GREAT BRITAIN GAMBLES WITH THE ROYAL NAVY

Geoffrey Till

The news late last year that the Type 23 frigate HMS *Northumberland* was to be replaced on the Falklands patrol by the Royal Fleet Auxiliary *Largs Bay* in order to join the international counterpiracy effort in the Gulf of Aden raised quite a few eyebrows. This was not because anyone seriously thought that Argentina would seek to profit from the absence of a British warship in these contested waters for the first time since 1982 but more as it seemed to show just how bad things were getting for the once-mighty Royal Navy that its first-line fleet could not apparently cover both commitments at once.[1] Worse still had been the sad story of the ambush by the Iranian Revolutionary Guard Corps of a boarding party from HMS *Cornwall* in 2007, described by the then First Sea Lord, Admiral Sir Jonathon Band, as "one bad day in our proud 400-year history." Subsequent investigations showed that there had simply not been time or resources for the boarding party to be sufficiently trained in the requirements of operating in that particularly difficult situation. Such events led to a spate of articles that the Royal Navy was in serious trouble, "on the brink," heading into stormy waters, or had even "strangely died."[2]

To many observers, these incidents seemed to illustrate a chronic and worsening problem—the drastic decline in the numbers of warships available to the Royal Navy, compared to its inexorably rising number

Geoffrey Till is professor of maritime studies in the Defence Studies Department, King's College London, and director of the Corbett Centre for Maritime Policy Studies. Previously the dean of academic studies at the Joint Services Command and Staff College, he has taught at the Royal Naval College Greenwich, Britannia Royal Naval College Dartmouth, City University, and the Open University; he earned his PhD at King's College London. Professor Till was a visiting scholar at the U.S. Naval Postgraduate School in Monterey, California; later he held the Foundation Chair in Military Affairs at Marine Corps University in Quantico, Virginia. He held the Kippenberger Chair at the Victoria University of Wellington, New Zealand, and is currently Visiting Professor at the Rajaratnam School of International Studies in Singapore. His recent books include Seapower: A Guide for the 21st Century *(second edition 2009) and* The Development of British Naval Thinking *(2006)*.

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of commitments.[3] The Royal Navy now comprises just 101 units, including sixteen inshore patrol boats used only to train university cadets. Every year the Royal Navy seems to have had one hull less on the water. In 1980 there were sixty-seven frigates and destroyers; by 2020 the figure could be as low as eighteen. Even in the past ten years, destroyer and frigate numbers have shrunk from thirty-five to twenty-three, despite the recommendations of the 1998 Strategic Defence Review. Six nuclear-powered attack submarines (SSNs) have been decommissioned in the same period. But at the same time, among the effective ships remaining in "extended or reduced readiness" (or more cynically, "in mothballs") in Portsmouth were the carrier *Invincible,* three air-defense destroyers (*Exeter, Nottingham,* and *Southampton,* nearly two years before their time), two offshore patrol ships, and four Royal Fleet Auxiliary logistic ships. At least two Type 42 guided-missile destroyers have gone on operations with their Sea Dart air-defense missiles disabled. In recent times other modern vessels have been disposed of prematurely: the *Upholder* SSKs (conventionally powered hunter-killer submarines) to Canada (which meant the abandonment of the Royal Navy's conventional submarine capability), three of the first generation of Type 23 frigates to Chile, and others. And so it seems to go on. . . .

Questions naturally arise, not least for Americans concerned at the possible fate of one of their leading naval allies, especially given their own budgetary problems at a time of considerable commitment around the world and the relative rise of the maritime powers of the Asia-Pacific. Is this just a part of a dramatic shift of naval power from West to East? If so, to what extent? How bad are things generally—and how much worse are they likely to get? What will it mean for the U.S. Navy?

Trying to answer these questions requires us to look at what the British seem to think their Royal Navy is for and then to gauge the gap between its commitments and its current and future resources. We will find that the gap is wide and probably unsustainable. We will review and reassess all aspects of British defense, the Royal Navy's commitments, and its most important programs (Trident replacement, the *Astute* SSNs, Type 45 destroyers, carriers, afloat sustainability, and plans for future surface combatants). Given the bleak state of Britain's public finances, the point that emerges is that the Royal Navy is currently engaged in the hardest part of one of the longest and most challenging campaigns in its illustrious history, the outcome of which is at the moment too close to call. The Royal Navy may emerge from this, one of its greatest battles, as a totally transformed and still globally significant navy, ready to "fight and win" in the conditions of the twenty-first century. Certainly, if it doesn't, the world will be a different place, not least for the United States.

SO, WHAT IS THE ROYAL NAVY FOR?

The apparent decline of the Royal Navy seems strange, since the British have always been regarded as a particularly maritime nation, with a long-standing interest in the defense of the maritime trading system upon which the prosperity and security of the country has always been seen to depend. "The UK is," admits the country's new National Security Strategy, "and ever has been, a distinctively maritime nation."[4] According to the A. T. Kearney/*Foreign Policy* Globalization Index, the United Kingdom is the twelfth-most-engaged country in the world economy. If one excludes the factors that disproportionately skew the calculations toward countries with very small populations, the United Kingdom rises to third position, behind only the United States and Canada.[5]

Defending trade and market access has accordingly long been a major role for the Royal Navy. In the language of its own traditional prayer, the Royal Navy itself has acted as "a security for such as pass on the seas upon their lawful occasions." For all his fame in winning decisive battles, even Admiral Horatio Nelson accepted that the fundamental justification for the Royal Navy was to defend trade. "I consider," he told one of his captains, "the protection of our trade the most essential service that can be performed."[6] And yet, despite all these centuries of tradition, the ancient emphasis on the direct defense of trade at sea has over the years been quietly airbrushed out of the list of the country's main military tasks.[7] This is largely the product of a risk-management decision-making system at the Ministry of Defence (MOD) in which maritime affairs in general and the Royal Navy in particular seem to command much less attention than they did.

There is a curious disconnect here between objective reality and the decision maker's perception of it. The apparent relegation of maritime affairs is not due to any actual decline in Britain's sea-dependence—far from it, in fact. The United Kingdom remains a preeminent trading nation. By volume, 92 percent of British trade is conducted by sea. So used are the British to laments about their declining financial and maritime status that the rapid growth of their shipping industry is hardly noticed. After a twenty-year decline in British shipping, a government-inspired major reformulation of regulations and taxation arrangements have led to a merchant fleet now 170 percent larger than it was in 2000. The shipping industry employs forty thousand people in the United Kingdom directly, as well as another 212,000 indirectly, and brings £4.7 billion to the country every year.[8] This sea dependence is, moreover, beginning to percolate into public consciousness more than it used to. When the MV *Napoli* grounded off the Devon coast in January 2007, thousands of tons of valuable imported goods washed up onto the beaches—and with them came a sudden, belated, and unexpected recognition of just how dependent every aspect of British life is on the safe and timely arrival and departure of merchant shipping.

Nowhere is this more true than in the field of energy security. The United Kingdom is already a net importer of natural gas and will soon become a net importer of oil. Lamentably low stocks ashore mean that were there to be any significant interruption of this trade, it would not be long before Britain's lights would go out. The National Security Strategy recognizes the fact that the United Kingdom's energy security needs to be seen against a global background in which, before the recession hit, world energy consumption was increasing at a rate of 2.6 percent per year, twice as fast as in the previous decade. "Supplies," it says, "may not be able to keep up, intensifying competition for energy and leading to instability and conflict."[9] From every angle, then, the worldwide market shapes Britain's energy interests. Whether it likes it or not, in this as in so many other ways, the United Kingdom is enmeshed in the consequences of globalization. It sees itself as a constituent in a supranational economic system that operates above and beyond the traditional purview of the nation-state. Because this can become a source of vulnerability, the United Kingdom has a "particularly large stake in the success of the international rules-based system."[10]

Globalization, of course, is the product of a system that depends absolutely on seaborne trade, and as Albert Thayer Mahan reminded us over a century ago, it is vulnerable and faces a range of threats: "This, with the vast increase in rapidity of communication, has multiplied and strengthened the bonds knitting the interests of nations to one another, till the whole now forms an articulated system not only of prodigious size and activity, but of excessive sensitiveness, unequaled in former ages."[11]

The threats and challenges that the system faces are wide and varied. They include the prospect of conflict between various types of sea users (disputed jurisdictions, fishermen against the oil industry, etc.), all forms of maritime crime, the depletion of sea-based resources, and environmental deterioration. Sometimes trade can suffer, as it did in the Iran-Iraq war of the 1980s, from inadvertent involvement in the quarrels of others. The global trading system indeed could be destroyed by large-scale interstate warfare, as it nearly was before and after the First World War.[12] These days the system can be the subject of exploitation or even direct and premeditated attack from groups or states hostile to its intentions or its effects. Finally, the system can be at risk to a global pandemic or a financial meltdown in response to what Karl Marx called capitalism's "internal contradictions."

Any of these threats can disrupt trade and, importantly, the conditions for trade. Because the United Kingdom is part of the sea-based trading system, its economic security will be affected too, directly or indirectly. This is not a matter of choice for the United Kingdom, but whether it chooses to play its part in the defense of the system and how it chooses to do so most certainly are. Accordingly, there is a general

consensus that "preserving the trading environment should be recognised and prioritised as a fully justifiable military task for the new millennium."[13]

The British choice has been to be a full participant, not merely a bystander, in the world's events. The latter approach is explicitly rejected: "Our approach to the global era is an internationalist one, and we are committed to working with partners to develop and adapt the rules based international system to meet the demands of the twenty first century."[14]

. . . AND FROM THIS DEVELOPS THE ROYAL NAVY'S TASKS

The recognized role of the United Kingdom's armed forces in general, and of the Royal Navy in particular, flows from all this. "Preserving the trading environment" calls for the Navy to defend trade and, less obviously, the conditions for trade, both directly by what it does at sea and indirectly by what it does *from* it.

This is generally seen to require the development of four different sets of capability:

- Fighting and winning wars
- Staging distant expeditions
- Defending good order at sea
- Preventing and deterring conflict.

Fighting and Winning Wars

Fighting and winning wars remain a high priority even in the age of globalization. Globalization might fail—it has before. Today's variant has systemic weaknesses, as is all too obvious, and faces potentially well-equipped adversaries. It will be under a particular strain in the 2030s, when some predict a "perfect storm" resulting from a coincidence of global warming, possible pandemics, and gross shortages in oil, food, and water. National competitiveness, already evident in the consequences of recession, is likely to increase.[15] While according to the National Security Strategy there is no such serious threat today, it is not possible to rule out the reemergence of a major state-led threat to the United Kingdom, its dependencies, or its allies over the longer term.[16]

But even if globalization doesn't fail so catastrophically, the capacity to fight and win wars remains vital, because, after all, serious interstate conflict not involving the United Kingdom directly still poses a critical level of threat to the system as a whole. The Royal Navy continues to make the case that maintaining the capacity to fight and win is still the most effective deterrent to war in an uncertain future.[17] Moreover, the Navy's argument runs, the standards associated with the capacity to engage in high-intensity conflict usually offer high levels of precision, effect, and (very important from the political point of view)

protection for the British forces engaged with lower-intensity, asymmetric opponents.

For all these reasons, the Royal Navy takes the retention of its world-class capabilities in such high-end disciplines as antisubmarine and antiair warfare (ASW and AAW) as critical to its present and future strategic effectiveness. Hence the appearance of the *Daring* Type 45 destroyer, the *Astute* class of submarine, and the Navy's long insistence on a recapitalization of its existing aircraft carrier fleet. For all that, there is a concern that the Royal Navy has not been able to pay as much attention as it would wish to some of these disciplines, because of the passing distractions of Afghanistan.

Although much of the popular debate still tends to focus on traditional platforms, the British recognize that future effectiveness, precision, and maneuverability may depend in large measure on a network-centric approach, unmanned vehicles, robotics, loitering systems, precision systems, engineering, signature reduction, the consequence of increasing ranges of weapons and sensors, and so forth. Part of its case for the hugely sophisticated and so far highly successful *Daring*-class destroyers is the aspiration to stay up with the hunt in technological innovation, even to lead it in some areas, expensive though this might be. If the Royal Navy is to continue as a significant naval player, the argument goes, it really has little choice about this, given the rising capacity of adversaries to challenge even complex networks, sensors, and weapons.

Staging Distant Expeditions

Here is the obvious response to the impulse to "go to a distant crisis before it comes to you" in order to defend the system by liberal intervention ashore.[18] This capability focuses more on the protection of the conditions for trade ashore than on the trade at sea itself. This traditional focus in British strategy is unlikely to change. "We remain committed," says the National Security Strategy, "to retaining robust, expeditionary and flexible armed forces for the foreseeable future."[19]

The 1998 Strategic Defence Review pointed out that "maritime forces are inherently well suited to most force projection operations. Their reach, ability to sustain themselves without reliance on host nation support and flexibility are invaluable attributes. A joint maritime force often provides the opportunity for early and timely intervention in potential crises."[20] The Royal Navy, indeed, demonstrated the advantages of maritime power projection of this sort in the first and second Iraq wars, the opening Afghanistan campaign, and the now almost forgotten but highly successful Sierra Leone operation of 2000.[21]

British maritime power projection, usually but not always in consort with others, has taken a variety of forms, from the capacity to conduct, or threaten, amphibious assaults to the delivery of ordnance from the sea, at one end of the

spectrum, to the conduct of humanitarian relief operations, at the other. It all depends, however, on the kind of assured access to be expected from the capacity to fight and win wars discussed earlier.

Depending very much on the scenario and particularly the level of opposition to be expected, mounting "expeditions" of this wide-ranging sort may call for the capacity to sustain, transport, and support civilian populations or landed forces or both; to engage in amphibious operations; to develop specialist forces for riverine and lacustrine pre- and postconflict stabilization operations; and, if necessary, to strike adversaries ashore with sea-launched missiles and naval gunnery. Hence the British focus on Carrier Strike and Littoral Manoeuvre task groups to secure sea control and project power ashore.

In recent years, and in conformity with the 1997 Strategic Defence Review, the Royal Navy's amphibious capabilities have been completely transformed and revitalized with two new 14,600-ton assault ships (HM Ships *Albion* and *Bulwark*), the helicopter carrier HMS *Ocean* (twenty-one thousand tons), and four new sixteen-thousand-ton Bay-class landing ships, supported by six Ro-Ro ferries for strategic sealift. But even with recent enhancements a Littoral Manoeuvre Group cannot provide the personnel, vehicles, and stores required for a full maneuver brigade. At the same time, the Royal Navy's Carrier Strike Task Group depends on the invaluable *Invincible*-class carriers, now only with ground-attack Harriers—these are clearly at the end of their operational careers. With the contentious early retirement of Sea Harrier FA.2 fleet in March 2006 and having no deployed air-defense fighter at sea, the Royal Navy is in the midst of an embarrassing "capability holiday" until the Joint Strike Fighter (or JSF, the F-35) arrives.[22] Nonetheless, the Royal Navy's recent development of capabilities for what it calls "littoral manoeuvre" and its ambitious carrier replacement program are predicated on the assumption that an uncertain future demands the development of a much enhanced capability for *sea-based* force projection.

The perceived cost and debatable effects of the Iraq and Afghanistan operations have sparked a certain wariness in some quarters about a continuation of the United Kingdom's expeditionary impulse.[23] Despite this, it seems highly unlikely that Britain will turn away from its long-term policy of supporting military interventions in support of a rules-based international system—even in some circumstances without the specific approval of the Security Council, but only once all other options have been exhausted.[24] The Iraq and Afghanistan experiences are, however, likely to reduce greatly a future British government's appetite for large-scale and open-ended interventions of this sort while increasing its longer-term interest in the more limited liabilities (and, admittedly, aspirations) of distinctively maritime conceptions of expeditionary operations.[25]

Here, sea-based expeditionary forces obviously come into their own, with their capacity to project power in their own right—to insert, support, and extract landed forces into and from areas of concern, which are mostly near water.[26] Hence the increased political salience of the Royal Navy's interest in all types of expeditionary activity, including sea basing, the capacity to operate sustainably at sea with a much reduced physical and political footprint ashore. The Royal Navy is not slow in making such points.

As part of its determination to foster the mentality of deployability, the Royal Navy has for decades staged regular group deployments around the world, even when its equipment and maintenance state and the government's political will to engage "out of area" were low—as was the case in the 1970s after the decision to withdraw "from East of Suez." Despite that injunction the Royal Navy continued to foster its global presence, and with all its difficulties, commitments, and operational stretch, it continues to do so.[27] The previous First Sea Lord made the point that "only by genuinely deploying ships on operational tasks will they play to their inherent strengths of poise, presence and inbuilt sustainability. Navies are for using—they are not just insurance policies."[28]

The Royal Navy has, for example, just completed Operation TAURUS, an ambitious group deployment of one of its amphibious task groups. At its peak it was led by *Bulwark* and *Ocean* and was accompanied by two Type 23 frigates, HM Ships *Argyll* and *Somerset;* a French frigate, FS *Dupleix;* an *Arleigh Burke*–class destroyer, the USS *Mitscher;* a *Trafalgar*-class SSN, HMS *Talent;* two Bay-class landing ships; three Royal Fleet Auxiliaries; and the survey ship HMS *Echo.* The force conducted amphibious operations in Turkey and the Gulf and riverine operations in Bangladesh and Brunei, and it interacted with seventeen other navies around the world. The force included both Royal Marines and Royal Air Force (RAF) units, nicely illustrating what the Royal Navy considers to be the strategic versatility of a properly constituted and all-round joint and combined maritime force.

Defending Good Order at Sea

The defense of good order at sea—or to give it its more contemporary label, maritime security, as against terrorists, criminals, and the careless—is an immediate precondition for the effective operation of the global trading system. Moreover, as an island nation heavily dependent on seaborne trade, Britain is more economically dependent on good maritime order than are many other states.[29] But good order at sea is also critical for wider concepts of national security. About thirty tons of heroin, for example, enter Britain every year (mainly from Afghanistan), together with vast quantities of cocaine from South America; this clearly represents a threat to the peace and prosperity of every British

citizen. Intercepting the passage of illegal drugs at sea—and of illegal immigrants too, for that matter—therefore constitutes a significant contribution to individual human security in the United Kingdom. The Royal Navy has been active for years in the rarely publicized campaign to intercept and disrupt the drug trade in the Caribbean and across the Atlantic to Europe.[30] The current emphasis on the threat to the homeland posed by al-Qa'ida and its affiliates has further reinforced the importance of maritime security operations.

Some argue that if handled sensitively, this growth of interest could be good for the Navy—at least, if the fortunes of the navy next door in Ireland are anything to go by. The Irish navy has risen from two to eleven platforms in fifteen years, solely on the basis of its task of maintaining good order in the country's territorial sea and exclusive economic zone. Perhaps the Royal Navy might benefit in like manner? The difficulty is that forces designed for the preservation of good order in home waters are unlikely to have the sailing and fighting characteristics required for the first two tasks just discussed and so, given the Royal Navy's overall proclivities, are bound to take a second place in that service, if one of increasing importance.

This inclination is further reinforced by the United Kingdom's general acceptance of the fact that the globalization of such maritime threats means that the first line of defense of Britain's home waters has to be much farther forward. "The distinctive characteristics of the UK as a nation mean that it is impossible, when thinking about our own national security interests, to separate the 'domestic' and the 'international.'" For this reason, the National Security Strategy concludes, there is an important "away game" aspect to the enforcement of good order at sea.[31] "This implies a strong case for investing in certain kinds of naval forces, such as frigates, capable of playing a role in both interdiction at sea and maintenance of maritime law and order."[32]

The task calls for collective and cooperative maritime domain awareness across the world ocean, not just at home. This mandates close habits of cooperation with other navies, coast guards, and maritime security agencies. It demands sophisticated, flexible, and adaptable legal regimes to deal with pirates, drug smugglers, and human traffickers operating across possibly ambiguous national jurisdictions. Through ISTAR (Intelligence, Surveillance, Target Acquisition, and Reconnaissance), it requires an emphasis on thoroughly integrated surveillance to track down mobile and covert adversaries, as well as a structured and balanced sufficiency of cheaper frigates, corvettes, ocean and offshore patrol vessels, helicopters, unmanned aerial vehicles (UAVs), and even submarines on occasion, to intercept wrongdoers and enforce jurisdiction. Given the vastness of the oceans and the ranges of tasks and of possible adversaries, numbers have a quality all of their own in the preservation of good order at sea.

Preventing and Deterring Conflict

Prevention and deterrence may well head off incipient problems before they become crises for the system. Here the main naval contribution to national and global security could well lie in what does *not* happen. Maritime power is as much about preventing conflict as about winning it. The Royal Navy's role in helping guard Iraq's two critical oil platforms against attacks by insurgents and its successful training program to prepare the Iraqi navy and marines to assume that responsibility themselves illustrate deterrence and prevention, respectively. Together they reduce the future need for external countries to concern themselves with Iraqi and Gulf security.

The prevention of conflict is seen to depend in large measure on the benign presence of naval forces able to develop sustainable relationships with local states; to help states build up their capacity to defend themselves against such major problems as climate change, humanitarian disaster, poor governance, and the like; and, if necessary, to reassure them against prospective adversaries. Prevention may also call for constructive capacity-building engagement, especially in the good-order tasks discussed earlier, since, as the piracy problem in the Gulf of Aden shows, a lack of good governance in one area may result in security threats that challenge the system.

The piracy situation off Somalia and in the Gulf of Aden illustrates the consequence of a failure of governance at sea. The Royal Navy is taking a leading role in this long campaign to address the consequences of this; it established and led the European Union (EU) Operation ATALANTA and until recently provided the flagship for the Standing NATO Maritime Group 2 in the Gulf of Aden.[33] The United Kingdom was also instrumental behind the scenes in setting up the legal arrangements with Kenya that allowed the authorities there to prosecute captured pirates on behalf of the international community. Better by far, however, would it have been for naval forces to have contributed proactively to Somalia's capacity to defend and exploit sustainably its own marine resources, thereby preventing the situation from arising in the first place. "Stabilization," the argument goes, should be about *preventing* conflict rather than restoring the situation afterward.

Ensuring good order at sea calls for the development of jurisdictional and enforcement capabilities in the countries of relevant regions, since disorder at sea often follows deficiencies of this sort. Although sometimes constrained rather than encouraged by the Ministry of Defence, the Royal Navy therefore takes capacity building very seriously and has demonstrated an impressive ability to get things done. The successful cruise and capacity-building port calls of HMS *Endurance* (far removed from its normal role in the South Atlantic) around the coast of Africa last year was, like the U.S. African Partnership Station, which it

partly inspired, intended to reduce the prospects of the Somalia situation recurring elsewhere in the continent.[34]

And where there *is* an adversary to be deterred, early demonstrations of force can nip the problem in the bud. Potential wrongdoers ashore and afloat are identified and deterred by the presence of naval forces clearly able to limit their chances of success. What constitutes a successful deterrent will depend in large measure on the nature of the prospective adversary, but in most cases short of interstate war it resides in a regular naval presence in areas of concern of vessels appropriate for the tasks in hand. Frigates and ocean-capable patrol vessels for visible presence and submarines for covert surveillance are most commonly used for this purpose, and they are most effective when acting closely in consort with the vessels of other like-minded nations.

Finally, of course, there is deterrence at the top, nuclear end of the spectrum. For all its interest in limiting or even reversing nuclear proliferation, the current British government remains set on the country's maintaining the independent nuclear deterrent now exclusively provided by the Royal Navy's four *Vanguard* submarines.[35] With this continuous aspiration, of course, comes a requirement for the sustainment of certain specialist types of defense industrial expertise and operational skills, such as deepwater ASW.

SO, GIVEN THE NEED FOR THESE TASKS, WHAT'S THE PROBLEM?

Even in today's contentious and difficult times, relatively few people involved in or merely observing the British defense debate would seriously dispute very much of this, but for all that there remain the serious problems of paying for it all and deciding priorities—that is, the problem is a resources-commitments gap.

For much of the twentieth and early twenty-first centuries, the biggest problem confronting Britain's naval planners has been a sometimes acute shortage of resources and a seemingly ever-widening gap between these and a level of commitment significantly higher than originally envisaged in the Strategic Defence Review. British defense spending, at £38 billion in 2008, is now estimated to represent a mere 2.1 percent of gross domestic product (GDP), its lowest rate since the early 1930s and less than half of what it was in the late 1980s. Nevertheless, the consensus view is that especially in the current recession, no significant uplift of this level seems in prospect. Although absolute cuts are unlikely in the near term, defense inflation on its own could inflict real cuts of some 10 percent over the next five years. For the medium to longer term, the government has inaugurated a strategic-review process that could well add further real cuts to this. Either way, the challenge will be to do more with less, very possibly much less.

As a result, the Royal Navy faces two distinct challenges. The first is how to get through the next couple of almost certainly bleak years of severe constraint, and the second will be how to respond to the resource implications of the expected new strategic defense review of 2010–11, whatever they are.

The existence of a resources-commitments gap is not, of course, new, and in the past a number of ways of bridging the divide have been tried, and these will certainly be relevant for the next few years.

"Can Do." "Working extra hard" is traditionally seen as the Royal Navy's way of getting through a difficult situation—in other words, a policy of expecting a temporary level of performance from people and equipment well above what was originally considered sustainable and then spinning that program out still farther. The Royal Navy has always been most reluctant to refuse a commitment even in circumstances that would make that seem reasonable, even sensible. The most famous recent example of this occurred in 1982, when the First Sea Lord, Sir Henry Leach, donned his uniform and demanded to see the prime minister, the uncharacteristically uncertain Mrs. Thatcher, in order to assure her and the country that the Royal Navy was able and willing to lead the campaign to retake the Falkland Islands, despite every prospect of significant loss. As befits this "can do" tradition the Royal Navy's current operational tempo is extremely high, some 40 percent of its force being committed to current operations.

But there are problems with this. Even when such operations are successful, as they generally have been, the tempo inflicts personnel stresses, a higher rate of equipment wear-out, reduced operational life for ships, weapons, and aircraft, and, finally, skill fade in unexercised disciplines. For example, ships deployed as singletons in order to maintain as much global coverage as possible may lose some of the "edge" they need as constituents of a task force. More insidiously, when the service so often delivers the apparently impossible (or at least the very difficult), politicians, the public, and the Treasury come unreasonably to expect that. Sympathetic critics argue that a few refusals might have a salutary effect, leading to more resources or fewer commitments—the latter possibility, of course, being the worry.

Combining with Partners. Responding to financially induced shortages mandates working in coalitions of the willing. The Royal Navy argues that high-intensity capabilities at sea confer status in alliances and greater influence over events. The fact that, like the French, the British "do" nuclear deterrence, carrier strike operations, and amphibiosity puts their influence and their general contribution to alliances in a different category from those of the rest of the Europeans (many of whom face similar problems). The British aspiration is not just to participate in coalition operations but to lead them. Hence the EU's

counterpiracy campaign off Somalia and in the Gulf of Aden, ATALANTA, is effectively run by the Royal Navy from NATO's Allied Maritime Component Command Headquarters at Northwood.

For the past century or so, the British have been well aware that "strategy" is as much about influencing the behavior of allies as it is that of adversaries. For this reason the Royal Navy puts considerable stress on the importance of maintaining a credible global presence and of retaining a fleet sufficient in quality and quantity to continue to command the levels of respect it has been used to in decades past. The numerical decline in the fleet, however, makes that more difficult, because inevitably it reduces the Navy's level of operational presence.

Joining with the Other Services. For years the British armed forces in general, and the Royal Navy in particular, have consistently advocated the joint approach, for its now-obvious synergies of effort, resource, and effect.[36] By offering the opportunity to make the most of what each service can offer, close interservice cooperation clearly means that more can be done with less. But as a solution to the resources-commitments gap, British jointness is also revealing its limits. First, the ferocious assaults apparently launched by both the Army and the Royal Air Force on the carrier replacement program show that reducing resources actually decreases the prospects for real jointness, certainly at the strategic level, and so the latter is unlikely to be necessarily the solution to the former. It may be, but often it won't be. Second, there are areas in the spectrum of conflict that continue to require dedicated single-service specializations that cannot safely be traded away in the name of jointness or economy. Third, the shortage of resources leads to unsatisfactory risk-management compromises that in fact satisfy the aspirations of none of the services, the Royal Navy included.

Seeking Other, Cheaper Ways of Doing Things. In return for a promise of a "core work load" of naval production every year to help planning, the MOD expects from industry significant improvements in efficiency, productivity, and profitability. Much of this transformation in Britain's shipbuilding capacity has been driven by the requirement to tool up for the *Queen Elizabeth*–class aircraft carrier (CVF) and Future Surface Combatant (FSC) projects. As Lord Drayson, the Defence Procurement Minister, stated in 2005, "The level of warship building over the next 10 years is the largest the UK has seen for many years. . . . [W]e need to find new ways to get the yards to work together, to pool resources and provide investment so we have an industry which is more efficient and effective than it is now. We have an opportunity to change ship-building in this country."[37]

"Quite simply," Archie Bethel, chief executive of Babcock Marine, has remarked, "we must continue to attack support costs, otherwise we will end up with a smaller navy."[38] This followed Babcock's acceptance of responsibility for

operating a number of naval dockyards, bases, and depots, and it is an important part of a determined campaign to transform, reduce, and simplify both the Royal Navy's support costs and its equipment-acquisition processes. Some of these innovations have seemed radical. The Royal Navy's hiring of the four River-class ocean patrol vessels (HM Ships *Tyne, Severn,* and *Mersey*) for fishery protection and HMS *Clyde* for the Falkland Islands Patrol from BVT Surface Fleet (which still "owns" these ships) has proved a great success in cost-efficiency terms, providing through a multiple-watch system completely predictable platform availability for the MOD. Conversely, Vosper Thornycroft operates but does not own the two survey vessels, HM Ships *Echo* and *Enterprise,* but is still contracted to deliver 334 sea days a year. By these and a host of other reforms, the Royal Navy now gets far more out of its ships than it used to. These days the number of "operational" units generated by a given pool of ships is higher, and modern technology often reduces operating costs too. A Type 45 destroyer, for example, with its all-electric drive is expected to use half the fuel required for a Type 23 frigate.

For the past fifty years a succession of major institutional reforms to the manner in which ships, weapons, and sensors are designed and built—to correct for past inefficiencies and partially compensate for ruthless defense inflation—have been put in place, with varying success. A procurement system that delivers good ships on budget and on time has long appeared to elude the Royal Navy. Partly this has been a consequence of unsustainably optimistic projections of anticipated cost (no doubt in part intended to help secure political approval) and partly because of the inherent problems of a maritime defense industry not sufficiently tailored to suit modern conditions.[39] The result in the 2004–2006 period was something of a procurement crisis, resulting in cost and time overruns that seriously threatened important shipbuilding projects.[40]

An official Defence Industrial Strategy that was finally issued in 2005 and a Defence Technology Strategy in the following year have indicated a real determination to get to grips with this problem. It has led to a constructive rationalization and consolidation of British defense industries, with, for example, a great emphasis on teamwork among various providers, as demonstrated by the formation of BVT and the Aircraft Carrier Alliance. This in turn promises to facilitate more cost-effective procedures, such as performance-based agreements, and to help stabilize the maritime supply chain in the future. Progress in the reorganization of the British defense industry and the development of the notion of partnering between customer and supplier allowed the placing of major orders in 2007.[41]

How effective these reforms will prove in the long run remains to be seen, although initial prospects seem favorable.[42] But a basic problem remains. The

United Kingdom's maritime defense industry is now, after a long period of famine, grappling with something like a feast in orders but suspects that in the longer term these orders could well drop off substantially. The industry is thus still far from securing the steady and predictable flow of future orders that it would like to have. For such reasons the instituted reforms have, for all their promise, so far ameliorated rather than solved the real problem of a gap between commitments and resources.

More Networking. An alternate way of making the most of fewer platforms is to ensure that those few act together more coherently. Some have gone on to argue that with network-enabling technologies there could be a shift in the composition of the fleet away from fewer large platforms to larger numbers of smaller combatants gridded to operate together. The Royal Navy has not gone so far as to accept the more radical of these views but nonetheless has put a good deal of effort into this non-platform-centric approach to the future fleet.[43] In July 2004, the "promise of a Co-operative Engagement capability (CEC) was used to justify reducing destroyer and frigate numbers from 31 to 25."[44] Nonetheless, and despite the service's long experience in this field, the introduction and support of these potentially transformational technologies are more likely to increase raw costs for the Royal Navy than to reduce them. The full-blown CEC scheme sketched out in July 2004 was in fact postponed for five years, in early 2005.

THE NEED FOR A MAJOR REVIEW

Given the failure of these palliatives to solve the United Kingdom's long-standing resources-commitments problem, there is a general recognition, across the political spectrum and among all the services, that in the current financial and strategic environment the country needs the kind of major rebalancing of commitments and resources that only a rigorous strategic defense review can provide. The last one of these was in 1997–98, with a "new chapter" added in 2002 in light of the focus on counterterrorism created by 9/11. The history of British defense since 1945 shows something of a pattern of a review every decade or so. Indeed, some believe Britain should adopt the more regular course corrections provided by the American Quadrennial Defense Review process.

It was no surprise, then, that the government announced on 7 July 2009 a wide-ranging consultative "green paper" (i.e., a preliminary government report without commitment to action) on defense to be completed by the spring of 2010, when a new general election is widely expected. This will act as the foundation for a full-blown strategic defense review through 2010–11 that will set the agenda for the succeeding decade or so. The Conservative opposition has likewise announced its intention to follow much the same course, and a number of

private organizations have already published significant contributions to the debate.

Of these, perhaps the most comprehensive has been the Institute for Public Policy Research's very wide-ranging report *Shared Responsibilities: A National Security Strategy for the UK.* Its emphasis is on defining security in the widest way and on considering the defense dimension within that much broader context. It also puts a good deal of stress on developing closer security relationships with the rest of Europe in a much more unstable, multipolar world.[45] Finding what it calls "a black hole in the defence budget," the IPPR report recommends a close review of Britain's projected defense-equipment requirements with a view to "capability downgrading and quantity reductions, as well as for complete cancellation of some equipment programmes."[46] Significantly, the candidates offered up for illustrative purposes were all naval: the Future Carrier program, the Joint Strike Fighter, the Type 45 *Daring*-class destroyer, and the *Astute*-class submarine. If it serves no other purpose, the report at least identifies some of the areas that the Royal Navy will need to defend in the coming round.[47]

The Strategic Deterrent

The Royal Navy has successfully operated Britain's continuous-at-sea deterrent for the past forty years and believes that none of its patrols have been detected, even when one of its SSBNs (ballistic-missile submarines) was involved in a minor but extraordinary collision with a French SSBN in the Atlantic in February 2009![48] Each boat sails in "relaxed" mode, carrying forty-eight detargeted warheads that are on several days' notice to fire. The Trident missile will not reach the end of its operational life until around 2042, and the *Vanguard* submarines, on current estimates, will require replacement in 2024.

The long lead time needed to build a new generation of ballistic missile–firing submarines led the British government to outline plans in a December 2006 white paper and then in May 2007 to authorize design and concept work for a new class of submarines. The new submarines are expected to have twelve rather than the current sixteen missile tubes, and a British-led contract has been awarded to General Dynamics Electric Boat to design a "Common Missile Compartment" for both the United Kingdom's successor submarines and the U.S. Navy's projected *Ohio*-replacement SSBNs.[49] This followed a year of intensive review by the Ministry of Defence of over a hundred alternative ways of maintaining a deterrent. The conclusion of the review was that only a Trident-like system would produce the necessary capabilities at bearable cost. The highly classified nature of much of the evidence considered in this review greatly limited its visibility and contributed to quite a widespread perception that the decision was more of an instinctive reflex than the result of a rigorous analysis of

all the issues.[50] Also, although spread over many years, the program, at an estimated £24 billion, seems to many extremely expensive at a time of major constraint. Accordingly, many have argued that the decision ought to be put back on the table for a second look, given that contracts for the build of the new submarines may not need to be placed until perhaps 2014.[51]

So far, though, the government has, uniquely, excluded the possibility of a reconsideration of this program from the green-paper process. The National Security Strategy was quite clear that "a minimum strategic deterrent capability is likely to remain a necessary element of our national security for the foreseeable future."[52] Even the rather more skeptical IPPR report has concluded that development work should continue and that consideration be given to "a further run-on, beyond 2024 of the existing *Vanguard* hulls," since "a minimum UK deterrent is still needed."[53] The Conservative opposition has in theory acknowledged the necessity of a degree of reconsideration;[54] nonetheless, it is still likely to accept the need for a submarine-based system of some sort, although there is an appetite within the party for much cheaper solutions. There remains, furthermore, the wider skepticism about whether the United Kingdom needs an independent nuclear deterrent at all. The prime minster's recent decision to delay Trident design work and his apparent readiness to consider such various "Trident Lite" alternatives as three rather than four SSBNs and a reduced number of warheads may prove significant.[55]

The Astute-*Class Submarines*

The 7,400-ton *Astute* SSN, the first of which is expected to be delivered by the end of 2009 (at the time of writing), is closely related to this issue. Three others have been laid down and long-lead orders given for two more; an order for the seventh boat, to be delivered around 2020, should be issued next year. An eighth boat seems problematic.[56] This constitutes a significant drop in SSN numbers since 1998 from fourteen to perhaps eight. Originally scheduled to produce the first *Astute* in June 2005, the program has been subject to delays, cost increases, and constructional problems that are partly attributable to a certain fading in skills as a result of the long gap since the early 1990s, the construction of the last *Vanguard.* The delays and difficulties are also due to the determination to give this submarine some extraordinary, world-class capabilities. Finally, the *Astute* program exemplifies one of the most difficult problems facing the British maritime defense industry—the fact that the SSN building industry is highly specialist, with only one supplier (once Babcocks, now BAE Systems at Barrow), one customer, and no prospect for export. As a result, the program has also to support the costs of retaining the industry.

Perhaps unsurprisingly, the program was in real trouble in the 2002–2005 period, but it has now, with the negotiation of new agreements and procedures between the MOD and BAE Systems, been successfully turned around. As Murray Easton, managing director of the project at Barrow, remarked, "We were in a marginal situation with *Astute* and just survived. If we were to go through anything like that again, then we almost definitely wouldn't recover."[57]

For this reason, going instead for a regular, plannable, and predictable drumbeat of nuclear submarine construction would have many advantages for industry. The Defence Industrial Strategy agreement of 2005 sought to solve this problem for BAE Systems at Barrow with a long-term agreement to deliver one submarine every twenty-two months. After the Future Attack Submarine project, which was intended to be a follow-on to the *Astute* class, was quietly terminated in 2001, the future of the SSN building industry seems linked to the Trident replacement project. Were it decided *not* to build successors to the *Vanguard* SSBN, the likely atrophying of submarine design and construction skills would make a longer-term replacement for the *Astute*s highly problematic.[58]

The Type 45 Daring-*Class Destroyer Program*

The *Daring* Type 45 destroyer was another extremely complex and ambitious program, one that pulled together the productive efforts of over seven thousand defense firms. Adam Ingram, Minister for the Armed Forces, stated in 2003 that

> the principal role of the Type 45 Destroyers will be antiair warfare. However, these ships are being built with significant space and weight margins to enable incremental acquisition should an emerging requirement necessitate a different equipment fit. Our requirements are being kept under review, and the design could be modified to incorporate improved land attack capabilities, including a cruise missile system such as *Tomahawk*.[59]

Perhaps inevitably, its costs increased over budget, and six ships rather than the twelve originally envisaged were decided upon—contributing, of course, to each ship's being significantly more expensive than originally planned for. About three years late, this program is now nearing completion, and the Royal Navy claims with some justification that the result has indeed been what is, in many respects, a world-beating AAW destroyer. With its Samson radar, a single *Daring* will be able to monitor all takeoffs and landings from every major airport within two hundred miles of Portsmouth, including London Heathrow and Gatwick. Able to engage twelve air targets simultaneously, a Type 45 could single-handedly protect London from air attack.[60] The design, moreover, is spacious, with all the growth potential anticipated by Adam Ingram in 2003.

Nonetheless, criticisms of the project have been made. Its Sea Viper principal antiair missile system has not yet been fired from the ship, although extensive

trials (including a first sea-firing on 4 February 2009) have taken place. A cross-party committee of members of Parliament has been critical of the MOD's project management for its alleged deficiencies.[61] Another criticism has fastened onto the fact that the *Daring* has not been fitted with land-attack missiles, as a result, some say, of a blocking operation carried out by a Royal Air Force concerned about the survival of its deep-strike role.[62] The vessel's highly sophisticated Samson radar system would allow it to grow into a highly effective ballistic missile–defense role; given the proliferation of missiles around the world, this seems a likely requirement.

The Carrier Program

The program for two sixty-five-thousand-ton CVFs originally announced in the 1998 Strategic Defence Review has now been confirmed, much subcontracted work has already been completed, and the first steel was cut ceremonially on 7 July 2009, but these ships remain controversial. The British press has reported widespread opposition to them within Army and Royal Air Force circles and itself has exhibited skepticism about whether they really constitute good value for money. The IPPR report also identified the carrier and the associated JSF programs (138 aircraft for the Royal Navy and for the RAF, at an estimated five and ten billion pounds, respectively) as major sources of significant future savings on the defense budget.

The in-service dates of the two carriers were originally 2012 for *Queen Elizabeth* and 2015 for *Prince of Wales.* The decision in December 2008 to delay the completion of the two carriers by approximately two years, in order to "reprioritise investment to meet current operational priorities and to better align the programme with the Joint Strike Fighter aircraft," added at least £600 million to the £3.9 billion already envisaged.[63] Now HMS *Queen Elizabeth* is due for completion in 2016 and *Prince of Wales* two years later in 2018. Each will be able to take from thirty-five to forty fighter aircraft and a large number of helicopters and UAVs.

The arguments against the completion of the project are fairly familiar.[64] Given their high-seeming cost and the likely presence of allied carriers and friendly land bases, some believe that the need for such an ambitious capability is overstated. The IPPR report makes the point that since Britain is likely to engage in major combat operations only in coalitions led, most likely, by the United States, investment in capabilities already held "in abundance, relative to any adversary," seems unwise.[65]

The worst aspect of this controversy has been the reappearance of destructive interservice tribalism. The British Army's position is that current expenditure for the forces actively engaged in Afghanistan should take priority for the next

ten years or so, rather than weapons systems, "relics of the Cold War," which it claims are primarily intended for high-intensity interstate warfare. The RAF has attacked the carriers more insidiously, first arguing that the Harrier force on the Royal Navy's existing carriers should be scrapped, thereby opening up a serious gap until the putative arrival of the JSFs. Beaten off in this attack, the RAF then argued that it should take over entire responsibility for naval aviation, promising to make nonspecialist aircrew available as and when necessary. This threat to return to the dreadful days of "Dual Control" in the interwar period has likewise been defeated, at least for the time being.[66]

The carrier program's heavy reliance on the prompt arrival of the vertical/short-takeoff-and-landing (V/STOL) version of the JSF F-35B as the answer to the RAF/Royal Navy requirement for perhaps 138 Joint Combat Aircraft remains a source of danger, and any significant delay could hugely complicate the carrier project.[67] The V/STOL ramp could be removed and replaced by conventional catapults, but this would cost considerable money and time. The fact that the United Kingdom has invested enough in this project to become a Level 1 partner (that is, to have a significant role in the project's direction) with the United States indicates in itself, however, the priority currently attached to it.

The CVF's defenders point to the manifest utility of the carrier in most war-fighting, expeditionary, and conflict-prevention situations. Britain's capacity "to deliver airpower from the sea wherever and whenever it is required" until about 2070 will facilitate "strategic effect, influence and, where necessary, direct action [that] will give us an unprecedented range of options to deal with the challenges of an uncertain world at a time and place of our choosing."[68] The Navy has argued that the experience of the past fifty years amply demonstrates the advantages of sea-based aviation in a manner likely to be confirmed in the next fifty.[69] The CVF and its air group could be flexibly tailored to cope with activities in all of the four main task areas identified earlier.

Moreover, given the inability to run the elderly *Invincible* carriers and Harrier fleet still further and the absence of a "Plan B," the loss of this program would put the Royal Navy at a major disadvantage relative to all the world's other carrier navies (including several European ones)—a position from which it would be very difficult indeed to recover. Given the increasing domestic and international challenges facing the U.S. Navy's carrier program in the next few decades and the rising naval powers of the Asia-Pacific, the loss of these two "medium" carriers would materially change the global naval balance for "the West."

With Quentin Davies, the Minister for Defence Equipment and Support, announcing at the steel cutting that aircraft carriers "are a corner-stone of British Defence," the naval view seems to have prevailed for the moment, but few doubt that the way ahead will be rocky. The industrial side of the argument, often

overlooked, may prove decisive. The carrier project employs ten thousand shipyard workers directly (mainly in Glasgow and Rosyth, in politically sensitive Scotland) and an estimated forty to fifty thousand more workers among the many subcontractors spread around the rest of Britain and, indeed, abroad. The Aircraft Carrier Alliance, largely comprising a functional merger of BAE Systems and Vosper Thornycroft, the two largest shipbuilding concerns in the country, is, as we have seen, represented as an imaginative rationalization in support of the government's Defence Industrial Strategy of keeping world-class defense technologies in Britain.[70]

Although the completion date of the carriers has been put back two years, the project has advanced since the contract was signed on 3 July 2008 more than is generally recognized. Work has gone ahead on the generators in France and Italy, on the shaft lines in the Czech Republic, on the rudders and propeller blades, on the aircraft lifts, the automatic weapons-handling system, bridge and antennae design, and so on, alongside heavy investment in infrastructure, especially in the No. 1 Dock at Rosyth. Numerous suballiance contracts have been signed—for example, to de-risk interface problems between the carriers and its aircraft and to deliver the propulsion systems needed to drive what will be the world's biggest all-electric ships.[71] Given such sunk costs, cancelling the project at this stage would be very expensive in financial terms. For the time being, at any rate, the National Security Strategy emphasizes "continued commitment to renewing the Royal Navy, through Type 45 destroyers, *Astute* submarines and the Future Aircraft Carriers."[72]

All the same, the new First Sea Lord, Admiral Sir Mark Stanhope, has admitted that the carrier program *could* be overturned. In the meantime, industry is forging ahead, and with the return of the British Harrier force from its diversion to Afghanistan, the necessary work on regenerating carrier-strike capability on HMS *Invincible* and then *Ark Royal* has now resumed. Exercise AURIGA, the group deployment for 2010, will be important from this point of view.[73]

The MARS Program

The Military Afloat Reach Sustainability (MARS) program attracts much less attention than the Royal Navy's other, higher-profile projects, but it is critical to the support of the service's sustained global presence, to the development of British concepts of sea basing, and to the logistic support of British joint forces ashore.[74] The Royal Navy's current tankers and solid-support ships are ageing fast, find it difficult to keep up with modern task groups, and include single-hulled tankers of dubious legality. Originally the program was intended to produce a total of eleven new ships between 2011 and 2021 at a cost of some £2.5 billion, but delays have been experienced, partly because of the program's

concurrency with the CVF, Type 45, and *Astute* projects. Two Wave-class auxiliary oil tankers have been delivered, but the overall series is worryingly late.

The Future Surface Combatant

The "hi/lo mix" issue (that is, the idea of combining sophisticated but expensive units with forces less capable but affordable in greater numbers) is exactly illustrated by the current debate over the Future Surface Combatant. This program, intended to replace the Type 22s, 23s, and lesser types as well, started in the mid-1990s but failed in 1999 and had to be resurrected in 2003.[75] The cancellation of the last two Type 45s (numbers 7 and 8, known colloquially as HM Ships *Dubious* and *Doubtful*) in the original plan provided headroom for the resuscitation and indeed partial acceleration of this project, but the accumulated delay makes an eventual shortfall in destroyer and frigate numbers almost inevitable. The precise mix of ships to be adopted has always been a very complex matter, but since these ships are to be the mainstay of the Royal Navy for decades, it was, and indeed remains, clearly important to get the project right.

Some argue that this family of ships should include a sizable investment in new, less capable, and cheaper—if not "cheap as chips"—warships, more modular and fitted for, but not with, specialist equipment. This thinking reflects a concern that the reduction in numbers brought about by an insistence on high quality in warship design dangerously reduces the geographic coverage that the fleet provides. However good it is, a warship can only be in one place at one time. Having secured just six of the *Daring* class, these people think, there is now a need for a bigger focus on simple numbers.

A second school of thought is somewhat less concerned about the drop in numbers, having greater faith in the compensating effect of high quality. With technical advances and the astonishing speed at which first-line warships can move, the coverage afforded by a modern warship amply compensates for a drop in numbers, its adherents say. Pointing to the deeply impressive capabilities of the Type 45, they conclude, "Measuring the capability of our Armed Forces by the number of units or platforms in their possession will no longer be significant."[76] For such reasons, this school continues to uphold the traditional Royal Navy policy of placing its major investments in capable, high-end war-fighting platforms. They also maintain that governments would be less willing to use the second-rate ships of a two-tier navy in any but the most benign of environments, when, in fact, support ships might offer greater capability.

At the moment, there is a broad balancing consensus that the FSC family should comprise three classes of ship:

- C1: large, capable warships intended for ASW and land attack, with organic mine countermeasures (MCM) and a limited capacity to carry a military

force. The C1 should be big, with a large flight deck and growth potential. It would be able to join a deployed task group. The aspiration is for the first of these to be commissioned in 2017, an ambitious target indeed.

- C2: smaller, less sophisticated, and so cheaper general-purpose vessels, possibly with the same hull as the C1, intended for lower-scale stabilization and maritime security operations.
- C3: a diverse family of significantly smaller ships capable of operating on the open ocean and of being configured for a variety of roles, including offshore patrol, MCM, hydrography, and oceanography. These ships, in effect, are now regarded as a distinctive group in their own right, but alongside the C2s they could provide presence and often be entrusted with conflict-prevention and maritime security operations around the world.[77]

The notion that we will see a blurring of the differences between simpler frigates and minor war vessels and a trend toward more multipurpose vessels making use of modular and unmanned technologies is part of this debate. The thinking behind the C2 variant is particularly revolutionary, since it approaches the controversial notion of building a major warship that from the war-fighting point of view would be second-class by design. Admiral Sir Jonathon Band was "much more interested in something which is designed first and foremost to perform maritime patrol and presence tasks, with the ability to contribute to 'classic' warfare tasks if required."[78]

By such innovative thinking the planners hope to be able to help solve the numbers problem; to reduce the current diversity in platforms, weapons, and sensors; and to do both at sustainable cost. Early progress in this project is also seen as essential as a means of providing the British warship-building industry with a sustained basis for sensible planning. For the same reason it is important that some of the variants have export potential. Thinking about all of this, especially the C3 variant, is quite tentative at the moment, however, and no quick or easy solution to the Royal Navy's numbers problem is expected. In the meantime, plans exist to upgrade and run on some of the Type 22 and Type 23 frigates as a way to keep frigate numbers up until the 2030s.[79] Some of these hulls are likely to remain in service for between thirty-two and thirty-six years—nearly twice as long as originally envisaged. The FSC program attracts nothing like the public attention given to the carriers and Trident, but it is hard to exaggerate its importance for the Royal Navy as an oceangoing force in the longer term.

AIMING FOR THE VERY BEST

The conclusion that emerges is that for all its apparent reductions in size, the reported death of the Royal Navy has as yet been considerably exaggerated. Instead

what the world may be watching is a major process of transformation, and in some ways rebirth, of what is still and will remain one of the world's significant navies.

A succession of British defense policy makers over the past ten or fifteen years have collectively taken, under extreme financial and operational pressure, a real and potentially risky gamble for their navy's future. They have decided that the Royal Navy *must* stay in the front line—the premier division, in soccer terms—and to that end they have set going the most ambitious program of fleet recapitalization for perhaps forty years, at a time when naval defense spending is less than half of what it was in the Cold War era. The price deliberately and consciously paid for this ambitious renewal has already been severe in numbers of ships, submarines, aircraft, and people. But insofar as the tonnage of frontline ships is concerned, today's built and building fleet is appreciably larger than it was in 1997, even without the Future Surface Combatant. The final rewards of this Nelsonian policy of aiming for the very best will be apparent only when the major programs described above complete or start to come through.

The problem for the Royal Navy is that the general situation has greatly worsened since this long campaign began. The so-called War on Terror has produced two conflicts in which the United Kingdom has found itself in savage and expensive land-based wars, in Iraq and Afghanistan, whose needs command the attention of governments, politicians, and the media. The facts that over half the air strikes in Afghanistan are from carriers and that 40 percent of the British personnel engaged in that unrelenting campaign have at various times been naval (counting the Royal Marines as such) make no difference. At a time when journalism, the defense variant included, can be likened to the "industrialization of gossip," the facts are less important than the narrative—it is the impression that counts. And the impression is that the Army is doing all the fighting and so deserves the resources. Given the very short political horizon of most politicians and media folk, this is potentially a very dangerous development for the Royal Navy.[80]

However, a growing public distaste for engagement in large-scale, open-ended conflicts on, and garrisoning of, parts of the Asian mainland (or anywhere else, for that matter) will probably militate against the assumption that the strategic future should be merely the strategic present extrapolated forward. Accordingly, one of the most contentious and critical issues in the Strategic Defence Review will therefore be the extent to which current experience should act as a template for defense preparation in the medium and longer terms. It may well be that the review will herald a marked shift away from fighting future Afghanistans and back toward the traditional, more modest, maritime conceptions of strategy that have served Britain rather well over the past three hundred years.

The new review will certainly need to address the extraordinary disconnect that has developed over the years between a growing awareness of Britain's

dependence on the sea for its safety and security, on the one hand (as exemplified by the government's rejuvenation of the British shipping industry, the attention paid to maritime security in the *National Security Strategy,* and today's very high levels of directed naval engagement), and, on the other, a continued shortfall in the allocation of resources needed to sustain it.

On top of all that come the effects of the worst economic recession for the United Kingdom in three-quarters of a century. The United Kingdom's national debt is now some 12 percent of GDP, and government revenues are some £175 billion overdrawn. Accordingly, significant reductions in medium-term government spending can be anticipated, not least in defense. Although both major political parties have suggested that they will seek to protect the defense budget, estimates of the size of prospective defense cuts vary widely; the newspapers talk of 10, 15, even 30 percent reductions. At the moment no one knows, nor will they until the new Strategic Defence Review is completed. Nor do we know which government will make the next round of decisions in 2010. The political certainties are few. If past history and current political attitudes to national spending and borrowing are anything to go by, we can expect a Conservative government under David Cameron to be significantly less sympathetic to the Royal Navy than the current administration. All in all, it would be wildly optimistic to imagine the Royal Navy's emerging completely unscathed from this deadly barrage of unexpected and unpredictable fire.

All this may make the chances that this, Great Britain's greatest gamble with its navy, will actually come off seem quite remote, but the successfully completed transformation of the United Kingdom's amphibious capability (once long despaired of) and the appearance of the *Daring*s and the *Astute*s may suggest, for all the contention, that as so often before the Royal Navy will prevail against the odds. Certainly, for the long-term prosperity and security of the country and for the rules-based maritime order of which it is a part, one must hope so.

NOTES

1. "Navy Forced to Withdraw Warship from the Falklands," *Daily Telegraph,* 7 December 2008.
2. "MPs Attack Navy over Debacle in the Gulf," *Guardian,* 14 December 2007; "Navy Would Struggle to Fight a War—Report," *Daily Telegraph,* 2 December 2007; Arthur Herman, "The Strange Death of the Royal Navy," *New York Post,* 14 January 2007.
3. The clearest expositions of this view are Vice Adm. Sir Jeremy Blackham and Gwyn Prins, "Storm Warning for the Royal Navy," U.S. Naval Institute *Proceedings* (October 2007), and "The Royal Navy at the Brink," *Journal of the RUSI* (April 2007).
4. *National Security Strategy Update 2009: Security for the Next Generation* [hereafter NSS2009] (Norwich, U.K.: The Stationery Office [hereafter TSO]: March 2009), pp. 97–99.

5. A. T. Kearney, "The Globalization Index," *Foreign Policy* (November/December 2007).
6. Nelson, aboard HMS *Victory,* to Capt. Benjamin Hallowell of HMS *Argo,* 20 March 1804, in Sir Henry Nicholas, *The Dispatches and Letters of Vice Admiral Viscount Nelson* (London: Henry Colburn, 1845), vol. 5, p. 467.
7. These are listed in the defense white paper *Delivering Security in a Changing World,* Command 6041-1 (Norwich: TSO, 2003), pp. 4–5.
8. "Making Waves," *Defence Special: Newsletter of the Chamber of Shipping* (Spring 2009), pp. 1–2, 4.
9. NSS2009, p. 54.
10. Ibid., p. 39.
11. A. T. Mahan, *Retrospect and Prospect* (London: Sampson, Low Marston, 1902), p. 144.
12. Jeffrey Frieden, *Global Capitalism: Its Fall and Rise in the Twentieth Century* (New York: W. W. Norton, 2006), pp. xvi–xvii.
13. "Making Waves," p. 8. The increased recognition of the requirements for maritime security discernible from a comparison between the first and second versions of the National Security Strategy, in 2008 and 2009, respectively, is further evidence of such a trend.
14. NSS2009, p. 14.
15. For example, Randy Schnepf, *US-Canada WTO Corn Trade Dispute,* CRS Report for Congress (Washington, D.C.: Congressional Research Service, 31 January 2007).
16. NSS2009, p. 66.
17. Nor is this view confined to the Navy. See Gen. Sir Charles Guthrie, "The UK's Armed Forces: Warfighters or Peacekeepers?" *Jane's Defence Weekly,* 3 January 2001.
18. The shift toward expeditionary operations began with the *Strategic Defence Review* (London: Ministry of Defence, 1998) [hereafter SDR98].
19. NSS2009, p. 67.
20. SDR98, introduction, para. 6, and "Supporting Essay Six: Future Military Capabilities," para. 22, p. 6.6.
21. The latter is the subject of an important new review: Andrew Dorman, *Blair's Successful War: British Military Intervention in Sierra Leone* (London: Ashgate, 2009).
22. Richard Scott, "Briefing: Retirement of the UK Sea Harrier Force," *Jane's Defence Weekly,* 8 March 2006.
23. For two examples of the "Little Englander" tradition, see Paul Robinson, "Why Britain Needs a New Defence Policy," and Correlli Barnet, "Imperial Overstretch, from Dr Arnold to Mr Blair," both *Journal of the RUSI* (August 2005).
24. *Shared Responsibilities: A National Security Strategy for the UK* (London: Institute for Public Policy Research, June 2009) [hereafter IPPR report], p. 24.
25. The view that military personnel must be protected by the European Convention on Human Rights even when deployed in battle is likely to complicate further the conception and management of risk in operations by all European forces; "MoD Overruled on Troops' Human Rights," *Guardian,* 19 May 2009. The Royal Navy is not immune to such pressures, as it discovered when an accident on the submarine HMS *Tireless* killed two crew members off Alaska in March 2007; "Sailors Died as Sub's Faulty Gear Exploded," *Daily Telegraph,* 11 February 2009. Even the Royal Navy's famous Field Gun competition has had to be adjusted to fit health and safety regulations.
26. It is important to note, however, that with limited liability may go more limited aspirations—more about "offshore balancing" and protecting the conditions for trade than installing Jeffersonian democracy in resistant areas.
27. See Geoffrey Till, "The Return to Globalism: The Royal Navy East of Suez," in *British Naval Strategy East of Suez, 1900–2000,* ed. Greg Kennedy (London: Routledge, 2005). For a convenient account that shows just how busy the Royal Navy has been in the post–Cold War era, see John Roberts, *Safeguarding the Nation: The Story of the Modern Royal Navy* (London: Seaforth, 2009), pp. 202–334.
28. Adm. Sir Jonathon Band, "The Strategic Vision for Navies," *Journal of the RUSI* (February 2007).
29. IPPR report, p. 50.

30. HMS *Iron Duke* recently made the Royal Navy's biggest drug seizure when it intercepted 5.5 tons of cocaine—worth £240 million, the cost of a good frigate—off South America. *Guardian,* 28 September 2009.
31. NSS2009, p. 49.
32. IPPR report, p. 50.
33. Tim Fish, "SNMG2 Maintains NATO's Counter-piracy Presence," *Jane's Defence Weekly,* 8 July 2009.
34. For the African Partnership Station, see Jonathan Stevenson, "The U.S. Navy: Into Africa," *Naval War College Review* 62, no. 1 (Winter 2009), pp. 59–65.
35. The number of warheads carried by present and future submarines might, however, be reduced as part of a collective agreement. "Obama Plans Nuclear Talks to Lift Threat of Proliferation," *Independent,* 10 July 2009.
36. For an exploration of the traditionally "joint" instincts of the Royal Navy, see Commodore Tim Laurence and Stephen Prince, "The Continuing Transformation of Britain's Maritime Forces," *Journal of the RUSI* (April 2003).
37. Quoted in "Minister to Set Carrier In-Service Date," *Jane's Defence Weekly,* 2 November 2005.
38. Quoted in Richard Scott, "Bringing Out the Big Guns," *Military Logistics International* (April/May 2008).
39. Philip Pugh, "Follies of Management: Then and Now," *RUSI Defence Systems* (Autumn 2005).
40. "MPs Accuse MoD of £2.6 Billion Overspend on Biggest Projects," *Daily Telegraph,* 11 September 2007.
41. "Orders for £3Bn Warships Signal a New Era for Naval Defence Industry," *Guardian,* 29 March 2007.
42. An important review of the effectiveness of the new arrangements under Bernard Grey is expected in the autumn of 2009 (at the time of writing).
43. Lee Willett, "UK Defines Its Network Ethos," *Jane's Navy International* (April 2006).
44. Pugh, "Follies of Management."
45. IPPR report, p. 57.
46. Ibid., p. 14.
47. Critics have pointed out that the distinguished panel of senior politicians, retired officers, diplomats, and academics contained one retired general but no one with maritime expertise. Moreover, none of the many sources and only one of the interviews listed appears to deal with maritime matters. It seems therefore to be a classic example of the "sea blindness" so lamented by the former First Sea Lord, Sir Jonathon Band; Jasper Gerard, "Ministers Are Sea Blind: The Navy Can't Go Anywhere Else, Says Admiral," *Daily Telegraph,* 13 June 2009. To be fair, though, this was such a wide-ranging review that coverage of military/defense issues was relatively slight.
48. "Nuclear Subs Collide in the Atlantic," *Daily Telegraph,* 17 February 2009; "Silent Killers of the Deep Were Just Too Quiet," *Times,* 17 February 2009. France's deeper integration into NATO's command structure will, one hopes, prevent such water-management problems.
49. "Countering Nuclear Threats and Anti-nuclear Arguments," *Guardian,* 5 December 2006; Richard Scott, "UK's Successor SSBNs Will Carry Fewer Missiles," *Jane's Defence Review,* 25 March 2009.
50. Max Hastings, "We Need Less Tosh and More Facts for a Decision on Trident," *Guardian,* 17 July 2006.
51. IPPR report, p. 53.
52. "Trident to Be Excluded from Defence Review," *Guardian,* 8 July 2009; NSS2009, p. 10.
53. IPPR report, pp. 14–15.
54. "Tories Cast Doubt on £21bn Trident Nuclear Missile Upgrade," *Daily Telegraph,* 1 May 2009.
55. Hugh Beach, "Trident White Elephant or Black Hole?" and Julian Lewis, "Soldiers against the Bomb?" both *Journal of the RUSI* (February 2009). (Lewis is a Conservative spokesman for the Navy.) For a possible shift of public opinion on this see "Most Voters Want to Scrap Nuclear Weapons: ICM Poll," *Guardian,* 14 July 2009; and "Design Work on Trident Put Back," *Guardian,* 17 July 2009. See also "Brown Considers Cutting Nuclear Warheads as Part of 'Global Bargain,'" *Guardian,* 24 September 2009.

56. Francis Tusa, "Support Looks Solid for *Astute,*" *Defence Technology International* (June 2009).

57. Quoted in Richard Scott, "Briefing: *Astute*-Class Submarine Programme," 22 March 2006.

58. "RAND Highlights Actions to Sustain UK Submarine Base," *Jane's Defence Weekly,* 26 October 2005.

59. *Hansard,* 13 May 2003, column 159W, cited in Lee Willett, "Operation Telic: Land Attack Capability and the Type 45 Destroyer," *RUSI Defence Systems* (January 2004).

60. Thomas Harding, "Navy to Rule the Waves with Most Advanced Destroyer," *Daily Telegraph,* 11 December 2008.

61. Richard Norton-Taylor, "MPs Say Navy's New Destroyer Will Put to Sea Unready for Action," *Guardian,* 23 June 2009; Thomas Harding, "The Navy's New Destroyer Will Set Sail Unable to Fire Missiles," *Daily Telegraph,* 23 June 2009.

62. Neil Tweedie, "The Army Takes on the Navy as Whitehall Goes to War," *Daily Telegraph,* 18 June 2009.

63. Richard Norton-Taylor, "Aid for Afghan Troops as £4bn Aircraft Carrier Plan Delayed," *Guardian,* 12 December 2008.

64. Many of these views are rehearsed and examined in Tweedie, but see also Richard Norton-Taylor, "Military Spending Not Fit for Purpose: Army Head," *Guardian,* 16 May 2009; Sean Rayment, "Air Force Chief Hints That the Navy's Carrier Jets Are Doomed," *Daily Telegraph,* 7 June 2009; and "Fighting Old Wars," *Guardian,* 1 July 2009. One of the few newspapers to come out unequivocally for the new carriers was the *Times*—see its leader (that is, editorial), "The Case for Carriers," *Times,* 12 December 2008.

65. IPPR report, p. 50. This conclusion sits unhappily with the IPPR's aspiration for closer ties with Europe and with current U.S. Navy assumptions about the future naval force balance, particularly in the Pacific.

66. Tim Ripley and Richard Scott, "RAF, RN Clash over Plan to Cut UK's Harrier Force," *Jane's Defence Weekly,* 17 December 2008.

67. Anticipated pressure on the JSF buy seems to have been the basis of the officially denied story that appeared in the *Sunday Times* on 26 March 2009, "Navy Surrenders One New Aircraft Carrier in Budget Battle." For the moment at least, the building of two strike carriers remains government policy.

68. Adm. Sir Jonathon Band, quoted in "British Carrier Project in Money Trouble," London UPI, 9 July 2009.

69. For a convenient summary of this experience, see Tim Benbow, "British Naval Aviation: Limited Global Power Projection," in *Seapower at the Millennium,* ed. Geoffrey Till (Stroud, U.K.: Sutton, 2001), pp. 57–65.

70. Richard Scott, "UK Naval Sector Urged to Consolidate to Survive," *Jane's Defence Weekly,* 4 January 2006.

71. Richard Scott, "Preparing for Take-Off: UK Amps Up JSF Carrier Integration Effort," and "Power Curve: UK Puts Its Faith in Full Electric Propulsion for Future Carriers," both *Jane's International Defence Review* (January 2009).

72. NSS2009, p. 33.

73. "Aircraft Carriers May Not Be Built, Says Navy Chief," *Guardian,* 19 September 2009; Richard Scott, "Back on Board," *Jane's Defence Weekly,* 9 September 2009.

74. Richard Scott, "UK Nears Decision on MARS Integrator," *Jane's Defence Weekly,* 18 October 2006.

75. Richard Scott, "Make or Break: The FSC Programme," *Jane's Defence Weekly,* 27 August 2008.

76. The Rt. Hon. Geoffrey Hoon, Secretary of State for Defence, lecture (Royal United Services Institute, 26 June 2003).

77. "UK Plans Radical Changes to Minor War Vessel Fleet," *Jane's Defence Weekly,* 9 September 2009.

78. Adm. Sir Jonathon Band, interview, *Jane's Defence Weekly,* 26 July 2006.

79. "UK MoD Stretches Lives of *Duke*-Class Frigates," *Jane's Defence Weekly,* 26 November 2008.

80. See, for example, "Military Facing Deep Changes, Says Minister," *Guardian,* 4 August 2009.