

Argumentative Essay

Introduction

- Attention step: Although Britain and America had different levels of naval capabilities, they became great naval powers during the interwar period by developing and employing naval tactics and innovations to meet their strategic considerations.
- Thesis: Britain and America developed and deployed naval propulsion systems, carrier aviation, and submarine warfare with a prevailing goal of strengthening their strategic military capabilities.

The differences and similarities between the U.S. and British naval innovations were influenced by strategic objectives

A: Both the US and Britain have the naval propulsion systems for their naval vessels, however, the performance of the former was better

Differences. The British Royal Navy used fuel and developed turbine engine as a means of energy to power its naval equipment, whereas the U.S Navy introduced and developed turbo-electric drive engines to power its naval vessels. The difference had an impact on the performance of naval vessels for both countries.

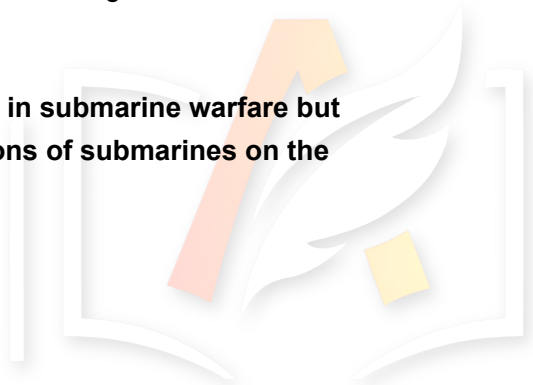
Similarities. Both navies designed naval equipment, which were efficient in terms of fuel and energy consumption.

B: Although both the US and Britain developed aviation carrier, the former produced better carriers than latter

Differences. The America Navy outclassed the Royal Navy by designing advanced aviation carriers. The British Navy designed a “built-for-purpose carriers,” whereas the U.S Navy designed multiple carriers. It influenced the operational capabilities of both navies.

Similarities. Both navies used radial engines to enable their carriers attain high level of performance in terms of taking off and landing.

Both the US and Britain developed different technologies used in submarine warfare but the US technology was more improved as it supported detections of submarines on the surface of water



Differences. The U.S Navy used and developed radar technology to address the issue of submarines, whereas the Royal Navy depended on indicator loops and sonar technologies to fight against the opposing powers' submarines.

Similarities. Both navies installed "mines" and other technologies to resolve the issue of submarines.

In this context, dichotomy prevailed because both nations had different institutional policies and financial powers coupled with human resources to influence naval innovation.

Conclusion

The American and British navies adopted naval tactics, innovations, and technologies that were similar and different in many aspects, especially in areas of deploying carrier aviation, developing naval propulsion systems, and submarine warfare. Naval innovations in the US and Britain reflected their objective of attaining strategic military capabilities.

Introduction

Although Britain and America had different levels of naval capabilities before World War 1; they became great naval powers during the interwar period by developing and employing naval tactics and innovations to meet their strategic considerations. Britain and America developed and deployed naval propulsion systems, carrier aviation, and submarine warfare with a prevailing goal of strengthening their strategic military capabilities. This argument is supported by evidences in the sections that follow below.

Naval Propulsion Modernization

Britain introduced the turbine engine and fuel oil for propulsion of naval ships. Conversely, the US developed the turbo-electric drive for use in warships with an aim of improving the fuel economy of warships. Although Britain led other countries in this innovation, its propulsion systems were more bulky, heavier, and had high steam leakages and less fuel efficiency. For instance, the boilers used the Royal Navy vessels needed cleaning each 750 hours during their operations. On the contrary, the Navy propulsion technology used by the US Navy ensured that its warships had less fuel consumption compared with British ships. For instance, the fuel consumption for US warship, Washington was 39% less than that of an equivalent British warship, King George V both at lower and higher speeds that doubled the endurance of the royal Navy's battleship. The modernization of the propulsion systems increased the cruising radius of the US ships, improved engine performance, and eased refueling. Although the US and Britain had different approaches to naval propulsion modernization, the countries share certain similarities. Specifically, both navies spurred innovations in the naval propulsion systems to increase efficiency in fuel consumption during operations. Similarly, the navies of both countries were driven by strategic considerations in developing modernizing the naval propulsion systems

for their naval vessels. In this regard, the innovations enhanced the performance of naval vessels in the Second World War due to their improved fuel efficiency.

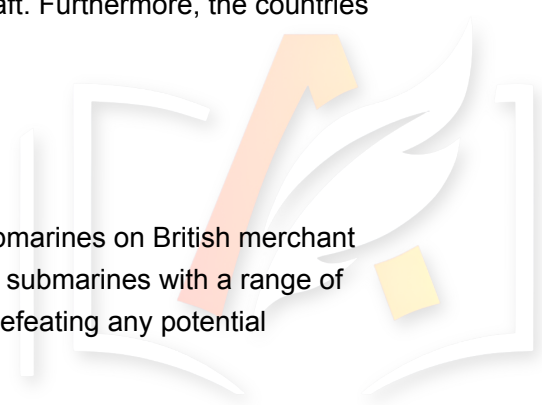
Aviation Career

The Royal Navy led other navies with the introduction of functional aircraft carriers. The British aviation carriers were built for purpose, lacked large hulls and collectively could only operate 48 aircraft. The carriers had fly-on decks for allowing the wheeled aircraft to recover and flying-off decks. Conversely, the split configuration of the deck with a shortened central superstructure hindered the safe recovery of aircraft. The development of the aviation carrier in Britain was linked to strategic considerations of the royal Navy. Specifically, the Royal Navy perceived the aviation carriers as critical to their defense doctrine. The carriers were to be used together with battleships for fortification rather than autonomous defensive or autonomous missions. This led to limited adoption of aviation carriers. Furthermore, the existence of an external threat explains the degree of innovation in relation to aviation carriers by Britain. During the interwar period, Britain considered Italy and Germany as presenting the most urgent threat. However, neither country had aircraft carriers. Thus, based on the potential threat posed by these countries, Britain allocated resources to its air force rather than its aircraft carriers.

On the contrary, the US converted its battle cruisers with large hulls into aviation carriers. The large size of the US aviation carriers meant they had the capacity for accommodating higher performance and heavier naval aircraft used in the Second World War. Furthermore, the huge size of the US aviation carriers allowed them to operate the naval aircraft in larger numbers compared with the British carriers. The US Navy considered aviation carrier as part of its strategic considerations. The naval carriers provided the US Navy with the capability of striking enemy bases and ships from the sea. In line with this, the US Navy required the projection of offensive power across the oceans and the aviation carriers were uniquely suited for this mission and this spurred innovation in naval carriers. Similarly, the US viewed Japan as its greatest threat during the interwar period. There was considerable distance between Japan and the US and this highlighted the importance of power projection with wide-reaching influence. Thus, naval aviation was an important goal for the US in planning for the potential war with Japan. Indeed, the expectations of the US about the war led to an assessment that revealed deficiencies related to aviation carriers. Consequently, this influenced further innovations in aviation carriers to increase the US Navy offensive capabilities. Although the US and Britain differed in relation to innovations in naval carriers, both navies utilized radial engines that enabled their carriers to achieve high performance levels in terms of taking off and landing of naval aircraft. Furthermore, the countries revolutionized aviation carriers as critical to naval operations.

Submarine Warfare

In response to the submarine warfare launched by the German submarines on British merchant ships, the Royal Navy relied on active solar technology for locating submarines with a range of up to 1,000 meters. This technology was considered as critical in defeating any potential



submarine threat in the future. In particular, the Royal Navy considered this innovation as necessary for accurately detecting the position of hostile submarines in terms of range and bearing. Conversely, the solar technologies had various limitations such as unreliable readings due to contrasting water temperatures and inefficiency associated with the effects of turbulence caused by the ships' motions or propellers. In contrast, the US Navy relied on Radar technologies for estimating the distance and direction of the enemy's submarines. The radars were developed with smaller antennas and shorter wavelengths and installed on battleships to determine the presence of submarines. The radars played an important role in the anti-submarine warfare in the Second World War. In particular, the radar technology allowed the US Navy in detecting surfaced submarines. The radars were also installed onto aircraft that increased the capability of the US Navy in searching for hostile submarines over large areas. Despite the differences, both the US Navy and the Royal Navy used mines to counter the threat of hostile submarines. The use of sonar and radar technology by Britain and US, respectively, characterize the strategic goal to counter the threat posed by submarines of hostile countries such as Germany. In this case, the radar and sonar technologies played an important role in the offensive doctrines of both the US and Britain in the Second World War.

In this context, dichotomy was existent as Britain had preeminence in naval capabilities prior to the interwar period but the US learned from the failures of Royal Navy to develop better naval technologies and innovations. Nevertheless, both countries deployed human resources and utilized varied financial powers and institutional policies to influence naval innovation with the goal of achieving their strategic considerations. Specifically, external security threats guided the naval innovations undertaken by the two nations to increase their strategic military capabilities that are evident in the contemporary naval policies of these two countries.

Conclusion

The British and American adopted naval technologies and innovations that were different and similar in many aspects, particularly in the deployment of aviation carriers, development of naval propulsion systems, and submarine warfare. The naval innovations undertaken by the two nations were aimed at increasing their strategic military capabilities that have persisted to the present era.

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