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Proposal: David Bushnell & American Turtle

At the time of the late eighteenth century, the British Royal Navy was far and away one of the strongest military presences in the western world. Famously, the British Navy was vast in size, and any other nation that wanted to challenge it had an insurmountable task in front of it. This is why, when the American British colonies began their rebellion in 1775, the burgeoning country had to find creative solutions to avoid directly engaging the massive power ahead of them. This is why the Founding Fathers and early military leaders looked towards the patriot tinkerers using prevailing scientific thought to devise great inventions that could help them in battling the British.

One of the inventors that the Continental Army sought out was David Bushnell. An adept scientist up to date with top scientific knowledge, Bushnell was just the man to help empower the American Navy. Bushnell's work contributed to the creation of a design for the "Turtle," (also known as the "American Turtle"), a submersible machine designed to drill and explode ships from underneath with a gunpowder-filled mine. Bushnell received a substantial amount of attention and funding to produce the Turtle, and created a model that was used in combat with middling results. Despite the overall lackluster performance of the Turtle in its combat debut, the Turtle remains an interesting part of the American Revolution and is often cited today as the birthplace of modern submarine warfare.

The proposed research project seeks to do further analysis of the American Turtle and David Bushnell, seeking to understand the perception of the people contemporary to the invention. The invention of the Turtle is still a substantial amount of time before the Industrial Revolution, and stands as a surprisingly modern portion in a bygone time. It seems reasonable to believe, then, that the people surrounding Bushnell had formed opinions on the creation of this new piece of technology. There is also some reason to evaluate how these opinions changed after the failure of the Turtle to perform in any meaningful capacity. It is also worth noting that Bushnell went on to keep tinkering well after the creation and blunder of the Turtle, so it is worth investigating how his subsequent work was affected by these events.

To do this analysis, the proposed project will rely heavily on the primary literature. Bushnell and the Turtle have a high amount of documentation, including letter written by important historical figures, such as George Washington and Thomas Jefferson, about the two. These letter resources will bare much material that the proposed project will benefit from incorporating. Then to go along with these, there are a small number of surviving accounts of the Turtle in action from witnesses. In addition to these, Bushnell's work has some documentation in newspapers of the time, which are easily accessed through the Simpson Library database. These sources will serve a vital function in the creation of this paper, and act as the work horse for writing about the subject.

The secondary sources on Bushnell and the Turtle specifically are limited in amount. *Submarine fighter of the American Revolution* by Frederick Wagner and *The American Turtle Submarine* by Arthur S. Lefkowitz serve as the main books that have popped up in researching for the proposed project, along with a small number of articles about the subject. Where the

secondary sources do pick up is in contextualizing the greater context the Turtle and Bushnell existed in.

Bibliography

Black, Jeremy. "Naval Power in the Revolutionary Era." *Defence Studies* 7, no. 2 (June 2007): 171–92. <https://doi.org/10.1080/14702430701337975>.

In this article, Black argues that European states maintained their global domination through a vast network of naval power. The strong military and economic forces of the European powers helped them in conquering the world. This article serves as a way of highlighting the cultural and scientific importance of the Navy in Western culture, and helps in placing the Turtle among this culture.

Fagal, Andrew J. B. "Thomas Jefferson, Military Technology, and the State." *Transactions of the American Philosophical Society* 110, no. 2 (2022): 147–66. <http://www.jstor.org/stable/45400909>.

In this article, Fagal disputes the pacifistic view of Thomas Jefferson by bringing to attention his contributions and direct interest in American weaponry and military equipment. The article highlights Jefferson's philosophical justifications for desiring a strong military, and even points to his interest in naval (including early submarine) experiments. This article will serve to further demonstrate the connection between Jefferson and Bushnell in addition to primary sources. It shows his clear interest in underwater warfare, and can be compared to his private writings.

Hindle, Brooke. *The Pursuit of Science in Revolutionary America, 1735-1789*. The Institute of Early American History and Culture, 1956.

In this book, Hindle argues that the specific set of circumstances that the American colonies in the time of 1735 to 1789 were under allowed for the

advancement of mathematics and natural science far beyond those of other Western nations. The unique environment, relatively leisure filled lifestyle of the British American, and emerging enlightenment ideas set the stage for scientific advancement in the New World. This both contain portions on David Bushnell and the Turtle as well as placing him against his contemporaries. This allows for conversation about reputation against his peers to be made.

James L. Nelson. *George Washington's Secret Navy: How the American Revolution Went to Sea*. International Marine, 2008. EBSCOhost.

In this book, Nelson argues that the sea was a place of particular interest for the Continental Army, and in particular George Washington. The ocean was seen as a massive unbroken highway connecting the Americas to the British Isle, and could be of particular use for the Revolutionary effort if mastered. This book highlights the key figures, such as George Washington, in the early nautical efforts of America, and helps to place the Turtle's importance among them.

Lefkowitz, Arthur S. *Bushnell's Submarine: The Best Kept Secret of the American Revolution*. New York: Scholastic Nonfiction, 2006.

This text serves to give more background on Bushnell's work on the Turtle, and helps in evaluating the view contemporary of the Turtle. It serves as one of the most full biographies on the subject, and gives a reference point to evaluating other accounts of the event. As well, it contains many images and diagrams that can be used in the paper and presentations to help illustrate and articulate certain points of discussion.

Rodger, N A M. *The Command of the Ocean: A Naval History of Britain, 1649-1815*.

New York: W.W. Norton, 2005.

This book gives background on the history and power of the British navy, and highlights its overall utility in the ability of the nation to build its empire. For the proposed project, this book will serve as a placement against the relatively short history and limited power of the Continental Navy.

Roland, Alex. "Bushnell's Submarine: American Original or European Import?"

Technology and Culture 18, no. 2 (April 1977): 157.

<https://doi.org/10.2307/3103954>.

In this article, Roland seeks to challenge the character that the Turtle has grown over centuries of thinking and scholarship. The Turtle is seen as one of the greatest scientific advancements in American war history, but looking into Bushnell's background seems to turn away from this reputation. This article will help in analyzing and combating traditional narratives about Bushnell and the Turtle in the proposed project.

Wagner, Frederick. *Submarine Fighter of the American Revolution*. Dodd, Mead, 1963.

This monograph serves its place as the most complete biography of David Bushnell and having the most detailed account of the Turtle in action. As well, Wagner engages in speculation on the aspects of Turtle's history that history has left blank. This allows for the project to engage with more modern thinking about the Turtle, and fill in gaps that cannot be done with just primary sourcing.