

REVIEWS

O. M. Westall (Editor), *Windermere in the Nineteenth Century*, Centre for North-West Regional Studies Occasional Paper No. 1, University of Lancaster 1976. 59 pp. 5 plates. £1.50.

E. A. M. Roberts, *Working Class Barrow and Lancaster 1890 to 1930*, Centre for North-West Regional Studies Occasional Paper No. 1. University of Lancaster 1976. 91 pp. 8 plates. £1.00.

It is to be hoped that these modestly-priced booklets are the first of a long and successful series from the new centre, directed by Dr John Marshall at Lancaster. They are boldly designed, and whilst the piecemeal typing of the text is not always perfect, the photographs, especially the covers are delightful.

The first comprises three essays. An impressionistic, interesting, though rather inconclusive essay by John Marshall on the impact of genteel society on the Lakeland yeomanry and peasantry before the 1840s is followed by an examination of the development of the tourist trade from the coming of the railway in 1847 to 1912. Here John Walton shows how little is new in the battle between conservationists and developers ('despoilers and defenders' in John Marshall's phrase) over areas of scenic beauty. The growing, largely middle-class, tourist trade is set against divided local responses to railways, steamers and other schemes to cater for 'excursionists'. Readers familiar with the Lakes will judge for themselves which of these early protagonists (including of course Wordsworth himself) has been vindicated. The highlight of this essay must surely be the catching of a local magistrate placing explosives under an intrusive advertising hoarding for Beecham's pills. In the third piece Oliver Westall discusses the attractions of Windermere, particularly by the Edwardian period when it could be reached from Liverpool and Manchester in two hours, for wealthy Lancashire and Yorkshire industrialists. The flight from the towns where these 'offcomers' made their money to such Arcadian retreats as Windermere, especially after 1880 with the spread of public companies, poses interesting questions for students of industrial towns, though its universality needs further investigation. There is more in this collection than the title promises: local studies with a wider frame of reference. One small point: a map would have helped in John Walton's paper.

It is not too difficult to quantify the income and expenditure of the average urban working-class family in the early part of this century. It is far harder to investigate the spending of individual families or groups

with different social, political or religious mores. The second approach is necessary to put a human face to the statistical generalisation, and for this historians have turned in the last decade or so to the tape recorder and oral evidence. But the object is still to make general statements about societies and herein lies the dilemma of gathering unbiased evidence. Miss Roberts has done her best: the method is explained (a little patronisingly I thought) and the transcripts are available for consultation. But as she says, her data are 'not a large enough number to be a statistically valid sample', and one is left slightly uncertain of the significance of the unstartling conclusions drawn from these sixty respondents (thirty-two in Lancaster, twenty-eight in Barrow). The three or four pages on each topic (food, housing, clothing, religion, etc.) are followed by extracts from the taped interviews, all headed with what are presumably simply index numbers to the transcripts. The General Editor tells us that the Occasional Paper series is aimed at 'a wider audience': in achieving this laudable aim researchers in universities should avoid the temptation to 'write down'.

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Robert H. Kargon, *Science in Victorian Manchester, Enterprise and Expertise*, Manchester University Press and The Johns Hopkins University Press, Baltimore, 1977.

This well researched study provides a splendid resource for historians of science and technology; it should also be of considerable value to economic and social historians and to historians of education. Local social history of science has attracted considerable interest over the last ten years; research on eighteenth-century Edinburgh is perhaps best developed, but fine studies are also available on the contexts of institutions elsewhere, notably the Royal Institution in London and the Manchester Literary and Philosophical Society. Kargon's present book is the first more or less comprehensive survey of the scientists and scientific institutions in a nineteenth-century city. Had he done no more than collect and present the information on Victorian Manchester already available in secondary sources he would have performed a useful service, but he has gone much further. He has searched the relevant manuscript collections to great effect and complemented this fine-combing with extensive reading in the historical and sociological literature. His bibliographical note is thus an excellent guide to both the depths and the breadth of his topic. There is much in this book which will be new even to scholars who have studied this field; for more general historians it should open up several important areas hitherto inaccessible.

The book begins with a survey of the scientific institutions in Manchester in 1840, giving brief histories of the Literary and Philosophical Society, the Natural History Society, Royal Manchester Institution, the Mechanics' Institution and the Geological Society. An account of the foundation of the Royal Victoria Gallery (1840) and the career in Manchester of the lecturer and inventor William Sturgeon provides a link to the group of young 'devotees' who collected around Sturgeon: James Joule, Edward Binney and John Leigh. The careers of these men are described in some detail along with those of William Fairbairn the

engineer, his associate Eaton Hodgkinson; and Joseph Baxendell, astronomer and meteorologist. These were the men who came to dominate the Lit. and Phil. in the 1840s as the last of the old guard, John Dalton and Dr Edward Holme, passed from the scene. Most of them were locals and none were university graduates; for the most part they depended on their work in or their profits from business.

This group are contrasted with the new professionals, mostly chemists trained in German or French universities, including Lyon Playfair, Robert Angus Smith, Edward Schunck and Frederick Grace-Calvert. They worked as analysts for the developing chemical industry, they gave lectures, and they added their considerable weight to the Lit. and Phil., which became a purely scientific society. When the botanical literateur Leo Grindon tried unsuccessfully to reverse this trend he provoked an acrimonious public debate, Kargon's account of which nicely brings out the conflict of interests.

The professional chemists found other outlets for their expertise in the public health movement, either in government service or in the manufacture of disinfectants. This aspect of their work is covered in detail and linked to the MacDonagh-Hart over the nature of reform. It was, Kargon maintains, the science of civic virtue. Their industrial roles are also surveyed and illustrated by a fascinating letter from William Crookes to Angus Smith discussing the advantages of Manchester over London for chemists who hoped to make a living.

The second half of the book follows the evolution of science teaching and research at Owens' College, later the University. The foundation of the College and its early difficulties are nicely related to the evolution of middle-class education and the growth of examinations. The work of Henry Roscoe in developing the chemistry school and that of Osborne Reynolds in engineering are beautifully analysed and related to national and local concern over industrial competition from abroad. Roscoe and Reynolds gained support from industrialists because they offered the prospect of a university nationally pre-eminent in applied science and serving local industry. They were to supply a thorough scientific education for future chiefs of industry. The last chapter, more narrowly institutional, describes the development of the physical laboratory under Arthur Schuster, the basis of that astonishing array of talent which gathered under Rutherford in Edwardian Manchester.

Such a brief summary hides the many fascinations of this book. Time and again information is provided which provokes or helps to clarify questions of central and continuing importance, about the nature of science and its practitioners, about its relation to industry and education. No one interested in these questions can afford to neglect this book, but nor should they skim it lightly looking for headings, summaries and conclusions, for these are few and weaker than the material deserves.

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