Horticultural Society, as well as bathing and gymnastic clubs. An enthusiastic advocate of the health-giving properties of golf, good wine and good fellowship, he also boasted of his long membership of Beggar's Benison readers not familiar with this remarkable association are referred to David Stevenson's revealing study, The Beggar's Benison: Sex Clubs of Enlightenment Scotland (East Lothian: Tuckwell, 2001). Duncan fancied himself as a poet and a wit. To mark the visit of George IV to Edinburgh in 1822, he composed a cleverly sanitised version of the Beggar's Benison bawdy motto: 'Long may you live in harmony and ease / And never want, or purse, or power to please.' A most appropriate toast to a spendthrift and licentious monarch.

All of these various activities, and many more, are ably documented in Chalmers' book. Incidentally, although Chalmers is modestly described as the book's editor, of fifteen chapters, he is sole author of eleven and the joint author of two. Notable among the other contributions are Martin Kaufman's essay on the work of the Public Dispensary, and James Gray's chapter on Duncan's medical societies. But Chalmers is to be congratulated on clearly having been as much the driving force behind the production of this volume as Duncan was in any of the initiatives he was involved in. The result has been a readable and informative volume, which sorts out many of the details of Duncan's biography (warts and all, Duncan was vain and could be grasping and disputatious). It will be an indispensable aid to further research, not only on Andrew Duncan Senior, but also on his equally significant and almost equally industrious son, Andrew Duncan Junior.

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**Catherine Mills**, *Regulation Health and Safety in the British Mining Industries*, *1800–1914* (Farnham: Ashgate, 2010), pp. xxv + 284, £60.00, hardback, ISBN: 978-0-7546-6087-3.

Scholars seeking a pathway through the complexities of safety legislation in the British mining industries in the nineteenth and early twentieth centuries have long been in debt to extraordinarily conscientious contemporary and near-contemporary chroniclers of that labyrinthine body of law, no less tortuously convoluted than that governing the railways. There has long been a need for a modern synthesis and interpretation and those have now been provided by Catherine Mills in a study that casts its net wide. Mills engages with the much-overlooked growth of government debate, inspectorates, the actions and inaction of the Home Office, the demographic specifics of occupational health and, by implication, the deep origins of a midand later twentieth-century risk society.

She deftly simplifies the impenetrably complex or, where she needs to, creatively complicates a bewilderingly complex cache of parliamentary and administrative evidence. Mills locates her study in a now thriving interdisciplinary literature which has its deep origins in Oliver MacDonagh's work on the growth of government and the early Victorian state, but which has been extended and deepened by political and socio-medical scholars concerned with the history of occupational health and the roles played by the philanthropists, parliamentarians, civil servants and civil scientists, employees and trade unions in the quest for reform. However, this is a clear-eyed, determinedly non-Whiggish, and at times downbeat account.

The author touches on the ways in which nineteenth-century print media sensationalised major mining disasters in an effort to hasten reform. Some of these catastrophes are much less well known than others. Thus, in Northumberland and Durham between 1805 and 1819, no fewer than seven major flooding episodes led to the deaths of approximately two hundred and sixty colliers (p. xv). Only one of these accidents killed fewer than thirty men.

Mills also gives due attention to collapsing roofs and faulty ladders, and shows how explosions attributable to coal dust and methane contributed to the dismal register of death. But the most compelling part of her argument revolves around 'invisible' occupational mortality, most of it attributable to long undifferentiated variants of lung disease. In the earlier nineteenth century, afflicted colliers and workers in the metalliferous sector had a life expectancy at birth comparable to slum-dwellers in Liverpool and Manchester. Half-a-century later, J.S. Haldane concluded that conditions in the Cornish mining industry had deteriorated rather than improved: approximately eight years' exposure as a machinist in a still, in many respects, pre-industrial working environment would be likely to lead to a premature and horrifically painful death from lung disease (p. 205).

Over time, and intensively so between the 1840s and the early 1870s, the public visibility of large-scale disaster and the 'immorality' of near-naked workers labouring deep in the bowels of the earth, increased public and parliamentary concern. Owners, radicals believed, must be held either compulsorily, or - classic Victorian legislative evasion -'permissively', to account. In telling pages, Mills describes how helter-skelter mid-century developments - between 1852 and 1854 no fewer than four select committees pondered the operation of the seminal governmentbacked inspectorial act of 1850 - began to turn the tide in favour of more effective regulation (pp. 99–126). But the metalliferous sector, which employed approximately fifty thousand workers as compared to nearly a quarter-of-amillion labourers in coal mines, lagged badly behind. Small-scale non-ferrous enterprises remained geographically isolated and failed to expand their scale of production. During the final thirty years of the nineteenth century, the sector stagnated in the face of foreign competition, and clung to anciently embedded payment systems based on sub-contracting. A form of pre-industrial individualism and

localism proved inimical to the introduction of tougher regulation.

In one sense, Mills's monograph comprises two studies in one (note the plural in the title). Coal mining in Yorkshire and tin mining in Cornwall had about as much in common as chalk and cheese. Nevertheless, the two were repeatedly yoked together in later nineteenthcentury administrative discourse and parliamentary debate, and numerous select committees, many of them packed with owners and share-holders deeply opposed to any erosion of permissiveness, sought to extend regulations from one sector to another.

Mills's principal achievement is to have worked her way through a maze of technical, legal, legislative and administrative source material and bring order to chaos. Eschewing explanatory short-cuts, she has made sense of a forbiddingly complicated topic. Discussion of the now half-forgotten growth of government debate, and the role that MacDonagh ascribed – or failed to ascribe – to agency in his original schema becomes repetitious. Nevertheless, this is an impressive synthesis and it is likely to remain essential reading for specialists in the field for a long time to come.

One final point: either there has been a printing error or the author deliberately opted to omit any kind of acknowledgement to fellow historians and scholarly labourers at the coalface.

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Sue Hawkins, Nursing and Women's Labour in the Nineteenth Century: The Quest for Independence (London: Routledge, 2010), pp. xii + 228, £75.00, hardback, ISBN: 978-0-415-55169-4.

Nursing has attracted surprisingly few academic studies. In this pioneering empirical analysis rooted in nineteenth-century women's employment, Sue Hawkins breaks new ground with her prosopographical approach.