

institutions. The principle behind their zeal was that such a garden was of 'utmost importance to the citizenry of Belfast'.

Cambridge Botanic Garden had its origin before either of the Irish gardens as a physic garden. It was privately founded in 1760 by Richard Walker, the vice-master of Trinity College, who donated it to the university in 1762. His reasoning was that the practice of 'Physic' was of the greatest utility to mankind, and knowledge of plants was fundamental to that. The gardens were to undergo a revolution when the trustees gave way to the idea of using the land to establish the Fitzwilliam Museum. In 1825, John Henslow was appointed professor of Botany and undertook the establishment of the garden at its new and current site. Henslow was to foster the early career of Charles Darwin just three years later. His far-sighted vision meant that the new garden was founded almost entirely upon scientific principles and became an exemplar of botanical science. Henslow was a passionate advocate of observation, and he saw the classroom aspects of the garden as their greatest and most abiding value.

Botanical gardens founded by government order, private enterprise or academic need provide remarkably different routes to the same end. What all these gardens had, and still have, in common was that beside their disparate purposes they were all essentially visually pleasing. The role of the botanical garden has never been more important for inspiring future plant scientists – after all one of the greatest questions facing the human race is 'how will we feed our grandchildren?' The National Botanic Gardens in Dublin may have been founded to dispel 'horticultural backwardness', but similar to all botanical gardens continues to educate all visitors in the fact that plants really are of the utmost importance to mankind.

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**Mapping, measurement and metropolis: how land surveyors shaped eighteenth-century Dublin**, by Finnian Ó Cionnaith, Dublin, Four Courts Press, 2012, 278 pp., €45 (hardback), ISBN 978-1-84682-348-0

Ó Cionnaith's book opens with a dramatic description of the tragic collapse of Essex Bridge on a rainy night in 1687, leading to the death of a coachman and one of his horses. The incident serves to highlight the strain on the city's many cramped thoroughfares before the Wide Streets Commission transformed large portions of the city centre from the mid-eighteenth century into the familiar, grand, Georgian streets that typify Dublin today. Throughout the book, the author relates similarly engaging stories that illuminate the daily life, concerns and practices of the several land surveyors that operated in and shaped Dublin city in the eighteenth century.

The book is divided into five parts, each containing on average four chapters. Part I: Chapters 1 and 2 describe land surveying in eighteenth-century Dublin as loosely controlled, competitive, controversial and of varying standard. Many of the best practitioners came from abroad to apply their trade in Ireland (John Rocque, Herman Moll, etc.), but often had to 'adjust to Irish surveying traditions if they wished to operate

successfully' (p. 16). Others inherited the family profession and this extended to civic surveying positions, with sons often working alongside or succeeding their father (p. 19). In Chapter 3, the reader is given an insight into the dynamics of employment under the headings subscription, private hire and salaried employment, with examples of problematic overlaps between civic duties and commercial interests (pp. 31–32). Chapter 4 illustrates that success as a land surveyor was as much about marketing and public perception as it was about surveying skills, with newspapers offering a platform for dispute as well as for advertisement.

Parts II and III focus on the art and science of the land surveyor's profession. Subjects such as units of measurement (pp. 50–53), magnetic variation (pp. 68–76) and area calculation (pp. 135–141) are related in an accessible way. Chapters 6 and 8 outline the survey instrumentation of the period, providing a good illustrated introduction to the tools of early map making: the chain, plain table, circumferentor and theodolite. Ó Cionnaith is a surveyor himself and his personal understanding of and enthusiasm for the profession is clearly evident in this section, where he includes details of the surveyor's everyday concerns such as travel arrangements and instrument storage. This practical approach is also evident in Chapters 9 and 10, where the reader is taken through the process of eighteenth-century map compilation and production. This was not without its challenges. Accuracy and error were constant factors for consideration and controversy, whether the mapping technique involved a new or copied survey. Illegal reproduction and 'piratical practices' were the features of the international mapping trade to which Dublin firmly belonged (pp. 96–97). Sections on copper-plate printing, etching and engraving, and map colouring explain why different period maps look the way they do. Throughout, Dublin surveyors and maps act as the examples for how successful and applicable such production techniques were. For instance, William Wilson efficiently adapted his copper plates each year for his annual directory map but not without considerable expense and effort (p. 103).

Parts IV and V feature a series of chapters on substantial subjects, many of which have been treated more extensively by other writers or deserve whole books in their own right. Two seminal city maps (Charles Brooking's and John Rocque's maps of the city in 1728 and 1756) are chosen for select study. Further chapters outline the various Dublin urban estates; Dublin city surveyors; the Wide Streets Commission; and the survey of roads, canals and Dublin bay. The positive aspect of this section (as in the rest of the book) is the use of the primary sources, a point also commended by J.H. Andrews in his foreword. Contemporary newspapers, Wide Streets Commission and Paving Board minute books, survey treatises/manuals, estate papers and individual maps are referenced extensively, ensuring the use of the book as a source for further study. Also useful is the timeline of Dublin surveyors (Table 1, pp. xxii–xxiv), although an inconsistency noted with regard to John Rocque's birth date (1704 on p. xxii; *c.* 1709 on pp. 15, 19, 156) may indicate that some of the important points of detail should be checked if being referenced in other works.

This book is a welcome contribution to the broad subjects of historical mapping in Ireland and the development of eighteenth-century Dublin. Ó Cionnaith's attention is consistently tuned into 'the men behind the maps' and the working relationships of surveyors with landlords, farmers, tenants, subscribers, civic bodies, instrument makers/suppliers, publishers, engravers, printers and within the profession itself. Central personalities reoccur throughout, in different contexts, reminding the reader that the

primary strength of this book is the dedicated insight it offers into the lives and personalities of the eighteenth-century land surveyors.

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**The Ashgate research companion to critical geopolitics**, edited by Klaus Dodds, Merje Kuus and Joanne Sharp, Farnham, Ashgate, 2013, 570 pp., £90.00 (hbk), ISBN 978-1-4094-2380-5

This collection of works relating to, and reviewing, current thinking and practices within the school of academic geopolitics, with specific reference to the relatively new field of critical geopolitics, is a must-read book for all interested in the areas of political geography and international relations. This volume deserves a place on the library shelves of all universities containing Geography (and indeed Politics) departments, as there is much to offer here for students who might be interested in the different ways that politics impacts on, and is influenced by, developments at the local, national, regional and global levels, as well as in how the understanding of politics can be widened to draw in different issues and groups that would not be directly linked in to formal political networks. The book also draws on contributions from most of the leading scholars, though not all of these, in the rapidly developing field of critical geopolitics. To those who may be unaware of developments within this field, what may be particularly surprising here is the degree to which different contributions focus on topics, agents and issues that would not appear to fall within the concerns of traditional approaches to political studies. As well as the formal political activities of governments and other politician actors, this collection also looks at the role played by other actors such as the media and non-governmental organisations, while highlighting the importance of gender, religion and evangelism, ethnicity and art/visual culture within the political sphere. As such, the content of different chapters within this volume will be relevant, and of interest, to those with specific interests in the other branches of human geography, including cultural, development and social geographies.

Opening with a concise, yet insightful, foreword from Gearóid Ó Tuathail, the book is arranged across 28 different chapters, involving the work of 31 different contributors, with these chapters being organised between three different sections. The first of these sections uncovers the basics ideas and foundations underpinning the study of critical geopolitics, with some of the chapters in this section making reference back to the works of classical, or traditional, geopolitics as a means of illustrating the extent to which critical geopolitics differs from, but also builds upon, the work of earlier geopolitical schools such as Halford Mackinder. An especially strong piece of work in this section is the opening chapter by John Agnew on 'The Origins of Critical Geopolitics', which traces the development of critical geopolitics, with reference to how this emerging field of studies relates back to, and reacts against, the earlier work in geopolitics by Mackinder and his contemporaries. The remainder of this section looks at some of the other key ideas, concerns and concepts within the field of critical geopolitics, including chapters on questions to do with text and discourse, radical geopolitics, sovereignty and