracy as fishermen combined with paramilitary and criminal elements in the astonishingly successful evolution of their joint abilities to hijack large merchant vessels and hold them for ransom. Of around 10,000 commercial ships transiting the Gulf of Aden in the first six months of 2008, 71 were boarded, 12 were hijacked, and 11 fired upon. In total, 190 crew members were taken hostage and seven were killed. Some ships were held hostage for many months and by November, some US\$30 million was believed to have been paid in ransom. Piracy reached new levels of audacity in November, when Somali pirates captured the supertanker *Sirius Star* 450 nautical miles off Kenya's coast.

In the early months of 2008 the security situation in Iraq showed signs of improved stability, although levels of violence were not lower than in 2003 and 2004, shortly after the termination of the Saddam Hussein regime. Much of the improvement was attributed to the effects of the US military "surge" in 2007-08, but US defence department officials were deeply reluctant to see troop levels further reduced beyond the ending of the surge, for fear that the gains would be reversed. In part, this was an acknowledgment that the surge was only one factor behind the decrease in violence. A ceasefire by Muqtada al-Sadr's Mehdi army, the rise of the "awakening movement" among Sunni communities opposed to Islamist militancy, and the much clearer geographical separation of confessional groups were other significant factors.

Nevertheless, one consequence of the security improvement was the development of a "narrative of victory" in Republican Party circles in the United States. A forceful argument was developed that the Bush administration's military posture in Iraq was, at last, working and that Democratic presidential candidate Barack Obama's proposal for an early withdrawal of troops would snatch defeat from the jaws of victory. This narrative had only limited effect on the presidential election campaign, however, and was unable to overturn a domestic weariness with the war. In the event, Obama's victory in November had relatively little to

do with the situation in Iraq: his powerful rhetoric, an exceptionally well-organised and financed campaign, and the impact of the economic crisis were all far more significant. The result did mean, though, that President-elect Obama would have considerable freedom to decide on the speed of troop withdrawal. While US forces would be likely to remain entrenched in Iraq in various capacities for many years to come, 2008 did appear to be the year in which the focus moved from Iraq towards Afghanistan.

The consequences of the Iraq intervention were not easy to predict but nearly six years of war had seen at least 100,000 civilians killed, 120,000 detained without trial—some for lengthy periods—and the reputation of the United States sullied by torture, rendition, and widespread prisoner abuse. While these costs were grievous for US standing across the Middle East and south-west Asia, the main impact might be quite different and singularly long-lasting. In 1980s Afghanistan, many thousands of resistance fighters gained combat experience fighting in a largely rural environment against well armed, but often poorly trained, conscript Soviet troops. The eventual withdrawal of those Soviet forces was interpreted as a huge victory for the Afghan resistance and the foreign paramilitaries that had joined the conflict. Indeed, it was subsequently seen by al-Qaida strategists as the veritable crippling of a superpower, which also provided a generation of combat-trained jihadists, some of whom formed the operational core of the al-Qaida movement.

In the Iraq of the mid-2000s, a new cohort of jihadist paramilitaries gained combat experience against very well equipped volunteer US troops and Marines in the largely urban environment of Iraq. While most were Iraqis, large numbers came from Saudi Arabia, Yemen, Egypt, Algeria, and other countries across the region. Many of them died in Iraq but most did not. Even were the Iraq war to scale down considerably in 2009-10, this new generation would be available for operations elsewhere, and 2008 saw clear evidence that weapons and tactics developed in Iraq were being used in Afghanistan, western Pakistan, and even Somalia.

In Afghanistan, in particular, 2008 saw a steady increase in violent conflict and US military commanders argued for a major expansion in their operations, involving the deployment of many thousands of additional troops. Other NATO states were deeply reluctant to make substantial additional commitments and even the UK, which planned to pull out all its troops from Iraq by mid-2009, was unlikely to increase its commitment in Afghanistan. As of mid-2008 there were over 60,000 foreign troops in the country, the majority of them from the USA. In October an additional combat brigade of 4,000 troops was ordered to deploy from January 2009 but there were indications that local US military commanders were urging the need for three more combat brigades. By the end of the year it was expected that at least 20,000 additional US troops and Marines would be deployed to the country during 2009. With some modest additions from other NATO states this would take the foreign forces close to 90,000. Significantly, this new emphasis on Afghanistan was one aspect of US security policy where the incoming Obama administration was committed to a bipartisan approach.

The focus of international attention on Afghanistan and Pakistan came in a context of increased paramilitary activity within Pakistan and also in India. The

destruction of the Marriott Hotel in Islamabad in September was one major incident but even more significant was a carefully executed attack by a paramilitary group on numerous targets in the Indian financial capital of Bombay (Mumbai) two months later. The targets of the attack included guests in two leading international hotels, who were held hostage for several days resulting in intensive worldwide media coverage.

Towards the end of the year, US forces stepped up their attacks on al-Qaida and Taliban groups in western Pakistan. Attempts to use US special forces in these operations were rebuffed by the Pakistani armed forces and one consequence was the increased use of armed drones. On several occasions this resulted in numerous civilian casualties, with a consequent antagonism to US policy within Pakistan. Nevertheless, there was every indication that 2009 would see an increase in US operations both in Afghanistan and Pakistan, with no guarantee that the activity of Taliban, al-Qaida, and other paramilitary groups would decrease. Within Afghanistan, the Taliban was financed by income from heroin and morphine exports which were increasingly refined within the country in order to increase their export value. There were also indications that many Taliban supporters saw their activities as part of a wider international jihad, rather than being merely a nationalist insurgency.

Beyond all of this loomed the idea of global jihad that underpinned the al-Qaida movement. This remained strong throughout 2008, even as the movement became more dispersed and fragmented. It received a substantial boost at the end of the year with the start of a new conflict in Gaza. Just as the Israeli siege of west Beirut in 1982 had fuelled a perception of anti-Islamic action, so the new conflict in Gaza could readily be portrayed in a similar manner, involving the unequivocal support of the “far enemy” (the USA) for the key “near enemy” of Israel. Perhaps least understood in the United States and Israel was al-Qaida’s eschatological foundation. Although in many ways an unusual transnational revolutionary movement with defined political aims, it had its roots in a radical religious ideology that meant that it operated in a timescale stretching over many decades, with the leadership not expecting to achieve the movement’s objectives in their own lifetimes. This demanded a sense of political perspective that was very difficult for conventional Western governance to embrace.

The middle months of 2008 saw a sudden crisis develop in South Ossetia, leading to tensions between the USA and Russia, and this was paralleled by entrenched Russian opposition to US plans for a forward-based missile defence system in Eastern Europe, as well as a crisis at the end of the year in the transport of Russian gas exports through Ukraine. While there was extensive talk of a new “cold war” and a continuing Russian sensitivity to its wider international status, the reality of the brief South Ossetia conflict was that it showed how decrepit were Russia’s conventional armed forces. At the end of the year there were indications that the incoming Obama administration would show a more conciliatory US approach towards Russia, but that this would require a positive Russian response if it was to lead to a sustained improvement in relations. (Although the incoming

US administration showed little sign of major policy changes in relation to Israel, there was likely to be an attempt to improve relations with Iran, and Russian co-operation could be of some value in this regard.)

In other respects, the real changes expected from the Obama administration would relate to more sustained responses to the recession within the USA and a major shift in US attitudes to climate change. Throughout 2008 evidence grew that climate change would become one of the defining global issues of the mid-21st century. Four aspects of this issue became more significant. First, there was substantial evidence that the rate of change in the global climate was actually speeding up and was repeatedly exceeding the predictions made by the detailed climate modelling being conducted principally in the USA and the UK. A second aspect was that a number of positive feedback mechanisms were already at work. Among these was the decline in sea ice coverage in the polar regions, the result being that open water absorbed more solar radiation than sea ice, thus warming the sea and further increasing the rate of melting. Another feedback mechanism was that the melting of Arctic permafrost was beginning to release large quantities of methane from previously frozen decomposing vegetation, and methane was a far more potent climate change gas than carbon dioxide.

A third aspect of climate change was the increasing recognition that it would have a much greater impact on the tropical and sub-tropical regions that were home to most of the world's poorer people, who would be least able to cope. Finally, it was becoming steadily more apparent that combating climate change required far greater cuts in carbon emissions than any government was prepared to countenance. Cuts of 80 per cent in emissions were required within no more than two to three decades, and most were required by 2025.

If the probable impact of climate change was integrated with the widening global socioeconomic divide, the prospect was of a fractured and constrained global community that had the potential for social and political instability.

A number of military centres and security thinktanks in the USA and western Europe had come to embrace the idea of a volatile and uncertain global environment of insecurity, in which climate change and poverty were potential drivers of conflict. Amidst some innovative thinking, there remained a tendency to develop military responses that still depended primarily on ensuring the security of their own states or alliances. This was termed "liddism": keeping the lid on insecurity, rather than addressing the underlying causes.

Four trends that were apparent during 2008 were reminders that such a control paradigm might not be sustainable. In Iraq the expenditure of more than one thousand billion US dollars and the fielding of a substantial part of the world's most powerful army were only slowly gaining control of a five-and-a-half-year long insurgency, which rarely involved more than a few thousand paramilitaries. Moreover, arising from that insurgency were techniques of asymmetric warfare that were proliferating, not least to Afghanistan. Secondly, the extraordinarily potent attack on multiple targets in Bombay showed that a small but determined group of paramilitaries could require a powerful state to use most of its federal

counterterrorism forces in responding to just one operation, taking several days to bring the situation under control. A third example was the spread of piracy off the east coast of Africa, eventually requiring the assembly of a substantial international fleet of warships in an attempt to bring it under control. Whatever was to happen in 2009, one consequence would be that many hundreds, and possibly thousands, of young men would have learnt the techniques of piracy and many would be available for hire to use them elsewhere.

Finally, and most potently, the forceful Israeli assault upon Gaza at the end of the year was predicated on a feeling of considerable vulnerability in the face of the crude rockets fired from Gaza into towns and cities in southern Israel. While a small proportion of the devices had been smuggled into Gaza, most were produced in back street workshops and were wildly inaccurate. Yet their crudeness did not in any way limit their psychological impact. Thus, devices manufactured by mechanics operating in an impoverished and blockaded environment were able to affect significantly a state that had some of the world's most sophisticated military equipment and weaponry and was strongly supported by the world's sole superpower.

Individually, each of these factors might have been of only moderate significance. Together they served as a forceful reminder that 2008 demanded a more thorough examination of approaches to international security than had yet been envisaged.

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