

Building the Trident Network: A Study of the Enrollment of People, Knowledge, and Machines. *By Maggie Mort*. Cambridge, Mass.: MIT Press, 2002. 279 pp. Cloth, \$32.95. ISBN 0-262-13397-0.

Reviewed by William M. McBride

In 1981 the United Kingdom decided to equip its nuclear submarine force with the enhanced D5 version of the American Trident intercontinental ballistic missile (ICBM). This decision was influenced by the U.S. abandonment of the smaller Trident C4 missile as part of its hard-target, counterforce strategy. Termination of the C4 missiles, which Britain had adopted in 1980, meant that Britain either had to accelerate acquisition of the C4s and then be solely responsible for their maintenance or go with the D5 variant. The D5 required a larger submarine, further complicating the process.

The British government's decision, to "buy American," as with the preceding generation of Polaris ICBMs, met with widespread political opposition. Opponents included some conservative politicians who wanted a more independent, British nuclear deterrent, senior military and naval officials who feared the effects of Trident's enormous budget on other defense programs, and some trade unionists who perceived such large-scale systems as vulnerable to cancellation and contributing to the collapse of increasingly narrow-focused defense industries. Some union opposition also grew out of the perception that the nuclear weapons system being built was designed to be more offensive than defensive.

The D5 gave Britain strategic and material commonality with the United States; however, the Thatcher government decided to place these missiles in four new submarines of British design (the *Vanguard* class) powered by the latest in British reactors, the PWR-2, then under development in Scotland. The stage was set for the "largest and most ambitious technological enterprise ever undertaken by the UK" (p. 2).

Mort places her study of the British Trident project "somewhere between the literature on arms control and disarmament and that of science and technology studies (STS)." She states that her "point of view is that of labor," and she refers periodically to the "literature of resistance" and to "alternatives" that emanated from "workplace

knowledge.” Mort claims that this perspective “connects the disarmament debate with STS” (p. 4). With Mort’s pronouncements in mind, readers will progress through an interesting and thought-provoking account—but not a history—of the transformation of the Vickers shipyard in Barrow into an entity solely dependent upon the *Vanguard* submarine program. This ultimately worked to the detriment of the Barrow-area workforce when the cold war ended.

Mort begins her study with a review of the often convoluted and overwrought, but still very useful, intellectual landscape of the STS world with its “actor networks,” “boundary objects,” and “enrollment.” This is a field with extremely subtle distinctions between complex theoretical models. Trying to sort it can be headache inducing. Thankfully, Mort presents a good introduction for the models she employs as well as an overview of the prevailing theories on large-scale technological systems applicable to something on the magnitude of the Trident submarine.

Critical to production of the *Vanguard* class was the process of “technological shrinkage” that occurred within the large Vickers industrial empire. Mort recounts the effects that changing ownership and shifting products had on the engineering and production of Vickers’s technologies, most notably the abandonment of the potentially profitable constant-speed generator drive (CSGD). In the push to develop its defense-related “core business,” Vickers management marginalized the CSGD. Mort presents an account of the privatization and management buyout of Vickers by British Shipbuilders, which was a byproduct of industrial nationalization. This buyout occurred within the context of the impending Trident contracts, and it had a strong effect on Barrow, a company town, which would serve as a “purpose-built site and purpose-built workforce” to secure Trident production (p. 12).

The all-or-nothing nature of the *Vanguard*/Trident program for the Vickers’s Barrow shipyard led to the formation of the Barrow Alternative Employment Committee (BAEC). BAEC was careful to hold the Committee for National Disarmament at arms length, as BAEC argued for alternative technologies that could be built while maintaining the skills base within the Barrow facility. The BAEC failed to convince labor, management, and the Barrow community at large of alternatives to the Trident program. Unfortunately for the Barrow area and its work force, the completion of Trident

engineering work and the solution of initial construction puzzles resulted in significant downsizing of the work force as predicted by BAEC.

The tactics of corporate and geographic diffusion employed by large-scale, contemporary American defense contractors to protect their corporate entities and, to an extent, their skilled work force, were not practiced. Ironically, the coldest dismissal of the problem of defense-related layoffs and industrial drift typified by the Barrow experience came from former U.K. minister of defense Michael Heseltine, who said the government should not intervene to save those “skilled teams” serving “yesterday’s markets” (p. 163).

As a historian, I was struck with the parallel between the Vickers experience at Barrow and the situation faced by the U.S. shipbuilding industry, especially with regard to naval construction, between the Five-Power [Washington Naval] Treaty of 1922 and Franklin Roosevelt’s use of National Industrial Recovery Act funds in trying to keep shipbuilding industries (and their cities) afloat starting in 1933. Similar historical references are absent from this book. However, Mort has provided an important contribution to the literature of science and technology studies. Mort’s well-written and nuanced book has a direct relevance to historians interested in industrial and work-force dynamics as markets contract, especially within the context of the shift to a post-cold war world. It is also a useful contribution to our knowledge of the relationship between labor and technology in our modern world.

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