HOUSE OF COMMONS

# Defence Committee

## Oral evidence: The Navy: purpose and procurement, HC 168

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Watch the meeting

Members present: Mr Tobias Ellwood (Chair); Stuart Anderson; Sarah Atherton; Martin Docherty-Hughes; Richard Drax; Mr Kevan Jones; Mrs Emma Lewell-Buck; John Spellar; Derek Twigg.

Questions 1-35

### Witnesses

I: Admiral (Retd) Sir Philip Jones, Former First Sea Lord (2016-2019) and Professor Jonathan Caverley, Professor of Strategy, US Naval War College.

# Examination of witnesses

Witnesses: Admiral Sir Philip Jones and Professor Jonathan Caverley.

**Chair:** Welcome to this House of Commons Defence Committee hearing, focusing today on the Royal Navy's purpose and procurement. It is our first session on this subject, and I am delighted to welcome two witnesses: Admiral Sir Philip Jones, First Sea Lord from 2016 to 2019, and Professor Jonathan Caverley, professor of strategy at the US Naval War College. Sirs, thank you very much indeed for joining us this afternoon. I think it is going to be a very interesting and timely discussion looking at where the Royal Navy is going over the next decade. I invite Emma Lewell-Buck to start the questions off.

Q1 **Mrs Lewell-Buck:** Good afternoon, Admiral Jones and Professor Caverley. As you both already know, our Navy is tasked with doing a lot, and it does it well, but in the back of the Defence Command Paper is an expectation that there will now be more ships overseas, more often, and for longer. Do you believe that is achievable and realistic, and do we actually have the personnel to man these ships abroad? The Defence Command Paper says nothing about increasing personnel. If it is not achievable or realistic, what do you think our Navy should be prioritising?

***Admiral Sir Philip Jones:*** That is a very important question. My belief is that the additional tasks that the Navy is being asked to do in the Defence Command Paper are realistic, credible and appropriate. To be fair, they are not entirely unexpected. It is the kind of evolution of the role of the Royal Navy that we have seen coming for a couple of years now, and we have been trying to position the Navy to be ready to respond to it. As you rightly say, that is positioning in a number of ways. It is a question of scale: is the Navy big enough to be able to deploy on all the persistent present tasks that the Government is asking it to do? I believe it is, but what we will see over the next few years is an evolution of the size and shape of that Navy, with perhaps more appropriate ships for each and every one of those tasks being available in a couple of years' time, so we will seeing some swapping in and out as more ships become available. We also have to drive up the sustainability and availability of those ships, and that is a key requirement as well. That has been running for a number of years. I was, quite rightly, under a lot of pressure as First Sea Lord to make more ships available. It is not just the size of the fleets; it is how many are deployable. That is on an upswing at the moment as well, after some very good investment in sustainability, extending the length of service of current ships and bringing new ones in.

Your final point is perhaps the most crucial one of all: can we man this fleet? It is no good having all this fabulous equipment if you cannot man it. Again, we have been anticipating that requirement. Although the Defence Command Paper this year does not say much about growth in

numbers, SDSR 2015 did. Although it was hidden down in the small print, the Navy was authorised to grow its numbers—in a small way, initially—to anticipate having two Queen Elizabeth class carriers in service, looking to be in a position to grow the size of the surface fleet, and being ready to man these five new Batch 2 River-class OPVs. We have been quietly doing that, albeit from a very challenging baseline after the redundancy round in about 2012, after SDSR '10, and those numbers have been steadily coming up. What has helped is that we have stabilised a lot of our outflow during covid—never waste a good crisis, as someone said. Suddenly, military service is seen as a very stable and welcoming employer, so a lot of people who might have left have not done so, and we have been able to showcase the growth of the Navy, and its increasing tasking, to be a very positive recruitment tool. Many of the categories of concern in our manpower that I was tracking very carefully as First Sea Lord two years ago are in a much better place now. We are growing back to the manning capability needed to see those ships deploy.

**Mrs Lewell-Buck:** Professor, do you want to comment on that question?

***Professor Caverley:*** I have a couple of quick comments in a broader sense, rather than specific to the question. First, I have to state the disclaimer that these are my opinions, and they do not represent those of the United States Naval War College, the Navy or the Government.

With that out the way, my opinion is that, first, what makes navies unique from other services is the vast and massive peacetime role they play. The point of a navy is to go to sea in war and in peace. The Navy—the Royal Navy and the United States Navy—does a lot of important things, so it really is important that, if you have the ships, they have to go to sea.

Looking at the United States Navy's experience, like the Royal Navy it is very expeditionary and forward deployed. I believe that one of the major problems with United States Navy is demand management: the fleet is suffering because combatant commanders—the regional four stars who are in charge of the operations around the world—have an insatiable demand for Navy ships. It is important to be at sea, but it is also important to be very careful and comprehensive about how you manage the demand for deployments, because operation maintenance takes a real toll on ships. The United States Navy is really trying to learn some lessons from that.

One lesson that is very important to understand is that, frankly, the United States Navy has made some mistakes about how slim a crew you can put on a ship. Especially when you are forward deployed, you need trained personnel. Another lesson we are learning is that unmanned systems are not a solution for that. A person may not be on the ship or the platform, but there will need to be a person nearby for the maintenance and care and feeding of those assets. That is especially true for surface and sub-surface unmanned systems, which are incredibly maintenance-intensive. They are very demanding environments for a ship, even without humans onboard. Just because you are unmanned does not mean you will save a lot on personnel.

**Mrs Lewell-Buck:** Thank you both very much. I'll leave it there.

Q2 **Chair:** To pursue Emma's question a bit further: Admiral, when we worked together I was very concerned about the number of ships we had. We seemed to get stuck with the number of 18 frigates and destroyers—that seems to be embedded into the MoD's culture, perhaps directly by Whitehall and No. 10. Does "three to one" still apply, where if you have 18, you probably have six ready to go operationally at any one time?

***Admiral Sir Philip Jones:*** In many cases it does. It is important, certainly for those more capable ships that are traditionally manned and deployed such as the Type 45 and the Type 23, that you have a realistic expectation of how many of them you can have available to use at any one time. Given the right degree of notice, you can sequence that to create peaks; of course, carrier strike group '21 is one of those peaks.

Crucially, Governments need to know that the Navy can respond when you cannot predict the requirement for a peak—for example, the kind of peak we had in April 1982. It is important to drive greater resilience and availability into the fleet for those unexpected moments.

When you man the ships differently, coming up with a different model for how you use them, you have inherently greater flexibility anyway. The three-watch manning, for example, in both the Batch 1 and the Batch 2 River-class OPVs means they are continuously available unless they are in short periods of contracted maintenance, which can be abroad and not necessarily just in the UK. That makes a higher level of availability, but those are ships with a much smaller ship's company. A Batch 2 River-class OPV's whole crew is only about 45, so on two-watch manning, there are only about 30 on board at any one time, compared with hundreds on board a Type 45, but they are asked to do different things.

What we have been looking to do is come up with methods of making the ships more available, to squeeze more out of that, so we can possibly do better than one out of three. That is things such as the Type 23 life extension programme that they have been going through at Devonport recently, which has seen a dip in their availability but has now started to improve. Those ships now through that mid-life upgrade are at much higher levels of availability. That is a very good thing as we manage the transition of that class into Type 26 and Type 31. Likewise, the Type 45 propulsion improvement programme sees a dip in availability while we go through that, but it will lead to much higher levels of availability in those ships once that work is done.

Q3 **Chair:** The Integrated Review, which you touched on, and the Command Paper are placing greater demands on our Navy. There is mention of the Black Sea, and we have not really ventured into that neck of the woods traditionally. The Indo-Pacific is a massive tilt; that is where the aircraft carrier is going. On top of that, you have east Africa, the Gulf, the Caribbean, our home shores and overseas territories. There is an awful lot there for this multiple division of 18 to six, plus other assets, to cover. The argument we are looking at is whether it is now time to expand our

service fleet.

***Admiral Sir Philip Jones:*** I think it is, and it is welcome to see that it is going to be expanding progressively as we move through the 2020s into the 2030s. The Government has given a very welcome indication of direction of travel in the Integrated Review. In the meantime, we will persist with the strategy we have used for a while now, which is to think innovatively outside the box about how to achieve a high level of persistent presence and the capacity to be in as many of the places as we can by using ships that we might not have used in that way before.

The Navy that I joined, which had 50 destroyers and frigates available, was able to deploy destroyers and frigates pretty much everywhere. Wherever you needed to place a vessel, wherever you needed a Royal Navy presence, it could be a frigate. As we have come down in numbers, that is no longer possible, but what we have done is, for example, ask, "Okay, what are we trying to achieve in the Caribbean?" You need persistent presence to be involved in counter-narcotic operations all year round. An offshore patrol vessel, particularly one that is helicopter-capable and can carry a boarding party—if need be, a US Coastguard or law enforcement detachment—is a very good vessel to do that. That is why HMS Medway—a Batch 2 River-class OPV—is filling very effectively the role that frigates used to play.

Every six months, you need to be ready to go in at a higher level in order to do potential humanitarian aid after a hurricane. That needs a large vessel that can carry large humanitarian stores, and potentially more helicopters and more Marines. That is why the Royal Fleet Auxiliary vessels that we have used out there—everything from Tide-class tankers to RFA Argus, the aviation training ship, and of course Bay-class landing ship docks—are superb for that. It is about being flexible about where you use your ships.

In 2018, when I was asked to drive up the level of the Royal Navy's presence in the Asia-Pacific region in anticipation of CSG21, we had only so many frigates available to do that. Among a number of frigates that we deployed that year, we put HMS Albion, the landing platform dock, out there, and she had a very effective role because of the versatility of that ship. It is about thinking outside the box and using everything you have available until you get to the moment—I anticipate that being once we have Type 31 in service—when you can have more persistent presence using frigates.

**Chair:** Thank you, Admiral.

Q4 **Martin Docherty-Hughes:** I have to say that, since the publication of the Integrated Review, I have been a wee bit intrigued by the desire—I think it is on page 66—for the UK to become the European state "with the broadest and most integrated presence in the Indo-Pacific". Given that the role will fall principally to the Royal Navy, Admiral, how do think that can be done while still prioritising the Euro-Atlantic area? What are the capabilities of other European states in the Indo-Pacific that the UK would

require to be broader and more integrated with?

***Admiral Sir Philip Jones:*** My interpretation of that, which again didn't hit the Navy as an unexpected standing start when it was written in the Integrated Review—we were anticipating this—was, first, that we need to understand what our allies want and need us to do in that region. From my perspective, that is very much a navy-to-navy relationship. We have been very keen to say, "Okay, since 1971 we have not had a fleet based there permanently. We need to understand more about this region." We first need to get our head around the geography involved in it, how you do logistic support, how you build alliances and partnerships and how you reflect on the fact that there is no real NATO out there to standardise tactics, techniques and procedures among allies. How do you most effectively integrate and build on the partnerships that we already have? We are seeking to do that, and carrier strike group '21 will certainly enhance that.

It is also about looking at what our allies and partners already have in that region, and therefore how we can best supplement that. Our principal partners there—the Japan Maritime Self-Defense Force, the Royal Australian Navy, the Republic of Korea Navy, the United States Seventh Fleet—have a profusion of frigates and destroyers there. Those are navies that are high in that kind of capability, so we do not have to say that to be credible we have to put a lot of those elements out there immediately.

Very few nations are capable of deploying a genuinely credible carrier strike group, not just to that region but anywhere, so it is a statement of intent and of cohesion with allies that we are prepared to do that, again recognising that it is not only we who can do that. The French have deployed the Charles de Gaulle carrier strike group to that region before and will do so again. One of the best things we can do there is work with them, synchronise that, make sure there is scheduling coherence in the way we do that, and try to make sure, as much as possible, that our assets are interoperable with each other.

You are right to say, "But don't get carried away with that to such an extent that you neglect that you are an Atlantic region." The Integrated Review White Paper is good at stressing the importance of that and the Defence Command Paper places on the Royal Navy the requirement to always have a close eye on those waters closer to home where the threat is significant and the tasks are expanding, and where the need to keep the same level of interaction with allies as strong as it has always been is very much still in place. I am pretty sure the Navy is doing that. They certainly were two years ago. We have there the advantage of NATO and our long-standing work with the French Navy, the Norwegian Navy, the United States Navy and many others, to work to best effect in that area.

**Martin Docherty-Hughes:** Do you want to come in as well, Professor Caverley?

***Professor Caverley:*** Yes, with a couple of quick observations. First, I empathise with what the Admiral said. It is somewhat counterintuitive, but

maritime territory has a terrain. There is really no substitute for being in the region. The water looks the same everywhere, but the Pacific works differently to the Atlantic. That is a very simple fact.

**Martin Docherty-Hughes:** I think, Professor, it is half the surface of the planet, so I totally agree with you.

***Professor Caverley:*** But that is not always recognised, so I think the Admiral makes a very important point.

The second big point I try to make when I talk to anyone about this subject is that fleets change very slowly and expensively—this Committee knows exactly what I am talking about. For example, I worked on a project for the United States Navy about the future fleet in 2045. We tried to come up with different options about what kinds of fleets we could build in that timeframe. They all looked almost exactly the same—it is very hard to change a fleet quickly.

The fleet you have now is going to look a lot like the fleet you have going forward, even if every project that you have in mind comes in on time and under budget, which is obviously a rather heroic assumption. I would say it is much more important to have a demand-management plan in place than to have an extra frigate. Again, that is something the United States is struggling with.

The final point I wanted to make is that I do not envy any Sea Lord or Chief of Naval Operations having to think outside the box to make the most of the fleet. The thing that the United States Navy has had to learn is that efficiency can be a problem. In the Pacific, the United States frankly has an exquisite logistics chain that works extremely well under very ideal circumstances. It is like the Post Office, FedEx, UPS or DHL. The problem is that there is no capacity. A very efficient logistics system is not robust to the needs of surge; it is not robust to wartime, or even grey zone operations. Merely stretching a peacetime fleet to its maximum deployment is going to be problematic when the surge inevitably comes. That is all I have to say.

Q5 **Stuart Anderson:** Hello to you both. I would like to look at the threats posed by Russia and China now. How do you think these could change over the next decade? Professor, can you start us off, please?

***Professor Caverley:*** I will speak at a very broad level. I looked at data on "Jane's" to make sure I was in an appropriate space in terms of public access.

I will start with Russia. Russia is a submarine threat, more than anything—a submarine and land threat. I do not see that changing much over the next 10 years. Russia experimented with naval modernisation for a while but has more recently decided to double down on strategic nuclear forces, ground forces and air forces and missile defence. The Navy will always be secondary. There is no sign of anything beyond their submarines, which are quite capable but few in number.

As for China, its Navy is currently optimised for regional operations and anti-access/area denial. It is not an expeditionary fleet. There is talk that they will build a fourth or fifth carrier, but that is a long time in the future. I think, right now, China is, for understandable reasons, concentrating on its littoral; it is concentrating on 100 to 150 nautical miles across a strait. Eventually, China will build a sufficient number of cruisers, frigates and destroyers that will allow it to have a blue water capability.

In terms of competition with China over the next 10 to 20 years, there will be a high-end fight, which the United States is preparing for, which will be in the South China Sea or the very western Pacific around our allies, the Philippines and Japan; and then there will be a global competition, where you will have expeditionary forces around the world trading paint, if you will, at various pressure points on the globe. Right now, China does not have that capability. I assume that as that country gets bigger, and given its global economic interest, it will develop that. As the United States thinks about the future, it is starting to think about a global competition, not just the regional competition it envisions now.

**Stuart Anderson:** Thank you, Professor. Admiral, what are your views?

***Admiral Sir Philip Jones:*** First, I agree with everything Professor Caverley just said. That is an extremely astute analysis of the separate challenges that the two countries face, and I agree with it. They have enormous differences as nations, as we all know well—the size of their economies, the size of their populations, the likely movements in size of population and economy over the next 20 to 50 years, and the way their armed forces are configured at the moment.

Professor Caverley is absolutely right: Russia has a tradition of blue water operations, which it did very successfully all the way through the cold war, so as it looks to what it wants to do in the future, it reaches back and asks whether it wants to be able to do that again and with what kind of capability. China does not have that history, unless you go back nearly 400 years, when it was a very different kind of fleet, so they are asking these questions almost for the first time.

I also agree with Professor Caverley that they are developing capabilities in very different ways. The Russian Navy is very specialised in where it has decided to spend money. One of the hidden secrets of the post-cold war period is how effectively Russia kept spending defence R&D money in certain areas, such as Russian Naval Air Force missile technology, and of course particularly nuclear submarines, whereas the Chinese are spending everywhere and are growing their fleet right across every fighting arm and every capability. The trajectory of which one will present the more pressing threat in 20 years' time is, I think, very clear.

However, there are similarities too. This is something we often used to discuss with partners and allies. The Japan Maritime Self-Defense Force had a very good focus on this, and I remember talking to their chief about five years ago about this. Both nations are constrained by geography in their ability to get out to blue water and achieve effect on a global

expeditionary basis. They have to fight against that geography, in a way, to achieve effect. Each in their own way feels constrained by the way western navies bottle them up, so the question is what they will do about that and how they will respond to it. I agree with everything Professor Caverley said about that, but my fear has always been that, because some of that geography is quite tight and constrained, there is a risk of miscalculation and a potential tripwire effect as they try to push out against that geographical constraint.

Q6 **Stuart Anderson:** You raise an interesting point about the geography and how we could potentially trigger something by constraining China, in particular, or even Russia. However, as we are equipping the Navy moving up to 2030, have you identified any glaring threats that we won't be able to counter or that we won't be prepared for in our current plan?

***Admiral Sir Philip Jones:*** I am reticent to say no, because many strategic thinkers and admirals and politicians before have thought they couldn't see any and then found that there was one, because you rarely end up fighting the war you were preparing for—something tends to surprise you. But we have done a lot of work on threat analysis and our intelligence assessment and intelligence analysis is very good. I think we know broadly what we are up against.

The second question is whether we are able to counter it. At a recent maritime conference that Professor Caverley and I took part in, we were talking about the challenge of measure and counter-measure that navies and those trying to stop navies in their tracks have been engaging in for over 100 years now. It is a question of where you are in a balance of each of those.

Technology is moving that debate so rapidly that you can never pause for breath and say, "Okay, we have done enough to counter that particular submarine threat" or, "We have done enough to counter that particular anti-ship missile threat." We probably haven't, because it is constantly being evolved.

We have visibility of all those main areas, but some of the niche capabilities that the Russians in particular are working on at the moment—hypersonic missile capability; nuclear-tipped long-range torpedoes—are not easily counterable with any of the capabilities we have at the moment. Then, of course, we have to question their intent to use that kind of thing and consider what are the circumstances in which they would. Then you are back into a kind of cold war calculation, which I do not think many people want to step into.

So it is a question of keeping your R&D spend up enough to be able to respond to what your intelligence analysts tell you is the next likely threat.

Q7 **Stuart Anderson:** On the point that you have mentioned about the growth and the evolution of both China and Russia and how there is a different trajectory, if we prepare to counter or to meet the threat from China, are we going too far away also to meet the threat from Russia?

Can we do both? Admiral, could you just come in on that one, please?

***Admiral Sir Philip Jones:*** Clearly, we can't do both on our own, so the key thing will be how alliances work out here. That is why working with our close partners, both within NATO and then of course with our partners in the Indo-Pacific region, matters. We need to say, "Where can the UK and specifically where can the Royal Navy best aid both the NATO effort to balance emerging threats in the Euro-Atlantic area and then how best can we support our allies and partners in the Asia-Pacific region?"

I don't think it is necessarily a zero-sum game. I don't think we can afford to say, as effectively the UK did at the end of the '60s, "Well, let's leave the Indo-Pacific region to other people and we will now concentrate on the Euro-Atlantic." I think the balance of threat and challenge to what we want to achieve as a nation doesn't permit that anymore. But it is about working with allies and partners to say, "Where can we most effectively apply the capabilities that we have?" And I think we are learning new ways of doing that all the time.

Q8 **Stuart Anderson:** Professor, would you like to add anything to either of those points?

***Professor Caverley:*** Yes. Admiral Jones makes really important points. One is the balance between offence and defence when you are talking about near-peer adversaries, which would be Russia and China.

If we talk about how the current Royal Navy is balanced and how the plan going forward is balanced, speaking from the American experience there is a lot of debate about what the fleet should look like. The one thing that is not up for debate is that we need as many attack submarines as possible.

Submarines are capable of doing two things. They are very good at anti-submarine warfare. One thing that we should understand about the potential adversaries and the potential theatres that we are operating in is that Russia is very heavily involved in submarines. About 14% of its tonnage is submarines. That's enormous—the UK is closer to 4% and the United States is about 6%. And all the powers in the Pacific—not just China—are submarine-heavy. So again, if you are serious about ASW, submarines are a very good asset. Obviously, there are other ones that can be employed as well.

Submarines are also useful for getting inside what we call the weapons engagement zone. One of the issues when we are dealing with peer competitors is that we have a grand strategy that has us operating very closely to these giant aircraft carriers that are the size of continents and are bristling with missiles. The question is: how can you operate safely inside their weapons engagement zone? That is the big debate in the United States between carriers and submarines. In general, the conclusion is that submarines are more capable of operating inside those zones than carriers.

Q9 **Chair:** Professor, I have a couple of quick-fire questions on China, which I hope you will be able to answer. Can you tell us the relationship between

the Navy and the Army? Is the Navy subservient to the Army, which is the lead service? Is that correct?

***Professor Caverley:*** That is a great question. I am not an expert in this, but we do study it quite intensively. I will tell you my understanding. The People's Liberation Army is the dominant structure under which are both the People's Liberation Navy and, very importantly, the People's Liberation Army Rocket Force, which is a separate service within the Chinese military and which is responsible for a great deal of the anti-access/area denial capability. Anything that is going to have a hypersonic delivery vehicle or anything with a ballistic missile delivery vehicle—that is a completely different service.

The other thing to understand, which I am sure you already know, is that the People's Liberation Army is not subordinate to the nation; it is subordinate to the party. Generally, it is not even useful to think what the People's Liberation Army wants; it is what the Chinese Communist party wants.

There is rebalancing. There is a big debate between the expeditionary and blue water and air components of the People's Liberation Army and the more traditional ground components. For a while, it swung towards the People's Liberation Army Navy—the PLAN, we will call it. It is not clear it is going to stay there for the next 10 or 20 years.

Q10 **Chair:** You spoke about capabilities and you mentioned the DF-41, which I think we are all becoming familiar with. Is the Chinese Navy also being used from a strategic perspective as part of the maritime silk road? They may not have the frigates, destroyers and cruisers you mentioned, but they are advancing their bases and their footprint, if you like, well beyond China—in Djibouti; Sri Lanka is probably the best example; Tanzania; Angola; and so forth. Would you agree that they are developing maritime naval relationships with other countries that we should be aware of and perhaps concerned about?

***Professor Caverley:*** It is a great question. I'll be honest: I think the answer, given what we study at my institution, is that we are not sure yet. One of the things about the Chinese political economy and its military is that we talk a lot about civil-military fusion, which is a big policy of the Chinese Communist party, but it is not clear that it is the military driving that, rather than the economic side driving it. The problem is that these things correlate very tightly. China is a massive trading stage. It has very far-flung interests. It has a large diaspora. It would be strange if, as it achieves a wealthier and larger economy, it did not build a military that would follow the trade.

At this stage, I would say there is very little formal maritime silk road/military connections. There are certainly basing arrangements—not so much a naval base, but a source of ship husbandry. The support services for a warship are pretty demanding, so you really need to have a certain agreement before you even operate in a port.

Djibouti is obviously the major exception. I would look at the Chinese deployment to Djibouti with great interest—I do look at it with great interest—but beyond that, I am not sure we have a good sense, except for the very theoretical sense that a global trading state is going to develop a global naval presence eventually.

**Chair:** Thank you for that. That takes us back to what our fleet looks like. Sarah, over to you.

Q11 **Sarah Atherton:** Good afternoon, Admiral and Professor. We know the UK is committed to a balanced fleet approach, which is a broad range of assets able to provide a broad range of maritime security missions, but what capabilities are essential in order to meet this balanced fleet approach effectively? With the projections we are given in the Command Paper, are we likely by 2030 to have the capability to meet this approach adequately?

***Admiral Sir Philip Jones:*** That is a really important question. I am sure there has never been a First Sea Lord who has not talked about the need for a balanced fleet. So you are quite right that there is a need to get inside what we mean by that. Of course, it is balanced in every way. Going back to the very first question today, it has got to be balanced in terms of: can you sustain it; can you deploy it; can you man it and train it? That is the key determinant on Navy command: to make sure that whatever size it is, you can actually use it.

It has got to be balanced across the need both to retain a high-end war-fighting capability for those very near-peer threat challenges we have been talking about in the last few minutes, while at the same time retaining the capacity to deploy ships and optimise more for constabulary tasking of counter-piracy, counter-narcotics and counter-terrorist—presence operations, if you like—which do not need to be able to participate in near-peer war-fighting. So, balanced across sustainability and balanced across different components of the fleet but also recognising how interchangeable they are.

This is one of the arguments I used to make regularly as First Sea Lord: each fighting arm of the fleet—the surface fleet, the submarine fleet, the Fleet Air Arm, the Royal Marines and the Royal Fleet Auxiliary—is pivotal and interlocked, and there are very few tasks that the Royal Navy is asked to do that do not require the deployment of four of the five, if not all of those five, at any one moment. Clearly, the carrier strike group at the moment is a perfect example of that, as it has all five fighting arms embedded, and it would be severely weakened if you took any one of them away. But even something on a totally different scale, such as our operations in the Caribbean, have got surface fleet assets, a war fleet auxiliary component, a Fleet Air Arm component and a Royal Marines component. We very rarely have submarines out there, but there is no real requirement for that.

So you see how using the fleet in a deployed way needs balance across its fighting arms, balance across its size and shape and balance across the

need to sustain it. The trouble is, all of that comes at a price. If you are going to be balanced in all those ways, you need to invest properly in the fleet. There are not many navies in the world that are truly balanced in that way—as globally deployable and effective at all the tasks they are given—as the Royal Navy. Clearly, the United States Navy and the French Navy—the Marine nationale—are. The one that is rapidly racing towards that state is, of course, the PLA Navy. They are growing in a balanced way, which enables them to operate very much as high-end western navies have done. So it needs constant attention to ensure that you are not neglecting any one component of that balance.

Q12 **Sarah Atherton:** Admiral, when you talk about balance, are you concerned about the frigate gap—the medium ship gap—that we will have in our capabilities over the next few years? Or, as highlighted by the first question and the Chair, with the sheer raft of requests we now ask of the Navy, are you concerned that we are overstretching our Navy?

***Admiral Sir Philip Jones:*** First, on the frigate gap, you are absolutely right that the integrated review and components of the Defence Command Paper have indicated that one of the things the Navy will do is remove two Type 23 frigates from service slightly earlier than planned. But, as the First Sea Lord has made clear, that is not going to lead to a dip in availability.

The key thing you have got to remember at all times—the Chair alluded to this earlier with his knowledge of the Department—is that it is not your total number; it is how many you have got ready and available to deploy. The two type 23s we are losing were both earmarked for refits and were going to be out of the deployable cycle for the next few years anyway, so there will not be a dip in the numbers available. In fact—I think—by 2023 we will have one more frigate available than we have now for tasking, even though we will have decommissioned two. There is always the requirement to say, "Don't count the total numbers; count the ones available." So that's how I deal with that particular issue.

In terms of whether there is enough to do all the tasks they have to do, we had anticipated that growth in tasking with the flexibility we used in the fleet by using Royal Fleet Auxiliaries, by using amphibious ships and by using offshore patrol vessels to do roles that frigates had traditionally filled, and we found that in many cases they can do it equally well, if not better.

Of course, the great thing that the Integrated Review does is recognise that that uplift in tasks and missions and, in particular, forward deployed persistent presence is eventually going to have to lead to a bigger fleet to be able to do it more effectively on a sustained level. So the trajectory to get there through Type 31 and ultimately Type 32 is very welcome.

However, as the professor said earlier, you have to be patient here. You can't change the size, shape and balance of the fleet rapidly; you have to do it in a way that your shipbuilding capacity can sustain and, of course, your refit capacity can sustain as well. If we had tried to rush those midlife

upgrades to the Type 23 frigates in Devonport, or if we tried now to rush the Power Improvement Programme upgrades for the Type 45, in order to get immediate high levels of availability, we would pay a price for that down the track.

**Sarah Atherton:** Professor, would you like to add anything?

***Professor Caverley:*** I thought that was very useful. I will add one thing. I would say the Royal Navy or the United Kingdom has made a choice about its fleet in terms of balance, and that is that it is going to be an aircraft carrier-centric fleet for the foreseeable future. Once you have decided to build two aircraft carriers, given the size of the Royal Navy, that is going to dictate the rest of your fleet, so before you decide what the balanced or blended fleet is supposed to be, you have to decide what to do with those carriers. If you want to operate them in the traditional manner, the way the United States has traditionally thought about it, for the high-end fight, you need a carrier strike group, as the admiral has pointed out, and that is a much different set of surface ships than is the case for the constabulary duties that we talk about. They can do double duty, but to make a balanced fleet that also emphasises the carrier as this robust presence in the face of a determined opposition—it's going to get very expensive.

The other thing I would point out—this is open source; I can say this. The theory of the carrier for the United States is changing. It's not just a strike group; a nuclear-powered aircraft carrier like the Ford—as eye-wateringly expensive as it is, it's a giant source of electricity, and electricity is essential. Organic command, communications, intelligence, surveillance, reconnaissance, computing—that concentration of organic capability inside one ship is one of the theories as to why the United States is still investing in carriers, even though the threat to the carrier is growing. That is a perspective that is new to the United States Navy; it may or may not be new to the Royal Navy.

**Sarah Atherton:** Thank you both.

Q13 **Mr Jones:** Philip, you said that all First Sea Lords want more ships—I have to say I have never yet met one who didn't—but haven't we got to be realistic about the difference between ambition and what we can achieve? If we look at what the Navy is going to have, we have the withdrawal of the Type 23, which will reduce numbers. We have Type 45, which is going through its engine refits. We have HMS Glasgow coming as the first Type 26, even though it has taken 10 years to procure. We haven't yet got the fleet solid support vessels ordered; they are vital for the carrier strike. We have Type 31, which most commentators realise you wouldn't put in harm's way if you really wanted it to survive for very long. And we don't actually know what the Type 32—I accept that no First Sea Lord wants to say, "We don't need these ships" or "We need to limit our ambitions," but isn't a reality check needed over the next few years, just in terms of being honest with the public about what we can and cannot do? I personally have no problem with us deploying, if we have to deploy, with allies such as the US, but the idea that we are going to rule

the waves with the limited surface and submarine resources we have available is not going to happen in practice, is it?

***Admiral Sir Philip Jones:*** That is a very fair analysis. What I actually said was that no First Sea Lord has ever not argued for a balanced fleet, not argued for more ships. I think all of the First Sea Lords I have ever known and worked for—and I would like to think of myself in this category, too—are realists about how much of a fleet is affordable within the defence budget. That, of course, depends on how big that defence budget is going to be as a component of overall Government expenditure.

I think that by the time you reach the role of First Sea Lord, you are well tuned, through a number of roles in the Navy command headquarters and the Ministry of Defence, to realism and being able to cut your cloth. Broadly, the size and shape of the fleet now is a result of a number of cloth-cutting exercises that have delivered what we have at the moment. Some of the things you describe can be directly attributed to that.

The lateness of the Type 26 goes back to the huge amount of money taken out of that programme at a very early stage, just after SDSR 15. That is sacrificing long-term value for money and good procurements for early-year savings. All of us who have worked in the MOD know why that happens; the call for early-year cuts comes and, very often, large procurement programmes become the casualty of that need that for early-year money. It hasn't just happened in the Navy—the Army's armoured fighting vehicle programme is another good example.

What this particular exercise, the Integrated Review and its Defence Command Paper have done is give the direction of travel and a commitment to spend which has much greater longevity scheduled into it than ever before.

Of course, there will be future general elections, future Integrated Reviews and future changes to the naval programme. But from what I can see, there is more certainty and more consistency of direction of travel on a shipbuilding programme that enables some of the good things to happen in industry—the investment that industry needs to make to build ships more effectively and efficiently and bring them in on time and on budget, as the Professor said earlier—but it also enables the Navy to plan to have the balanced fleet for use in the tasks that the Government is asking it to do. That is a very welcome thing.

The important thing—you are absolutely right—is that we don't get carried away and promise that the fleet, as it is at the moment, can do things that it can't do. We have to be very keenly aware, as we both develop a near-peer war-fighting capability and a more persistent present constabulary capability, that we don't pretend that every asset can do every role all of the time. The First Sea Lord is being quite clear in how he lays that out at that moment.

Q14 **Mr Jones:** Can I just come back on that? I don't disagree with the point you made about shipbuilding programme. It is important to get that

drumbeat of supply through. It is possibly not the First Sea Lord's fault, but do you not think we need some expectation management? Personally, I have no problem if the future of the Royal Navy is a joint operation with allies, with the US, because that is about working closely together. Do you think we need some expectation management on the political side, in terms of the view that somehow this investment is going to lead to not only a balanced fleet, but a fleet that will be able to do everything all at once, when it quite clearly won't?

***Admiral Sir Philip Jones:*** Yes. I think the expectation management would be to make sure people don't think we can do all of these tasks by ourselves all the time. One of the initiatives that I emphasised and was most proud of during my time, and I am really pleased to see my successor taking this forward, is that we have to make the interoperability—I think he now uses the phrase "interchangeability"—with our key allies absolutely instinctive and something we can do at a moment's notice.

We are clearly practising this with CSG '21, with a US Navy destroyer and a Dutch Navy frigate embedded in the strike group. We have done the equivalent and put our own ships into American and French carrier strike groups before. That starts to build the idea that we work incredibly closely with allies, but we don't have to start making up how we work on day one. We already know how we will work, because we have trained, we have exercised and we have deployed together. For almost all the tasks that we are going to be invited to do, we are going to be invited to do them with allies and partners. Therefore, you don't just look at the size and shape of the Royal Navy; you look at the size and shape of the likely strike groups and integrated taskforces with which we will be working with all of our allies and partners.

Q15 **Chair:** Can I just pursue this carrier strike group issue? It is really interesting to hear you say, Professor, that if you commit to carriers, it really affects the entire architecture of your surface fleet. We have seen some really impressive photography by the Royal Navy as the aircraft carrier battle group makes its way towards Japan with various allies. Every time I see another picture showing aircraft and warships, my question is whether they will turn up for the fight. The training and exercises are very important, but Operation Ellamy, off Libya, is an example whereby much of NATO chose to opt out. My concern is that if we are that country that opts for a carrier strike capability, we are not even able to muster our own battle group ourselves without leaning on allies that we absolutely need to be sure will turn up to the fight, if required.

***Professor Caverley:*** A couple of responses to that. First, what is the carrier for? A carrier is not necessarily only for the very high-end fight against a peer competitor—which, frankly, does not exist yet. It will exist in the relatively near future, we think. The deployment of the carrier strike group is a really remarkable exercise of naval diplomacy. It is a very costly signal of Britain committing to a different theatre. Luttwak, a naval theorist, would talk about the difference between viable and visible naval

power. Sometimes, sending very visible naval power has a very useful political effect in peacetime, even if it is not viable combat power at the moment of the peer competition.

Secondly, I would say that the carrier—again, you are stuck with them. Carriers are very useful for lots of things. There is a reason why the United States keeps sending an aircraft carrier to the Gulf, even though we have been trying like crazy to divest ourselves, in the United States Navy, of a carrier presence in the Gulf. They send big signals. They are useful for expeditionary operations. Looking at how the United States Navy used its carriers in the cold war, and at how Great Britain has used its carriers throughout its post-world war two history, they are much more designed for expeditionary operations – they are not designed for expeditionary operations – they are employed for expeditionary operations for something like Libya. We may or may not agree on whether the Libyan operation was the right thing to do, but the fact that you had the carrier allowed you to do it. Frankly, it allowed you to drag the United States along with you, because you had the capability to do it yourself, and we in the United States knew that we could help. We were brought along.

The other point that I want to make, building on what the Admiral was saying, is that I spend a lot of time thinking about Japan, because obviously I spend a lot of time thinking about the Pacific. Japan is an even closer ally to the United States than Britain is, in terms of its need. We have a very strong need for each other in this theatre of operations. Japan is finally expanding its military, but it is expanding its military in a way that is not necessarily what the United States wants. Japan is a sovereign state. At the end of the day, the politicians who run the sovereign state will want to make their own decisions, and they will want to use its naval capability for things that advance that nation's interests rather than the alliance. One of the things we all have to accept is that, because naval forces are so flexible, they will almost inevitably be used by the civilian leadership of a sovereign state for sovereign uses, even if we have been exercising as a coalition for decades. That is something that the United States always has a hard time comprehending when it thinks about places like Japan and South Korea.

**Chair:** You raise a really interesting question, which we can come back to if there is time, of how much politicians actually help guide the design of the military to advance prosperity, or whether the military themselves, in their MoD equivalent, simply design what they believe is correct for the future and the threats to themselves. I always worry that there is a disjoint between the two. However, let us talk a little bit about lethality. Richard Drax, over to you.

Q16 **Richard Drax:** Good afternoon. This question is all about what our ships carry so far as weapons and armaments are concerned. It seems to be that our ships are fitted for, not with, many of the weapons systems that they boast. This must reduce the effective lethality of a ship or a taskforce, or even the effectiveness of the maritime operations they are sent on. What is your comment on that, Admiral—that we have all these

tubes and alleged missiles, but actually, when you look in the tube, nothing is in there?

***Admiral Sir Philip Jones:*** The phrase "fitted for but not with" is one of the very first you learn as a naval officer. There has been a lot of it around in the fleet for the whole of the 41 years that I was serving. It is not an ideal situation, but it is a frequent situation, recognising that the procurement cycle for the platform—the ship, the submarine, the aircraft—is not always in perfect harmony with the procurement cycle for the weapon fit that might or might not go with it. It is about trying to keep the options open for how you might do that.

In the past, we have sometimes responded to that in incredibly expensive and inefficient ways. Take the Leander class frigates built from the early '60s to the mid '70s, which in almost all cases were subjected to mid-life upgrades that were whole-ship rebuilds to reflect a new weapons system that had come into service since the class entered service—in that case, the Ikara anti-submarine missile, the Exocet anti-ship missile and, subsequently, the Sea Wolf close-in air defence missile. I think the lesson of that is that we never want to get caught doing that again, because the capacity for modularity and for building ships that have the space, weight and power to accommodate evolutions in weapon and sensor fits through time is a huge bonus that these ships have.

That, of course, is one of the reasons why ships are bigger. The fact that a Type 45 is so much bigger than the Type 42 it replaced, and that the Type 26 is so much bigger than the Type 23, is not just because Admirals like big ships but because many reasons are driving up the size of ships, one of which is, of course, the need to be much more environmentally sound and aware in the way you separate fuel oil and water; and also to have this capacity for modularity built in. To a degree, it is inevitable.

Going back to the question I was answering from Kevan Jones, you cannot always have the capability in the fleet that you would wish. You have to make compromises and work within the available budget that you have. There have been many occasions in the past when the Navy has had to say, "What must we deploy now in the fleet we have available?"

For much of the cold war and the period immediately after it, we had to make sure our anti-submarine warfare capability was top-line, so we were progressing the evolution of towed array sonars deployed both by our submarines and by our surface ships, and progressing the development of torpedoes to be fired from submarines, surface ships and naval helicopters. Of course, there can be unexpected changes. For example, the move to an all-missile ship was brought to an abrupt halt by the Falklands war in '82 and many of the subsequent constabulary operations we got involved in, and we reverted back to having good medium-range gun capability in our ships.

All of that takes time and money to reflect. While those were the predominant considerations, and although we had the Exocet anti-ship missile and, subsequently, the Harpoon anti-ship missile, many

commentators and, understandably, many officials in the MoD and across Whitehall, were saying, "Well, you're never going to fire one of these in anger. We get why you need a towed array sonar, Stingray torpedoes and medium-range guns, but you've never used one of these missiles, so let's push that down the priority list." It is very hard to make the case against that when you can't afford everything, so that is why, in some cases, we have less than we ideally would have.

We are also trying to future-proof. The best example is buying the Mark 41 launcher for the Type 26 frigate, which gives incredible capability to move with the evolution of the very broad range of weapons that you can fire from those silos and to have the Type 26 ready to respond in a way in which a surface ship has never been capable of doing before. In an ideal word, every silo would be full all the time of a full suite of strike and defence capabilities. In reality, we are making compromises to achieve best effect against the tasks we can see.

Q17 **Richard Drax:** Admiral, I wonder what you tell the captain and the crew if the proverbial does hit the fan and Royal Navy ships are sent in to a war of some kind and the tubes are empty because we can't afford it or we haven't got it. It seems to me unreasonable to send people to fight a war without the weapons to fight them, doesn't it?

***Admiral Sir Philip Jones:*** The tubes that are never empty, as far as I am concerned—I respond to this both as the former commanding officer of a ship in a challenging zone, and as the First Sea Lord—are the tubes that enable the ship to defend itself against an incoming strike. We have prioritised the availability of surface-to-air missiles and close-range air defence missiles, and that capability at all times, such that the ship can defend itself. Where we have had to make the case more regularly, and increasingly powerfully, is to fill some of the gaps and now, of course, potentially some of the tubes in the Type 26 with more of a strike capability, which we have not had before. It would be really good to add that to the inventory of our surface fleet. That is the case we are trying to make. You are entirely right that it would be wrong to have a ship going into harm's way that is incapable of defending itself, and we have not done that.

Q18 **Richard Drax:** Before I come to you, Professor, may I add one point? The Royal Navy and RAF do not have advanced surface or air-launched anti-ship missiles, or land-strike missiles. Why do you think that is?

***Admiral Sir Philip Jones:*** As I mentioned earlier, everything is a balance. Every defence capability is a product of what is available now, what might be available in the future, what the platforms are that might carry it, and how much availability there is in the defence budget to procure this capability. The challenge for those kinds of weapons, which many other navies and air forces carry, is that it just hasn't reached a high enough priority in the order of buy within the Ministry of Defence to make sure we have those available. There is an acute recognition of that gap—it is very important that it is highlighted, and I am grateful for you doing that. It will help make the case that this needs to be higher up the order

of buy as we potentially configure our armed forces to be ready for a much stronger likelihood of a near-peer war-fighting competition.

***Professor Caverley:*** This might be obvious to the Committee, but it bears repeating. You can have every tube in a ship full, but if you can't close the kill chain with sensing, computing and command and control, there is no point to it. Every missile is very expensive, not just because the missile is expensive, but because the reconnaissance strike complex needed in order to get that missile where it needs to go needs to be invested in as well.

Q19 **Mr Jones:** Admiral, I agree that the defence of the ship is very important, but the development of hypersonic missiles—I accept that there is a big difference between propaganda in Russia and China and what is actually being deployed—is a new threat to our fleet. I understand that, in terms of the carrier strike groups being set up at the moment, USS The Sullivans is providing protection. Is that not a gap that we are going to have to fill very quickly if we are to protect our naval assets from a generation of new and tougher weaponry?

***Admiral Sir Philip Jones:*** It is absolutely a requirement to reflect on threats like that. First, you are right to mention the fact that with that kind of capability, there is a degree of hyperbole and potential overstatement about its capability. You do not really know that a potential enemy has a capability like that until you see them physically use it, even in a test mode. In many cases we have not seen that, but we must take seriously what our intelligence analysts tell us.

Secondly, as I mentioned earlier, it is a constant battle of threat and counter-threat, responding to new capabilities and working out new ways of countering them. We have been doing that continually over time. By taking a snapshot of a moment and saying, "The enemy's got that offensive capability. Do you have a counter for it?", you are not going to have the perfect answer at every moment in time. There will be moments when your defensive capabilities are new and freshly brought into the service, and you are probably ahead of the game of those who might strike against you, and then it moves in another dimension.

The key thing is to know where you are on that scale at the point at which a near peer competitor battle breaks out, so that you know where you are in a strong position, you know where you might be in a weak position, and you can adjust your forces and pull in the capabilities of allies to fill the gaps that you think you might have at that moment. You are never going to be capable of countering everything all the time in any battle that might break out. It is knowing where you are strong, knowing where you have to rely more on allies, and having the principles in place to enable you to do that.

**Chair:** The point that has been made—I think it needs to be repeated—is that you have ships procured over the last number of decades that fight wars at sea, and our ships cannot hit anything on land apart from by using that big gun at the front. That is why I made the case that politicians, if

they were given the opportunity to be invited to have a view on what they might require the Navy to do, it would be to support land forces. At the moment we are not able to do that. I do hope that the next generation of Type 31s, Type 26s and Type 32s will actually consider that.

I want to look at the United States a bit now. Derek Twigg, can you take us forward on that?

Q20 **Derek Twigg:** Thank you, Chair. Going back to the theme of the balanced fleet, can the UK address the challenges of a balanced fleet by adopting the US concept of distributed operations and lethality?

***Admiral Sir Philip Jones:*** We have been studying that for some time. The United States Navy has a phenomenal capacity for conceptual thinking about how best to use maritime forces. Much of that comes from the US Naval War College, of course. I shamelessly trumpet the excellent work that the professor and his colleagues do—the size, scale and breadth of the OPNAV staff in the Pentagon, which supports the Chief of Naval Operations and comes up with new ways of using the US Navy on a regular basis. It is always important that we are ready to react to that, not least because if that is the direction of travel that the US Navy is going in, and the Royal Navy is not capable of going with and operating alongside them, we could be quickly discarded as a credible, capable and welcome partner for their operations, so we have been studying that ever since they launched it.

That is just in the last couple of years, since I left the job, but the predecessor maritime concept to that were ones that we worked incredibly closely with. The one that was prevalent in my time was one that saw a much more widespread and effective use of how they would deploy carrier strike groups and expeditionary strike groups, rather than having the predictable "You'll always have 1.0 in the Gulf. You'll always have 1.0—occasionally 2.0—in Asia Pacific," making that less predictable, and therefore making opponents have to think about where capability might pop up, so suddenly a carrier strike group might pop up in the Caribbean, in the Norwegian sea, or off the coast of Africa. We were learning how to respond to that and thinking whether we could do something similar, in particular by integrating into their groups as they did that. The problem for a navy like the Royal Navy—for any navy other than the US Navy—is whether you have the size and scale to do your own distributed lethality in quite the same way that the US Navy do. Therefore, genuinely to follow that concept in the way that the US Navy do, we will have to do it as their key partner, alongside other navies they would wish to have with them while they do that—the French Navy, the Japanese Maritime Self-Defence Force, the Royal Australian Navy—but the idea that we could do it on our own as a sovereign capability is probably a stretch too far for the size of fleet that we have at the moment.

Q21 **Derek Twigg:** If the Royal Navy's ability to deploy with its American counterpart is not adopted in that sense, it becomes limited, does it not? Surely that is not a good thing. The whole point—which you have made on a number of occasions now—is about interoperability and integrating

with the American and other Navies. Would the UK maybe take a lead, or wait for other Navies to decide to do something on similar lines?

***Admiral Sir Philip Jones:*** No, we will take a lead, as we always do. We have prided ourselves for many decades as the Navy that is most allied with the United States Navy in thinking, training, capability development and forward deployed operations. We have worked long and hard at our capacity to integrate and to be interoperable with their carrier strike groups and expeditionary strike groups. We will be there with them, as they reach into this idea of distributed lethality, and I think that we will use some of our high-end capability to supplement theirs at moments when we cannot do it all ourselves. When we do not have a CSG deployed, for example, some of the escorts that would be part of that CSG may well deploy with US distributed lethality forces. The idea that we can do it by ourselves at quite the same scale is where we have to be realistic.

Q22 **Derek Twigg:** Size is not everything, but size does limit what the Royal Navy can do in that respect. That is what I take from what you have said over the past few minutes.

***Admiral Sir Philip Jones:*** Yes, it limits what you can do at high end. What we are trying to do is to have a much more distributed Navy, using all forces available. For example, putting offshore patrol vessels into the Indo-Pacific region even when we cannot have high-end capability there all the time is a sign of presence and that we are determined to be forward deployed, even if we cannot do it in quite the way that the US Navy do.

Q23 **Derek Twigg:** Thank you. Professor, do you have any views about how the US Navy thinks about this and about the Royal Navy's possible role in this distribution?

***Professor Caverley:*** First, I appreciate the admiral's back-handed compliment. The United States Navy is great at conceptual thinking, but there are light years between the concept and the practice. The United States Navy is still trying to figure out how distribution works.

Quickly on the Chair's last point—the fact that the UK does not have those land-attack capabilities intrinsic to its missile vertical launch tubes—I want to point out that the United States Navy is trying like hell to figure how to kill ships, rather than ground targets. That is the capacity that we are lacking right now, so I think there is mirror imaging going on here that I find interesting and even a little ironic.

On distribution, please forgive me if this is review for you—distribution for the United States Navy is a concept, as the admiral pointed out, of a way to overcome a very difficult fight against a continental-sized power bristling with anti-access/area denial capability. Distribution does not matter for anything other than a high-end fight within a limited range of a continent. If you are not doing a high-end fight, you do not need distribution. That is point No. 1.

Point No. 2 is that distribution is really expensive. If you think about an Arleigh Burke destroyer and the new Future Surface Combatant and Small

Surface Combatant that the United States is going to build as a frigate, the frigate will cost half the cost of an Arleigh Burke destroyer and carry a third of the missiles. If you just do the math, that is a bad exchange—unless, by sticking the missiles on to a number of smaller ships and sailing them in a larger theatre, you complicate the adversary's targeting sufficiently that you can concentrate a salvo of missiles at the time and place of your choosing from this wider distribution of ships. That is extremely expensive, it is a bet, and we don't know how it is going to shake out.

When we talk about distribution, a lay person outside of this Committee Room would think distribution is a global fleet, its presence, it being in a lot of places and exerting diplomatic pressure and maybe having limited combat effects when called upon, but distribution for the United States Navy is almost exclusively a high-end fight concept.

I want to turn back to complement what the Admiral was saying. He was referring to the fact that there has been this new concept in the United States Navy, mostly under Secretary Mattis, that we would be unpredictable in our deployments—we would be able to pop up a carrier in the North sea or in the Gulf, at a time and place of our choosing. That has been a very steep learning curve and I would not call it a success story. The Teddy Roosevelt—I believe it is the Teddy Roosevelt—is now doing what is called a double-pump deployment, where its crew is basically under way continuously for a very long time. It is giving up on maintenance. You are giving up on crew rest and relaxation and training. That is a very difficult aspect of our concept of distribution.

One way to think about how the Royal Navy can plug into the concept is not necessarily to have the same unpredictable schedule that the United States has—we have 11 carriers, so it is easier, although it is still a big stretch. Commanders around the world think there is no substitute for a carrier—there is no substitute for a fixed-wing carrier in their theatre of operations. In the NATO area of operation, in the Gulf, if a very capable platform like the Queen Elizabeth class can take the place of that command and control node—of that presence—in a theatre where maybe you don't need to distribute its capability, but where it will still result in an economy of force for the alliance, that would be a very powerful contribution, in my personal opinion.

Q24 **Chair:** To explore that point for a second, that aircraft carrier can obviously only be in one place at one time and there is a lot of sea out there. You have both mentioned the importance of forward presence. Absolutely, we need some heavy lift capability. The frigates and destroyers we have are quite exceptional, certainly the Type 26 and the Type 45. Is there scope for example in the Type 32 for it to be a far simpler platform, which focuses on UAVs, USVs, rotary systems that have the missiles attached to the helicopters, for example, an OPV or a littoral combat ship, as the Americans are looking for, able to provide a greater presence in the Gulf towards the Black Sea and the Indo-Pacific as well, rather than relying on our more powerful, bigger brothers, which we have

in limited numbers and cost a lot of money?

***Admiral Sir Philip Jones:*** I absolutely think there is a case for this. This is one of the areas of how the incorporation of evolving technology is being most effectively brought in, not just by the Royal Navy, but by our sister services as well.

The loyal wingman concept of how future air power might confuse an enemy's picture by having a lot of assets coming at you at the same time, all with a strike capability, only some of which are manned, absolutely has a mirror in the maritime domain. Although there is not much of this available in frontline service at the moment in any Navy, all the high-end Navies in the world—the Royal Navy is at the cutting edge—are looking to develop this for all sorts of very good reasons.

First, the platforms will be much cheaper. Secondly, they will be much more capable of sustained presence off a hostile shore, because they won't have all the constraints of human beings on board. Thirdly, they will therefore by definition be more expendable, and, finally, they have the capacity to confuse a picture. It is absolutely this distributed lethality concept, not just in strike capability but also in, for example, mine warfare capability and maybe many others too.

Although I do not know much about it—I don't think at this stage there is much to know, because the Type 32 is still very much in the initial stages of operational concept development—that principle lies at the heart of how the Royal Navy will see the Type 32 being used in future, and I think that is really welcome.

***Professor Caverley:*** I agree with a lot of what the admiral says. Going back to my initial opening remarks, unmanned, especially surface and subsurface, is not going to solve as many problems as we would like it to. First, I don't think the United States Navy has developed an expendable marinised unmanned system. They are very expensive. Secondly, I don't know how an unmanned system does presence. We don't know what happens when you put an unmanned system at sea and leave it alone, and whether someone will pick it up and play with it or whether it has the same deterrent effect. At the same time, the idea of putting weapons on it makes it very expensive and also a tempting target for an opponent. When we think about how to use unmanned systems to improve the capability of a smaller forward-deployed ship, things like sensing are really important.

The publications that have been released by both the MoD and the Government talk about the idea—this is the United States Navy's strategic concept as well—of transparency, intelligence, and creating a water space picture for the world as a public good that improves global commerce and global interchange, but at the same time does provide a deterrent combat capability as well. That is one thing that I think an OPV or a smaller ship can provide with an unmanned aerial sensor, rather than an unmanned aerial combatant, for lack of a better word. Things like supply would also

be something they could do that would, again, increase the capability of that platform for relatively little money.

**Chair:** I am still trying to determine where the Type 32 came from as a concept, as an idea. I fear it might have been a clerical error when it was supposed to be mentioned as a Type 31, but that, I think, is to our advantage because, given that there is nothing written on paper and there are no confirmed plans, it does allow the likes of us to perhaps play a more engaging role in determining what it might look like in future, and that is to be welcomed.

Let's look at the Integrated Review and security infrastructure. Sarah, back to you.

Q25 **Sarah Atherton:** Integration of forces and platforms with the UK's and allies' defence and security is a key element in the Integrated Review. What capabilities are needed to properly integrate the Navy with our partners? I will start with the Professor.

***Professor Caverley:*** When reading these publications, one of the things that I am trying to figure out, because the United States is trying to figure it out, too, is the different levels of integration, so maybe I will respond to the question by asking whether you are talking about integration between combat forces or perhaps integration between, say, combat forces and constabularies, security, coastguard and non-military assets, or are you talking more about the high-end allied combatant-to-combatant level?

**Sarah Atherton:** I am thinking about the high-end allied combatant level. Later on I will talk about the commando force, so if we stick to that, that will be good.

***Professor Caverley:*** Again, we have done a lot of research on this. Trying to show the causal effect of various naval capabilities day to day is hard. The one thing we can be sure of is that exercises between allies is a fundamental contributor to the deterrence. The naval diplomacy and the militaries that exercise together build trust. They operate better when conditions become more stringent, and they also send a very large message to observers. If I had one dollar or a pound to invest in interoperability, I would be spending it on working with the assets we have here and now, not only because it improves our capability by operating together, but it also sends that deterrent message.

Q26 **Sarah Atherton:** I am going to move on to a question that I think is probably up your street. The MoD is implementing the combat cloud digital backbone by 2025 to support the integrated operating procedures. What opportunities will that offer? Also, what risks are inherent in that shared system?

***Professor Caverley:*** This is one of the most important questions for a modern military. The United States is struggling with this right now. The Secretary of Defence literally just signed guidance on how to do it jointly—the JADC. I have no good answers for you. I am not a technical expert in this. Among the things that are very important to understand as you

develop this is that it is probably pretty useful to get your own forces to be able to integrate before worrying about plugging into other allies' forces.

Secondly, the Secretary of Defence made a very good point at the conference that Admiral Jones and I were at, which is that the ability to operate without the cloud, the ability to operate with a degraded communications posture, is a potential aspect of especially naval forces going forward. At some levels, our mutual adversaries think that the biggest weakness of the Royal Navy and the United States Navy is our reliance on a very big pipeline of information going back and forth at all times. Any cloud system that you or we develop has to be as robust as possible. We also have to have the ability to operate with a tighter bandwidth of kilobits rather than gigabits.

**Sarah Atherton:** Thank you, Professor. Admiral, do you have any comments to add?

***Admiral Sir Philip Jones:*** Yes, I agree very much with what the professor said. In many ways, high-end western navies are now having to come back and to learn some lessons that used to be pivotal to the way they operated in the cold war, when we were really good at understanding the nature of the electromagnetic spectrum and how we could operate within it—how we could operate silently within it. I certainly remember from my seagoing days radars off, radios off. This was long before the era of satellite communications and that enormous pipe that Professor Caverley described, which we have come to rely on now.

It is not that the pipe is a bad thing; it has enabled us to build much more effective integration and sharing of a picture, and therefore the synchronisation and co-ordination of a strike capability across a disparate and sometimes multinational taskforce. But it brings vulnerability, because if you can cut the pipe off or jam the messages within the pipe, then you have really confused command and control.

We are going back to our roots, as it were, in getting a better understanding of the electromagnetic spectrum and of how we can operate in different ways. That is one of the reasons why high-end navies always used to train by using fall-back modes, saying, "You have lost the pipe, your main source of information. What are you going to do, because don't tell me the answer is nothing?" It definitely shines a strong light on the point that Professor Caverley made earlier: it does not matter how well placed your ship is, how well trained or well manned it is, or whether all its tubes are full, if you cannot bring it into an integrated picture and enable it to contribute to an integrated operation, it will not be very effective. That is really important.

I had really good visibility of this at an early stage in my career—I am a comms/EW specialist by background—when we were trying to roll out some of this capability to the fleet about 50 years ago, the then Defence Information Infrastructure. We learned two very valuable lessons about the challenge of doing this.

First, Professor Caverley made a really good point earlier about what carriers bring to the game: you have a lot of power, a lot of spare power and a lot of power you can distribute and use in different ways on a ship. This makes ships really good platforms for some of the new technologies that might be very hungry of electrical power and of space in a way that means you cannot deploy them on an aircraft and will struggle to deploy them in a very immobile land force. Also, just getting it into the ship, to find where in the ship you will put it, when almost every last square metre is already accounted for with our existing systems, and how to integrate it properly into the command system of the ship, so it does not just become a bolt-on but becomes an integral part of how you fight, takes an awful lot of planning. That is what makes this inherent flexibility of modular systems essential to the way we can let the Navy of today react to how this technology moves forward very rapidly.

What that alludes to is a point that I do not think I have stressed anywhere near enough today. We are talking not just about integration with other allied navies but about integration across domains. The Navy has to be ready in a much more effective way than ever before—the integrated review points to this—to incorporate land, air and cyber and space domains in how we do what we do. That will take a lot of work, a lot of careful thought and a lot of deeply technical knowledge if we are to be able do that effectively. The will to do it under the leadership of Strategic Command in the MoD is stronger than it has ever been, but we need to recognise that it is a hard challenge.

Q27 **Sarah Atherton:** Can I look at the future commando force and the role of global persistent engagement? Do you see any issues in the force's new role? I am thinking about the equipment that is at its disposal, the OPVs, the future Type 31 and whether it is armed enough and about its organisation. Will it be hindered or enhanced in the future?

***Admiral Sir Philip Jones:*** The future commando force is an extraordinarily important and powerful concept. It has been fascinating to watch it evolve over the past couple of years. It began on my watch as First Sea Lord, and we have not been doing it on our own. One of the great things about marine corps is that they talk to each other. Every nation that is privileged enough to have a marine corps is aware that it is a unique asset and unique capability and you need to think about how best to use it. For very understandable reasons, most marine corps—certainly those in the United States and the United Kingdom—were predicated on the question: how we can use a marine corps in war-fighting operations on the land in persistent, very demanding counter-insurgency operations? They almost became second armies. What we are in the process of doing now is turning them back to a maritime focus. The Royal Marines is doing what it always has done and is tracking what the US Marine Corps is doing—clearly at a much lower scale but with much of the same thinking.

What is the US Marine Corps doing? It is, for understandable reasons, discarding much of its heavy land war-fighting capability, so that it can focus on the lighter, more agile, more ready footprints that can enable it to achieve effect at sea and from the sea. The future commando force for

the Royal Marines is doing exactly the same thing. We did not have the same large land war-fighting equipment to discard, but we do have to think, "Well, what are they going to fight with? What are they going to bring to the battle that will make them unique?"

In many ways, it is leaning into the question of how to use your digital backbone and unmanned systems to help you both build a picture and make that very tricky transition from the maritime to the land, and to achieve effect—and in small packets of course. They are having to adjust to the fact that very rarely will an entire Royal Marines commando unit of 650-plus be operating as a single entity. They will be broken down into small groups, using the small platforms they are embarked in and the unmanned systems that are available to them to achieve raiding effect and operating much more closely like the special forces in the way they do that. It is a really exciting concept and it is exactly what marine corps should be doing.

Q28 **Martin Docherty-Hughes:** I want to talk about how joint operations provide more than just additional mass. What capabilities can the Royal Navy bring to joint operations? What should we be looking for? What extra capacity does the UK provide to our joint operations with the US Navy and how do the UK's contributions change when the US is not involved in a joint counter-piracy mission with, for example, France?

***Admiral Sir Philip Jones:*** Forgive me for asking for clarification about nomenclature. When you say "joint" to me, I start thinking of cross-domain within the UK. You are talking about navy to navy, aren't you?

**Martin Docherty-Hughes:** Yes, indeed.

***Admiral Sir Philip Jones:*** I think Professor Caverley and I have been articulating for the past couple of minutes much of how we do that at a high-end level and with a US Navy presence. I hope we have covered much of the ground there. But you are right, and there are two important clarifications to that. The first is when you come into a more constabulary role and the second is when you have to do so with the US Navy not there.

When the US is not there, to start with there is a capacity if you are in the Euro-Atlantic area to use NATO tried-and-tested structures, techniques and procedures. Much of the exercising that we do enables us to trial what happens if the US Navy is not there. We do most of our exercising assuming their presence and their lead, but we have the techniques and structures to be able to do it without them, and I think it is important that we enhance that.

[JOHN SPELLAR *took the Chair.*]

One of the things we are doing with carrier strike is looking at the global F-35 Bravo club, not just the global F-35 club. That brings in navies such as Italy's and Japan's. How do we get the most from our shared F-35B capability by working together? Hopefully, you will not be surprised to

hear that as we speak an Italian Navy destroyer has been incorporated for a while into the carrier strike group to work on precisely that. At the same time, the carrier strike group has loaned a frigate to NATO Standing Maritime Group 2 to enhance how we make a group like that work—it often doesn't have a US asset within it—to achieve high-end effect.

Q29 **Martin Docherty-Hughes:** I am sorry to interrupt, but I am conscious of time.

Bearing in mind what you said, Admiral, a lot of US commentators have said that the best way of the UK contributing to Indo-Pacific security might be for it to concentrate on the Euro-Atlantic area, allowing allies such as the US and Australia to bring to bear much greater resources in their backyard. Are we missing an important counterfactual?

***Admiral Sir Philip Jones:*** I know that Professor Caverley will have views on this, but there is a compelling argument in what you have just said—that we are somehow missing a trick, and the Indo-Pacific tilt is missing the point at which we should be.

I will answer that in a simple practitioner's way. When I was First Sea Lord, the chiefs of navy in the Indo-Pacific region used to say that the South China Sea, the East China Sea, the western Pacific and the Philippines Sea are incredibly challenging places to operate. All western nations like to talk the talk about countering the PLA Navy in the South China Sea—"We must do this; we must do that. That talk doesn't count for much unless you are prepared to come and be there with us. If you won't put your ships into that region and do freedom of navigation missions and take the heat when the PLA Navy come at you on VHF with aggressive manoeuvres and low overflights, we do not recognise the credibility of you talking the talk. You have to be here with us. We are going to take the brunt of it because it is our region," as you rightly say, "and we can't come and match you on anything other than an episodic basis in your region and work out what it means to counter the Russian submarine fleet, but if you're going to talk the talk you've got to walk the walk on South China Sea freedom of navigation. " I used to hear that regularly.

**Chair:** Emma, you have to leave and you want to ask something before you do so.

**Mrs Lewell-Buck:** It's okay, Chair. I just wanted to say thank you. I didn't want to appear rude by disappearing. I have an interview.

Q30 **Martin Docherty-Hughes:** Professor, do you want to come back on that?

***Professor Caverley:*** Let me say a very sympathetic thing. This is a dilemma; it is not a puzzle to solve. There will be demands to do everything. Every navy has to deal with this.

Admiral Jones is exactly right: at some level, in having been in the region learning how to operate there, there is a lot of goodness, but looking at the Royal Navy's fleet—what it is capable of, what its strengths are—I see

more of a global presence and economy of force operation as the natural thing based on capabilities.

There is one thing I would really advocate. I wrote a paper on the joint strike fighter and how interesting the programme was. The United Kingdom really strongly shaped how the joint strike fighter worked. I don't think the joint strike fighter would've been built if the United Kingdom had not been co-opted to contribute.

Q31 **Chair:** That's a lot of responsibility.

***Professor Caverley:*** I'm afraid you own it, literally and figuratively. The thing I see the United Kingdom doing that would be quite useful for the United States is going through a very hard process of thinking globally rather than regionally as part of defence. You are trying to figure out how you globally integrate the forces so that they are not divided in a zero-sum game between CENTCOM, EUCOM, INDOPACOM.

I think having Britain contribute at that highest level, on the global distribution of the united force, would be a very powerful and constructive contribution to allied conceptions of how the world should work. Bringing the carrier to bear on that would be the price of doing business and it would probably make the United States take notice. I think that would be good for the United States, because I really think the United States defence department needs to think more globally than regionally.

Q32 **Martin Docherty-Hughes:** I am not disagreeing with any of that, but there are elements of cost as an ally. I have concerns that in much of the deliberation today I have not heard specifically about one of our allies, France, which has major territory in the Pacific—off the top of my head, it is over 4,000 square miles of land—and two naval ports in the Pacific, yet we never hear about their role or our joint work in terms of their own physical presence in the Pacific itself.

***Professor Caverley:*** France is definitely operating in the region. If you look at the French White Paper, there is a tilt in that direction as well.

Q33 **Martin Docherty-Hughes:** You will forgive me, Professor, but there has been that tilt for quite a long time, given the role of French Polynesia, which is part of the French Republic.

***Professor Caverley:*** I understand that. We are not disagreeing on the fact that France has a territorial interest there. I am not sure how important that is relative to the massive amount of global commerce, which is everyone's interest there. Also, as Admiral Jones pointed out, the geography of the region means that the first island chain is the centre of gravity right now—that's Japan, Taiwan, the Philippines and then the Straits of Malacca. That is a relevant piece of territory to any global trading state. I am not sure that French Polynesia makes that particularly unique.

Q34 **Martin Docherty-Hughes:** Does the UK need to prioritise which allies it intends to work closely with? Again, the Indo-Pacific tilt notwithstanding, there seems to be a consensus that the UK principal share of operations

will be in the Euro-Atlantic area. We have just been speaking about co-operation with the US and France. I also note the Dutch frigate that is currently supporting the carrier group. Yet it seems that something that is little mentioned—the elephant in the room—in both the Integrated Review and the Command Paper is the European Union as a strategic actor from the Mediterranean to the Sahel, which undoubtedly is an omission. Do you think this omission is akin to a love that dare not speak its name, or is it a deliberate strategy to undermine the EU by attempting to work bilaterally with European states? Professor, can I come to you first?

***Professor Caverley:*** That is a really good question. Obviously, you have to have a balanced approach. The EU is an incredibly important actor and definitely central to British interests, from an outsider's perspective. Having said that, in your national security deliberations you need to think about what is the point of the military? Where is the centre of gravity of the threat? If it is great power politics or great power competition with Russia and China, then it is going to be NATO and maybe a few countries in the Indo-Pacific. We haven't even mentioned India, which is obviously a central actor in all this. If you think that the centre of gravity is the Sahel, the Middle East or security assistance in the Mediterranean—the Mediterranean is a depressingly interesting place from a maritime perspective these days; I never thought I would see that—then maybe the EU is more the organisation that you have to lean towards. But in terms of great power politics, it is NATO or nothing, as far as I can tell.

***Admiral Sir Philip Jones:*** I am very proud to be able to say that I was once an EU operational commander. About 11 years ago, as commander of the UK maritime forces, I stood up Operation Atalanta, the EU's counter-piracy operation off Somalia. I am very proud of having done that. It was great to see the EU flex its muscles and be allowed to do it that way. There has not been much of that in its history. That was the first ever EU maritime operation, and it was one of only three running at the time, with one in Chad and one in Bosnia. I am not sure that those numbers are any higher now.

In a funny sort of way, Brexit did not change the way that UK armed forces dealt with their European counterparts because we already had a number of structures in place that worked for the different areas of interest and the different regional challenges. NATO is of course the biggest and most profound, as Professor Caverley said, but there were others, too. The combined joint expeditionary force that has linked UK and French armed forces together going all the way back to the Lancaster House agreement of 2010 is a very credible capability, and I spent a lot of time with my French counterpart knocking down naysayers who said it was not. We exercised together, we had concepts of employment together, and we are just looking for the best opportunity to use it in a live operational domain. I still believe that to be very much the case.

The joint expeditionary force that links UK armed forces to their Nordic and Baltic colleagues is a very credible and very necessary linkage that I know is very highly regarded in those nations. Right now, as a UK carrier

strike group deploys through the Med on to the Indo-Pacific region, we also have a littoral response group in the Baltic doing Balt ops, and we will work very closely with Nordic and Baltic partners there. We have a couple of very unique and very significant bilateral links. You have mentioned the Dutch one, which is why they have a frigate in a carrier strike group now. The amphibious link to the Dutch Marines is very strong. With Norway, we are both P-8 maritime patrol aircraft operating-nations. We are one of the few navies that deploy regularly and credibly up into the Norwegian sea to work with the Norwegians to counter Russian presence there.

There is linkage to key European nations—whether they are NATO, EU, both or neither—right across the way the UK operates in the Euro-Atlantic area, so in a funny sort of way, our not being an EU partner does not change any of that, and I do not think it will going forward, either.

**Martin Docherty-Hughes:** Thank you, gentlemen. Back to you, Chair.

Q35 **Chair:** Thank you very much. I thank our witnesses for a very interesting and educational session. Earlier on, we talked about the strength of the Russian Navy. We remember the tragedy and disaster of the Kursk, and the Admiral Kuznetsov limping its way down the North Sea with all its auxiliaries to help it limp along. I understand that there has been quite considerable investment in the Russian fleet, but is this once again an example of thinking the Russians are 10 feet tall, or have they made a step change?

***Admiral Sir Philip Jones:*** That is a really important question. It is really important to keep the perspective in balance there because, in a sense, both statements are true. As I think both of us have alluded to, the Russians have invested very heavily in certain components of their war-fighting capability, not across the piece. Much of the high-end investment has been in areas that will directly contest our waters should they choose to do so, and could directly contest our maritime capabilities should they choose to do so. We disregard them at our peril.

You only have to look at their economy and the "one brick thick" element of some of that capability to say, "Don't get carried away. They can't do this on a sustained basis," but every now and again, they have the capacity to bring something out of long R&D that looks like a really terrifying and compelling capability—earlier, we touched on hypersonic weapons and long-range nuclear-tipped torpedoes. It is impossible to know how genuinely deployable those capabilities are and whether there is genuine desire to use them, but we disregard them at our peril. As ever, threat is capability plus intent, and we have to keep working on understanding both of those in Russian systems on a continual basis.

***Professor Caverley:*** There is a couple of things. One is—again, I go back to Luttwak's idea of a viable versus visible presence. I am not a Russia expert, but my understanding of Russia's grand strategy is the importance of being treated and identified as a great power. I would say that most of its naval operations and, frankly, most of its strategic forces, are based around that. Russia concentrates on managing its near abroad—we do not

enjoy that as an alliance—and also on being treated as a great power, and I think the Navy is subordinate to that. So the question you have to ask yourself is whether Russia is being treated as a great power a zero-sum game that you are willing to invest money to counter. That is a political question that I will leave to political leadership.

The second thing that probably deserves mentioning—I do it with some trepidation, because as a US Navy observer, I do not think we should panic about it—is that the bottom line is that the High North is becoming much more relevant than it used to be because of climate change. At some level, we should not worry about it too much because what that really means is that there is now a new artery for global commerce that did not exist before. That is a remarkable geopolitical development, but it does not necessarily mean we have to militarise it or worry if Russia takes a heavier hand in managing it. Russia is right next to it. This is a tremendous asset for Russia; it will probably use it to maximise, again, both its economic future and its status as a great power, and it is very important for us to think about Russia in that context. That does not mean that we need to panic, it does not mean we have to militarise it, but it does mean that it does have security implications that we have to think about.

**Chair:** On that broader perspective, thank you very much.