

From: Philip Hunt, FRAeS

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17 February, 2016

Sir,

I am usually in total agreement with Howard Wheeldon who recently wrote an RAeS Commentary & Analysis article on the emerging CVF aircraft carriers, Queen Elizabeth II and Prince of Wales after a visit to Rosyth and briefings by Babcock International. As the beginning of initial CVF sea trials approaches, there is clearly some excitement and chest pounding national pride. At risk of pouring cold water on rising enthusiasm, disagreeing with Howard and worse still, attracting opprobrium from the Navy fraternity, I would like to offer a counter view on the CVF acquisition.

It would be a great conceit to give my views the stature of Winston Churchill's warnings during the 1930s. Nevertheless, his experience serves to demonstrate that the Government and Services are quite capable of flawed defense assumptions. If there is further doubt, consider the White Paper of 1957 in which then Minister of Defence, Duncan Sandys, acted on his personal view that guided missiles had made manned combat aircraft obsolete. History has already passed judgment on this dangerous notion.

My own views on UK maritime air decisions, however they may be judged, leastways have the gravitas of having direct association with the US Joint Advanced Strike Technology-Joint Strike Fighter Program (JAST-JSF/F-35). I was responsible for initiating and conducting the first discussions (1989-92, office of Deputy Commandant Marine Corps Aviation and elsewhere in DoD) that led to UK participation in JAST-JSF/F-35. Additionally, I was the first on-site UK JAST-JSF program manager and I reflect fondly on my Sea Harrier background.

The simple objective of UK participation in the US Government program in 1989, recognizing the importance of organic maritime air to the 21st century Fleet and accepting that the Royal Air Force (RAF) had no interest in post-Harrier short take-off and vertical landing (STOVL) capability, was to replace Sea Harrier with a generation five, advanced STOVL strike fighter. Partnership with the US Marine Corps was, after 1988, the only viable path forward. In the years after formal involvement in the JSF program began, many other objectives, efforts and programs have become attached - the CVS ships, RAF needs, industrial base issues, employment in Scotland, renovating Portsmouth, Government credibility and so on. All these things have been built on the shoulders of the F-35 program. It is notable that in the JAST Joint Initial Requirements Document (JIRD) of the four service partners (USAF, USN, USMC and RN), it was the RN alone that advocated for air-to-air combat fighter capability. Along the way, this emphasis changed as the weight of RAF strike needs prevailed and the ship platform plans morphed into something more akin to an RAF airfield opposed to an integrated advanced aircraft-ship maritime system, formed and equipped to execute modern sea warfare. The events of the 1990s Bosnian and Kosovo conflicts and the later establishment of the RAF/RN Joint Force Harrier provided the illusion that the existential value of Naval air was well appreciated until with crashing effect, first Sea Harrier (maritime air defense) and then GR. 7/9 were thrown to the Treasury wolves.

Successful warfare allows that the protagonist, who introduces the best technology first and fields it in productive numbers, usually wins. US R&D investment that ramped up in the later 1940s and continues to this day seeks to develop transformational weapons systems that are disruptive to existing practices. CVF, despite some innovations is by size and performance a weapon that belongs to a past era and is not

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transformational. It fails, monumentally, to exploit ASTOVL technology which is difficult to comprehend given the innovative integration experience acquired through Sea Harrier in CVS.

For future RN maritime aviation, I believe that the CVF will prove to be an outstanding mistake. Some of the reasons for this are as follows:

- a. Vulnerability – Distributed forces/air groups in smaller ships improve the survivability of capability – large size is highly vulnerable to asymmetric threats
- b. Gen 5 fighter/attack aircraft, sensor capability and precision weapons multiply effectiveness enabling smaller air groups to achieve what hitherto required very large air wings – small modern ships with small air wings can achieve more capability than a WW II aircraft carrier
- c. ASTOVL aircraft demand small, fast, agile and survivable ships to exploit their performance advantages and to minimize aeronautical shortcomings – ship and ASTOVL aircraft must be a seamless integrated weapons system approach
- d. CVF and air groups of 36 are out of kilter with current RN force structure, are unaffordable (empty space costs to defend) and detract from investment required elsewhere for the surface fleet and below
- e. F-35B ASTOVL is the wrong aircraft for the RAF – is absolutely right for the RN maritime operations in small air groups
- f. Primary RN maritime air doctrine is fleet defence (enables strike) – present Harrier gapping questions the integrity of existing force structure - large CVF (so many eggs in one basket) comes with all the challenges of an incipient new 1941 Prince of Wales and Repulse event
- g. The premise of CVF employment, principally within strategic partnerships, ‘special relationship’ and coalition operations is fine but tying a national system to such constraints undermines the power to act – smaller, self-contained and more defensible assets are preferred to better facilitate autonomy when needed and outside of coalitions
- h. At departure from office, President Eisenhower was concerned about the influence of the “military-industrial complex” but with CVF, it is the political-industrial association that has led to an oversize carrier abetted by the crude finesses of the Services and their blundering about to increase their share of the pie
- i. Despite its size, the CVF remains an ASTOVL carrier – it has none of the operational enhancement of a Cat/Trap ship, no fixed wing AEW or COD
- j. The size of the CVF bespeaks a squandered opportunity to transform 21st Century maritime air warfare – there were alternatives but the imagination of a Jacky Fisher was not on hand

The investment of political capital, Services’ leadership credibility, industrial shareholding and massive public funding and so on have created two UK national floating Leviathans. The CVF size alone might be expected to stifle any criticism since even the largest critical ego must wilt under such dazzling spectacle; CVF is too big to be wrong, is too big to fail! This is a conundrum but warfare seeks out weaknesses without obligation to venerate such things. If systems are found to come up short when first engaged in operations, this is too late. Critical review is essential and best choice for ASTOVL maritime air, does not jive with these CVFs. If my contention is true and the CVF are as wrong as Duncan Sandys missile gambit, some brave leadership is needed soon.

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