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## In This Issue

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## In This Issue

April's articles contribute notably to business and technological history. John Brown's study of capital equipment design practice, Stephen McIntyre's story of overextended standardization at the Ford Motor Company, Bruce Epperson's analysis of success and failure in the Pope Manufacturing Company, and Roger Burt's challenge to conventional wisdom about the creativity balance between the United States and the United Kingdom: these four demonstrate the methodological power of history that takes business and technology practices explicitly into account. Eric Ash's Elizabethan harbor repair at Dover offers a very early account of centralized decision makers fumbling their judgment calls about project leadership.

John Brown ("Design Plans, Working Drawings, National Styles") contributes to the field's growing interest in visual representation and design practice by tracking a striking divergence of engineering styles: production- and profit-driven in the United States, design- and elegance-driven in the United Kingdom. Using a wealth of drawings and archival sources from a century and a half of practice, Brown makes a compelling argument for "the primacy of culture, the vital animating role that context gives to drafting practices, to engineering cultures, and to technological change at large." The scope, clarity, and authority of this study, sure to be included in the short list of engineering historiography, more than warrant its unusual length.

Eric Ash ("A perfect and an absolute work") studies Dover harbor, whose geography made it a vital resource even though it was routinely threatened by North Sea weather. How does government decide whom to trust with an expensive and confusing project? By locating the problem of expertise early in Britain's centralized monarchy, Ash shows that the counterclaims of competing experts now common in courts and hearing rooms predate industrialization. Fiscal authority required that the Privy Council in London choose a project director who could redesign the truculent harbor and stay within budget. Ash finds that expert mediators, with ties to the council and to Dover, performed essential service in sorting out the several project proposals, some foolish, some expensive, one ultimately effective.

Stephen McIntyre ("The Failure of Fordism") finds that the Ford Motor Company tried to replicate assembly-line order in franchised repair shops. Rolling off the line, Fords were as nearly identical as any product in history, but when they rolled back into the repair shop all the vicissitudes of automobility—bad roads, harsh weather, and machine-abusing drivers—transformed each one into an unpredictable challenge. It is not surprising that dealers resisted costly remedies designed at the home office, or that mechanics "kept the stint" to defend themselves. What is surprising (and McIntyre's most important contribution) is the company's failure to recognize the need for a negotiated workplace where skilled workers made on-site decisions. The repair shops revealed rigidities early in the Fordist era that would become the subject of many a critique of standardized mass production in the last decades of the century.

Bruce Epperson ("Failed Colossus") also writes a cautionary tale about innovative rigidity. The Pope Manufacturing Company rode the early waves of rapid bicycle design change by integrating existing armory production technology with materials testing and maintaining aggressive patent and marketing strategies. The venture floundered when bicycles shifted from technological wonderments to standardized products and emphasis on production blurred company focus on its point-of-sale distribution system. In light of corporate rigidities and a collapsing bicycle market, Pope's failed automobile venture appears to be a historiographically subtle mix of flawed strategy and bad luck, a mix that highlights the importance of staying close to market signals during dramatic technological changes.

Roger Burt (“Innovation or Imitation?”) ranges broadly across the historiography of nonferrous metal mining (gold, silver, copper, zinc, lead) to argue that the American industry showed exceptional tardiness in creating or adopting the key macroinnovations of the late nineteenth century. Seven technological breakthroughs would transform nonferrous mining “from traditional ‘selective’ mining—undertaken by skilled and experienced miners working massive, high-quality lodes—to ‘mass-production’ mining—using sophisticated mechanical and scientific equipment to remove and process large volumes of low-grade, complex material.” For readers from the United States, this story of dramatic technological innovations occurring in Britain, Germany, Australia, and New Zealand and only slowly adopted in a lagging U.S. sector provides a healthy dose of global perspective to stories of technological creativity generally.