Anthracite Country Reaches for the World, 1851

Joseph Conrad opens his 1898 novella, *Youth: A Narrative*, with the claim that the events he will relate "could have occurred nowhere but in England." This story recounts the ill-fated voyage of the fictional *Judea*, a rickety vessel carrying six hundred tons of coal from Newcastle to Bangkok in the mid-1870s whose cargo spontaneously combusts, engulfing the ship in flames. The circumstances of the voyage are indeed fittingly English, or, at least, British. The trade route followed by the *Judea* was a product of the British Empire. Britain was a maritime nation with the world's dominant navy and a globe-spanning merchant marine. And Britain was the world's preeminent exporter of coal and guarantor of the steam infrastructure that helped keep the globe linked together. It is a measure of Conrad's literary genius that he, a Pole born under a Russian czar, could author a story that so captured Britain at the height of its world power.[1]

Except, had a group of Pennsylvanian coal dealers a half century before had their way, the same story might have been a distinctly American one, as a series of letters and questionnaires preserved in navy records in the US National Archives reveals. This cache of documents records the correspondence between Benjamin Springer and Philadelphia-based engineers, steam-engine manufacturers, and mechanics in early 1851.[2] Springer, himself a coal dealer and former president of the Coal Mining Association of Schuylkill County's Board of Trade, had just been appointed to a new position in the US Navy. As the department's first "Anthracite Agent," he would supervise the navy's purchase of anthracite fuel. The existence of the agent position itself was a result of Springer's six years of lobbying Washington on behalf of Pennsylvania's anthracite industry to adopt this coal as the favored fuel for the navy's increasing number of ocean-going steam vessels.[3]

Since the mid-1840s, the US Navy had preferred Cumberland coal from western Maryland, a semibituminous fuel. This choice had resulted from a massive research study on coal combustion by the Philadelphia chemist and geologist Walter R. Johnson, who found anthracite burned

[1] Joseph Conrad, *Youth: A Narrative, and Two Other Stories* (Edinburgh, 1903), 1–8.

[2] The letters are found in box 707, XF 1841–1851, Record Group 45, US National Archives and Records Administration I, Washington, DC (hereafter RG 45, NARA I).

[3] "Report to the Coal Mining Association," *Hazard's Register of Pennsylvania*, May 17, 1834, 310–12; "Naval Contracts and Expenditures," H. Rep. No. 184, 35th Cong., 2nd sess., Feb. 24, 1859, 133.

efficiently in naval steam engines but not quite as efficiently as coal from Cumberland. Mustering their political resources around 1845, the anthracite dealers dispatched Benjamin Springer to Washington to persuade Congress and the navy to force the adoption of what they believed to be their superior (and more expensive) fuel.[4]

The broader context for Pennsylvania and Maryland's fight over naval coal contracts involved potentially vast export markets. Government contracts were nice—they paid well and aided domestic marketing purposes—but in tonnage they could only represent a relatively small share of the total coal trade. Not so for export markets. Both Maryland and Pennsylvania coal dealers knew that the coal American naval vessels carried around the world, and dispatched to foreign ports for refueling American steam vessels, effectively advertised their fuel across the industrializing world. Coal dealers in both states knew of the veritable explosion in coal exports from Britain—in fact, between 1830 and 1845 British coal exports had come to dominate international markets. In just fifteen years, British exports to Prussia increased by 1,214 percent; to the East Indies and Ceylon, 2,025 percent; to Denmark, 1,800 percent; and even to the coal-rich United States, 287 percent. By the mid-1840s, Britain exported nearly 650,000 tons of coal annually to France alone. Each of these statistics signaled potential markets that naval contracts could help them break into, or, ominously, potential markets that a failure to act would mean losing forever.[5]

Hence Springer's solicitation of Philadelphia engineers and manufacturers to help persuade the government to quietly subsidize their industry. Springer's letters queried about the coal preferences of merchant steamers northeast of Maryland, the difficulty of converting bituminous-burning steam engines to anthracite ones, the comparative ability of bituminous and anthracite coals to produce steam, and their relative risks of spontaneous combustion. Unsurprisingly, the responses that flowed back to Washington uniformly endorsed anthracite.[6]

[4] "Naval Contracts and Expenditures," 133; Walter R. Johnson, "A Report to the Navy Department of the United States on American Coals Applicable to Steam Navigation, and to Other Purposes," Senate Doc. 386, 28th Cong., 1st sess., Nov. 28, 1843.

[5] R. C. Taylor and S. S. Haldeman, *Statistics of Coal: Including Mineral Bituminous Substances Employed in Arts and Manufactures*, 2nd ed. (Philadelphia, 1855), 37–38.

[6] See, e.g., B. H. Springer to James Cooper, Feb. 18, 1851; B. H. Springer to Messrs. Merrick & Son, Jan. 21, 1851; Reaney, Neafie & Co. to Springer, Jan. 28, 1851; George W. Snyder to Springer, Feb. 14, 1851; Norris Brothers to Springer, Feb. 5, 1851; Richard C. Taylor to Springer, Feb. 14, 1851, box 707, XF 1841–1851, RG 45, NARA I.

By the end of the 1850s, Springer's efforts to boost Pennsylvania anthracite for the navy were successful, but the anthracite operators' bid for world markets was not. Springer helped inaugurate a new series of technical examinations that confirmed the value of anthracite fuel in marine steam engines. His work also helped prepare the commercial relationships that allowed the Union navy to fuel itself almost exclusively with anthracite during the American Civil War. Foreign markets, however, proved less susceptible—Britain's imperial and trade networks, along with its highly developed coal industry, kept British coal as the dominant global export fuel until World War I. Still, these letters, and the history they help illuminate, suggest the importance of understanding Pennsylvania's early history of fossil energy not merely from state or national perspectives, but global ones as well. Had Benjamin Springer succeeded as his supporters in anthracite country had hoped, the tale of a doomed coal ship might have been a distinctly American story and not an English one, and Pennsylvanian coal, not Pennsylvanian petroleum, might have made the United States a world power in energy for the first time.[7]

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[7] Charles Stuart, "A Report of the Engineer in Chief of the Navy, on the Comparative Value of Anthracite and Bituminous Coals," *Journal of the Franklin Institute* 24, 3rd ser., no. 4 (1852): 217–22; James Mason Hoppin, *Life of Andrew Hull Foote, Rear-Admiral United States Navy* (New York, 1874), 366; A. N. Smith to Gideon Welles, Oct. 1, 1863, and "E. & R. No. 8," in *Annual Report of Secretary of Navy*, House Exdoc. 1/15, 38th Cong., 1st sess., Dec. 7, 1863, 761, 769. On coal exports, see Gavin Wright, "Selected mineral fuels—imports and exports: 1867–2001," Table Db190–197 in *Historical Statistics of the United States, Earliest Times to the Present: Millennial Edition*, ed. Susan B. Carter et al. (New York, 2006), http://dx.doi.org/10.1017/ISBN-9780511132971.Db155-272; and "Fuel and Energy 7. Coal Exports," in *British Historical Statistics*, ed. B. R. Mitchell (New York, 1988), 256–67.