British Investment in the American Mining Frontier

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The Problem

British involvement in the American mining frontier presents us with an interesting conundrum. On the one hand, British miners, managers, and engineers played a major role in bringing locally-owned and promoted ventures into short-term profit and successful long-term development. On the other hand, direct investments in the same mining districts undertaken by British owned companies met with near universal failure and bankruptcy. Our question, therefore, is why was British labor so effective but British enterprise so inept? The answer that will be proposed is that while British labor, management, and expertise was steeped in experience gathered from generations working in the world's leading mining industry, the promoters and investors in overseas mining had little personal familiarity with the domestic industry and no real practical knowledge on which to base informed judgements about the value of the property they were acquiring.

The Success of Labor and Failure of Capital

First, let us look at the evidence for our opening proposition. The emigration of British, particularly Cornish, labor to America has been documented in great detail by John Rowe, A.L. Rowse, A.C. Todd, and many others [Rowe, 1974; Rouse, 1967; Todd, 1967]. They all point to a wealth of contemporary literature referring to the Cornish as the labor aristocracy of the new mining districts and all conclude, rather like Rowse, that, "from the beginning the mines depended on Cornishmen for their mine captains, bosses, shift-managers, foremen, as well as in earlier days for the miners" [Rowse, 1967, p. 171]. Lest we suspect the partisan conclusions of these Cornish authors, we might also note the starting observation in Ronald James' more recent study that, "Popular opinion in the Western United States during the nineteenth century held that immigrants from Cornwall were the most qualified of all miners" [James, 1994, p. 32], and Harvey and Press's plaudit that Cornishmen were, "widely regarded as the best hard rock miners in the world" [Harvey and Press, 1989, p. 70]. Nowhere was their contribution more obvious and their domination of the managerial structure more pronounced, than in the

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deep copper mines of Michigan's Keweenaw peninsula. In his study of the labor system in those mines, Lankton shows how in the nineteenth century it became common to have three Cornishmen filling the top posts of agent, head mine captain, and surface captain. He concludes that, "The Cornish became the immigrant elite, seldom relegated to unskilled work, but often tapped as skilled labourers, bosses, captains, or agents" [Lankton, 1991, p. 61]. We might also note that Lankton's work reinforces Rowse's conclusion that the Cornish did not make the fortunes from the mines that they worked. They were employees and seldom owners. The mining fortunes were made mainly by New England promoters and investors, particularly those based in Boston [Rowse, 1967, p. 169].

In contrast to the record of middle management and labor working for American-owned companies, the performance of the promoters, directors, and investors in British-based ventures was abysmal. In 1881, D.C. Davies, one of the most respected of British mining commentators, noticed that, "the most unsuccessful mines in northwestern America are those worked by English companies and under English management. It is said that of American mines introduced into this country within the last seven years, all but one or two have been failures, and have entailed a loss of money amounting to £10,000,000." Too often such enterprises, "were under the direction of incompetent men, whose chief qualification for the post of general manager or managing director seems to have been that they had failed in everything else." Overall, he concluded, "the English management of mines in Western North America has been far inferior to that of Americans of their own mines" [Davies, 1881, pp. 397, 401]. These conclusions have been reinforced by more modern study. Clark Spence estimated, for example, that there were at least 518 joint-stock companies registered in Britain between 1860 and 1901 to engage in metal mining in the western United States, with a total nominal capital of £77.7 million. Of these only 57 – or one in nine – ever paid *any* dividends, aggregating to just £11.75 million by 1915. Many of these dividends were only token payments, however, and the number of ventures making significant profits is smaller again. Indeed, not more than ten companies – or one in fifty – returned shareholders dividends that were at least equal to their investment [Spence, 1958, pp. 216-7, 230].

Common Explanations of Failed Enterprise

The poor performance of British-registered mining companies is usually explained in terms of a combination of negative factors. Davies, for example, was struck by "the difficulties that lie in the way of successful mining at a great distance from the seat of its direction" – viz. the distances and time required for travel and communications; the cost of carriage of materials; the tendency of agents and labor to be careless, neglectful, and idle [Davies, 1881, p. 401]. He also thought that many modest ventures, which might have proved perfectly profitable if conducted in a limited way, were often over capitalized and over managed. "These mines, and their are a number of them, would pay a moderate profit to a limited local partnership, but the very little profit is more than swamped by the remuneration and travelling expenses of directors, secretary, engineers, and the like" [Davies, 1881, p. 399]. Such expensively managed mines also tended to tolerate working costs that were higher than those accepted by a venture under careful personal management. Finally, he also drew attention to the effect of the peculiarities of western mining laws on the security of mine claims and the frequency and high costs of litigation to secure and protect investments [Davies, 1881, p. 400]. Spence reiterated many of these problems – particularly those caused by distance and the complexities of western mining law [Spence, 1958, pp. 231, 236; Lord, 1883, ch. 7 and 8] – but he also noticed a number of other difficulties. They were Civil War, Indian unrest, and poor transport during the preliminary stages of investment in the 1860s and early 1870s; the fraudulent sale of "salted" or worthless property to British companies unable to assess their true worth; and, perhaps most notably, the deliberate "bulling" of the market for the companies' shares by paying dividends out of scarce capital or exploiting only the richest deposits to maximise immediate income [Spence, 1958, pp. 229-31]. It is a well established principle of good mining practice that the essential requirement for the successful long-term exploitation of mineral property is a proper plan of development which balances the exploitation of rich and marginal ores. Any short-term policy that promotes "picking out the eyes of the mines" is a sure recipe for medium term financial failure [Hunt, 1887, p. 606].

Practical Experience of Mine Promoters

These issues might provide some explanation of why mining profits did not achieve their full potential, but they are hardly sufficient to explain the wholesale failure of hundreds of British mining companies. Properly qualified, informed, and experienced mining promoters could have been expected to have identified such pitfalls and taken them into account in their planning. They should have learned how to avoid or overcome them. But perhaps herein lies the real nub of the problems. The men who promoted and directed the great majority of these enterprises were not well qualified, informed, and experienced. They were frequently chosen for their names and social position rather than their abilities and, unlike the miners and middle managers who emigrated so successfully, *they* had commonly gained no first-hand knowledge or experience from their own domestic metal mining industry. They were truly innocents abroad – except in such cases where their promotions were deliberate frauds to fleece an unwary public.

To test this proposition, an analysis has been conducted of the inter-relationships between the directors and senior managers of domestic metal mining companies and those formed for mining in the United States. Throughout the nineteenth century, it was common for every mine, both at home and abroad, to have its own free-standing company [Wilkins, 1988]. The working of a particular mine over a period of time might pass through the hands of several companies as the properties were sold or consolidated or as the companies were reformed to raise more capital. Most of these companies were promoted on the London market and their prospectuses were advertised in the pages of the *Mining Journal*, the leading investors' broadsheet, published weekly from 1835. These prospectuses have provided the principal source for this study, which spans the period from the first editions of the *M.J.* until 1896, which approximates the end of the main period of heavy investment in the North American mining frontier. The published prospectuses give details of the directors, secretaries, managers, consulting engineers, and brokers of more than 1600 domestic metal mining companies and over 230 companies for mining in America. This amounts to a very large sample of the total operation at home and in the United States during the period. At home, most of the companies were to work copper, tin, and lead mines in the South West and Wales, of which there were around 3,000 operational during the period [Burt, Waite, and Burnley, 1984, 1986, 1987, 1990, 1992]. Many of the mines were worked by several companies during their life-time, so the sample size of the total number of companies operating is considerably less, but might be estimated at around 20 percent. The American companies were mainly for mining gold in the western territories/states of Arizona, California, Colorado, Idaho, Michigan, Montana, Nevada, and Utah. As we have seen, Spence estimated the total number of companies promoted in Britain at around 518, so the sample approximates to over 40 percent of the total.

Looking in detail at the background of experience and "networking" of more than 2,000 officers of British North American mining companies broadly confirms the proposition that the majority were not well equipped to make sound judgements about the value of properties that they purchased or the best arrangements for their profitable exploitation. Of the 1,368 senior officers of the companies – i.e. directors, managers, secretaries, agents, and consulting engineers – less than 200, or around 14 percent, had held equivalent positions in domestic mining companies. Of these, around half held a managerial position in only one domestic mine and less than 30 held positions in five or more ventures. There is, however, relatively little evidence to support the charge that many or most directors were chosen for their "name" or social position. Among the senior officers of the companies there were no more than a few senior military men, a sprinkling of MPs, and less than two dozen knights and aristocrats – the latter often involved in domestic ventures working their own property. Similarly, the low level of interlocking directorships suggests that deliberately fraudulent promotions – serial enterprises "got up" by unscrupulous men – were also relatively few. The frequent charge of fraud was probably often a misnomer for honest incompetence.

More often than not, the domestic ventures in which North American mining promoters and managers were involved were small in scale, limited in output, and negative in profitability [Burt, Waite, and Burnley, 1984, 1986, 1987, 1990, 1992; *M.J.* sharelists]. They seem frequently to have been chosen because of "market fashion" rather than sound judgement of their mining potential. Thus well-advertised bonanzas in America and Australia created periodic frenzies for anything "gold" or "western" and poor prospects in Wales and Ireland became unduly unpopular. Instead of sound domestic experience acting as a positive guide to overseas practice, foreign "mining manias" corrupted any sensible learning process. A ready explanation for this naive behavior can be found in the promoters place of residence. Nearly all of the directors of overseas mining companies lived in or around London and very few had direct knowledge of the mining districts and mining industry. Less than a dozen of the 2,000 or more officials of the companies for mining in America gave their address as within the South Western or Welsh mining districts, for example, where the great majority of their domestic operations were located. Certainly some of the others had lived and worked in the major domestic mining districts and had aquired valuable first hand experience but, as has been argued elsewhere, ownership of most of the really productive and profitable mines in those regions was retained by locals. They offered only the more speculative enterprises to outsiders [Burt, forthcoming]. If North American mining promoters had any prior domestic experience of the industry, therefore, it was usually based on a very skewed, speculative, and unsuccessful sample of the industry.

This was not always the case, however, and the exceptions help to prove the rule. There were a few investors in American ventures who also had interests in, and experience from, some of the most successful of mining ventures in England and Wales. Not surprisingly, they often showed perceptive judgement in the choice of their investments. Thus James T. Brown and James Knill, directors of Duchy and Peru, and Edmund Harvey and James V. Smedley, directors of Tresavean, two of Cornwall's most productive mines, joined forces to bring Alturas Gold of Idaho to profitability. Similarly, Benjamin Broughton and George Hopkins, directors of the Weardale Lead Company, one of the largest and most profitable companies operating in the north Pennine orefield, both held similar positions in Richmond Consolidated Mining Company of Nevada. This was to become the most profitable of all the British mining ventures in the western United States [Spence, 1958, pp. 264-6]. However, domestic success did not always guarantee profitable speculation abroad. Julius Alington and Charles Clark, both directors of the immensely successful Van Mining Company in central Wales, speculated unwisely when they became involved in the Eureka Mining Company and Nevada Consols, while Henry Schneider, founder of one of the largest iron mining operations in Britain, came unstuck when he became a director of the Feather River Land and Gold Mining Company in California. Even the highly successful multinational John Taylor and Sons partnership could achieve only moderate success in the Mineral Hill Silver Mines Company of Nevada and failed completely with the Sumner Gold and Mountain Ledge Gold Mining Companies of California [Spence, 1958, p. 265]. Clearly, profitable investment in America could be guided by experience and success at home, but the latter certainly did not guarantee a flow of dividends.

Although the senior personnel of overseas mining companies usually had few interlocking directorships, the bankers, solicitors, auditors, and brokers who provided them with professional services often enjoyed a long acquaintance with mining and a wide range of connections. In the data being used for this analysis, for example, the National Provincial, London and Country, and Alliance Banks provided services to over 50 different domestic mining companies and over a dozen North American mining ventures. Together with seven or eight other large enterprises, they appear to have established a considerable hegemony over domestic and overseas mining ventures during the second half of the nineteenth century. The range of operations of solicitors and auditors was more limited, but at least 30 partnerships of solicitors represented a number of domestic, North American, and other overseas mining enterprises during the period, and accountancy firms like Deloitte, Dever and Co., and Price, Waterhouse and Co. were well entrenched in all sectors of the industry by the 1880s. Brokers sometimes specialised in particular sectors of mining activity – home or overseas – but again over 20 individuals and partnerships offered services to both domestic and North American enterprises. All of these professional specialists were clearly in a position to offer valuable advice to companies on the selection and acquisition of mineral property and on the conduct of their business, but how far this was accepted and acted upon awaits detailed research on company records.

Other Sources of Evidence

So far, the analysis of connections between domestic and American mining has been based on a large but somewhat skewed sample of company promotions. The prospectuses appearing in the *M.J.* represent a significant share of total activity in the industry over a long period of time but probably over-represent small-scale, speculative enterprises registered in London, compared with the often more soundly based ventures promoted in the mining districts themselves [Burt, 1997]. For a better view of this other sector of the industry, reference can be made to Stock Exchange directories, such as those published by Thomas Skinner. Unfortunately, his *Stock Exchange Year Book* and its companion *Directory of Directors* start at a much later date than the *Mining Journal* prospectuses and, because they include only those companies admitted to the Exchange, give details of a smaller number of enterprises. They do, however, provide a useful view of the industry and a basis for cross-checking the conclusions drawn from the *M. J.* data.

Two sample years have been chosen for the analysis of Skinner's data – 1880, the earliest date for which both *Year Book* and *Directory* could be obtained, and 1896, the last date for the available *Mining Journal* data. In 1880, the *Year Book* gave details of 16 companies registered in Britain for mining in the United States and provided information on 65 directors of 14 of them. Seven of the directors were involved in more than one of these companies, so there are 57 separate individuals to be considered. The *Directory of Directors* for that year shows that 28 of these, or almost half, held one or more other directorships and 16 held two or more other positions. In all, they were connected with over 50 other companies. However, only five of these were domestic mining companies – they operated the Leadhills mines in Scotland, Mellanear in Cornwall, Pateley Bridge and West Pateley Bridge in Yorkshire, and Roman

Gravels in Shropshire. They were mainly moderate sized, relatively shallow lead mines providing no particularly challenging mining conditions [Skinner, 1880]. By this date, of course, it is possible that the promoters of overseas mining companies could have acquired experience and "learnt their trade" by involvement in other overseas mining enterprises and need not have bothered themselves with the domestic industry. But only nine of the companies in which they held other interests were involved in mining, most of them gold ventures in South America and Africa. In the great majority of cases, the "other" interests of the promoters of American mining companies were home and foreign railways, land and public utilities, insurance companies – virtually everything but extractive industries. As the analysis of the *M.J.*'s prospectuses showed, there were just a handful of skilled and experienced men such as John and Richard Taylor, William Baxter, James Wild, and Robert Wilson (several of whom have already been identified in the *M.J.* prospectuses) who went against the norm and tried to identify sound and profitable mining prospects both at home and abroad.

The overall situation appears to have changed little during the next sixteen years, notwithstanding a major increase in the number of companies for American mining quoted on the Exchange. In 1896 Skinner's *Year Book* included 59 such companies, nearly all for gold and silver, and gave details of 215 directors. A number of these were American residents – such as R.K. Colcard, the Governor of Nevada and a director of Durand Gold Mines – and were unlikely to have other major interests in the London market, but nearly two thirds of the total were listed in the *Directory of Directors* as holding one or more other directorships. Many held five or more appointments and together they held interests in several hundred other enterprises. Of these, the great majority were precious metal mining ventures scattered over five continents, supported by large numbers of other overseas railway, harbour, land development, public utility companies. However, while interlocking directorships in overseas enterprises had proliferated, interconnections with domestic activity remained at a relatively low level. Less than a quarter of the 215 listed directors held positions in domestic enterprises and of these, insurance, banks, railways, tram companies, and miscellaneous manufacturing and trading enterprises predominated. Just four out of the total held directorships in domestic non-ferrous metal mining companies. The already limited connections between the domestic and overseas mining sectors of the early 1880s had now almost ceased to exist. As the ailing domestic industry went into rapid decline, its experienced promoters and managerial talent switched their attention not to overseas mining, but to other forms of domestic industrial and commercial enterprise.

So far in this analysis, attention has been concentrated on an examination of the other interests – particularly domestic interests – of the senior officers of companies formed to undertake metalliferous mining operations in America. It is also possible, of course, to start at the other end, and look at the officers of domestic mining ventures and examine the degree to which they established interlocking directorships with other companies for home and overseas mining. Taking together all of the directors of domestic mining companies reported in the *Year Books* for 1891, 1893, 1894, 1896 and 1898, about 130 were noticed in the *Directory of Directors* for those years. Of these, only 23 held one or more other directorships in domestic mining ventures, and only 33 held positions in "other" domestic enterprises – the two groups being largely the same. A roughly similar number – 29 – held directorships in overseas enterprises but they had more extended networks. Together they held 90 different directorships with a 3:1 predominance of gold and silver mines, mainly located in America, Africa, and Australia. The overall conclusion, therefore, is similar to that already reached above. The great majority of the directors of domestic mining companies concentrated their attention on just one or two domestic enterprises and rarely interested themselves in overseas mining affairs. It was only a very small minority that built up extended operations embracing both home and overseas mining enterprises.

The Range of Shareholders' Interests

The analysis of the inter-relationship between home and North American mining has been conducted so far mainly in terms of interlocking directorships and the range of interests of senior paid officials, such as company secretaries and agents. It is, of course, possible that they could have been influenced in the formulation of policy by major shareholders who had themselves gained wider-ranging experience. Some evidence of the structure of portfolio investments in mining companies can be derived from the sharelists held in company files collected by the Registrar of Companies [PRO, BT31]. No detailed and systematic analysis of this extensive source has been conducted but examination of the sharelists of a small random selection of domestic and American mining companies suggests that shareholders generally displayed no greater diversity in the distribution of their investments than the directors. In the mid-1890s, for example, the shareholders in two of Cornwall's deepest, most modern and productive tin mines, Dolcoath, and Carn Brea and Tincroft, were still drawn very predominantly from the immediate locality. Notwithstanding rapidly falling metal prices, rising costs, and a pressing need to raise more capital from a wider market, less than ten percent of Carn Brea and Tincroft's shareholders were resident outside of Devon and Cornwall in 1896 and a quarter of all of the shares in Dolcoath were owned by just six Cornish mining, engineering, and banking families, who appear to have had very few interests in overseas mines at that time [PRO, BT31/6229/44154; BT31/6845/48158]. By contrast, the shareholders in the Emma Silver Mining Company, first formed in 1871 to work property in Utah [Spence, 1958, ch. 8], were drawn from almost everywhere but the major domestic mining districts. Of nearly 2,000 investors taking up 50,000 shares in that company, only 14 investors and 116 shares were held in Cornwall and Devon and most of those away from the main mining districts [PRO, BT31/1658/5809]. Similarly, the Eberhardt and Aurora Mining Company, formed in 1870 to work mines in Nevada and one of the few profitable British mining enterprises in the United

States, drew very little of its capital from the domestic mining areas. Out of 1,132 shareholders taking up 27,528 £10 shares in a re-formation of the company in 1879, just eight were resident in Devon and Cornwall with 244 shares between them [PRO, BT31/1518/4757]. Even the Grass Valley Consolidated Mining Company, formed in 1868 to mine for gold in one of the favorite Californian emigration destinations for Cornish miners, failed to attract any attention from Cornish investors. All but one of its shareholders were resident in London and the odd man out came from Hertfordshire [PRO, BT31/1409/4042]. It might also be noticed that while a few of the directors of the companies for mining in the United States were U.S. residents, virtually none of the shareholders in these companies were resident outside of Europe. Yet again the evidence tends to suggest a strongly bifurcated capital market, with most investors in productive domestic mines showing little interest in overseas mining before the end of the century. Equally, the overseas sector, including companies promoted for mining in America, seems to have been promoted and financed largely by people with little or no interest or experience in the domestic industry.

Conclusion

There is no doubt that during the second half of the nineteenth century Britain produced some of the most successful promoters of international mining companies, who made large profits for domestic investors from ventures prosecuted with great expertise in all parts of the world [Wheatcroft, 1985; Harvey, 1981; Eakin, 1989; Randall, 1972; Nash, 1983]. It is equally clear, however, that they were a very small minority of the total. The great majority of British overseas mining promoters and promotions were poorly informed, undercapitalized, and badly managed. Most of their ventures never progressed as far as the production phase and very few indeed ever produced a respectable return on capital. The picture mapped out by Spence for British enterprise in the United States is mirrored by that found by Harvey and Taylor for British enterprise in Spanish mining during the same period. They found that of 174 companies formed for mining in Spain, over half never reached the production stage and three quarters had only a very short and unprofitable life. In terms of profits, they concluded that, "the top three iron, lead and copper-pyrite firms accounted for 71 per cent, 83 per cent, and 98 per cent of respective industry returns" [Harvey and Taylor, 1987, pp. 191-2]. Given the considerable difference between Spain and the United States in terms of the level of domestic mining enterprise – it was very low in Spain but high in the U.S. – the similarity of the British companies' experience in both countries suggests that British failure in the U.S. cannot be simply explained in terms of "crowding out" by better informed locals. The explanations must go deeper and reflect an essentially British problem, probably located in the London market, where the great majority of overseas enterprises were promoted. It could, of course, be argued that many were inevitably doomed to failure because of the inherently high-risk nature of an industry in which it is almost impossible to predict profit levels before major expenditures on prospecting and development. Even the most expert can make mistakes – not only the likes of the Taylors in the nineteenth century but also the large number of major mining companies caught out in the recent Bre-X Indonesian gold mining scandal [*Financial Times*; *International Herald Tribune*]. Nevertheless, there is no doubt that experience can count in making the fine judgements necessary in this industry and the evidence suggests that the majority of the promoters, directors, and senior officials of these companies did not have it. Very few had been involved in other domestic or overseas mining enterprises and even fewer had acquired the first-hand knowledge of the special geological, metallurgical and engineering issues that were fundamental to successful mining operations. Those skilled and experienced in the finance of domestic mining – predominantly copper, tin, lead, and iron – appear to have confined their attentions principally to their known local prospects and shown little interest in unknown, high risk enterprises in the largely alien technologies and markets of gold and silver mining, which dominated the U.S. industry. When their domestic mines died in the face of rising foreign competition, they cautiously switched to other regional industries, public utilities, and transport facilities rather than enter the high risk world of overseas mining. The miners, engineers, and under-managers who had worked for them emigrated in tens of thousands and helped to develop successful mining operations across the world. But the promotion and finance of British companies working in these distant regions, including the western United States, was principally left to metropolitan speculators who looked more to profits from minor share price movements than operational dividends, and who regularly proved that gullibility and greed are two sides of the same coin.

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