Conclusion

Competition in the markets for coal heightened considerably in the two decades after World War I as energy supplies increased and demand slackened. British producers, though they had dominated international trade before 1914, found the adjustment to changing circumstances painful indeed. Profits fell sharply in the 1920s and 1930s, much business was lost, and the unemployment of resources was substantial.

The transformation of economic conditions generated few changes in the managements of the Ashington, Throckley, Briggs, and Waterloo Main coal companies. The top personnel at the four firms remained largely the same as before the war, and the few new faces that appeared were drawn from the same sources as their predecessors. Nor were organizational structures modified much—at least not at the highest levels of decision making.

Continuities in corporate culture did not invariably entail conservatism and inflexibility in the conduct of colliery business. Those firms that had established a tradition of innovation before 1921 continued to display flexibility in the choice of techniques and equipment. Ashington, which had pioneered the mechanical cutting of coal before the war, led the way in Northumberland in the introduction of mechanical conveying in the 1920s and 1930s. The company also overhauled its power-generating plant between the wars, installed new appliances for coal handling, and set up a comprehensive welfare program for its employees and their families. In addition, Ashington radically revised its approach to coal sales, rationalizing its product line, extending its coal-preparation facilities, and introducing new customer services. The management at Briggs likewise maintained an activist bent between the wars. The company continued to mechanize its mining operations. It remained a lively participant in the acquisitions-and-mergers market, and it took significant steps to reorient its marketing outlook and modernize its sales practices. The early history
of the Waterloo Main Colliery Company had been distinguished by the determined search for the most productive combination of mining locations and extractive techniques and a relative indifference to immediate profit maximization. A similar readiness to change sites and alter mining practices as geological and commercial conditions warranted was the hallmark of the company's management between the wars.

At Throckley the continuity of personnel and organizational structures did mean conservative management during the 1920s and 1930s. An engineer's report of 1917–18 had identified several deficiencies in the company's operations: out-of-date equipment, the irrational arrangement of the workings underground, and the failure to realize the full commercial value of its coals. Some attempt was made to introduce new appliances during the next two decades; but the works remained inefficient, and the marketing problem became even more acute. Nor did Throckley repair relations with its miners after the events of 1920 had opened a wide gulf between management and men.

The financial successes that Ashington, Briggs, and Waterloo Main achieved suggest that strategies for raising productivity and enhancing sale prices were available to individual colliery companies during the interwar period and that their adoption allowed firms to prosper even as the industry succumbed to cyclical depression and secular decline. By the thorough-going mechanization of production, Ashington and Briggs secured gains in mining efficiency that did much to negate the burden of the industry's wage provisions on unit labor costs. Waterloo Main obtained similar results with manual mining methods by concentrating production on the best of its coal measures. Attention to such mundane matters as equipment repair and office expenses could also generate significant reductions in production costs, and economies in nonlabor production costs made an important contribution to the competitive power of both Ashington and Briggs. The careful preparation of coals prior to sale and adherence to a few simple marketing principles could enable firms to enhance the market value of geologically unexceptional coals and to improve their access to those markets where demand was strongest and prices firmest. That Ashington and Briggs sold their coals at above-average prices was due in large measure to the cleanliness of the coals and to the uniformities of size and chemical properties that the companies' cargoes exhibited. The restriction of their product lines to a limited number of coals of standard characteristics, informative labels, and the provision of chemical analyses with coal shipments also helped those con-
Concerns to carve out favorable niches in the marketplace. Waterloo Main's successful exploitation of the household-coal market likewise must have rested on a sales program carefully tailored to the requirements of domestic consumers.

The innovations in production and commercial practices that allowed Ashington, Briggs, and Waterloo Main to prosper between the wars were second-best strategies, not the best practices recommended by the technical authorities of the day. None of the three firms embraced radically novel mining practices. None undertook the wholesale rearrangement of underground workings, the replacement of old roadway networks, or the introduction of new systems of main roadway transport. Consequently, mining operations at each of the firms exhibited inefficiencies that more far-reaching changes in technique would have eliminated.¹

What distinguished the second-best strategies implemented at Ashington, Briggs, and Waterloo Main was their practicability. The changes in mining and sales that they undertook could be introduced in piecemeal fashion and without the serious disruption of production. Nor did the innovations pose daunting problems of interrelatedness. Incremental changes did produce bottlenecks (as at Ashington), but the gains in efficiency more than offset them. The transformation of established techniques at the three profitable firms occasioned few problems of cost or scale. Efficiency could be raised without the wholesale introduction of new appliances as Waterloo Main showed, but the mechanization of extraction and conveying was not a particularly costly alternative. The price of new equipment was low enough and the terms of its acquisition sufficiently favorable that even a financially hard-pressed firm such as Throckmorton was able to meet the expense. Nor did the profitability of the new techniques inhere in economies of scale. Ashington's output rose dramatically between the wars, but that was largely the result of the opening of a fifth colliery. Each of its prewar mines recorded increases in productivity, even where production expanded only modestly. Briggs and Waterloo Main both improved their operations without significant changes in the tonnages they raised. Since the new practices could be made to pay at prevailing output levels, neither the restructuring of the coal industry as a whole nor a collective scheme to concentrate production was a necessary condition of innovation at the individual firm. Similarly, a concern could contemplate such innovations without the benefit of sheltered markets or a secure share of the trade. Ashington is a case in point.

The firm-specific barriers to the introduction of these second-best
practices were no more constrictive. Briggs and Waterloo Main made innovative changes without altering their management structures. At Ashington, reforms in corporate organization accompanied the reorientation of the firm’s approach to marketing in 1929–30, but decision making at the highest reaches of the firm—and the central position of Ridley Warham in particular—was in no way altered. Finally, the work forces at Ashington, Briggs, and Waterloo Main found no reason to oppose the innovations in mining activities at those firms. Their superior profitability reduced the pressure on management to streamline the labor force, and mechanization saved additional jobs by making it possible to exploit marginal seams. In circumstances of mass unemployment in the industry, the relative security of work and earnings at Ashington, Briggs, and Waterloo Main must have done much to accommodate labor to the changes there.²

The second-best strategies that enabled Ashington, Briggs, and Waterloo Main to prosper while their competitors had difficulties making ends meet were not hidden from the view of neighboring colliery companies. The innovations in production and commercial operations that Ashington and Briggs introduced were widely reported in the trade press; much of our knowledge about them today derives from contemporary descriptions published in the Colliery Guardian. Furthermore, information about their financial affairs must have been relatively accessible. As a public company, Briggs was required to publish an annual financial report. Ashington was not under a similar compulsion, but it did have to make regular statistical submissions to the Northumberland Coal Owners’ Association and to the auditors who did the official accounting required by the industry’s wage-determination machinery. The precise details of Ashington’s finances may have been held in confidence, but it is unlikely that other firms on the Northumberland coalfield were in much doubt as to the company’s performance—especially once the sale of coal became official trade business. Nor would Waterloo Main’s success in the market for household coal in West Yorkshire have been a surprise to its rivals.

Information about the strategies employed by Ashington, Briggs, and Waterloo Main and their results may have been readily available, but the second-best innovations they adopted were not imitated widely. Comparisons of these firms with the district coal industries to which they belonged indicate that rival concerns on the Northumberland and West Yorkshire coalfields were slow to adopt similar techniques for improving efficiency and raising sale values. Neighboring concerns—companies that worked the same seams, mined comparable coals, sold in similar markets,
and drew their labor from a common pool—did not mechanize the extraction and transport of coal to the same extent that Ashington and Briggs did. Nor did they mechanically clean such high proportions of their outputs or supply customers with chemical analyses as a matter of course. As a result they processed less coal per man-hour, were forced to sell at lower prices, and registered inferior financial results.

It is difficult to understand why more firms did not adopt the mining and marketing practices that proved so profitable at Ashington, Briggs, and Waterloo Main. The barriers to their introduction do not appear to have been particularly formidable. The fear of nationalization may have inhibited innovation in the first half of the 1920s; it certainly did so at Briggs. Yet political considerations hardly provide a convincing explanation of an economic phenomenon observable over two decades—especially when organized labor in both its industrial and political manifestations was so weak for much of the time. Geology is another possible explanation, though conditions underground did not impede improvements in mining techniques at Throckley; and we may question whether they did so elsewhere. Natural conditions in Northumberland and West Yorkshire—and in the other coalfields of England and Scotland—were no worse than in Western Europe, and the coal industries there extracted virtually all of their coal by machine. Moreover, it was in difficult conditions—where the return to human effort was most problematic—that the new techniques were most advantageous.

The expense of establishing new mining and commercial operations in theory could also have retarded innovation. In practice, however, the changes that were made at Ashington, Briggs, and Waterloo Main were not so costly—particularly when account is taken of the profits that were made during World War I, the advances available from banks, and the favorable terms offered by suppliers. Nor can the resistance of the labor force be blamed for the slow diffusion of the techniques employed by the three successful companies. At none of the four firms examined in this study did the miners display any inclination to thwart improvements in colliery operations, let alone the strength to enforce such an inclination.

It thus appears that British coalowners and colliery managers were less than enterprising during the 1920s and 1930s. Techniques for reducing costs and raising proceeds were available. Information about them was widely broadcast, and the obstacles to their use were limited. If the colliemasters made only modest use of mechanical devices for cutting and conveying coal, presale treatment facilities, and more rational marketing
programs, it was because they miscalculated the costs and benefits of those innovations. In short, managerial failings exacerbated the problems that the British coal industry experienced in adjusting to the changing economic environment after World War I.

The entrepreneurial deficiencies that plagued the interwar British coal industry cannot be reduced to a single simple shortcoming, be it the incorrect choice of extractive technique or an inappropriate form of corporate organization. While coalowners did not make the most profitable use of innovations in the cutting and hauling of coal, neither did they exploit fully the traditional manual methods. Organizational capability—in siting extractive operations, scheduling material flows, superintending maintenance and repairs, rationalizing marketing practices, and monitoring the performance of all these tasks—was indispensable to financial success in the coal trade between the wars. Organizational capability, however, was more a matter of putting the right people in the right places and inspiring them to competence than it was of industrial restructuring and corporate reorganization. At both Briggs and Waterloo Main, continuities of personnel and managerial structures presented no barriers to better performance. The histories of the three successful firms presented in this study demonstrate that there was no one strategy, and no one form of company organization, that resulted in efficient extraction and profitable selling. Rather, it was necessary for firms to elaborate production and marketing strategies suited to their circumstances and to develop the managerial competence to work them effectively.

The skill with which a colliery company managed its work force bore less heavily on its fortunes, because labor relations were subject to considerable intervention from outside the firm and were therefore less responsive to entrepreneurial initiative. Of course, no concern could afford to be indifferent to its relations with its miners. Throckley's experience shows that clearly. Yet the business of mining coal was not reducible to the cost of the most expensive factor of production. It was far more complex than either the obsession of interwar coalowners or the preoccupation of latter-day historians with industrial relations allowed.

To argue that managerial failings contributed to the difficulties that the British coal industry suffered in meeting the economic changes of the interwar years is to go against the grain of recent writing. Most analysts of the British coal industry have said little that is critical about the men who presided over it between the wars. Neil K. Buxton's numerous writings on the coal industry maintain that interwar colalmasters missed few op-
opportunities to improve the operations of their firms and that the trade’s difficulties stemmed from a wage burden imposed from without and the geology of Britain’s principal coalfields. Barry Supple, in his authoritative account of British coalmining between 1913 and 1946, concedes that coal-owners and colliery managers might have displayed “greater resilience in organization, attitudes, and techniques.” He insists, however, that only wholesale changes in the structure of the industry and the radical renovation of underground operations could have significantly improved the performance of the industry, and that the harsh economic climate between the wars justified the colliermasters’ reluctance to initiate such extreme measures. Ben Fine’s work likewise emphasizes the debilitating consequences of the coal industry’s structure, and he locates the persistence of this organizational deficiency “on the terrain of collective action within the developing economic structures.” If his account of coal’s misfortunes admits of individual culpability, it rests with the owners of landed property who held the rights to Britain’s coal and not with the owners and managers of the companies that mined it.\(^4\)

The disparity between this literature and the findings presented here derives from differences of definition, assumption, and method. Most inquiries into the problems of the British coal industry have defined efficiency exclusively in terms of production. Marketing operations have been all but ignored, as if the efficient combination of the factors of production guarantees that the finished product will sell in quantities and at prices that yield a satisfactory return. That the picture of the interwar coal industry presented here differs from other views is in part the result of the attention paid to the commercial side of the business. Too often students of coal’s decline have concentrated on the productivity of labor and neglected the organizational or nonlabor dimension of industrial activity. The procurement of raw materials and the scheduling of their delivery, the organization of maintenance and repair, the efficiency of the office staff—all these were essential to profitable working and were a potential source of competitive advantage. Economies in these areas, as we have seen, could do much to improve the financial results of interwar coal companies. Yet such considerations are conspicuous by their absence from the literature devoted to coalmining. Finally, the standards of assessment used to evaluate the coal industry’s performance have generally been rather remote ones: abstract notions of best practice derived from the technical literature or the records of mining industries in other countries. In this study it has been the experiences of British firms—from the
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same time and the same places—that have furnished the benchmarks against which the performances of British colliery companies are measured. If my analysis is more critical of entrepreneurship in the interwar coal industry than previous studies, it may be because it is informed by a more concrete sense of what was possible in British coalmining between the wars.

The conclusion that entrepreneurs failed in managing their firms inevitably invites the counterfactual question of how the industry's fate would have differed had its captains performed more competently. It is doubtful, however, that a convincing account of a future that never was can be computed for the British coal industry after the First World War. To begin to calculate the hypothetical consequences of better management would require both an enormous quantity of data about interwar energy markets, much of which is almost certainly unavailable, and a number of heroic assumptions about how the buyers and sellers of fuel and the regulators of energy markets would have acted in the face of a more efficient, more competitive British coal industry. Once the benefits of more skillful superintendence were converted into figures of output foregone or profits lost, it would be necessary to estimate the meaning of these sums in terms of additional earnings in mining communities, a larger volume of colliery consumption of materials, equipment, and services, increased tax revenues, and savings on social welfare expenditures, and the multiplier effects of each of these items. In the event that the final results inspired a modicum of confidence, the next task would be to locate the coal industry in its proper place in the larger economy. Coal was far and away the most important supplier of heat, light, and power in interwar Britain, and the full measure of the effects of better management would have to include its impact on other industries. Since a more efficient coal industry might have induced technical and commercial innovations elsewhere, an accounting based solely on lower fuel costs would not be sufficient. Finally, the entire exercise would have to be set within the proper chronological bounds, for even a small numerical difference would become significant if sustained over a long period of time.

Of greater import than the counterfactual question of how much are the qualitative issues raised by the finding of entrepreneurial failure in the interwar British coal industry. Why didn’t the discipline of the market compel the more rapid diffusion of the best mining and selling practices? Why didn’t the erosion of market share and financial loss force the inefficient from the industry and the concentration of production on firms
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like Ashington and Briggs that innovated rapidly and profitably? Government intervention is obviously part of the story, with part 1 of the Coal Mines Act, 1930 ensuring a share of the trade to the efficient and inefficient alike. State regulation, however, does not furnish a full explanation of the failure of supply and demand to work their magic. The provisions of the Coal Mines Act did not guarantee that the trade secured for each firm would prove profitable, as Throckley's experience indicates. Moreover, the coal industry had been beset by contractionary forces for almost a decade when the government chose to intervene, and the preceding years of depression and decline had not produced a shake-out in the industry. The adjustments of the neo-classical market clearly were a long-term affair for the British coal industry of the 1920s. Until we know why this was so, we shall not have a satisfactory account of the decline of the trade.

The shortcomings of Britain's interwar coalowners and colliery managers also provoke questions about the wider environment those decision-makers inhabited and the values that informed their business judgments. That British businessmen placed a high value on the continuation of personal or familial control over their enterprises and preferred quick financial gains for the purpose of social or political expenditure to long-term business investments are two of the most enduring clichés in the literature of decline. Alfred Chandler's recent demonstration that British firms failed to match their American and German rivals in making the tripartite investment in manufacturing, marketing, and management necessary to build competitive industrial corporations strongly reinforces the conventional wisdom. Chandler, though, did not examine the mental universes of British entrepreneurs directly, drawing inferences from their business decisions instead. Nor did he link the corporate world he studied to the social, political, and cultural milieu of which businessmen were also a part. The present study is no more illuminating about the sociocultural values that animated entrepreneurs in Britain because the source material pertaining to Ashington, Throckley, Briggs, and Waterloo Main left the decision makers and the decision-making processes at those firms almost entirely in the dark. We cannot afford, however, to ignore the assumptions and aspirations that businessmen brought from their homes, schools, churches, and clubs to their offices, and if other corporate archives prove as barren in this regard as the ones on which this book is based, then business historians will have to borrow from the techniques of their colleagues in social and cultural history. Whether it be through prosopog-
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Raphy or the study of collective *mentalite*, we shall have to enter imaginatively into the diverse cultures in which British businessmen lived if we are to understand the decisions they made for their firms.

Finally, the discovery that the coalowners of interwar Britain did not fully exploit the technical, organizational, and commercial opportunities available to them suggests that we should reconsider entrepreneurship in those other staples of the British economy—iron and steel, shipbuilding, textiles, and motor vehicles—that suffered dramatic declines. After all, if labor costs were largely irrelevant to the financial results of companies in the highly labor-intensive coal industry, isn’t it all the more likely that the price of labor was at most a secondary factor in the decline of capital-intensive businesses like shipbuilding and motor vehicles? If organizational efficiency was an important source of competitive strength for concerns whose operations were no more complicated than the cutting, transporting, and cleaning of coal and which required only a few simple material inputs, how much more important must managerial coordination and control have been to enterprises carrying out complicated manufacturing tasks using a large number of diverse parts? And if marketing was of central importance to producers of coal—a relatively homogeneous commodity requiring only a modicum of customer services—ought we not to take a careful look at design, quality control, and salesmanship in industries like textiles and metalworking that produced more complex products?

These larger questions signal the need to reorient our approach to the problem of Britain’s industrial decline. In recent years the cliometric and institutionalist paradigms have dominated the analysis of British economic performance. While those two schools of thought have sharpened the focus of inquiry, together they have narrowed our perspective on decline. The econometricians have reduced the imperatives of the firm to the efficient combination of the factors of production, and they have assumed that innovations that increase efficiency at one firm are quickly transmitted via the marketplace to others. But, as the interwar coal industry demonstrates, products have to be sold as well as made, and the discipline of the market may not operate very powerfully even where competition is fierce.

The institutionalists have located the key to economic success in the economies of scale and scope. But, as Chandler has so powerfully demonstrated, scale and scope are historically specific—that is, they are not potentially available in all industries in all times and places. Growth and
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decline, therefore, cannot be reduced to those firms, industries, and economies that captured the economies of scale and scope and those that did not. Moreover, and this too is clear from Chandler’s work, these economies of scale and scope are at least as much a matter of personality as of organization. While mass production cannot be efficiently integrated with mass distribution in the absence of functional managerial hierarchies, bureaucratic structures don’t build and motivate themselves. It is the work of a Pierre S. du Pont or an Alfred P. Sloan. Far from dispensing with entrepreneurship, the age of corporate capitalism has merely redefined it. Consequently, if Britain’s failure has been the failure to enter into the managerial era quickly and fully, then the performance of the country’s individual entrepreneurs remains open to question.

If we are to make sense of Britain’s relative economic decline since 1870, we will have to bring back into the picture all that the cliometricians and the institutionalists have excluded from view. The businessman who made choices about the marketing of finished goods, the administration of production and sales, the motivation of men and women, and the shape and dynamics of corporate structures—and not just about the techniques of manufacturing—will require our attention. So too will the entrepreneur who made these decisions in industries where capital-intensive techniques for mass production and mass distribution were not available and the arsenal of competitive advantages did not include economies of scale and scope. We will also need to consider those markets that didn’t automatically compel the rapid diffusion of more efficient techniques and practices and the agencies and structures that mitigated the transformative power of competition. The external influences that shaped the behavior of Britain’s entrepreneurs likewise must be subjected to systematic examination. And all of this work will have to be carried out with the most rigorous concern for time and place. The best entrepreneurs are no better than the opportunities available to them, and it is only by grasping the full range of accomplishments in an industry at a particular point in history that the historian can begin to define the actual opportunities of the moment.

The decline of the British economy will not yield its secrets to anything less than the comparative history of British businesses and businessmen. This is undoubtedly a most formidable task, but then the “British disease” has proven both chronic and contagious.