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## *William Barton Rogers and the Idea of MIT*

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If there is a weakness to the book, it is the short shrift Reynolds pays to Hawthorne's "official" role in politics, both as a repeated beneficiary of the political spoils system and as the close friend and campaign biographer of Franklin Pierce, the Democratic president whose complacency in confronting the South's growing demands was seen by many as having helped precipitate the war. Reynolds's point is that Hawthorne's views, instead of having been aligned with the more conservative elements of the Democratic Party, were in fact far more nuanced than the standard account portrays. Yet the author's intimate involvement with that party unquestionably influenced the perspectives Reynolds otherwise so wisely and intelligently illuminates.

Randall Fuller, *author of EMERSON'S GHOSTS: LITERATURE, POLITICS, AND THE MAKING OF AMERICANISTS (2007), teaches at Drury University. His book on American literature and the Civil War, THE VOLCANO, is forthcoming from Oxford University Press.*

*William Barton Rogers and the Idea of MIT.* By A. J. Angulo. (Baltimore: Johns Hopkins University Press, 2009. Pp. xviii, 220. \$55.00.)

MIT's founder, William Barton Rogers (1804–82), has long needed a scholarly biography. Now, thanks to A. J. Angulo, we have a very good one.

Rogers came of age in the midst of the early industrial revolution in the United States, a time of transformation that marked the advent of the modern age in American history. He was raised in an academic family, studied the natural sciences (he eventually specialized in geology), and attended William and Mary College. Like his father, Patrick Rogers, he decided to pursue an academic career, first as a schoolteacher in Baltimore (1825–28), then as his father's successor at William and Mary (1828–35), and eventually as a professor at the University of Virginia (1835–53). An important turning point occurred between 1835 and 1842, when Rogers directed the state-sponsored Geological Survey of Virginia.

Although fraught with political infighting, organizational difficulties, physical challenges, and ultimate disappointment, the survey taught Rogers several important lessons. One was the significance of combining theory and practice in the education of young people embarking on careers in the "useful arts" (surveying, engineering, manufacturing, industrial science, etc.). Another was the need to

develop a better understanding of the political process, especially the need to prepare oneself for the hardball tactics that often accompanied political lobbying for state support of scientific projects. As much as any single experience could, the Virginia survey served as an intellectual epiphany for Rogers, one that encouraged him to take up the cause of educational reform, especially reform that aimed at “striking a balance in advancing both practical and theoretical knowledge” (p. 33). Ultimately, Rogers’s reform-oriented vision would result in the establishment of MIT.

Angulo does an excellent job of bringing together the disparate elements of Rogers’s career and showing how they coalesced in MIT’s founding in 1861. A number of interesting points emerge from his narrative, one of which is that the original charter issued by the Commonwealth of Massachusetts to the incorporators of MIT included not only a School of Industrial Science but also a museum and a scholarly “Society of Arts.” Another is the extent to which the Civil War threatened the new institute’s financial stability and how hard Rogers struggled to keep the shaky enterprise afloat during the economic instability that plagued the 1860s and 70s. Angulo’s most important contribution, however, is his emphasis on Rogers’s growing commitment to a “useful arts” approach to higher education, something that would eventually become known as “the New Education” and would serve as a model for the modern American research university. Angulo is also very clear about what distinguished Rogers’s educational vision: the establishment of laboratory teaching and a rigorous method of instruction that emphasized not only demonstration and experimentation but also original research on the part of students. “With the laboratory method squarely at the center of the Institute,” he writes, “MIT . . . attracted attention for its experimental scientific instruction” (p. 147).

Another reason why MIT quickly acquired a reputation as America’s leading “Scientific School” was Rogers’s remarkable ability to attract highly competent faculty members who shared his vision of the New Education. Among them numbered the chemists Francis H. Storer and Charles W. Eliot (the latter soon to become president of Harvard), physicist Edward C. Pickering, architect William R. Ware, and mechanical engineer William Watson. Rogers’s successors as president, John D. Runkle (1868–78) and Francis Amasa Walker (1882–97), built upon the founder’s vision as more and more (mostly white male) students enrolled at MIT during the 1870s and 1880s. By 1894, Walker could proudly proclaim that “the battle of

the New Education is won." While MIT continued to experience financial problems, its reputation as the nation's leading science and engineering school flourished.

Although there is little to fault in this fine biography, some careless errors do creep into the work, such as when Angulo notes that the fall of Fort Sumter marked "the end" rather than the beginning of the Civil War (p. 102). Such slips, however, are few in number. At the same time, readers will surely want to compile "wish lists" of topics they would like to have seen treated in greater detail, such as student life at MIT, of which little is said. After reading Angulo's discussion of William Rogers's positive but extremely cautious position on the admission of women (with reference to the case of Ellen Swallow, MIT's first woman graduate), this reader wanted to know more about how many women actually graduated from MIT in the late nineteenth century, but the author is silent on this matter—as he is on whether African Americans were admitted to the Institute during these years. These omissions result in an incomplete picture of MIT during the Rogers, Runkle, and Walker presidencies.

That said, Angulo adds a great deal to our understanding (and appreciation) of William Rogers and his role in shaping MIT during its foundational years. Rogers emerges as a major figure in the history of American higher education, a reformer who played a key role in breaking the hold of the classical tradition while pointing college educators in a new and innovative "scientific" direction. Angulo's biography clearly stands as the best work in print on the early history of MIT.

Merritt Roe Smith, *the Leverett and William Cutten Professor of the History of Technology and the Director of the Program in Science, Technology, and Society at MIT*, is working on a history of technology and the Civil War.

*Ashes of the Mind: War and Memory in Northern Literature, 1865–1900.* By Martin Griffin. (Amherst: University of Massachusetts Press, 2009. Pp. 265. \$80.00 cloth; \$29.95 paper.)

The Civil War produced an unexpected swap in the influence of regional literary communities. During the antebellum period, there was a distinct "Northern" literature, whose twin centers of gravity, like orbiting stars, were New York and Boston. This Northern school bore correspondence with its phases: romantic, transcendentalist, or New England (or was damned simply as "Yankee" or "abolitionist"), but