ENRICHING ARCHITECTURE

CRAFT AND ITS CONSERVATION IN ANGLO-IRISH BUILDING PRODUCTION, 1660–1760

Edited by Christine Casey and Melanie Hayes

With a Foreword by Glenn Adamson

UCLPRESS

Enriching Architecture

Enriching Architecture

Craft and its conservation in Anglo-Irish building production, 1660–1760

Edited by Christine Casey and Melanie Hayes

With a Foreword by Glenn Adamson

UCLPRESS

IRISH RESEARCH COUNCIL
An Chomhairle um Thaighde in Éirinn

OPW
Oifig na nOibreacha Poiblí
Office of Public Works

This volume was made possible through an Advanced Laureate Award of the Irish Research Council based in the Department of History of Art and Architecture at Trinity College Dublin.

First published in 2023 by
UCL Press
University College London
Gower Street
London WC1E 6BT

Available to download free: www.uclpress.co.uk

Text ©Authors, 2023
Collection © the Editors, 2023
Images © Copyright holders named in captions, 2023
Foreword © Glenn Adamson, 2023

The authors have asserted their rights under the Copyright, Designs and Patents Act 1988 to be identified as the authors of this work.

A CIP catalogue record for this book is available from The British Library.

Any third-party material in this book is not covered by the book's Creative Commons licence. Details of the copyright ownership and permitted use of third-party material is given in the image (or extract) credit lines. If you would like to reuse any third-party material not covered by the book's Creative Commons licence, you will need to obtain permission directly from the copyright owner.

This book is published under a Creative Commons Attribution-Non-Commercial 4.0 International licence (CC BY-NC 4.0), https://creativecommons.org/licenses/by-nc/4.0/. This licence allows you to share and adapt the work for non-commercial use providing attribution is made to the author and publisher (but not in any way that suggests that they endorse you or your use of the work) and any changes are indicated. Attribution should include the following information:

Casey, C. and Hayes, M. (eds.). 2022. *Enriching Architecture: Craft and its conservation in Anglo-Irish building production, 1660–1760*. London: UCL Press. https://doi.org/10.14324/111.9781800083547

Further details about Creative Commons licences are available at
https://creativecommons.org/licenses/

ISBN: 978-1-80008-356-1 (Hbk)
ISBN: 978-1-80008-355-4 (Pbk)
ISBN: 978-1-80008-354-7 (PDF)
ISBN: 978-1-80008-357-8 (epub)
DOI: https://doi.org/10.14324/111.9781800083547

Contents

Part 1: Loss and retrieval

Part 2: Design and making

List of figures

List of contributors

Christine Casey is a professor in architectural history and a fellow of Trinity College Dublin. She has published widely on architectural history and craftsmanship in Ireland, Britain and Europe. Her books include the definitive reference work on Dublin city, *Dublin* (Yale University Press, 2005), and *Making Magnificence* (Yale University Press, 2017), for which she received the Alice Davis Hitchcock medallion of the Society of Architectural Historians of Great Britain. She is the recipient of an Irish Research Council Advanced Laureate award for a project on craftsmanship in the early modern architecture of Britain and Ireland.

Melanie Hayes is a post-doctoral research fellow of the Irish Research Council CRAFTVALUE project at Trinity College Dublin. Her doctoral research focused largely on Anglo-Irish eighteenth-century architectural history, with a specific interest in the transnational development of architectural culture and practice in the early Georgian period. She has previously taught early modern architectural history at Trinity College Dublin, and has written and spoken widely on these topics. She is author of *The Best Address in Town: Henrietta Street, Dublin and its first residents, 1720–80* (Four Courts Press, 2020).

Glenn Adamson is a curator and writer who works at the intersection of craft, design history and contemporary art. He has previously been director of the Museum of Arts and Design; head of research at the Victoria and Albert Museum; and curator at the Chipstone Foundation in Milwaukee. His publications include *Craft: An American history (Bloomsbury, 2021); Fewer Better Things* (Bloomsbury, 2019); *Art in the Making* (Thames & Hudson, 2016, co-authored with Julia Bryan-Wilson); *The Invention of Craft* (Bloomsbury, 2013); *Postmodernism: Style and subversion* (V&A Publishing, 2011); *The Craft Reader* (Berg, 2010); and

Thinking through Craft (Berg/V&A, 2007). He contributes regularly to *Art in America, Crafts, Disegno, frieze, The Magazine Antiques,* and other publications.

Tony Barton is an architect with extensive experience in the conservation and reuse of historic buildings. He joined Donald Insall Associates in 1993 as a member of the Windsor Castle restoration team and was appointed as chairman in 2013. He has a portfolio of award-winning projects, many of which involve significant changes in important historic buildings and new design in sensitive settings. He is based in Donald Insall Associates' studio in Chester, where he is an active member of Chester Civic Trust and chairs the Cheshire Historic Buildings Preservation Trust. He is the architect to Chester Cathedral.

Mechthild Baumeister is a conservator in the Department of Objects Conservation at the Metropolitan Museum of Art in New York with responsibility for furniture, wooden objects, and historic interiors in the Department of European Sculpture and Decorative Arts. She supervised the conservation and reinstallation of wooden objects, including architectural structures displayed in the new British Galleries. Her education includes an apprenticeship in cabinetmaking and training in furniture and polychrome wood conservation at the Westfälisches Landesmuseum für Kunst und Kultur in Münster, the Klosterkammer Hannover, and the Victoria and Albert Museum in London.

Louise Caulfield is a geographer who has specialised in the history of building stone in Britain and Ireland and holds a PhD from Trinity College Dublin. She has worked extensively in the field and has been a researcher on the Irish Research Council funded research projects *Making Victorian Dublin* and *Stonebuilt Ireland*. Her publications include an extensive paper on Victorian decorative stone in Christine Casey and Patrick Wyse Jackson, eds., *The Museum Building of Trinity College Dublin: A model of Victorian craftsmanship* (Four Courts Press, 2019)

Sophie Chessum is senior curator at the National Trust, having previously held the post of curator for Clandon Park, Petworth, Polesden Lacey and Uppark. Until 2015 she held a dual role as curator for Ham House and team leader for a group of specialists advising NT historic properties in Kent and East Sussex. She assisted on the night of the Clandon Park fire and was appointed to the role of salvage lead. She now leads the curatorial and conservation response for Clandon and is researching the Onslow family and their connections with emerging colonialism, trade and ultimately the slave trade. Sophie's publications include S. Chessum and C. Rowell, *Claremont* (National Trust, 2000) and S. Chessum and C. Rowell, *Clandon Park, Surrey* (National Trust, 2002).

Edward McParland, fellow emeritus and former lecturer in architectural history at Trinity College Dublin, is an authority on eighteenth-century architecture. He has published widely, including *James Gandon, Vitruvius Hibernicus* (Zwemmer, 1985) and *Public Architecture in Ireland 1680–1760* (Yale University Press, 2001). He jointly founded the Irish Architectural Archive in 1976. Active in architectural conservation he jointly founded the Irish Landmark Trust and has been a committee member of the Alfred Beit Foundation and the Irish Georgian Foundation. He is an honorary fellow of the Royal Institute of the Architects of Ireland and an honorary member of the Royal Society of Ulster Architects.

Peter Pearson is an artist, writer and collector, and a graduate of Trinity College Dublin who has published widely on the architecture and history of Dublin city and environs including *The Heart of Dublin: Resurgence of an historic city* (O'Brien Press, 2001); *Decorative Dublin* (O'Brien Press, 2002) and *Between the Mountains and the Sea* (O'Brien Press, 2007). He has had a lifelong interest in documenting and protecting the architectural and natural heritage of Ireland. His important collection of architectural fragments has been displayed publicly on several occasions but hitherto only cursorily documented in published form.

Lee Prosser is curator of historic buildings at Historic Royal Palaces, with responsibility for Kensington Palace State Apartments and Kew Palace with its associated royal buildings in the Royal Botanic Gardens, Kew. He was part of the project that conserved and restored the Great Pagoda at Kew in 2018, and has been involved in the historic lighting project at Kensington since 2013, when the ongoing representation of the fine rooms began. Lee is a fellow of the Society of Antiquaries and a member of the Vernacular Architecture Group. His published works include S. Groom and L. Prosser, *Kew Palace: The official illustrated history* (Merrell, 2006); J. Marschner, O. Fryman, S. Edwards, D. Murphy and L. Prosser, *Kensington Palace: Art, architecture and society* (Yale University Press, 2018).

Jenny Saunt is the Oliver Ford Curatorial Research Fellow for furniture and interiors of the long eighteenth century in the Furniture, Textiles and

Fashion Department of the Victoria and Albert Museum. From 2012 to 2017 she was curator for the Bryan Collections at Crab Tree Farm, Illinois, an extensive private collection of early modern decorative arts. Her teaching includes courses for the Victoria and Albert Museum/RCA History of Design MA and the Courtauld Institute of Art. Her doctoral research focused on late-seventeenth-century craft practice and design in decorative plasterwork, a focus of study that developed from her previous career as a conservator and modeller of lime plaster.

Andrew Tierney is a post-doctoral research fellow of the Irish Research Council CRAFTVALUE project at Trinity College Dublin. He has an M.A. in the history of art and a PhD in archaeology from University College Dublin, and has taught at UCD, NUI Maynooth, and the Institute of Irish Studies at the University of Liverpool. His research and publications cover a broad chronology from medieval to Victorian architecture. In 2019, his volume *Central Leinster* (Yale University Press, 2019) was short-listed for the 2020 Colvin Prize by the Society of Architectural Historians of Great Britain.

Patrick Wyse Jackson is an associate professor of geology and curator of the Geological Museum at Trinity College Dublin. He has published extensively on bryozoan research, on the history and philosophy of geology, and on the use of building materials in Ireland. In 2017–19 he jointly led an innovative cross-disciplinary Irish Research Council project ‘Making Victorian Dublin’ which focused on the Irish stone industry and architectural production in the nineteenth century. Since 2019 he had directed Stonebuilt Ireland, which examines the use of dimension and decorative stone in Ireland. His books include *The Chronologers’ Quest: Episodes in the search for the age of the earth* (Cambridge, 2006); *Introducing Palaeontology: A guide to ancient life* (Dunedin Academic Press, 2010; 2nd edition 2019).

List of abbreviations

BL	British Library
DIA	Dictionary of Irish Architects (IAA)
HMC	Historical Manuscripts Commission
IAA	Irish Architectural Archive
ICOMOS	International Council on Monuments and Sites
INHA	Institut national d’histoire de l’art
The Met	Metropolitan Museum of Art
NAI	The National Archives of Ireland
NLI	National Library of Ireland
NT	National Trust (UK)
RIBA	Royal Institute of British Architects
RTAS	Research and Technical Advisory Service
TCD	Trinity College Dublin
TNA	The National Archives (UK)
UNESCO	United Nations Educational, Scientific and Cultural Organization

Foreword

Glenn Adamson

To enrich flour, bread or milk is to do something quite particular. It is to restore vitamins and other nutrients that naturally occur in that food but have been lost through the course of industrial processing. What is it to enrich architecture? That is the question asked and answered in this book. The focus is on a century of craft history, coincident with the rise of the European Baroque and the establishment of architecture as a professional discipline. So, at first blush not much to do with current nutritional standards. Yet there is an important sense in which 'enrichment', as explored in this volume, has also to do with retrieving a sustaining, life-giving quality which might otherwise have been lost.

Let me (briefly) explain. As authority migrated from builders to architects – from the construction site to learned treatises – much was clearly gained: a certain allusive erudition; a new technical sophistication; a formal clarity, especially transformative in the urban context. Yet something important was also threatened. The wondrous organic irregularity of artisan-led design – its 'diversity', to invoke the vocabulary of theorist David Pye – results only from the workmanship of many hands.

Yet, as the research in this book amply attests, this process of transference was highly complex, varying from place to place and from trade to trade. Even within a single building project there were always variable degrees of artisan agency. Much of this had to do with the essential materiality of architecture. It was one thing to draw a ceiling; another to render it in sculptural plasterwork that might stand fully two feet (over half a metre) proud of the surface. It was one thing to reserve discrete zones of an interior scheme for ornament; another entirely for a team of joiners and carvers to gloriously dispose their ingenuity and skill across the walls (and these *were* teams, with practitioners of many disciplines working in concert). Some typological elements, like staircases, were sufficiently discrete – falling at a midpoint between architectural fabric and movable furniture – that they were created independently of any established academic canon, retaining a high degree of design autonomy. And some materials, like figured stone, were so extremely various that their selection, cutting and installation was an art in its own right. Even seemingly simple forms of embellishment – like wainscoting, ashlar masonry and rustication – relied for their execution on long-established, mathematically-derived compositional principles.

Such was the intellectual property of the artisan class, though it was not understood as such in the early modern period. With the industrial revolution still some decades off (and likewise, the oppositional valuation of craft as a creative counterforce), the tendency was to take artisanal know-how for granted – or, at any rate, to leave its qualities largely unstated. Even Joseph Moxon, whose book *Mechanick Exercises* (1683–5) was such a groundbreaking inquiry into the matter, looked at it in just this way:

> I thought to have given these *Exercises*, the Title of *The Doctrine of Handy-Crafts*; but when I better considered the true meaning of the Word *Handy-Crafts*, I found that *Doctrine* would not bear it; because *Hand-Craft* signifies *Cunning*, or *Sleight*, or *Craft* of the Hand, which cannot be taught by Words, but is only gained by *Practice* and *Exercise*.

The contributors to this book, each in their own way, contend impressively with this 'tacit' aspect of artisanship, which meant that it left comparatively little trace in publications and archival sources. Each chapter is an exploration into craft's latent content, its contingent qualities. The enrichment of architecture made it layered – a palimpsest of different skills – and also changeable, constantly shifting in relation to ephemeral lighting effects and day-to-day usage.

In the centuries since, of course, quotidian patterns of inhabitation have brought about deleterious effects, which now necessitate careful campaigns of conservation. This ongoing preservation of historic buildings amounts to a communication across the centuries, with contemporary craftspeople seeking an ever more complete understanding of their predecessors' workmanship. It is one of the signal features of this volume that it encompasses such hands-on artisanal research, integrating conservation with more conventional forms of architectural history. Craft's 'richness' as a subject is just as much about haptics as visuality. Since Moxon's time that fact has mostly militated against it as a proper field of study. It is perhaps understandable that scholarship, a fundamentally discursive undertaking, has struggled to illuminate something so stubbornly non-linguistic – though doubtless, social hierarchies of class, gender and ethnicity also have a lot to do with it too.

Now, at last, artisanal history – so long a blind spot in art and architecture's rear-view mirror – is coming into view. This seems to be part of a wider phenomenon, in which the human faculty of 'material intelligence' (that is, the ability to appreciate, understand and manipulate the world around us) is being reassessed. The reasons are not far to seek. Dematerialised, digitised experience is the most radical transformation yet that we humans have brought to our environment, at least potentially; we are only at the beginning stages. Like the rise of professional architecture in the seventeenth and eighteenth centuries, and mass-produced modernism in the twentieth, this all-pervading technological invasion of our mental and physical space brings with it both benefits and losses, inseparably twinned. As we grapple with the implications, though, we do have some important advantages – not least, the benefits of hindsight. It may seem a little counter-intuitive to suggest that an encounter with historic buildings might help to reground us in the twenty-first century. Yet those architectural survivals are indeed part of our present. We can visit them; appreciate them; and, yes, learn from them. At a time of great change, the artisans who built these beautiful structures were called upon to enrich their own reality. We need nothing less today.

Acknowledgements

This book is the outcome of an Advanced Laureate Award of the Irish Research Council based in the Department of History of Art and Architecture at Trinity College Dublin. The editors wish to acknowledge the generous support of the Office of Public Works of Ireland in the publication of this volume. We are grateful to the Irish Architectural Archive, the Board of Trinity College Dublin, Davison & Associates, Dublin City Council, the National Library of Ireland, Trinity Art Collections and Trinity College Manuscripts and Archives Library.

Introduction

Enriching architecture: craft and its conservation in Anglo-Irish architectural production, 1660–1760

Christine Casey and Melanie Hayes

> Design is what, for practical purposes, can be conveyed in words and by drawing: workmanship is what, for practical purposes, cannot. In practice the designer hopes the workmanship will be good but the workman decides whether it shall be good or not. On the workman's decision depends a great part of the quality of our environment.
>
> David Pye, 1968[1]

Context

David Pye's argument for the role of craft in architecture, though expressed more than half a century ago, retains its potency and relevance. This is because the material dimension of architectural production continues to be overshadowed by conceptual issues, whether of design, patronage or reception. Though the burgeoning field of construction history has celebrated the carpenters, masons and bricklayers responsible for the building carcass, the finishing of buildings has received considerably less attention. This volume is concerned with the final representative layer of building production, the face or finish of a building and the creative labour which produces it. Despite a seismic shift in the perception of craft within wider cultural debate, the nature and effect of workmanship in stone, wood and plaster remain undervalued in scholarship. This ignores the fact that the greatest investment in buildings of the past lay in the refinement and enrichment of surfaces. We argue that the aesthetic and material order of early modern architecture depends upon a combination of mutually enhancing, major and minor elements produced by a complex arena of architectural labour that is ill-served by design-led or semiotic narratives. In embracing the fundamental role of quality at the heart of historic craftsmanship, the volume underscores the historical legitimacy of skill as a criterion of value. While the terms decoration and ornament describe elements of this final layer, they are inadequate categories for others, such as combinations of materials, patterns of tooling and masonry, and sculptural processes. The visual and haptic effects of glistening or variegated stone, of shadows cast by cornice and moulding, of jointed embrasures and carved frames or the polished surfaces of stair rails and floors are among many crafted elements of the building which contribute fundamentally to the experience of architecture.

The dramatic case of Clandon Park in Surrey, a prodigy house of circa 1730 devastated by fire in 2015, and the subject of Sophie Chessum's chapter in this book, embodies the core themes of this volume. The loss of so many of the building's enrichments, the partial and sporadic survival of others and the retrieval of the thousands of crafted fragments throws into relief the fundamental role of craft activity in architecture. The superb brick elevations, their Bath and Portland stone classical dressings, the marble flags and monumental chimneypieces of the Marble Hall, the timber wainscot of the parlours, the cool stucco decoration of the rooms of parade and the rich fabrics and carvings of the furnishings constituted an environment of immense optical and haptic complexity involving the participation of the architect and a host of local and foreign craft practitioners and suppliers of materials from across the globe. The fragments of wood, metal, timber and stone which cling to the monumental brick carcass provide a cross section of the cumulative craft activity involved in the production of the building's interior and exterior surfaces. Loss, decay and absence throw into relief the achievement of the 'superb craft tradition' which thrived in Britain in the seventeenth and eighteenth centuries, and indeed well into the nineteenth century.[2]

The intense materiality of Clandon Park in its damaged state is a counterpoint to the neglect of enrichment in architectural history. This blind spot has a complex genealogy rooted in western intellectual, artistic and religious traditions and exacerbated by modernist rejection of ornament, resulting in a critical rush 'past the surface to excavate more complex inner truths'.[3] In recent decades a new interest in materiality and craft practice within the wider sphere of social philosophy and anthropology has prompted a rethinking of the operative part of architecture and the role of materials, making and decoration in all aspects of human activity.[4] Likewise, in its focus on the experience of art and architecture, phenomenology has shifted attention to the haptic and sonic dimensions of buildings and the agency of texture, colour and material. For Jonathan Hay, early modern decorative objects constitute a 'surfacescape' demonstrative of high artisanal skill redolent of their luxury status.[5] As a craftsman in wood, David Pye was acutely conscious of surface effect and lamented the absence of a related nomenclature: 'We have few enough names for colours but for surface qualities all but none. Yet the variety of our experience of surface quality must be every bit as wide as that of colour'.[6] These perspectives have thrown into high relief traditional conceptual binaries that have militated against a holistic analysis of architectural production: conceptual versus manual, optical versus haptic, individual versus communal, creative versus rote, craft versus industry, intentionality versus contingency. Interdisciplinarity has likewise prompted a rethinking of boundaries in the histories of art and architecture, building on the achievements of scholars who were undeterred by disciplinary divisions in the first place, and instinctively wary of 'border police'.[7]

While the new art history of the late twentieth century exhibited clear antipathy to decoration, museum, heritage and conservation professionals – deeply immersed in real works of art and architecture, and more closely attuned to public sensibility – were keepers of the flame, sustaining focus on the significance of quality in painted, built and modelled surfaces as a fundamental element of scholarship. For decades the study of craftsmanship in early modern British architecture remained, for the most part, a separate category of enquiry situated in a liminal space between art and architectural historians on the one hand and historians and conservators of furniture, craftsmanship and textiles on the other.[8] An important vehicle for this scholarship was the journal *Country Life* which, in its dedication to full biographies of buildings, created a cumulative and highly significant record of the British country house that is gradually beginning to receive due recognition.[9] Rooted in formalist and connoisseurial art history, this pioneering work was driven by issues of quality, biography and style – approaches dismissed by the new art history as irrelevant, elitist and mere vehicles of the art market, thereby discrediting the principal tools for analysis of surface enrichment in art and architecture. While scholarship in material culture reasserted the significance of making, its egalitarian appraisal of all material production undermined qualitative analysis as an analytical tool. In similar fashion, socio-economic readings of early modern buildings, while underscoring the significance of surface enrichment have nevertheless tended to subordinate decoration to its representative function. Here too, however, a sea change has begun, prompted by those unwilling to dispense with the 'great intellectual achievement' of foundational art history.[10] For David Carrier, art-historical writing, even of the most radical nature, clearly exhibits elements of formal and connoisseurial analysis as criteria of intrinsic value for the study of all artistic practice.[11] In conjunction with the reappraisal of connoisseurship, a developing neo-formalism returns increasing attention to the composition of works of art and architecture, 'combining close observation of individual works with broader cultural historical analysis', and to the old but compelling question of why works *look* the way they do. Form and quality matter even though they now take their place alongside other equally compelling aspects of architectural production and reception.[12]

Rationale

These wider issues have a direct bearing on the content of this volume, which explores multifarious forms of enrichment of early modern buildings in Britain and Ireland to emphasise the role of craft in building production – expanding the definition of architectural labour to include the vast reservoir of creative activity involved in the completion of buildings. Joinery, wood carving, stone masonry and plasterwork loom large, with less attention paid to other vital aspects of architectural decoration such as mural painting and carving in stone. It is hoped therefore that the volume will serve as a stimulus to further scholarship in architectural decoration, building on the foundational achievements of scholars such as Geoffrey Beard, Peter Thornton and John Cornforth. Its core premise is that creative craft activity – whether of stonemasons, bricklayers, iron founders, carvers, joiners or plasterers – is an integral and fundamental part of architectural production which has fallen between the disciplines of architectural history; art history; and, in some instances, craft theory.[13] By developing an inclusive perspective on architectural achievement, this volume aims to break down barriers to holistic appraisal of early modern buildings. And in combining the findings of conservation, curatorial and collecting activity with the research of architectural historians, it adopts a hands-on approach to early modern craftsmanship predicated on empirical, scientific and archival documentation and close analysis of eighteenth-century buildings. The volume addresses the combined professional, academic and lay interests which underpin the maintenance, preservation and interpretation of early modern buildings. Affirmation of the creative role of craft in architecture builds on the work of anthropologists such as Arthur Gell and Tim Ingold, who emphasise respectively the downplaying of technology in fine-art perspectives and the 'world-making' role of haptic vision.[14] The sheer scale of creative labour in early modern building production and its impact in city and countryside invokes Ingold's eloquent characterisation of landscape creation as 'taskscape', while the wealth of investment in surface enrichment across wall, floor, soffit and aperture aligns with Nicola Barham's reading of the Antique aesthetic environment as an 'ornament-scape'.[15] The volume builds on David Pye's affirmation of workmanship by seeking to understand the materials, processes and standards which governed early modern architectural decoration. However, in contrast to Pye's clear division of design and workmanship, this study considers their interaction and seeks evidence for the working relationship of architect and craft practitioner. In this sense it explores the combined achievement of individual and communal skill that has been the subject of much communitarian scholarship – most notably the work of Richard Sennett, whose blueprint for a dangerously cerebral society is rooted in the painstaking labour and learning of traditional apprenticeship systems: 'there is nothing inevitable about becoming skilled, there is nothing mindlessly mechanical about technique itself'.[16]

Is this then simply a twenty-first-century reiteration of John Ruskin's celebration of craftsmanship? Or a new form of artisanal connoisseurship? Do we seek, in the words of Joseph Roth, to 'hang sentimental weights on the winged feet of time'?[17] While Ruskin's passionate affirmation of the dignity of human labour and the significance of craft activity undoubtedly informs this volume, it departs from his premises in significant ways – not least from his characterisation of artisanal creativity as free and inventive as opposed to dull and rote. This remarkably influential premise persists in commentary on architectural craftsmanship of all periods and does little service to the high skill and consummate discipline of early modern workmanship.[18] An anti-intellectual dimension of Ruskin's writing, also evident in modern craft theory, while responsive to tacit knowledge and instinctive practice, tends in terms of architecture to polarise design and making. While Ruskin was undoubtedly right 'that architects with drawing boards could not have made Venice what it was', he later admitted that unfettered craftsmanship was not what he had wished to encourage.[19] The work of the O'Shea brothers, which he had initially praised for its freedom and spontaneity, was as indebted to art and to architects as it was to nature.[20] Separating design and craftsmanship ignores the mutual learning that results from the complexity and contingencies of the building process. Christine Stevenson's insightful characterisation of seventeenth-century architectural practice as 'building in bits' captures the incremental, composite and empirical character of much early modern building design, involving knowledge exchange and mutual valorisation between client, contriver and artisan.[21] It is this elusive relationship which we seek to discover. Neither do we reiterate the stylistic and qualitative schema of the past but endeavour to build on the foundational scholarship of the twentieth century by excavating the processes and standards which guided the work of eighteenth-century craft practitioners, and in so doing to demonstrate that analysis of quality is grounded in the very standards which informed the work in the first place. We thus corroborate the findings of European research on craftsmanship in affirming the historical legitimacy of quality as an analytical tool.[22] And while loss of craft skills certainly inspires sentiments of fear and regret, there are more compelling reasons for the excavation of historic craft practices than nostalgia. Indeed, the many lives of early modern architectural fittings demonstrate recycling on a vast scale, showing durability to be a form of sustainability notwithstanding the exploitation of lives and resources which enabled it.

How can craft processes and standards be recaptured from a period in which artisanal achievement was concealed and therefore, as shown by Alina Payne for the Renaissance period, effectively written out of history.[23] Winners write. 'If writing, and even language is lacking' asks Pamela Smith 'how do we reconstruct historical techniques of making, experiencing and knowing?'[24] A problem in seeking to shift traditional focus from 'high' to 'low' is the paucity of documentation for the latter, the craft practitioners' voices being largely heard through the words of client and architect rather than their own. The untold story of architectural craftsmanship in the long eighteenth century is deeply embedded in recalcitrant archival documentation such as building accounts and testamentary records with flashes of historical vivacity in the treatises, journals or notebooks of upwardly mobile craftsmen. Because of this, buildings loom large as primary evidence: rich in the work of joiners, masons, carvers and plasterers. When conservation occurs, buildings provide an even more valuable tool for gaining an understanding of the materials and methods of craft practitioners. While the publication of conservation findings is a burgeoning field in continental Europe, with the notable exception of the *Journal of Architectural Conservation* it remains under-developed in Britain and Ireland.[25] A great deal of evidence from architectural conservation projects gathers dust on institutional or practitioners' shelves and too seldom finds its way into historical narratives. Yet, it is conservation which provides the most direct route to the craft processes of the past. The opening up of buildings, analysis of substances and tool marks, and experimental reproduction of original ambient conditions tell us much about aesthetic, economic and ethical decisions in the past. Likewise, the on-site findings of curatorial research activity, institutional and private, illuminate taken-for-granted surfaces in historic buildings whether in situ or removed from their original contexts.

Contents

How then do these wider issues find their way into the experience and analysis of early modern buildings in Britain and Ireland? The haptic dimension of architectural enrichment emerges vividly from the chapters of this volume, which provide many terms for the nomenclature of surface quality desired by David Pye. Two virtuoso staircases of the 1670s removed from houses in England (Cassiobury Park in Hertfordshire) and Ireland (Eyrecourt Castle in County Galway), here analysed and compared by Mechthild Baumeister and Andrew Tierney, demonstrate that '[s]eventeenth-century interiors speak as much to the hand as to the eye'. In the buildings of Richard Castle analysed by Andrew Tierney, the hand raised and lowered over the 'sinuous curving surfaces' of moulded balustrades and ramped stair rails, and feet touching the surface of riser and landing were active participants in the experience of the early modern interior. For Peter Pearson and Andrew Tierney, writing respectively on salvaged architectural fragments and eighteenth-century staircases, Irish Georgian stair balusters likewise stimulate haptic response – their newels and columns alternately 'chunky' and 'slender', 'stout' or 'delicate'. In a discussion of eighteenth-century wainscoting, Christine Casey demonstrates that different types of wall surface in wood, textile and plaster produced effects judged by contemporaries as respectively 'neat', 'gaudy' and 'noble', while Lee Prosser, in a chapter on early eighteenth-century interiors at Kensington Palace, shows that ensembles of painted, carved and modelled enrichment, calculated to be seen in candlelight, contain elements designed to advance and recede – both 'muted' and 'sparkling'. In similar fashion Edward McParland's analysis of rusticated masonry reveals that light playing across the stone surface might result in 'flickering vitality' or accentuate 'distressing irregularity'. The distinctive characteristics of stone types employed in the eighteenth-century architecture of Dublin city, as discussed by Patrick Wyse Jackson and Louise Caulfield, further amplified the haptic effects of rustication and other architectural enrichments: alternately ‘rough’ and ‘smooth’, ‘robust and coarse’ or ‘fine-grained’ and ‘precise’.

The compound approach to early modern architectural design, which celebrates the virtuoso performances of master craftsmen as benchmarks of taste and discernment, is reflected in many of the essays. The great set pieces of the early modern interior such as stairs, wainscoting and chimneypieces could be created in metropolitan workshops and transported to the farthest regions of the realm. This composite and movable character meant that interiors might just as easily be dismantled, resulting in a diaspora of interior fittings in the late nineteenth and early twentieth centuries. Chapters by Mechthild Baumeister and Andrew Tierney, Peter Pearson, and Christine Casey discuss the impact of destruction and the fate of surviving decorative elements. The most evocative counterpoint to the composite and incremental nature of early modern craft production is the assemblage by Peter Pearson of a vast collection of architectural fragments gathered during a period of wanton destruction of Dublin’s eighteenth-century domestic architecture. Removed from their settings, these fanlights, stair rails, window and door frames, and plaster fragments effectively deconstruct the cumulative achievement of grand-scale, hand-wrought craft production. Likewise the recently conserved and reassembled Cassiobury Park stair at the Metropolitan Museum of Art in New York and the still disassembled Eyrecourt stair at the Detroit Institute of Arts evoke the original processes of production, transportation and installation.

The didactic value of fragments is a further dominant theme of the volume. Sophie Chessum’s chapter on Clandon Park shows how loss, decay and conservation activity can illuminate and enliven the craft practices of the past. Together with conservation analysis of the building’s surviving surfaces, thousands of fragments retrieved from the building – now stored for analysis and documentation – provide new information on chronology, materials and the working methods of craft practitioners, and in turn demonstrate the level of investment in the representative classical interior. Architectural fragment collections, such as the Pearson collection, perform a similar task in drawing to our attention the complex composition of even the most modest building surfaces. Such collections present a significant challenge for collectors, museums and institutions around the world in terms of storage, accessibility and interpretation. Detached from their original context, visible at close quarters and objectified as aesthetic objects, fragments or detached set pieces are a valuable source of information and a powerful teaching tool. Stripped of their original finishes, the Cassiobury and Eyrecourt staircases are shown to have been crafted from an amalgam of woods and exhibit the marks of multifarious tools and gouges. In the Pearson collection, rescued examples of the expansive fanlights which crown the doorcases of Dublin's streets and squares, and which have become associated in the popular imagination with the city, reveal a composition of curved wooden or metal glazing bars painstakingly jointed and glued together, framing up to 30 separate pieces of glass and formerly fixed to the door opening with dovetailed joints. However, it is not always possible to see such traces of workmanship, as concealment of tooling was the norm in the period. Again, conservation permits greater insight into process. Jenny Saunt, conservation practitioner and academic, explores the nature of design in seventeenth-century English plasterwork, arguing for an imbrication of drawing and modelling akin to design processes in painting and other forms of sculpture. Informed by direct experience of plaster modelling, a persuasive argument is advanced for a dynamic integration of concept, drawing and execution which takes us beyond previous sequential discussions of drawing in plasterwork production.

Conservation is of course a critical activity, which reflects the attitudes of the present to the past, and three of the essays in this volume exhibit different positions with regard to the consolidation, conservation and restoration of interior finishings. At Clandon Park, the distressed surfaces of the interiors in the wake of the fire of 2015 have been allowed to speak for themselves. In the Octagon of Orleans House at Twickenham, described in Tony Barton's chapter on conserving craft, the shiny nineteenth-century marble floor – at odds with the sober underlying Portland stone flags – remains in situ, reflecting a policy of minimal intervention and respect for the accretions of age considered best practice in contemporary architectural conservation. In contrast, the lost giltwood chandelier of the Octagon, known through early photographs, was reconstructed rather than adopting a modern lighting solution – a decision informed by aesthetic and historicist considerations. Like the Octagon lantern, the Cassiobury Park staircase exhibits a primarily aesthetic approach to conservation, predicated on the quality of the object, the 'halo' effect of its virtuoso execution and its modern function as an interactive museum exhibit.[26]

While compound craft production explains the appearance of many interiors of the long eighteenth century, the orchestrating role of a single contriver, surveyor or architect should not be underestimated. In craft-focused narratives, artisanal agency tends to become too much of a good thing.[27] Architects, particularly in the eighteenth century, gained increasing control over the building project. Here Andrew Tierney considers the staircase in the output of Richard Castle, the most prolific architect in eighteenth-century Ireland, and examines the relationship of architect, joiner and carver in its achievement. This exploration of responsibility for surface articulation in buildings is developed by several contributors. Edward McParland focuses on rustication, a ubiquitous yet challenging surface treatment in monumental architecture which forces us to consider the problems faced by architects and masons in its design and execution. For, as David Pye suggests for another type of masonry surface, '[n]o architect could specify ashlar until a mason had perfected it and shown him that it could be done.'[28] Who was ultimately responsible for configuring the sophisticated rusticated façade of the eighteenth-century Printing House at Trinity College Dublin? What were the norms in the handling of rusticated façades in this period? How much detail for the measurement of stonework was an architect expected to provide? Geologists Patrick Wyse Jackson and Louise Caulfield carry this analysis into the actual materials employed and consider the distinctive lithic palette of Dublin's monumental architecture by comparison with that of other contemporary cities in Britain and America. Was the combination of glistening, local granite and smooth Portland stone a pragmatic solution attributable to geographical and market factors, a conscious aesthetic choice by the architect or an amalgam of both?

Since Antiquity the special role of the architect has been defined as being a leader and orchestrator of many disciplines and activities. However, with notable exceptions, this aspect of the architect's activity has been neglected in scholarship due to over-emphasis on design.[29] Here, the co-ordinating function of the architect in specifying, commissioning and overseeing craft activity – whether on the eighteenth-century building site or in the conservation of eighteenth-century buildings – is addressed by Melanie Hayes, Tony Barton and Christine Casey. Archival sources have been explored in an effort to demonstrate the complexity of this task and the architect's on-site engagement with clients, measurers, clerks of works and craft practitioners in the delivery of the completed building. A specific and significant problem for conservation architects and curators in the presentation of historic buildings is lighting and how to approximate or evoke early modern conditions. This has broader implications in that modern display methods, like academic scholarship, tend to highlight individual objects or works of art, whereas originally these were subsumed into 'a larger topography of decorative surfaces'.[30] Experimental research at Kensington Palace which used candlelight to understand the original effects of flickering light on painted, carved and woven surfaces is discussed by Lee Prosser, showing the complexity of lighting sources in the period and its impact on perception of the interior and its contents. If William Kent had not used so much gold, much of these schemes would have disappeared by candlelight.

Together, these chapters on the crafted surface in British and Irish architecture of the long eighteenth century will, we hope, draw renewed attention to the co-operative nature of early modern building activity, to the significance of qualitative standards in guiding craft production and to the value of conservation and preservation as research tools. Ultimately, we hope to stimulate a wider discussion of creative labour in the production and reception of architecture.

Notes

1 Pye, *The Nature and Art of Workmanship*, 1. Reproduced with permission of The Licensor through PLSclear.
2 Wilson and Mackley, *Creating Paradise*, 295.
3 Casey, 'Surface value'; Adamson and Kelley, *Surface Tensions*, 1.
4 Adamson, *Thinking Through Craft*; Adamson, *The Invention of Craft*; Adamson, *Craft*; Adamson and Kelley, *Surface Tensions*; Anderson et al., *The Matter of Art*; Frayling, *On Craftsmanship*; Elkins, 'On some limits of materiality in art history'; Hanson, *Architects and the 'Building World*'; Ingold, 'The temporality of the landscape'; Ingold, *Making*; Ingold, 'Surface visions'; Pye, *The Nature and Art of Workmanship*; Sennett, *The Craftsman*; Smith et al., *Ways of Making and Knowing*; Yarrow and Jones, 'Stone is stone'.
5 Hay, *Sensuous Surfaces*, 61.
6 Pye, *The Nature and Art of Workmanship*, 68.
7 Kummer, *Anfänge und Ausbreitung der Stuckdekoration im Römischen Kirchenraum (1500–1600);* Montagu, *Roman Baroque Sculpture*; Cornforth, *Early Georgian Interiors*; Diers, 'Kultur-Arbeit, auf windigem Posten', 93.
8 The leading scholar of craftsmanship in early modern British architecture was Geoffrey Beard, whose publications include *Georgian Craftsmen and Their Work*, *Decorative Plasterwork in Great Britain* and *Craftsmen and Interior Decoration in England*. For exemplary conservation-based research, see Bristow, *Architectural Colour*.
9 O'Reilly, *Irish Houses and Gardens*; Hall, *Country Life English Houses*; Strong, *Country Life, 1897–1997*.
10 Carrier, 'In Praise of connoisseurship',159.
11 Carrier, 'In Praise of connoisseurship', 159–69.
12 Dietrich and Squire, *Ornament and Figure in Graeco-Roman Art*, 2.
13 For example, in defining 'fine craft' as a category of artistic endeavour, Howard Risatti divorced adornment from craft, placing it 'somewhere between craft and fine art', and likewise dispatched the building trades of plastering and joinery as 'categorically different activities' to 'the conceiving and making of a unique craft object', Risatti, *A Theory of Craft*, 170.
14 Gell, *Art and Agency*; Ingold, *Making*; Ingold, 'Surface visions'.
15 Ingold, 'The temporality of the landscape' mentioned 153–70, specifically 161–3; Barham, 'Esteemed ornament', 295.
16 Sennett, *The Craftsman*, 9.
17 Roth, *The Hotel Years*, 27.
18 'Workmanship is basically a rote process of making and should not be confused with craftsmanship', Risatti, *A Theory of Craft*, 163.
19 Pye, *The Nature and Art of Workmanship*, 70. 'When I said that the workman should be left free

to design his work as he went along, I never meant that you could secure a great national monument of art by letting loose the first lively Irishman you could get hold of to do what he liked in it', Cook and Wedderburn, *The Works of John Ruskin*, vol. xxxiv, 581–2.

[20] Tierney, 'Reviving the Artisan Sculptor', 189–216.

[21] Christine Stevenson, 'Building in bits: lessons from the English baroque', The Courtauld Institute of Art. Accessed 16 June 2022. https://www.youtube.com/watch?v=R20W-lUjGXw.

[22] Negre, 'Virtuosité technique et esthétique artisanale dans l'architecture aux XVIIx^{e} et XVIII^{e} siècles', 1–18; Napoli, 'The Art of the appraisal', 201–41.

[23] Payne, 'Materiality, crafting and scale in Renaissance architecture', 367–86.

[24] Smith et al., *Ways of Making and Knowing*, 20.

[25] The *Journal of Architectural Conservation* was established in 1995.

[26] Arthur Gell cited by Christine Stevenson in, 'Building in bits: lessons from the English baroque', The Courtauld Institute of Art. Accessed 16 June 2022. https://www.youtube.com/watch?v=R20W-lUjGXw.

[27] Taws, 'Telling artisanal time', 90.

[28] Pye, *The Nature and Art of Workmanship*, 2.

[29] McKellar, *The Birth of Modern London*; Lucey, *Building Reputations*; Gibney et al., *The Building Site in Eighteenth-Century Ireland*; Saint, 'The conundrum of "by"'; Campbell, *Building Saint Paul's*.

[30] Hay, *Sensuous Surfaces*, 69.

References

Adamson, Glenn. *Thinking Through Craft*. Oxford and New York: Berg, 2007.

Adamson, Glenn. *The Invention of Craft*. London: Bloomsbury, 2013.

Adamson, Glenn. *Craft: An American history*. London: Bloomsbury, 2021.

Adamson, Glenn and Victoria Kelley, eds. *Surface Tensions: Surface, finish and the meaning of objects*. Manchester: Manchester University Press, 2013.

Anderson, Christy, Ann Dunlop and Pamela H. Smith. *The Matter of Art: Materials, practices, cultural logics, c.1250–1750*. Manchester: Manchester University Press, 2015.

Barham, N. 'Esteemed ornament: an overlooked value for approaching Roman visual culture'. In *Ornament and Figure in Graeco-Roman Art: Rethinking visual ontologies in classical antiquity*, edited by Nikolaus Dietrich and Michael Squire, 279–98. Berlin and Boston: De Gruyter, 2018.

Beard, Geoffrey. *Georgian Craftsmen and Their Work*. London: Country Life, 1966.

Beard, Geoffrey. *Decorative Plasterwork in Great Britain*. London: Phaidon, 1975 and Donhead: Shaftesbury, 2011.

Beard, Geoffrey. *Craftsmen and Interior Decoration in England 1660–1820*. London: Bloomsbury, 1986.

Bristow, Ian. *Architectural Colour in British Interiors 1615–1840*. New Haven, CT and London: Yale University Press, 1996.

Campbell, James W.P. *Building Saint Paul's*. London: Thames and Hudson, 2007.

Carrier, David. 'In praise of connoisseurship', *Journal of Aesthetics and Art Criticism* 61:2 (Spring 2003): 159–69.

Casey, Christine. 'Surface value: ways of seeing decoration in architecture', *Architectural Histories* 9:1 (2021): 13. DOI: https://doi.org/10.5334/ah.534.

Cook, E.T. and A. Wedderburn. *The Works of John Ruskin*, 39 vols. London and New York: George Allen and Unwin, 1903–12.

Cornforth, John. *Early Georgian Interiors*. New Haven, CT and London: Yale University Press, 2004.

Diers, Michael. 'Kultur-Arbeit, auf windigem Posten', *Kritische Berichte* 8:4/5 (1980): 93–101.

Dietrich, N. and M.J. Squire, eds. *Ornament and Figure in Graeco-Roman Art: Rethinking visual ontologies in classical antiquity*. Berlin: De Gruyter, 2018.

Elkins, James. 'On some limits of materiality in art history', *Das Magazin des Instituts für Theorie* [Zürich] 12 (2008): 25–30.

Frayling, Christopher. *On Craftsmanship: Towards a new Bauhaus*. London: Oberon Books, 2011.

Gell, Arthur. *Art and Agency: An anthropological theory*. Oxford: Clarendon, 1998.

Gibney, Arthur, E. McParland and L. Hurley, eds. *The Building Site in Eighteenth-Century Ireland*. Dublin: Four Courts Press, 2017.

Hall, Michael J.W. *Country Life English Houses: From the archives of Country Life 1897–1939*. London: Sothebys, 1994.

Hanson, Brian. *Architects and the "Building World" from Chambers to Ruskin*. Cambridge: Cambridge University Press, 2003.

Hay, Jonathan. *Sensuous Surfaces: The decorative object in early modern China*. Honolulu: University of Hawaii Press, 2010.

Ingold, Tim. 'The temporality of the landscape', *World Archaeology* 25:2 (1993): 152–74.

Ingold, Tim. *Making: Anthropology, archaeology, art and architecture*. London and New York: Routledge, 2013.

Ingold, Tim. 'Surface visions', *Theory, Culture and Society* 34:7–8 (2017): 99–108.

Kummer, Stefan. *Anfänge und Ausbreitung der Stuckdekoration im Römischen Kirchenraum (1500–1600)*. Tübingen: Wasmuth and Solen, 1987.

Lucey, Conor. *Building Reputations: Architecture and the artisan, 1750–1830*. Manchester: Manchester University Press, 2018.

McKellar, Elizabeth. *The Birth of Modern London: The development and design of the city, 1660–1720*. Manchester: Manchester University Press, 1999 and 2021.

Montagu, Jennifer. *Roman Baroque Sculpture: The industry of art*. New Haven and London: Yale University Press, 1989.

Napoli, J. Nicholas. 'The art of the appraisal: measuring, evaluating, and valuing architecture in early modern Europe', *Memoirs of the American Academy in Rome* 65:54 (2009): 201–41.

Negre, Valerie. 'Virtuosité technique et esthétique artisanale dans l'architecture aux XVIIxe et XVIIIe siècles', *Images re-Vues* 7 (2019): 1–18.

O'Reilly, Sean. *Irish Houses and Gardens: From the archives of Country Life*. London: Aurum Press, 2008.

Payne, Alina. 'Materiality, crafting and scale in Renaissance architecture', *Oxford Art Journal* 32:3 (2009): 367–86.

Pye, David. *The Nature and Art of Workmanship*. Cambridge: Cambridge University Press, 1968.

Risatti, Howard. *A Theory of Craft: Function and aesthetic expression*. Chapel Hill: University of North Carolina Press, 2007.

Roth, Joseph. *The Hotel Years: Wanderings in Europe between the wars,* translated by Michael Hoffmann. London: Granta Books, 2016.

Saint, Andrew. 'The conundrum of "by"'. In *Architectural History after Colvin*: *The Society of Architectural Historians of Great Britain Symposium 2011*, edited by Malcolm Airs and William Whyte, 1–17. Donington: Shaun Tyas, 2013.

Sennett, Richard. *The Craftsman*. 3rd edition. Harmondsworth: Penguin, 2009.

Smith, Pamela H., Amy R.W. Meyers and Harold J. Cook, eds. *Ways of Making and Knowing: The material culture of empirical knowledge*. Chicago: University of Chicago Press, 2014.

Strong, Roy. *Country Life, 1897–1997: The English Arcadia*. London: Boxtree Ltd, 1999.

Taws, Richard. 'Telling artisanal time'. In *Crafting Enlightenment: Artisanal histories and transnational networks*, edited by Lauren R. Cannady and Jennifer Ferng, 87–91. Liverpool: Liverpool University Press, 2021.

Tierney, Andrew. 'Reviving the Artisan Sculptor: the role of Ruskin, science and art education'. In *The Museum Building of Trinity College Dublin: A model of Victorian craftsmanship*, edited by Christine Casey and Patrick Wyse Jackson, 189–216. Dublin: Four Courts Press, 2019.

Wilson, Richard and Alan Mackley. *Creating Paradise: The building of the English country house 1660–1880*. London: Hambledon Continuum, 2000.

Yarrow, Thomas and Siân Jones. 'Stone is stone: engagement and detachment in the craft of conservation masonry', *Journal of the Royal Anthropological Institute* 20 (2014): 256–75. DOI: https://doi.org/10.1111/1467-9655.12103.

Further reading

Burton, Neil. *Georgian Stairs*. London: The Georgian Group, 2001.

Campbell, James W.P. and Michael Tutton. *Staircases: History, repair and conservation*. London: Routledge, 2013.

Harris, John. *Moving Rooms: The trade in architectural salvages*. New Haven, CT and London: Yale University Press, 2007.

Thornton, Peter. *Seventeenth-Century Interior Decoration in England, France and Holland*. New Haven, CT and London: Yale University Press, 1983.

Part 1

Loss and retrieval

1

‘Onslow Palace’: new evidence of eighteenth-century craft technique at Clandon Park

Sophie Chessum

> A most noble and elegant Hall 40 foot high adornd with Marbles pillars carvings bass relieves by Rysbrake stuccos painting guildings &c. most rich and Costly.
>
> George Vertue, 1747[1]

Commissioned by Thomas, 2nd Baron Onslow in the 1720s, Clandon Park, Surrey, was given to the National Trust in 1956 by Gwendolen, Countess of Iveagh (daughter of the 4th Earl of Onslow). It was among the most significant English buildings of its time, designed by Italian-born architect James (Giacomo) Leoni and decorated by the sculptor John Michael Rysbrack and a team of Swiss *stuccatori*. Together they created the extraordinarily grand and imposing Marble Hall, complemented by a series of high-status parade rooms. The house was described by Thomas Onslow’s contemporary, British Prime Minister, the Duke of Newcastle, as ‘Onslow[’s] Palace’ (Fig. 1.1).[2] Much of the house was gutted by fire in April 2015,[3] with only a few rooms spared and about 600 of 3,000 collection items rescued. The loss of cultural heritage was devastating; it included archival documents, paintings, decorative arts, Maori treasures and the interior finishes of the house.[4] However, the façades and internal masonry structure of the house, together with fragments of the interior decoration, remain as conceived by its architect, patron and craftspeople. The fire had a dramatic impact on the once bright white cube of the Marble Hall, the great set piece of the design, but it remains an impactful and meaningful architectural space whose current state reveals much about its creation. This chapter will describe the impact of the 2015 fire on the interiors and the fate of the decorative plaster, including that in the *piano nobile* rooms – here considered comprehensively for the first time. This will include the National Trust's work since the fire to stabilise the house and surviving decorative interiors, and recovery of the collection and architectural fragments from the debris which have been so crucial to our understanding of the house. The latter tell us much about the craft processes which produced the decorative plaster surfaces at Clandon Park. Discussion will be prefaced by a summary of the house's problematic history and an analysis of the scholarly literature on its architecture and decoration in the light of discoveries made during investigation of the fire-damaged building, which suggest a revised chronology for Clandon. Given the focus of this chapter, the National Trust's broader conservation philosophy will not be set out. However, the strategic approach to Clandon since the fire has been based on the significance of the many elements of the fire-damaged house, including significances which have been made apparent as a result of the fire and have been revealed by further investigation. Supported by an expert team, the National Trust has cleared and stabilised, is repairing and conserving and will enclose the house for use by local communities and members. As announced in July 2022, Clandon will be a place where the craft and construction of the eighteenth-century great house can be appreciated and understood by visitors and further enlighten visits to other complete houses they see.[5]

Figure 1.1: Clandon Park, the west front.

Photograph © Andrew Knowles/RegencyHistory.net.

History

The house, home farm and core estate seen today have developed out of two medieval manorial centres. The house, occupying an elevated position in the south-east corner of the historic estate near the Anglo-Saxon parish church of St Peter and St Paul, West Clandon, is at least the third on the site though little is known of its predecessors.[6] In the thirteenth century, the farm complex known as Temple Court in the adjoining Parish of Merrow was leased from the Crown by the Knights Templar – all revealing the long occupation of the area. The placement of the house in the landscape is, in part, explained by this historic split in ownership and in part by the local geology; the house is built on a solid chalk seam, rich with springs, and immediately to its north is the wide band of clay which stretches across southern England.[7] For the building of the house at Clandon, it is significant that the area provided plentiful lime for making mortars and plaster, and an abundance of clay earth for making bricks. The proximity of the Wey Navigation allowed the comparatively easy transportation of timber, stone and other specialist materials from London and further afield.[8] Though Surrey at this time was not a wealthy county, plentiful local building resources and relative proximity to the seat of power in London and to royal residences at Whitehall, Hampton Court and Windsor help to explain why Sir Richard Onslow (1601–64) added to his existing Surrey estates by purchasing Clandon Park from Sir Richard Weston in 1641.

By the early eighteenth century the Onslow family's political aspirations were aided when the wealthy and powerful Whig politician and courtier Thomas Pelham-Holles, 1st Duke of Newcastle (1693–1768) bought and developed nearby Claremont, and his younger brother, the prime minister, Henry Pelham (c.1695–1754) followed his lead at Esher Place.[9] Increasing wealth and rising prominence, followed by ennoblement, led to Sir Richard's son, Thomas Onslow, 2nd Baron Onslow (1679–1740, Fig. 1.2) and his wife Elizabeth (c.1693–1731, Fig. 1.3) commissioning the imposing brick Palladian-style house we see today. Onslow's family were, according to his cousin, Speaker of the House of Commons Arthur Onslow (1691–1768), 'beholden very much to him for the great augmentation he made of the estate and the noble house he built at Clandon … He married the niece and heiress of Colonel Knight, of Jamaica, an eminent person there, and by her had a very great fortune.'[10] The Speaker's words hint that Clandon Park was not just a home but at the centre of the Onslows' familial, social, political and business lives. This was not a Surrey-based enterprise nor confined to national boundaries but was international: the family had commercial interests through trading in Turkey (as members of the Levant Company) and Elizabeth Knight's wealth derived from her uncle Charles Knight, who made his money trading enslaved people and produce from his Jamaican sugar and rum plantation, which relied on enslaved labour. This plantation passed by descent until its disposal in about 1832, and the income – along with the rent from English estates, appointments at court and investments in the emerging insurance market – provided the additional money to build 'Onslow Palace' and presumably contributed to the development and upkeep of the house and estate for many years.

The paucity of surviving documentary evidence means that the motivation of this power couple to make the expensive and bold move to demolish the existing large, high-status house which had been the Onslow family's home for more than 80 years is currently lost to us.[11] There are no documents relating to the construction of the house; no plans, accounts or

Figure 1.2: Hans Hysing (1678–1753), Thomas, 2nd Baron Onslow, who commissioned the new house at Clandon Park (NT 1441514 destroyed in the fire).

© National Trust Images/Angelo Hornak.

Figure 1.3: Hans Hysing (1678–1753), Elizabeth, Lady Onslow (née Knight), whose fortune from a Jamaican sugar plantation largely funded the building of the new house at Clandon Park (NT 1441468 destroyed in the fire).

© National Trust Images/Angelo Hornak.

letters have yet been found. Some of Thomas Onslow's business activities are understood to some small extent but Elizabeth Onslow's life is barely documented.[12] So little is known of their artistic patronage that we can only speculate about how they met and engaged with the Italian émigré architect James (Giacomo) Leoni (c.1686–1746) and the many more as yet unnamed craftspeople and artisans who built this richly appointed and distinctive house. The attribution of the superb decorative plaster decoration at Clandon Park, as with other houses such as Barnsley Park and Sutton Scarsdale, has to be made on stylistic grounds, which is challenging given that the *stuccatori* led workshops and appear to have formed partnerships with other *maestri* when taking on large commissions such as Clandon. Architectural historian John Cornforth described the Marble Hall as 'unquestionably among the grandest of all eighteenth-century interiors, its decoration by the best Italian *stuccatori*, and its chimneypieces by Rysbrack'.[13] The Onslows were Whigs and supporters of the Hanoverian succession, which brought them into a circle of politicians and courtiers such as the Duke of Newcastle, Sir Robert Walpole and Benjamin Mildmay, all of whom would have known, or known of, Leoni. Leoni dedicated an engraving of one of his designs to Onslow, who subscribed to his translation of *Della architettura di Leon Battista Alberti* when it was published in London in 1726.[14] Elizabeth Onslow died in 1731, seemingly in the midst of the construction, and Thomas Onslow in 1740. It is likely, therefore, that the house was completed by their only son Richard (1713–76). The established facts and contemporary sources relating to the primary phase of construction of the house are few and far between. Tantalisingly, the earliest surviving inventory of the contents of Clandon Park, dated 1778, includes the following description: 'In the Gallery … The model of a Mansion',[15] perhaps indicating that Leoni provided the Onslows with a lost model of the proposed design for the house as he had done for Sir William Scawen at nearby Carshalton.[16] Sadly, the inventory is not detailed enough to discern if architectural drawings were amongst the contents, though the Billiard Room (a large and important first-floor room overlooking the garden) had alongside many prints hanging on the walls 'two Port Folios and seventy Prints'. The only certainty is that the structure and roof were complete by 1733, the date borne by the lead rain-water heads, though logically the internal fit out would have continued for some additional years. On 20 August 1747 George Vertue visited:

> … to see the fine and Noble House lately built by the late Lord Onslow. and finisht by the present Lord … entring into a most noble and elegant Hall 40 foot high adornd with Marbles pillars carvings bass relievos by Rysbrake stuccos painting guildings &c. most rich and Costly – a fine dineing room … another spacious noble room. collums carvings ornamented richly. calld the Palladio room this house is very spacious. has 12 rooms on a floor … built of brick and some stone a fine Views & Visto's from it a fine grotto. of shellwork the park & walks noble Great and delightfull – Mr J. Leoni was the principal Architeckt and builder.[17]

The use of the word 'principal' begs the question that another architect was involved. This remains the subject of investigation, particularly since the fire has revealed differences in construction methods which could explain a change in architectural leadership or foreman during the period when the house was being built. Almost two decades later, in 1764, Horace Walpole described Clandon as 'built by Leoni for the last Lord Onslow; very magnificent, but rather wanting taste than in a bad one. In the hall, a noble room, but too richly loaded, are fine Basreliefs by Rysbrack'.[18]

With so little information, architectural historians have struggled to place Clandon Park within the context of its contemporaries, though it is undisputed that James Leoni (c.1686–1746) was the architect.[19] Daniel Defoe's *A Tour Thro' the Whole Island of Great Britain* (originally published in three volumes, 1724, 1725 and 1727) added to the chronological confusion by stating that the 'late Lord Onslow improved and beautify'd both the house and the estate too very much' and has led architectural historians to conclude that the demolition of the existing house and the building of the new one was initiated by Richard, 1st Baron Onslow (1654–1717).[20] This would be an unlikely commission for Richard, 1st Baron and his wife (also named Elizabeth), who were in late middle age at the time, and would make Clandon Park one of the earliest examples of Palladian architecture in early eighteenth-century England and Italian émigré Leoni's first commission. Defoe was more likely describing extensions to the old house or alterations made to its interiors by the 1st Baron which can be seen in the reuse of building materials evident in the house today and are recorded, in part, in his account book.[21] The bricklayer-turned-poet Robert Tatersal dedicated his *Bricklayer's Miscellany* of 1734 to the late Richard Onslow, which may have some relevance here, as may the laying out of the garden by royal gardeners George London (d.1714) and Henry Wise (1653–1738) in 1692.[22] Lending weight to the argument against a completion date in the early 1720s is the fact that Leoni did not include designs for Clandon in his influential translation of Alberti's *Ten Books*. Sir John Evelyn's description of a visit made by Frederick, Prince of Wales (1707–51) to race horses with Thomas, 2nd Baron in May 1729 and then to dine with the Onslows and other distinguished guests in 'the great room above stairs' likewise supports this supposition, since the latter does not easily fit the description of any room in the new house.[23]

New evidence and analysis

With so little documentary evidence, the tragedy of the 2015 fire created new, if unlooked for, opportunities to investigate the materiality of the house. The National Trust has taken the opportunities presented by this unforeseen and unfortunate stripping back to greatly increase our knowledge and understanding and to reassess the significance of the house and where possible of the people who made it. The first discovery to help with the dating of the house came with the commissioning of a dendrochronological investigation by the Historic England Scientific Dating Team.[24] Eighteen samples were taken from fire-damaged principal softwood girders. This analysis of tree rings revealed that a number of the ground-floor ceiling timbers were felled between the winter of 1729 and the spring of 1730, and originated in Finland and the border area between Norway and Sweden. The timber would have then been shipped to London and on to Clandon for immediate use. Richard Neve's *The City and Countrey Purchaser* of 1703 recommends the seasoning of timber before use, but it is likely that this refers to the use of oak rather than of pine, which was more commonly imported by the time Clandon was under construction.[25] It is more likely, therefore, that in 1729 the Prince of Wales was one of the last royal guests to be entertained in the existing house before it was demolished, rather than the first guest to be entertained in the newly finished house.[26] Individual lines of enquiry focused on Leoni's circle, and each trade and material – such as brick, joinery and stone – is being pursued, and the early indications are that Clandon is linked to teams of craftsmen employed in London on the construction of buildings under the supervision of the Office of Works.

Besides problems of chronology, architectural historians have found it difficult to place architect Leoni within the wider narrative of English neo-Palladianism.[27] While Leoni's translation and publication in English of Andrea Palladio's *Quattro Libri* should have given him a prominent position, his not being one of Lord Burlington's circle or a British exponent of Palladianism such as Colen Campbell or James Gibbs rendered him an 'outsider'.[28] There may well be other reasons affecting Leoni's legacy which remain to be illuminated: his status as an immigrant; his Roman Catholicism in a country dominated by the Church of England and religious prejudice which excluded him from public office; the status of his clients, who were wealthy and discerning but not always of the 'first rank';[29] and the fact that his sons did not carry on their father's work or protect his legacy.[30] It is helpful to compare Clandon with other houses designed by Leoni: Lyme Park, Cheshire, built for the Legh family, which can be followed in part in the correspondence of the family, and the sadly demolished but remarkably well-documented Moulsham Hall, Essex, for Benjamin Mildmay, Earl Fitzwalter (1672–1756).[31] Mildmay's detailed accounts trace the building of the house and services from the first brick being laid in 1728, over the subsequent 20 years until Leoni's death.[32] They include subscriptions to Leoni's publications; evidence that the architect also acted as an agent to buy works of art; and, of course, detailed costs of the construction and fitting out of the house. The last payment to Leoni was made by Mildmay on 8 June 1746: 'Mr Leoni, my

Italian architect, died this day. Sent him during his illness, which lasted about one month, *par charite* £8,8,0'.[33]

The crafted surface

New interest in the crafted surfaces at Clandon and the significance of the decorative schemes emerged in the 1970s stimulated by the work of interior designer John Fowler, who was commissioned by the National Trust to redecorate Clandon 1969–70, and the architectural historian John Cornforth, who followed the progress of the work for *Country Life*.[34] This was part of a growing, serious interest in the study of the English country house – particularly the study of interiors as set pieces combining architecture, textiles, paintings, sculpture and furniture as a whole. Historian and writer Geoffrey Beard was part of this 'movement'. Beard published works on Grinling Gibbons but it is his pioneering research on stucco decoration that first pointed up the significance of the Marble Hall

Figure 1.4: Clandon Park, Marble Hall, ceiling.

© National Trust Images/Anthony Parkinson.

ceiling as one of the grandest schemes of the period in Britain and shed light on the careers of Giuseppe Artari and Giovanni Battista Bagutti, to whom the Clandon Park schemes were attributed (Fig. 1.4).[35] This work began to raise the profile of craft skills, particularly demonstrated in the rare-surviving early eighteenth-century wallpapers, the highly skilled carving in marble by John Michael Rysbrack and the carved joinery in high-status rooms on the *piano nobile* – some of which Fowler drew attention to by the addition of decorative but historically spurious gilding.

The interiors at Clandon Park

Of the twelve rooms of state on the *piano nobile* described by Vertue, eight had highly decorative plaster schemes by travelling *stuccatori* dating from the primary phase of construction, now dated in the early to mid-1730s (Fig. 1.5).[36] These were the Marble Hall, the adjoining Saloon, the State Bedroom, the Green Drawing Room (and its neighbour the small drawing room), the Palladio Room, the Library and the Speakers' Parlour – the last of which is the only interior to survive the fire largely intact. The two primary staircases had unadorned ceiling flats and more restrained decorative plaster wall schemes limited to fielded panels only. The higher-status Stone Stairs had a decorative cornice and frieze whilst the lesser-status Oak Stairs had a plain run-moulded but deep entablature. Despite the extraordinary quality and quantity of the decorative plaster ceilings (and walls in the Library) they have received very little attention from scholars. Architectural writers such as Nikolaus Pevsner and Ian Nairn in the *Buildings of England, Surrey* found it difficult to reconcile the 'copybook Palladian symmetry and elegance' of the plan with the 'disparity' of 'four oddly un-Palladian brick elevations' and the exuberance of, as they saw them, outdated and incongruous Baroque interiors.[37] On the whole, English architectural history has favoured form, space and function over decoration and ornament. Clandon's plainness of exterior was compared favourably with the ebullience of the Baroque sculptural decoration inside, which was consistently criticised as being overblown and lacking in taste.[38] A common exception, which runs through writing from Vertue and Walpole to Gervase Jackson-Stops in the 1980s, is praise for the chimneypieces and overmantels carved in relief by John Michael Rysbrack (Fig. 1.6).[39] It seems that the art of the reductive sculptor in marble was held in much greater esteem than that of the additive process of moulding figures from lime plaster. Geoffrey Beard's survey of British decorative plaster makes occasional suppositions about the craftsmen

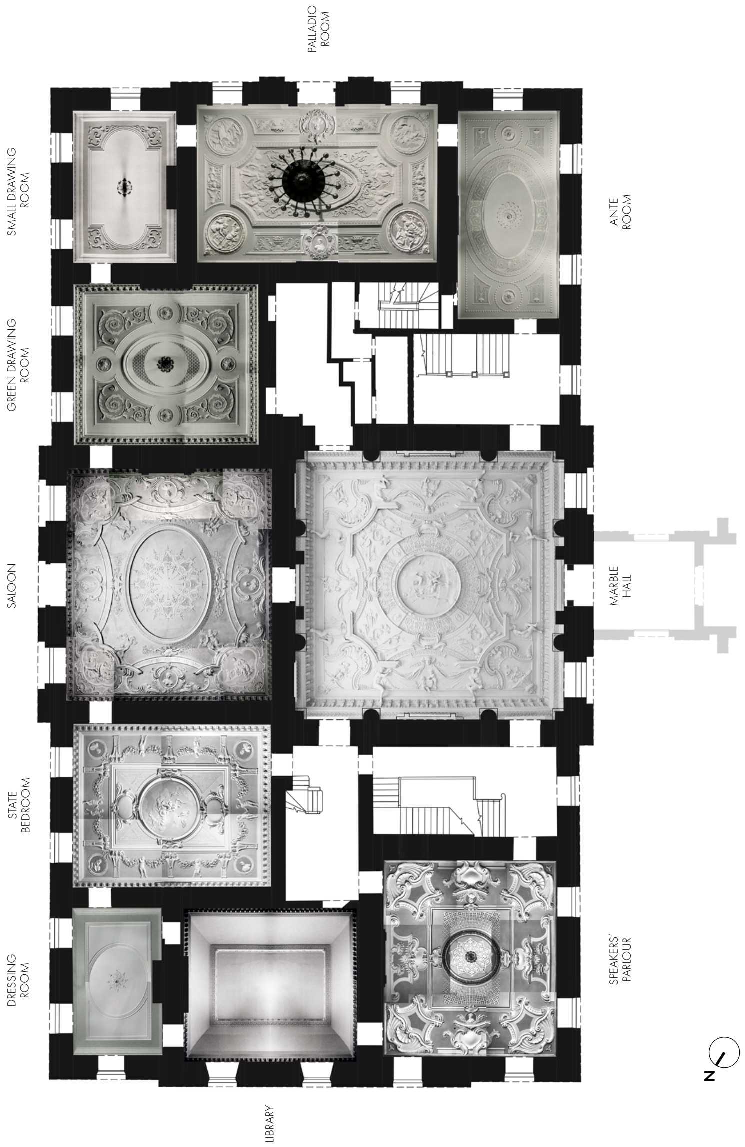


Figure 1.5: Clandon Park, decorative ceilings of the State Rooms.

© National Trust Images/Allies and Morrison.

Figure 1.6: Clandon Park, Marble Hall, the carved overmantel with sacrifice and attributes of Bacchus by John Michael Rysbrack.

© National Trust Images/Jonathan Gibson.

and techniques employed at Clandon Park. It was not, however, until Christine Casey's pioneering work *Making Magnificence* was published in 2017 that the craft skills and practices had begun to be understood and the significance of the decorative plaster at Clandon Park and in Britain more generally appreciated.

The Marble Hall, a 40 ft (12 m) cube, was designed by Leoni as an architectural statement (Fig. 1.7). To him can be ascribed the proportions, architectural form and pattern of windows, door openings, the engaged columns, pilasters, cornice and entablature, though working in collaboration with the designers of the ceiling. Compared with its close contemporary and exemplar, the Stone Hall at Houghton – a room that was embellished by the same artists (Artari, Bagutti and Rysbrack) but directed by the architect William Kent – Clandon's Marble Hall appears less crowded and more controlled. At Houghton the door architraves, pediments and the stucco tablets above are perilously close to the window

Figure 1.7: Clandon Park, Marble Hall looking south-east.

© National Trust Images/Anthony Parkinson.

architraves at 90 degrees to them, unlike those at Clandon, suggesting perhaps a higher level of architectural oversight by Leoni.[40] Awkward junctions of window and door frames, and other fixtures and fittings were common in eighteenth-century building practice, attesting to the discrete nature of contracts for workmanship and the frequent absence of sustained architectural oversight.

The ceilings of the *piano nobile* at Clandon Park have long been attributed to Giuseppe Artari and Giovanni Bagutti on stylistic grounds because of the similarity to their documented work at Moor Park, Houghton Hall and Cassiobury Park. Given the amount of work in the ceilings and their number, complexity and slightly differing style, it is highly likely that they represent the collaborative achievement of two or more *maestri* with the support of a workshop. With no documentary evidence for Bagutti's date of death and no documented commissions after about 1730, his involvement at Clandon Park was in doubt. However, Casey has shed light on this and tentatively puts Bagutti's death, in Italy, as late as 1754, which leaves his involvement at Clandon Park entirely possible.[41] A number of other highly skilled Luganese *stuccatori* spent much of the year working in England and Ireland in this period and may well have been involved at Clandon Park, including Francesco Vassalli; Francesco Serena; the Lafranchini brothers Paolo, Filippo and Pietro-Natale; Giovanni Battista San Michele; and Giuseppe Cortese (who, like Leoni, settled permanently in England and anglicised his name to Joseph).[42] Recent analysis of the designs of the eight ceilings has revealed stylistic characteristics which could indicate different design authorship. Despite their differing functions and status, the ceilings fall into four groups – the Marble Hall and neighbouring Saloon, with their robust architectural frames suggesting a form of three-dimensional central motif; the Speakers' Parlour and neighbouring Library, which share decorative motifs; the Palladio Room and Green Drawing Room with the ante-room between them which share their own architectural framework and decorative motifs. Lastly, the State Bedroom stands alone stylistically. Understanding the sequence and chronology of building at Clandon is a work in progress. It is noteworthy that the groups of rooms with decorative similarities coincide with differences in construction methods – particularly at the north and south ends of the house.

Despite their significance, the eight decorative plaster ceilings have not previously been fully described and illustrated. Though only one entire scheme survives, the documentary record and surviving fragments permit analysis of composition, iconography and modelling which contributes to our understanding of Luganese workshop practice in Britain. The complexity of the ceilings' design and modelling varies and each relates to the status and, to some extent, the function of the particular room. The decoration of the highest-status rooms is dominated by figures in high relief, the lowest with exuberant scrolling foliage or acanthus arabesques. This hierarchy can also be seen in the corresponding façades of the house. The exterior of the Marble Hall is articulated in stone, the Saloon with several finely rubbed and gauged brickwork arches and the Palladio Room with giant order carved stone pilasters. We know that involvement in design decisions by Leoni's patrons varied greatly. Mrs Frances Legh (1670–1728) certainly influenced and caused Leoni to change his designs for Lyme Park. This included the removal of a proposed cupola because, in Leoni's words, ‘Madam Legh did not approuve [sic] of it’ and also ‘shee objected at the three Arches … thinking they should draw to Much wind in to the Court and make the House to Could [sic]’.[43]

John Fowler’s redecoration of the principal rooms at Clandon in 1969–70 introduced colour to the ceilings. His choice of colours was invariably a creative response to others in the historic furnishings of the room, such as the introduction of pale green into the Green Drawing Room ceiling (where he had revealed green wallpaper from the 1730s) or pinks and blues in the Saloon ceiling echoing the colours in the Mortlake tapestries. However, paint and pigment analysis carried out in 2001, long before the fire, demonstrated that each ceiling was originally painted white, with colour first being introduced only in the late nineteenth century. White or stone-painted stucco was favoured by Palladian architects as a pure and monumental treatment which accentuated gradations of shadow.[44]

The Marble Hall

Although conceived by Leoni, the work of the *stuccatori* dominates here and is the key to Clandon’s renown, from the engaged columns with Corinthian capitals supporting a boldly modelled entablature the eye was drawn up to the most expressive and three-dimensional of the ceilings in line with its status as the grand entrance hall. Life-size figures hung from the cornice and supported classical gods in the ‘sky’ above the viewer (Fig. 1.8). The entire surface of the ceiling was covered with deeply moulded faces, figures, draperies, military trophies and decorative devices within deep architectural framing – all supporting and giving the illusion of a raised central architectural device. Photographs do not do justice to the sheer panache, daring and skill of the design, which could be viewed at closer quarters from the first floor ‘Gallery’ that overlooked it at a raking angle. The hall and its neighbouring room, the Saloon, form one of the four stylistic groups of ceilings as they share a similar architectural framework and the same engraved sources.

The figurative decoration of the Marble Hall ceiling was largely inspired by the frescoes of Annibale Carracci (1560–1609) in the Gallery of the Palazzo Farnese in Rome (1597–1601) with additional ornamental motifs. Transposed to Clandon, the scheme does not seem to deliver a unified theme – unless it conveyed a hidden meaning to the patrons, Thomas and Elizabeth Onslow, which is lost to us. In the central roundel of the 40 ft (12 m) square ceiling were low-relief mythological figures of Omphale, Queen of Lydia, and Hercules which have been interpreted in their original at the Farnese Palace as communicating a complex set of messages on courtly love and sexual desire with a comedic twist in the emasculation of the hero, Hercules (Fig. 1.9).[45] This is a subject which does not entirely equate with what is reported of Onslow's character by his cousin Sir Arthur Onslow (1691–1768), who described him as having

> … such a mixture of what was wrong in everything he thought said and did, and had so much of pride and covetousness too, that his behaviour conversation, and dealings with people were generally distasteful and sometimes shocking, and had many bitter enemies but with not very few friends (to whom he was not unkind).[46]

Figure 1.8: Clandon Park, Marble Hall, one of the deeply sculpted *giganti*. © National Trust Images/Chris Lacey.

It is noteworthy that the art collector and builder of Houghton Hall, first British Prime Minster Robert Walpole, owned a painting of the same subject by Giovanni Francesco Romanelli.[47] Versions of the theme were painted by contemporary Italian artists active in England, Jacopo Amigoni and Antonio Bellucci.[48] Carracci's frescoes in the Palazzo Farnese were engraved by French artist Jacques Belly (1609–74), who published 30 images in 1641; Carlo Cesio (1622–82) in 1657; and Pietro Aquila (c.1650–92) around 1676.[49] Each of these suites of engravings provided artists such as Artari with exemplars for their own works and perhaps to show to clients. Presumably the portfolios of such patterns were frequently used and so have not survived well; but they must have existed along with other working drawings including pouncing papers to guide assistants in their work, such as those related to William Kent's work discovered at Hampton Court.[50] Francesco Vassalli chose Carracci's Farnese *Pan offering the fleece to Diana* as the source for his large and exuberant overmantel in the White Hall at Hagley Hall, Worcestershire.[51] Belly engraved not just Hercules and Omphale but also a series of Virtues from the Farnese Gallery, three of which (Temperance, Justice and Fortitude) were

Figure 1.9: Clandon Park, Marble Hall, central roundel showing Queen Omphale and Hercules.

© National Trust Images/Anthony Parkinson.

employed, with some variation, in the corners of the Marble Hall ceiling. Artari did not utilise Belly's figure of Charity, instead substituting the figure of Prudence to more correctly complete the group of Cardinal Virtues. Another theme not previously identified are four vignettes of Eros and Anteros (Fig. 1.10), though the engraved source for these is not drawn from Carracci's work in the Farnese Gallery. However, these were also used in the Saloon ceiling next door, which must raise the questions of how co-ordinated the schemes were, in which order they were made and how the workshop and its work was planned.

The entablature of the Marble Hall was formed of a scrolling acanthus frieze punctuated by scallop shells and, over each of the Corinthian capitals, female masks. Prominently centred on all four sides was a Baron's coronet (repeated over many of the windows and blind openings). The faux balustrade which wrapped, intermittently, around the walls was perhaps designed to suggest the presence of a gallery as is present at Inigo Jones' Queen's House, Greenwich; at Houghton Hall; and at Leoni's own Moor Park. The niches high up on the north and south walls contain nineteenth-century plaster copies of Venus and the

Figure 1.10: Clandon Park, Marble Hall, Eros and Anteros.

© National Trust Images/Jonathan Gibson.

Discophoros, but although the niches were perhaps designed for this purpose there is no mention of sculpture here by Vertue or in the first inventory. However, the latter does mention ‘two marble bustos’ still in place at the time of the fire (and which survived it).

The Saloon

The Saloon was conceived architecturally with a white marble-tiled floor to form a suite with the larger, neighbouring Marble Hall, which together provided views to the landscape beyond (Fig. 1.11). Whilst elements of the architectural framing of the ceiling are similar to that in the Marble Hall, the more subtle sculptural treatment and shallow relief of the Saloon ceiling reflected its lower ceiling height and the proximity of the viewer. The Saloon shares the suggestion of a central three-dimensional architectural device as in the Marble Hall but in lower relief (Fig. 1.12). As has been shown, the themes and engraved sources for the two ceilings and the duplication seen arguably demonstrate that there was a lack of co-ordination in decoration of these two adjoining rooms. This high-status room had a dual theme of love, as demonstrated by the surviving low-relief plaster overmantel scene of Venus, Mars and Cupid, and the elements. The engraved source for this has not yet been found but the figures of Venus and Mars point strongly to a relationship with Hendrik Goltzius’ 1585 print of the same subject, to which it bears a closer resemblance than to others of the same subject.[52] Joseph McDonnell has identified other *stuccatori* working in Ireland and England using Goltzius as a source.[53] Cupid is seen again, this time in very low-relief, holding roses – the flowers emblematic of his mother, Venus – in the centre of the ceiling, surrounded by a deep border of strapwork and scallop shells which is reminiscent of the lost ceiling from the New Hall at Sutton Scarsdale attributed by Beard to Adalbertus Artari and Francesco Vassalli.

Each corner of the room had one of the four elements represented by a mythological figure: Jupiter, Cybele, Apollo and Thetis. Ovals on the cardinal points of the ceiling depicted goddesses: Minerva flanked by owls, Venus by doves, Juno by peacocks and Ceres flanked by winged dragons – the last-named bearing a close resemblance to those in the Saloon ceiling at Ditchley Park. No specific engraved sources have yet been linked to these motifs. In common with the Marble Hall, the Saloon ceiling is completed by Eros and Anteros; however, this time the figures have been directly taken from Carracci’s paintings for the Palazzo Farnese. In turn, the fiercely

Figure 1.11: Clandon Park, the Saloon, looking south towards Leoni's chimneypiece.

© National Trust Images/Anthony Parkinson.

competitive brothers are fighting over a palm frond, pulling each other's hair, hiding a torch and finally reconciled in an embrace (Fig. 1.13). The use of Eros and Anteros in both the Marble Hall and Saloon allows a direct comparison in their sculptural treatment. The physique of the boys and their activities in the Saloon are articulated in detail and in some depth; however, those in the Marble Hall were sculpted with greater three-dimensionality, in many cases the boys' lower limbs extended forward of the sculptural plane and were sculpted in the round. The entire composition of the Saloon was framed by the vigorous plasticity of the entablature, and its alternating

Figure 1.12: Clandon Park, the Saloon ceiling showing the coloured paint scheme introduced by John Fowler.

© National Trust Images/Anthony Parkinson.

eagles, cornucopia and classical profiles held by putti were richer and more prominent that those of the Marble Hall. Remarkably, a small section of the frieze survived the fire in the north-west corner of the room.

The Palladio Room

This large drawing room had a central position on the south side of the house, facing Leoni's decorative Grotto and flanked by the stylistically related ante-room and adjoining Green Drawing Room (Fig. 1.14). The Palladio Room's status is confirmed by Vertue, who made special reference to it when he visited in 1747, describing it as 'another spacious noble room. Collums carvings ornamented richly. Calld the Palladio room.' Two points are of interest in his short note: the decorative scheme and the name. The individual naming of the room is of particular significance. It refers to the proportions of the room, its length being twice the height and one-and-a-half times its width, but also perhaps signals Leoni's or Onslow's desire to demonstrate consciously the connection between the design and the revered architect Andrea Palladio, whose treatise Leoni had published in English. It seems likely that this is the earliest naming of a room in honour

Figure 1.13: Clandon Park, the Saloon ceiling, Cybele and her lion with Eros and Anteros fighting over a palm frond above.

© National Trust Images/Jonathan Gibson.

Figure 1.14: Clandon Park, the Palladio Room looking west, showing part of the ceiling and the deeply moulded frieze.

© National Trust Images/Anthony Parkinson.

of a deceased architect in Britain. As designed originally, this sunny interior was entered directly from a modest vestibule off the Marble Hall, altered not long after 1778. The theme of the highly decorative ceiling was thought to be the seasons, but recent research has revealed a more complex iconography which appears to be warning against the worshipping of false idols. The deeply modelled corner roundels contained vignettes relating to the presentation of Old Testament sacrifices to gods, including one which depicted Solomon worshipping idols (Fig. 1.15).[54] Unusually, the elderly king was depicted wearing a Roman tunic, and this may relate to a 1551 engraving by Dirck Volckertsz Coornhert after a drawing by Maerten van Heemskerck.[55] Following this theme, the roundel in the south-east corner appears to be a highly edited depiction of the Sacrifice at Lystra. The other two scenes, each depicting figures making offerings at an altar, have yet to be identified. The choice of subject matter is somewhat perplexing in such a high-status secular drawing room. Other, highly modelled decorative elements fill other areas of the ceiling, including eagles and faces bordered with fruit and flowers. Acanthus leaves spring from the tails of sphinxes kissing putti, a pairing also found in the hall ceiling at Houghton, while trapezoidal panels contain goats kissing satyrs. Although far less rich, the scrolling leaves, central boss and studded flowers were also seen in the

Figure 1.15: Clandon Park, the Palladio Room ceiling, King Solomon worshipping idols.

© National Trust Images/Jonathan Gibson.

less-embellished ceiling of the Green Drawing Room. The Palladio Room ceiling was supported by an elaborate modillion cornice with an egg-and-dart, dentil and acanthus frieze which was punctuated by 20 female masks.

The Green Drawing Room and closet

The Green Drawing Room and its closet should be compared with their higher-status neighbour the Palladio Room as the three ceilings form a stylistic group (Fig. 1.16). Each of the ceilings has an identical central boss and the two grander rooms share a similar architectural framework around this, decorated with floral studs, though the ornament in the Green Drawing Room was more restrained (Fig. 1.17).[56] The small adjoining closet had a ceiling dominated by a plain flat, framed and with modest acanthus ornament. The Green Drawing Room ceiling is

Figure 1.16: Clandon Park, the Green Drawing Room looking south-west, showing the ceiling colour scheme introduced by John Fowler.

© National Trust Images/Anthony Parkinson.

reminiscent of designs in the collection of James Gibbs, as is the structure (but not the decoration) of that in the Palladio Room.[57] Gibbs worked with Artari and Bagutti at Ditchley Park, but whether he was involved directly or indirectly at Clandon is a subject for further research. Like those in the State Bedroom, Speakers' Parlour and Stone Stairs, the frieze took the traditional form of layered banded laurel with bold egg-and-dart ornament above it – giving rise to speculation that these rooms were in use by the family whilst the house was being completed.

Figure 1.17: Clandon Park, the Green Drawing Room ceiling.

© National Trust Images/Jonathan Gibson.

The Speakers' Parlour

This was the only room and decorative plaster ceiling on the *piano nobile* to survive the fire largely intact, which has thus enhanced its significance (Fig. 1.18). It was the Onslow family's 'fine dineing room' wherein Vertue noted, as others have since, the portraits of the three Speakers Onslow (hence the name of the room). The ceiling is largely abstract with a large panel of treillage ornament at the centre and figurative cartouches at the cardinal points. It is dominated by scallop and scroll ornament with textured plaster surfaces, and is enlivened by satyr and male masks in the corners (Fig. 1.19). The west and east sides are enriched with plaster ornament of scrolls, cartouches, masks, lambrequin drapery, and baskets of fruit and flowers. Medallions bearing more generic female busts rest on deep projecting mouldings over blind cartouches.

Figure 1.18: Clandon Park, the Speakers' Parlour ceiling in the days after the fire, showing its remarkable survival.

© National Trust Images/John Millar.

Figure 1.19: Clandon Park, the Speakers' Parlour ceiling, showing a satyr.

© National Trust Images/Chris Lacey.

The Library

Along with the Marble Hall, the Library was the only room to have richly modelled decorative plaster on the wall surface as well as the ceiling, the east side of which survived the fire (Fig. 1.20). The ceiling was plain in stark contrast to others on the *piano nobile*, with a deep cove springing from a modillion cornice and incorporating animal masks at each corner, including a hare and a characterful terrier-like dog (Fig. 1.21). The restraint of the ceiling has led to speculation that the plain plaster was intended to be painted or that it has been replaced at some point, but this is unlikely – particularly given its similarities to the Library at Houghton Hall. The focus of the crafted surface in this room is therefore the highly decorative plaster adorning the overmantel; walls; and, unusually, the window embrasures decorated with pendants emblematic of the four elements. The iconographic theme relates primarily to learning and has an obvious connection to the use of the room as a study or library. This is seen most clearly in the generic figures of philosophers in the overmantel and the diminutive figure of an owl surmounting the pier glass between the windows. In the 1778 inventory this was described as ‘an oval Glass in an elegant carved frame with ornaments’, the unknown scribe mistaking the plaster for carved wood. Although dissimilar in the form of decoration, details such as the profiles and other

Figure 1.20: Clandon Park, the Library looking north-east.

© Clareville Studios Ltd.

Figure 1.21: Clandon Park, the Library ceiling, showing its simple cove, repetitive guilloche and hand-modelled terrier.

© National Trust Images/Jonathan Gibson.

decorative motifs are shared between the Library and its neighbour the Speakers' Parlour, forming the third of the stylistic groups at Clandon.

The State Bedroom

The State Bedroom was high-status and its use as a ceremonial bedroom, containing in 1778 'a noble costly bedstead', suggests that it always

Figure 1.22: Clandon Park, the State Bedroom looking north-west, showing the 'noble costly bedstead' and ceiling.

© National Trust Images/Anthony Parkinson.

performed this function (Fig. 1.22). Stylistically, this room stands alone and forms the last 'group' of the four types of decorative ceilings at Clandon Park (Fig. 1.23). The form and style of the plasterwork related closely to the State Bedchamber at the demolished Cassiobury Park. At Clandon a central allegorical cloud-borne figure held aloft a flaming torch which scared away demonic winged and snake-legged female figures emblematic of darkness.[58] Previously identified as Venus, it more likely represented Aurora[59] surrounded by putti, one bearing a basket of flowers, which image Casey has linked to a painting by Antonio Bellucci that Bagutti employed in the ceiling of the State Bedchamber at Cassiobury Park.[60] In the corners were small roundels containing busts emblematic of the seasons. The room also differed from the other rooms of parade in having a deep conventional classical entablature with a pulvinated laurel frieze which partially survived the fire.

Figure 1.23: Clandon Park, the State Bedroom ceiling in 1925.

© Country Life.

After the fire: uncovering methods and materials

The loss of much of the surface decoration in the fire has revealed what was previously invisible: the brick carcass of the house, supporting substrate and layers of craft activity that lay behind the more ornate, superficial and often more costly materials which covered them. This peeling back has provided extensive new material to examine and understand, has raised questions, opened up numerous avenues for new research and provided more knowledge about the construction of the house than ever before (Fig. 1.24). This includes materials and their sources and craft techniques, some of which will be illuminated below, though many questions remain at this time unanswered. In its response, the National Trust team had the benefit of drawing on experience gained at other historic building fires such as those at Hampton Court Palace, Windsor Castle, Glasgow School of Art and the National Trust's own Uppark, and modified it to the situation at Clandon and in line with current health-and-safety legislation. First, the house was stabilised and loose material – such as large structural timbers, melted lead and masonry – was gradually removed at all but basement and ground-floor level. Once stability had been safely achieved, a team of archaeologists was briefed to excavate the mess of debris, architectural fragments and

Figure 1.24: Clandon Park, looking into the gutted house in the days after the fire.

© National Trust Images/John Millar.

Figure 1.25: Clandon Park, the Saloon, showing sections of the surviving frieze and plaster fragments in the debris.

© National Trust Images/Chris Lacey.

Figure 1.26: An archaeologist with the foot of Eros or Anteros excavated from the debris in the Marble Hall.

© National Trust Images/Sophie Chessum.

collection objects which had accumulated in each room, sometimes more than 5 ft (1.5 m) deep (Fig. 1.25). Finds were labelled using a simple location grid. Some of the larger pieces of decorative plaster were recoverable (Fig. 1.26); it was at this time, in handling the plaster, such as the thigh of a monumental figure, that the composition of the plaster became evident, in some cases being of solid lime. Sadly, in areas like the Palladio Room where the fire was at its hottest (up to 2,200 degrees Fahrenheit – 1,200 degrees Centigrade) the survival of the decorative plaster was poor. Decorative plaster fragments found in this area were incredibly friable and often had no structural integrity; they disintegrated as they were removed by archaeologists from surrounding debris.

The National Trust's next aim in the immediate aftermath was to stabilise the decorative plaster which remained in situ, to prevent additional loss. To begin with, this work had to be carried out by operatives suspended from a crane basket to protect them from the risk of falling masonry. Decorative plaster and the flat plaster surrounding windows, blind windows and niches for sculpture – along with engaged columns and their Corinthian and Composite capitals – were very simply strapped and pinned in place to stabilise them. Fragments of architectural fabric and collection objects were removed from the house to a purpose-built temporary conservation area where they were assessed against a retention-and-disposal policy drawn up in advance, as well as against their conservation needs. Some categories of fabric such as rubble, ash and that which was damaged beyond recognition were disposed of in order to focus resources on objects of historic significance, which were grouped by material type and moved to conservation cabins for decontamination.[61] Similarly, decorative plaster fragments, ranging in size from 2 to 20 inches (5 to 50 cm), were placed in trays and brushed clean of contaminated ash deposits. This helped us to begin to understand the survival of the ceilings, the quantity and the quality of surviving material, and also to distinguish between work carried out by Italian *stuccatori* and that carried out by English plasterers. Importantly, it was also the first time that the plaster had been seen close up, and the opportunity was therefore taken to gain more understanding of its materials and the techniques being used by the *stuccatori*. Our initial findings were that larger, heavier, more sculptural decorative plaster survived better, as did that in rooms with lower ceilings. Also, there was more damage where rooms had marble floors – such as the Marble Hall and the Saloon – whereas survival was increased in the State Bedroom, which had a wooden floor, carpet and furnishings which provided decorative plaster with a softer landing. During the salvage response approximately 1,100 trays of decorative plaster fragments were recovered, and these are in storage whilst our research and analysis continues.

Beneath the crafted surface

On stylistic grounds, the design of the Marble Hall ceiling has long been attributed to Giuseppe Artari and in Casey's opinion was his 'finest and most ambitious figurative composition in Britain'.[62] Itinerant *stuccatori* carried with them portfolios of engravings and drawings, presumably to show to clients, to use as guides to model ceilings and perhaps act as training aids for apprentices. An engraving after Carracci's paintings for the Palazzo Farnese by Pietro Aquila – this time of one of the *giganti* – was used by Artari for modelling, as can be seen when compared with one of the surviving thighs, complete with folds of drapery (Fig. 1.27).[63] The leg is approximately life size and weighs more than 66 lb (30 kg); it came as a surprise that close examination revealed no supporting metal armature, rather the thigh is modelled from a very dense lime-rich mortar. This finding has implications for wider stuccowork practice in the period and supports observations made elsewhere by plasterwork conservators.

Many of these very heavy, solid decorative lime elements appear to have been attached with a combination of nails, and barely any are scratched or keyed into the supporting plaster coat below. Concerns about the stability of the ceiling in the late 1950s saw the insertion of steel above the Speakers' Parlour and another, huge steel beam in the small

Figure 1.27: One of the thighs from a *gigante* figure excavated from the debris in the Marble Hall.

© National Trust Images/Sophie Chessum.

servants' rooms above the Marble Hall. Today this appears an intrusive intervention, but it assisted the original timber girders (some of which had been damaged by rot) in supporting the immense weight of the ceiling. After repairs to ceiling cracks in 2010 these rooms had even been cordoned off to avoid unnecessary vibration. It was not apparent until after the fire how lightly the *stuccatori* had affixed the decorative elements to either the timber supporting structure or the base coats of plaster. In well-maintained buildings the survival of eighteenth-century decorative plaster ceilings has been remarkable, and demonstrates the skill of the craftsmen and their knowledge of the materials they worked with. It is not clear, and may never be, how much involvement the *stuccatori* had in the preparation of this ceiling's supporting structure. It is documented that on occasions *stuccatori* specified the kinds of laths to be supplied and insisted on preparing their own ground. Many areas of laths have been exposed as a result of the fire; they vary in their width, but it is clear that the quality of laths and their spacing was important in providing a good key for the plasterers. The wavy, irregular edges and the deep grain of the softwood lath produced by cleaving rather than sawing was essential to hold the wet plaster to walls, ceilings and other decorative plaster elements such as the engaged columns and pilasters of the Marble Hall

Figure 1.28: An engaged column in the Marble Hall: partially burned, it reveals the timber structure beneath the plaster.

© National Trust Images/Sophie Chessum.

(Fig. 1.28).[64] In the Speakers' Parlour, damage has revealed unusually closely spaced laths, which has compromised the adhesion of the plaster.

Further examination of larger surviving fragments confirmed the discovery that metal armatures were not used in the decorative plaster ceilings made by the Luganese *stuccatori* at Clandon Park. Instead, the broken ends of a lower-leg fragment reveal the use of bundles of straw or reed held together by drawn wire wrapped round it (Fig. 1.29). Close inspection shows that the pliable lime plaster has, as a first coat, been squeezed around this lightweight, loose and flexible 'armature'. Subsequent layers and modelling were built up as and where necessary. This is not a technique used by English plasterers, perhaps because they were working in lower relief which did not demand additional internal support. In some cases, including with life-size heads and faces, the straw bundle is bound by wire to create something more akin to a pad, which provided a broad ground for a hand-modelled face. The heat from the fire and subsequent damp has caused hand-modelled faces to delaminate, showing how the *stuccatori* have built up layers of lime putty to model these expressive elements. It is also possible to make out light tool marks on the figures' cheeks. Drawn wire was also used, without the addition of reed, to support finer details such as a scroll motif. In the 1660s Italian sculptor Gian Lorenzo Bernini (1598–1680) used wire to support the arms of angels in the Cathedra Petri in Saint Peter's Basilica in Rome.[65]

It has been possible to make a direct comparison been work carried out by *stuccatori* and that, by deduction, carried out by English plasterers by examining materials and methods. We are now more inclined to conclude that elements of the first-floor-level frieze and faux balustrade are the work of English craftsmen. There is much more use in these areas of moulds, particularly for decorative motifs like palm leaves and coronets

Figure 1.29: Lower-leg fragment, revealing the use of bundles of straw or reeds held together by drawn wire.

© National Trust Images/Sophie Chessum.

seen in window and door pediments. It was immediately noted during examination of plaster on these lower areas of the Marble Hall that it contained a wider variety of more and larger aggregate mixed in with the lime. It also contains animal hair, which was completely absent in the ceiling plaster and known to be commonly used by English plasterers. Although not comparable with the freehand figurative work of the ceiling, it is noteworthy that metal armatures were used in the faux balustrade from the frieze at first-floor level.

Examining the materials and methods used in the ceilings presents an opportunity to explore further the attribution of the ceilings by comparing these with the stylistic differences. A comprehensive project linking archives, materials and methods of *stuccatori* in an area of Lugano carried out by Giacinta Jean of La Scuola universitaria professionale della Svizzera italiana (SUPSI) may offer useful comparative material.[66] Ordinarily hidden from view, it is now possible to see the many thousands of iron 'hold fasts' individually forged by blacksmiths that held in place the timber battens which have been burned away. These approximately 10 in x 1½ in (25 cm x 4 cm) hold fasts were the method used to batten out the walls, onto which hand-cleaved softwood laths were nailed. Other features have been revealed, such as lines where the carpenters and joiners scribed the brick walls to indicate and measure out where door frames, windows and other joinery features would be fixed. On the principal floors the same method can be seen: the vertical timber battens with horizontal laths affixed with handmade nails, followed by a base coat, squeezed into the supporting laths – sometimes called the render or 'pricking up' coat. This is followed by the floating coat (both of these included hair) and the deep scratches made deliberately to provide a key for the final, thin upper, smooth or 'setting coat' (Fig. 1.30). Paint analysis carried out in 2001 revealed marble dust in this upper layer of plaster or in whitewash applied over it to add a brilliance to the final coat. The fragility and the challenge of managing the wall plaster since the fire cannot be underestimated, as illustrated by an example of surviving but precarious pilasters. Much of the plaster, the pilasters and the neighbouring engaged columns have no timber supporting them, it having all been burned from behind. The effect of fire on plaster is apparently under-researched, but it is likely that the high temperatures will have irreversibly changed and shrunk the plaster whilst causing multiple, tiny fractures. In some areas elements of the timber former have survived, seen sitting on a large stone slab, which also forms part of the skirting in the room. Also visible are the vertical laths which would have been nailed around a series of timbers onto which the plaster was applied

Figure 1.30: Layers revealed by the fire, including the softwood laths and three layers of plaster.

© National Trust Images/Sophie Chessum.

in coats. The surface achieved was so smooth that many were deceived into thinking the columns were made of solid marble – perhaps this was Leoni's intention. In some cases the craftspeople have driven numerous nails into the tall timber supports, creating a very effective bond but one which was clearly never meant to be seen.

There is no doubt that the loss of much of the decorative plaster during the 2015 fire is incalculable. Three parallel research paths and approaches have been pursued in this chapter: archival, comparative and material. For archival research the direction of architectural historians towards the serious study of ornament and craftsmen has opened up yet more lines of enquiry and research questions for Clandon Park. Despite the fire this archival research has continued and has revealed likely pictorial sources and a better understanding of the iconography of the ceilings. Close comparison with other ceilings, particularly those at houses with surviving documentation, has allowed greater clarity in the many hands at work at Clandon. It has also uncovered additional information about patronage networks. Crucially, information gained from materials in the house which would not have been possible before the fire, primarily the dendrochronology, has enabled more focused research. Gradually, despite the lack of documentary evidence, bringing these two elements together will bring a greater understanding and contextualisation of the architecture and ornamentation of the house. Although deeply regrettable, the loss and stripping back caused by the fire has opened up new research paths on the materials and methods used by craftspeople in its making, which would not have been possible before. This has added enormous detail to our knowledge of how these ambitious, inventive and beautiful ceilings were made. Understanding through material analysis and construction methods has amplified our knowledge of Clandon Park and the craftspeople working here, but will also benefit wider understanding of their work in Britain, Ireland and Europe. Differences between the methods employed by the *stuccatori* and by English plasterers are beginning to be understood, though there is more to be discovered. This level of investigation brings us closer to their creators – including a surprisingly personal connection on finding a pistachio nut and a walnut squashed into the decorative lime plaster.

Notes

1 Vertue, Walpole Society, 'VERTUE'S NOTE BOOK', 153.

2 British Library ADD MS 33077 f.118.

3 Caused by an undetectable manufacturing fault in a modern electrical-distribution board.

4 For more information, see the Clandon Park website: https://www.nationaltrust.org.uk/clandon-park.

5 National Trust, 'New plans for Clandon Park reveal X-ray view of a great house'.

6 Blair, *Early Medieval Surrey*, 156. A licence to build a private chapel was granted to William de Weston in 1313, giving an indication of the high status of the house at that time.

7 British Geological Survey, 'The Geological Survey of England and Wales Guildford sheet 285'. The house is built without foundations, directly onto Newhaven chalk. Immediately to its north, running across the estate is a seam of London clay of the Lambeth Group.

8 National Trust, 'River Wey Navigations'. The River Wey and Godalming Navigations were made by Sir Richard Weston from 1651 to 1653. The former connects Guilford with the river Thames at Weybridge. With thanks to my colleague Rachael Chambers, who informs me that it passes closest by road to Clandon Park at Burpham, near the historic home of the Weston family, Sutton Place.

9 Chessum and Rowell, *Claremont*.

10 Onslow, 'A manuscript belonging to the Earl of Onslow', 495.

11 Onslow, 'A manuscript belonging to the Earl of Onslow', xii notes that William Onslow, 4th Earl of Onslow was 'unable to find any family manuscripts of historical interest at Clandon Park' though many subsequently came to light and were deposited by the Onslow family at Surrey History Centre, Woking.

12 For Onslow's involvement in the founding of the Royal Exchange Assurance company, see Supple, *The Royal Exchange Assurance*, [12–14] 18, 25–6, 29, 33, 44–5. On Elizabeth Onslow, see Foundling Museum, *Ladies of Quality and Distinction*, 5; on 8 April 1730 Elizabeth, Baroness Onslow signed Thomas Coram's first petition to George II to establish the Foundling Hospital in London. For the sermon following Baroness Onslow's funeral, see Stephens, *The Amiable Quality of Goodness, as Compared with Righteousness, Considered*.

13 Cornforth, *Clandon House*.

14 Alberti, *The Architecture of Leon Battista Alberti in Ten Books*.

15 This manuscript is in the National Trust collection, collection number 1441341.

16 National Archives, Prob 11, 588, 139–42, Scawen bequeathed the majority of his estate to his nephew Thomas Scawen, stipulating in his will that an annuity of £10,000 should be 'laid out and expended in rebuilding a house at Carshalton … as neare to and agreeable to the Modell I now have as may be'.

17 Vertue, Walpole Society, 'VERTUE'S NOTE BOOK', 153. 'J. Leoni' was mis-transcribed from the original manuscript as 'J. Levin' in the 1937 Walpole Society volume.

18 Toynbee, 'Horace Walpole's journals of visits to country seats, &c.', 60. Given that Walpole bought Vertue's notebooks in 1750, it is supposed that Walpole's attribution came from Vertue's first-hand knowledge.

19 Hewlings, 'James Leoni', 21–44.

20 Defoe, *A Tour Thro' the Whole Island of Great Britain*, 147.

21 Woking, Surrey History Centre, G97/11/6. Quoted in Chessum and Rowell, *Clandon Park*, 57.

22 Tatersal, *The Bricklayer's Miscellany.* Thanks to Christine Casey for drawing my attention to this remarkable book; Woking, Surrey History Centre, G97/11/6. '1701 Paid Mr London and Mr Wise in full £19'.

23 Woking, Surrey History Centre, G173/3, fol. 9. Quoted in Chessum and Rowell, *Clandon Park*, 65; Cornforth and Onslow, *Clandon Park*, 13. Even before discoveries made since the fire, this theory had been dismissed by John Cornforth.

24 Tyers, 'Fire damaged timbers at Clandon Park'.

25 Neve, *The City and Countrey Purchaser*, 263. Despite the ideal drying practice recommended by building manuals such as Neve the physical evidence at Clandon suggests its immediate use. I am grateful to Joe Thompson and Ian Tyers for clarification on this point.

26 William III and George I visited the Onslows in their old house; Defoe, *A Tour Thro' the Whole Island of Great Britain*, 147.

27 For an excellent assessment and summary of Leoni's position amongst or outside the Palladians, see Hewlings, 'James Leoni', 21–44.

28 This subject is well covered by Woodhouse, 'Giacomo Leoni', 158–72.

29 Leoni does not appear to have been financially successful, or perhaps astute, and he died intestate. See Edwards, *The Account Books of Benjamin Mildmay, Earl Fitzwalter*, 53, '17 June 1734 Advanced Mr James Leoni, £25, on account of the building I am [to] go on building with next year, being in distress'. The original manuscripts are held at the Essex Record office, Chelmsford.

30 Leoni married Mary and they had two sons, John Philip and Joseph. One appears to have been a glazier, one perhaps a clerk to Matthew Brettingham; see Connor, 'Giacomo [James] Leoni'.

31 Danter, 'The 18th century rebuilding of Lyme Park', 49–80.

32 Edwards, *The Account Books of Benjamin Mildmay, Earl Fitzwalter*.

33 Edwards, *The Account Books of Benjamin Mildmay, Earl Fitzwalter*, 64.

34 Cornforth, 'Clandon Park revisited – I',1456–60; Cornforth, 'Clandon Park revisited – II', 1582–6.

35 Burman and Watt, 'Interview with Geoffrey Beard', 75–84.

36 Comparison with the floor plan today shows only ten rooms, plus the two staircases. This is explained by the joining of two pairs of smaller rooms (one pair in the south-west corner to form the Morning Room, the other in the north-east corner to form a dressing room to the State Bedroom) in the late 1770s. At the time of the fire, these rooms had restrained neo-Classical designed ceilings and cornices.

37 Pevsner and Nairn, *The Buildings of England, Surrey*, 507–10; this apparent disparity has fuelled theories that another unnamed architect was responsible for the façades or that Leoni was working in partnership, or was replaced, or that the designs were drawn up in c.1713 but not executed until much later.

38 Vertue, Walpole Society, 'VERTUE'S NOTE BOOK', 153.

39 Toynbee, 'Horace Walpole's journals of visits to country seats, &c.', Walpole: 'fine Basreliefs by Rysbrack'.

40 See Klausmeier, 'Houghton, Raynham and Wolterton Halls', 607–29; Harris, 'The architecture of the house', 20–4.

41 Casey, 'The dynamics of migrant craftsmanship in 18th century Britain'.

42 TNA *Board of Stamps: Apprenticeships Books* IR 151, 184; on 31 July 1752 Joseph Cortese, plasterer was residing in Bishopton, nr Ripon and paid duty for the indenture of apprentice Thomas Robinson; on 24 September 1756 he married Jane Andrew in York and his birth date is given as 1711.

43 Danter, 'The 18th century rebuilding of Lyme Park', 62, Leoni to Peter Legh 6 August 1726.

44 See Bristow, *Architectural Colour*, 53–7.

45 Chessum and Rowell, *Clandon Park*, 6. Modern interpretations have included Hercules 'the hero feminised by his love', a comic role reversal referencing Elizabeth Knight's greater wealth and also as a reference to enslavement. Baldwin, 'Annibale Carracci's Farnese Ceiling'.
46 Onslow, 'A manuscript belonging to the Earl of Onslow', 495.
47 Hermitage Museum (no. ГЭ-1601), St Petersburg. Bought by Catherine the Great in 1779 from Sir Robert Walpole's grandson. This painting was listed by Horace Walpole in *Aedes Walpolianae*, London, 1752. It was hanging in the Carlo Maratt room.
48 https://commons.wikimedia.org/wiki/File:Amigoni,_Jacopo_%E2%80%93_Hercules_and_Omphale.jpg; for Bellucco, see Magani, *Antonio Bellucci*, 136–8.
49 Belly, *La Gallerie du Palais Farnaise de la ville de Rome peintre par Annibal et Augustin Carache*; Cesio, *Galeria nel Palazzo Farnese in Roma del Seresniss*; Aquila, *Galeriae Farnesianæ Icones Romae In Aedibus Sereniss*.
50 Thurley, *Hampton Court*, 279, Fig. 271. Thank you to Sebastian Edwards for drawing this rare survival, discovered in 1953, to my attention.
51 Beard, *Decorative Plasterwork in Great Britain*, 249. The roundels with putti appear to relate to Cesio's engravings of Carracci's Eros and Anteros – as do the figures of Atlas in the chimneypiece, which are by English carver James Lovell.
52 British Museum no. 1947.0412.3.50.
53 McDonnell, 'The art of the sculptor-stuccadore Bartholomew Cramilion', 41–9.
54 I am indebted to Dr Paul Taylor for identifying this subject.
55 Coornhert, *Solomon's Idolatry*.
56 In the 1778 inventory this is the only room listed with what is presumed to be a central light: 'a superb cut glass lustre with festoon ornaments & brass chain'.
57 For drawings of ceilings by James Gibbs, see the Gibbs volumes in the Ashmolean Museum, Oxford.
58 Hussey, *English Country Houses: Early Georgian 1715–1760*, 102, Fig. 149. This is the only known illustration of the ceiling.
59 Chessum and Rowell, *Clandon Park*, 30.
60 Casey, 'The dynamics of migrant craftsmanship in 18th century Britain'.
61 Retention and disposal followed directions laid down in a policy written in response to the debris removal after the fire.
62 Casey, *Making Magnificence*, 196.
63 Aquilla, Pietro, Warburg Institute (or Bibliotheca Hertziana CC BY-NC 4.0. foto.biblhertz.it/BHpD52942).
64 Timber specialist and carpenter Joe Thompson of the Weald and Downland Living Museum has identified the surviving, exposed laths as oak apart from those on the Marble Hall engaged columns, which are of softwood, probably pine, imported at the same time as the larger timbers from Finland and Norway. This could indicate the preference of the plasterers, perhaps because of the smooth, curved surface of the slight columns.
65 https://www.museivaticani.va/content/museivaticani/en/collezioni/musei/la-pinacoteca/sala-xvii---secolo-xvii/gian-lorenzo-bernini--modelli-della-cattedra-di-san-pietro.html.
66 Felici and Jean, *Stucchi e stuccatori ticinesi tra xvi e xviii secolo: studi e ricerche per la conservazione*.

References

Alberti, Leon Battista. *The Architecture of Leon Battista Alberti in Ten Books; of Painting in Three Books; and of Statuary in One Book, Translated into Italian by Cosimo Bartoli and Now First into English ... by James Leoni*. London: Edlin, 1726.

Aquila, Pietro. *Galeriae Farnesianæ icones Romae In aedibus sereniss. ducis Parmensis ab Annibale Carracio ad veterum aemulatione' posterumq. admiratione' coloribus expressae cum ipsarum monocromatibus et ornamentis a Pietro Aquila delineatæ incisæ.* Rome: Giovanni Giacomo de' Rossi, c.1677.

Baldwin, Robert. 'Annibale Carracci's Farnese ceiling' (1997). Accessed 17 June 2022. https://docest.com/annibale-carracci-s-farnese-ceiling.

Beard, Geoffrey. *Decorative Plasterwork in Great Britain*. London: Phaidon, 1975.

Belly, Jacques. *La Gallerie du Palais Farnaise de la ville de Rome peintre par Annibal et Augustin Carache: Dessinée et gravée à l'eau forte à Rome par Jaques Belly de Chartres en 1641 et dédiée par luy à M. le marquis de Coeuvres*. Rome/Lyon, c.1641.

Blair, John. *Early Medieval Surrey: Landholding, church and settlement before 1300*. Wolfeboro Falls, NH: Alan Sutton Publishing, 1991.

Bristow, Ian. *Architectural Colour in British Interiors 1615–1840*. New Haven, CT and London: Yale University Press, 1996.

British Geological Survey. 'The Geological Survey of England and Wales: Guildford sheet 285', 2001. Accessed 16 June 2022. https://webapps.bgs.ac.uk/data/maps/maps.cfc?method=viewRecord&mapId=10150.

Burman, Peter and David Watt. 'Interview with Geoffrey Beard: scholarship, craft and conservation', *Journal of Architectural Conservation* 5:1 (1999): 75–84. DOI: 10.1080/13556207.1999.10785236.

Casey, Christine. *Making Magnificence: Architects, stuccatori, and the eighteenth-century interior*. New Haven, CT and London: Yale University Press, 2017.

Casey, Christine. 'The dynamics of migrant craftsmanship in 18th century Britain'. In *Interpreting Italians Abroad*, edited by Sarah Lynch. Rome: Officina Libraria, forthcoming 2022.

Cesio, Carlo. *Galeria nel Palazzo Farnese in Roma del Seresniss: Duca Di Parma etc dipinta da Annibales Caracci intagliata da Carlo Cesio*. Rome: François Collignon, 1657.

Chessum, Sophie and Christopher Rowell. *Claremont*. London: National Trust, 2000.

Chessum, Sophie and Christopher Rowell. *Clandon Park, Surrey*. London: National Trust, 2002.

Connor, T.P. 'Giacomo [James] Leoni', *Oxford Dictionary of National Biography*, 23 September 2004. Accessed 17 June 2022. https://doi.org/10.1093/ref:odnb/16474.

Coornhert, Dirck Volkertsz and Maarten van Heemskerck. (n.d.). *Solomon's Idolatry* [Images]. Amsterdam. Accessed 17 June 2022. https://jstor.org/stable/community.12399993.

Cornforth, John. 'Clandon Park revisited: I and II', *Country Life* 146:3796 (4 December 1969): 1456–60; 146:3797 (11 December 1969): 1582–6.

Cornforth, John. *Clandon House*. London: National Trust, 1982.

Cornforth, John and Pamela Onslow. *Clandon Park*. London: National Trust London, 1971.

Danter, Catherine. 'The 18th century rebuilding of Lyme Park, Cheshire, and the Leoni collection at the John Rylands University Library of Manchester', *Bulletin of the John Rylands University Library of Manchester* 82:2 (2000): 49–80.

Defoe, Daniel. *A Tour Thro' the Whole Island of Great Britain: Divided into circuits or journies …*, 3 vols. London: Printed and sold by G. Strahan, W. Mears, R. Francklin, S. Chapman, R. Stagg and J. Graves, 1724–7; reprinted by P. Davies, London, 1927.

Edwards, A.C. *The Account Books of Benjamin Mildmay, Earl Fitzwalter*. London: Regency Press, 1977.

Felici, Alberto and Giacinta Jean, eds. *Stucchi e stuccatori ticinesi tra xvi e xviii secolo: Studi e ricerche per la conservazione*. Florence: Nardini, 2020.

Foundling Museum. *Ladies of Quality and Distinction*, exhibition catalogue. London: Foundling Museum, 2018.

Harris, John. 'The architecture of the house'. In *Houghton Hall: The prime minister, the empress and the heritage*, edited by Andrew Moore, 20–4. London: Philip Wilson, 1996.

Hewlings, Richard. 'James Leoni c.1686–1746, an Anglicized Venetian'. In *Architectural Outsiders*, edited by Roderick Brown, 21–44. London: Waterstone, 1985.

Hussey, Christopher. *English Country Houses: Early Georgian 1715–1760*. London: Country Life, 1965.

Klausmeier, Axel. 'Houghton, Raynham and Wolterton Halls on Thomas Ripley's major works in Norfolk: architecture amidst political tensions', *Norfolk Archaeology* 43:4 (2001): 607–29.

Magani, Fabrizio. *Antonio Bellucci: Catalogo ragionato*. Rimini: Stefano Patacconi, 1995.

McDonnell, Joseph. 'The art of the sculptor-*stuccatore* Bartholomew Cramillion in Dublin and Brussels 1755–72', *Apollo* 156 (September 2002): 41–9.

National Trust. 'River Wey and Godalming Navigations and Dapdune Wharf: River Wey Navigations – the back story', 2018. Accessed 16 June 2022. https://www.nationaltrust.org.uk/river-wey-and-godalming-navigations-and-dapdune-wharf/features/river-wey-navigations---the-back-story.

National Trust. 'New plans for Clandon Park reveal X-ray view of a great house', July 2022. Accessed 22 July 2022. https://www.nationaltrust.org.uk/clandon-park/features/new-plans-for-clandon-park-reveal-x-ray-view-of-a-great-house.

Neve, Richard. *The City and Countrey Purchaser, and Builder's Dictionary: Or, the compleat builder's guide*. London: J. Sprint, 1703.

Onslow, A. 'A manuscript belonging to the Earl of Onslow', *Great Britain, Historical Manuscripts Commission*, 14th Report. London: HMSO, 1895.

Pevsner, Nikolaus and Ian Nairn. *The Buildings of England: Surrey*. Harmondsworth: Penguin, 1971.

Stephens, George. *The Amiable Quality of Goodness, as Compared with Righteousness, Considered. In a sermon [on Rom.V.7] preach'd … after the funeral of … Elizabeth, Lady Onslow …* London, 1731.

Supple, Barry. *The Royal Exchange Assurance: A history of British insurance 1720–1970*. Cambridge: Cambridge University Press, 1970.

Tatersal, Robert. *The Bricklayer's Miscellany: Or, poems on several subjects: written by Robert Tatersal, a poor country bricklayer, of Kingston up Thames, in allusion to Stephen Duck*. London: Printed for the author and sold by J. Wilford, 1734.

Thurley, Simon. *Hampton Court: A social and architectural history*. New Haven, CT and London: Yale University Press for the Paul Mellon Centre for Studies in British Art, 2003.

Toynbee, Paget. 'Horace Walpole's journals of visits to country seats, &c.', *The Volume of the Walpole Society* 16 (1927): 9–80. Accessed 17 June 2022. http://www.jstor.org/stable/41830706.

Tyers, I. 'Fire damaged timbers at Clandon Park – interim statement of the dendrochronological analysis'. Historic England Scientific Dating Team for the National Trust. Clandon Park Archive, 2017.

Vertue, George. 'VERTUE'S NOTE BOOK D. 1 (part) [British Museum, Add. MS. 23,089. (ff. 1–32.)]', *The Volume of the Walpole Society* 26 (1937): 141–56. Accessed 25 July 2022. http://www.jstor.org/stable/41830383.

Woodhouse, John. 'Giacomo Leoni: unsung intermediary between Alberti and Palladio'. In *Cultural Reception, Translation and Transformation from Medieval to Modern Italy: Essays in honour of Martin McLaughlin*, edited by G. Bonsaver, B. Richardson and G. Stellardi, 158–72. Cambridge: Cambridge University Press, 2017.

Further reading

Musgrave, Clifford. 'Clandon Park, Surrey', *Connoisseur* 181:729 (November 1972): 153–62.

Tipping, H. Avray. 'Clandon Park, Surrey', *Country Life* 62: 1599 (10 September 1927): 366–72; 62: 1600 (17 September 1927): 398–404; 62: 1601 (24 September 1927): 434–40.

2

Piercing the surface: virtuoso wooden staircases from Cassiobury Park and Eyrecourt Castle

Mechthild Baumeister and Andrew Tierney

The staircases from Cassiobury Park, Hertfordshire (c.1677–80) and Eyrecourt, County Galway (c.1677–85), which went to the Metropolitan Museum of Art in New York and the Detroit Institute of Arts respectively, are two of a series of great seventeenth-century wooden staircases that represent a high point of interior craftsmanship. They are defined by their superlative carved balustrade friezes of scrolled acanthus leaf, an antique vegetal motif that became a mainstay of seventeenth-century ornament across Europe. While its application to staircases was largely a British phenomenon, the type can also be found in Ireland, the Netherlands and Belgium.[1] Of the 30 or so extant British examples, that from Cassiobury Park is one of the finest. It was acquired by the Metropolitan Museum of Art in 1932 from the London firm Edwards & Sons of Regent Street and first put on display in 1957 in a format reconfigured to meet the space constraints of the British Galleries (see Fig. 2.1).[2] More recently (2017–19), it has been restored and reinstalled in a configuration more closely approximating its original layout in the Met's new British Galleries for Sculpture and Decorative Arts from 1600 to 1900, which opened in March 2020.[3] Visitors to the museum, invited to use the steps of the Cassiobury staircase, can now appreciate in full the double-sided carved balustrades with their pierced friezes, skilfully executed with scrollwork of vigorous acanthus foliation and flowers, bursting seed pods, coiling snakes, open-winged birds, and energetic ascending and descending rhythm.

Finialed newel posts, central balusters, handrails, baluster bases and strings frame the friezes and provide support structure. The relief ornaments on the inset panels of the newel posts and balusters echo the acanthus motif of the friezes. The lightness of the pierced carving is emphasised by the solid treatment of the carved skirt boards covering the strings, where oak leaves and acorns bound by ribbons are framed at the top by a guilloche and at the bottom by a ribbon border. Three different types of wood were used for the creation of the staircase: elm for the pierced and double-sided carved baluster friezes, finials and pendants; oak for the treads, risers and landings; and pine for all other elements (Fig. 2.2).

In contrast to this dazzling masterpiece at the Met, the Eyrecourt staircase at the Detroit Institute of Arts has never been put on display. Its appearance is therefore known largely from early photographs, probably

Figure 2.1: Staircase from Cassiobury Park in Hertfordshire as displayed from 1957 until 2017 in the Met's British Galleries.

© The Metropolitan Museum of Art.

Figure 2.2: Balustrade of bottom short flight, Cassiobury Park staircase. Exterior side (left); interior side (right).

© The Metropolitan Museum of Art.

Figure 2.3: Views of the Eyrecourt staircase – from ground floor (upper left), half landing (upper right) and upper balustrade (lower). Unique to the two friezes on the staircase's upper balustrades, the acanthus scroll bursts from the mouth of a grotesque mask.

Detroit Institute of Arts Founders Society. Photograph © Gift of the William Randolph Hearst Foundation and the Hearst Foundation, Inc.

taken in the early 1920s prior to the 1926 sale of the Eyrecourt estate (see Fig. 2.3).[4] It was commissioned by Colonel John Eyre (1640–85) for his residence in County Galway in the west of Ireland, probably some time during the 1670s or 80s.[5] The staircase and entrance hall occupied almost one-third of the entire interior space, thus ensuring that visitors would be impressed.[6] Access to elements unpacked from the crates granted for research purposes shows that it has many material parallels with the Cassiobury staircase, as described below, and that it is stylistically consistent with other seventeenth-century staircases of this type.[7] An unusual feature is the acanthus scroll bursting from the mouth of a grotesque mask on the landing balustrade, suggesting influence from an unidentified engraving. More unique was its imperial configuration into two parallel sets of stairs rising to a half landing, where they turn 180 degrees and continue as a single flight to the upper floor, closely echoing that at the Mauritshuis in The Hague and several other important Dutch interiors.[8] Each of the three flights had 14 steps, like the two long flights of the Cassiobury staircase, with the addition of an intermediate landing within the flight. In 1927 the London firm White, Allom & Co. purchased the Eyrecourt staircase and sold it to William Randolph Hearst, the newspaper magnate, for possible installation in Hearst Castle in San Simeon, California.[9] Hearst was an obsessive art collector, and like many of his purchases the staircase remained in its crates.[10] The same year Hearst acquired some Grinling

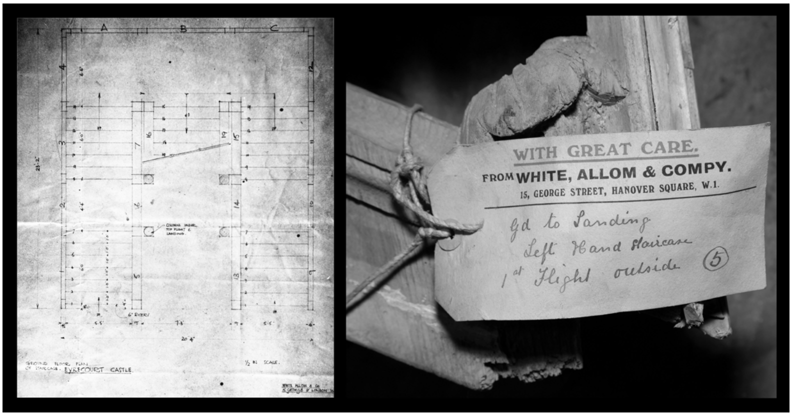


Figure 2.4: Drawing made of the Eyrecourt staircase by White, Allom and Company (left); label describing location of element (right).

Detroit Institute of Arts Founders Society. Photograph © Gift of the William Randolph Hearst Foundation and the Hearst Foundation, Inc. Drawing has been inverted for better legibility. Photograph by Mechthild Baumeister.

Gibbons carvings from Cassiobury and in 1930 purchased a second carved staircase of this type from Hamilton Palace in Scotland (now lost).[11] In 1958, after his death, the Hearst Foundation gave the Eyrecourt staircase to the Detroit Institute of Arts, where it has remained to this day. Fortunately, drawings made by White, Allom & Co., documenting the original position of the labelled elements, are preserved with the staircase (Fig. 2.4).

The movement of both staircases out of their original context raises questions about the relationship of surface and structure in early modern architectural production. The process of regrafting an interior from one architectural shell to another required substantial manipulation of the original timber fabric. But it also depended on the supple nature of both the design and the materials. Such migratory interiors often reveal themselves through 'unhappy conjunctions', as John Harris put it.[12] The Cassiobury staircase has been subjected to such manipulation on at least three separate occasions. It originates from Cassiobury Park in Hertfordshire, which was enlarged for Arthur Capel (1631–83), 1st Earl of Essex by his kinsman architect Hugh May (1621–84) between 1672 and 1680.[13] May was one of the key architects of the Restoration period and installed a similar staircase in his Dutch-Palladian villa for banker John Shaw at Eltham Lodge, south-east London (1664). The Cassiobury stairs was part of a rich suite of state rooms that included carvings by Grinling Gibbons, to whom the staircase was for decades wrongly attributed. In 1935 Christopher Hussey noted its resemblance to the similarly refined and vibrant staircase at Sudbury Hall created in 1676 for George Vernon by Edward Pearce, to whom it has since been reattributed (see Fig. 2.5).[14] Around 1800, when the staircase was moved to a new location within Cassiobury Park during a neo-Gothic remodelling by James Wyatt, the bottom five steps were fanned out to provide a grander entrance.[15] This saw the balustrade of the lower flight cut short to terminate at an added newel post on the fifth step. Another balustrade was created from the cut-off sections and joined to the new newel post at a 90-degree angle, as seen in a watercolour of about 1860 by Arthur Algernon Capel (1803–92), the 6th Earl of Essex and in photographs dating to around 1910 (see Fig. 2.6).[16] Duties following the death of his successor in 1916 set the demise of Cassiobury Park in motion, ending with the demolition of the house in 1927. His widow and her stepson, the 8th Earl of Essex, organised the sale of the estate in June 1922.[17] Edwards & Sons bought the staircase, which they published in a 1923 advertisement in *The Burlington Magazine for Connoisseurs*: 'We have lately purchased: – the wonderful collection of Grinling Gibbons Carvings and Staircase from Cassiobury Park.'[18] When acquiring the staircase in 1932, Met

Figure 2.5: Staircase at Sudbury Hall (1676) with carvings by Edward Pearce.

© Bryan Whitney.

curator Preston Remington asked the dealer to restore it to its original layout, which required replacing material cut-off from the elements of the lower long-flight balustrade: 'Edwards will have the best carvers in London do that and include it in the price', he reported. 'He says that we will never be able to tell the difference which I can well believe. The painting on the dado will furnish the carver with the pattern for the missing section of acanthus scroll.'[19]

The staircase's configuration was altered in 1956/57 to fit the gallery's low ceiling and other space constraints.[20] While in the late seventeenth century two long flights were connected by one short flight with a quarter landing between the flights, the altered staircase rose in two short flights connected by one long flight with two quarter landings in between. The study of the historic photographs, combined with the physical evidence, revealed the 1950s installation was missing one-and-a-half baluster friezes, one original newel post and the entire wainscoting. Sections from the upper flight were redeployed to create a second short flight that previously did not exist. In the 1800s the balustrade on the upper landing had terminated with a newel post that was flush with the

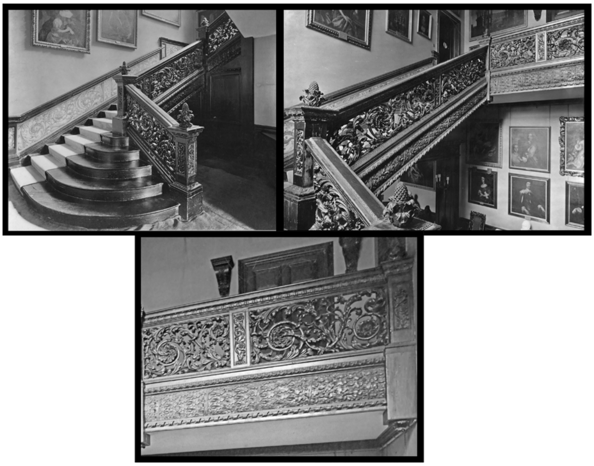


Figure 2.6: Staircase after it was reinstalled at Cassiobury House at the beginning of the nineteenth century. Lower long flight with the bottommost five steps opened up to provide a grander entrance (upper left). Balustrades of the short flight, the upper long flight and the upper floor (upper right). Balustrade of upper floor. In its 1800 configuration, the staircase terminated at the wall with a newel post (lower).

Photographs courtesy of Watford Museum.

Figure 2.7: Cassiobury Park staircase installation at the Met, 1956/57. Due to space constraints the newel post could not be included and the balustrade ended partially embedded in the plaster wall.

© The Metropolitan Museum of Art.

Figure 2.8: Reinstalled Cassiobury staircase in the new British Galleries at the Met.

© The Metropolitan Museum of Art.

wall, which was eliminated and the balustrade ended partially embedded in the plaster wall (Fig. 2.7).

The upper-landing handrail and baluster base had some unique manufacturing features. In addition to the mortises cut to accommodate the central baluster, there were 15 mortises cut in succession, equidistant from each other, at the same depth, indicating that this balustrade previously contained, or was meant to contain, balusters and not baluster friezes. Notably, the two baluster friezes are not the same size and do not conform to the symmetrical composition found on the landing balustrades of similar seventeenth-century staircases. Two modified acanthus-scroll friezes, formerly installed in the Dining Room remodelled by James Wyatt, may originate from the upper-landing balustrade, the layout of which is unknown.[21] Although the whereabouts of these panels is not known, the 2017–19 reinstallation sought a closer approximation of its original layout within the limitations of the gallery space while respecting the early nineteenth-century configuration of the landing balustrade (Fig. 2.8). A proactive approach towards visitor engagement determined the course of treatment, allowing the public to walk up and/or down the staircase to fully appreciate the exquisite double-sided carving of the balustrades. A search throughout the museum yielded an unlabelled crate, which contained most of the carved staircase elements that were not included in the 1956/57 installation. Although still constrained by the ceiling height in the British Galleries it was possible to fully install the first long flight, a landing and the short flight leading to a small mezzanine-level gallery, which can also be reached by an elevator. Of the second long flight and the upper landing, the balustrades alone were installed, supported by a steel structure.

Historical context

The emergence of elaborately carved staircases in seventeenth-century England has received relatively little scholarly attention. While their chronological sequence remains unclear, they are related to the strapwork staircases of the 1620 and 30s, such as those at Crewe Hall (1616–36, see Fig. 2.9), Aston Hall (1618–35) and Rawdon (1622), where the interweaving openwork baluster panel first appears.[22] It was by no means a great leap to replace flat Jacobean strapwork with the scrolling Roman acanthus leaf. A transition between the two types can be seen at Castle

Figure 2.9: Crewe Hall, Cheshire (left) and Aldermaston Court, Berkshire (right). Joseph Nash, *Mansions of England in the Olden Time*. Vols 1 and 3. London: Thomas Maclean, 1839.

Getty Research Institute.

Ashby (the west staircase of c.1635) and Aldermaston (c.1636, see Fig. 2.9), which incorporates c-scrolls, cartouches, masks, putti and griffins, weaponry (including cannon), and vegetal drops on the newel panels.[23] The staircases at Cromwell House, Highgate (c.1637), and at Ham House, Richmond upon Thames (1638–9, Fig. 2.10) further developed the classical martial trophies of a type that were becoming popular in continental engravings.[24] At Ham House we first encounter the newel post with fruit finial, a persistent feature of the later acanthus staircases and a shift away from the more prominent figurative finials of the Jacobean period. Flemish influence may have contributed to the transition as there is an early example of acanthus-scroll baluster panels on a staircase by Artus Quellinus and Peter Verbruggen the Elder of 1640–2 on the pulpit at St Gummaruskerk in Lier (see Fig. 2.11).[25] The earliest fully developed English example of the

Figure 2.10: Staircase at Ham House, Richmond upon Thames.

Photograph by Bryan Whitney.

Figure 2.11: The pulpit at St Gummaruskerk in Lier, Belgium, by Artus Quellinus and Peter Verbruggen the Elder, 1640–2.

Detail from a photograph by Paul Hermans. Wikimedia Commons. CC BY-SA.

Figure 2.12: Staircase at Thorpe Hall, Cambridgeshire. Charles Latham and Henry Avray Tipping, *In English Homes*. London and New York: Country Life and Charles Scribner's Sons, 1909. Vol. 3, p. 132.

Texas Tech University Libraries. Internet Archive. Public Domain.

Figure 2.13: Staircase at Forde Abbey, Dorset.

Photograph by Bryan Whitney.

acanthus baluster panel is most likely that at Thorpe Hall (1653–6, see Fig. 2.12) in Cambridgeshire, built during the interregnum by Oliver St John, the Lord Chief Justice, and happily still in situ. Erected by the master bricklayer and architect Peter Mills, the classical elevations and interior are attributed to John Stone (son of Jones's collaborator Nicholas Stone, recently returned from exile in France) and the Danish carver Caius Gabriel Cibber.[26] Similar in date, and testament to the productiveness of pre-Restoration craftsmanship, is the staircase at Forde Abbey, Dorset; the building was remodelled by Edmund Prideaux, Cromwell's Attorney General, from 1649 and possibly completed by the time of his death in 1659 (see Fig. 2.13).[27] Also of the Commonwealth period is the staircase at Tyttenhanger, Herefordshire, a house built by Sir Henry Blount, also possibly the work of Peter Mills.[28]

The widespread adoption of the acanthus scroll in Britain owed much to architect Inigo Jones, who used it as a lively decorative counterpoint to his formally proportioned interiors. Claire Gapper has noted that when English plasterers struggled to adjust to Jones's new classical vocabulary, he came to rely on wood carvers (having come from a joinery background himself) to execute his internal ornament, including ceilings.[29] One of the best examples of Jones's scrolling acanthus-leaf friezes, executed in timber, was that in the King's Presence Chamber in the Queen's House, Greenwich (1616–35, see Fig. 2.14). One of his sources may have been the Maison

Figure 2.14: The frieze in the King's Presence Chamber in the Queen's House, Greenwich (1616–35).

Photograph courtesy of Carvers and Gilders Ltd.

Carrée at Nîmes, the Corinthian frieze of which was published by Palladio and which Jones visited in person.[30] He also possessed a book of ornament (now lost) by architect and antiquary Pirro Ligorio, which may have provided a wider repertoire of motifs.[31] Ligorio was one of the artists whose work was published in Antoine Lafrery's *Speculum Romanae Magnificentiae*, produced in Rome in 1549, which included highly enriched acanthus-scroll designs from antique entablatures very similar to those found on English staircases – most notably the vertically oriented sprouting base of the plant, from which the leaves roll horizontally outwards. Also published here were fragments of carved antique pilasters (First century) of the Augustan period from the Della Valle collection in the Villa Medici in Rome, remarkably graceful in conception and execution, which were accessible to European artists visiting the city; a fragment of these pilasters was also engraved by Adam Philippon, the master of Jean Le Pautre.[32] Applied to the frieze rather than carved in relief, the Queen's House carvings may well have been executed off-site in the workshop. Similar painted designs on the ceiling of the bedchamber at Greenwich and the ceiling of the Single Cube Room at Wilton, Wiltshire, have been attributed to Jones's collaborator Edward Pearce (the elder).[33] In 1640 Pearce published a set of acanthus-scroll engravings, which his son, the carver Edward Pearce (responsible for the carvings of the 1676 staircase at Sudbury Hall), reissued again in 1668 and around 1680 (see Fig. 2.15).[34] More exuberant scrolls with animal–acanthus

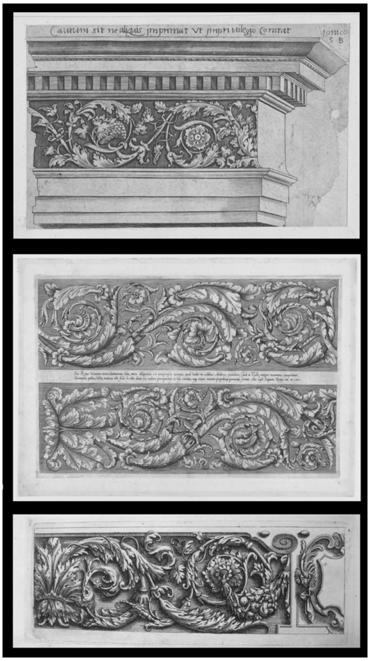


Figure 2.15: Acanthus-leaf engravings. Antique entablature by Agostino Veneziano from Antoine Lafrery's *Speculum Romanae Magnificentiae*, produced in Rome in 1549 (top). Engraving of a pilaster fragment from the Della Valle collection in the Villa Medici in Rome, from Antoine Lafrery's *Speculum Romanae Magnificentiae*, produced in Rome in 1549 (centre). Acanthus-leaf design from Edward Pearce, *Designs for Friezes*, 1640 (bottom).

© The Metropolitan Museum of Art.

hybrids of the type found in the Baths of Diocletian and in the recycled imperial-era friezes at the Grotte Vaticane and San Lorenzo Fuori Le Mura, Rome can be seen in the staircases at Tredegar and Dunster Castle.[35] Seventeenth-century experiments with the scrolling acanthus reached their height in the engravings of Jean Le Pautre and in the fantastic designs that Wolfgang Hieronymus von Bömmel produced for goldsmiths (see Fig. 2.16). However, carvers were not totally dependent on such sources. English staircases employ flowers of greater scale and variety than those found in contemporary engravings (including those by Pearce). Some patterns are common to several if not all staircases, such as the sunflower with its complicated layers of petals (see Fig. 2.17). The recurrence of the sunflower suggests Dutch influence as it featured heavily in the widely disseminated

Figure 2.16: Wolfgang Hieronymus von Bömmel. Design for gold ornament from *Neue-Ersonnene Gold-Schmieds Grillen*, 1698.

Cooper Hewitt, Smithsonian Design Museum. Public Domain.

Figure 2.17: Sunflower carvings on staircase friezes. Clockwise from top left: Cassiobury, Eyrecourt, Crakemarsh, Eltham, Dunster and Sudbury.

Photographs © The Metropolitan Museum of Art, The Detroit Institute of Arts, Alex Puddy and Bryan Whitney.

carvings of Amsterdam Town Hall.[36] It was still a relatively new flower in western Europe and developed symbolic associations with kingship and loyalty, as deployed in Van Dyck's *Self Portrait with a Sunflower* (c.1633).

Work of this type was spreading to Ireland by the 1660s through a number of Anglo-Irish families in the late seventeenth century, whose interests straddled the Irish Sea.[37] In 1665 architect William Kenn, then designing a house for Sir John Perceval at Burton in County Cork, recommended he acquire in Bristol 'elm and elm planks for the stairs, which are all to be through cut in "leaves and antics" as (I believe) your worship has often seen in balconies in London'.[38] This suggests that not only were such staircases known in Ireland by this date, but so was the importance of elm for their manufacture (as outlined in the next section below). In the period 1680–2 Perceval's son hired Grinling Gibbons and Artus Quellinus to work on memorials for his father and brother in London, suggesting fluid and direct intercourse between Anglo-Irish patrons and London craftsmen of Dutch and Flemish origin.[39] The most energetic Irish patron was James Butler, 1st Duke of Ormonde, Ireland's premier peer, Lord Lieutenant of Ireland (1662–8 and 1677–82), who commissioned the new royal hospital at Kilmainham to the west of Dublin and employed the Huguenot Tabary brothers to execute the carving in the chapel, including acanthus scrolls in relief at the east end.[40] Ormonde, who had connections to the Vernons of Sudbury Hall and received advice from Hugh May regarding building work at his seat in Kilkenny, was particularly important to the later career of John Eyre, builder of Eyrecourt.[41] Although Eyre had acquired his estates through the Cromwellian reconquest, it was through his support of Ormonde, a key royalist, that he managed to maintain his lands in post-Restoration Ireland.[42] Eyre's son, educated next to Ormonde's seat at Kilkenny, married a niece of the Duchess of Ormonde in 1677.[43] The Duchess had built one of the most important houses in Ireland at Dunmore, County Kilkenny, from 1665 (demolished), and surviving wall panels from within the Ormonde collection have been compared with work at Thorpe Hall.[44] By 1680 the Duke had appointed Eyre to the Irish Privy Council, which seat he retained until his death in 1685.[45] Arthur Capel, Earl of Essex, who preceded Ormonde's second term as Lord Lieutenant of Ireland from 1672 to 1677 was another likely conduit for work of this kind. At the time of his Irish sojourn Essex was remodelling Cassiobury and corresponding with his architect Hugh May, who is thought to have advised on work at Dublin Castle.[46] May was also remodelling Windsor Castle, which included new state chambers with work by Antonio Verrio, and carving by Grinling Gibbons and Henry Philips. Essex was tasked in 1675–6 with

Figure 2.18: Cassiobury friezes before conservation. Exterior side of top frieze on lower long flight (top). Interior side of top frieze on lower long flight (centre). Exterior side of bottom frieze on upper long flight (bottom). © The Metropolitan Museum of Art.

handing over £20,000 of Irish revenue to finance this work, which included chimneypieces of Irish marble in the apartments of the king, queen, and the Duke and Duchess of York's lodgings. Essex himself similarly installed Irish marble in his chimneypieces at Cassiobury, suggesting that he was acting as a conduit between Ireland and English not just for money but also for materials.[47]

Original manufacturing of the staircases

The Cassiobury and Eyrecourt staircases, although differing in the quality of their carving, are made of similar combinations of elm, oak and pine.[48] The interlocking grain of elm wood made it ideal for making large carved, pierced friezes that were resistant to splitting, allowing the acanthus scrollwork to be carved on both sides (see Fig. 2.18). Thus a person walking up or down the Cassiobury stairs is enveloped in a cascade of swirling acanthus leaves, oscillating seed pods, birds with

Figure 2.19: Eyrecourt friezes. Exterior side of bottom frieze on lower left flight (top). Interior side of bottom frieze on lower left flight (centre). Rectangular wainscoting panel on half landing of lower left flight (bottom).

Photographs by Mechthild Baumeister.

extended wings, and twisting vines and snakes. The diarist John Evelyn remarked in *Sylva: Or, a discourse of forest trees* (1662) that *Ulmus glabra* (elm) was 'very common in several parts of Hertfordshire, Essex, and other north-east counties of England, where it grows to a large tree, and is much esteemed'. He notably recommended it for carving 'by reason of the tenor of the grain, and toughness which fits it for all those curious works of frutages, foliages, shields, statues, and most of the ornaments appertaining to the orders of architecture, and for not being much subject to warping'.[49] These qualities were important as they allowed craftsmen to carve each baluster frieze from one continuous flat, sawn board of elm (*Ulmus spp.*) (that at Cassiobury with a maximum dimension for the four large friezes in the balustrades of the long flights of about 88 in by 20 in by 4½ in [223.5 x 51 x 11.5 cm], and at Eyrecourt approximately 78½ in by 18 in by 5 in [200 x 46 x 13 cm]). Both show the same degree of detail and three-dimensionality in the flowering acanthus scrolls on both sides of the friezes (see Fig. 2.19).[50] Such uniformity required that the designs be first transferred to both sides of the boards. Since the overall composition of the two adjacent friezes on the long flight at Cassiobury is based on mirror symmetry, the same design could have been flipped and used on the opposite side.[51] At Eyrecourt each section of the wainscoting is also decorated with acanthus scrollwork carved in relief, again from a single board of elm – mirroring the carving on the opposite baluster friezes – and applied to a back panel comprising pine boards (see Fig. 2.19, bottom). This generous extension of carved decoration to the wainscoting is also found on the staircases at Durham Castle and Thrumpton, Nottinghamshire, which follow the example of pre-Civil War staircases such as those at Rawdon, Aldermaston and Ham. On the other hand, the Cassiobury wainscoting, reflecting a later tendency to confine carving to stair panels only, was decorated with *trompe l'oeil* painting of the corresponding balustrade (Figs. 2.6 and 2.31). The date of the *trompe l'oeil* rendering seen in the historic photographs remains open for debate. It is unclear if they date from the late seventeenth century when the staircase was manufactured, or if they were painted when the staircase was moved to a different location during the early nineteenth-century renovation of Cassiobury House. The rendering does not reflect the added newel post, indicating that it predates the alteration of opening up the staircase at the bottom. Such *trompe l'oeil* paintings on the dados were a common feature on these seventeenth-century staircases with pierced and carved baluster friezes, as known from the staircases at Dunster Castle (1683–4) and Tredegar Park (1665).[52] In most cases the painted decoration has been removed, exposing the substrate wood. One exception is the 1658 staircase at Forde Abbey, where the *trompe l'oeil* paintings on the wainscoting panels are preserved (see Fig. 2.13).

It is unclear whether the panels were pierced early in the manufacturing or later, during the carving process. Piercing them first, for the purpose of marking where the centre line for the double-sided carved friezes and prominent design elements would be located, is likely. Going back and forth between shaping and piercing would maintain the structural stability of the wood throughout the carving process.[53] The elm panels must have been held in multiple fixed positions to ensure maximum stability and access. The friezes were probably carved shifting from a flat to a vertical, and possibly angled position. For Cassiobury the outer perimeter or 'frame' was probably carved first on both sides to define the border for the acanthus scrollwork, as evidenced by gouge marks from the carving of overlapping or adjacent elements present on the flat surfaces.[54] For the carving, several flat chisels and about 100 gouges with curved blades in various sizes and shapes would have been used.[55] During the examination and treatment of the Cassiobury staircase it became obvious that the carving of the friezes constituted multiple 'hands'. Each frieze

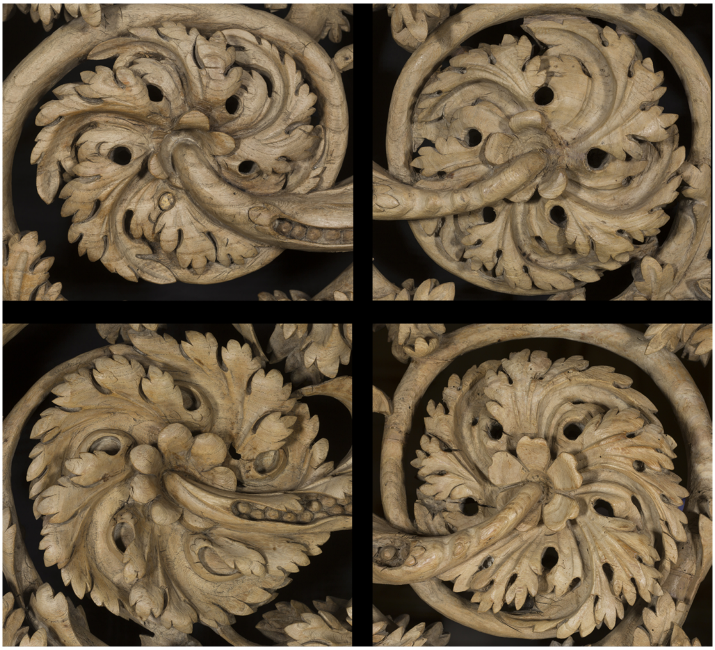


Figure 2.20: Spinning acanthus leaves in centre of large friezes on Cassiobury staircase (exterior sides).

© The Metropolitan Museum of Art.

Figure 2.21: Variations in carved snakes. Bottom frieze of lower long flight (left). Top frieze of lower long flight (right).

© The Metropolitan Museum of Art.

panel follows a similar decorative composition, yet remains distinctly rendered in depth, carving style and interpretation of the design (see Fig. 2.18). This is most evident by comparing the same details, their styles and how they were carved – for example, the differences in the spinning acanthus leaves in the centre of the large friezes, the way they relate to the adjacent vines and the direction of their scroll. Three of them follow the same direction, while the fourth turns in the opposite direction (see Fig. 2.20). One of the three central scrolls is further distinguished by not having its five holes pierced, but rather carved as elliptical shallow recesses. Stems emanating from the centre of the acanthus scrolls and the leaf edges differ in design and carving. The snakes and vines in the frieze compositions exhibit equally contrasting details. Some snakes have ridged backs and others smooth. There are snakes with scored heads, stylised or simplistic noses, and different methods and styles are used for carving the snakes' bodies wrapping around the stems (see Fig. 2.21).

Beard's and Knott's research also shows evidence of collaborative work between different trades at Sudbury Hall (Fig. 2.5). Edward Pearce does not appear to have visited the house himself, indicating that the carvings for the staircase were produced in his workshop in London and sent with his assistant, John Grew who worked with George Vernon's joiners to incorporate them into the staircase. Small payments to Grew are listed in Vernon's *Creditor and Debtor Book*. This was apparently the usual practice. After agreeing on the contract and any drawing, the work was done in the shop, usually in London, and then sent to the country houses for installation. The original scale drawing for the Sudbury staircase survives, showing two long flights connected by a short flight. The records also disclose that Pearce received for the 'carvinge of the Staircase' a total of £112 15*s*. 5*d*.[56]

More than 120 elements of the Cassiobury Park stair, framing the elm friezes and oak steps, are made from Scots pine (*Pinus sylvestris L.*) most likely imported from Scandinavia. They represent the structural and unifying elements of the staircase, and have the most varied carved and moulding-planed surface decorations (see Fig. 2.22). All of the newel posts were constructed from a tree trunk, squared and further refined to the desired shape and dimensions to hold the staircase together.[57] Large mortises and grooves were added to receive the adjacent elements including, from top to bottom: the handrails, baluster friezes, baluster bases, strings, treads and risers. The joining tenons were secured in the newel mortises with pegs, and carved ornaments were glued to the surfaces of the recessed newel panels. As at Eyrecourt, the craftsmen returned to elm for the pinecone finials and pendants – each made from a solid piece, including the pith, first turned on

Figure 2.22: Reinstalled lower long flight of Cassiobury staircase.

© The Metropolitan Museum of Art.

Figure 2.23: Eyrecourt staircase finial.

Photograph by Mechthild Baumeister.

a lathe to attain its rough shape and then carved by hand (see Fig. 2.23). The baluster bases and handrails were also constructed from solid timber and contain decorative carving on both sides following repeating patterns of acanthus leaves and bead-and-reel ornaments, and echoing similar discrepancies as observed on the elm friezes. The Cassiobury strings were fashioned from a single board of pine, with grooves for the oak stair treads and risers.[58] The skirt boards, consisting of an assembly of three elements covering the exterior of the strings, are ornamented differently to the other pine elements. A ribbon and flower or leaf motif frame the skirt boards' friezes, composed of a repeating shallow oak-leaf, acorn, flower and ribbon motif. The frieze, which is pulvinated, with foliated ornament, is a common feature of these staircases; Cassiobury and Eltham have oak leaves and acorns; Crakemarsh, Dunster, Stratton Park and Tyttenhanger have laurel leaves and berries; and Sudbury has a combination of both in an alternating sequence. That on Eyrecourt is pulvinated but otherwise unornamented. A variant, perhaps reflecting an earlier developmental phase, is found at Castle Ashby (east staircase) and Durham Castle, where the pulvinated frieze is placed immediately under the handrail rather than on the string.

All treads and risers of the steps of the Cassiobury staircase are fabricated from flat-sawn oak (*Quercus spp.*), a surprising choice as it has the tendency for cupping in comparison with quarter-sawn oak. Another drawback of using such oak boards is the presence of large knots and sapwood, which is the case on several treads and risers (see Fig. 2.24).[59] This is particularly interesting given a contemporary debate over the effects of tree pruning on the presence of knots that appears in a book by the Earl of Essex's gardener, Moses Cook, published in 1676. Cook argued that regular pruning increased the height and straightness of the tree trunk, thus providing higher-quality planks and reducing the presence of knots in the timber as he demonstrated with an oak tree.[60]

> My Lord being at Cashiobury and discoursing of pruning Forrest-trees with the ingenious Artists Sir Samuel Moreland and Hugh May Esquire, I shewd them the Truth confirmed in this Tree; for that year it was pruned it did grow ⅖ of an Inch, which was near as it had grown in five years before.[61]

Each riser, joined to the connecting tread with a butt joint, was originally held in position with glue blocks. An oak cove moulding, under the tread's nosing and glued to the riser, covers the butt joint. The pine strings held each step in place at both ends, while hand-forged nails attached the back edges of the treads to the riser above it (replaced now with screws).

Figure 2.24: Reinstalled Cassiobury staircase steps and bottom section of lower long flight.

© The Metropolitan Museum of Art.

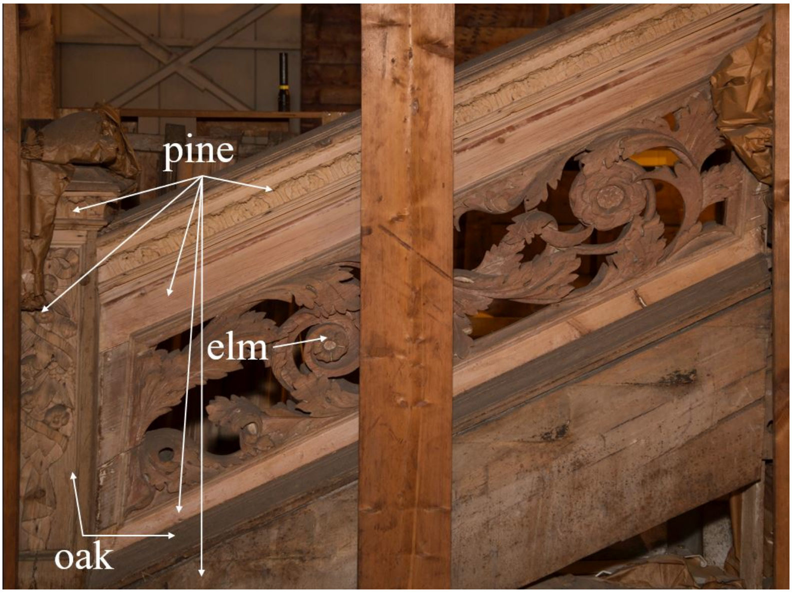


Figure 2.25: Eyrecourt staircase balustrade.

Photograph by Mechthild Baumeister.

Chamfered notches on the tread's rear edges show that the steps were formerly supported by a carriage beam. The dimensions of the steps, about 13 inches deep and 5¾ inches high (33 x 14.5 cm), refer to those noted in Joseph Moxon's 1703 publication for lavish buildings:

> Several Writers of Architecture have delivered different Rules for the Height and Breadth of Steps, and that according to the several Capacities of the Stair-Cases. They forbid more than six, and less than four Inches for the Heighth [sic] of each Step, and more than sixteen, and less than twelve, for the Breadth of each Step. But here we must understand they mean these Measures should be observed in large and sumptuous Buildings.[62]

While the pierced double-sided carved baluster friezes and finials of the Eyrecourt balustrades are made of elm, the newel posts and baluster bases are oak – and the handrails, the top and bottom strips attached to the baluster friezes, the strings, and the applied carved ornaments and mouldings on the newel posts are pine (see Fig. 2.25). The treads and risers are made of elm, incorporating mouldings planed into the solid boards – such as the nose moulding on the front edge of the treads and the framing top and bottom mouldings on the risers. The vertical moulding sections on the risers are applied (see Fig. 2.26).

Surface finishes

Prior to the Met's acquisition Edwards & Sons had thoroughly stripped the decorative surface finishes of the dismantled staircase elements – presumably to reflect the aesthetic associated with Grinling Gibbons, whose works are known to have been left unfinished with their wooden surfaces exposed.[63] The misattribution was understandable as Gibbons did work with Hugh May at Cassiobury, which was one of his first large-scale commissions. This stripping process, intended as a 'restoration', unfortunately destroyed evidence of the original and later surface treatments of the staircase.[64] Visible tool marks suggest the timber was originally covered by ground and finish layers, which would also have disguised the tonal disparity introduced by the three different timbers. While there is not enough physical evidence to determine its earlier decorative finishes, there is evidence of a painted treatment in its later history. An 1886 article about Cassiobury described 'the carved wood of the balustrades standing out deep brown, against the dark green of the carpet'.[65] In 1910 H. Avray Tipping

Figure 2.26: Detail of Eyrecourt staircase step.

Photograph by Mechthild Baumeister.

remarked that it seemed to be made of pine 'not clearly visible, as it is now stained a dark colour and heavily varnished, as is all Gibbons' work in this house', which is also noticeable in the historic photographs (see Fig. 2.6).[66] While the staircase was most likely refinished while in use for nearly 250 years at Cassiobury, especially when it was moved to another location in the house at the beginning of the nineteenth century, there is evidence of painted treatments in similar seventeenth-century English staircases. In 1935 Christopher Hussey noted that Edward Pearce's Sudbury staircase (1676) was at that time painted and varnished resembling dark-grained oak;[67] it is now painted in two shades of white – based on a 1960s misinterpretation of a revealed 1830s white paint scheme which the interior

Figure 2.27: Ham House, reveals of past wood-graining campaigns.

Photograph by Mechthild Baumeister.

designer John Fowler (1906–77), who worked for the National Trust, believed to be the original paint.[68] Apparently, the 1683–4 staircase at Dunster Castle was also painted white in the nineteenth century. Prior to removing the white surface finish and exposing the wood during the 1869–72 remodelling of the castle by architect Anthony Salvin (1799–1881), the foreman noted a description of the surface layers removed. Originally the balustrade was painted grey and embellished with silver leaf, and the dado was painted with matching *trompe l'oeil* acanthus scrolls.[69] A surviving bill from decorative painter Matthew Goodricke shows that the 1638 staircase at Ham House was originally painted in an imitation of walnut and the carved elements gilded.[70] Paint analysis substantiated the painted and gilded scheme in Goodricke's account and the staircase was accordingly refinished in 1980–1 and redone in 1994 (see Fig. 2.10).[71] Paint reveals scraped at the time showed past wood-graining campaigns with various interpretations of the original finish (see Fig. 2.27). Ada De Wit discovered in her recent research the names of the wood carver and painter of a related Dutch 1699–1700 staircase from a private house in The Hague, which has been in the collection of the Museum Boijmans Van Beuningen in Rotterdam since 1928. Willem van Sundert (1656–1747) carved the nine pierced acanthus-scroll friezes for its staircase balustrades between October 1699 and April 1700 (probably with assistants) and Simon Classon, a master painter, finished the frames in oak colour and the woodcarving in '*ael*', which might refer to a grey or olive-brown eel colour.[72]

The Eyrecourt staircase was unfortunately subjected to similar stripping back in the 1920s, but historic photographs indicate that it formerly had a dark, glossy surface finish (like the Cassiobury staircase), which was removed after it was deinstalled. When the finish was still intact, the staircase, although made of three different woods, had presented a unified appearance. One balustrade section was stained brown and coated at an unknown subsequent date, probably to 'improve' its surface appearance. An on-site examination of staircase elements at the Detroit Institute of Arts has shown that the stripping of the decorative surface finish caused major irreversible damage to the wood and opened up joints, as illustrated by a handrail. Whereas the Cassiobury handrail is made from solid pine, the Eyrecourt handrail has an oak core to which the carved and moulded pine elements are attached (see Fig. 2.28). Instrumental analysis revealed that the dismantled Cassiobury staircase elements were chemically stripped using a solution of sodium hydroxide (NaOH) and neutralised with sulphuric acid (H_2SO_4).[73] This aggressive treatment especially affected the elm and oak elements, those being less resilient to bases and acids than softwoods are (see Fig. 2.29).[74] Most

Figure 2.28: Handrails from Cassiobury (left) and Eyrecourt staircases (right), showing the effects of the chemical stripping.

Photographs © The Metropolitan Museum of Art and Mechthild Baumeister.

Figure 2.29: Section of a pine newel post cut off during the 1956/57 installation of the Cassiobury staircase. The front of this fragment shows the whitish haze, dust and grime (top), while the back reveals the natural colour of the wood (centre). The edges show the depth the stripping chemicals penetrated into the wood (up to half an inch [15 mm]), which is especially noticeable in UV light (bottom). Note that the more recently cut edges show no penetration.

© The Metropolitan Museum of Art.

Figure 2.30: Eyrecourt staircase coat of arms.

Photograph by Mechthild Baumeister.

significantly, the extractives that give elm and oak fibres their coloration were removed from the outermost layer. The Eyre family's coat of arms crowning the architrave of the staircase was spared from the stripping and retains historic and possibly original paint and gilding layers (see Fig. 2.30). Importantly, more material from previous decorative finishes remains in recesses of stripped elements than on their Cassiobury counterparts, and may possibly provide enough evidence to determine how the staircase appeared in the past.

Given that there is not enough evidence of the original or subsequent decorative surface finishes on the Cassiobury staircase, it was decided to leave the wooden surfaces exposed as part of its history. The goal for the recent conservation by Mechthild Baumeister, Lisa Ackerman, Ivo Kipre and Nick Pedemonti was therefore to create a more harmonious relationship between the elm, pine and oak elements by reducing the whitish 'haze' caused by the chemical stripping, removing the applied wax layers and grime deposits, and removing a grey paint/wash that had been applied on many pine elements to simulate the greyish appearance of the adjacent elm friezes. A cleaning method for the carved elm friezes, the most elaborate decoration of the staircase, needed to be developed first as it would serve as the visual guideline for the degree of cleaning the pine and oak elements would need. It was also essential to test and select a protective surface coating which would not give the wood the appearance of having a finish.[75] Overall, the original oak steps were badly soiled, stained and scratched. The surfaces of the treads and risers of the long flight also reflected their previous history, including marks left from the missing wainscoting and at least two runners, one seen in the historic photographs (see Fig. 2.6). Based on these marks and inscriptions from different periods, the majority of these treads and risers are placed in the correct position as historically intended.[76] The cleaning procedure for the elm and pine was also used on the oak, but with some modifications to reduce the stains and carpet lines.

Reinstallation

The overarching concept of the conservation of the Cassiobury staircase was to reinstall it in a way that best represents its original configuration and to allow a maximum of 10 visitors at one time access to the stairs. The staircase was deinstalled and reinstalled by Traditional Line, a New-York-based company specialising in architectural conservation, who made all drawings and devised a naming and numbering system for the nearly 200

Figure 2.31: Cassiobury staircase with reconstructed wainscoting.

© The Metropolitan Museum of Art.

staircase elements.[77] After the deinstallation it was important to mock up sections of the staircase given the many elements that were left out of the 1956/57 installation and therefore might have become distorted. In addition, the cut sections needed to be rejoined and it was important to understand how much material was missing and needed to be replaced. Mock-ups were also essential to establish the height of the proposed mezzanine gallery and measurements for a supporting steel structure. Safety concerns required a modern wall handrail, a standard and safe slope, and consistent height between each tread, which also determined the angle of the balustrade elements. The missing wainscoting was reconstructed by Traditional Line, and the *trompe l'oeil* paintings were recreated by James Boyd and Anne Reath in their New York studio.[78] The original colour scheme of the *trompe l'oeil* paintings would have reflected the decorative surface finish of the balustrades. In similar fashion, we choose to reflect the tonality of the stripped balustrades (Fig. 2.31).

Given the fragility of the carved elm newel-post finials, they needed to be replaced to withstand possible touching by visitors. After considering the various options we concluded that laser scanning of the best-preserved finial, digitally compensating for losses and using the final 3D model for CNC milling them in wood would produce the most faithful replicas.[79] In

Figure 2.32: Original Cassiobury staircase finial (left), milled replica finial with hand-carved and sealed surface (centre), completed replica finial (right).

© The Metropolitan Museum of Art.

order to closely resemble the original finials, the surfaces were finished by Carole Hallé, a professional wood carver, and a protective coating was applied that matches the appearance of the treated elm friezes. Mounting the finials was the final touch in bringing this architectural masterpiece back to life (Fig. 2.32).The complexity, challenges and decision-making processes that were involved in developing an appropriate concept and its realisation for the conservation and reinstallation of the Cassiobury staircase required many steps.[80] The new installation is a closer approximation of the original configuration of the stairs highlighting especially the magnificent double-sided carving of the balustrades, which can now be viewed close up by visitors who choose to walk up or down the staircase as they progress through the new British Galleries. Similar steps would need to be undertaken for the future resurrection of the monumental staircase from Eyrecourt Castle, which for too long has been hidden from public view.

Conclusion

Seventeenth-century interiors speak as much to the hand as to the eye. Ornament has not yet retreated to the planar surface, where line and colour win out over high-relief opulence. These staircases are tactile; their broken, pierced surfaces reach out to the viewer, their whirling serpentine lines pulling us forward – an effect that has informed the reinstallation of the Cassiobury staircase. While the Eyrecourt staircase for the moment remains entombed in its crates, there is clearly great potential for a similarly proactive treatment. And it will be worth it. The energy injected into the acanthus leaf during the seventeenth century is without parallel, bursting to its height with Jean Le Pautre’s engravings and finally exhausting itself in the figurative caprices of Von Bömmel. But the production of such dynamic designs in wood, in an architectural context, was an astonishing achievement. At no other period does ornament take so bold a step forward into domestic space. In taking this step the craftsmen nevertheless remained remarkably faithful to their fulsome Augustan prototypes. The capacity for artists to speak to each other across generations resonates most loudly in the museum space – as we see in the Met, where the achievements of millennia can be traversed in a single afternoon. In such a setting the reinstalled Cassiobury staircase finds fresh context as the product of centuries of tacit knowledge, art-historical enquiry, visual record and dissemination – and, above all, as an example of craftsmanship reconsidered through the probing processes of fragmentation and reassembly.

Acknowledgements

Projects of this magnitude involve a lot of people, and Mechthild Baumeister would like to thank the following individuals and companies: at the Met: Sarah Lawrence, Luke Syson, Wolf Burchard, Ellenor Alcorn, Daniëlle Kisluk-Grosheide, Elizabeth St. Georg, Denny Stone (Department of European Sculpture and Decorative Arts); Lisa Pilosi, Lisa Ackerman, Nick Pedemonti, Ivo Kipre, Rebecca Gridley, Maggie Bearden, Fred Sager, Jody Hanson, Andy Estep, Marijn Manuels, Joseph Hutchins, Karen Bishop, Mark Fradin, Lila Reid (Department of Objects Conservation); Adriana Rizzo, Federico Carò, Yuka Ohashi (Department of Scientific Research); Barbara Bridgers, Rich Lee, Chris Heins, Scott Geffert, Jesse Ng, Wilson Santiago, Oi-Cheng Lee (Imaging Department); Tom Javits, Kate Lisi, Luisa Ricardo Herrera, Mahan Khajenoori, Larry Kellermueller, Charles Tantillo, Taylor Miller, Daniel Olson (Construction and Buildings Department). Outside Contractors and Companies: Traditional Line Ltd, Carole Hallé, James Boyd and Anne Reath, Campbell & Strasser, Digital Atelier LLC, Jill Wendorff @ Mitchell Giurgola Architects, Roman and Williams Buildings and Interiors, Skanska USA Building, Colliers Project Leaders, Silman Structural Engineers, Transcontinental Steel Inc., M. Cohen and Sons. Outside Consultants: Ian Tyers, Lee Prosser, Ada De Wit, Damien O'Connor, David Esterley, Bob Blanchette. At DIA: Alan Darr, Yao-Fen You, Eve Straussman-Pflanzer, Alexandra Nickolaou, Irene Gelbord, Lara Roney, Terry Birkett, Kimberly Dziurman, Meghan Finch. We would also like to thank Christine Palmer ACR, Director, Carvers & Gilders Ltd, Alex Puddy, and Glen Smith, Senior Conservator at Royal Museums Greenwich.

Notes

1 For recent research on the Dutch examples, see De Wit, 'New light on a staircase of 1699–1700', 103–9.

2 Parker, 'A staircase by Grinling Gibbons', 228–36.

3 See https://www.metmuseum.org/art/collection/search/197338.

4 The images are preserved in the William Randolph Hearst Archive (Long Island University) and can be viewed online: https://jstor.org/stable/10.2307/community.23958653; https://jstor.org/stable/10.2307/community.23958654; https://jstor.org/stable/10.2307/community.23958655; https://jstor.org/stable/10.2307/community.23958656.

5 The date of the Eyrecourt staircase has never been established with precision. It is thought the house was constructed around 1677 at which time John Eyre established a trust to clear debts that had arisen from improvements on his estate, which included the creation of a park and the building of a church. See Cronin, '"A Gentleman of a Good Family and Fortune"', 107. Eyre's death in 1685 and the unstable political conditions that followed the accession of the Catholic James II that year, as well Eyre's son's flight to England, make it a probable *terminus ante quem* for the construction of the house. See Burke, 'Eyre of Eyrecourt (Part 1)'. Also O'Connor, 'Stairway to history'.

6 O'Connell and Loeber, 'Eyrecourt Castle, Co. Galway', 40–8.

7 In June 2016 Mechthild Baumeister had the opportunity to spend 1½ days studying uncrated staircase elements with colleagues from the Detroit Institute of Arts and Damien O'Connor, who was visiting from Ireland.

8 Craig, *The Architecture of Ireland*, 145. The existing carved acanthus-scroll baluster friezes on the upper floor landing at the Mauritshuis are a restoration of eighteenth-century precursors. Pieter Post's seventeenth-century drawings show plain balusters, destroyed in a fire of 1704. The drawings do not specify how the balustrades of the staircase flights looked. See Buvelot et al., *Mauritshuis: The building*, 38–48.

9 Roy, 'William Randolph Hearst and the Eyrecourt staircase'.

10 Gallagher, 'William Randolph Hearst and the Detroit Institute of Arts', 54–65.

11 A Quantity Of Guaranteed Grinling Gibbons Cherry And Oak Wood Carvings From Cassiobury Park. Image, n.d. https://jstor.org/stable/community.23958288; Evans and Stable, 'The Old State Drawing Room from Hamilton Palace'. Harris, *Moving Rooms*, 112.

12 Harris, *Moving Rooms*, 11.

13 John Evelyn visited the Earl of Essex at Cassiobury Park in April 1680, and in his diary entry he gives a lengthy description of the house and garden. He mentions the excellent carving by Gibbons, especially the chimneypiece in the library and a parqueted yew floor in one room, but he does not mention the staircase. Evelyn and Bray, *Diary and Correspondence of John Evelyn*, vol. 2, 140–1.

14 Hussey, 'Sudbury Hall, Derbyshire II', 654; Beard and Knott, 'Edward Pearce's work at Sudbury', 43–8.

15 Completed after Wyatt's death in 1813 by his nephew Jeffry Wyatville. For a plan of Hugh May's added two wings to the existing Tudor house, and a plan of Wyatt's rebuilding of the house, see Britton, *The History and Description of Cassiobury Park*, Plates 1 and 2.

16 Rabbitts and Priestley, *Cassiobury*, 98.

17 Knight, Frank & Rutley, *Catalogue of the Contents of Cassiobury Park*.

18 Edwards & Sons, Advertisement in *The Burlington Magazine for Connoisseurs*, 21; Edwards & Sons, *The Wonderful Grinling Gibbons' Carvings from Cassiobury*.

19 The Metropolitan Museum of Art Archives, New York. Box 22, Folder 7, Letter from Preston Remington to Joseph Breck, 5 September 1932.

20 Parker, 'A staircase by Grinling Gibbons', 235.

21 Cassiobury Park Photograph Album, photos 10, 15, 16.

22 For an overview of the history of the staircase in Britain, see Campbell and Tutton, *Staircases*. For the first comprehensive account of the rise of the carved staircase, see Godfrey, *The English Staircase*, 36–45.

23 For Castle Ashby, see Jourdain, *English Interior Decoration*, Fig. 17.

24 Adshead and Rowell, 'Seventeenth-century decorative woodwork at Ham House', 75–7.

25 Muller, 'Jesuit uses of art in the province of Flanders', 135.

26 Mowl and Earnshaw, *Architecture without Kings*, 111–13.

27 Mowl and Earnshaw, *Architecture without Kings*, 106–7.

28 Mowl and Earnshaw, *Architecture without Kings*, 108; Gomme and Maguire, *Design and Plan in the Country House*, 274; Colvin, *A Biographical Dictionary of British Architects 1600–1800*, 656.

29 Gapper, 'The impact of Inigo Jones on London decorative plaster', 82–7.

30 For Jones's visit to the temples at Nîmes, see Higgott, 'Inigo Jones in Provence', 24 and Plate 12a.

31 Worsley, *Inigo Jones and the European Classicist Tradition*, 120.

32 In 1645 Philippon published a suite of engravings of classical fragments from Roman villas largely comprising acanthus scrolls, see Philippon, *Curieuses recherches de plusieurs beaus morceaux d'ornemens antiques et modernes.* His prolific pupil Jean Le Pautre went on to create the most sophisticated variations on the Roman acanthus scroll. In the late eighteenth-century plaster

casts of the delle Valle pilasters were made for the Royal Academy, from where they continued to exert influence. https://www.royalacademy.org.uk/art-artists/work-of-art/part-of-an-ancient-pilaster-in-the-villa-medici-at-rome. See also https://www.royalacademy.org.uk/art-artists/work-of-art/cast-of-monumental-pilaster-fragment-with-acanthus-scrolls-and-birds.

33 Higgott, '"Mutual Fruitfulness"', 300; Higgott and Grimstone, 'Drawings by Edward Pearce Senior', 2020, 14–18.

34 Pierce (Pearce), *Designs for Friezes*; Jervis, 'A seventeenth-century book of engraved ornament', 893–903. Roscoe et al., *A Biographical Dictionary of Sculptors in Britain, 1660–1851*, 961. Other artists producing acanthus designs in England include the German artist Francis Cleyn, employed as a designer at the Mortlake tapestry works, who published designs in 1645 with sophisticated combinations of animals. Polifilo Zancarli's acanthus designs (1625) were published for an English market by John Overton in London in 1672, though may have arrived earlier. Robert Pricke collected and published a series of similar designs from continental sources in 1674, 'useful for painters, stone-cutters, carvers, plasters', and offered a range of continental engravings at his London shop, see Pricke, *The Ornaments of Architecture*. Stefano della Bella's *Ornamenti o grottesche* and *Ornamenti di fregi e fogliami* published 1645–50 also provided the kind of acanthus friezes found in British staircases, incorporating putti, masks, animals and fruit baskets. For the full scope of Pearce's work, see also Higgott and Grimstone, 'Drawings by Edward Pearce Senior', 1–113.

35 For the Baths of Diocletian frieze, see Fréart, *Parallèle de l'architecture antique*, 69; for San Lorenzo Fuori Le Mura, see Toynbee and Perkins, 'Peopled scrolls', Plates xviii, xvii and xviii.

36 Quellinus, *Prima[-secunda] pars praecipuarum effigierum ac ornamentorum amplissimae curiae Amstelrodamensis.*

37 Barnard, *Making the Grand Figure*, 43.

38 *HMC*, Egmont II (The Historical Manuscripts Commission), 15; Loeber, 'Irish country houses and castles of the Late Caroline Period', 38 and 65; Loeber, *A Biographical Dictionary of Architects in Ireland*, 67; see also Glin and Peil, *Irish Furniture*, 26. Another carved staircase of unknown origin was recycled into the La Touche bank in Castle Street, now in the National Museum, and that at Desart Court dates to the 1730s and is stylistically quite different. See Glin and Peil, *Irish Furniture,* 24–6. The Knight of Glin speculated that the Desart Court staircase was removed from Dunmore House (built by the Duchess of Ormonde) in the 1730s, as it had been abandoned by the Ormondes before 1708. However, stylistic analysis suggests that the Desart staircase was quite distinct in its foliage, newels (columnar) and handrail type (swan-neck), suggesting a date in the 1730s. Other work of this type includes a balcony with openwork carved acanthus-leaf panels added to the Dublin Tholsel some time between 1695 and 1728 (compare drawings by Thomas Dineley, Charles Brooking and Thomas Malton). There was formerly a similar balcony on the Royal Hospital at Kilmainham, though its date is unclear. See McParland, *Public Architecture*, 217 n. 52.

39 Loeber, 'Arnold Quellin's and Grinling Gibbons's monuments for Anglo-Irish patrons', 85.

40 McParland, *Public Architecture*, 53–6.

41 For Ormonde's connections with the Vernons, see Beard and Knott, 'Edward Pearce's work at Sudbury', 43. For his connections with Hugh May, see Loeber, *A Biographical Dictionary of Architects in Ireland*, 70–1.

42 Cronin, '"A Gentleman of a Good Family and Fortune"', 102.

43 Cronin, '"A Gentleman of a Good Family and Fortune"', 108.

44 Glin and Peil, *Irish Furniture*, 24.

45 Cronin, '"A Gentleman of a Good Family and Fortune"', 109–10.

46 In a letter from Dublin Castle to his brother Henry Capel dated 16 May 1674, Essex describes needing to raise money to finish the new wing already begun at Cassiobury and his plans to buy a house in London. He also mentions that the work on the building needs to be resolved in 1674 and the following year, and that the inside will be finished at a later time. See Airy, *Essex Papers*, 226–7. For May's possible involvement in work at Dublin Castle, see Loeber, *A Biographical Dictionary of Architects in Ireland*, 70–1.

47 Hope, *Windsor Castle*, 315–16; Rabbitts and Priestley, *Cassiobury*.

48 The woods used for the manufacturing of the Cassiobury staircase were microscopically identified by Marijn Manuels, conservator in the Met's Department of Objects Conservation and Marc Fradin, a conservation student. The Eyrecourt staircase woods were only macroscopically identified.

49 Evelyn and Nisbet, *Sylva: Or, a discourse of forest trees*, 73.

50 An interesting aspect of the balustrade friezes of the 1638–9 Ham House staircase is that the outline of the double-sided carving is the same (also carved out of one board) but the motifs depicted on the interior versus the exterior sides are different on some panels, such as armour on the interior side and cartouches on the exterior. The 1662–5 staircase at Durham Castle is another example showing the different treatment of the interior and exterior decoration of the pierced panels. Although related in their design, the boldest and most three-dimensional and detailed carvings embellish the exterior sides of the friezes, while the interior sides as well as their counterparts on the wainscoting are decorated with less refined carved scrollwork.

51 For a description of seventeenth-century methods for transferring designs onto timber for carving, see Esterly, *Grinling Gibbons and the Art of Carving*, 186.

52 Dodd, *Dunster Castle*, 18.

53 For piercing tools, such as a brace with bits or an auger, see Moxon, *Mechanick Exercises*, 69, 94–5.

54 Intermittently sections of wood retaining the boards' full thickness must have been left in place, providing support for the panels when lying flat, and where clamps could have been placed to secure the friezes during the carving process. These blocks would have been cut away when the carving was completed.

55 Esterly, *Grinling Gibbons and the Art of Carving*, 188–205; and Ayres, *Art, Artisans and Apprentices*, 343–67.

56 Beard and Knott, 'Edward Pearce's work at Sudbury', 45–6.

57 One of the newel posts had been so severely altered from past installations that it was reproduced for the 2020 reinstallation. Contained within its square bottom were nearly 400 growth rings including some in the outer sapwood. This made it an ideal candidate for tree-ring analysis, which was conducted by Ian Tyers, a British dendrochronologist. He was able to discern that the newel post's timber was derived from a very long-lived and slow-grown Scots pine tree originating from Scandinavia. Tyers thought that the newel post was made from a c.1670 timber, correlating with the c.1680 manufacturing date of the staircase.

58 The staircase is missing its original strings placed on the wall sides.

59 Dendrochronology was used in an effort to date the oak and to get an idea of its provenance. Unfortunately, none of the boards have the 50 growth rings required for a conclusive analysis. According to Ian Tyers, the wide growth rings and the slightly distorted growth is typical of fast-growing trees from managed landscapes, indicating that the oak originates from Hertfordshire.

60 Cook, *The Manner of Raising, Ordering, and Improving Forrest-Trees*, 43–5.

61 Cook, 'To the Reader', unpaginated introduction to *The Manner of Raising, Ordering, and Improving Forrest-Trees*, 9.

62 Moxon, *Mechanick Exercises*, 144. Joseph Moxon's (1627–91) 'Mechanick Exercises' was first issued as essay instalments in 1677 and published as a series of volumes between 1683 and 1685. The series was published as a single volume (most likely by Moxon's son James) in 1693; the second edition in 1700; and the third edition, with an addition of the bricklayer's trade, in 1703.

63 In the mid-1690s Celia Fiennes had described Gibbons's carving at Windsor, about 20 years after he had worked there, as 'all white natural wood without varnish' – referenced by Parker, 'A staircase by Grinling Gibbons', 235, to argue that the staircase in its stripped form matched Gibbons's original intention. Fiennes and Morris, *The Illustrated Journeys*, 218; Beard, *Craftsmen and Interior Decoration*, 68; Tipping, 'Cassiobury, Herts, the seat of the Earl of Essex', 392–9; Edwards & Sons. Advertisement. 'This magnificent Grinling Gibbons Staircase', 11; Tipping, *Grinling Gibbons and the Woodwork of his Age*, 93; Esterly, *Grinling Gibbons and the Art of Carving*, 12, 202–4.

64 Only minute remnants of extant surface finishes were discovered throughout the conservation process. Analyses conducted in the Met's Department of Scientific Research by scientists Adriana Rizzo and Federico Carò, and research fellow Yuka Ohashi suggest that the previous surface finishes had pigments and ground layers containing lead (e.g. lead white and red lead) and calcium (e.g. calcium carbonate). See Baumeister et al., 'Reactive, Proactive and Interactive'.

65 Rose, 'English homes: no. VII, Cassiobury', 441–6.

66 Tipping, 'Cassiobury, Herts, the seat of the Earl of Essex', 397.

67 Hussey, 'Sudbury Hall, Derbyshire II', 650–6.

68 Knox, 'John Fowler and the National Trust', 17–20; Beard and Knott, 'Edward Pearce's work at Sudbury', 47.

69 Dodd, *Dunster Castle*, 18.

70 Goodricke's bill from April 1638 lists: 'ffor painting the Raills and Posts, Pannells and Basketts, and the other carved worke of the Stairs being thrise primmed and Layde walnuttree coullo' in

Oyll and vained at £25. Item for guilding (that worke of the Staircase withe the severall Mouldings and other inrichments of the carved worke therof) with fine gould in Oylle at £20'. Adshead and Rowell, 'Seventeenth-century decorative woodwork at Ham House', 75.

71 Thornton and Tomlin, 'The furnishing and decoration of Ham House', 45–9.

72 De Wit, 'New light on a staircase of 1699–1700', 103–9.

73 The analyses were conducted in the Met's Department of Scientific Research by scientists Adriana Rizzo and Federico Carò, and research fellow Yuka Ohashi.

74 The greater resistance of softwoods, including pine, is based on their higher lignin and resin content as well as their lower hemicellulose content compared with the hardwoods, see Unger et al. *Conservation of Wood Artifacts*, 43–4.

75 The surface treatment was developed in collaboration with Adriana Rizzo and Federico Carò, scientists in the Met's Department of Scientific Research.

76 When the staircase was reinstalled at Cassiobury House at the beginning of the nineteenth century, the bottom five steps were extended on their proper left sides. The bottom five treads of the long flight have a groove on this side remaining from the tongue-and-groove joint, indicating that the 1956/57 placements of the steps followed the 1800 sequence.

77 See time-lapse video of the staircase's deinstallation and reinstallation: https://www.metmuseum.org/exhibitions/listings/2020/british-galleries.

78 The new wainscoting elements and newel post were built in the woodworking shop Campbell & Strasser in Bethlehem, PA.

79 The finials were milled at Digital Atelier in Mercerville, NJ. For the reproduction of the finials, see Baumeister et al., 'Digital 3D reproduction and CNC milling'.

80 For an in-depth article about the conservation and reinstallation of the Cassiobury staircase, see Baumeister et al., 'Reactive, Proactive and Interactive'.

References

Adshead, David and Christopher Rowell. 'Seventeenth-century decorative woodwork at Ham House'. In *Ham House: 400 years of collecting and patronage*, edited by Christopher Rowell, 67–83. New Haven, CT and London: Yale University Press, 2013.

Airy, Osmund. *Essex Papers, vol. 1, 1672–1679*. London: Camden Society, 1890.

Ayres, James. *Art, Artisans and Apprentices: Apprentice painters and sculptors in the Early Modern British tradition*. Oxford and Philadelphia, PA: Oxbow Books, 2014. Accessed 18 June 2022. http://www.jstor.org/stable/j.ctvh1djn3.

Barnard, Toby. *Making the Grand Figure: Lives and possessions in Ireland, 1641–1770*. New Haven, CT and London: Yale University Press, 2004.

Baumeister, Mecka, Lisa Ackerman, Jesse Ng and Ivo Kipre. 'Digital 3D reproduction and CNC milling: putting the finial touches on the Cassiobury House staircase'. AIC Wooden Artifacts 2020 Postprints. Accessed 18 June 2022. https://culturalheritage.org/docs/default-source/publications/039-058-wag2020-baumeister_et_al.pdf?sfvrsn=78b31420_2.

Baumeister, Mecka, Lisa Ackerman, Nick Pedemonti and Ivo Kipre. 'Reactive, proactive and interactive: the conservation and reinstallation of the Cassiobury House Staircase at the Met'. AIC Objects Specialty Group 2020 Postprints [forthcoming].

Beard, Geoffrey. *Craftsmen and Interior Decoration in England 1660–1820*. London: Bloomsbury, 1981.

Beard, Geoffrey and Anne Cherry Knott. 'Edward Pearce's work at Sudbury', *Apollo: The International Magazine for Collectors* 151:458 (2000): 43–8.

Britton, John. *The History and Description of Cassiobury Park, Hertfordshire, the Seat of the Earl of Essex*. London: Chiswick Press, 1837.

Burke, Donal G. 'Eyre of Eyrecourt (Part I)', Burke's East Galway: the culture, history and genealogy of the families of east Galway, 2016. Accessed 18 June 2022. http://burkeseastgalway.com/eyre-of-eyrecourt-part-i/#_edn22.

Buvelot, Quentin, Koen Ottenheym, Johannes Binne Hendrik de Haan and Margriet van Eikema Hommes. *Mauritshuis: The building*. Zwolle: Waanders Uitgevers, 2014.

Campbell, J.W.P. and Michael Tutton. *Staircases: History, repair and conservation*. London: Taylor and Francis, 2014.

Cassiobury Park Photograph Album. Album of Photographs taken at Cassiobury Park, Hertfordshire, of the Building's Interior Paneling and Woodwork. Gift of Mrs Francis Henry Lenygon to The Met's Department of European Sculpture and Decorative Arts. c.1922.

Colvin, Howard. *A Biographical Dictionary of British Architects 1600–1800*. 3rd edition. New Haven, CT and London: Yale University Press, 1995.

Cook, Moses. *The Manner of Raising, Ordering, and Improving Forrest-trees Also, How to Plant, Make and Keep Woods, Walks, Avenues, Lawns, Hedges, &c.: With several figures proper for avenues and walks to end in, and convenient figures for lawns: also rules by M. Cook*. London: Printed for Peter Parker, 1676.

Craig, Maurice. *The Architecture of Ireland: From the earliest times to 1880*. London: B.T. Batsford, and Dublin: Eason & Son, 1982.

Cronin, John. '"A Gentleman of a Good Family and Fortune": John Eyre of Eyrecourt 1640–1685', *Journal of the Galway Archaeological and Historical Society* 60 (2008): 88–115.

De Wit, Ada. 'New light on a staircase of 1699–1700 in Museum Boijmans Van Beuningen, Rotterdam', *Burlington Magazine* 158:1355 (2016): 103–9.

Dodd, Dudley. *Dunster Castle: Somerset*. London: National Trust, 1993.

Edwards & Sons. Advertisement. *The Burlington Magazine for Connoisseurs* 42:242 (1923): 21. Accessed 18 June 2022. https://www.jstor.org/stable/861761.

Edwards & Sons. *The Wonderful Grinling Gibbons' Carvings from Cassiobury*. London: Edwards & Sons, The Regent Street Galleries, c.1925.

Edwards & Sons. Advertisement, 'This magnificent Grinling Gibbons Staircase from Cassiobury Park'. *The Burlington Magazine for Connoisseurs* 61:355 (1932): 11.

Esterly, David. *Grinling Gibbons and the Art of Carving*. London: V&A Publications, 1998.

Evans, Godfrey and Charles Stable. 'The old state drawing room from Hamilton Palace at the National Museum of Scotland, Edinburgh', *Artefacta* 12 (28 November 2019). Accessed 18 June 2022. https://www.doria.fi/bitstream/handle/10024/177682/Artefactum12.html?sequence=1&isAllowed=y.

Evelyn, John and William Bray. *Diary and Correspondence of John Evelyn, F.R.S.: To which is subjoined the private correspondence between King Charles I and Sir Edward Nicholas, and between Sir Edward Hyde, afterwards Earl of Clarendon, and Sir Richard Browne*. London: Henry Colburn, 1850.

Evelyn, John and John Nisbet. *Sylva: Or, a discourse of forest trees* [1662]. Volume 1 of 2 vols. London: Doubleday, 1908.

Fiennes, Celia and Christopher Morris. *The Illustrated Journeys of Celia Fiennes, 1685–c.1712*. London: Macdonald, 1982.

Fréart, Roland. *Parallèle de l'architecture antique et de la moderne, avec un recueil des dix principaux autheurs qui ont écrit des Cinq Ordres: sçavoir Palladio et Scamozzi, Serlio et Vignola, D. Barbaro et Cataneo, L. B. Alberti et Viola, Bullant et de Lorme, comparez entre eux* … Paris: R. Fréart, Sieur de Chambray and Charles Errard, 1650.

Gallagher, Brian. 'William Randolph Hearst and the Detroit Institute of Arts', *Bulletin of the Detroit Institute of Arts* 78:1/2 (2004): 54–65. Accessed 18 June 2022. http://www.jstor.org/stable/41504984.

Gapper, Claire. 'The impact of Inigo Jones on London decorative plasterwork', *Architectural History* 44 (2001): 28–88.

Glin, The Knight of and James Peil. *Irish Furniture: Woodwork and carving in Ireland from the earliest times to the Act of Union*. New Haven, CT and London: Yale University Press, 2007.

Godfrey, Walter H. *The English Staircase: An historical account of its characteristic types to the end of the XVIIIth century*. London: Batsford, 1911.

Gomme, Andor and Alison Maguire. *Design and Plan in the Country House: From castle donjons to Palladian boxes*. New Haven, CT and London: Yale University Press, 2008.

Harris, John. *Moving Rooms: The trade in architectural salvages*. New Haven, CT and London: Yale University Press for the Paul Mellon Centre for Studies in British Art, 2007.

Higgott, Gordon. 'Inigo Jones in Provence', *Architectural History* 26 (1983): 24–34; 123–31.

Higgott, Gordon, '"Mutual Fruitfulness": A nuptial allegory on Queen Henrietta Maria's Bedchamber Ceiling at the Queen's House, Greenwich'. In *The Wedding of Charles I and Henrietta Maria, 1625: Celebrations and controversy*, edited by Marie-Claude Canova-Green and Sara J. Wolfson, 295–320. Turnhout: Brepols, 2020.

Higgott, Gordon and A.V. Grimstone. 'Drawings by Edward Pearce Senior (fl. c.160–, d.1658): painter, decorator and interior designer', *Walpole Society* 82 (2020): 1–113.

Hope, W.H. *Windsor Castle: An architectural history, collected and written by command of Their Majesties Queen Victoria, King Edward VII and King George V*, vol. 1. London: Offices of Country Life, 1913.

Hussey, Christopher. 'Sudbury Hall, Derbyshire II: The seat of Lord Vernon', *Country Life* 77 (22 June 1935): 650–6.

Jervis, Simon. 'A seventeenth-century book of engraved ornament', *Burlington Magazine* 128:1005 (1986): 893–903.

Jourdain, Margaret. *English Interior Decoration*. London: Batsford, 1950.

Knight, Frank and Rutley. *Catalogue of the Contents of Cassiobury Park, Watford, Herts*. London: Knight Frank and Rutley, 1922.

Knox, Tim. 'John Fowler and the National Trust'. In *John Fowler: The invention of the country-house style*, edited by Helen Hughes, 13–20. Shaftesbury: Donhead, 2005.

Loeber, Rolf. 'Irish country houses and castles of the Late Caroline Period: an unremembered past recaptured', *Bulletin of the Irish Georgian Society* 16 (1973): 1–69.

Loeber, Rolf. *A Biographical Dictionary of Architects in Ireland 1600–1720*. London: John Murray, 1981.

Loeber, Rolf. 'Arnold Quellin's and Grinling Gibbons's monuments for Anglo-Irish patrons', *Studies: An Irish Quarterly Review* 72:285 (1983): 84–101.

McParland, Edward. *Public Architecture in Ireland 1680–1760*. New Haven, CT and London: Yale University Press, 2001.

Mowl, Timothy and Brian Earnshaw. *Architecture without Kings: The rise of puritan classicism under Cromwell*. Manchester: Manchester University Press, 1995.

Moxon, Joseph. *Mechanick Exercises: Or, the doctrine of handy-works. Applied to the arts of smithing joinery carpentry turning bricklayery. To which is added, mechanick dyalling: shewing how to draw a true sun-dyal on any given plane, however scituated; only with the help of a straight ruler and a pair of compasses, and without any arithmetical calculation*. 3rd edition. London: Printed for D. Midwinter and T. Leigh, 1703.

Muller, Jeffry, 'Jesuit uses of art in the province of Flanders'. In *The Jesuits II: Cultures, sciences, and the arts, 1540–1773*, edited by John W. O'Malley , Gauvin Bailey, Steven Harris and T. Frank Kennedy, 113–56. Toronto: University of Toronto Press, 2006.

O'Connell, John and Rolf Loeber. 'Eyrecourt Castle, Co. Galway', *The GPA Irish Arts Review Yearbook* (1988): 40–8. Accessed 18 June 2022. http://www.jstor.org/stable/20492048.

O'Connor, Damien. 'Stairway to history: the House of Liberty and the Imperial Staircase'. BA Dissertation, Institute of Technology, Galway, 2016.

Parker, James. 'A staircase by Grinling Gibbons', *Metropolitan Museum of Art Bulletin* 15:10 (1957): 228–36. DOI: 10.2307/3257759; http://www.jstor.org/stable/3257759.

Philippon, Adam. *Curieuses recherches de plusieurs beaus morceaus d'ornemens antiques et modernes, tant dans la ville de Rome ques autres villes et lieux d'Italie / dessiné et mis en lumière par moy Adam Philippon, menuisier et ingénieur … du Roy.* [A Paris]: Published by the author, 1645.

Pierce (Pearce), Edward I. Ca. 1640. *Designs for Friezes*. In the collection of The Met's Department of Drawings and Prints # 19.65.22.

Pricke, Robert. *The Ornaments of Architecture, Containing Compartments, Mantlings, Foldings, Festones, &c: Collected out of the works of several eminent masters, and set forth by Robert Pricke*. London: Printed for Robert Pricke, 1674.

Quellinus, Hubertus. *Hubertus Quellinus, Prima[-secunda] pars praecipuarum effigierum ac ornamentorum amplissimae curiae Amstelrodamensis: Maiori ex parte, in candido marmore effectorum per Artum Quellinium, eiusdem civitatis statuarium = Het eerste[-tweede] deel van de voornaemste statuen ende ciraten vant konstrijck Stadthuys van Amstelredam*. Printed in Amsterdam by Fredrick de Witt, 1665.

Rabbitts, Paul A. and Sarah Kerenza Priestley. *Cassiobury: The ancient seat of the Earls of Essex*. Stroud: Amberley, 2014.

Roscoe, Ingrid, Emma Hardy, M.G. Sullivan and Rupert Gunnis. *A Biographical Dictionary of Sculptors in Britain, 1660–1851.* New Haven, CT: Yale University Press, 2009.

Rose, Edward. 'English homes: no. VII, Cassiobury', *Illustrated London News*. London: William Little, 1886, 441–6.

Roy, James Charles. 'William Randolph Hearst and the Eyrecourt staircase', Accessed 18 June 2022. https://www.jamescharlesroy.com/eyrecourt-article.html. A shortened version of this online article appeared in *The Journal of the Galway Archaeological and Historical Society* 69 (2016): 161–90.

Thornton, Peter and Maurice Tomlin. 'The furnishing and decoration of Ham House', *Furniture History Society* 16 (1980): 1–194. Accessed 18 June 2022. http://www.jstor.org/stable/23404800.

Tipping, Henry Avray. 'Cassiobury, Herts, the seat of the Earl of Essex', *Country Life* 28 (17 September 1910): 392–9.

Tipping, Henry Avray. *Grinling Gibbons and the Woodwork of his Age (1648–1720)*. London: Country Life, 1914.

Toynbee, J.M.C. and J.B. Ward Perkins. 'Peopled scrolls: a Hellenistic motif in Imperial art', *Papers of the British School in Rome* 18 (November 1950): 1–43. Accessed 18 June 2022. https://doi.org/10.1017/S0068246200006139.

Unger, Achim, Arno P. Schniewind and Wibke Unger. *Conservation of Wood Artifacts: A handbook*. Berlin: Springer, 2001.

Worsley, Giles. *Inigo Jones and the European Classicist Tradition*. New Haven, CT and London: Yale University Press, 2007.

Further reading

Ayres, James. *The Artist's Craft: A history of tools, techniques, and materials*. Oxford: Phaidon, 1985.

Beard, Geoffrey. *The Work of Grinling Gibbons*. Chicago: University of Chicago Press, 1989.

Burchard, Wolf, Max Bryant and Elizabeth St. George. 'The New British Galleries', *The Metropolitan Museum of Art Bulletin* 77:4 (2020). Accessed 18 June 2022. https://resources.metmuseum.org/resources/metpublications/pdf/The_New_British_Galleries.pdf.

The Connoisseurs Diary. 'Lord Vernon's Sudbury: painting below zero', *The Connoisseur* 179 (January 1972): 65.

Cornforth, John. 'Sudbury Hall revisited', *Country Life* 149 (10 June 1971): 1428–33.

Cornforth, John. 'Ham House revisited II', *Country Life* 169: 4355 (5 February 1981): 322–3.

De Wit, Ada. *Grinling Gibbons and the Golden Age of Woodcarving*. Turnhout: Brepols, 2022.

Dietz, Barbarara. 'Oberflächenveränderungen an Schnitzhölzern durch historische Ablaugverfahren und Ablaugmittel', *Zeitschrift für Kunsttechnologie und Konservierung* 17:2 (2003): 357–77.

Edwards and Sons. Advertisement. *Arts and Decoration* 20/4 (1924): 49.

Esterly, David. *The Lost Carving: A journey to the heart of making*. London: Penguin, 2012.

Félibien, André and Jean Baptiste Coignard. *Des principes de l'architecture, de la sculpture, de la peinture, et des autres arts qui en dependent: Avec un dictionnaire des termes propres à chacun de ces arts*. Paris: J.B. Coignard, 1676.

Fenlon, Jane. 'Moving towards the formal house: room usage in early modern Ireland', *Proceedings of the Royal Irish Academy: Archaeology, Culture, History, Literature* 111C, Special Issue: Domestic life in Ireland (2011): 141–68.

Green, David Brontë. *Grinling Gibbons: His work as carver and statuary, 1648–1721*. London: Country Life, 1964.

Hadfield, Miles. 'The pineapple as an ornament', *Country Life* 137 (18 February 1965): 373–4.

Humbert & Flint. *Particulars, Plans, Views and Conditions of Sale of the Cassiobury Park Estate including the historical family mansion, Little Cassiobury, and the West Herts Golf Links, embracing in all an area of about 870 Acres. For sale by auction, at the Estate Sale Room, 20, Hanover Square, W., on Thursday, the 8th day of June, 1922, at 2:30 o'clock (unless meanwhile sold privately) by Humbert & Flint in conjunction with Knight, Frank & Rutley*. London: Estate Gazette, 1922.

The Irish Aesthete. 'Bring it home', *The Irish Aesthete,* 4 November 2019. Accessed 18 June 2022. https://theirishaesthete.com/2019/11/04/a-national-treasure-repatriated/.

Jones, Owen. *The Grammar of Ornament*. London: Day and Son, 1856.

Levkoff, Mary L. *Hearst, The Collector*. New York: Abrams, 2008.

The Metropolitan Museum of Art. 'Staircase carved by Grinling Gibbons new feature at the Metropolitan Museum', Watson Library Digital Collections. Press release 1957. Accessed 18 June 2022. https://libmma.contentdm.oclc.org/digital/collection/p16028coll12/id/814/rec/3.

O'Neill, John P., ed. *The Metropolitan Museum of Art: Greece and Rome*, 126–7. New York: Metropolitan Museum of Art, 1987.

Poole, Stephen. *A Fair and Large House: Cassiobury Park, 1546–1927*. Watford: Watford Borough Council, 1985.

Robinson, John Martin. *Felling the Ancient Oaks: How England lost its great country estates*. London: Aurum Press, 2011.

Ryan, May Stratton. 'Lady Gregory's Galway sketchbook', *Journal of the Galway Archaeological and Historical Society* 68 (2016): 147–59. Accessed 18 June 2022. http://www.jstor.org/stable/44751505.

Tipping, Henry Avray. 'Hugh May and Grinling Gibbons at Cassiobury'. In *Grinling Gibbons and the Woodwork of His Age (1648–1720)*, by Henry Avray Tipping, 68–79. London: Country Life, 1914.

Tomlin, Maurice. *Ham House*. London: Victoria and Albert Museum, 1986.

Von Bommel, Wolfgang Hieronymous. *Neu-ersonnene Gold-Schmieds Grillen*. Berlin: Johann Christoph Weigel [before 1698].

Wells, Griffith T. '"That incomparable young man Gibbon" – master wood carver of Late Renaissance, England', *Arts and Decoration* 20: (1924): 38, 39, 57.

Welsh, Peter C. *Woodworking Tools, 1600–1900*. Washington, DC: Smithsonian Institution, 1966.

Whitley, Mary. 'The role and function of the interior double staircase'. In *English Architecture Public and Private*, edited by John Bold and Edward Chaney, 1–9. London: Hambledon Press, 1993.

Whitney, Geffreyand. *A Choice of Emblemes, and Other Devises: For the moste parte gathered out of sundrie writers, Englished and moralized. And divers newly devised*. Leiden: Francis Raphelengius, 1586.

3

Fragments of eighteenth-century craftsmanship: the Pearson collection

Peter Pearson

The Pearson collection of architectural fragments and installations presents an unusual and varied display of craftsmanship, mostly rescued from demolished buildings in Dublin and beyond during the last decades of the twentieth century. Many of the objects, which are beautiful in their own right, also have an historic importance as each piece came from a specific building and has a recorded provenance of its own (Fig. 3.1). About three-quarters of the collection is documented by photographs, sometimes with images of the pieces in situ and with provenance noted on the object itself. The collection, which mainly dates to the eighteenth and nineteenth centuries, embraces a wide range of craft practice from joinery to carving, glazing, ironwork and plasterwork. The collection immediately confronts the viewer with a number of questions. How did these decorative elements or structural fittings come to be removed from their original settings? How were they retrieved or salvaged? Where have they been stored and what is to become of them in the future? What is their potential role in telling the story of the city and its built heritage? Have they aesthetic value in their own right? What can these objects, in their detached and fragmentary state, tell us about craftsmanship of the eighteenth and nineteenth centuries, and the experience and making of the crafted surface? What, moreover, does the destruction of so many houses and buildings and the discarding of these fragments say about the public and official attitude to heritage structures in Ireland in the latter

Figure 3.1: Vitruvian scroll, plaster frieze fragment, stairhall No. 29 Clare Street, Dublin.

© Peter Pearson. Photograph by David Davison.

decades of the twentieth century? As Sarah Elizabeth Hawes pointed out in her thesis on this subject in relation to the US context, architectural-fragment collecting is tied to the duality of preservation and destruction.[1] The Pearson collection constitutes an important reference collection for conservation architects and historians, while the process of collection charts the broader campaign to preserve Dublin's architectural heritage.

The salvaged objects are seen in the collection as individual specimens and are necessarily displayed out of their architectural context. The removal of these artefacts from their original setting and the opportunity to see them close up serves to accentuate their intrinsic beauty and heighten the focus on the craftsmanship of each object. This altered perspective – perhaps last experienced by the original creator – can reveal previously hidden or unseen aspects about the object, as well as insights into the craftspeople and processes behind its creation. For example, the delicate construction of wrought-iron fanlights is enhanced by close viewing (Fig. 3.2), revealing the refined detail of its many constituent parts – from the eggshell-thin glazing in varied shapes and sizes to the often-overpainted decorative enrichments such as urns, finials and ram's heads. The decorative detail and inner composition of

Figure 3.2: Late Georgian fanlight.

© Peter Pearson. Photograph by David Davison.

plasterwork fragments which once adorned the ceilings of great houses can be closely examined and handled in a way not normally possible, and the tactile materiality of timber pilasters, architraves and staircase details – often stripped of paint and varnish layers – is revealed, as occasionally are the marks of their makers. These pieces are the evidence of craftsmanship which made up the detail of built Dublin, mementos of a time long past and of the people who built and lived there. As such, the collection not only helps foster awareness of historical preservation, it also plays an important role in facilitating the second-life value of architectural fragments.

The scope of the collection

While most of the artefacts represent the decorative surfaces of buildings, some – such as timber roof trusses, wrought-iron cramps, eighteenth-century nails or lead plumbing fittings – reveal internal or structural details. Such items can tell us much about historic construction methods and help us to understand the evolution of the built heritage and building technology of the time. The collection also contains fragments from several important public buildings in Dublin, acquired during conservation works. For example, one of the original iron masonry cramps from the Custom House, which caused so much damage to the

Figure 3.3: Iron cramp (bottom right) from the Custom House, Dublin, 1781–91.

© Peter Pearson. Photograph by David Davison.

fine stonework (Fig. 3.3); a plasterwork acorn rescued from the Four Courts before the 1922 fire; and a granite step from Nelson's Pillar, which was blown up in 1966, were donated to the collection. Plasterwork from City Hall was retrieved during conservation works, and early wallpaper fragments and a decorative toilet from Dublin Castle were salvaged during the 1980s when substantial sections of the castle were rebuilt. The pattern of neglect and abandonment was not confined to the city, and there are also many objects from buildings in County Dublin and further afield around Ireland. In the twentieth century many country houses were simply left to collapse and rot away. Some of these ruins have since been re-roofed and restored, such as Killua Castle in County Westmeath or Syngefield in Birr, County Offaly. Other houses, such as Frescati in Blackrock, County Dublin – the seaside villa of the Duchess of Leinster, and her son Lord Edward FitzGerald – or Robert Emmet's birthplace at No. 109 St Stephen's Green, had an historic as well as an architectural significance, but despite this they were still reduced to rubble.[2] Two plaster fragments, an anthemion and a piece of strapwork are all that is known to survive from Frescati House, which was destroyed in 1983 after a 13-year-long planning battle (Fig. 3.4). In the wake of what seemed like an official attitude of deliberate neglect and disinterest in this part of Irish material culture, it became all the more pressing to save the emblems and fragments which remained.

Figure 3.4: (a) Frescati House, Blackrock, County Dublin, built 1739, demolished 1983. Photograph from *The Lady of the House* (Christmas, 1908). Courtesy of the Irish Architectural Archive; (b) Plaster anthemion and piece of strapwork, Frescati House, Blackrock, County Dublin.

© Peter Pearson. Photograph by David Davison.

The vast majority of fragments in the Pearson collection have been rescued from historic buildings prior to their demolition. Most of the artefacts date from the eighteenth and nineteenth centuries. Accidents will of course always happen, but demolition or destruction by fire is so very final and can be quite shocking and unexpected – as everybody knows who woke up to the news that Notre-Dame in Paris had burned down, or who witnessed the destruction of Powerscourt in County Wicklow or Clandon Park in Surrey. Planned or wilful demolition provokes an equally emotive response to loss. For a number of reasons it would now, hopefully, no longer be possible to salvage or assemble such a collection in Ireland, as most significant buildings of this kind are now listed as protected structures, and present-day site safety would preclude casual access to the demolition of an old house. However, this does not mean that elements from protected structures are no longer sometimes at risk, and there have been many examples of loss even in recent years.

The demolition model: the politics of preservation

The outlook for Ireland's historic built heritage was very different 30 years ago. During the 1980s there might at any one time be as many as 10 or 20 vacant houses in Dublin lying open awaiting demolition. Whole blocks of terraced houses and entire streetscapes were eradicated in places like Eccles Street, St Stephen's Green, South Frederick Street, Leeson Street and the quays of the river Liffey, to name but a few.[3] The destruction of so many of the Georgian quayside terraces which made up one of Dublin's most memorable and iconic views – a composition of russet-coloured brick houses stretching from the Custom House, past the Four Courts to Guinness's brewery – was a terrible mistake planned by the city council's own road engineers. In the suburbs things were little better: large houses were left open to the elements and were soon stripped bare while their sites awaited redevelopment. Many houses and buildings of architectural importance around the country were simply left abandoned.

Many people now would not believe the extent of the demolition that took place. A complex amalgam of resentment and distaste for anything old, anything colonial or British, was fuelled by greed and a desire to create a modern city of office blocks. As Erika Hanna notes, 'the demolition of eighteenth-century streetscapes was often described as the "re-conquest" of the city which had once been the nucleus of British rule', the process of urban modernisation was subconsciously part of a 'totemic "de-Anglicisation of Ireland"'.[4] Projects were promoted by teams of auctioneers, architects and developers backed by banks and insurance companies, and their paths were smoothed by politicians and public servants. In the 1980s even enlightened heritage bodies felt that the most that could be hoped for was that the main public buildings and the two Georgian squares of the south city would be preserved. Indeed, that was essentially all which was 'listed' or protected at that time. Much has been written about all that was swept away – the whole streets that were razed like Dominick Street or large sections of Mountjoy Square for example, mostly between 1960 and 1990 – and there are many fascinating photographs of what has been lost (see Fig. 3.5).[5] The Irish Architectural Archive was established in 1976 to record such buildings. Much attention was given, naturally enough, to the more noted streets and buildings, but even the seemingly insignificant lesser quarters often had features of interest: old stone doorcases, ironwork railings, streetlamps or whole shopfronts. The effort to save Temple Bar from complete demolition for a bus station in 1984–6 was an attempt to save the character of a more modest but richly historic part of the city. A survey of all the buildings and street pavements was organised by this writer and was carried out voluntarily by friends.[6] Much publicity and lobbying ensued and though the area was saved from the bus-station plan, many historic buildings in the quarter were needlessly demolished.[7]

Figure 3.5: Rear elevation, Summerhill, Dublin, 1981.

Courtesy of the Irish Architectural Archive. Photograph by David Davison.

Rescue and collection

To address now the idea of collecting, it might be asked at what point does an accumulation of items become a collection? Perhaps when there are several examples of the same type of artefact, for example of stair tread-ends or railing heads, it can be said that there is a collection. Objects of the same type can be compared for size, quality or design and in this way we can arrive at a classification of objects, citing where possible the date, site, designer/maker and medium. The rapid pace of demolitions in Dublin city and county in the 1980s made it possible to acquire these objects, but they did not simply fall out of the sky. In the first case an attempt was made through the planning process to prevent destruction. Countless letters were written under the auspices of An Taisce (the National Trust for Ireland) and the Irish Georgian Society to oppose such destruction, and individuals such as Frank McDonald did much to highlight the process in the press through investigative journalism. Being often unsuccessful, this led to the hour of demolition – if one was lucky enough to know when it might happen. A useful clue was the pervasive smell of burning paint and woodwork, and clouds of blue smoke wafting from some quarter of the city as doors, shutters, joists and floorboards were set on fire by the demolition contractors to make the work of the bulldozer easier. In general, nobody wanted to save anything except old copper and lead, and developers were keen to clear the site as quickly as possible. Some of the larger elements were recycled – for instance, slates from two large Georgian houses went for the re-roofing of Drimnagh Castle, while joists, floorboards, doors and mouldings were always useful if there was an opportunity to save them. Earlier salvagers such as John Lenahan managed to rescue whole panelled rooms, while the architect Jeremy Williams was responsible for dismantling and re-erecting several eighteenth-century ceilings.[8] Ian Lumley salvaged an entire late seventeenth-century staircase from a house on Ormond Quay. Rescuing ironwork balconies or plasterwork required patience; tools; help from like-minded friends; and, of course, transport. Much was moved on the back of motorbikes, and cars were borrowed for larger items. Plasterwork had to be detached, sometimes using a hatchet, usually from makeshift scaffolds made out of old wardrobes and joists. The black filth of demolition, dust in the eyes, splinters and sharp nails were all routine hazards, not to mention the toll of lifting very heavy stones and timbers. Squeezing in between iron bars and climbing in through awkward holes in walls or small windows was part and parcel of such house exploration. Lastly, space was needed to store everything – usually in basements or outside sheds.

Where does the interest to collect such material come from? In my case I was always a magpie for anything old – a dug-up piece of iron, an old bottle, shells – but perhaps it was the shock, when I was 11 years old, of the blowing up of Nelson's Pillar in 1966, or witnessing the burning down of St Michael's church in Dun Laoghaire in 1965 that made me realise that the seemingly solid, unchanging world of the 1960s was not so permanent as I would like to have thought.[9] I made a plaster model of the stump of the Pillar, sprinkled with broken bits of granite, and displayed it in a school exhibition, and a photo of it appeared in the *Irish Times*. Some years later I began reclaiming old tiles, bell pulls and railing spikes from the rubble of house demolitions. Soon afterwards I met the Gillman brothers in Dun Laoghaire and they too were addicted to collecting architectural fragments, as well as photographs, books and papers. As supporters and admirers of Desmond and Mariga Guinness they had been founder members of the Irish Georgian Society. This form of collecting – fragments from a wide range of Dublin's built heritage – could be seen as a kind of lunatic magpie addiction or perhaps it could be regarded more accurately as a sort of advance-archaeology of the eighteenth and nineteenth centuries, where the items rarely got the chance to be buried (Fig. 3.6). On another level, like some archaeological artefacts, the objects are artistic pieces in their own right. The objects illustrate aspects of particular buildings and the development of the city in general, and reflect the social history of those times. For example, an ornamental ceramic bell pull, an iron footscraper or coal hole can tell us much about living conditions, heating and transport in the eighteenth and nineteenth centuries.

Figure 3.6: No. 15 Dawson Street, Dublin, first-floor ceiling during removal in February 1977.

Courtesy of the Irish Architectural Archive.

The collection as an interpretative tool

What do collections of architectural fragments tell us about the crafted surfaces of buildings over and beyond what we can see in surviving structures? As the latter cannot be opened up, unless in exceptional conservation circumstances, these fragments allow us to see the inside, outside, bottom, side and top of the decorative and constructional components as their makers would have seen them. These altered perspectives offer new insights into the craft processes and the industry of craftsmanship in the late seventeenth and eighteenth centuries, while close examination of the fragmentary object can reveal evidence of the craft techniques, materials and tools employed in their making. The objects, often beautiful in their own right, contribute to the story of each building – in Dublin and beyond.

Timber joinery and carving

The Pearson collection contains a range of hand-carved structural and decorative timber elements, from external mouldings to staircase components, which illustrate developments in decorative craft practice and material processes over the course of more than one hundred years. Two pieces of oak which were recovered from now-lost seventeenth-century buildings are of particular interest. The first is a shaped transom or cill from a window of Turvey House, Donabate, County Dublin (Fig. 3.7), which was found in the rubble after the historic ruin was demolished in 1984. The late seventeenth-century house incorporated a medieval castle, part of whose undercroft survives still. The timber fragment, which measures some 18 inches (46 cm) long and 8 inches (20 cm) square with a tenon joint at one end, is important because it marks the transition of window design from stone mullion to timber frame. There is a groove in the rounded outer moulding in which glass may once have sat, and there are faint traces of red paint. Due to its strength and durability – which increased with age, particularly in areas which were exposed to the air and water – oak was the preferred timber for structural framing and external joinery. Despite the increasing scarcity of native oak supply in the late seventeenth and eighteenth centuries, joiners and architects continued to specify this hardwood for external timber components.[10] This fragment appears to have been buried in the masonry of later alterations and may well predate the seventeenth-century structure at Turvey. The second piece of oak is a heavy and substantial decorated window architrave, dating from the 1660s from Eyrecourt Castle in County Galway (Fig. 3.8), discussed in Mechthild Baumeister and Andrew Tierney's chapter in this volume. The fragment is about 6 ft (1.8 m) long and approximately 10 inches (25 cm) square, and once formed the side of one of the principal windows of the façade. The outer face is carved with egg-and-dart and beaded mouldings. The significance of this fragment is that it demonstrates an early example of classical decorative detail in an Irish country house, signifying the transition from defensive to more representative domestic architecture. As at Turvey, the choice of oak reflects the availability of that timber and the once-prevalent use of oak for structural and decorative purposes. Ireland was once covered with extensive oak forests and, as can be seen from the timber fragment, after three-and-a-half centuries this building material has endured very well the exposure to sun and rain.

Fragments of internal timber joinery from Kilmacurragh, County Wicklow – another remarkable house dating from the first decade of the eighteenth century, which was damaged by two successive fires in the late twentieth century – are preserved in the collection. The modest-sized house, with small wings or pavilions and a large gabled centrepiece, was originally built for the Acton family and featured some fine carved timber detailing, including a Baroque-style doorcase, in pine or deal softwood, and deal panelling throughout. The front door gave onto a spacious hall from which a finely carved deal staircase once rose. The collection includes several charred balusters and a boss in the form of an English rose which was fixed to the underside of the newel posts of the staircase. In their current unfixed state these deal fragments appear as last seen by the joiner who fixed them in place. The balusters were turned on a lathe in the carvers' workshop and involved considerable skill to produce the spiral effect of barley sugar. Other parts, such as the small 'egg-and-dart' capital and fluting, were executed by hand with a chisel (Fig. 3.9). The balusters were held in position by several small nails and very often dovetailed into the edge of the stair tread or step.

Though the parkland and arboretum at Kilmacurragh are now very well maintained, the house has been roofless for many years. Following some abortive attempts to restore it in the late 1970s and further damage caused by two subsequent fires, the ruin lay abandoned and Kilmacurragh's fine decorative timber work has largely been lost. A rare set of building accounts for the construction of the house survive in the Acton papers and offer evidence of the individuals and cost of craftsmanship involved.[11] In 1707 Mr Acton spent upwards of £2,000 on his 'new mansion house' and several other structures in the demesne. A

Figure 3.7: (a) Turvey House, Donabate, built late seventeenth and eighteenth century, demolished 1987. Courtesy of the Irish Architectural Archive. (b) Oak transom from Turvey House.

Photograph by Patrick Rossmore; © Peter Pearson. Photograph by David Davison.

Figure 3.8: (a) Eyrecourt Castle, County Galway, prior to ruin, built circa 1665, interiors removed circa 1920s; (b) Carved timber architrave from Eyrecourt Castle.

(a) Courtesy of the Irish Architectural Archive; (b) © Peter Pearson.

Figure 3.9: Charred timber balusters, Kilmacurragh, County Wicklow. © Peter Pearson.

Mr Royly was paid £5 in 1718 for joinery and wainscoting and £6 for carving and turning. Though Royly could have been local it seems more probable that he was based in Dublin, where similar examples were once commonplace, and it was normal practice to subcontract such woodwork to a specialist craftsman. It is also noteworthy that the barley-sugar and fluted stair balusters and the carved Corinthian newel post (Fig. 3.10) are almost identical to other examples in the collection from Dublin city houses of the same period, possibly about 1730, such as those at No. 6 Bachelor's Walk (Fig. 3.11, demolished in 1989).

A large collection of timber staircase components allows us to chart the development of decorative repertoire and changes in material use in staircase construction. The earliest examples in the collection come from Dublin houses at No. 30 Ormond Quay, Bolton Street and Aungier Street, and date from the later seventeenth and early eighteenth centuries. These stair balusters or poles are made of oak and have a satisfying, chunky quality in the style of a short barley-sugar pillar or a fat baluster. Being oak, they are heavier and harder than pine, and when unpainted often bear marks of chisel and blade. Later examples, such as the fluted

Figure 3.10: Former staircase, showing newel post, Kilmacurragh, County Wicklow, built circa 1697–1705.

© Davison & Associates. Photograph by David Davison.

Figure 3.11: Half newel post, pine stripped of paint, No. 6 Bachelor's Walk, Dublin, circa 1730.

© Peter Pearson. Photograph David Davison.

baluster from No. 6 Bachelor's Walk, show a shift towards more slender profiles and decorative mouldings. Here, the newel post, complete with composite capital, has been stripped of cumulative layers of paint, revealing the intricacy of carved timber detail. Towards the mid-century, as Andrew Tierney's chapter in this volume shows, the most superior houses contained staircases with balustrades of carved and turned mahogany or hammered wrought iron. Some fine examples of the latter survive in situ at Nos. 9 and 11 Henrietta Street (c.1730), while two virtuoso examples in mahogany can be seen in houses by Richard Castle at No. 85 St Stephen's Green (c.1738) and Tyrone House (c.1740). Staircases of painted softwood timbers, however, were by far the most commonplace in the more standard Dublin terraced house, as a more economic and readily available option. Increasingly large quantities of softwood timbers were imported from Scandinavia and the Baltic coast throughout the eighteenth century, which despite the transport costs from northern Europe were still cheaper to purchase than native hardwoods.[12] Spruce, fir and Scots pine, generically known as 'deal' in the eighteenth century, were the most commonly used as their straight grain and elasticity meant they could be easily carved and turned. As these imported timbers were often painted or treated, distinguishing between the different varieties employed is problematic when in situ. Several examples of pine balusters, retrieved from now-demolished buildings, have been stripped of paint, revealing the pale straw-like colour and regular grain. The act of viewing these objects in their fragmentary or singular state, as if lying on the joiner's bench, is redolent of the process of making (Fig. 3.12).

The same is true of the brackets from staircases, or tread-ends as they are usually called, which not only form an interesting index to the

Figure 3.12: (a) Baluster from Ashtown Lodge, Phoenix Park, Dublin (built 1772, demolished 1978); (b) newel post from Mantua House, County Roscommon (built mid eighteenth century, now a ruin).

© Peter Pearson. Photographs David Davison.

style and date of houses but also demonstrate the high attention to detail in the crafting of every surface in the eighteenth-century stairhall. Among a collection of over 30 different examples, mostly from Dublin houses, the earliest date from the 1730s and are usually deeply carved with scrolls and foliage. As with the rails and balusters, these were usually made from pine, but repeated painting over the centuries tended to obscure the surface detail. Those which have been cleaned show exquisite carved detail, often highlighted by a stippled background like the eagle-head tread-ends at No. 85 St Stephen's Green. A particularly fine example comes from Allenton House, Tallaght (Fig. 3.13), built

Figure 3.13: (a) Allenton House, Tallaght, County Dublin, showing façade removed on New Year's Day, 1983; (b) carved timber bracket, Allenton House (left).

(a) Courtesy of South Dublin County Libraries CC Licence; (b) © Peter Pearson. Photograph by David Davison.

about 1740, which had its façade ripped down on New Year's Day, 1983. Here, the brackets displayed deeply cut flowing scroll work and acanthus leaves. Other later eighteenth-century examples from Stradbrook House, Blackrock, and South Frederick Street and St Stephen's Green West in Dublin show a tendency towards more complicated openwork carving featuring leaves and flowers (Fig. 3.14). Towards the close of the century, stair brackets became simpler and the timber tread-end was often decorated with applied gesso castings. The gesso-decorated brackets were clearly cheaper than the older carved ones and allowed for a new style of ornament – more in keeping with the taste of Robert Adam – urns and pineapples appear with rosettes at the end of scrollwork. A beautiful example from the collection includes a curved bracket which was steamed and bent to go around the curve of a staircase at Rosemount, Clonskeagh, County Dublin. As well as changes in material and carving style these timber fragments, removed from the built fabric and cleaned of over-paint and varnish, can reveal marks of their making. A tread-end from a house at St Stephen's Green West shows the carpenter's sketch for the ornament on the reverse side, while another example from a house at Nos. 18–21 Eccles Street of about 1780–90 reveals a message from the maker to the carrier: 'sent by this bearer 3 dozen for the Lord Mayor,

Figure 3.14: (a) and (b) Eighteenth-century timber brackets, No. 127 St Stephen's Green, showing sketch on reverse.

© Peter Pearson. Photographs by David Davison.

[signed] Arthur Mooney'. This signed piece corroborates the documentary record, demonstrating the practice whereby such joinery and carved components were executed by teams of craftsmen in workshops, and delivered to the site for installation.

Many of the city's early eighteenth-century houses were panelled, which as well as being fashionable – as Christine Casey notes in her chapter on wainscoting in this volume – also provided insulation. A surviving panel from the staircase at Drimnagh Castle, just outside Dublin city (which, being stored in a container for future conservation, was destroyed in a fire set by vandals) shows how they were constructed in framed sections. A raised and fielded panel was constructed very like a picture in a frame – the carefully planned arrangement of panels was then nailed to battens which were affixed to the wall. A unique feature of the Drimnagh staircase was the appearance of carved strapwork in three shallow panels, a stylistic throwback to the seventeenth century. Cornices were also made of timber and were sometimes embellished with dentils (Fig. 3.15), as can be seen in a surviving example from No. 45 St Stephen's Green. Much of this panelling was of pine and was almost always painted, as seen in a piece of wainscot cornice from No. 17 Eustace Street. All the aforementioned joinery was fixed in position with very sharp thin brads or nails, most of which have been removed from the pieces to avoid ripping one's hands and to facilitate display. Handmade nails were used to secure hinges of

Figure 3.15: Mid-eighteenth-century timber cornice.

© Peter Pearson. Photograph by David Davison.

doors and shutters until well into the early 1800s, when the use of screws, first manufactured in England in the 1770s, became more usual.

Plasterwork

Georgian Dublin is noted for the quality and range of its decorative plasterwork, the variety of designs and decorative motifs.[13] As plaster is fragile by nature, any neglect of buildings can lead quickly to its loss and destruction. Many important Dublin ceilings have been lost, such as those at Delville near Glasnevin, a house of the 1720s which was once home to Dean Patrick and Mary Delany, and much visited by their friend Dean Jonathan Swift, but was demolished in 1940 to make way for Bon Secours Hospital, or James Gandon's Four Courts, the interiors of which were destroyed during the civil war in 1922. A plaster acorn from the dome of the Four Courts (Fig. 3.16), retrieved from the floor below years before its destruction in 1922, is a tiny but treasured example of the work of Edward Smyth – stone carver and *stuccatore*. These are but small retrievals compared with large-scale rescue and reconstruction at mid-century, such as that of a ceiling from the Latouche Bank on Castle Street or Bartholomew Cramillion's Rococo ceilings at Mespil House, which were relocated prior to demolition in 1951.[14] His 'Four Seasons presided over by Jupiter' was moved to Áras an Uachtaráin (the official residence of the President of

Figure 3.16: Plaster acorn from the Four Courts, Dublin, 1776–1802.

© Peter Pearson. Photograph by David Davison.

Ireland), while 'Minerva introducing the Arts to Hibernia' was moved to Dublin Castle during the restorations of 1964–8.[15] Unfortunately, much destruction continued unabated until the 1990s and, consequently, rescued decorative plasterwork fragments make up a large part of this collection (Fig. 3.17). Many of the fragments reveal their handmade origins, in the form of slight fingerprints and the individuality of every small piece. But over time layers of limewash and paint have usually obscured these details. Animal hair is frequently found in larger elements such as chunks of cornice where strength was required.

The houses of St Stephen's Green are among the grandest in Dublin and, while many significant examples survive, almost 60 houses were

Figure 3.17: No. 15 Dawson Street, Dublin, first-floor ceiling during removal in December 1977.

Courtesy of the Irish Architectural Archive.

demolished here between 1960 and 1985. Many of these were modest but still contained good plasterwork, and several of these schemes were illustrated in the *Georgian Society Records* volumes (1909–13).[16] Fragments of stucco flowers and fruit are all that survive of a staircase cornice from one of the houses on the west side of the Green that were demolished in the mid-1980s to make way for a shopping centre.[17] The large cavetto cornice also contained birds such as eagles and the whole work was very bold, sculptural and not unlike the style of Robert West, who was noted for his freehand Rococo plasterwork (Figs. 3.18 and 3.19). West, however, is thought to have had a number of followers or members of his workshop who would have been producing similar plasterwork, broadly known as the Dublin school of plasterwork.[18]

An interesting technical detail, not visible when viewed in situ, is the use of a small wooden armature in bunches of grapes and a peach, illustrating how the freehand-modelled pieces were attached to the freshly plastered cornice (Fig. 3.20). In other cases, such as fragments of grapes from the drawing-room ceiling of No. 15 Parnell Square in Dublin, long nails were used. A plaster whelk shell found amongst a dump of rubble cleared from the burned ruin of Powerscourt, County Wicklow, in the 1990s similarly speaks of the craft processes involved. As discussed elsewhere in this volume, the solid shell fragment, many of which once ornamented the niches of the entrance hall, was modelled by hand

Figure 3.18: No. 129 St Stephen's Green, Dublin, built mid-eighteenth century, demolished 1986. Carved timber and plasterwork on staircase wall, from *Georgian Society Records*, vol. II (Dublin: 1910).

Courtesy of the Irish Architectural Archive.

Figure 3.19: Plaster fragments from Nos. 127 and 129 St Stephen's Green, Dublin.

© Peter Pearson. Photograph by David Davison.

Figure 3.20: (a) Peach plaster fragment, showing timber armature, No. 129 St Stephen's Green, Dublin; (b) acanthus leaf, showing nail armature, entrance hall ceiling rose, South Frederick Street, Dublin.

© Peter Pearson. Photographs by David Davison.

– possibly cast directly from shells found on the beach using a composite of lime plaster and plaster of Paris. There are no armatures or wire supports evident in this fragment, so the shells were simply embedded in a thick layer of fresh plaster.[19]

Boldly modelled work of a similar type was once found at No. 60 St Stephen's Green, close to the Leeson Street corner, which underwent a bizarre process of 'restoration' in the 1980s. The original drawing-room ceiling was carefully copied and then replaced with a very good replica, and the original plasterwork was thrown out. A fabulous eagle and portrait head were given to me by the plaster workers who had been tasked with making the copies. The original bird and portrait face are modelled in a very realistic way and reveal skill in both observation and execution – and illustrate the quality of this work, which is in the style of Robert West and the mid-century Dublin school of plasterwork. Buildings are treated differently over time, some remain almost the same as on the day they were finished while others suffer many indignities and alterations (Fig. 3.21). Constant decoration leads to detail becoming caked with paint, to the point where it is nearly invisible. Furthermore, other finishes that were originally applied to the stuccoed surface have been lost or covered over. As Lee Prosser discusses in this volume, decorative eighteenth-century plasterwork was often gilded to enhance the richness and reflective properties of the plaster surface. The delicate nature of gold leaf, which was applied to set plaster using small brushes (as illustrated in Figure 6.12), means few complete and intact examples survive – while those that do are often in high-up, inaccessible locations. The Pearson collection contains fragments of acanthus-leaf work from the ceiling and

Figure 3.21: Plaster panels, entrance hall, Hoddersfield, County Cork, circa 1801.

© Peter Pearson. Photograph by David Davison.

Figure 3.22: Gilded cornice fragment, Johnstown Kennedy, Rathcoole, County Dublin, built circa 1760s, demolished 1989.

© Peter Pearson. Photograph by David Davison.

egg-and-dart cornice from Johnstown Kennedy, near Rathcoole, County Dublin (demolished in the mid-1980s, when one ceiling was reconstructed at Dr Steevens's Hospital in Dublin), where vestiges of highlighting in gold leaf are still evident (Fig. 3.22).

The fashion for 'Adam'-style decoration had taken a firm hold in Dublin by the 1770s, and many examples of delicate ceilings and bas-relief panels in the Neoclassical idiom appeared in the city. Antique-inspired ornament, which looked to excavated material at Pompeii or Spalatro appears in the work of *stuccatori* like Charles Thorp or Michael Stapleton.[20] A particular motif favoured by the latter was paired dancing figures, which derived from Antique Roman sarcophagi by way of printed sources like George Richardson's *Iconology; or, a Collection of Emblematical Figures* (1779), which featured a number of figured plaster bas-reliefs.[21] A set of fine examples which once adorned the walls of the ballroom and library at Newlands House, Clondalkin, County Dublin (demolished in 1981, Fig. 3.23), are preserved in the collection. Here, the dancers, in low-relief stucco, are interspersed with musical instruments and swags of fruit and flowers. Plaster fragments of sphinx and cherub motifs, anthemion frieze panels of the library and urns and garlands on the overdoors have also been recovered. The advantage of the new 'Adam' style of plaster decoration was that most of it was cast in moulds and later put into position. In this way patterns could be easily repeated or used elsewhere. During the demolition of Newlands House, as a result of the

Figure 3.23: (a) Detail of Ballroom plasterwork, Newlands House, Clondalkin, County Dublin, built second half eighteenth century, prior to demolition in 1981; (b) plaster reliefs from the Ballroom, Newlands House, Clondalkin, County Dublin.

(a) © Peter Pearson; (b) © Peter Pearson. Photograph by David Davison.

roof having been stripped of lead, the plasterwork was so saturated that the casts came away quite easily. The poured swirls of eighteenth-century plaster can still be seen on the backs of the castings along with the hatching or scoring to create a better key.

Fanlights and doorcases

Dublin is justly famous for its fanlights, which vary considerably in terms of material, shape and decorative vocabulary – and significantly contribute to the visual character of the historic streetscape. Some of the most impressive may still be seen in Merrion Square, North Great George's Street or other parts of the later Georgian city; indeed John Sambrook, in his study of English fanlights, regards Dublin examples as more plentiful, larger and often more decoratively unusual than those of London.[22] The purpose of the fanlight is to allow light into the hall behind the front door without compromising security, so the earliest fanlights were small and simply made.[23] They consisted of a heavy semicircular timber frame into which two curved glazing bars were placed. The curved elements were cut from planks of suitable width (Fig. 3.24). An alternative and quite common arrangement consisted of a plain fan or spoke design, while simple rectangular-shaped lights were also used in more modest houses and shops. The fanlight structure was bedded into the plaster of the internal wall. An example

Figure 3.24: Timber fanlights: (a) Fownes Street, Dublin, circa 1750; (b) Westland Row, Dublin, late eighteenth century.

© Peter Pearson. Photographs by David Davison.

salvaged from a house in Fownes Street shows how a dovetail joint at the top of the window holds the whole structure together. From the mid eighteenth-century, fanlights continued to be made of thin pieces of curved wood to which gesso or 'compo' ornament in the form of teardrops, urns, ram's heads and beading was applied (Fig. 3.25). An example of this was salvaged from Lower Leeson Street in the early 1980s, when an entire block on the south side incorporating the Sacred Heart convent was razed. The dipping of this heavily painted fanlight into an acid bath in the 1980s proved disastrous, as the timber joints became unglued and much of the gesso detail disintegrated.

Figure 3.25: (a–c) Fanlight, gesso on timber, with ram's head ornament, Lower Leeson Street, Dublin, late eighteenth century.

© Peter Pearson. Photographs by David Davison.

Later fanlights (1780–1820) tended to be made on a rigid zinc frame (a kind of alloy of tin and lead) to which lead decoration was attached by solder. The whole window was supported in a wooden frame. It is these extremely ornamental and delicate fanlights for which Dublin is so well known, and they continued to be made for all kinds of houses and other buildings throughout Ireland well into the 1840s. Although not immediately evident when viewed from the street, these fanlights were composed of numerous structural and decorative elements. A zinc-framed fanlight could easily contain up to 30 or more separate pieces of glass, which had to be cut to the various irregular shapes of the fan. This glass, some of which is like eggshell, is of the thinnest gauge and it is very easily broken. Such glass would have been easier to cut into the irregular shapes which were then fixed with putty into their metal frame. The collection contains a wide vocabulary of lead fanlight enrichments including swags, festoons, beading, urns, anthemion, bows, ram's heads and rosettes. These enrichments were not simply decorative but served to hide the soldered joints of the delicate zinc frame.

It is not possible to talk about the fanlight without mentioning the fine stone doorcases of which they were a part. The early windows were often part of a Gibbs-style doorcase, constructed of granite or limestone blocks, as opposed to the timber doorcases of London houses.[24] The collection features a fine limestone Doric doorcase from St Stephen's Green which dates from the 1760s. As granite could be sourced near Dublin it would naturally be less costly than imported Portland stone but, as shown by Patrick Wyse Jackson and Louise Caulfield in their chapter 'The rough and the smooth', it is a very hard stone and could be more demanding to work where mouldings and decoration were required. Later, more elaborate Dublin terraced houses often had a full Portland stone door surround composed of three-quarter columns, ornate capitals and fluted architrave. According to Sambrook this is a speciality of Dublin doors, and their English counterparts are usually less classically exact and more stylised.[25] Grander examples, such as those of Merrion Square, display fanlights incorporating sidelights fixed between the stone pillars and the wall at each side, thus allowing more light into the interior. This in turn raised fears for security and so iron bars and decorative grilles, composed of a large number of wrought- or cast-iron scrolls riveted together, were sometimes inserted behind. The sidelights were beautifully crafted and matched the design of the fanlight above. Typically, sidelights had a central oval or circle and were joined by lozenges above and below, though like the fanlight itself their decoration varies widely. In fact, when examined *en masse* and sometimes in isolation we find that almost no two Dublin fanlights are the same and they differ widely in proportion, material and decoration.

Stone coverings and embellishments

As stone and brick were the pre-eminent building materials during this period one would expect to find a wide range of uses, from decorative detail to functional surfaces like flooring or paving. The collection, however, contains relatively few examples of decorative stone fragments, perhaps due to the durability and indeed value of this material for reuse. In addition

Figure 3.26: Portland stone column base (a) and capital (b), Lower Mount Street, Dublin, late eighteenth century.

© Peter Pearson. Photographs by David Davison.

to the aforementioned doorcase fragments the collection includes components from several important Dublin buildings which were salvaged during conservation works (Fig. 3.26) or, in the case of the granite step from Nelson's Pillar, following its destruction in 1966. From part of the original frieze from Newcomen Bank on Castle Street (1781) and a much-weathered granite baluster from the Dining Hall at Trinity College (which was retrieved from the quarry where it appears to have served as a template for new balusters, in the aftermath of the devastating fire in 1984) to fragments of the Portland stone parapet from the Custom House (1781), these fragments showcase the workmanship and investment in the

Figure 3.27: Welsh slate, Russborough, County Wicklow, 1740s.
© CRAFTVALUE.

decorative surface of the city's public architecture. Roof coverings in the eighteenth century, including slates and ridges, were of stone – though it is rare now to find original sandstone ridges as they are prone to break when handled during re-roofing. The earliest surviving slates in Ireland were locally sourced and were small. They were held in place with oak dowels or pegs, some of which have survived in perfect condition three hundred years later. Examples in the collection come from Buncrana Castle, County Donegal, which was restored in the 1990s, and Carstown Manor in County Louth, a recent casualty of fire and ruin. A large heavy slate of the 1740s, half an inch (1.27 cm) thick, from the roof of Russborough, County Wicklow (which was found in a skip during re-roofing works, Fig. 3.27), marks the beginning of widespread use of Welsh slate in Ireland.

Metalwork

Dublin is fortunate to still possess a great deal of its eighteenth-century ironwork in the form of gates, railings and other street furniture, unlike parts of the UK where much was melted down during the Second World War (Fig. 3.28).[26] Although it was first used in an architectural setting for the palisades at St Paul's Cathedral in London in 1714, the extensive use of cast iron developed over the course of the century as a product of the industrial revolution, and architects and builders were not slow to see its advantages

Figure 3.28: Wrought-iron railings, Nos. 3–9 Henrietta Street Dublin, built circa 1730–56.

Courtesy of the Irish Architectural Archive. Photograph by David Davison.

for both function and ornament.[27] For instance, railings, which provided security and safety and previously had to be made on the blacksmith's forge, could now, at least in part, be mass produced. In his *Complete Body of Architecture* (1756) Isaac Ware noted that 'cast iron is very serviceable to the builder and a vast expense is saved in many cases by using it', whereas 'wraught [sic] iron, much less substantial, would cost a vast sum'.[28] It was also believed that cast iron would require less maintenance than wrought iron, though that has not always proven to be the case.[29] However, in Dublin most of the railings, with their square profile bars, continued to be made of wrought iron and where the quality is good they rust very little, even where they have not been painted for years. The corner posts of a typical eighteenth-century Dublin railing were articulated by stout cast-iron columns – tapering and clad with leaves, and topped by a classical urn. These posts were composed of up to 18 separate casts, which were held together by molten lead. An example assembled and disassembled is held in the collection. Cast iron, which is quite brittle and is easily broken, came into its own in the nineteenth century. Examples of both wrought- and cast-iron railings which are preserved in the collection allow us to compare the changing modes of production and forms of these related materials. For instance, some early eighteenth-century wrought-iron railing bars with arrow heads or sharp spikes are relatively simple in design and construction, as is a forged and riveted gate panel and scroll work for the top of a gate, whereas later cast-iron examples tend towards greater complexity. There are also examples of balconies in both wrought and cast iron. In many later Georgian houses the windows of the principal floors came right down to the floor, flooding the room with light. There was, however, danger if a window was left open, and many houses later added iron balconies at first-floor level. The style and decoration of such balconies varied considerably but one of the most popular was the anthemion or honeysuckle design, which continued to be made from the 1780s up until the 1830s.

Iron and sometimes brass were also used to construct the door and street furniture – from door-knockers, bell pulls and footscrapers to oil-lamp holders and coal-hole covers. As well as articulating the exterior and adding to the visual variety of the Georgian streetscape, these artefacts bear witness to life in the age of the horse for transport, coal for heat and cooking, and oil for light. They also tell of a time when servants were available and plentiful to do all the fetching and carrying. Of about 15 coal-hole covers or coal plates which come from the streets of Dublin, one or two stand out for their decorative quality (Fig. 3.29). A fine example from South Frederick Street displays a swirl of oak leaves, bordered by a beaded ring. Another from Eccles Street has a thin radial pattern of leaves, held inside a double ring or border. Most of these heavy iron lids or covers had small legs so that they could rest easily on the footpath while fuel was being delivered. Many also had a chain attached so that the lid could be secured from inside the house in the cellar beneath. The designs on such covers were based generally on leaves or foliage and had a twofold purpose: to look attractive in the granite paving and be different from the neighbouring one a few yards down the street, and to provide a non-slip surface. Footscrapers, which were usually mounted on the steps just beside the front door, also performed both practical and decorative functions. They were necessary in a time when horse droppings and other dirt might lie on the streets and footpaths in times when street cleaning was not so regular. The simplest design was in the form of an H, but more ornamental examples are composed as a classical lyre. Many of these smaller items were made in English foundries but may have been copied in Dublin. Door-knockers came in various forms, including the wreath; the ball and fist; or, perhaps most common, the Adamesque female head with the pendant knocker hanging from her ears, like a giant earring. This is often referred to as the Dublin or ‘Anna Livia’ knocker, but in fact it can be seen in various parts of Europe and Britain as well.

Figure 3.29: (a) Cast-iron coal-hole cover, South Frederick Street, Dublin, mid-eighteenth century; (b) eighteenth-century hinges, including shutter hinges..

© Peter Pearson. Photographs David Davison.

Internally too, ironmongery was used for decorative and utilitarian purposes. The doors of the principal rooms were hung on butt hinges, usually made of iron and sometimes stamped with the maker's name. The making of locks was another important specialist activity, from the large brass ornamented box locks of the Georgian front door to the pine-framed box locks of the cellar. The doors of the principal rooms were fitted with hand-crafted brass locks and delicate drop handles, while lesser rooms had simple iron-cased rim locks. There are a large number of locks and keys in the collection, mostly from the late eighteenth and early nineteenth centuries. A collection of eighteenth-century shutter hinges shows how they were hand forged in the form of an H and nailed into position, whereas larger basement hinges were surface mounted and often featured a hammered eye or disc at the extremity. Ironwork played an important part in the construction of houses and other buildings in the form of nails, hinges, brackets and tie bars (Fig. 3.29). A collection of three-inch hand-forged clout nails comes from a structural beam in No. 2 Palace Street, a tall terraced house, constructed in 1781 at the gates of Dublin Castle to the designs of the Wide Streets Commissioners.

Conclusion: the collection as a resource

Collections of architectural fragments can be a difficult resource: as components of a larger whole, removed from their original context within a building's fabric, they are no longer part of the architecture and possibly too recent to be regarded as museum artefacts. And yet there is clearly a significant role for such a collection to be used as an educational resource or tool, a form of three-dimensional reference library, for conservation and craft practitioners, students of history and architecture, and schoolchildren alike. At the same time such wider public access facilitates a second-life value for the object and, as such, serves to foster awareness of historical preservation.[30] Providing such access to a collection of this scale and housing it in an appropriate manner require significant space and resources. At present much of the Pearson collection is stored privately and cannot be easily examined, although parts of it have been displayed publicly on many occasions (see Fig. 3.30).

The Brooking Museum of Architectural Detail in Surrey, England, is probably the Pearson collection's best-known equivalent. This collection, which was formed by Charles Brooking, is privately operated and at present there is only limited public access.[31] Brooking's focus has been largely on safeguarding his collection, and while the displays at the private teaching gallery demonstrate the variety and quality of architectural fragments over a wide-ranging period up to the 1950s, its approach is didactic. There are a small number of collections of this kind in the USA, such as that in the National Museum of American History,

Figure 3.30: ‘Dublin fragments, the Pearson collection’, exhibition at the City Assembly House, Dublin, 2020.

© Peter Pearson. Photograph CRAFTVALUE.

which is home to more than 1.8 million objects – including large amounts of printed material relating to architecture and engineering, as well as reconstructed buildings and architectural components – through which fundamental aspects of American history and life are explored. The Museum of Bath Architecture in the south-west of England is probably one of the best-displayed collections of this type, and is strengthened by its very clear role in telling the story of Bath’s built history. All such collections owe much to great, early collectors of architectural fragments like Sir John Soane. The driving force behind Soane’s collection was a love of Antiquity, an appreciation of the aesthetic of the Antique artistically brought together in a radical display of architecture and sculptural fragments. In Soane’s time most collecting was the preserve of those on the Grand Tour, who might wish to furnish a great house or garden or a display for a ‘Cabinet of Curiosities’. The idea of a national collection or museum was then in its infancy.

In the case of the Pearson collection, while display of the material can by its nature be didactic its comparative value is significant in allowing us to compare and contrast a range of related objects across time, place and medium, rather than viewing the fragmented artefact in isolation. This in turn facilitates new insights into the development of craft techniques and material practices throughout the period. Many items in the collection – from a timber upright to a fanlight, a plaster boss or a lock – are composed of many parts, which when disassembled or fragmentary reveal much about their composition and construction. Similarly, although often related, no two objects are exactly alike in size, shape, material or design – and this issue of variability allows us to explore the value of craft production as a theme for interpretation. At the same time the collection itself serves as a valuable interpretative tool. The close view of objects in their detached and fragmentary state can reveal hitherto unseen aspects and insights into the craft techniques involved in their making, while the physical act of being able to manipulate the artefact allows us to interrogate the object from a different viewpoint, to look beyond the exposed surface at the layered material composition beneath. Finally, I have always been swayed by aesthetic considerations because the majority of the objects are works of craftsmanship and are beautiful in their own right. Even in a state of decay there is the patina of age which lends grace to an object. There is also the question of the story behind each piece: Who made it? Who was it made for? Who lived and worked there and how did this fragment come to survive? The association of the crafted object to person and history brings the past alive.

Notes

1 Hawes, ‘Curating architecture’.

2 Lord Edward FitzGerald was a son of the FitzGeralds of Carton, County Kildare, Dukes of Leinster, and a leader of the 1798 rebellion; Robert Emmet was a son of a noted surgeon and an instigator of the 1803 uprising.

3 See Pearson, *The Heart of Dublin*, 9–15.

4 Hanna, *Modern Dublin*, 15.

5 Hanna, *Modern Dublin*; Kincaid, *Postcolonial Dublin*; McDonald, *The Destruction of Dublin*; Kearns*, Georgian Dublin*; O’Dwyer, *Lost Dublin*; Mitchell, *Vanishing Dublin*.

6 An Taisce, *Dublin: The Temple Bar area a policy for its future, 1985*. See also Lumley, ‘Development of Temple Bar’.

7 McCullough, *Dublin: An urban history*; Casey, *Dublin*, 78–9, 425–45; Pearson, *The Heart of Dublin*, 33–67.

8 For salvage of plasterwork ceilings, see Maguire ‘Plasterwork techniques in Ireland 1700–1850’.

9 See White, ‘Dreaming Spires’ for an interview with Peter Pearson.

10 Bowett, *Woods in British Furniture-Making*, x–xi, 164–5.

11 Acton Papers, Private Collection. Other papers relating to Kilmacurragh and the Acton family are held at the NAI (National Archives of Ireland), Kilmacurragh Park Estate, TSCH/3/S13514A; NLI (National Library of Ireland), Acton Papers, MS. 21,984 and n. 4563, p. 4529.

12 Gibney, *The Building Site in Eighteenth-Century Ireland*, 101–2.

13 Curran, *Dublin Decorative Plasterwork*; McDonnell, *Irish Eighteenth-Century Stuccowork*, 13, 25–6; Casey and Lucey, *Decorative Plasterwork in Ireland and Europe*; Casey, *Making Magnificence*.

14 See Pearson, *The Heart of Dublin*, 126–7.

15 McDonnell, *Irish Eighteenth-Century Stuccowork*, 13, 25–6. See also Girouard, ‘Belvedere House, Co. Westmeath – II’, 1539; Casey, *Dublin,* 293–4, 353.

16 Irish Georgian Society, *Georgian Society Records*, vols I–V.

17 Casey, *Dublin*, 546; Pearson, *The Heart of Dublin*, 283.

18 Curran, *Dublin Decorative Plasterwork*, 51–66; McDonnell, *Irish Eighteenth-Century Stuccowork*, 13, 25–7.

19 Saunt ‘Getting plastered’.

20 See Lucey, *The Stapleton Collection.*

21 Lucey, ‘British agents of the Irish Adamesque’, 141. See also Lucey, ‘Bas-reliefs after Angelica Kauffman’, 440–4.

22 Sambrook, *Fanlights*, 22.

23 See Gay and Sambrook, *Fanlights*; Roche, *The Legacy of Light*, glossary.

24 Cruickshank, *Georgian Buildings of Britain and Ireland*, 38.

25 Sambrook, *Fanlights*, 22.

26 Cruickshank and Wyld, *London: The art of Georgian building*, 216–19, refers to Heinrich Meisler of Zurich’s comments in 1792 on the extent and appearance of London’s iron railings, which he considered to be of a ‘dull, clumsy appearance’; O’Connor, ‘Timothy Turner’, 141–2.

27 Cruickshank and Wyld, *London: The art of Georgian building*, 211.

28 Ware, *A Complete Body of Architecture*, cited in Cruickshank and Wyld, *London: The art of Georgian building*, 211.

29 Roche, *The Legacy of Light*, 45.

30 Hawes, ‘Curating architecture’, 4.

31 Brooking, ‘The continuing erosion of period detail’, 67–71.

References

An Taisce. *Dublin: The Temple Bar area: A policy for its future, 1985*. Dublin: An Taisce, 1985.

Bowett, Adam. *Woods in British Furniture-Making 1400–1900: An illustrated historical dictionary*. Wetherby: Oblong Creative and Royal Botanic Gardens, Kew, 2012.

Brooking, Charles. ‘The continuing erosion of period detail’, *The Georgian Group Report and Journal* (1988): 67–71.

Casey, Christine. *The Buildings of Ireland: Dublin.* New Haven, CT and London: Yale University Press, 2005.

Casey, Christine. *Making Magnificence*. New Haven, CT and London: Yale University Press, 2018.

Casey, Christine and Conor Lucey, eds. *Decorative Plasterwork in Ireland and Europe: Ornament and the early modern interior.* Dublin: Four Courts Press, 2012.

Cruickshank, Dan. *A Guide to the Georgian Buildings of Britain and Ireland*. London: Weidenfeld and Nicolson, 1985.

Cruickshank, Dan and Peter Wyld. *London: The art of Georgian building*. London: Architectural Press, 1975.

Curran, Constantine Peters. *Dublin Decorative Plasterwork of the Seventeenth and Eighteenth Centuries*. London: Alex Tiranti, 1967.

Gay, A.S. and J. Sambrook. *Fanlights: A visual architectural history*. London: Alphabooks, 1990.

Gibney, Arthur. *The Building Site in Eighteenth-Century Ireland*, edited by Livia Hurley and Edward McParland. Dublin: Four Courts Press, 2017.

Girouard, Mark. ‘Belvedere House, Co. Westmeath – II’, *Country Life* 129:3356 (29 June 1961): 1538–41.

Hanna, Erika. *Modern Dublin: Urban change and the Irish past, 1957–1973*. Oxford: Oxford University Press, 2013.

Hawes, Sarah Elizabeth. 'Curating architecture: an investigation of the motives and practice of architectural collection and exhibition with recommendations for interpretation of the architectural study collection at Independence National Historical Park'. MA Thesis, University of Pennsylvania, 2010.

Irish Georgian Society. *The Georgian Society Records of Eighteenth-Century Domestic Architecture and Decoration in Dublin*, 5 vols. Shannon: Irish University Press, 1909–13.

Kearns, Kevin. *Georgian Dublin: Ireland's imperiled architectural heritage*. Newton Abbott: David and Charles, 1983.

Kincaid, Andrew. *Postcolonial Dublin: Imperial legacies and the built environment.* Minneapolis: University of Minnesota Press 2006.

Lucey, Conor. *The Stapleton Collection Designs for the Irish Neoclassical Interior.* Tralee: Churchill House Press, 2007.

Lucey, Conor. 'British agents of the Irish Adamesque', *Architectural History* 56 (2013): 135–70.

Lucey, Conor. 'Bas-reliefs after Angelica Kauffman', *Burlington Magazine* 156:1336 (2014): 440–4.

Lumley, Ian. 'Development of Temple Bar', *Irish Times*, 15 April 2002. Accessed 20 June 2022. https://www.irishtimes.com/opinion/letters/development-of-temple-bar-1.1085145.

Maguire, Eileen. 'Plasterwork techniques in Ireland 1700–1850'. MA Thesis, UCD School of Art History and Cultural Policy, 1995.

McCullough, Niall. *Dublin: An urban history: The plan of the city*. Dublin: Anne Street Press, 2007.

McDonald, Frank. *The Destruction of Dublin*. Dublin: Gill and MacMillan, 1985.

McDonnell, Joseph. *Irish Eighteenth-Century Stuccowork and its European Sources*. Dublin: National Gallery of Ireland, 1991.

Mitchell, Flora. *Vanishing Dublin*. Dublin: Figgis, 1960.

O'Connor, Miriam. 'Timothy Turner, an eighteenth-century Dublin ironsmith', *Irish Arts Review* 12 (1996): 141–2.

O'Dwyer, Fredrick. *Lost Dublin*. Dublin: Gill and MacMillan, 1981.

Pearson, Peter. *The Heart of Dublin: Resurgence of an historic city*. Dublin: O'Brien Press, 2000.

Roche, Nessa. *The Legacy of Light: A history of Irish windows*. Bray: Wordwell, 1999.

Sambrook, John. *Fanlights*. London: Chatto and Windus, 1989.

Saunt, Jenny. 'Getting plastered: from sketch to product', V&A blog, Victoria and Albert Museum, 9 November 2010. Accessed 20 June 2022. https://www.vam.ac.uk/blog/sketch-product/getting-plastered.

Ware, Isaac. *A Complete Body of Architecture*. London: T. Osborne and J. Shipton, 1756.

White, Victoria. 'Dreaming Spires', *Irish Times*, 23 September 1998. Accessed 20 June 2022. https://www.irishtimes.com/culture/dreaming-spires-1.196253.

4

Experiments with historic light in Kensington Palace's early eighteenth-century interiors

Lee Prosser

The effects of historic light suffuse drama and cinema set in the past – in film we see flickering candles and characters gazing contemplatively at the hearth – the only sources of artificial light in a much darker world. Fire – when used as a myriad of candle lights in pendant chandeliers, wall sconces or candelabra – has the power to create dramatic variations of light and shadow; to soften, to enhance shine, to accentuate the glitter of diamonds and polished metal and convey a dramatic and sometimes romantic mood of otherworldliness which is remote from the modern world. It therefore seems plausible to consider that historical surfaces were deliberately designed to respond to the effects of artificial light as well as daylight, and that through understanding this we might gain insight into the choices of colour, forms and processes behind the design of historic interiors. However, to replicate that mood within a real historic interior is now almost impossible because modern lighting focuses on the optimum display of decorative arts or visibility and is subordinated to an entirely practical modern aesthetic. One or two places attempt it, such as Dennis Severs' house in London's East End, but they are small-scale and tightly controlled. In larger historic buildings, lighting candles and fires is impossible for reasons of health and safety, but also because we live in a world which has become accustomed to much higher levels of artificial light. Visitors demand to see the paintings in detail, to be able to read the labels and to navigate freely through rooms. As a result, many heritage organisations wrestle with the issue of 'historic lighting' in a sector where the standard is often set by galleries and museums and the primary objective is to illuminate individual decorative artworks divorced from their original context. The result is that within integrated historic interiors lighting has remained fairly unsophisticated or has attempted to apply concepts of gallery lighting, with unsatisfactory results. In recent years, however, the need to address the subject has become urgent as technological changes and European legislation have forced the phasing-out of traditional incandescent bulbs and their replacement with more energy-efficient LED technology – an evolving yet still essentially unproven form of lighting. Though developed in the early part of the twentieth century, LED lights only appeared on the market for domestic use around 2002 – yet by the end of the decade had grown exponentially in market share and are now dominant. However, the longevity of the bulbs remains unknown, despite the claims of manufacturers; the bulky nature of the earlier fittings limited the light emitted; and the truthful rendering of the colour of the light was also never adequately considered. The wholesale replacement of lights with this fairly new technology has, for these reasons, created unforeseen problems and has also altered the experience of historic interiors.

Kensington Palace, a major London tourist attraction, is typical of this problem. Some parts of the palace still use lighting which was installed in the 1970s. Fluorescent neon strip lights remain hidden behind cornices to illuminate a series of spectacular painted ceilings; spot lights are positioned on cornices; while heavy, incongruous uplighters are moved around on dull days. In recent years, many of the bulbs have been replaced without much scrutiny by LED substitutes. As a result, the rooms have become unbalanced; colour temperatures have changed, altering perceptions; and artworks are not properly lit. To compound the problem, all these forms of light are alien to historic interiors. So, when a second phase of a long-term project to refurbish the King's State Apartments began in 2013, it was felt that light was such a crucial component that reinstating any kind of historical integrity could not be considered without applying more curatorial rigour and research to the subject. A project was thus initiated which aimed to understand how historical surfaces reacted to the eye under candlelight, and whether these effects could be replicated with modern lighting. As well as being an achievable goal, a second important question was whether such a thing was desirable. Most people believe that candlelight merely plunges a room into gloom and darkness, but this has rarely been tested scientifically. Kensington, then going through a process of change and restoration, seemed a perfect test subject.

Kensington Palace: the King's State Apartments

Kensington Palace lies in West London at the edge of a large stretch of parkland encompassing Kensington Gardens and Hyde Park and remains partly inhabited by modern members of the British royal family (Fig. 4.1). Today, the building is part-managed by Historic Royal Palaces, an independent charitable trust set up in the 1980s to administer the royal residences which are no longer actively used by the sovereign. The palace was constructed as a semi-informal rural retreat in the aftermath of the inception of parliamentary monarchy by King William III (r.1689–1702) and Queen Mary II (r.1689–94). The joint monarchs purchased and then augmented an early seventeenth-century courtier's villa, but from the 1720s the palace took on a more formal role and was considerably enhanced by physical enlargement and the creation of a new set of ceremonial state apartments.[1] These changes were commissioned by King George I (r.1714–27) and completed early in the reign of his successor George II (r.1727–60).

Figure 4.1: External view of Kensington Palace from the south-east. The King's State Apartments lie on the upper floor.

© Historic Royal Palaces.

Ten rooms, including several which had originally been built for William III, were decorated or remodelled by the architect William Kent, then a young and talented artist who secured this, his first major commission through his friendship with Lord Burlington. Kent impressed the king and was able to dislodge the serjeant-painter, Sir James Thornhill, who should have done the work, principally by undercutting his price and cheating him out of the commission.[2] It proved to be a launch pad for a highly successful career and Kent went on to design innovative and highly influential interiors for his patron Lord Burlington at Chiswick House in London; aristocratic commissions at Holkham Hall and Raynham Hall in Norfolk; and further royal works for Frederick, Prince of Wales at Kew.[3] At Kensington he created a sequence of rooms in the latest 1720s fashions, transforming large but fairly plain panelled chambers with unadorned ceilings into sumptuous spaces inspired by Antique Roman originals. He used paint, gilding and silk wall hangings to create an innovative sequence, into which he introduced painted ceilings depicting grotesque-work decoration or mythological schemes which glorified the new Hanoverian dynasty. The architect also designed gilded en-suite furnishings of stools, tables and lamp stands, richly adorned with high-relief carvings and introduced sculpture, tapestries and ornate frames for many of the great works of art in the royal collection. What is particularly noteworthy is that no cohesive visual programme is apparent; instead Kent treated each room slightly differently, working with variation in materials. This may reflect the piecemeal nature of the commission but may also disguise greater subtlety – apparent in the use of common motifs and techniques, for example.[4] The visitor would pass from a painted room to an unpainted room, and then perhaps beyond into a more extravagant interior with variation in the style and subject of the ceiling paintings. In some rooms panelling was painted and gilded, while in others the dark tone of the oak was left untouched and instead softened with textiles. A few had hard, architectural sculptural elements added in marble, sometimes gilded. Colour and gilding were important characteristics, with a single unifying theme of crimson silk damask on the walls.

Six of the rooms survive with substantial elements of their eighteenth-century interiors to the present day. The King's Staircase marked a grand ceremonial entrance from a long corridor known as the Stone Gallery (Fig. 4.2). Within the stair, already an impressive statement with treads of black Irish marble and an ironwork balustrade by the French Huguenot iron-master Jean Tijou, Kent created a sense of arrival by painting an illusionistic Venetian loggia inhabited with an exotic gaggle of royal servants and a high, fictive dome. State Housekeeper Henry Lowman looks down on the arrivals,

Figure 4.2: The King's Staircase, Kensington Palace, with ironwork by Jean Tijou, circa 1693–6. William Kent later painted the *trompe l'oeil* scheme on the walls and ceiling. Glass lanterns were later affixed to the balustrade to provide more light.

© Historic Royal Palaces.

together with George I's body servants, Mustapha and Mehmet, two of his most trusted companions, who had been captured in battle with the Turks. The most famous person depicted is Peter the Wild Boy, a mute, feral child brought under the king's protection from Hanover to be a curiosity at court. Elsewhere the walls are adorned with mythological figures in grisaille.

In the King's Presence Chamber, Kent retained elements of the earlier decoration, reinforcing a notable characteristic of his work: that rarely was he given a blank canvas to work with, but instead modified earlier and existing late seventeenth-century schemes. Here, he painted the older oak panelling and whitewashed overmantel carvings by Grinling Gibbons, part-gilding the cornice, lowering the ceiling to an almost flat plane and painting it with grotesque work inspired by classical and newly discovered ancient interiors he had seen in Rome during his travels. In the adjacent King's Privy Chamber, plain, unpainted oak panelling was combined with silk wall hangings beneath a ceiling painting depicting Mars and Minerva presiding over the arts and sciences, surrounded by a deep coffer painted in imitation of carved mouldings. The adjoining room, lying at the geographical centre of the suite, is both an unconventional addition to the sequence and also the grandest, most theatrical room in the palace – and was much admired in its time. This is known as the Cupola Room (Fig. 4.3). Here, monumental doorcases of veined white polished marble and a heavily carved fireplace with an overmantel by John Michael Rysbrack are set within a wainscoted interior almost entirely decorated with illusionistic architectural features. These included giant pilasters painted with fluting to appear as stone and pendant metallic military trophies, with extensive use of gilding to highlight an effect of reflectivity or speckled to accentuate sparkle. The walls were furthermore relieved by marble niches with fully gilded statues of gods and goddesses, and busts of Roman emperors. This whole theatrical composition was topped by a *trompe l'oeil* domed ceiling with a vast Garter star and Roman coffering painted blue. Beyond it, the King's Drawing room forms a more sober counterpoint, again combining silk walls with panelling in a

Figure 4.3: The Cupola or Cube Room, Kensington Palace, constructed in 1719–21 and decorated by William Kent in 1724 as his first major commission. The chandeliers were recreated in the 1990s after the lost originals.

© Historic Royal Palaces.

more restrained style but beneath an equally opulent ceiling depicting Jupiter and Semele, once again decorated with a broad repertoire of gilded elements, green and stone colours.

Several rooms of the sequence are sadly lost, including the Council Chamber, the King's State Bedchamber and two small private withdrawing closets beyond, which survive as an echo within wings rebuilt or remodelled in the early nineteenth century by the architect John Nash. At least one is known to have had a second grotesque scheme. The former State Bedchamber was later used by the future Queen Victoria as a childhood bedroom, and it was also the room in which Princess Mary of Teck, the future Queen Mary (1867–1953) was born. The King's Gallery, built in 1695, where William III spent his last days after breaking his collarbone while hunting, was an equally grand room conceived in the manner of a Roman palazzo with a long ceiling of painted canvas. As in the Presence Chamber, Kent adapted an existing 1690s interior, but replaced the chimneypiece – painting the dado panelling and cornice white and introduced crimson damask (Fig. 4.4). This was subdivided in

Figure 4.4: The King's Gallery, Kensington Palace, created by William III in 1695 but presented today as it was redecorated by William Kent in the 1720s, with silk damask, white joinery and gilding.

© Historic Royal Palaces.

the nineteenth century but the underlying joinery and Kent's mythological ceiling were retained, enabling it to be reinstated in 1898. This was the first of the great rooms to be restored to its 1720s scheme in the 1990s.

While these rooms form an essential part of Britain's architectural heritage and launched his career, Kent's motivations and the actual process of design are poorly documented. Preparatory drawings are few and it is to the artistic influences and perhaps the chronological sequence that we must turn to perceive something of the expression of his creative philosophy. Roman antecedents are in evidence; the feathered helmets prominent in the ceiling of the Cupola Room have been compared with those at the Palazzo Spada for example, and it has been suggested that the king's Hanoverian palaces were also influential.[5] Whether the rooms were conceived by Kent alone or with others, including George I, is also unknown. Their moment of prominence was brief, however. Only 35 years after their completion, with the death of George II in his bedchamber at Kensington in October 1760, the court departed and the palace was abandoned. The rooms, however, were kept in a curious state of semi-readiness for the eventual return of the monarch, which of course never occurred and for at least 50 years almost nothing was touched. This protected them from drastic remodelling, although throughout the nineteenth century artworks and furnishings were progressively removed until by the 1880s they were practically empty. By the late 1890s the rooms were in poor condition and a newspaper report listed a startling litany of problems to show just how low the palace had fallen:

> … floors are thick with the dust of ages; windows are black with a century's grime and soot, walls are discoloured with rain and snow; mirrors are mildewed with damp, marble is discoloured, gilt is tarnished or has gone altogether, painted ceilings are thick with dirt and cobwebs, woodwork is worm-eaten, rich cornices are crumbling, doors broken … [and] mounds of rubble and rubbish are heaped up in corners.[6]

In 1898 Queen Victoria agreed to open the state rooms to the public. This was preceded by a comprehensive restoration by the Office of Works, which swept away much of Kent's plain paintwork and gilding – then dismissed as 'dirty encrustations' – and the removal of the remaining eighteenth-century damask wall hangings, by then barely recognisable and falling to pieces.[7] Even with these alterations, the King's Apartments form the best surviving early eighteenth-century sequence of royal state rooms in England. From the early 1990s, in the wake of the near-disastrous fire at Hampton Court Palace, attention turned to Kensington, which had become a dull and much-diluted visitor attraction. A long-term project was initiated to reinstate the 1720s schemes, reflecting the period when Kensington sparkled with court events and the palace was occupied by King George II and Queen Caroline. This was based on extensive documentary research into bills for the provision of furnishings, early descriptions, forensic analysis and the identification of surviving furniture. In the mid-1990s the King's Gallery and Drawing Room were refurbished (Figs. 4.4 and 4.5). In 2013–14 the King's Presence Chamber and Privy Chamber were returned to their appearance in 1724 by replacing the Victorian floors; reinstating the wall hangings; and, where possible, bringing back paintings and artworks which are known to have dressed the rooms. The latest phase of the project in 2019 saw the recreation and reinstatement of four large gilt-wood chandeliers in the King's Drawing Room, creatively adapted to improve the lighting conditions and drawing on the learning of the lighting test described below.

Figure 4.5: The most recently reinstated chandeliers in the King's Drawing Room, Kensignton Palace, 2021. Carved wood, gesso and gilding, but with additional recessed modern lights to illuminate the ceiling.

© Historic Royal Palaces.

The problem of lighting

Ultimately, lighting has proved to be the most challenging aspect of the project, firstly raising the issue of whether these rooms are essentially now picture galleries, or instead should be seen as integrated historic interiors of which the paintings are just one component. Secondly is the nature of modern LED lights, and whether the technology can rise to the challenge of lighting the rooms in a meaningful way which could retrieve a sense of their historic atmosphere. Mindful of the shortcomings of the existing scheme, the main stakeholders and senior management also requested some form of 'historic lighting' without any clarification as to what exactly this meant, but the imperative seemed to be that we needed to recapture a sense of the historic mood without the need for buying in candles and lighting the fires. The curatorial section, led by the late Deirdre Murphy, discussed the possibility of conducting a candlelight test, and using the results as a base line for designing a new lighting system which responded to the levels and effects of candlelight or selecting the most appropriate bulbs on the market. Similar exercises have been undertaken at the Neues Palais in Potsdam, Germany, and the Johanneum in Graz, Austria, though these are interiors with markedly different characteristics.[8] These findings were shared at several technical meetings of the European Royal Residences Association, to which Historic Royal Palaces belongs. The request for Kensington to do the same was initially met with understandable consternation and alarm from the Conservation and Collections Care section and fire-safety officer but, after some persuasion and reassurance, was agreed to under tightly controlled circumstances and enhanced safety measures.

The test was prefaced by extensive documentary research, which sought to identify the means, quantity and circumstances of lighting in the State Apartments in the 1720s.[9] Historical depictions of interiors of the time show four different sources of light. Firstly, was the hearth, which would be used during the winter months but also at other times of the year, providing an important low-level source of light.[10] Secondly, rooms were lit at an intermediate level by sconces. These are candle nozzles set against a large reflective backplate, either of mirrored glass or polished metal, often suspended against the walls by long silken ropes from the cornices. Aristocratic houses used silver or ground plate glass, but they can also be found in cheaper reflective materials such as brass or tin, which provided additional safety from an unprotected candle and some magnification of the available light.[11] Wall-mounted lanterns performed the same function.

Candelabra, often with many branches, were also used as task lighting, brought into a room where light levels needed a boost and most often set on stands or on pier tables with mirrors to provide additional reflected light. Finally, pendant lighting in the form of chandeliers of brass, gilt wood or crystal are to be found. The fact that these sources light different parts or zones of a room has important implications for our understanding of their effects on historical surfaces. As the records and depictions show, they could be used singly or in combination, though this is a subject which needs further exploration. At Kensington several rooms were provided with chandeliers but others had painted ceilings which prevented this, suggesting perhaps that some rooms were designed to be more densely lit than others – possibly as a reflection of their use. Certainly, we know, for example, that at the Palace of Versailles the Hall of Mirrors would normally be lit with a single or double layer of crystal chandeliers, but for one or two occasions in the year a third tier was added when extra magnificence was required. This is how the Hall is displayed today. It suggests that ultimately, differing forms of lighting may have been used separately or combined as and when required for impressive effect.

For Kensington, good records survive in the National Archives at Kew, particularly in the Lord Chamberlain's accounts, while some pictorial sources – including a set of watercolours of the rooms by Charles Wild and others, commissioned in 1819 for inclusion in a luxury publication called *History of the Royal Residences* by William Henry Pyne – are invaluable.[12] They show Kensington almost untouched from the time of George II, just before his great-grandson the future George IV began to remove artworks for redistribution around his new projects at Windsor and Brighton.

The research confirmed that different forms of lighting were used in different rooms. Often this was determined by circumstances. In the King's Staircase wall-mounted lanterns are recorded, later augmented by a number of additional glass lanterns attached to the staircase balustrade itself. In June 1729 orders were given for 'seven looking glass plate lanterns in very neat brass frames with two neat flat brass candlesticks and loose sockets to each, the lanterns screwed upon strong iron work and fixed to iron nails, six of them 12 inches square by 17 inches high'.[13] This was used as a basis to reconstruct the lanterns in the 1990s, but their practical use as a modern source of light has continued to elude us and they remain unused on the staircase today. In the King's Presence Chamber William Kent's painted ceilings precluded the use of chandeliers, and so in the same month three looking-glass sconces with carved gilt frames were ordered. Another account records 'a fine large sconce in a carved gilt frame with five branches'.[14] Though it is not known to which room this refers, certainly in the King's

Gallery in May 1727 'two very large silvered hanging glasses (£300 the pair)' and 'six large oval silvered glasses for six white oval sconces' were supplied. These glasses survived until at least 1816, when they were depicted in a watercolour of the room by Charles Wild, but have since disappeared. Wild's view shows sconces with three branches each, hung on the walls between the windows, suggesting that sconces were often lit by multiple candles.[15] Others were of pure silver and had to be boiled regularly, so providing us with an invaluable record. In 1734–5, orders were given for 'twenty-eight yards of Crimson silk lyre to hang four sconces, weight forty-eight ounces, eight tassells suitable for … the privy chamber there'.[16] The Cupola Room and Drawing Room were provided with four giltwood chandeliers – the former with twelve nozzles each and the latter with nine. These could be raised or lowered by a counter-weighted pulley system located in the roof space. In January 1724 the royal cabinetmakers Gumley and Moore were given orders for hanging 'four gilt chandeliers of twelve nozzles each there'.[17] There is no doubt that task lighting or multi-branch candelabra were also brought in, as bespoke giltwood stands for them were part of the permanent furnishings and survive. By contrast not a single candelabrum of the date remains in the royal collection, as most seem to have been melted down in the nineteenth century.

The test

Overall, the research gave an important insight into the use and combination of these different light sources, allowing us to determine the levels required for the test. The Cupola Room with its chandeliers would provide 48 candles, with perhaps additional sets of candelabra to bring the usage closer to a hundred (Fig. 4.6), whereas the Presence Chamber seems to have sufficed with a dozen candles distributed across several wall sconces. The Georgian Establishment Books refer to different sorts of wax. White wax, the most expensive, was used in the State Apartments where cost was no barrier to reflecting the prestige of the king. Yellow wax and tallow were probably used in more private or service areas, though these distinctions did not affect the amount of light produced.[18] Three rooms were selected for the test – the Presence Chamber, Privy Chamber and Cupola Room – principally because they reflected a mixture of lighting sources and materials to give different results. Sconces, candelabra and stands were hired from a theatrical prop company, while one of the great gilt chandeliers was specially adapted by removing the light bulbs and installing temporary nozzles to take candles.

Figure 4.6: Relighting the Cupola Room chandeliers with candles as part of the lighting test by means of special adaptations.

© Historic Royal Palaces.

Scientific testing was conducted under the supervision of a lighting designer and aimed to compile as much metric data as possible, measuring light levels in different parts of the room but also testing this data against a range of LED light bulbs which were available on the market for comparison (Fig. 4.7).[19] Lux, colour temperature and colour rendering were recorded. Lux records how much light falls on a surface, notionally lumens per square metre of area. A measurement of lux is the intensity of one candle at a distance of 1 metre from a surface 1 metre square. Colour temperature records how cool or warm the lamp appears. Candles have a colour temperature of around 2,000 Kelvin, with lower temperatures reflecting an even warmer light. Traditional tungsten-filament bulbs are similarly warm but modern LED bulbs can have temperatures of up to 5,000 K, giving off a much cooler light which alters visual perception. Related to the temperature is the colour render index – how truthfully colours appear under specific artificial light when compared with daylight. This is important because many LED bulbs have poor colouring in the red part of the spectrum. This was most apparent during a technical visit to the palace of Schönbrunn in Vienna, within a room almost entirely dressed in red fabrics. The use of incorrect LEDs rendered the colour almost black, altering the room completely. Other aspects which were tested included heat convection and smoke emitted from candles, with

Figure 4.7: Comparison of different modern LED bulbs.

© Historic Royal Palaces.

Figure 4.8: The effects of shine – candles lit against a silver sconce, as attested in the state rooms at Kensington Palace in the 1720s.

© Historic Royal Palaces.

implications for environmental conditions and also fire risks. Surprisingly, silk, which adorns most of the walls and is the principal material used in the tapestries, is not flammable but simply melts under direct flame – reassuring the fire-safety officer that placing candelabra on stands near the wall originally offered limited risk.

The test was in some ways partial, because a full complement of light was not reinstated. For the purposes of the scientific measurements, it was not needed. Thus, only one of the great chandeliers in the Cupola Room was lit and several sconces were set up in other rooms, both rooms having additional candelabra on stands about 1.5 metres (5 feet) high. No substitute was put in place for the fireplaces. Ultimately, while harvesting technical data was of great importance, the exercise was designed to give the participants a real and personal impression of the aesthetic qualities of candlelight in these great spaces. It was undertaken after dark (Fig. 4.8), necessary because several rooms have no shutters or curtains. Colleagues were invited from several museums and the royal collection.

The results

It is not intended to rehearse the technical results in any detail here, but the findings are briefly summarised below. From an aesthetic point of view the results can be classified into effects on visibility, colour, texture and shine. Visibility was not particularly impaired. Surprisingly, even with a reduced number of lights the full depth and height of the rooms remained completely visible in candlelight, making it easy to recognise individual faces across rooms and to perceive detail in the architectural elements. In the Cupola Room, for example, the vertical emphasis of the giant pilasters was thrown into relief by shadow, while the painted military trophies were distinguishable in mass but with muted detail. The colour inherent in the ceiling paintings became less distinct, as was expected, but the designs and subject matter remained visible – and thus the ceilings could still be perceived as part of the room (Fig. 4.9). Wall-mounted artwork was of particular interest. Kensington still has many fine paintings, including Old Masters, but some of the more standard seventeenth-century royal portraits are not of exemplary quality. Under candlelight these ‘improved’ considerably, probably through a loss of definition and colour. Perceptions of texture were also prominent. Under candlelight the crimson damask – with its warp-faced satin weave and alternate weft-faced weave, which produces a counter glossiness in natural light – became deeper, lustrous and textured like velvet, with the

Figure 4.9: The ceiling of the King's Presence Chamber at Kensington Palace under candlelight. The ceiling, in the grotesque style, was painted by William Kent and retained both its visibility and some colour in lower light.

red almost vanishing to be replaced only by the contrasts of the pattern (Fig. 4.10). Similarly, colour became less important as a decorative element of the many tapestries, producing instead a three dimensionality in the designs. This has further implications for understanding their use in the sixteenth and seventeenth centuries.

The concept of shine, gloss or sparkle was perhaps the outstanding quality which dominated the rooms in candlelight. Shine can affect the entire texture of an object or pick up points of light, scattering it to give movement or sparkle as the viewer in turn moves around the room. These broader qualities were evident in the oak floors, which were oiled and reflected a gentle sheen. Similarly, the oak panelling – now oxidised to a richer, deeper colour – also gave off a wax sheen, and the polished marble chimney pieces were highly reflective. Traditionally both panelling and marble are recorded as having been varnished or waxed at Kensington, and the effect of giving character to an otherwise flat surface which could be non-reflective was noticeable. Shine was present everywhere, in the ubiquitous use of gold to highlight mouldings and create further patterning in furnishings and picture frames (Fig. 4.11). In the Cupola Room, the distinctive use of gold to pick out what would normally form

Figure 4.10: The effects of candlelight on different materials at Kensington Palace: crimson damask, marble and antique tapestry.

© Historic Royal Palaces.

natural highlights and give three-dimensionality to the decoration was left visible when the stone colours became recessive, leaving the designs legible. Large surfaces at higher level were speckled, giving greater mass from further distance. Much of the Cupola Room gilding has now dulled with age, but where the statues in niches were re-gilded in the 1990s these were particularly accentuated against their white-marble backgrounds and appeared more fully rounded by the effects of shadow rather than a single, undistinguished block of gold, as they appear in daylight (Fig. 4.12).

Other elements which contributed to the shine and formed points of light are less obvious – polished brass lock cases on the doors, the high-chased relief work of the sconces themselves, and relief patterns on table tops and scrolled volutes to sculpture pedestals. One important component which remains absent from these fine rooms are the people who once populated them. In the eighteenth century the regimented dress that was required at court was conspicuous for the use of large amounts of textile in expensive gold and silver thread, silk embroidery for gentlemen's waistcoats and diamonds in abundance – for jewellery and shoe buckles (Fig. 4.13). This would have brought shimmer and sparkle through movement, strengthening the reflections from static elements by the flickering of candles and the sheer abundance of reflective surfaces.

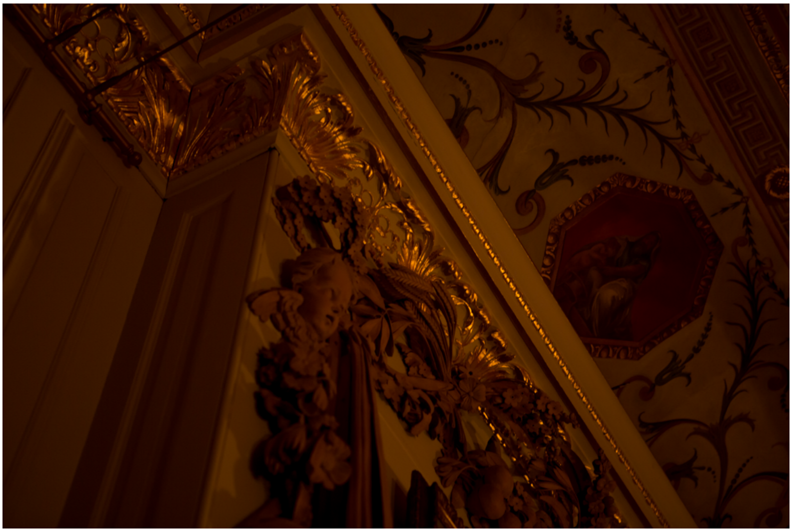


Figure 4.11: The effects of candlelight on carving, gilding and painting at Kensington Palace. The gilding and white paint replicate elements installed by William Kent in 1725. The carvings are by Grinling Gibbons.

© Historic Royal Palaces.

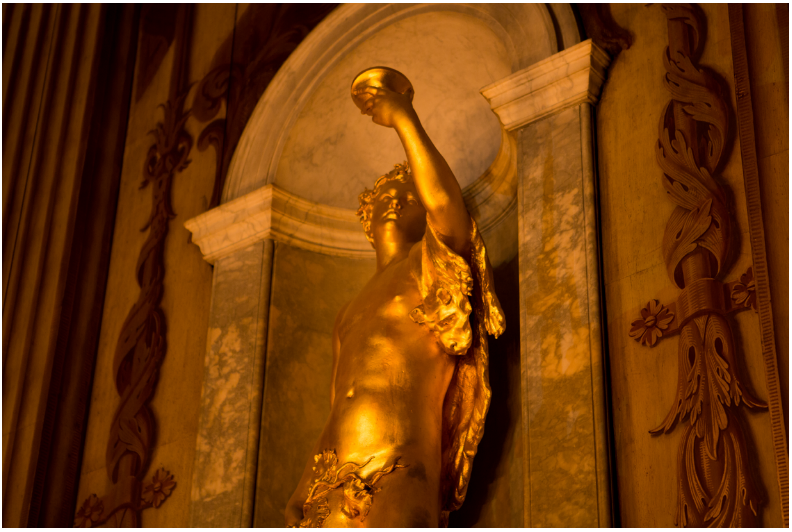


Figure 4.12: Gilded statue of Bacchus set in a marble niche in the Cupola Room, Kensington Palace. The statues, which take on a glaring aspect in natural light, become much more subtle under candlelight.

© Historic Royal Palaces.

Figure 4.13: Beyond interior decoration. The Countess of Rockingham's silver mantua. This spectacular court dress, dating from 1763 is woven in silk with silver thread, which would have sparkled under low light when combined with the dynamism of movement.

© Historic Royal Palaces.

Ultimately, the loss of one form of visual perception normally seen in daylight was compensated for by another accentuated by candlelight, which may explain the choice of surface treatments. We should not forget that many of these materials were in themselves prestigious and used as signifiers of wealth and authority, and such ostentation was expected of the king. Gold, silk and polished marble is therefore not surprisingly found in royal palaces, but other elements may be more directly a personal choice. In its own day this ostentation had its detractors – and while we may be impressed by the lavish use of gold, perhaps to create a glittering backdrop for the court, the antiquary George Vertue was not. To him the Cupola Room had 'statues of burnish'd gold which makes a terrible glaring show and truly gothic – according to the weakness and conceptions of the Surveyors and Controllers of the Kings Works, or their private piques'. The grotesque-work ceiling of the Presence Chamber was just ‘poor stuff’.[20] While Vertue may have been accusing officials of responsibility so as not to implicate a king with dubious and unsophisticated tastes, nonetheless the candle test gave us tantalising clues about William Kent’s design process. This was to some degree variable in these early Kensington days when, fresh from a long sojourn to Italy and having observed much, he was already expanding as a painter, architect and interior designer, applying what he had learned and lending his own style to his English commissions.[21] His use of textiles and motifs were perhaps all part of the ‘Italian gusto’ he had observed, though luxury wall hangings such as silk and velvet were not new at Kensington.[22] In fact, Queen Mary had embellished her private rooms with embroidered hangings in the 1690s. In her gallery these were later replaced by blue mohair for Prince George of Denmark (d.1708), the consort of Queen Anne, so had clearly been part of the decorative repertoire early on. Kent’s response there was to remove the textile, panel the walls up to the cornice and repaint everything white in what might appear a retrograde step. Ultimately, Kensington was a piecemeal development reflecting a combination of high and low ceilings, stylistic differences and a combination of panelling or textiles for hanging paintings and tapestries. The Cupola Room is a case in point – initially Kent painted the ceiling but later returned to adorn plain, but grandiose oak panelling which was already present when he arrived. Steven Brindle has characterised Kent’s decoration as having an ‘odd and idiosyncratic quality’, which may reflect the piecemeal approach.[23] Unlike his innumerable other designs and interiors, Kensington was decorated in fits and starts – beginning with a single ceiling and with no expectation of further work. Ultimately, Kent was allowed to continue and to design furnishings, picture frames and other elements, so creating an integrated scheme for which he is well known. What has rarely been considered, either here or elsewhere, is the effects of light on this process of selection of colour, texture and shine – something which could only have been directed by the artist. This is most emphatic in the Cupola Room, where the fictive shadowing of the architectural elements in the ceiling reveals the direction of light to be the fireplace and not the windows, reinforcing the fact that the rooms were meant to be viewed in the evening. Similarly, the candles on wall-mounted sconces threw shadows which accorded very closely to borders and visual delineations on the ceiling paintings, almost as if he had sketched them out by candlelight, and it is clear that if he had not used as much gold as he did, much of the decoration would have vanished during the evening. These are all intriguing elements which may explain the combination of materials here and elsewhere.

Conclusion

The candlelight test has produced conclusions but also opened a debate and offered a different perspective on our perception of the historic interior and the treatment of surfaces. The experiment was useful for two principal reasons. Firstly, it showed that candlelight transforms a room, but not necessarily to the detriment of historical surfaces. It may be that the choices and treatments stemmed from the need to accentuate materials in lower light levels, creating a slightly different aesthetic which Vertue may not have approved of in the stark light of day – but we are left with the impression that William Kent understood this during the process of his design.

Secondly, however, is the ongoing debate about the use of LED bulbs. The technology is fast moving and even since 2014, when the first of the new lights was installed at Kensington Palace to a rather lukewarm reception, the provision of bulbs with closer colour temperatures and rendering to historic candles and incandescent lights has improved. Even so, it remains true that many claims by manufacturers are unreliable regarding the longevity of the bulb or the qualities of the light, which was proved by measurements taken during the test. Thus, the search continues for an ideal solution. Ultimately, replicating the true effect of candles complete with flicker becomes increasingly possible. In this respect, LED technology holds great potential, giving us far greater flexibility with few of the disadvantages of fire risk or unwieldy mechanical plant which we had with incandescent bulbs. Perhaps with the flick of a switch it will be possible to turn a room into 'historic' mode for special occasions, allowing us to recapture something of that magic and appreciate interiors which were designed as much for the night as they were for daytime. After all, the court was theatre and William Kent was a master at creating a suitable theatrical backdrop for the nightly performances in these spaces. Against it, all the great furnishings, the textiles, gilt tables, mirrors and pictures were ultimately devised as the dressings of this great theatre of state.

Notes

1 For a fuller history of Kensington Palace, see Fryman et al., *Kensington Palace*.
2 Finberg, *Vertue note books, volume I*, 100–1. The surveyor-general's report also mentions this, National Archives T1/243 No. 20.
3 Weber, *William Kent*. See also Mowl, *William Kent*.
4 Edwards, 'George I at Kensington', 109–20.
5 Edwards, 'George I at Kensington', 109–20. See also Brindle, 'Kent the painter', 119.
6 *The Times*, 21 January 1898, 3.
7 Law, *Kensington Palace*, 42–4.

8 Much of this work remains unpublished or confined to papers issued by the European Royal Residences Association.

9 Most of the sources for light are scattered in various archival sources at the National Archives in Kew, London. The best source is the Lord Chamberlain's Accounts (record class LC), but others are searchable online, including the Establishment Books (EB/EB/312) and the Household allowance book for George II, 1727 16–21.

10 For comparative work later in the century, see Parrott Bacot, 'Nineteenth century lighting'.

11 The best publication and summary of the subject remains Leeds City Arts Galleries, *Country House Lighting 1660–1890*.

12 Pyne, *History of the Royal Residences*.

13 Gaunt and Knight, 'A History of Kensington Palace', vol. 2, chapter 2, 357.

14 National Archives LC9/287, fo. 70.

15 National Archives Work 6/15.

16 National Archives LC9/165, fo. 6.

17 National Archives LC9/384, pl. 2 No. 49.

18 Royal Collections Trust, Georgian Establishment Books.

19 The testing was carried out in house as well as by the lighting designer Hoare Lea.

20 Finberg, *Vertue note books, volume III*, 19.

21 Harris, 'William Kent: A life', 28.

22 Brindle, 'Kent and Italy', 101.

23 Brindle, 'Royal Commissions', 271.

References

Brindle, Steven. 'Kent and Italy'. In *William Kent: Designing Georgian Britain*, edited by Susan Weber, 89–109. New Haven, CT and London: Yale University Press, 2013.

Brindle, Steven. 'Kent the painter'. In *William Kent: Designing Georgian Britain*, edited by Susan Weber, 111–49. New Haven, CT and London: Yale University Press, 2013.

Brindle, Steven. 'Royal commissions'. In *William Kent: Designing Georgian Britain*, edited by Susan Weber, 271–301. New Haven, CT and London: Yale University Press, 2013.

Edwards, Sebastian. 'George I at Kensington'. In *Kensington Palace: Art, architecture and history*, edited by Olivia Fryman, Sebastian Edwards, Joanna Marschner, Deirdre Murphy and Lee Prosser, 109–20. New Haven, CT and London: Yale University Press, 2018.

Finberg, A.J. *The Eighteenth Volume of the Walpole Society, 1929–1930: Vertue note books, volume I*. Oxford: Printed for the Walpole Society by Frederick Hall at the University Press, 1930.

Finberg, A.J. *The Twenty-Second Volume of the Walpole Society, 1933–1934: Vertue note books, volume III*. Oxford: Printed for the Walpole Society by Frederick Hall at the University Press, 1934.

Fryman, Olivia, Sebastian Edwards, Joanna Marschner, Deirdre Murphy and Lee Prosser. *Kensington Palace: Art, architecture and history*. New Haven, CT and London: Yale University Press, 2018.

Gaunt, Peter and Caroline Knight. 'A history of Kensington Palace'. Unpublished manuscript in 12 volumes, curatorial archive, Hampton Court Palace.

Harris, John. 'William Kent: A life'. In *William Kent: Designing Georgian Britain*, edited by Susan Weber, 27–43. New Haven, CT and London: Yale University Press, 2013.

Law, Ernest. *Kensington Palace: The birthplace of the Queen, illustrated*. London: George Bell and Sons, 1899.

Leeds City Arts Galleries. *Country House Lighting 1660–1890*. Temple Newsam Country House Studies 4. Leeds: Leeds City Art Galleries, 1992

Mowl, Timothy. *William Kent: Architect, designer, opportunist*. London: Pimlico, 2011.

Parrott Bacot, H. *Nineteenth Century Lighting: Candle-powered devices: 1783–1883*. Westchester, PA: Schiffer, 1987.

Pyne, W.H. *History of the Royal Residences*. London: A. Dry, 1819.

Royal Collections Trust. 'Georgian Establishment Books, EB/EB/13: Household allowance book for George II, 1727', *Royal Collections Trust*. Accessed 20 June 2022. https://gpp.rct.uk/Record.aspx?src=CalmView.Catalog&id=GEO_EB%2f13.

Weber, Susan, ed. *William Kent: Designing Georgian Britain*. New Haven, CT and London: Yale University Press, 2013.

5

Retrieving craft practice on the early eighteenth-century building site

Melanie Hayes

Set in a remote and 'very beautiful situation, on the side of a mountain' in the shadow of the Sugarloaf in north County Wicklow (Fig. 5.1), Powerscourt was one of the most ambitious country houses of the period (Fig. 5.2).[1] The house was commissioned around 1730 by Richard Wingfield (later Viscount Powerscourt) and built to the designs of Richard Castle, then recently arrived in Ireland. The external arrangement, which was noted for its 'most striking and palatial aspect', conformed to the latest Palladian ideals in planning, with a substantial *corps de logis* complete with an applied portico to the centre, single-storey arcades linked to pavilions, and quadrant wings stretching out into the landscape.[2] Of even greater novelty, the entire entrance front was faced in cut stone from local granite quarries. Sophisticated improvements were made to the grounds, including terraced landscaping and water cascades to rear of the house. Internally, the 68-room mansion boasted some of the finest early eighteenth-century interiors in Britain and Ireland. From the shell-encrusted stucco coffering in the Entrance Hall (Fig. 5.3), inspired by the grotto halls of German Baroque palaces and by growing interest in shell collecting, to the colonnaded Saloon (Fig. 5.4) which, like Lord Burlington's contemporary exercise in York, was modelled on Vitruvius's description of an Egyptian Hall in Palladio's *Quattro Libri*, Powerscourt established new levels of decorative splendour and craftsmanship in country-house architecture.[3]

Figure 5.1: George Barret RA, *Powerscourt, County Wicklow*, between 1760 and 1762, oil on canvas.

© Yale Center for British Art, Paul Mellon Collection, B1981.25.35.

Figure 5.2: North entrance front, Powerscourt, County Wicklow, 1731–9.

© CRAFTVALUE.

Figure 5.3: Entrance Hall, Powerscourt, County Wicklow, photo taken early 1974, pre-fire.

Courtesy of the Irish Architectural Archive. Photograph by Hugh Doran.

Figure 5.4: Saloon, Powerscourt, County Wicklow, photo taken early 1974, pre-fire.

© Courtesy of the Irish Architectural Archive. Photograph by Hugh Doran.

Significance notwithstanding, Powerscourt has yet to be the subject of sustained scholarly inquiry – as has workshop practice in the works of Richard Castle – and its building history is complicated by alteration and loss. On 4 November 1974 Powerscourt was consumed by a devastating fire. The exterior shell survived the blaze, and several of the interiors have been reconstructed. A facsimile of the panelled plaster ceiling in the Saloon has been reconstructed – as have the surfaces of the granite columns, remnants of which survived the fire, while the pilasters on the south wall are original but seem oddly squashed into place (Fig. 5.5). Other parts of the interior, as at Clandon Park, have been left in their raw state, exposing their inner construction. The squat Entrance Hall has been stripped bare of its stucco embellishment (Fig. 5.6), though fragments of the shell motifs which once adored the coffered ceiling panels and arcades survive, revealing the material composition of these hand-modelled

Figure 5.5: Saloon, Powerscourt, County Wicklow, post-fire and restoration.

© CRAFTVALUE.

Figure 5.6: Entrance Hall, Powerscourt, County Wicklow, post-fire and restoration.

© CRAFTVALUE.

objects. While the structure is laid bare the absence of the decorative surface is keenly felt. In the face of such loss to the building fabric, a rare set of surviving building accounts at the National Library of Ireland provides a way back into exploring the historic craft practices which brought this work into being. Although they are far from a complete record, close scrutiny of these building accounts – and attention to the practicalities and materiality of architectural craft – reveals important new insights into the craftspeople and processes employed here in the 1730s. In setting this work against a range of contemporary projects in Ireland and Britain some of the broader tendencies within early eighteenth-century craft production and workshop practice emerge.

The building site: complexity, connectivity

In October 1731 *Faulkner's Dublin Journal* reported:

> On Tuesday last as some masons and brick-layers were at work at the mansion-house of Powerscourt in the County of Wicklow, the scaffold fell down, by which said accident five men were killed and some wounded.

The early eighteenth-century building site was a noisy, bustling and at times hazardous workplace. Construction began at Powerscourt in late spring 1731, though major site clearance and preparation would most likely have taken place the preceding year. The new house was built around an existing H-plan structure, and the excavation and knitting together of old and new would have presented significant challenges. An auction catalogue of 1729 shows the earlier building to have been a substantial structure, at least two storeys over a cellar or basement with a number of large formal rooms, still furnished and in use up to this date.[4] There were also several offices and outbuildings – including a 'bake house', 'out-larder', 'wash-house', 'brew house', 'confectionery' and 'dairy' – as well as stables and a bowling green attached to the site. Although the structural core of the earlier house was incorporated into the new building and is still evident today in the thickness of the walls and splayed window openings to the rear first-floor rooms and stair hall, much demolition was required before works could begin. An array of temporary structures, masons' sheds, carpenters' huts and kiln shelters required during construction added to the complex terrain of the building site.[5]

The excavation or digging out of foundations required a large work force, here seemingly drawn from local tenantry. The account ledgers record regular payments to Thomas Caddy 'to pay the labourers' in the initial years of construction.[6] Payments averaged £1 10*s*. 0*d*. per week, enough for five city labourers but perhaps more at country rates.[7] Although certain trades were seasonal, the accounts show that labourers were required on site throughout the year. As well as excavation and earth removal, labourers were required to erect and move the timber scaffolding as the building progressed.[8] The need for care in both the erection and use of scaffold is clear from the quotation above. This was not an isolated incident. The death of a workman employed at the New Buildings at Broad Street in London in 1737, who 'fell thro' the scaffolding into the street … owing to the careless manner of laying the Boards' prompted the reporter to remark that the 'many instances of this Nature, one would think, should make the Masters, if the Men don't, take care to secure their scaffolding'.[9] Timber scaffolding of the period consisted of a system of vertical or upright poles, known as 'standards', and horizontal poles, or 'spars', tied together with ropes to form an H-shaped frame, on which timber planks were laid to form a precarious platform. As the walls rose at Powerscourt, so too did the need for scaffold – and there are frequent references to the delivery of scaffolding poles to the site, usually in quantities of six, perhaps due to the length of the timber or their cost. In 1732 we learn that the bricklayer James Weyr was charged the not insubstantial sum of five shillings for the 'cost of one scaffolding Pole lent him for shelter for the Kiln and lost'.[10] The choice of timber was important. 'Standards' were required to be straight-grained and free from knots to ensure strength and durability. Although Richard Neve recommended alder for scaffold poles, 'for if it lie always wet, it will harden like a very Stone', he goes on to remark that 'where it is sometimes wet, and sometimes dry, it rots immediately'.[11] The building contract for Yester House in Scotland in 1729 stipulated that the Marquess of Tweedale cut 'Two Rows of the firr Trees now growing in the Garden' for scaffolding, and as James Ayres notes, Scandinavian spruce, pine and larch were also used, presumably because of the long lengths and elasticity of these timbers.[12] Even in such a supporting role, materials clearly mattered.

There was much coming and going to the Powerscourt site, with large volumes of building materials delivered by local carmen, who hauled horse-drawn loads of stone from the quarry at Glencree, timber from the woods, or stones from the river to build the demesne walls.[13] There were regular trips to Dublin for 'lead and hair', while other materials were brought from further afield.[14] Some materials were stored at a yard at the nearby coastal town of Bray, though others, like sawn timber, would have been kept on site. In February 1733/4 (O.S. calendar) the labourer (and lime-burner) Thomas Gory was paid £2 18*s*. 4*d*. for '70 days and nights for watching the House and loose materials'.[15] Lime was burned at a limekiln in Bray but bricks, as was standard practice, were burned in the vicinity, requiring large amounts of coal – some of which came from the port of Whitehaven in Cumbria – as well as culm (a fine-grained coal waste) from the limekiln at Bray.[16] In October 1732 James Weyr was paid for 'making and burning' 362,000 place bricks, 16,500 stock bricks and '660 Long bricks put into the kiln' for free.[17] This noxious activity seems to have been kept at some distance from the house, as carmen were paid for delivering large quantities of bricks to the site, and drawing bricks from 'Mr [Thomas] Brownriggs'.[18] The removal of 'rubbish' – from grass sods, soil and rubble to other building debris – was another costly and labour-intensive task. In addition to the gangs of unskilled labourers, who removed rubbish from the immediate area using such basic tools as wheelbarrows and spades, the services of local carmen were again called on to dispose of this material.[19]

A large workforce of craftsmen, of different trades and skill levels, increased the activity on site. Structural-building tradesmen such as bricklayers, masons, carpenters, sawyers, plumbers, lath splitters and slaters were active in the initial years of the project, while 'second finish' trades such as plasterers and painters, carvers and joiners worked on site from the mid-1730s. Although there is a tendency to treat each trade in isolation, the division was not so neat in practice and there was much collaboration and connectivity on site. The banker masons or stonecutters, for example, worked in sheds or lodges – built by the carpenters – each mason at his own individual banker, where there was space to swing a mallet. They would, however, have joined forces with the rough or walling masons, when the time came to attach the dressed masonry to the wall surface. Carpenters, who also worked in weatherproof huts or sheds where timber was often laid up to season, were responsible for the construction of scaffolding and for the timber centring and supports required during masonry construction, as well as the roof and floor timbers. Sawyers too were an essential cog in this wheel, working in pairs out in the open to prepare materials for the timber trades. In December 1738, for example, Richard Smith and William Magee submitted their bills for sawyers' work done 'for the joiners'.[20]

Organisation within the building trades followed the hierarchical structure of master-craftsman, journeymen and apprentices found across eighteenth-century Britain. Each trade or team of craftsmen had their attending labourers and were paid a daily subsistence rate or allowance. Bills of subsistence were regularly submitted by the master-craftsmen at Powerscourt, sometimes weekly, though payment was often received by their second-in-command or overseer. This form of payment, as James Campbell notes with respect to St Paul's in London, ensured the regular attendance of workmen on site.[21] It also meant that master-craftsmen had to have the resources to pay their workforce on a regular basis, as tradesmen's bills were only settled periodically. Specific predetermined tasks carried out by skilled craftsmen were generally paid by 'the measure' rather than 'by day', and signed-off by Richard Castle, who appears to have kept a close eye on the organisation of the site, at least until 1736 when the painter John Esdall began to act as a clerk of works.[22] This oversight included the work not just of master-craftsmen but also of local labourers. In 1733, for instance, John Byrne of Kilmalin submitted his bill for 'stones drawn to the Dairy office … due him by Mr. Castle's measurement, if found right'.[23]

Owing to its remote location, beyond the county boundaries, Powerscourt seems to have slipped the leash of Dublin's guild system. For although Richard Castle did employ a number of established craftsmen who were members of Dublin's guilds and freemen of the city, he also drew on the local workforce, from the rough mason Richard Price to the principal stonecutter Robert Clough and the scores of other tenants who hauled materials to the site – often in lieu of rent.[24] Although local craftsmen lacked the formal training afforded by the guild system, in practice they would have followed the same empirical process of skill acquisition. The tendency of employing both ‘imported’ and local craftsmen occurs throughout the period, and not only points to autonomy of elite patrons in the context of their own estates and a more fluid, or perhaps pragmatic, approach to the organisation of labour but also raises questions as to how the varied operational hierarchies on-site were managed.[25]

Masonry

In his description of Powerscourt in 1822 George Wright notes that the house, ‘a large and nearly square building … built entirely of cut stone’, was ‘rather substantial than beautiful’.[26] The entrance front, which survives largely as originally built, is faced almost entirely in silvery-grey granite, or ‘mountain stone’. This hard-wearing igneous rock with its distinctive crystalline flecks of mica, quartz and feldspar has a coarse, gritty texture, which produces a robust effect and adds to the substantial character of the building (Fig. 5.7).[27] Previously used for paving and service areas, Wicklow granite was employed at the Parliament House in Dublin in 1730, though here it was juxtaposed with fine-grained, fossilised limestone from the Isle of Portland in Dorset – to potent effect. Powerscourt was the first instance, certainly in County Wicklow, in which granite was used across an entire entrance front, though Richard Castle had previously employed local cut stone on the façades of Castle Hume, County Fermanagh, and Hazelwood, County Sligo.[28]

The stone was quarried on the Powerscourt estate at Glencree, about 4 miles (6.5 kilometres) west of the house. The exact location of the quarry has not been identified, though Samuel Lewis notes that there were ‘several good quarries’ in the area and there are local references to an old granite quarry at Toneygarrow, near Glencree, as well as at Lough Bray.[29] Although the Glencree river made the ideal highway for transporting this weighty material, there are multiple references in the ledgers to local carmen from Shillelagh delivering stone from the quarry.[30] The quarry was run by William Harricks (Junior), a tenant of Richard Wingfield’s, who was born on the estate in 1708, and leased land at nearby Monastery.[31] His father William, and later his brother Joseph, held lands at Onagh, through which the Glencree river flowed – while another relative, Thomas Harricks, leased lands at Ballybrew, where a granite quarry was in use well into the last century.[32] Between 1732 and 1736 William Harricks undertook large-scale quarrying work for Richard

Figure 5.7: North entrance front, Powerscourt, County Wicklow, 1731–9. © CRAFTVALUE.

Wingfield. His account shows weekly payments to the labourers throughout the summer and autumn months, in addition to his own costs for 'attending at ye Quarry'.[33] Extracting this unyielding stone from the quarry bed was no easy task, and William Harricks' account includes references to the making and mending of quarrying tools, using 'Square Iron' and 'Germ.n steel', as well as the purchase of a 'Quarry sledge'. As was the case elsewhere, the large, roughly hewn blocks of freestone – which were free from blemishes and cracks – would most likely have been worked to some degree at the quarry before they were transported to the site, where they were sawn using toothless iron 'grub saws' and finished by hand using chisels, hammers and mallets.[34]

The walling or rough masonry on ancillary buildings at Powerscourt was carried out by local masons Richard Price and Henry Neale, who worked on 'the Pheasantry' in 1732 and 'Dog Kennell' in 1735.[35] The stonework on the house proper was also executed, somewhat surprisingly, by a local stonecutter or freemason as this branch of the trade was known in England. As noted, Robert Clough, like Richard Price, was a tenant on the estate, perhaps because this gave him direct access to the quarries.[36] Though no other works have been discovered, Robert Clough carried out his training in Dublin and was admitted as a freeman of the city by service at midsummer 1731, just as works were commencing at Powerscourt.[37]

Clough was employed on site throughout and oversaw a large workforce; his weekly subsistence payments averaged £5, rising to £18 in September 1734.[38] He appears to have undertaken a variety of work, requiring varying degrees of skill. For example, in addition to the dressed stone facings he was paid for laying the 'Flagging [of] the Vaults under the kitchen'.[39] As with the other building crafts, the relationships and responsibilities within the masonry trade can be difficult to define.[40]

In executing an entire façade in this coarse material, Clough faced a considerable challenge. The main entrance block stands up to scrutiny and elements such as the circular niches, or *tondi*, a motif favoured by Richard Castle, are well executed – as are the blocked window surrounds and rusticated base (Fig. 5.8). Such rustication required considerable skill to execute. From what we can glean, the banker mason, working at his low bench with chisel and mallet in hand, would first form a smooth or 'true' face to the stone block. He would then cut back or chamfer the four edges, or marginal drafts, of the face at a 45-degree angle, between one and two inches (2.5 and 5 cm) wide, resulting in a pronounced v-joint between each block when laid in situ. The fixer mason was

Figure 5.8: Detail, north entrance front, Powerscourt, County Wicklow, 1731–9.

© CRAFTVALUE.

responsible for fixing these dressed-stone facings to the building's surface – raising them into position with hand-powered lifting tackle such as an iron lewis (a metal tenon in the stone) and crane, then fixing the block in place with metal fixings (dowels and cramps), lime mortar and grouts. The handling of the niches in the wings is not of the same standard, suggesting a less-skilled hand – the size and shape of the curved blocks and the geometry of the stonework being irregular (Fig. 5.9). As Edward McParland shows in this volume, a thorough grounding in mathematics was essential for the masonry trade, while a degree of 'skill in drawing' was also required of master-craftsmen. Contemporary building manuals agree. Batty Langley's *Builders and Workman's Treasury* shows the complex calculations involved in forming the heads of niches (Fig. 5.10).[41] In Scotland admission to the craft guilds required the craftsman to demonstrate evidence of his skill by producing an essay piece, which for masons usually including drawings (plans and elevation) or making models.[42]

Imported stone was also employed at Powerscourt. In 1734 the English stonecutter and quarry agent Thomas Gilbert supplied 18 tons[43] of Portland Stone, some of which was used for the emblematic eagles in the wings and the cartouche displaying the entwined Wingfield–Rowley arms in the pediment (Fig. 5.11).[44] This appears to be the work of the Dublin stone carver David Sheehan, who worked here in the late 1730s.[45] Gilbert – whose family had significant quarrying interests on the Isle of Portland, and had been involved with the supply of stone to St Paul's Cathedral – had worked as a stonecutter at the Parliament House in

Figure 5.9: (a) and (b) North entrance-front wings, Powerscourt, County Wicklow, 1731–9.

© CRAFTVALUE.

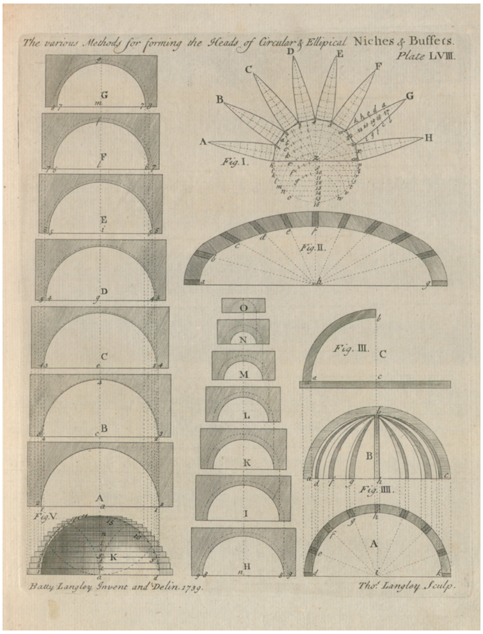


Figure 5.10: Plate LVIII, ‘The Various methods for forming the heads of circular & Elliptical Niches’, Batty Langley, *The City and Country Builder’s and Workman’s Treasury of Designs.* London: Printed and Sold by S. Harding, 1745.

Getty Research Institute, Public Domain.

Figure 5.11: Wingfield-Rowley Arms, Powerscourt, County Wicklow, circa 1739.

© CRAFTVALUE.

Dublin in 1731, while in 1734 he was involved in the supply of stone for Richard Castle's Printing House in Trinity College Dublin.[46] His services were much in demand. Writing to John Tucker of Tucker & Co., major suppliers of Portland stone, Catherine Clarke of Dublin (who was also involved in Portland stone supply at Trinity College) remarked:

> I would have writ to you sooner but could not find Mr Gilbert [though] I writ severell letters to ye Country where I was tould he was but he is Imployed by so maney gentlemen that He seldem stays in one Pleas Long.[47]

A variety of stone was used internally at Powerscourt. Gilbert's onetime associate at Trinity College, Moses Darley, supplied marble and 'Blackstone' chimneypieces in November 1736, while Thomas Perry, boatman, was paid for freight of four tons of marble in 1737.[48] Patrick Keeling supplied Palmerstown flags in 1736 and 1737, John Reily 'cursed stream flags' in 1738, while William Langford of Tinnahinch near Mountmellick was paid for 'a parcel of Mountmellick flags' in 1737.[49] The most remarkable use of stone, however, was in the solid granite columns, pilasters and carved Ionic capitals in the Saloon (Fig. 5.12). Here, fluted

Figure 5.12: Saloon, Powerscourt, County Wicklow in the aftermath of the fire in 1974.

Courtesy of the Irish Architectural Archive. Photograph by Irish Architectural Archive.

channels were carved into the long and short drums of the column shaft, which were then plastered and painted to resemble marble. This treatment was not uncommon. In German palaces of the period faux marble stucco – *Stuckmarmor* or scagliola – was applied to timber columns and pilasters, while the columns at York Assembly Rooms may originally have been marbled and were presented in a pale stone colour.[50] Such striking extravagance aside, the use of solid stone columns in the upper floor at Powerscourt was an unusual and perhaps ill-conceived choice. The great weight of the granite blocks had consequences for the structural integrity of the saloon floor. The hall ceiling below, according to the 7th Viscount Powerscourt, 'was formerly very much sagged, as the beams supporting the Saloon floor were not strong enough' and had to be reinforced with cast iron girders in 1871.[51]

Joinery

Joinery, according to Joseph Moxon, 'is an Art Manual whereby several Pieces of Wood are so fitted and joined together by Straight- line, Squares, Miters or any Bevel, that they shall seem one intire piece'.[52] While the carpenter was usually responsible for structural elements, such as floor and roof construction, the joiner applied his skill to the more decorative surfaces. One of the great losses occasioned by the fire at Powerscourt was that of its timber joinery, most particularly the fine inlaid parquetry floors in the Saloon and Octagon (Fig. 5.13).[53] Known as 'Parquet de Versailles', this panelled floor covering was popularised by Louis XIV and spread throughout the courts of Europe in the late seventeenth century, where it developed into a more elaborate ornamental intarsia parquetry in the following century. There are few extant examples from this period in Britain, though an inlaid pine panel from Lord Carpenter's house on Hanover Square, London (1719–32), is preserved in the Victoria and Albert Museum.[54] It is believed that Richard Castle, who had first-hand knowledge of continental techniques, introduced this craft to Ireland and in turn instructed the craftsmen in the execution of these complex designs. Although later examples survive at Russborough, County Wicklow, the inlaid floors at Powerscourt appear to be the earliest of the kind in the country. Regrettably, few pre-fire photographs survive of this space and none which show the floor in its entirety (Fig. 5.14). It is clear, however, that this was highly accomplished multi-panel parquetry – of octagons, squares, lozenges, circles and triangles – which echoed the basic structure of the ceiling.[55]

Figure 5.13: Saloon, showing floor, Powerscourt, County Wicklow, photo taken early 1974, pre-fire.

Courtesy of the Irish Architectural Archive. Photograph by Hugh Doran.

Figure 5.14: Saloon, showing floor details, Powerscourt, County Wicklow, photo taken early 1974, pre-fire.

Courtesy of the Irish Architectural Archive. Photograph by Hugh Doran.

Although there is little contemporary documentation of parquetry technique, builders' manuals allow us to recover an idea of the processes involved. The joiner at his work bench would first create the parquetry panels by planing or 'shooting the joynt' of the individual timber pieces 'so exactly flat and Square', according to Moxon, that when they are set upon one another 'light stall not be discern'd betwixt them'.[56] For short joints such as these, the joiner would use a strike-block plane, a short hand-held tool, followed by smoothing planes and pairing chisels. The craftsman would then assemble the individual timber pieces into panels and join them using tenon-and-mortice joints, which, Roubo's *L'art du menuisier* (1769–70, Fig. 5.15) notes, must 'be two-sevenths of the thickness of the frame' and made of flat-grained timber to avoid splintering.[57] This source illustrates the technique for laying square parquetry panels or compartments over a joist sub-floor, recommending the use of 16 quartered or diagonal panels – though at Powerscourt the geometric pattern is not confined to individual framed compartments but rather the inlaid design stretches across multiple panels, covering the entire floor.[58] Inlaid or intarsia elements, such as the star, would have

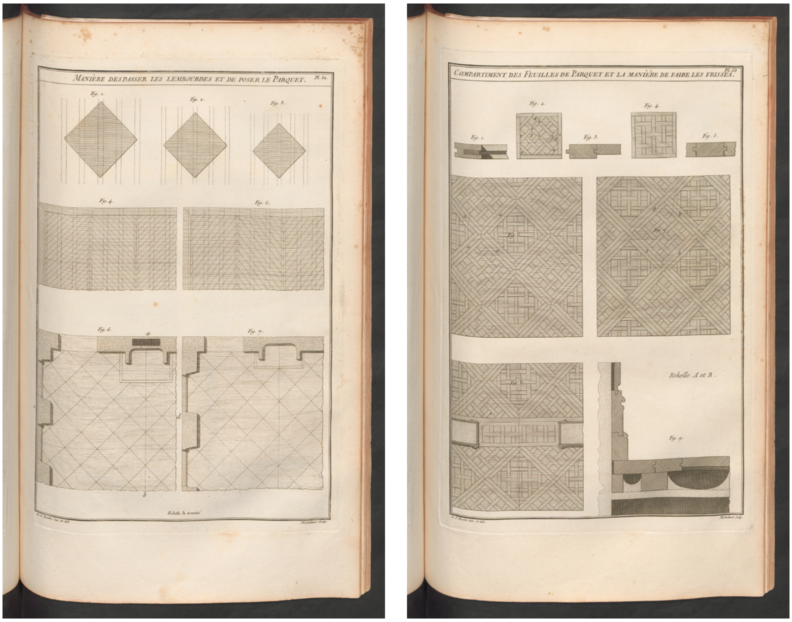


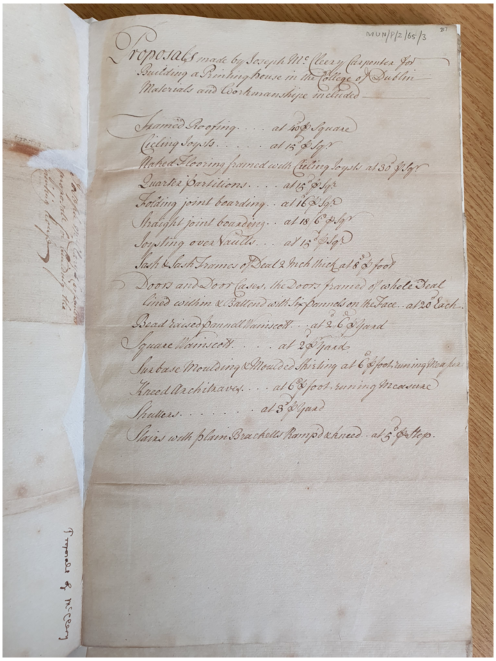
Figure 5.15: (a) and (b) André Jacques Roubo, *L'art du menuisier*, Partie 2. Paris: Cellot et Jombert, 1769–70, Plates 52 and 53.

ETH-Bibliothek Zürich, Rar 969. https://doi.org/10.3931/e-rara-13467 / Public Domain Mark.

been chiselled out of the parquetry panel using a small chisel such as the skew-former on acute angles, then the excavated space filled with an alternative type of timber.[59] 'Care must also be taken to put together only woods of the same density,' Roubo notes, 'so that they may resist equally well to rubbing.'[60] The floor might then be tinted, and sealed with several layers of polish. The high-sheen finish was not to everyone's taste. Visiting Powerscourt in the 1760s, an English traveller remarked that although the Egyptian Hall was a 'noble room', 'the walls are out of repair, and the floor is too slippery as to render it useless'.[61]

Given the complexity of this parquetry work, one would expect Richard Castle to have employed continental craftsmen skilled in this technique. However, the names of the timber craftsmen employed at Powerscourt suggest that they were native. Felix McCabe carried out carpentry work here in the early years of the project, whereas Joseph McCleery oversaw much of the carpentry and joinery work between 1732 and 1740, employing a large team of workers.[62] This hitherto undocumented craftsman – who served his apprenticeship in Dublin and was entered on the freemen's rolls as a joiner, by service, at Michaelmas 1728 – seems to have established a close working relationship with Richard Castle.[63] In about 1733/4 he submitted proposals for carpentry work at the Printing House at Trinity College Dublin, which were mainly for structural carpentry but included wainscoting, decorative mouldings and a 'ramp'd and kneed' stair (Fig. 5.16).[64] In 1743 McCleery witnessed a lease involving Richard Castle for property at Stephen's Green West and Proud's Lane, Dublin.[65] He also seems to have been involved in timber supply. In 1737 McCleery was paid £6 13*s*. 4*d*. for 'mohanny & walnutt' used at Powerscourt, while in April 1738 he supplied – and most likely created – '2 oak desks & 10 leather bottom chairs' for the Wingfield's town house on South William Street in Dublin.[66] McCleery also brought in subcontractors on occasion, to carry out more specialist aspects of the work. In 1732 he paid 'the turner' the modest fee of 18*s*. 6*d*. for 'Stair Balusters & posts'.[67] The Dublin-based carver John Kelly, who regularly worked with Richard Castle, was also employed at Powerscourt between 1735 and 1739 when he and his assistant Robert Jones were responsible for a team of carvers.[68]

In terms of materials, large quantities of walnut were delivered to the site throughout the project. This was the principal timber used in the Saloon floor – though Lewis, writing in 1837, mistakenly refers to it as 'chestnut, highly polished and inlaid'.[69] According to John Evelyn walnut was of 'singular account with the joyner, for the best grain'd and colour'd wainscot', whereas Neve apportions its popularity to 'it being of a more curious brown colour than Beech, and not so subject to the Worms'.[70]



MUN/P/2/65/3 217

Proposals made by Joseph M^c Cleery Carpenter for Building a Printing house in the College of Dublin Materials and Workmanshipe included

Framed Roofing . . . at 40^s ℘ Square
Cieling Joysts . . . . at 15^s ℘ Sq.^{r}
Naked Flooring framed with Cieling Joysts at 30^s ℘ Sq.^{r}
Quarter Partitions . . . at 15^s ℘ Sq.^{r}
Folding joint boarding . . at 16^s ℘ Sq.^{r}
Straight joint boarding . . at 18/6^d ℘ Sq.^{r}
Joysting over Vaults . . . at 15^s ℘ Sq.^{r}
Sash & Sash Frames of Deal 2 Inch thick at 8^d ℘ foot
Doors and Door Cases, the Doors framed of whole Deal lined within & Battend with Six pannels on the Face . . at 20^s Each.
Bead raised pannell Wainscott . . at 2^s 6^d ℘ yard
Square Wainscott . . . . at 2^s ℘ yard
Surbase Moulding & Moulded Skirting at 6^d ℘ foot running Measure
Kneed Architraves . . . at 6^d ℘ foot running Measure
Shutters . . . . . . at 3^s ℘ yard
Stairs with plain Brackets Rampd & kneed . at 5^s ℘ Step.

Proposals of McCleery

Figure 5.16: ‘Proposals made by Joseph McCleery carpenter for Building a Printing House in the College of Dublin, Materials and Workmanship included’.

TCD MS MUN/P/2/65/3. © The Board of Trinity College Dublin.

Although it was widely used by Irish furniture and cabinetmakers during this period, few examples of decorative walnut joinery survive. Walnut and other non-native tree nurseries and plantations were encouraged with premiums given by the Dublin Society from the 1740s; local supply was limited and North American walnut was imported across the British Isles from 1722, when import duties were lifted.[71] In addition to more than 23 tons of walnut, which was delivered to the site at Powerscourt in 1734, the account ledgers record a variety of other timbers. In the same year there were payments for ‘10 horses drawing ash from the woods’; ‘the carriage of Lime Timber from Bray’; and a parcel of oak, which despite scarcities in supply elsewhere was readily available in the mature oak woodlands on the estate.[72] There are also references to large quantities of deal or ‘Fir timber’, occasionally referred to as ‘Swedish Plank’. This softwood was generally used for structural carpentry but may have been employed in constructing the sub-floor on which the parquetry panels were assembled and joined together. This came from Scandinavia, by way of timber merchants Montgomery and White's yard at Poolbeg Street in Dublin, who specialised in softwood timbers and received large payments from the Powerscourt estate throughout the 1730s.[73] The Knight of Glin has suggested that Alderman Caspar White, a Danish native who had gained a foothold in the Dublin building industry through his role as the director of the Ballast Board in the 1720s, acted as overseer at Powerscourt.[74] Montgomery and White were employed on other contemporary projects associated with Richard Castle: including the Parliament House, Trinity College and Henrietta Street in Dublin.[75] William Montgomery and Caspar White, who had both married daughters of the Wicklow merchant John Hayes, supplied timber to other Wicklow sites including the rural retreat built for General Thomas Pearce, uncle to the architect Sir Edward Lovett Pearce, at nearby Altidore in 1730.[76]

The cost and logistics of transporting materials were significant concerns, complicated by Powerscourt's remote location, in the Wicklow mountains. The coastal town of Bray, which was connected to Powerscourt by road and by the Dargle river, served as a transport gateway of sorts. Sea freight was the obvious transport choice; however, in the period concerned there was no wharf or pier at Bray, which meant that only small vessels could land there, and carmen often had to take the long overland road, through the Scalp (a deep ravine or crevice which cuts through the mountain route from Enniskerry to Dublin), from Dublin's port and shipping yards.[77] Indeed, such was the inconvenience that the idea of building a railway – perhaps along similar lines to Ralph Allen's Combe Down railway at Bath (1731) – between the quarries around Powerscourt and Bray was later proposed to transport building stone.[78] As noted, some materials were stored at Bray, though sawn timber would have been kept on site where, once cut to size, it would be left to season in covered sheds. Richard Neve notes that carpenters would rough-plane the flooring boards before doing anything else in the building, then lay them up in a 'very dry and airy place' to season the timber. Sawn timber should be laid horizontal, he notes, with a block between each length to allow airflow, and 'to preserve them from a certain Mouldiness caused by sap', adding 'that it may not cleave but dry equally, you may daub it over with cow dung'.[79]

The Octagon Room on the upper floor of the south-east bow, which had been added on to the older structure in the 1730s, also contained fine joinery (Figs. 5.17 and 5.18). Its parquetry floor, which was laid out in an elaborate mosaic pattern of tapered square inlays surrounding a central star, enclosed by a flower motif, was an accomplished scheme, composed of various timbers. The walls were entirely clad in columnar wainscoting,

Figure 5.17: Octagon (cedar) Room, Powerscourt, County Wicklow, executed circa 1734, photo pre-1974 fire.

Courtesy of the Irish Architectural Archive. Photograph by Thomas Gunn.

Figure 5.18: Octagon (cedar) Room, Powerscourt, County Wicklow, executed circa 1734, photo taken early 1974, pre-fire.

Courtesy of the Irish Architectural Archive. Photograph by Hugh Doran.

which showed not only the skill of the craftsmen responsible but also the quality of the materials employed. Christine Casey has outlined the processes involved in the creation of wainscot panelling, as well as its practical function and impact in the domestic interior. Surviving images attest to the sophistication and the rich materiality and haptic impact of this scheme. The timber used for the wainscot is something of a puzzle. Early nineteenth-century visitors refer to 'cedar' panelling in the Octagon; Charles Robert Cockerell, who visited Powerscourt in October 1823, described it as 'decorated with cedar columns and wainscoting'.[80] A comprehensive trawl of the account ledgers does not, however, reveal any reference to the use of cedar in the 1730s. The term 'cedar' was widely used in the late seventeenth and early eighteenth centuries to refer to a variety of West Indian hardwoods of the genus *Cedrela*, none of which were true cedars (*Cedres*) but rather were named so because of their aromatic scent. Although there are references to several 'cedar chapels' in England – at the Earl of Southampton's house on Bloomsbury Square in London and at Chatsworth, Derbyshire, for example – true cedar was not widely used in Britain and Ireland during the initial decades of the eighteenth century.[81] In 1735 the Powerscourt accounts contain an entry for the freight of an unspecified quantity of mahogany, which is similar in appearance to cedar and until 1760 was classified under the same genus of *Cedrela.*[82] Both varieties were reddish-brown in colour (though cedar is slightly lighter) and often had an interlocking grain which produced a striped effect on radial surfaces.[83] In contrast to cedar, which Neve tells us was subject to splitting, mahogany was a more durable, finer-grained timber – and although its association with slave labour has called for a re-evaluation of this contested material, it was prized in the eighteenth century not only because it was easy to work but also because it produced a rich, textured finish. Robert Walpole used this material extensively in the internal joinery at Houghton, Norfolk, in the 1720s, while it gained widespread popularity in Britain and Ireland following Walpole's abolishment of taxes on imported timber in 1722. Other early instances of the use of this imported material in Ireland can be found in buildings associated with Richard Castle – for instance the stair at Hugh Montgomery's house at No. 85 St Stephen's Green (c.1738) and at Tyrone House in Dublin (1740), discussed by Andrew Tierney in this volume.

Figure 5.19: (a) and (b) Plaster fragments, Entrance Hall, Powerscourt, County Wicklow.

© CRAFTVALUE.

Figure 5.20: Saloon, ceiling detail, Powerscourt, County Wicklow, photo taken early 1974, pre-fire.

Courtesy of the Irish Architectural Archive. Photograph by Hugh Doran.

Plaster

Another great loss at Powerscourt is its decorative plasterwork which, despite its fire-retardant properties, was largely destroyed by the fire. The fragmentary remains of the shell work in the low coffered ceiling and arcades in the Entrance Hall (Fig. 5.19), and the architectonic Palladian schemes in the apartments above, throw into relief the quality of the crafted surface and the skill of the craftsmen in manipulating the medium (Fig. 5.20). Building accounts record its material composition. In spring 1735 more than £16 was spent on 'Paris Plaster', or gypsum, which may have been added to the lime plaster or employed on its own in order to achieve a fine finish.[84] In addition to the standard barrels of 'black hair', which cost 4 pence per barrel and was usually used to strengthen the initial coat or layer of brown lime plaster, paler-coloured 'kid' or 'goats' hair was purchased at a cost of 2 shillings 6 pence per stone, along with 'fine sand' to create a more refined white appearance.[85] 'Size for the Plasterers use' was also required in 1737, as this animal-based (often rabbit's) glue was used as a retardant to slow down setting time of gypsum plaster and achieve a smoother finish, particularly for the finishing layer of 'white and size'.[86] Relatively costly

Figure 5.21: Octagon (cedar) Room, Powerscourt, County Wicklow, executed circa 1734, photo taken early 1974, pre-fire.

Courtesy of the Irish Architectural Archive. Photograph by Hugh Doran.

‘Brass wyre’ was purchased – perhaps, as was the case at Clandon Park, to fix elements in place.[87]

The coffered ceiling in the Octagon Room (Fig. 5.21), now known only through a handful of photographs, is an early and ambitious example of architectonic plasterwork in a domestic context. Described by Neve as ‘a square Depressure or Sinking’, coffering is not easy to achieve by hand – particularly in an octagonal space, where maintaining the diminishing scale of the angles requires skill.[88] Although pattern books and treatises like James Gibbs’s *Rules for Drawing the Several Parts of Architecture* (1732) provided illustrated examples, and set out the mathematical rules involved in drawing coffering, printed sources are silent on the actual techniques employed in plaster coffering.[89] Its seems likely that the individual coffer or panel was built up in layers, probably using a timber mould or frame. As noted in Jenny Saunt’s chapter in this volume, a thorough grounding in geometry – as can be seen in Gibbs and other pattern books, such as Batty Langley’s *The City and Country Builder’s and Workman’s Treasury* (1745, Fig. 5.22) – was crucial.[90]

As in other building trades there was considerable overlap in terms of the responsibilities of plasterers, both plain and decorative, and related crafts. Plain or rough plasterers were responsible for plastering internal walls and ceilings, as well as rendering external walls with roughcast

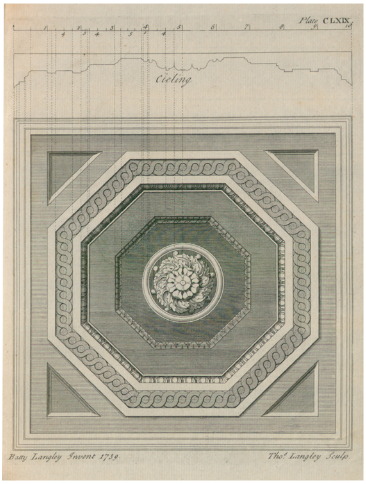


Figure 5.22: Plate CLXIX, ‘Ceiling’, Batty Langley, *The City and Country Builder’s and Workman’s Treasury of Designs*. London: Printed and Sold by S. Harding, 1745.

Getty Research Institute, Public Domain.

plaster, in collaboration with walling masons and glaziers. Lath splitters like Peter Maguire, who carried out this task at Powerscourt, prepared the timber lath substructure for wall and ceiling plaster, and, as Sophie Chessum notes, plasterers sometimes specified the type of timber used. In the initial years of the project at Powerscourt the plain lath plastering on the ceilings and walls was carried out by Hugh Kelly, a Dublin plasterer who was employed on site between 1732 and 1734 (and later carried out repairs to both the plain and decorative plasterwork at the Parliament House). His account includes payments to his second-in-command 'Pat. Masterson' and labourers John Nowlan and John Silby.[91]

Decorative (as opposed to figurative) plasterers would have carried out plaster enrichments such as cornices and coffering. The decorative plasterwork in the Octagon Room was begun by William Spencer, a master-plasterer from Dublin, who carried out works between June 1734 and April 1736.[92] Spencer, who was admitted as a freeman of Dublin at Easter 1727, by birth, came from an established line in this trade, dating back to 1669. His father Joseph Spencer had served his apprenticeship

Figure 5.23: Former House of Lords, Parliament House, Dublin, circa 1730.

© CRAFTVALUE.

with George Spencer, bricklayer and plasterer, while another relative, Hugh Spencer, had worked at Trinity College in the early 1700s as a plasterer and painter (and was a member of both guilds).[93] In 1730 William Spencer was employed at the Parliament House in Dublin, where fine plaster coffering survives in the House of Lords (Fig. 5.23), and he is associated with several others works by Edward Lovett Pearce and Richard Castle during this period. A number of payments due to Spencer were received by a Michael Higgins, who was most likely his overseer or second-in-command – suggesting that Spencer was not continually present on site throughout the works.[94] In August 1736 Spencer – who was then living on Bolton Street on the north side of Dublin, and clearly carrying on an active plastering trade – placed an advertisement in the *Dublin Weekly Journal* regarding a runaway apprentice, Laurence Keating, in which he warned employers against him as being 'very self-opinionated in matters of his trade'.[95]

In the same year, for reasons which are unclear, George Semple, plasterer, took over work at Powerscourt from Spencer. His bill for plastering refers to work done previously by William Spencer at the Octagon Room 'to be allowed to him [Spencer] as well as stuff made use of belonging to Spencer', which were valued by the bricklayer William Johnston and stonecutter Robert Clough.[96] George Semple, plasterer, who had received two payments on Spencer's behalf in May 1735, also carried out works at Richard Wingfield's house on South William Street in Dublin in 1737 and was employed at Castle Forward in County Donegal alongside other building craftsmen involved at Powerscourt during this period.[97] Whether or not this is the same George Semple, as the architect and engineer, who later built Essex Bridge in Dublin (1753–5) is unclear. The latter, whose father was a mason, received his city franchise as a bricklayer in 1735, by service'.[98] In his *Treatise on Building in Water* (1776) Semple gives little account of his early career, and makes no mention at all of plastering.[99] According to C.P. Curran, however, a George Semple, plasterer, appears in Wilson's 1762 *Directory* but by 1770 is listed as an architect and engineer.[100] The architect George Semple's brothers Patrick and Edward Semple were plasterers, and the latter served his apprenticeship under George Semple.[101] What is more, in both his published treatise and a proposal for St Patrick's Hospital in Dublin (1749) George Semple displays a profound understanding of properties of lime mortar and, in particular, of technical innovations in the production of quicklime, which falls under the purvey of both bricklayers and plasterers.[102] These uncertainties serve to demonstrate the divisions, collaborative ties and fluid working relationships which developed

Figure 5.24: South garden front, Powerscourt, County Wicklow, altered 1787 and 1800s.

© CRAFTVALUE.

between teams of craftsmen in this period. What is more, the practice of measuring the work of other trades or craftsmen further demonstrates the connectivity on the early Georgian building site.

This point is borne out in the treatment of the rear façade at Powerscourt (Fig. 5.24). On 15 October 1734 the Daybook records that William Spencer, plasterer, was paid for '2123 3/4 feet of Rustick Work at the Back Front … 421 yards of Ashlar work above ditto & at the Pantry

Figure 5.25: (a) and (b) Details, south garden front, Powerscourt, County Wicklow, altered 1787 and 1800s.

© CRAFTVALUE.

Wall in the Kitchen [and] 160 yards of rendering at the Turf House'.[103] This puzzling entry has been hitherto taken as evidence of the stone treatment on the rear façade.[104] Another entry in the account ledger, however, confirms that the material in question was in fact plaster, noting payment to William Spencer for 'his bill of Measurement of the Back Front Stucco, & rendering the Turf House', £46 0*s*. 9*d*. Although it survived the fire, the garden front has seen multiple interventions over the centuries – most significantly, the addition of a third storey in 1787. The main block, which was initially only two storeys high, formed part of the earlier castle, which accounts for asymmetrical window openings in this section (Fig. 5.25). The circular towers, added during the 1730s, were also originally only two storeys high and were topped with Welsh Carnarvon slates by the slater Richard Betts in 1735.[105] All three levels are faced in local granite; however, closer scrutiny seems to suggest that the exterior walls were originally rendered, in ruled and lined plaster, with the stone facing added later. This fits with window articulation on the two lower levels, while it is also significant that only one stone façade is mentioned in a description of the house in 1786 whereas two are referred to in 1837.[106]

Although few early eighteenth-century examples of this pseudo-stone treatment on the exterior survive in Ireland and Britain, a building agreement for Blatherwick Hall, Northamptonshire, of 1720 notes that the 'ground story was to be wholly plaistered above the ashler course'.[107] Moxon refers to the Roman use of *Maltha* or bitumen mortar 'in finishing or plastering of Fronts to represent Stone', and notes that 'the strongest Lime and the Sharpest Sand' should be used in making 'finishing morter to represent Stone'.[108] Neve describes the process of plastering a 'House all over on the out-side with Mortar; and then striking it by a Ruler with the corner of a Trowel, or the like, to make it resemble the Joynts of Stone.' Such plastering, or 'pargeting', could be applied onto brick or a timber casing of heart laths 'because the Mortar will decay the sape [sic] ones in a little time'.[109] Whether this treatment was the original design intention or a compromise worked out in practice, this instance underlines the complexities and sometimes contradictions which exist between written record and physical fabric.

The early-eighteenth-century building site was a complex and sophisticated working environment governed by strict hierarchical structures of skill and training, and division of labour. At the same time, as this chapter has shown, there was a fluidity in the roles and overlapping responsibilities of the various actors involved, with much collaboration and connectivity between crafts and craftspeople. While this shows the sophisticated levels of organisation and orchestration required, it can make it difficult for the historian to unpack the intricacies of financial and productive responsibilities. At Powerscourt we have seen that Richard Castle kept a firm hold on operations, at least during the initial stages, while the integral involvement in this collaborative process of several skilled craftsmen, some previously undocumented, has come to light. The lack of written testimony makes it similarly difficult to retrieve a clear picture of the craftsmen's perspective, though there are tantalising glimpses of their humanity in the records at Powerscourt. One cannot fail to feel the (economic) pain of James Weyr over the loss of a scaffold pole or wonder why William Spencer was (seemingly) superseded by George Semple. In focusing on the practicalities of production and drawing out the material achievements of these individuals, embodied in the crafted object, from the supply and transport of materials to the skills and processes involved, we can find a way into retrieving this historic craft practice and come closer to 'the thing itself'.[110]

The above instance of the garden façade demonstrates the importance of close attention to materials and methods – and at the same time points to the tension between written record and built fabric, which is complicated by loss and alteration at Powerscourt. The accounts ledgers not only provide tangible evidence of craft activity at Powerscourt, revising the previous chronology of the building history and bringing us closer to what has been lost, they can also be utilised as a springboard to exploring the wider workshop practice in other projects by Richard Castle and beyond. His ongoing connections to hitherto unknown figures like the joiner Joseph McCleery, or to more established practitioners like George Semple and Caspar White, present opportunities for further enquiry. Ultimately, the loss occasioned at Powerscourt has laid bare the importance of the crafted surface. The haptic impact, in absentia, of its material form and its effect on our experience of the built environment is thrown into relief – highlighting in turn the crucial concerns of comfort and utility, as well as style and representation, in eighteenth-century architecture.[111]

Acknowledgements

I am grateful to my colleagues Andrew Tierney and Nele Lüttmann for their help and advice on this chapter; to Powerscourt House and Gardens for granting access to the building; to the National Library of Ireland, manuscripts department; and to the Irish Architectural Archive.

Notes

1 Wilson, *The Post-chaise Companion*, 216.

2 RIBA (Royal Institute of British Architects), 30587, Powerscourt House, County Wicklow: plan of the ground floor and stables with accompanying notes, C.R. Cockerell.

3 On shell collecting, see Dance, *Shell Collecting*. For scholarship on Powerscourt, see IAA (Irish Architectural Archive) 98/45, Desmond Fitzgerald, Knight of Glin, unpublished thesis manuscript, 'The Irish Palladians', 105; Hussey, 'Powerscourt Co Wicklow'; Glin, 'Richard Castle'; Craig, *The Architecture of Ireland*, 188; Griffin, 'Richard Castle's Egyptian Hall', 119–24; O'Reilly, 'Poor Palladian, or not?', 50–4; O'Reilly, *Irish Houses and Gardens*, 111.

4 NLI (National Library of Ireland) MS 8367, 'A Catalogue of the Goods and Stock of the late Edward Wingfield Esq at Powerscourt and at his House in Dublin to be sold by Auction. The Sale to begin on Tuesday the 25th Day of February 1728–9 and to continue till all are sold'.

5 NLI MS 3162, Accounts ledger of the Powerscourt estate, 1732–40, fol. 52, Richard Price and Henry Neale, masons, 23 December 1732 'By the pheasantry, their bill for walling, roofing &c. measured by Rich.d Castle'.

6 NLI MS 3162, fol. 7, Thomas Caddy account May 1732–June 1734. Thomas Caddy also ran the Granary on the estate, see NLI MS 3162, fol. 83, 'Thomas Caddy, his acco. on the Granary'.

7 See D'Arcy, 'Wages of skilled workers in the Dublin building industry, 1667–1918', 21–37, for rates of pay for skilled and unskilled labour in this period, which was 12*d*. per day. City rates tended to be higher than those paid in the country at this time. Stephenson, *Contracts and Pay*, 20, a revisionist study of the complexities and limitations of calculating wages for London's building industry, notes that rates paid in larger towns were up to 50 per cent higher than in smaller ones.

8 Gibney, 'Studies in 18th century building history', 15.

9 *Stamford Mercury*, Lincolnshire, England, Thursday 8 September 1737, report from London, 3 September 1737.

10 NLI MS 4875, Day book of the Powerscourt estate showing receipts and payments 1732–46, 17 October 1732.

11 Neve, *The City and Countrey Purchaser*, 261.

12 Gifford, *William Adam*, 34; Ayres, *Building the Georgian City*, 48–9.

13 NLI MS 3162, fol. 5, 'John Purcell of Sheleala, carman, acc.'; fol. 6, 'James Ryan of Sheleala, carman, acc.'; NLI MS 4875, entry for 28 November 1733 shows several payments to local carmen including John Purcell, James Ryan, and Thomas Doran for 'Drawing stone from the quarry' or 'Drawing stone from Glancree [sic]'.

14 NLI MS 4875, 28 November 1733, 'Credit Michael Byrne, carman, for 18 Horses to Dublin for lead, hair &c.' £1 16*s*. 0*d*.; 'Credit Pat Keegan, carman, for 7 horses to Dublin for lead, hair, spokes &c.' £1 14*s*. 0*d*.; 20 December 1734, 'credit John Purcell, carman, for … 41 journeys to Dublin for lead hair &c.'.

15 NLI MS 3162, fol. 11, Thomas Gory, labourer, acc. 9 February 1733.

16 NLI MS 3162, fol. 4, James Weyr, Brick maker, 10 July 1732.

17 NLI MS 3162, fol. 4, James Weyr, Brick maker, 17 October 1732; NLI 4785, daybook receipt, 17 October 1732.

18 NLI MS 3142, fol. 4, James Weyr, Brick maker, 28 November 1733; NLI MS 3162, fol. 5, notes frequent payments to John Purcell, carman and others for hauling large quantities of bricks in 1732–3. Fol. 78, 'Thomas Brownrigg, his acco. for the manner of Wingfield' notes cash paid to 'Silvester Byrne' for barrels of coal and payments on account to various carmen.

19 Campbell, *Building St Paul's*, 37; NLI MS 4875, 28 November 1733, credit to 'John Purcell of Sheleala carman, for '30 horses drawing rubbish to the land'; 20 December 1734, credit to the widow of Michael Byrne, carman, for '45 horses drawing home rubbish' at 9*d*. per load.

20 NLI MS 3162, fol. 30, Richard Smith and William Magee bills for sawyers work done 'for the joiners' from 15 August 1738 to 22 December 1738, £15 15*s*. 8*d*., 22 January 1738/9 to 9 June 1739, £11 15*s*. 3*d*.

21 Campbell, *Building St Paul's*, 72. See also Stephenson, *Contracts and Pay*, 51 on day rates.

22 NLI MS 3162, fol. 30 refers to cash paid on account to sawyers 'Rich.d Smith & Wm. Magee' by 'Mr. Esdall' in 1738. Fol. 79 refers to payments to John Bermingham, pavior, signed off by Esdall in the same year. Fol. 135, 'John Esdall Painter his acco.' includes large sums paid on account by order of 'Mr Castles'; John Esdall again worked under Richard Castle on 'the steeple' (bell

tower) at Trinity College Dublin in 1746, see TCD MUN P2/94/18–20, 'Tradesmen's bills, steeple', 1740–6, which record payments to John Esdall/Esdale, of £5 0*s*. 0*d*. for 'gilding the ball, vane & blaze', certified by Richard Castle in December 1744 (19–20). Esdall was paid an additional £12 0*s*. 0*d*. for 'painting the dials in the cupola' on the order of Richard Castle on 11 October 1745 (21); Dr Peacock was responsible for the estate accounts at Powerscourt and paid out cash for much of the building works in the 1730s.

23 NLI MS 3162, fol. 112, 'The New Buildings carrying on at Powerscourt', 26 February 1733; fol. 12, 'John Byrne of Kilmalin'.

24 For example, see NLI MS 3162, fol. 12, John Byrne of Kilmalin's account, which includes payments for 'stones drawn for the domain wall', 'for the Dairy Offices in the kitchen Yard' as well as 'cattle for appraisement' and 'furze for the house used the cook'.

25 See Stürmer, 'An economy of delight', 496–528; Klausmeier, 'Houghton, Raynham and Wolterton Halls', 619–20.

26 Wright, *Guide to the County of Wicklow*, 21.

27 For Wicklow granite, see Wyse Jackson, *The Building Stones of Dublin*, 7–9, 20, 27, 46–7.

28 Hayes, *The Best Address in Town*, 85, 193.

29 Lewis, *A Topographical Dictionary of Ireland*, 471. Wingfield, *A Description and History of Powerscourt*, 88 refers to the granite quarry at Toneygarrow. For reports on quarries in the vicinity, see Meehan et al., *The Geological Heritage of Wicklow*, 41, 64, 170–1.

30 NLI MS 3162, fol. 3, 'Michael Byrne of Shelela, carman' 9 June and 8 July 1732; fol. 5, 'John Purcell of Sheleala, carman', 9 June 1732; fol. 6, 'James Ryan of Sheleala, carman', 6 June 1732; fol. 25, 'Thomas Doran of Sheleala, Carman', 9 June 1732 and 8 July 1732; fol. 21 includes payments of over £165 to John Hicks (later described as 'of Glancree') for damage done by the 'Water course from Glancree' valued by William Harricks, which suggests this river was also used in the transport of stone from the quarry.

31 NLI MS 43,006 /13. A map showing a parcel of land between Monastery and the Parknasillog, by Charles Maguire, 1759 shows Harricks's holdings; Seery, 'Powerscourt parochial records', transcribed at the Representative Church Body Library in 2004, show that William Harricks, son of William Harricks and Hannah his wife, was baptised on 29 April 1708; On 6 April 1758 'William Harricks of Monastry' was married to 'Grissel Kinsela of Powerscourt'; 'Will Harricks of Monastry' was buried on 16 December 1781, aged 73.

32 NLI MS 3162, fol. 16, 'Will.m Harricks Sen.r his acc.t for ye Town & Lands of Onagh' shows he paid £50 rent per annum between 1731 and 1738; fol. 55, 'Will.m Patrickson & Tho.s Harricks, their acco. for the Town & lands of Ballybrew', 1731–8. For Ballybrew Granite, see Wyse Jackson, *Building Stones*, 7. For Wicklow quarrying operations see Hussey, 'Granite quarrying and the migration of quarrying communities from Golden Hill to Ballyknockan, Co. Wicklow, c.1700–c.1850', 83.

33 NLI MS 3162, fol. 14, 'Will.m Harricks Jun.r his acco.t on the Quarry', 1732–6.

34 Campbell, 'The supply of stone for the rebuilding of St Paul's Cathedral 1675–1710', 26. Ayres, *Building the Georgian City*, 79.

35 NLI MS 3162, fol. 52, Richard Price and Henry Neale, Masons account, 1732–5; fol. 95, Richard Price Mason, 'rent of his part of Glansulane'.

36 NLI MS 4875, 23 November 1734.

37 Dublin City Libraries and Archive, Ancient Freemen of Dublin, Midsummer, 1731, 'Rob.t Clough, mason, by service'.

38 NLI MS 3162, fol. 96, Robert Clough, Stone Cutter account March 1732/3–December 1733; Clough's assistant, Joseph Strong was also local, see MS 3162, fol. 22, 'Joseph Strong his acco. for drawings stones'; fol. 30, 'Rob.t Clarke and Joseph Strong their acco. for part of Cookestowne'. By 1736 Clough's workforce was being reduced, with one or two men being 'paid off' every month that year, see MS 3162, fol. 130.

39 NLI MS 3162, fol. 8 (contra), Robert Clough, Stone Cutter, 10 March 1732, 'By 99 y.ds Flagg'd in the vaults measured & agreed to by Rich.d Castle', £3 2*s*. 9*d*.; fol. 146, Robert Clough, Stone Cutter, 18 February 1737; fol. 40, John Revells, likely a member of a local quarrying family, was paid 'for flagging in the stable, ye Butlers pantry &c.'; fol. 147, 6 March 1738 'to John Barry & John Herron' for 'flagging work done in the Hall'; fol. 79, 27 May 1737, William Langford received payment of £3 19*s*. 6*d*., John Bermingham, pavior, carried out external paving work in the stable yard.

40 Gibney, *The Building Site in Eighteenth-Century Ireland*, 128.

41 Langley, *The City and Country Builder's and Workman's Treasury*, 19–20.

42 Gifford, *William Adam*, 43–5.

43 Since the conversion factor between imperial tons and metric tonnes is so marginal (especially at low values), this book relies on the imperial measure only.

44 NLI MS 3162, fol. 112, 'The New Buildings carrying on at Powerscourt', 14 September 1734, 'To cash paid Tho.s Gilbert Stonecutter Cost of 18 tuns 15 foot of Portland Stone w.th charges' £17 1*s*. 6*d*.

45 NLI MS 4874, fol. 43, 10 April 1739, 'Paid David Sheehan on Acco,t', £30 0*s*. 0*d*.

46 House of Commons, *Journals of the House of Commons of the Kingdom of Ireland*, vol. 8, appendices, 1061–3, 25 September 1731 'To Thomas Gilbert, on account of ditto [stonecutter's] work, from the 28th of August last to this day, as per ditto f. 117', £14 9*s*. 3.1/2*d*.

47 Bodleian MS Don. c. 113 Tucker, Catherine Clarke Dublin 17 June 1740 to John Tucker; TCD MUN (Trinity College Dublin, Muniments) P2/81/14 Clarke, Catherine. A/c for Portland stone delivered to Moses Darley, with R. Castle's order for payment, 5 May 1741.

48 NLI MS 3162, fol. 136, 'The New Buildings at Powerscourt', 6 November 1736, 'To cash pd. Moses Darley for 3 Marble Chimney pieces & 3 black stone Ditto', £16 8*s*. 1*d*.; fol. 90, 'Thomas Perry, Boatman, his acco.'.

49 NLI MS 3162, fol. 60, Patrick Keeling. 24 March 1736, 'To Cash pd. Him on acco.t of Palmerstowne Flags'; 1 June 1737, 'To ditto by Mr Castles ord.e to him'; fol. 40, 7 September 1738, cash paid to Patrick Reily 'on acco. of cursed stream flags', £5 5*s*. 11*d*.; fol. 79, 27 May 1737, William Langford. received payment of £52 10*s*. 0*d*. between October 1732 and September 1733.

50 Bristow, *Architectural Colour*, 28–31, 172; Croft, *Paint Analysis at York Assembly Rooms*, 19–20 – while the report notes that the presence of early marbling on the column shafts could not be conclusively established, cross-section paint analysis revealed a 'pale stone colour' on the column shafts in the 1735 scheme.

51 Wingfield, *A Description and History of Powerscourt*, 3.

52 Moxon, *Mechanick Exercises*, 63.

53 Derrick, *Letters written from Leverpoole …*, 131–2, letter XIX, 28 October 1760.

54 See Fawcett, *Historic Floors* for a wider discussion of inlaid timber floors in Britain. For the inlaid floor at Lord Carpenter's house in Hanover Square, see 'Floor. 1719–1732: Portion of a half landing. Pine inlaid with parquetry of various woods', W.28-1927, Victoria and Albert Museum, London. Accessed 5 July 2022. https://collections.vam.ac.uk/item/O167599/floor/.

55 I am most grateful to my colleague Nele Luttmann for sharing her research on this topic.

56 Moxon, *Mechanick Exercises*, 63.

57 Roubo, *L'art du menuisier*, partie 2, 158–9.

58 Roubo, *L'art du menuisier*, partie 2, Plates 51–4.

59 Moxon, *Mechanick Exercises*, partie 2, 63. Information on intarsia techniques kindly given by Nele Luttmann.

60 Roubo, *L'art du menuisier*, 161.

61 Derrick, *Letters written from Leverpoole …*, 131–2, letter XIX, 28 October 1760.

62 NLI MS 3162, fol. 10, Felix McCabe, Carpenter, 20 May–23 June 1732; fol. 49, Joseph McCleery, Carpenter, 1 July 1732 (Ledger states 1733 but this must be an error)–16 June 1733; fol. 103, Joseph McCleery, Carpenter, 23 June 1733–25 May 1734; fol. 141 (? torn), 'Joseph McCleery, Joyner, his acco.t' July 1737–December 1738.

63 Dublin City Libraries and Archive, Ancient Freemen of Dublin, Michaelmas 1728, Joseph McCleery, joiner, by service.

64 TCD MUN P2/65/1 n.d. (1733 or 1734), 'Proposals of Joseph McCleery, carpenter, for building a printing house'. TCD MUN P2/65/ 3 (1733–4), 'Proposals of Joseph McCleery, carpenter, for the Printing House (reduction on no.1 above)'. He does not seem to have been successful as John Connell, carpenter received frequent payments for work on the Printing House.

65 Registry of Deeds, 100/454/78632, 15 March 1743.

66 NLI MS 3162, fol. 141 (? torn), 'Joseph McCleery, Joyner', 11 March 1737/8 'To mohanny & walnutt sold him per acco.t', £6 13*s*. 4*d*.; NLI MS 3162, fol. 126, 'Dwelling House in William Street Dublin', 20 April 1738, 'To cash pd. Jos. McCleery for 2 oak desks & 10 Leather bottom chairs', £10 24*s*. 6*d*.

67 NLI MS 4875, fol. 33, 23 December 1732, 'By Jos. McCleery. Carpenter, pd. him per Rich.d Castle's order. the Turners bill for Stair Balusters & posts', 18*s*. 6*d*.; NLI MS 3162, fol. 49, Joseph McCleery, Carpenter, 23 December 1732, 'the Turner's bill for Stair Ballusters', 18*s*. 6*d*.

68 See TCD MUN P2/84/6 Tradesmen's bills 1742–4. New hall. 'Kelly, John. Irish oak capitals' £17 3*s*. 0*d*. paid 11 November 1746 'on order of R. Castle'; NLI MS 3162, fol. 131, 'John Kelly, carver, his acco.t', 20 March 1735–22 December 1738.

69 Lewis, *A Topographical Dictionary of Ireland*, 470.

70 Evelyn, *Sylva*, 56. Neve, *The City and Countrey Purchaser*, 216.

71 McCracken, 'Notes on eighteenth century Irish nurserymen', 41. NLI MS 3162, fol. 117, 'The new improvements at Powerscourt', 20 September 1736 refers to payment for 1,000 'Wallnuts', as well as 'Horse Chestnuts' evidently for planting. On the 26 January 1736 'ditching was made about the Nursery in the Long Meadow.'

72 NLI MS 3162, fol. 19 and contra, 'The Widow Byrne her acco.t of drawing lime &c.', 23 December 1736, 'By Sundries for carr.ge of Lime Timber &c. as per day book'; NLI MS 4875, 28 November 1733, 'Credit Michael Byre, carman … for drawing … 82 foot of Wallnut Timber … 27 horses drawing Wallnut plank'; NLI MS 4875, 20 December 1734, 'Credit John Purcell, carman … 22 Horses Drawing Ash from the Woods'; NLI MS 4875, 20 December 1734, 'Credit Thomas Doran, carman … 7 tun 6 Foot of Fir … 2 tuns of Wallnut'.

73 NLI MS 3162, fol. 53, Alderman Casper White, Merchant. 1732–5, 'William Montgomery, Merch.t his acco.', 1736.

74 IAA 98/45, Desmond Fitzgerald, Knight of Glin, unpublished thesis manuscript, 'The Irish Palladians', 104; Acts of the parliaments of Great Britain, part 8 (1714–21), 1714 (1 Geo. 1 St. 2) c. 43. Geo 1, 1714, naturalisation of Casper White. See O'Rourke, 'Captain Johan Heitman', 50–85, for Caspar White's role as agent to a Danish shipping company in the legal matter of stolen cargo in the early 1730s.

75 TCD MUN P2/68/28–30. Tradesmen's bills and orders for payment, 1734–6, Printing House. Montgomery & White. A/c for timber, paid 'order of Castle'; *Journals of the House of Commons of the Kingdom of Ireland,* vol. 8, 1061–3, 'The report from the Committee, relating to the building of the new Parliament House, 1731'; Hayes, 'Anglo-Irish architectural exchange in the early eighteenth century', 149–50.

76 V&A Elton Hall Album E.2124.10-1992, 1730 'Generall Peirse To Messrs Montgomery White'. A bill for building materials. See Hayes 'Anglo-Irish architectural exchange', 149–50; Hayes, *The Best Address in Town*, 47.

77 NLI MS 3162, fol. 90, Thomas Perry, Boatman, account, shows payment for the freight of small quantities of timber and stone.

78 Wright, *Guide to the County of Wicklow*, 9.

79 Neve, *The City and Countrey Purchaser*, 136, 263.

80 Wright, *Guide to the County of Wicklow*, 21 refers to 'an octagonal room, entirely lined with cedar'; Lewis, *A Topographical Dictionary of Ireland*, 470; Royal Institute of British Architects, 30587, Powerscourt House, County Wicklow: plan of the ground floor and stables with accompanying notes, C.R. Cockerell.

81 'The carvings of Grinling Gibbons', *The Builder: A journal for the architect and constructor*, vol. 25 (31 August 1867): 641 refers to the cedar chapel at Chatsworth.

82 Anderson, 'Nature's currency', 48 notes that even after its scientific nomenclature in 1760 other exotic timbers were mislabelled as mahogany, and vice versa.

83 Bowett, 'The English mahogany trade 1700–1793', 1–3; Bowett, *Woods in British Furniture-Making*, 120–2.

84 NLI MS 3162, fol. 128, 'The New Buildings at Powerscourt', 5 February 1735, to cash paid to Thomas Perry, Boatman for freight of '12 tuns 8 hundred of Paris Plaster', £1 10*s*. 11*d*.

85 NLI MS 3162, fol. 124, 'The New Buildings at Powerscourt', 7 June 1735, to cash paid to William Spencer for '21 barrels of Black Hair at 4*d*. per', £0 7*s*. 0*d*.; NLI MS 3162, fol. 128, 'The New Buildings at Powerscourt', July 1735, to cash paid to Murtagh Moore for '25 stone 12lbs. of Kids Hair at 2/6 per' £3 5*s*. 7*d*. For more on lime plaster mixes, see Ayres, *Building the Georgian City*, 202–3.

86 NLI MS 3162, fol. 145, 'The New Buildings', 7 July 1737, To cash paid Owen Sweeny for '26 Gall.s of Size for the Plasterers use', £0 2*s*. 2*d*.; see Moxon, *Mechanick Exercises*, 249–50 for references to 'white and size'.

87 NLI MS 3162, fol. 136, 'The New Buildings at Powerscourt', 29 March 1737, To 'Geo. Semple's Bill for fine sand and Brass Wyre &c.' £2 16*s*. 0*d*.

88 The complexity of this achievement is testified to by modern craftsmen, such as those at Kilboy, Co. Tipperary, where heritage materials and traditional handcraft practices were employed in executing the elliptical coffered ceiling over the stairhall.

89 Gibbs, *Rules for drawing*, Plate 5 illustrates an octagonal example. I am very grateful to David Griffin for bringing this to my attention.

90 See Gibbs, *Rules for Drawing*, 25, explanation of Plate LVII, which sets out the 'geometrical rule' for the 'upright side' of an octagonal cupola; Langley, *The City and Country Builder's and Workman's Treasury*, Plates CIII and CLXIX.

91 NLI MS 3162, fol. 41, Hugh Kelly, Plasterer, June 1732–March 1733/4.

92 NLI MS 3162, fol. 115, William Spencer, Plasterer. Between 9 August 1734 and 17 April 1736 his account records frequent subsistence payments. After that date there are only two payments made: 1 February 1736, To cash paid 'his order on me for' £11 6*s*. 4*d*.; 7 November 1737, 'to cash p.d him on acco.t' £2 15*s*. 2*d*.

93 Dublin City Libraries and Archive, Ancient Freemen of Dublin; TCD MUN P2/16–30; Gibney, *The Building Site in Eighteenth-Century Ireland*, 263, 265; Curran, *Dublin Decorative Plasterwork*, 105.

94 NLI MS 3162, fol. 115, 'William Spencer, Plasterer his acco.'

95 Curran, 'The Parliament House 1728–1800', 438; *Dublin Weekly Journal*, 7 August 1736.

96 NLI MS 3162, fol. 115, 'William Spencer, Plasterer his acco', contra; fol. 132, 'George Semple, Plasterer his acco.' 24 April 1736–April 1737 includes £65 in payments to his account, above and beyond the weekly subsistence payments.

97 NLI MS 3162, fol. 123 (? torn), 'To cash paid him [Semple] by Dr. Peacok on account of work at William Street house, paid him on 10 Decr. 1737'; NLI MS 10470, Castle Forward papers.

98 Dublin City Libraries and Archive, Ancient Freemen of Dublin; Frederick O'Dwyer, 'Semple, George (c.1700–1782)', *Oxford Dictionary of National Biography*, Oxford University Press, 2004. Accessed 5 July 2022. http://www.oxforddnb.com/view/article/25079.

99 Semple, *A Treatise on Building in Water, In Two Parts*, 79.

100 Curran, 'Dublin plaster work', 30; Curran, *Dublin Decorative Plasterwork*, 101.

101 Dublin City Libraries and Archive, Ancient Freemen of Dublin, 'Semple'. Gibney, *The Building Site in Eighteenth-Century Ireland*, 29. Ayres, *Building the Georgian City*, 200.

102 NLI MS 2758, 2 February 1749, Photocopy of specifications and plans signed by GS and Rev. Francis Corbet, Dean of St Patrick's in St Patrick's Hospital archives, F/2.

103 NLI MS 4875, 15 October 1735, £46 0*s*. 9*d*. in total; NLI MS 3162, fol. 112, 'The New Buildings carrying on at Powerscourt', 15 October 1734, 'To Wm. Spencer Plasterer for am.t of the Back Front & rendering the Turf house as per bill' £46 9*s*. 9*d*.; fol. 115, 'William Spencer, Plasterer his acco.', contra, 15 October 1734, 'By 27 barrels of hair at 4d. per', £0 9*s*. 0*d*., 'By his bill of Measurem.t of the Back Front Stucco, & rendering the Turf House', £46 0*s*. 9*d*., £46 9*s*. 9*d*. in total.

104 O'Reilly, 'Poor Palladian, or not?', 52.

105 NLI MS 3162, fol. 59, Richard Betts, Slater, 1732–5.

106 Wilson, *The Post-chaise Companion*, 216 published in 1786 notes that 'the front of the house is an extensive range of hewn stone'. He may not, of course, have seen the rear. Lewis, *A Topographical Dictionary of Ireland*, 470 refers to 'a spacious mansion of hewn granite with two fronts'.

107 Northamptonshire Record Office, OBB/12 Agreement of Robert Wright to build a mansion at Blatherwick … 1720.

108 Moxon, *Mechanick Exercises*, 243, 250.

109 Neve, *The City and Countrey Purchaser*, 99, 289.

110 Sennett, *The Craftsman*, 9.

111 For more on this topic, see Stobbart, *The Comforts of Home in Western Europe, 1700–1900*.

References

Anderson, Jennifer. 'Nature's currency: the Atlantic mahogany trade and the commodification of nature in the eighteenth century', *Early American Studies* 2:1 (Spring 2004): 47–80. Accessed 21 June 2022. http://www.jstor.org/stable/23546503.

Ayres, James. *Building the Georgian City*. New Haven, CT and London: Yale University Press for the Paul Mellon Centre for Studies in British Art, 1998.

Bowett, Adam. 'The English mahogany trade 1700–1793'. PhD Thesis, Brunel University, 1996.

Bowett, Adam. *Woods in British Furniture-Making 1400–1900: An illustrated historical dictionary*. Wetherby: Oblong Creative and Royal Botanic Gardens, Kew, 2012.

Bristow, Ian. *Architectural Colour in British Interiors 1615–1840*. New Haven, CT and London: Yale University Press for the Paul Mellon Centre for Studies in British Art, 1996.

Campbell, James W.P. *Building St Paul's*. London: Thames and Hudson, 2007.

Campbell, James W.P. 'The supply of stone for the rebuilding of St Paul's Cathedral 1675–1710', *Construction History* 28:2 (2013): 23–49. Accessed 21 June 2022. http://www.jstor.org/stable/43856562.

Craig, Maurice. *The Architecture of Ireland from the Earliest Times to 1880*. London and Dublin: B.T. Batsford and Eason & Sons, 1982.

Croft, Paul. *Paint Analysis at York Assembly Rooms*. Project Report. City of York Council, 2017. Accessed 12 August 2022. https://eprints.lincoln.ac.uk/id/eprint/33514/1/Paint%20Analysis%20at%20York%20Assembly%20Rooms.pdf.

Curran, C.P. 'Dublin plaster work', *The Journal of the Royal Society of Antiquaries of Ireland*, Seventh Series, 10:1 (1940): 1–56. Accessed 21 June 2022. http://www.jstor.org/stable/25510229.

Curran, C.P. 'The Parliament House 1728–1800'. In *The Bank of Ireland 1783–1946*, edited by F.G. Hall, 425–54. Dublin: Hodges Figgis, 1949.

Curran, C.P. *Dublin Decorative Plasterwork of the Seventeenth and Eighteenth Centuries*. London: Alec Tiranti, 1967.

Dance, Stanley P. *Shell Collecting: An illustrated history*. London: Faber, 1966.

D'Arcy, Fergus A. 'Wages of skilled workers in the Dublin building industry, 1667–1918', *Saothar* 15 (1990): 21–37.

Derrick, Samuel. *Letters Written from Leverpoole, Chester, Corke, the Lake of Killarney, Dublin, Tunbridge Wells, Bath*. London: Davis and Reymers, 1767.

Evelyn, John. *Sylva, Or a discourse of forest-trees, and the propagation of timber in His Majesties dominions*. London: John Martyn for the Royal Society, 1664.

Fawcett, Jane. *Historic Floors: Their history and conservation*. Oxford: Butterworth-Heinemann, 1998.

Gibbs, James. *Rules for Drawing the Several Parts of Architecture*. London: W. Bowyer, 1732.

Gibney, Arthur. 'Studies in 18th century building history'. PhD Thesis, TCD, 1998.

Gibney, Arthur. *The Building Site in Eighteenth-Century Ireland*, edited by Livia Hurley and Edward McParland. Dublin: Four Courts Press, 2017.

Gifford, John. *William Adam 1689–1748: A life and times of Scotland's universal architect*. Edinburgh: Mainstream Publishing, 1989.

Glin, the Knight of. 'Richard Castle, architect: his biography and works', *Bulletin of the Irish Georgian Society* 7:1 (January–March 1964): 2–38.

Griffin, David J. 'Richard Castle's Egyptian Hall at Powerscourt, Co. Wicklow', *The Georgian Group Journal* (1995): 119–24.

Hayes, Melanie. 'Anglo-Irish architectural exchange in the early eighteenth century: patrons, practitioners and pieds-à-terre'. PhD Thesis, TCD, 2015.

Hayes, Melanie. *The Best Address in Town: Henrietta Street, Dublin and its first residents, 1720–1780*. Dublin: Four Courts Press, 2020.

House of Commons. *Journals of the House of Commons of the Kingdom of Ireland*, volume 8. Dublin: House of Commons, 1763, printed by George Grierson, 1796.

Hussey, Christopher. 'Powerscourt Co. Wicklow', *Country Life* C:2603 (6 December 1946): 1062–7; no. 2604 (13 December 1946): 1158–61; no. 2605 (20 December 1946): 1206–9.

Hussey, John. 'Granite quarrying and the migration of quarrying communities from Golden Hill to Ballyknockan, Co. Wicklow, c.1700–c.1850'. In *The Museum Building of Trinity College Dublin: A model of Victorian craftsmanship*, edited by Christine Casey and Patrick Wyse Jackson, 79–102. Dublin: Four Courts Press, 2019.

Klausmeier, Axel. 'Houghton, Raynham and Wolterton Halls on Thomas Ripley's major works in Norfolk – architectural success amidst political tensions', *Norfolk Archaeology* 43:4 (2001): 607–29.

Langley, Batty. *The City and Country Builder's and Workman's Treasury of Designs*. London: Samuel Harding, 1745.

Lewis, Samuel. *A Topographical Dictionary of Ireland: Comprising the several counties, cities, boroughs, corporate, market, and post towns, parishes and villages*, 2 vols. London: S. Lewis & Co., 1837.

McCracken, Eileen. 'Notes on eighteenth century Irish nurserymen', *Irish Forestry: Journal of the Society of Irish Foresters* 24:1 (1967): 39–58.

Meehan, Robert, Matthew Parkes, Vincent Gallagher, Ronan Henness and Sarah Gatle. *The Geological Heritage of Wicklow: An audit of county geological sites in Wicklow*. Dublin and Wicklow: Geological Survey of Ireland, 2014.

Moxon, Joseph. *Mechanick Exercises: Or, the doctrine of handy-works. Applied to the arts of smithing joinery carpentry turning bricklayery. To which is added, mechanick dyalling: shewing how to draw a true sun-dyal on any given plane, however scituated; only with the help of a straight ruler and a pair of compasses, and without any arithmetical calculation*. 3rd edition. London: Printed for D. Midwinter and T. Leigh, 1703.

Neve, Richard. *The City and Countrey Purchaser, and Builder's Dictionary: Or, the compleat builder's guide*. London: J. Sprint, 1703.

O'Dwyer, Frederick. 'Semple, George (c.1700–1782)', *Oxford Dictionary of National Biography,* 23 September 2004. Accessed 21 June 2022. https://doi.org/10.1093/ref:odnb/25079.

O'Reilly, Sean. 'Poor Palladian, or not? Some alternative sources for the early Georgian villa in Ireland'. In *The Georgian Villa,* edited by Dana Arnold, 48–60. Stroud: Alan Sutton Publishing, 1996.

O'Reilly, Sean. *Irish Houses and Gardens: From the archives of Country Life*. London: Aurum, 1998.

O'Rourke, Andrew. 'Captain Johan Heitman: the golden lion and the Danish silver robbery', *M/S Museet for Søfarts årbog* 55 (2017): 50–85. Accessed 21 June 2022. https://tidsskrift.dk/mfs_aarbog/article/view/96484.

Roubo, André Jacques. *L'art du menuisier*, Partie 2. Paris: Cellot et Jombert, 1769–70.

Seery, Michael. 'Powerscourt parochial records', Enniskerry Local History: Archives, notes and stories from the village, 26 January 2015. Accessed 21 June 2022. http://enniskerryhistory.org/index.php/archives/2972.

Semple, George. *A Treatise on Building in Water, In Two Parts*. Dublin: J.A. Husband, 1776.

Sennett, Richard. *The Craftsman*. New Haven, CT and London: Yale University Press, 2008.

Stephenson, Judy. *Contracts and Pay: Work in London construction 1660–1785*. Cham: Springer International Publishing, 2020.

Stobbart, Jon, ed. *The Comforts of Home in Western Europe, 1700–1900*. London: Bloomsbury Academic, 2020.

Stürmer, Michael. 'An economy of delight: court artisans of the eighteenth century', *The Business History Review* 53:4 (Winter 1979): 496–528.

Wilson, William. *The Post-chaise Companion: Or, travellers directory through Ireland*. Dublin: Wilson, 1786.

Wingfield, Mervyn E., Viscount Powerscourt. *A Description and History of Powerscourt*. London: Mitchell and Hughes, 1903.

Wright, George N. *A Guide to the County of Wicklow*. London: Baldwin, Cradock, Joy, 1822.

Wyse Jackson, Patrick. *The Building Stones of Dublin: A walking guide*. Dublin: Town House and Country House, 1993.

6

Conserving craft in eighteenth-century buildings: the role of the conservation architect

Tony Barton

There is always much to discover from a building and its crafted surfaces during the process of repair or alteration. Historic buildings hold their story in their fabric and there is joy in discovering how something has been put together, what it has been made from and how it has been fixed in place. In some instances we know from the written record who made what and when, but there is so much more to learn about this overlooked but intrinsic element of architectural conservation. These buildings were designed, co-ordinated and delivered by the architect as an orchestrated composition of art, craftsmanship and utility, housing the complex functions of their patrons, visitors and staff whilst keeping them dry, warm and secure. However, by automatically applying an architect's name when describing a notable building of the eighteenth century, we fail to recognise the talents of the myriad craftsmen, builders, clients and manufacturers without whom it could not have been achieved. Furthermore, this masks the contribution of those later hands and minds who produced the architectural palimpsest it has become and which is now committed to the care of this and future generations.

Just as the buildings' original architects commissioned, co-ordinated and directed their construction, so the crucial management of the necessary care and change to an historic building is today the task of the conservation architect. Directly engaging with the surviving material fabric and collaborating with craft conservators serves to enrich knowledge of the work itself and the people who made it. Focusing on the Octagon at Orleans House, Twickenham (c.1720, Figs 6.1 and 6.2), a significant early eighteenth-century building designed by James Gibbs and decorated by Luganese *stuccatori* for a patron of international significance, this chapter compares the collaboration between the eighteenth-century architect and craftsperson and the modern role of the conservation architect in orchestrating specialist conservation activity. At the same time it outlines the multiple threats to historic crafted surfaces and the fundamental importance of maintenance. It considers the challenges faced in confronting change in building fabric; in understanding the substrates which secure decorative finishes; and the choices involved in navigating complex, cumulative layers over multiple historic periods. It also advocates the preparation of a conservation-management plan before embarking on any project involving an historic building.

Figure 6.1: Orleans House Gallery, Twickenham, London.

Photograph by Jim Linwood.

Figure 6.2: Édouard Pingret, *Louis Phillipe visiting Orleans House in 1844*, 1844, lithograph.

By permission of London Borough of Richmond upon Thames Borough Art Collection, Orleans House Gallery.

The conservation architect

Historic buildings not only require care and conservation but must also change through the generations to meet the needs of an ever-changing society. They have survived the introduction of new technologies – electricity replacing the wick, boilers replacing the hearth and horse-power replacing the horse – as well as politics, war and the decline of the aristocracy and landed wealth. In recent times the continued introduction of new technology and more inclusive access has seen these buildings survive and thrive, just as they must now face the pressing challenge of the climate emergency. In order to safeguard the intrinsic significance of these buildings from the willing but inexperienced, there are now conservation-accreditation schemes in place which give assurance that the architect has the required skills and years of experience in matching UNESCO's principles of conservation to the practicalities of transforming an historic structure, ready for a new life, via the liminal, organised chaos of a building contract.[1] It is here, at this point in a building's passage between the generations, that the conservation architect comes face to face with the specialist conservators, craftsmen and craftswomen without whom we could not deliver our services. The pressure of juggling quality, cost and programme within a complex contract presents a challenge – but to take a couple of hours to escape onto the scaffold or into the workshop with specialist craftspeople, skilled of hand and eye, is instructive and illuminating. Indeed, the importance of bringing together a diverse team of skilled professionals on a built-heritage project has long been recognised, with each bringing their own disciplinary expertise to the project, while a recent study of the relationships between architects and conservation craftspeople has confirmed that greater interaction between both parties can lead to a more successful project outcome.[2] Through this engagement, architects learn much about the detail of particular decorative elements which often sheds light on understanding the building as a whole. There is a tendency to overlook the individual details of a decorative interior, and thus taking time to engage with the conservators enriches knowledge about the element itself – and about the people and processes by which it was created.

Preserving the underlying structure

Although occasionally conservation architects are commissioned to directly oversee the repair or conservation of decorative elements, from failing mosaic to faded glass, their most common encounters with these crafted objects occur in the context of a larger project. Generally, the conservation architect is engaged in the care of historic buildings and their craftsmanship when change occurs in a building's purpose or its capability to meet modern needs, or when it is in retreat or recovery from danger or disaster. Within any of these scenarios the conservation architect will come face to face with the questions to be answered about the future of the whole building, an entire room or an individually crafted element. Crafted surfaces – particularly finishings such as plaster, wainscoting and hangings – depend upon the underlying structure for their existence. One of the least exciting aspects of the job but one of the most important is the maintenance of these structures to prevent loss, damage and decay from three principal threats: water ingress, dry rot and fire damage.

A case in point is provided by Doddington Hall in Cheshire (Fig. 6.3), which was built to the design of Samuel Wyatt between 1777 and 1798 and has remained in the ownership of the same family since.[3] A monument to Neoclassical taste, this substantial country house demonstrates the skills of the master builder and the artistry of the craftsman in local sandstone, Coade stone, plaster, metal and timber. Thanks to a major emergency grant from the British Government, it survives to be enjoyed.[4] The hall is still cared for by the Delves Broughton family, who have held the property for over 650 years, and the house and surrounding estate are open to the public at specific times as a condition for receipt of the emergency repair grant. Before conservation commenced, maintenance was conducted by an estate manager whose job included keeping an eye on the building, which had stood empty since a school closed its doors a generation ago. However, the estate manager was, unbeknownst to the family, afraid of heights and never, ever, went onto the hall roof – so never, ever, cleared the gulleys, gutters or the single internal rainwater pipe of bird debris and the bodies of their pigeon ancestors. Wyatt did not deign to sully his beautiful elevations with rainwater downpipes, and without servants on hand to keep the water flowing, in channels within the roof spaces, inevitable leaks of water into the interior resulted. Dry-rot spores are ubiquitous and if timber becomes damp and the temperature falls within its comfortable range, dry rot will result and the timber will be lost. Most of the plasterwork in eighteenth-century buildings is grounded on timber, so the consequences of a dry-rot outbreak are potentially severe. At Doddington we found that the horizontal softwood grounds built into the inner face of the external walls were getting wet, dry-rot spores were travelling behind the plasterwork and we were losing support for the laths and losing interior finishes. We fixed the leaks, dried out the walls, treated timber in places and replaced the worst-affected parts with new pressure-impregnated softwood which arrested decay,

Figure 6.3: Doddington Hall, Cheshire.

© Donald Insall Associates.

saved most of the plaster and allowed new work to be installed. Happily, Doddington Hall was caught in time and, being made wind- and watertight, permitted its architects to get to know it inside and out.

Employing a conservation architect to develop a bespoke maintenance plan for historic properties is a crucial aspect in the care of these structures and the prevention of damage and loss.[5] Such a plan can be tailored to the available resources of each building's management and include a checking regime for each task, for instance a chart controlled by an estate manager to confirm that the single outlet on a country-house roof has been cleared of all debris every Wednesday morning! Or indeed, installing a means of access for the maintenance team to make regular four- or five-yearly inspections of the fabric. A maintenance plan might become more pertinent year on year as climate change becomes embedded in deliberations on the care of historic buildings. Recent years have seen far greater intensity of rainfall. Indeed, more rain fell on Britain and Ireland on 3 October 2020 than on any other day in recorded history. The fact must be faced that seventeenth- and eighteenth-century methods of keeping rain out of buildings are now inadequate. A conservation architect can design and oversee the preventative improvements in gutters and outlets to cope with this uncomfortable fact of modern life and increased danger to historic fabric.

A similar example can be found at Liverpool Town Hall (Fig. 6.4), begun to the designs of John Wood of Bath in 1749 but remodelled and extended by James Wyatt, brother of the aforementioned Samuel, in the late eighteenth century.[6] The upper floor contains a circuit of late-Georgian reception rooms, including the large ballroom which occupies Wyatt's entire north extension. Here, the 40 ft (12 m) high barrel-vaulted ceiling had a severe outbreak of dry rot in its support structure. The conservation team conceived an innovative measure against dry rot which, instead of bringing down and remaking the ceiling, allowed it to be left in place – dry rot and all – with the fungus dying off as the timber dried out. Led by the Donald Insall Associates (Insall) conservation architects, craftsmen repaired and reconfigured the underlying structure just in time to save the ceiling (Fig. 6.5). We were fortunate that extensive replacement was not required as the roof was repaired in time and dry rot was managed. However, some areas had lost their key into the underlying timber laths, requiring the skilled attention of plaster conservators who remade the key using now-established methodologies. In such locations as these there is access above the plaster ceiling in the roof space, and Insall's architects were able to identify which areas had lost their integrity and schedule the repair in sufficient detail to obtain competitive costs but leaving enough scope for the conservator team to employ their own particular skills and techniques. In order to avoid recurrence, a moisture-detection system was installed that will set off an alarm if the damp, and hence the dry rot,

Figure 6.4: Cupola, Liverpool Town Hall.

Photograph Craigthornber, CC BY-SA 3.0.

Figure 6.5: Liverpool Town Hall interior, following restoration.

Photograph by Ant Clausen.

threaten to return. The message here is simple: prevention is better than cure.[7]

The same applies to the threat posed by fire – more immediate and obvious, but also preventable and containable with proper planning. We have seen too often the devastation caused by fire that not only puts at risk the lives of occupants and firefighters but also diminishes society through the often-preventable loss of tangible cultural heritage. The national and international mourning over the Notre-Dame disaster is a very real expression of this loss, while Sophie Chessum's discussion of Clandon Park (Fig. 6.6) in this volume explores aspects of mitigation after a similarly catastrophic fire in 2015. My career at Insall began as a very junior member of the Windsor Castle post-fire restoration team, a project followed by other post-fire rebirths. Fire-detection measures are now easily installed, together with unobtrusive means of compartmenting buildings and improving their resilience to the spread of fire. To safely install plasterboard anywhere in an historic building it should first be in the roof space as a fire break. Although adding fireproof plasterboard sheets to roof trusses in an open roof space can complete a fire 'compartment' it is only one, crude, simple and effective means of protecting a building from further damage or complete loss. Fire will quickly find a way through any void, and measures must be carefully

Figure 6.6: Clandon Park, Surrey, looking down into the burned-out rooms. © National Trust Images/James Dobson.

designed and diligently installed to work. Adding intumescent bags where services have broken through a masonry wall and filling voids around the frames of fire doors in solid walls are effective and common solutions, but the ubiquitous use of fire extinguishers in order to keep fire doors open is probably harder to solve in some places. These less-glamorous aspects of the conservation architect's craft are fundamental in protecting the art of decoration in historic buildings – and, as at the Orleans House conservation project described below the addition of fire stops and fire-detection devices is simple, effective and cheap.

The orchestration of craft activity

Having set out thoughts on the protection of our legacy of craftsmanship, within the context of the buildings as a whole, what is the role of the architect in the conservation of that craftsmanship? And how can hands-on interaction with specialist craft practitioners increase architects' material understanding of the work?[8] The conservation of Orleans House Gallery (Fig. 6.7), in the Octagon, provides an important case study of this process. Known as Orleans House after a member of the French royal family who lived there in exile in the early 1800s, the original house was built overlooking the Thames in about 1710 for the former secretary of state of Scotland, James Johnston. The Octagon, which originally served as an entertainment space to the side of the main block, was built in 1720 to the designs of the architect James Gibbs. An auction catalogue of 1907 describes the decorative splendour of this space, noting that the entire room was 'superbly decorated in marble, carved oak, etc., in colours, enriched gilt with sumptuous yet most elegant effect'.[9] The dichotomy between the reticence of the original exterior and the rich interior treatment suggests the combined agency of architect and craftsmen.[10] The main house was demolished in 1926 to make way for a gravel pit. Only a service wing, which houses the Gallery's ancillary accommodation, and the sumptuously decorated Octagon survive; the latter today serves as a public gallery operated by Richmond Council Arts Service (Fig. 6.8). The project, carried out by Insall under the direction of Ayaka Takaki, completes the final stages of a decades-long conservation programme designed to open the doors into this wonderful building and provide a cultural focus in West London. Grant-aided by the UK National Lottery Heritage Fund (formerly the Heritage Lottery Fund), it not only reveals the significance of its decorative craftsmanship but also illuminates the orchestration role of the conservation architect.

Prior to the onset of works, Insall wrote a comprehensive Conservation Management Plan (CMP). Conservation is not preservation. As such, conservation architects develop a thoroughly researched conservation-management plan, with a focus on managing change or compensation resulting from material loss.[11] This should not be a document that states the obvious and provides only generic policies but

Figure 6.7: Orleans House Gallery, Twickenham, London, interior detail.

Photograph Andy Scott, CC BY-SA 4.0.

Figure 6.8: Orleans House Gallery, Twickenham, London, prior to restoration.

Photograph by Maxwell Hamilton, CC BY 2.0.

rather one that guides, informs and inspires the management of change through constructive conservation. Whether we are rescuing, restoring or making alterations to the fabric of a building, the conservation architect begins with getting to know it – like meeting a new person. This starts with the building as a whole and research to find out all that can be gleaned from the written archive. In parallel, time is devoted to really looking at the building in order to closely examine the detail and interpret what is found in the archive by reading the fabric. In so doing, the architect comes to know its merits and to understand the place of craft elements within the whole: what is 'right', what might be 'wrong'. Is it in the right place, is there scope for intervention, where best to conceal services? Should elements be removed to better express more significant parts?[12]

More often than not there is some aspect, even at this early stage, that requires the expert input of a specialist conservator, craftsperson or engineer. Indeed, one thing to keep learning as a conservation architect is the need to keep learning – and to share this cumulative knowledge, experience and opinion. This, then, may be the conservation architect's first encounter with a specialist conservation contractor on a particular project, usually for advice but then often followed by a specific commission to investigate a particular issue and enable informed decisions to be made later in the process. Research has confirmed what Insall has long advocated: that a majority of participant architects believed that exposure to building-craft processes and engagement with the craftspeople responsible would not only improve relationships between both parties and perceptions of their respective roles but would also be of benefit to the architect's knowledge base.[13] In addition to such engagement with craft specialists, building a team approach with the authorities charged with the protecting of structures and gaining consents for changes brings the potential for further experience and another source of knowledge (Fig. 6.9). This consultative and learning process is one of the key roles of the architect in the conservation of craftsmanship, along with managing the task within the context of the whole building. This involves working out its place in the historical and architectural context; rooting out the cause of any problem affecting its integrity and putting it right; making decisions on authenticity and a 'fit' within the building and the space; researching the art of the possible; and, crucially, assessing the affordability of any proposal within the overall budget of a job.[14]

The plasterwork enrichments of the Octagon were by the Luganese *stuccatori* Giuseppe Artari and Giovanni Bagutti, who worked on several notable buildings in England including St Martin-in-the-Fields from 1723

Figure 6.9: Orleans House Gallery, Twickenham, London, detail following restoration.

© CRAFTVALUE.

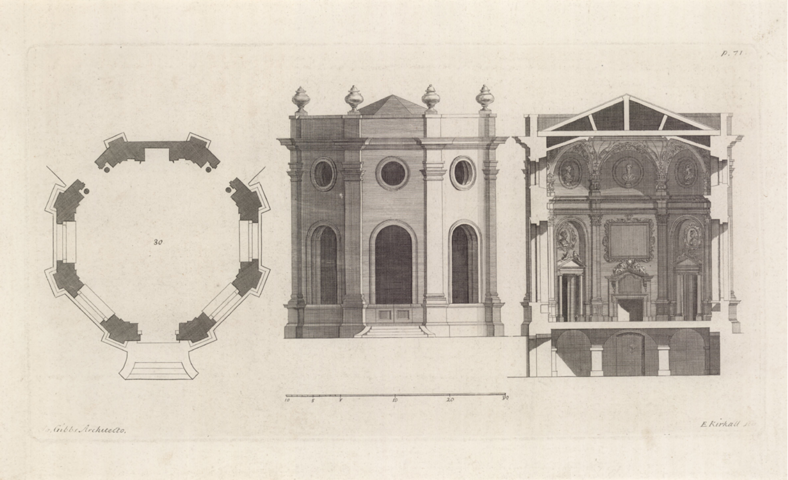


Figure 6.10: Plan, elevation and section of the Octagonal Room, Orleans House. Engraving: E. Kirkhall after James Gibbs, circa 1720.

By permission of London Borough of Richmond upon Thames Borough Art Collection, Orleans House Gallery.

and Clandon Park, Surrey, in the early 1730s, as discussed in Sophie Chessum's chapter. Comparative analysis of a plate from Gibbs's *A Book of Architecture* (1728, Fig. 6.10), which illustrates the architect's scheme for the Octagon's interior, with the surviving fabric demonstrates that although Gibbs intended the room to be decorated with plaster ornaments and figures, the finished work was not executed as drawn. Ayaka Takaki concluded that the *stuccatori* took matters into their own hands and installed their own, not Gibbs's designs, supporting Christopher Hussey's assessment: 'Nowhere did Gibbs give Artari and Bagutti a freer hand than in this decoration'.[15]

As Frank Matero notes, conservation begins with the work of art or architecture and comes back to the work through a series of processes from a range of fields.[16] An obvious but important point to make about a conservation project involving an historic building's fabric is that architects and craftspeople are at 'the coal face' because something needs to be done to protect, enhance or preserve the work. The conservation architect must first discover the cause of any and all problems inhibiting the piece, room or building from its best condition. This might be because the exterior environment is affecting the interior, because of too much moisture or sun, the humidity may have changed with a new heating system, something may have been added to the surfaces restricting their ability to breathe – indeed, even because of a change of cleaning staff. These underlying issues must be properly analysed by the conservation architect, with help from a specialist team, and invasive or non-invasive investigations conducted with recording and monitoring where necessary. Finding the right craftsmen and women, engaging them and listening to their views, and drawing on their expertise is essential. Of particular interest in the Orleans House project is this modern partnership between architect and craftsperson-conservators, as there were extensive repairs to the Artari and Bagutti plasterwork (Fig. 6.11) as well as repairs and decisions to be made on the floor surface, the redecoration and gilding, the historic joinery and the quest to restore a lost chandelier.

One significant problem discovered was that the plaster ceiling was loose. As mentioned above, historic plasterwork – plain, moulded or modelled – is usually supported on a timber structure: ceiling joists, grounds fixed to masonry walls or specific structures holding coved junctions between the two. Nailed to the structure are timber laths: thin, riven strips of wood about an inch (2.5 cm) wide and set about ¼ inch (0.6 cm) apart. These can be destroyed by persistent damp drainage and will then require replacement by the craft repairers – but more typically,

Figure 6.11: Orleans House Gallery, Twickenham, London, following restoration.

© Donald Insall Associates. Photograph by Richard Chivers.

as at Orleans House, only an intermittent but prolonged wetting will damage the 'key'. This is the first coat of plaster squeezed into the gap between the laths; it is very susceptible to damp, which softens the plaster, and, if left, gravity will prevail. The damage had been done at the Octagon before copper roof repairs were conducted by Insall in 2008. Refixing of failing plaster is now a well-practised craft: stainless-steel washers and screws are recessed and fitted through to the timber and into newly added plaster of Paris backing, allowing for consolidation of the base coats and conservation of the decorative crafted surfaces. Here is the collaboration between conservation architect and expert conservators in a nutshell. The architect knows what has to be done, based on research, analysis, consultation and hours of unpaid contemplation. They have instructed the resolution of the underlying problem and now set out what is needed; choose a shortlist of suitable contractors; and gain proposals, prices and methodologies. The architect, in short, must have a wide-ranging skill set and knowledge of the broad framework(s) of the built-heritage project – a clear view of 'the bigger picture'. The craft conservator, by contrast, is more concentrated in their specialism.[17] They bring expertise and scientific knowledge, technical ability and hard physical work to the consolidation; the tools and experience to repair the decorative plasterwork; and reinstate missing elements with artistry and skill to interpret and make new hand-crafted pieces to complete the work. As with much of the conservator's craft, it is easy to describe but difficult to execute. Consolidation, repair and restoration were the tasks appointed to the master plasterers John Joy and his team, who worked on the shell work, trellis panels, rosettes and acanthus leaves of the ceiling. John's son Tom worked with him at Orleans House – extending a long relationship between conservation architects and the Joy family, as Tom's grandfather Bunny was responsible for the celebrated restoration of the plasterwork at Windsor Castle in the post-fire 1990s works under the direction of the Insall team. Such craftsmen and women see themselves as part of a lineage, or tradition, of craft practice transmitted across generations.[18]

Just as the work of all conservation professionals can be seen in the wider context of passing on a sustainable future for our planet, so the importance of the conservation of specialist heritage skills cannot be overstressed. Once lost this knowledge, allied with a skilled hand, cannot be easily relearned. One particularly valuable aspect of the conservation architect's job is learning on the scaffold from craftsmen- and craftswomen-conservators working on site.[19] A personal opinion is that national funding for apprenticeships for these key skills, from scagliola conservator to traditional carpet weaver, is as important as funding the actual work itself. Insall has a structured in-house training regime to guide newly qualified architects through to conservation accreditation. All conservation projects are led by a senior accredited conservation architect and 'Insall apprentices' experience hands-on involvement, from helping to write a conservation management plan to assisting in the production of a maintenance plan via mid-contract inspections on the scaffolding and exposure to the realities and challenges of the craft. Ayaka Takaki is the 'third-generation' Insall conservation architect to work on Orleans House. Conserving skills is vital if we are to conserve the fabric.

Protecting the fabric during the works – from fire and water, as well as physical damage as alterations are made and services installed – is managed and specified by the architect when designing and commissioning the work on site. Other important roles are planning and working with engineers to determine the future internal environment for fragile pieces, determining the decorative finish based on analysis but also on the future life and context of the interior, and overseeing and checking the work as it progresses. This includes setting up samples and ensuring clarity of purpose between client, contractor, craftsperson and architect. Handing over the building and its inherent craftsmanship into a new life and advising on its future care and maintenance are all day-to-day tasks for the conservation architect, and set the structure within which the conservators can deploy their skills. The floor at Orleans House Gallery was a particular challenge, in more ways than one. It was discovered that below the chequered black-and-white marble the original 1720s Portland stone tiles remained in situ. The marble was a later enrichment by the French royal family in exile and installed a century after the original works were realised. There was an obvious question to be asked – should this nineteenth-century floor be removed to reveal the original eighteenth-century floor covering which had survived, and was unquestionably the original fabric? Sometimes these, quite common, debates over authenticity are solved by pragmatic factors, and in this case money was not available to make repairs to the Portland stone even if desired; there was also a risk that much of it might not be there and, if it was, the condition was unknown. Secondly, the floor would have been at a lower level and would necessitate altering the doors and the joinery – all perfectly possible with the right craftspeople, but not if you don't have the money to pay for it and it is contrary to the adopted policies of the Conservation Management Plan. Our task was to repair and reveal Gibbs's creation and express the art and craft of the Octagon in a modern context. Removing the later floor may have met this brief but would, of course, have removed an important chapter of its history. This would have broken two precepts of the conservation architect's craft – make only minimal intervention and celebrate each period of a building's heritage.[20] So the Duke of Orleans' floor remains and an important layer of the Octagon's history is there for us to read, even if it was not what James Gibbs and James Johnston intended.

There is always a danger in privileging one period in a building's history over another when designing a conservation project, and further questions over authenticity and the historic and aesthetic value of the work had to be faced by the team when it came to the decorative finishes. Before conservation, the interior had a pale-blue ivory and gold paint scheme. Detailed research and analysis on the evolution of the room's decoration had been commissioned over the years. Jane Davies took over 500 paint samples to inform the final phase of work, building on the overview provided for Insall by Dr Ian Bristow in the 1990s, thus further demonstrating the value of continuity in architectural conservation. There were many discussions, informed by the results of the analysis, that showed that both the original 1720s and the 1750s colour schemes were predominantly stone coloured, followed in the 1820s by a series of blue-based schemes which prevailed up to the twenty-first century. Informed by the CMP the team decided that the second decorative scheme, from the 1750s, would give the best correspondence with the architectural arrangement left to us today. Full-scale decoration trials followed. A pragmatic modern water-based emulsion, which is washable and hard-wearing and gives a similar sheen to the traditional flat-oil paint, was employed. Project-specific batches of unique pigment were produced to match the chosen colours devised from the decoration trials. The placement of the gilding was also established in the decoration research and trials, and the eighteenth-century scheme was followed by employing an oil gilding process enacted by Hare & Humphreys, using 23½ carat gold leaf for which the previous gold paint was certainly no substitute.

There are often surprises during the construction period, and at the Octagon one of the original sash-window frames was discovered left behind a bricked-up opening. A new replica timber sash window was made for the recovered opening – restoring Gibbs's architectural expression of a symmetrical arrangement, with the chimneypiece and the sash window acting again as focal points of the interior. The centerpiece of that axis was originally a chandelier, literally the crowning glory and focus of the Octagon. We knew that a chandelier had been in use up to the 1960s, when it disappeared. The only visual evidence to work from were two *Country*

Figure 6.12: Orleans House Gallery, Twickenham, London, gilding of the chandelier in progress.

© Donald Insall Associates.

Figure 6.13: Installation of chandelier at Orleans House Gallery, Twickenham, London.

© Donald Insall Associates.

Life photographs from 1944 but these were enough for us to design a replacement.[21] In close partnership with the craftsmen and craftswomen, using full-sized drawings and sample carvings, a new chandelier was made (Figs. 6.12 and 6.13), gilded and hoisted into position.

This single chapter in the life of Orleans House has provided a context in which to describe the integral role of its decorative and ornamental features, within the wider context of its architectural and spatial qualities. Furthermore, it has allowed an explanation of the work of the conservation architect, from researching the archive to inspecting the last brushstroke of paint and handing back the building to its owners ready for its next chapter. The role of the conservation architect echoes the work of the originator – particularly in the collection, direction and co-ordination of the skilled team whose collective efforts result in a harmonious expression of art, craft and architecture.

Notes

1 In the UK, the Specialist Conservation Architect (SCA) qualification through the RIBA (Royal Institute of British Architects) https://members.architecture.com or AABC https://www.aabc-register.co.uk/. A qualified architect is required to demonstrate knowledge of UNESCO principles, ability to apply them and experience of successfully delivering several live conservation projects.

2 Djabarouti and Flaherty, 'Architect and craftsperson', 424 cites the ICOMOS (International Council on Monuments and Sites) Venice Charter, 1964: article 2, which highlights the need for 'all the sciences and techniques' to adequately safeguard built heritage.

3 Hartwell et al., *Cheshire*, 331–3.
4 English Heritage Emergency Repairs Grant.
5 Insall, *Living Buildings*, 106–15; Dann and Cantell, 'Maintenance in conservation', 185–98.
6 Sharples, *Liverpool*, 42–8.
7 See Palfreyman et al., *The environmental control of dry rot*, 27–38 for environmental-control strategies for dry rot.
8 See Djabarouti and O'Flaherty, 'Architect and craftsperson', 433–4 for further discussion of the relationship between architect and craft practitioners.
9 Cited in Stearn and De Novellis, *Orleans House*, 60.
10 Hussey, 'Twickenham II: Orleans House', 464–7; Cherry and Pevsner, *London 2*, 541; Cooper, *Orleans House*; Friedman, *James Gibbs*.
11 Kerr, *Conservation Plan*; Clark, *Conservation Plans in Action*; Heritage Lottery Fund, *Conservation Plans for Historic Places*.
12 Insall, *Living Buildings*, 58–67.
13 Djabarouti and O'Flaherty, 'Architect and craftsperson', 433.
14 For further discussion of 'authenticity', see Matero, 'Loss, compensation and authenticity' 71–90.
15 Hussey, 'Twickenham II: Orleans House', 44.
16 Matero, 'Loss, compensation and authenticity', 87.
17 For further discussion of the collaboration between 'generalists and specialists', see Djabarouti and O'Flaherty, 'Architect and craftsperson', 424, 433; Orbasil, *Architectural Conservation,* 8. The conservation architect is expected to have good knowledge across all 14 skills outlined under paragraph 5 of the ICOMOS (1993) Guidelines for Education and Training for the Conservation of Monuments and Sites.
18 See Djabarouti and O'Flaherty, 'Architect and craftsperson', 433; Yarrow and Jones, '"Stone is stone"', 261.
19 Djabarouti and O'Flaherty, 'Architect and craftsperson', 432 notes that architects surveyed believed that hands-on experience would enable them to develop a deeper understanding of building materials, tools and handling – and that more interaction with building materials, craft and craftspeople would provide an essential link between theory and practice on built-heritage projects.
20 ICOMOS, Venice Charter, 1964: article 9 stipulates minimal physical intervention to historic building fabric.
21 Hussey, *English Country Houses*, 44.

References

Cherry, Bridget and Nikolaus Pevsner. *The Buildings of England, London 2: South*. London: Penguin, 1983.

Clark, Kate, ed. *Conservation Plans in Action: Proceedings of the Oxford conference*. London: English Heritage, 1999.

Cooper, Astley Patricia. *The History of Orleans House*. Twickenham: London Borough of Richmond upon Thames, 1984.

Dann, Nigel and Timothy Cantell. 'Maintenance in conservation'. In *Understanding Historic Building Conservation*, edited by Michael Forsyth, 185–98. Oxford: Wiley-Blackwell, 2013.

Djabarouti, J. and C. O'Flaherty. 'Architect and craftsperson: project perceptions, relationships and craft', *Archnet-IJAR* 14:3 (2020): 423–38. Accessed 9 August 2022. https://doi.org/10.1108/ARCH-01-2020-0010.

Friedman, Terry. *James Gibbs*. New Haven, CT and London: Yale University Press, 1984.

Hartwell, Clare, Matthew Hyde, Edward Hubbard and Nikolaus Pevsner. *The Buildings of England: Cheshire*. New Haven, CT and London: Yale University Press, 2011.

Heritage Lottery Fund. *Conservation Plans for Historic Places*. London: Heritage Lottery Fund, 1998.

Hussey, Christopher. 'Twickenham II: Orleans House: the Octagon', *Country Life* 96 (15 September 1944): 464–7.

Hussey, Christopher. *English Country Houses: Early Georgian 1715–60*. London: Country Life, 1955.

Insall, Donald. *Living Buildings: Architectural conservation philosophy, principles and practice*. Mulgrave, Vic: Images Publishing, 2008.

Kerr, James Semple. *Conservation Plan: A guide to the preparation of conservation plans for places of European cultural significance*. 7th edition. Sydney: National Trust of Australia (NSW), 2013.

Matero, Frank. 'Loss, compensation and authenticity in architectural conservation', *Journal of Architectural Conservation*, 12:1 (2006): 71–90. DOI: 10.1080/13556207.2006.10784961.

Orbasil, Aylin. *Architectural Conservation: Principles and practice*. Oxford: Wiley-Blackwell, 2008.

Palfreyman, John, Gordon Low and Dennis Urquhart. *Technical Advice Note 24: The environmental control of dry rot*. Edinburgh: Historic Scotland, 2002.

Sharples, Joseph. *Liverpool: Pevsner architectural guides*. New Haven, CT and London: Yale University Press, 2004.

Stearn, Miranda and Mark De Novellis. *Orleans House: A history*. Richmond: Orleans House Gallery, 2008.

Yarrow, T. and S. Jones. '"Stone is stone": engagement and detachment in the craft of conservation masonry', *Journal of the Royal Anthropological Institute* 20:2 (2014): 256–75. Accessed 22 June 2022. https://doi.org/10.1111/1467-9655.12103.

Part 2

Design and making

7

The geometry of rustication: an eighteenth-century case study

Edward McParland

Rustication is often discussed in the context of style (for instance Mannerism), or iconography (as in the Medicean references to the diamond-pointed rustication of the Fortezza da Basso in Florence), or interpretation (as when Serlio suggests a contrast between 'natural' rock-faced masonry and 'artificial' classical mouldings). This chapter deals with its geometry, in the hope that generalisations about rustication can evolve from a case study of the façade of the Printing House in Trinity College Dublin (Fig. 7.1), by the architect Richard Castle, begun in 1734. By geometry of rustication I mean the rules governing the setting out of the channels separating the blocks of masonry. This geometry can be exigent, and whether the problems that arose in its execution were solved (if they were solved) by designer or stonecutter is not always clear. But by looking at problems faced and patterns chosen, as well as at mistakes made and at necessary departures from ideal solutions, we can watch designing and executant minds and hands at work. The final grid of rusticated blocks – with its difficulties, mistakes, precision and successes – can bring us as close to the building site as many another historical approach.

It is proper to start with a tribute to James Ackerman's pioneering article of 1983 on the Tuscan/Rustic order, in which he notes Serlio's 'radical association of rustication with the Tuscan order'.[1] Consistent in his stand that rustication is 'an indicator of wall-bearing structure', he refuses to accept drafted masonry (smooth-faced blocks separated by U-shaped

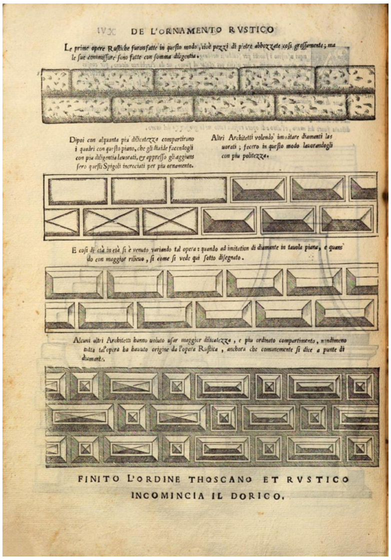
Figure 7.1: Printing House, Trinity College Dublin, Richard Castle, 1734. Photograph Brendan Dempsey, IT Services, Trinity College Dublin.

channels, as on the façade of the Palazzo Rucellai in Florence, Fig. 7.2) as rustication. But – following Gianluca Belli's study of 2019 of fifteenth-century Florentine rustication – drafted masonry, which was common in Roman Antiquity, is included in this discussion.[2] Justification is found in Serlio's illustration of the canon of rustication which includes smooth-faced blocks separated by V-shaped, though admittedly not U-shaped, channels (Fig. 7.3). As Ackerman implied, many rusticated patterns – as indicators of wall-bearing structure – originate in structural facts. Alternating quoins, rusticated or not, bond adjacent façades and strengthen corners. The blocks of a Gibbs surround may accommodate smooth jambs of window or door, and bond the surround into the adjacent masonry. Rusticated arches, round or flat, articulate the structure of voussoir and keystone (notwithstanding this example of mannered inspiration in Berwick-upon-Tweed: Fig. 7.4).

As we shall see, from about 1500 on, most rusticated patterns, however complicated, are controlled by symmetry: the rustication of all of those neo-Palladian basements is set out in a regular grid of horizontal and vertical channels observing overall and local symmetries. This is entirely different from the ashlar courses of the upper storeys. These, naturally, are laid in continuous horizontal courses, but the vertical courses are rarely aligned. Far from suggesting a distressing irregularity, this gives a flickering vitality to the

Figure 7.2: Palazzo Rucellai, Florence, L.B. Alberti, 1447 onwards, drafted masonry of façade.

Photograph by the author.



IVX DE L'ORNAMENTO RVSTICO

Le prime opere Ruſtiche furonfatte in queſto modo, cioè pezzi di pietre abbozzate coſi groſſamente; ma le ſue commiſſure ſono fatte con ſomma diligentia.

Dipoi con alquanta piu dilicatezza compartirono i quadri con queſto piano, che gli diuide facendogli con piu diligentia lauorati, & appreſſo gli aggiunſero queſti Spigoli incrociati per piu ornamento.

Altri Architetti volendo imitare diamanti lauorati; fecero in queſto modo lauorandogli con piu politezza.

E coſi di età in età ſi è venuto variando tal opera: quando ad imitation di diamante in tauola piana, e quando con maggior rilieuo, ſi come ſi vede qui ſotto diſegnato.

Alcuni altri Architetti hanno uoluto uſar maggior dilicatezza, e piu ordinato compartimento, nondimeno tutta tal'opera ha hauuto origine da l'opera Ruſtica, anchora che comunemente ſi dice a punte di diamante.

FINITO L'ORDINE THOSCANO ET RVSTICO
INCOMINCIA IL DORICO.

Figure 7.3: Sebastiano Serlio, *Tutte l'opere d'architettura e prospetiva*, Venice, 1537.

National Library of Naples. Google Books. CC. Public Domain mark 1.0.

Figure 7.4: Berwick-upon-Tweed, rusticated façade.

Photograph by the author.

ashlar surface. Such subtle pleasures arising from the happy effects of a becoming irregularity are often lost on modern laminated façades.

Roman orthodoxy

The geometrical orthodoxy of rusticated arcuated patterns was established in Rome around 1500 in the circles of Giuliano da Sangallo, Donato Bramante and Raphael. The ground-floor façade of the Palazzo Alberini (Raphael and Giulio Romano, 1512–20, Fig. 7.5) illustrates this orthodoxy. Vertical channels are carefully aligned, and disposed symmetrically around the central axes both of openings and of piers; voussoirs form a raised profile over the semicircular mezzanine arches; and voussoirs are aligned continuously with the adjacent horizontal courses of rustication. These are the geometrical patterns still current in the rustication of modern classicism. As a digression, one peculiarity of the Palazzo Alberini may be noted – the alternating heights of its horizontal courses. Influenced by Vitruvius's (2, viii, 6) description of pseudoisodomic masonry, this was a favourite technique of Roman

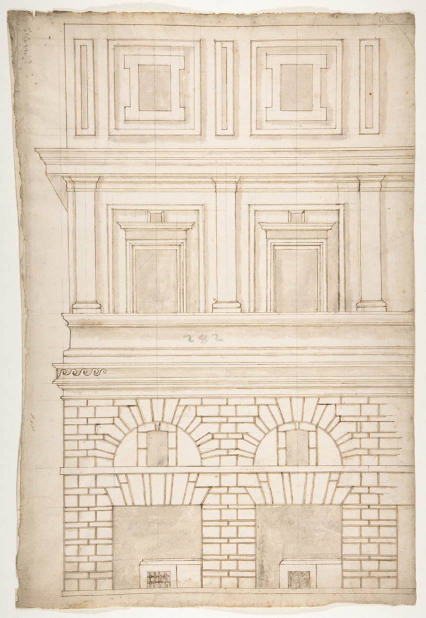


Figure 7.5: Palazzo Alberini, Rome, Raphael and Giulio Romano, 1512–20.

Metropolitan Museum of Art, CC0, Wikimedia Commons.

architects in the early sixteenth century. An early appearance in the Vatican was in the unrusticated tower of Nicholas V of about 1450. The strict regularity of early sixteenth-century Roman rustication, a regularity to which *quattrocento* Florence only aspired, was characteristic of a period interested in canonical regularisation – of language and of the classical orders of architecture, as of rustication. Just as Renaissance architects in their drawings sometimes 'corrected' Roman antiquities – even the Pantheon – to suit their preconceived ideas, when Vasari the Younger came to draw the Palazzo Strozzi in Florence, he 'corrected' its rustication to some of the new regularised conventions.[3]

Diagrams can illustrate the geometry involved in leading voussoirs continuously into horizontal courses of rustication of equal heights. This results in a profile of voussoirs the crown of which is raised high above the semicircular arch which they form. This raised profile is called here a 'halo' for convenience. Figure 7.6a shows a semicircular halo concentric with the arch and voussoirs of equal intrados, which can result in courses of irregularly unequal heights. Figure 7.6b illustrates a semicircular halo and courses of equal heights, which can result in voussoirs of unequal

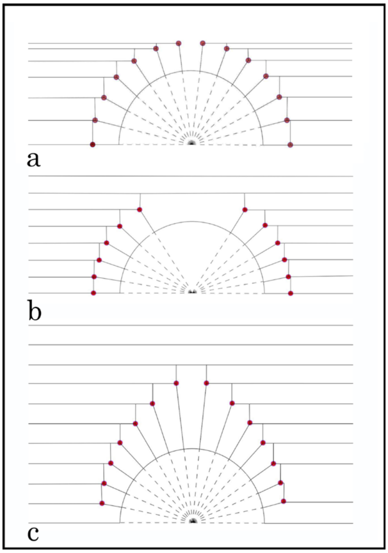


Figure 7.6: (a) A semicircular 'halo' can be associated with courses of unequal height; (b) a semicircular 'halo' can be associated with voussoirs and keystone of disproportionate sizes; (c) a raised 'halo' with voussoirs leading continuously into rusticated courses of equal height.

Drawings by the author.

intrados and a potentially monstrous keystone, whereas in Figure 7.6c the raised halo accommodates voussoirs of equal intrados with courses of equal heights. This geometry is not elaborate, but neither is it banal. It can justify Vitruvius's demand that an architect should be well versed, if not necessarily expert, in geometry. The anonymous Ballyshannon master in 1700 was neither (Fig. 7.7).

Unorthodox experiments

The rustication in Ballyshannon is more likely to be gaffe rather than consciously mannered. But what about George Dance's niches on the façade of Newgate Prison (1770–80, Fig. 7.8), where the voussoirs are uncomfortably knit into the rusticated courses? Conscious Mannerism would not be a far-fetched idea in a design so indebted to Giulio Romano. But Dance's contract drawings show conventional details. A change of mind, in execution, on Dance's part, or a lack of attention to his masons' work? And conscious Mannerism may be ruled out in analysing the discrepancies in rusticated patterns on James Gandon's King's Inns in Dublin (begun in 1800 and completed after Gandon's death, Fig. 7.9a–c). In the arched central section of the ground floor of the west façade, the rusticated pattern of the right-hand bay is awkward (in particular in the neighbourhood of the rectangular tablet) and differs from that on the corresponding bay on the left. Gandon

Figure 7.7: Barracks, Ballyshannon, County Donegal, 1700, entrance.

Courtesy of the Irish Architectural Archive. Photograph by David Davison.

Figure 7.8: Newgate Prison, London, George Dance, 1770–80, detail of façade. From A.E. Richardson, *Monumental Classic Architecture in Great Britain and Ireland during the XVIIIth and XIXth Centuries*. London: Batsford, 1914, p. 29, Figure 32.

Getty Research Institute. CC BY-SA 3.0.

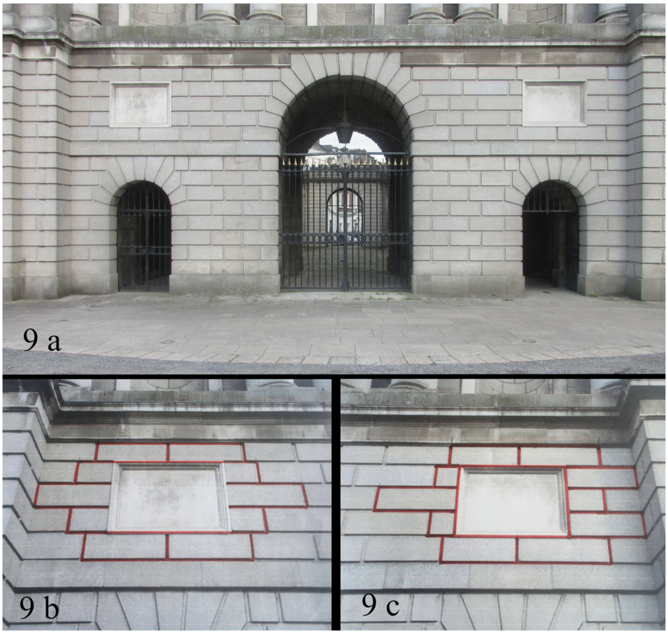


Figure 7.9: (a–c) King’s Inns, Dublin, James Gandon 1800–17 (work continued by Henry Aaron Baker and Francis Johnston), west front.

Photographs by the author.

disappeared in 1805 from the records of the then-unfinished building: had he by then lost heart in supervising the details of his building? Or was the right-hand bay the work of a less fastidious successor? Who's to say?

Exactly the same questions arise with Thomas Burgh's Old Library in Trinity College Dublin, begun in 1712 (Fig. 7.10a–b). In his earlier Royal (now Collins) Barracks in Dublin (c.1707–c.1710) Burgh managed the rusticated arcades conventionally. At the library he seems to have left too much to his stonecutter Moses Darley.[4] The patterns of the arcade itself are conventional, but those surrounding the rectangular windows of the end pavilions are unorthodox in not being symmetrical about their central axes. Was there, in Darley's approach, a late-medieval sense that if you got the rustication of the masonry piers right, the windows could look after themselves? Or was Burgh in the years around 1712 too busy with government buildings, for which over £20,000 was granted in that year for work on Dublin Castle and on the Council Chamber, to fully attend to the library?[5]

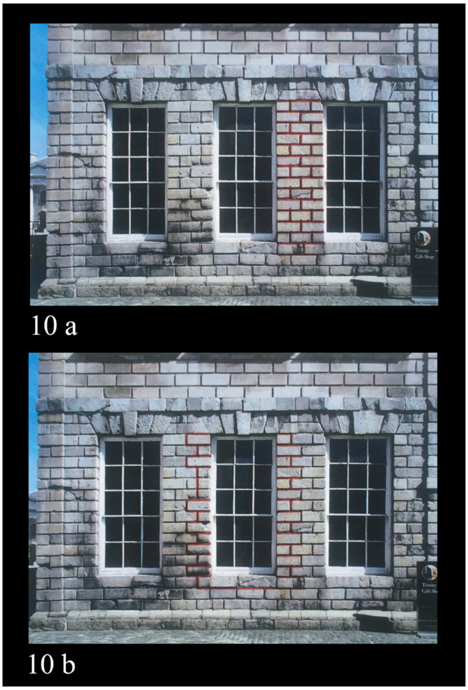


Figure 7.10: (a–b) Trinity College Dublin, Old Library, Thomas Burgh, 1712–32, west pavilion.

Photographs by the author.

And so to Richard Castle's Printing House of 1734 (Fig. 7.11), at Trinity College Dublin, and the rusticated patterns on the inner wall of its portico. The consequence of the building has been noted by Christine Casey, who describes it as the first all-Portland stone façade in the city.[6] Its rustication is more complex and accomplished than that of any earlier rusticated work in Ireland. There are oddities about the Printing House of a kind which would suggest design and/or execution in two phases (the surviving and fairly full documentation does *not* confirm this). Otherwise, how do we explain the 'marriage' of Tuscan body with Doric portico (see Fig. 7.1)? [7] But here we are concentrating on the portico alone.

An initial surprise is that the rustication on its inner wall is confined to an area above the ashlar plinth, thus denying the implication that rustication articulates the load-bearing nature of masonry blocks. For this, however, there was good antique and Palladian precedent in the Temple of Antoninus and Faustina in the Roman Forum, illustrated in Book IV of the *Quattro Libri* (Fig. 7.12). The parallels go further – in both porticoes the rustication stops short of capital level, and the rusticated field in both is a double square. There are other suggestive mathematical ratios of simple fractions in the Printing House façade (Fig. 7.13). Within an error of about 1 per cent the distance from floor to top of the door architrave is half the height of the portico; the height of the ashlar plinth is one-third that of the rusticated

Figure 7.11: Printing House, Trinity College Dublin, Richard Castle, 1734, elevation.

Digital rendering by Andrew Tierney based on a survey by Donald W. Insall and Associates Ltd.

area; the distance between the centres of the niches is five-eighths the width of the façade. I will revert to this mathematical digression at the end. In Ireland, only Edward Lovett Pearce, architect of the Parliament House at College Green, had documented a preference for such Palladian ratios.[8]

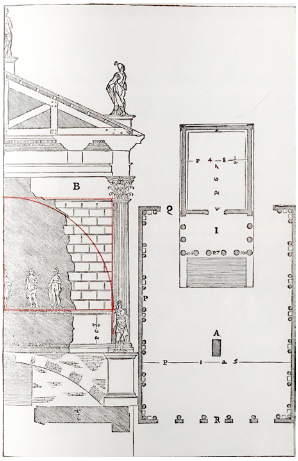


Figure 7.12: Temple of Antoninus and Faustina, Rome, begun 141 CE.

Andrea Palladio, *I Quattro Libri*, IV, Venice, 1570.

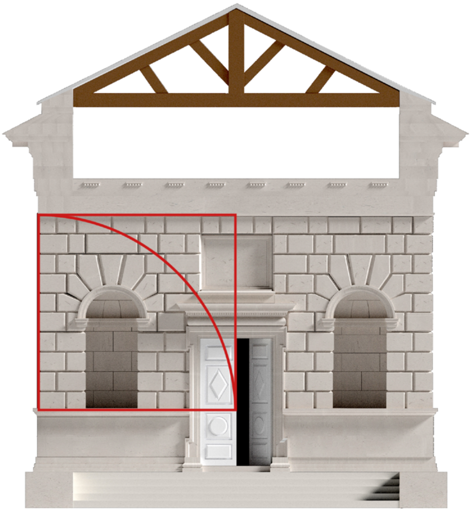


Figure 7.13: Printing House, Trinity College Dublin, inner wall of portico.

Digital rendering by Andrew Tierney based on a survey by Donald W. Insall and Associates Ltd. Colour outlines by the author.

At the Printing House the Doric order is learnedly detailed with the unusual refinement, within the portico, of architrave and guttae continued around just below the flat ceiling. The stonecutter was Moses Darley, of the recently completed Old Library, but it is possible that someone else who appears in the accounts kept Darley up to scratch with the rustication: the Portland stone was provided by a Thomas Gilbert, and someone of this name was stonecutter on Pearce's Parliament House, then occupied but still unfinished.[9]

The rusticated pattern can best be analysed with diagrams. Figure 7.14 shows the outlined field chosen for rustication; note that the springing of the arches of the niches are not aligned with the rusticated channels, and that beside the door, vertical channels are aligned with the lugs and not with the rest of the architrave. Door, niches and inscribed tablet are determinants around which the rustication has to be fitted. Figure 7.15 shows another determinant or constraint – namely, the elevational view through the intercolumniations showing the primacy of the central axes of the niches, and the patterns of their immediate surrounds when read together with the columns.

In the above description I have deliberately stressed the importance of constraints and choice. After all, other choices could have been made

Figure 7.14: Printing House, Trinity College Dublin, with rusticated field outlined.

Digital rendering by Andrew Tierney based on a survey by Donald W. Insall and Associates Ltd. Colour outlines by the author.

Figure 7.15: Printing House, Trinity College Dublin, elevation showing relationship of columns to inner wall of portico.

Digital rendering by Andrew Tierney based on a survey by Donald W. Insall and Associates Ltd. Colour outlines by the author.

(these drawings, and others, are to scale): for instance, in Figure 7.16a, with seven voussoirs the 'halo' is too tall; in Figure 7.16b, with shallower courses of rustication the halo is insignificant; in Figure 7.16c, with the springing of the arches of the niches level with a rusticated course, voussoirs and keystone are disproportionate; but Figure 7.16d is executed satisfactorily. Further, the vertical joints are just as rigorously determined (Fig. 7.17): some are set out in the conventionally indented patterns of quoin and surround, some are aligned with the lugs of the door surround, some with the sides of the niches and some (in the top cornice) with voussoirs. All – except two over the tablet – have a logical relationship with other joints. And the consequence of this is that there are *six* different lengths of block in the top two courses (excluding the tablet).

So what? First of all, the geometry of rusticated patterns – having reached a point of definitive orthodoxy in Rome at the start of the sixteenth century 'certainly' (according to Heydenreich) thanks to Tuscan masters – observed this orthodoxy for centuries.[10] A study of the surface of buildings leads to important but unanswered (maybe unanswerable) questions: Are the unexpected features of rustication in Ballyshannon, and Newgate Prison, and the King's Inns and the Old Library in Trinity, related to the skill of the

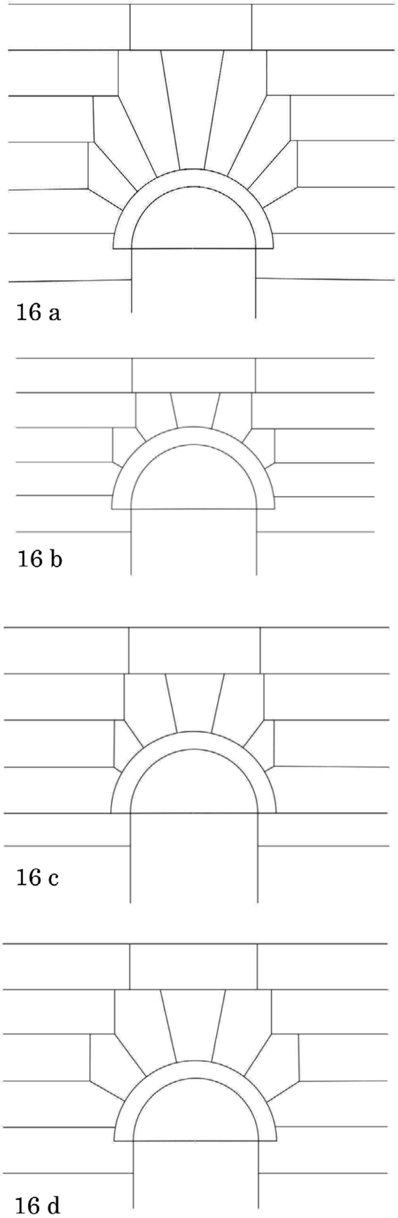


Figure 7.16: (a–d) Alternative possible rusticated patterns around niche heads of the Printing House: 16a with seven voussoirs; 16b with shallower horizontal courses; 16c with springing of arch aligned with a horizontal course; 16d as executed, lacking the infelicities of 16a–c.

Drawings by the author.

Figure 7.17: Printing House, Trinity College Dublin, inner wall of portico, alignments of vertical channels of rustication.

Digital rendering by Andrew Tierney based on a survey by Donald W. Insall and Associates Ltd. Colour outlines by the author.

mason or to the architect's supervision of the building? How are they related to the division of responsibility between architect and craftsman? Or to a change in responsibility for such supervision? Further, an analysis reveals the apparently routine rustication of the little Printing House in Trinity as an unexpectedly and rigorously calculated – even Procrustean – design involving sophisticated choices and deliberation. Finally, the sophistication of the surface patterns in the Printing House is slightly at odds with the rest of Richard Castle's *oeuvre*. The geometry (particularly its reliance on ratios which can be expressed as simple fractions), the use of Portland stone, the bifurcation between portico and body of building suggestive of a two-fold evolution of the design, the presence of Thomas Gilbert and the date all point to intimate connections between the building and Edward Lovett Pearce's Parliament House (Pearce had died in 1733), on which Castle had worked in an as yet ill-defined capacity. Is the portico of the Printing House Pearce's?

Acknowledgements

I am grateful to Melanie Hayes and Andrew Tierney for their assistance in preparing this chapter. The measured drawings of the Printing House, on which this chapter is based, are from a survey of the building by Donald W. Insall and Associates Ltd, 1980 (Estates and Facilities Department, Trinity College Dublin).

Notes

1 Ackerman, 'The Tuscan/rustic order', 15–34.
2 Belli, *Paramenti Bugnati architettura*.
3 This drawing is illustrated in Millon and Lampugnani, *The Renaissance from Brunelleschi to Michelangelo*, 72.
4 See McParland, *Public Architecture*, 159; TCD MUN (Trinity College Dublin, Muniments)/P2/23–5 (1712–13), 27 (1714), 31 (1715–17), 37 (1718), 39 (1719), 42 (1720–1), 48 (1722), 54 (1724–8) Tradesmen's bills, work on new library.
5 See McParland, *Public Architecture*, 96–9.
6 Casey, *Dublin*, 404.
7 See McParland, *Public Architecture*, 159. For further discussion on the use of stone at the Printing House, see Patrick Wyse Jackson's and Louise Caulfield's 'The rough and the smooth: stone use in Dublin 1720–60' in this volume.
8 See McParland, 'Edward Lovett Pearce and the Parliament House in Dublin', 91–100.
9 McParland, *Public Architecture*, 159; TCD MUN/P2/65/1, Documents concerning the building of the printing house, n.d. (1733 or 1734) Proposals of Joseph McCleery, carpenter, and Moses Darley, stonecutter, for building a printing house; TCD MUN/P2/68/15–17, Tradesmen's bills and orders for payment, 1734–6. Printing house. 'Darley, Moses. Receipt of £6 on a/c of subsistence of stonecutters', 26 July 1734; 'Darley, Moses. Order of Castle £40 for stone-cutter's work, & receipt 14 Aug 1734'; Darley, Moses. Order for same for £26-15-10 1/2 for Portland stone'.
10 Heydenreich, 'Il bugnato rustico nel Quattrocento e nel Cinquecento', 40–1.

References

Ackerman, James. 'The Tuscan/rustic order: a study in the metaphorical language of architecture', *Journal of the Society of Architectural Historians* 42:1 (March 1983): 15–34.

Belli, Gianluca. *Paramenti Bugnati architettura nella Firenze del Quattrocento*. Florence: Firenze University Press, 2019.

Casey, Christine. *The Buildings of Ireland: Dublin*. New Haven, CT and London: Yale University Press, 2005.

Heydenreich, Ludwig. 'Il bugnato rustico nel Quattrocento e nel Cinquecento', *Bolletino CISA* 11 (1960): 40–1.

McParland, Edward. 'Edward Lovett Pearce and the Parliament House in Dublin', *Burlington Magazine* 131: 1031 (February 1989): 91–100.

McParland, Edward. *Public Architecture in Ireland 1680–1760*. New Haven, CT and London: Yale University Press, 2001.

Millon, Henry and Vittorio Lampugnani, eds. *The Renaissance from Brunelleschi to Michelangelo: The representation of architecture*. London: Thames and Hudson, 1994.

8

The rough and the smooth: stone use in Dublin 1720–60

Patrick N. Wyse Jackson and Louise M. Caulfield

Stone is a highly versatile material that can be cut, sawn, carved and utilised for many elements in buildings – from hidden foundations and bulk walling to finely worked surface ashlar, carved motifs and internal decorative features. This chapter examines the period 1720–60, when varieties of stone, both Irish and English, became available on the Dublin market and whose use is seen in the city's buildings. It discusses the geological and petrological characteristics of stone used in Dublin, both native and imported, and argues that the combinations of their use in public buildings was unique and imparted a distinctiveness not seen in eighteenth-century buildings in Britain. At first glance the eighteenth-century fabric of Dublin renders a sense of greyness, but identifying the lithologies used reveals a more complex and intriguing scenario. Dublin stone use can be characterised as providing a triple palette of paired colour (grey/white, grey/grey and yellow/black), achieved by juxtaposing combinations of native and English stone types – and, as a by-product, a variety of textures between each of the two stone types used. The geological palette adopted in the city comprised yellow sandstone with black Calp limestone and pale-grey crystalline Irish granite, with either imported creamy white Portland limestone or pale-grey to white Irish limestone. These imparted a conscious texture to the cityscape that was more varied than that of London and other developing cities such as Washington, DC in the young United States, where utilisation of locally quarried pale limestones (in London) and sandstones (in Washington) resulted in a flatness and homogeneity to their buildings. Did architects and patrons in Dublin seek variety of surface texture and aesthetically pleasing colour combinations, or were other more pragmatic factors at play? Perhaps, drawing on a deepening understanding of the geological composition and character of stone, architects availed themselves of local Calp limestone, which had been quarried since the twelfth century, but added a granularity through the use of yellow sandstone from County Down, which could be carved in reasonable detail. Portland stone, which first came into the Dublin markets in a significant way in the early 1700s, was a versatile limestone that could be carved with great skill into highly elaborate decoration. Pairing Portland stone with granite from County Wicklow was a masterstroke in that the calcitic composition of the former yielded a surface that had an even texture when cut that contrasted visibly with the highly crystalline fabric and more varied tones of the latter (Fig. 8.1). Dublin's craftsmen soon demonstrated an ability to work to a very high standard all five stone types, which were transported in significant volume to the city's stone yards and building sites. The wide streets of Dublin lined with terraces of red-brick buildings were an ideal setting for monumental stone-faced buildings that reflected the elevations of the granite mountains

Figure 8.1: Former Parliament House, now Bank of Ireland, College Green, Dublin. Portland stone colonnade with granite walling.

Photograph by Patrick Wyse Jackson.

directly to the south of the city. A third lithology evident in the city's buildings gradually emerged – namely, an exclusive facing in native limestone from County Meath which provided a workable alternative to the dominant pairing of local granite and imported limestone.

Building stone: native and imported

Ireland's underlying geological foundation has provided a great range of lithological types. Lithology refers to the physical characteristics of rock types – rather than being synonymous it is used here to indicate the physical nature of the stone used for building rather than simply its name. These lithologies included igneous granites of different grey, pink and greenish hues that make up the mountains of Leinster, Donegal and the Mournes, amongst others, and finer-grained diorites of Wicklow and basalts of north-east Ulster. The granites were intruded into pre-existing rocks during times of continental collision and cooled deep beneath the surface. They are only exposed today thanks to millions of years of erosion removing the overlying sequences. Limestone provides about 60 per cent of the underlying bedrock of Ireland and largely crops out in the midlands and some southern counties, such as Cork and Kerry. Often highly fossiliferous, these limestones, which were mainly deposited during the Mississippian period 350 million years ago in reef or shallow-water marine settings, can be varied in colour.[1] Calp, a particular muddy limestone variety, was deposited in deeper water basins in Dublin and Kildare (Fig. 8.2). Sandstone is widespread in Munster, where red coarse sediments were deposited in fluviatile and desert settings; younger yellow Mississippian sandstones are largely found in northern counties from Donegal to Monaghan. A long tradition of combing Calp with finer and more workable stone is evident in the medieval fabric of the city. The earliest major, upstanding stone building still extant in Dublin is Christ Church Cathedral – erected from 1170, albeit significantly altered in the late nineteenth century. Constructed of Calp limestone, it was enhanced with carvings executed in Dundry limestone imported from Somerset.[2] Calp supplied the bulk of Dublin's building material until the 1720s and was quarried locally in numerous small surface openings or in larger quarries to the west at Palmerstown and Lucan, or to the south at Rathgar and Kimmage. While most buildings in Dublin predating 1720 have been swept away, those that remain, or elements of former buildings revealed in excavations, show the predominance of Calp usage.

Figure 8.2: Calp limestone arcade, Old Library, Trinity College Dublin. The dark muddy limestone on the ground floor offers a visual contrast to the paler granite of the upper storeys.

Photograph by Patrick Wyse Jackson.

Following the Great Fire of London in 1666, and the consequent rebuilding of the city, architects like Inigo Jones (1573–1652) and Christopher Wren (1632–1723) chose a stone which emulated the lithic palette of Greek and Roman Antiquity. Parian and Pentelic marble and Carrara marble, used by the ancient Greeks and Romans respectively, were known to western European architects in the sixteenth, seventeenth and eighteenth centuries and had imparted a pale vista to Athens and Rome given their use in significant buildings such as the Parthenon, and the Pantheon.[3] Portland stone – first used in London in the Queen's House, Greenwich in 1616 – was adopted soon after in 1619 for the Banqueting Hall and later, in 1631, during restoration of St Paul's;

subsequently it became widely used as the connoisseur's stone of choice.[4] It and other pale-coloured lithologies for city buildings mimicked the ancients in terms of their pale colour if not texture; Parian and Carrara stone is marble, a metamorphosed limestone, whereas Portland, Bath and Purbeck limestones have not been metamorphosed as indicated by their fossil content. The Hellenic influence was carried forward later, with greater impact than in London, in Washington and Vienna when those cities were being laid out for the first time or being extensively rebuilt. Men of power – whether they be British monarchs, George Washington or the Emperor Franz Joseph I – and their architects desired an imperial character in their buildings which pale stone enabled. In the case of Washington, light-grey Aquia Creek sandstone had been quarried locally for use in colonial Virginia, in particular from the 1730s, and it became the favoured urban stone, used on the President's House (the White House) and the Capitol begun in the 1790s; for Vienna in the eighteenth century a vast tonnage of Laas marble was quarried and transported from the South Tyrol in what is now northern Italy.[5]

Reconsidering London it is reasonable to conjecture that the erection of its Portland stone buildings, with their pale walls of finely worked ashlar, was an emulation of Antique imperium and that the influence of London was carried over – albeit with a degree of delay – to Ireland. At St Paul's Cathedral and elsewhere Portland stone was combined with other pale limestones from central and eastern England to achieve the desired effect. However, this was not always the case. Originally Jones's Banqueting Hall was polychromatic with pale-orange Jurassic limestone from Headington, Oxfordshire for the rusticated basement level and pinkish Jurassic sandstone from Duston in Northamptonshire for the rusticated walls of the upper storeys being employed alongside Portland used for pilasters, capitals and other ornamentation. It became monochromatic when Sir John Soane refaced it entirely in Portland stone in 1829.[6] Blenheim Palace remains somewhat of an outlier and reflects the polychromatic use of stone in Dublin of the period in that its plinth is of Portland stone and the remaining façade is in a yellow-brown limestone from Oxfordshire. Jones's work, nevertheless, probably encouraged the adoption of Portland stone by architects in Ireland and any use of indigenous material by them was due to them having a prior understanding of the availability and nature of the stone. Dublin in the eighteenth century was developing as the second city of the British Empire, and buildings were soon erected that reflected its status. However, the diversity of stone utilised in Dublin is greater and more polychromatic than in many other imperial cities.

Figure 8.3: (a) Granite of Baltyboys/Blessington type at the former Parliament House, Dublin, comprising equigrained sized interlocking crystals of quartz, feldspar and mica providing a pale-grey colour; (b) Three Rock Mountain granite with characteristic large mica crystals set into smaller crystals of quartz and felspar (detail from Dublin Castle wall); (c) Calp limestone with fine-bedded laminations of limy sediment with intercalations of more muddy horizons, all traversed by thin vertical white veins of calcite (detail from Old Library, Trinity College Dublin); (d) Scrabo sandstone comprising coarse quartz sand grains – drafted margin of stone seen at centre left (detail from Treasury Building, Dublin Castle); (e) Ardbraccan limestone containing fossil crinoid stems top right and icicle rustication (detail from Provost's House, Trinity College Dublin.); (f) Portland stone with fine oolitic grains and some fragmented shelly fragments and tooling marks (detail from Public Theatre [Examination Hall] column, Trinity College Dublin). Width of field of view 10 cm for each.

Photographs by Patrick Wyse Jackson.

Transformation: stone use in Dublin in the early to mid-eighteenth century

The peace and relative prosperity of the early 1700s saw Dublin emerge from the medieval city of wooden structures and Calp limestone buildings with renewed vigour and undertake significant regeneration. During the course of the eighteenth century the city's building stock underwent a radical transformation in terms of lithological materials used in its (singular) fabrication. Calp limestone, as we have seen, was the favoured stone of architects and builders of large buildings until the 1720s when it largely, but not fully, fell out of use and was replaced with a mixture of imported and native limestones, sandstones and granites. The supply of stone was a labour-intensive and costly operation. While large country houses were usually built of locally derived stone, often from the estate of the client, which was most likely extracted by local workers using crowbars and hammers to exploit the weaknesses caused by natural jointing and bedding and transported relatively short distances to the building site, the supply of stone for city building projects was more logistically involved.[7] Large blocks of hewn stone were raised onto wooden 'carrs' using hand-powered lifting tackle and transported, either by road or water, to the city's stone yards and building sites where they would have been cut and finished by stonemasons and stonecutters.[8]

Calp limestone and Scrabo sandstone

Small-scale quarries in Calp limestone had been opened from the twelfth century in various parts of Dublin city or somewhat distant – at Christchurch, Chancery Lane, St Stephen's Green, on College Green and at Clontarf. By the eighteenth century larger-scale and deeper quarries were worked for Calp limestone further afield beyond the limits of the city at Rathgar, Lucan and Palmerstown. Calp limestone took a reasonably smooth face but benefited from weathering to a brown colour and containing fine sedimentary layering or beds that are visually arresting close up. The rusticated treatment of the Calp limestone at Thomas Burgh's Old Library of Trinity College Dublin (1712–32, Figs. 8.2, 8.3c), discussed in Edward McParland's chapter in this volume, gives the horizontal bedding imparted by this native limestone added textural impact. Aside from some carving at the cornice level and the rustication, the worked ashlar stone seen on the ground-floor colonnade was left unornamented; to the architect the stone provided a structural strength through utilisation in large blocks that required minimal stone working post their extraction from the quarry. Dark limestones, such as Calp and other Irish midland limestones, can be finished in different ways that provide varied texture and visual impact – so much so that a face that has been bush hammered and another finely chiselled may be mistakenly identified as being of different lithologies quarried from two sources. Over time, any variety in surface finishing applied by stone carvers to limestone used in eighteenth-century Dublin has degraded through surface weathering, although in many buildings this enhancement of texture can still be discerned.

While dark Calp was used for the lower plinths and ground-floor level, the upper storeys of the Old Library were originally faced in yellow sandstone, believed to have been quarried at Scrabo, County Down (Fig. 8.4). The first record of quarrying sandstones at Scrabo was made in Norman times.[9] The elevated position of the Scrabo quarries near Newtownards allowed for inexpensive removal of the stone blocks in wagons to the quays and their subsequent shipping down the Irish sea to Dublin. In the eighteenth century Scrabo stone was quarried by George Darley, son of Arthur Darley who took over the quarry on the death of his father Henry in 1728.[10] The brother of Moses Darley, the stonemason who worked on Trinity College, George had significant building interests in Dublin and also leased the Black Quarry in Kilkenny, famed for its black marble or polished limestone. Deposited between 237 and 250 million years ago during the Triassic geological period the Scrabo stone came in varied colours ranging from pale buff to darker yellowy orange and a russet red. Originally formed under arid desert conditions much of this stone is composed of wind-blown sand lightly cemented together with calcium carbonate. The sand formed dunes in

Figure 8.4: Old Library, Trinity College Dublin. Cornice-level carvings in Scrabo sandstone (top), Calp limestone (middle) and ashlar granite (bottom). Compared with contemporary carvings in Portland stone in Dublin these are rather crude. Some of the sandstone has been replaced with moulded mortar.

Photograph courtesy of Ger Walsh.

which the layers, or beds, were often at a high angle to the horizontal – a pattern called cross bedding. Examination of stone used in St Werburgh's Church (1715–19, Fig. 8.5) and the doorcases of the Treasury Building (1712–17, Fig. 8.3d) on the west side of the Lower Yard of Dublin Castle allows this bedding to be discerned. These bedding patterns add additional textural fabric to this freestone that was worked easily, which resulted in less waste when cut. Particularly popular in Belfast, the Darley enterprise and probably the influence of Thomas Burgh, architect of St Werburgh's, the Treasury Building and the Old Library, where it found most use in the early decades of the 1700s, resulted in Scrabo stone's entry onto the Dublin building site. The stone was easily carved on account of its cement being rather soft and this was exploited by Moses Darley, the principal stonecutter at the Old Library of Trinity College where the cornice is carved into an egg-and-dart design with corbels enhanced with a rose-like design; alongside them lie his carved Calp elements. All, however, are rather crude (when compared with contemporaneous carvings in Portland stone), which may either bear testament to his early attempts at stone cutting or reflect the difficulty of achieving as sharp a cut and resultant design in these two lithologies as against Portland stone, which soon became the preferred medium for stone decoration in Dublin. The swansong of the Calp-and-sandstone combination, which Burgh also employed at St Werburgh's

Figure 8.5: St Werburgh's Church, Dublin. Entrance façade with Calp limestone plinth and worked Scrabo sandstone laid in a pattern of courses of unequal size.

Photograph by Patrick Wyse Jackson.

Church, is represented in a later view of the Old Library (Fig. 8.6). Here, the rich yellow of the Scrabo sandstone and the dark tones of Dublin Calp can be clearly seen. The sandstone at Trinity College was removed due to decay, but unweathered portions can still be viewed in the carved cornice; that on St Werburgh's remains and has mellowed nicely, as indeed has the Calp, so that the dazzling visual differences between the two lithologies is not as striking as it would have been originally.[11]

Granite and Portland stone

An unusual and interim combination of materials is encountered at mid-century at St Patrick's Cathedral. Here a spire was added to lofty effect over the Calp limestone Minot's Tower that had been erected of Rathgar stone in the 1360s. The octagonal spire of Leinster granite quarried from both east and west quarrying districts was executed between 1749 and 1750 by two stonemasons, George Wurmston of Drogheda and George Burton of Stillorgan, at a cost of 950 guineas, much of it borne by Bishop

Figure 8.6: James Arthur O'Connor, *View of the Old Library*, early nineteenth century, oil on canvas.

Collection of Trinity College Dublin, reproduced by permission of the Board of Trinity College Dublin.

John Stearne, the Bishop of Clogher, who also funded the College Printing House.[12] The juxtaposing of Leinster granite and Calp limestone, although common stone types near the capital, is unusual and was not replicated in any significant way elsewhere. As both lithologies were rather unsuitable in taking crisp, elaborate carvings, both were utilised in general for bulky construction where it was not necessary to use a variety of stone types. A move to employ harder stones in Dublin was mirrored in stone used for paving. Granite was first used for paving at Trinity College in the early 1700s and by 1770 was adopted wholesale by the Paving Board, which then began using granite from Wicklow to replace the ubiquitous Calp that had been used from medieval times.[13] This was a fair choice as Calp weathered badly and granite was more resilient and provided great grip – and it also reflected a move away from the use of Calp on exterior surfaces in the city, whether they be buildings or pavements. Our earliest documentation of granite usage in Dublin dates to 1701 when it is recorded as being employed for various purposes in Trinity College, most notably for paving the Provost's brewhouse, but it found an early external use for the doorcase of St Matthew's Church in Irishtown near Dublin.[14] This seems late given that the stone makes up the Dublin and Wicklow Mountains only 12 miles (20 kilometres) to the south of the city. While granite had been quarried from ancient Egypt for millennia (being used for columns in Rome's Pantheon and elsewhere), quarrying technologies did not permit its extraction in considerable volume in Dublin until the mid-1700s. Two loci of granite quarrying developed on either side of the Wicklow mountains, but the quarries on the west were more productive – possibly on account of the laying out of a road system that allowed for rapid delivery of stone to the city.[15] On the east side, transport was more difficult and stone use was largely confined to projects overseen for the landowner Richard Wingfield, 1st Viscount Powerscourt as discussed in Melanie Hayes's chapter in this volume. Granite was reportedly first quarried in west Wicklow in the early 1700s from several openings at Baltyboys near Blessington (Fig. 8.3a) and from 1740 in more significant volumes at Woodend and Threecastles nearby and then from Golden Hill.[16] The Baltyboys stone may have been the source of the granite used in the facing of the central 'piazza' at the Parliament House, where contemporary documents show that William Borrowdale was paid £6 16*s*. 2*d*. for 'mountain stone' on 24 December 1729. In 1731 on site and in storage was 230 feet (70 metres) of ashlar and in that year nearly treble the quantity of stone was used for the exterior.[17] The chronology of this building shows that a considerable volume of granite was entering the Dublin market from west Wicklow prior to the opening of the larger quarries in 1740. Perhaps the scale of the work on the walling of the Parliament House piazza was the catalyst to the major quarrying recorded from 1740, at which time it was understood by architects how granite could be worked and utilised and it became fashionable and in demand.

Transportation networks developed in the eighteenth century allowed for the carriage of stone from quarry sources by sea, along improved Irish river navigations or later along the canal network. The position of the Portland stone quarries on the south coast of England meant that any stone ordered for Dublin could be moved exclusively by sea and unloaded on the Liffey quays. Transporting Portland stone overland, even via canal to Birmingham, was more expensive than shipping to Dublin despite the shorter distance travelled.[18] Largely destined for the Dublin market, this creamy oolitic limestone contains beds of fossil oysters and long-spired gastropods that lived in shallow seas during Jurassic times (Fig. 8.3f). Initially Portland stone was used in a limited way for the stone dressings of buildings – the stone allowed for sharp carving of straight edges and for decoration, as well as being a visual foil to red brickwork or textured granite. But like any material new to a market it may have taken some time for clients and architects to accept its value. At the Royal Hospital Kilmainham (1680–4, Fig. 8.7) Portland stone was used for the window surrounds and cills of the central pedimented projections only, with brick employed for window dressings elsewhere. Portland was also

Figure 8.7: North front, Royal Hospital at Kilmainham.

Photograph courtesy of Marcus Lynam.

employed alongside Calp limestone in the pilasters and doorcase on the principal north front, though the Corinthian capitals are in fact carved in wood. This imported limestone was even emulated in fictive form in painted timber tympana to the principal arched entrances.[19] Portland stone details are also found in domestic buildings of the earlier eighteenth century; at Powerscourt in County Wicklow dressings of Portland stone were combined with local granite masonry in 1734.[20] In Dublin's Henrietta Street the large red-brick town houses of the 1730s had window cills of Portland stone. After the 1730s usage increased significantly, so that by 1741 the volume being shipped to Dublin was 236 tons and in 1755 188 tons.[21] For Castle Coole, Armar Lowry-Corry, 1st Earl Belmore reportedly spent £12,000 on Portland stone that was transported by sea to Ballyshannon, County Donegal in the brig *Martha* and then carted ten miles (16 kilometres) to Lough Erne where it was carried on lighter vessels to the building site.[22] This was a complex logistical matter not without difficulties: on one occasion stone had to be salvaged from Lough Erne on account of the sinking of the vessel transporting it.[23] In the 1980s Portland stone was brought in by the National Trust for use for repairs and replacement of decayed and damaged masonry.[24]

Portland stone and Leinster granite appear to have been first combined at the Parliament House in Dublin (Fig. 8.8) and were later

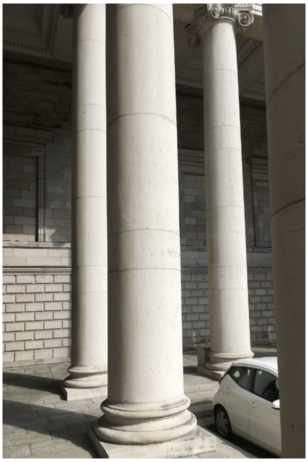


Figure 8.8: Former Parliament House, Dublin. Granite ashlar with lower-level rustication and Portland stone columns: a typical use of Irish and imported stone in eighteenth-century Dublin.

Photograph by Patrick Wyse Jackson.

used on the West Front of Trinity College (1752–9), followed by a sequence of other monumental buildings in Dublin city, including the Blue Coat School (1773–5), the Custom House (1781–91) and the General Post Office (1814–18).[25] This to many observers is the 'typical' Dublin stone use of the period. Leinster granite provided Dublin with bulk and a coarse lithological texture that had to be augmented with lithological finesse through utilisation of Portland stone in which fine carved elements were achieved. Drawing these two lithologies together provided buildings with a pleasing visual cohesion given the pale palette utilised, and avoided garish mixtures of other colours. Calp and Portland or Scrabo sandstone and Portland were not attempted, presumably for this reason. In some buildings a solitary stone type was adopted by the architects for the façades. At the Printing House in Trinity College (Fig. 8.9), Portland makes up the fine rustication and columns of the portico but is contrasted strongly with the side and end wall constructed of roughly finished Calp limestone, which the user and viewer were presumably meant to ignore. The latter was simply a working stone to hold the building together and not to present a fresh and attractive face to the exterior. Similarly, the façades of the Royal Exchange (now City Hall, Fig. 8.10), begun in 1769, and Newcomen's Bank (begun 1781) opposite on Castle Street, William Chambers' Casino at Marino (c.1758–76) and James Gandon's Custom House (1781–91, Fig. 8.11) extensively

Figure 8.9: Portland stone portico, Printing House, Trinity College Dublin. Photograph by Patrick Wyse Jackson.

Figure 8.10: Portland stone, interior, former Royal Exchange, Dublin. It is possible that the Portland floor with insets of Kilkenny black marble was restored in the early twentieth century.

Photograph by Patrick Wyse Jackson.

Figure 8.11: Portland stone exterior, Custom House, Dublin, with keystone by Edward Smyth depicting the River Barrow.

© CRAFTVALUE.

utilise Portland stone. In the latter two buildings the degree of carved ornamentation offsets the pale mass of the façades, while in those on Castle Street the stone is less worked and this extravagance not evident to the same degree. The versatility of Portland allowed for both extremes:

arguably Thomas Ivory exploited the flat-white, monotone, pale, fine-textured character of Portland to optimum effect on his Newcomen Bank with ashlar masonry and discrete passages of ornament, whereas in the Custom House the opposite is true: the mass of stone in its 375-foot (114-metre) façade required extensive carving so that it did not present a flat monolithic block.

Ardbraccan limestone

The arrival of Ardbraccan limestone in 1745 onto the Dublin market was driven by local economic and personal factors. It was first employed in any significant volume on Kildare House (now Leinster House, Fig. 8.12), the town house of the Earl of Kildare. Local limestone had already been favoured for his country house at Carton, County Kildare.[26] In 1759 it was selected for the façade of the Provost's House on Grafton Street (Fig. 8.13), and perhaps here the choice of stone was made through the influence of the Darleys.[27] Quarried by George Darley at the White Quarry near Navan in County Meath, so named to reflect the colour of the extracted stone (although it is pale grey rather than creamy white), it was

Figure 8.12: Ardbraccan limestone, Leinster House, Dublin. The pale ashlar inserts are in Lecarrow limestone from County Roscommon and date to a recent restoration.

Photograph by Patrick Wyse Jackson.

Figure 8.13: Ardbraccan limestone, Provost's House, Trinity College Dublin. The icicle rustication on the ground floor has allowed for the build-up of soot and gypsum while the upper story, being plain ashlar, remains cleaner. Photograph by Stephen Farrell.

used in various provincial houses, such as the Bishop of Meath's residence close by at Ardbraccan and for Bellinter House, County Meath.[28] This stone is composed of crystals of calcium carbonate that precipitated from warm Mississippian seawater and settled on the seabed in layers that buried various organisms, such as crinoids, which became fossilised (Fig. 8.3e). In this stone the crinoid stems appear as thick pencil-like expansions and are quite coarse – and as a result a very smooth, chiselled finish could not be obtained by the stonemasons. When viewed at a distance, as in the upper storeys of both the Provost's House and Leinster House, such coarseness would not be problematic; at eye level the coarseness has been visually removed in the former by the clever addition of icicle rustication, which no doubt was difficult to achieve for the stone carver – and expensive. At Charlemont House (now the Hugh Lane Gallery), begun in 1763, Ardbraccan was used for ashlar with Portland stone for window and other dressings. Although both are pale in colour, Ardbraccan is darker and would have been difficult to carve to the same degree of fidelity as Portland, but produced excellent ashlar.

Patriotic and economic motives

While emulation of London and projection of political status are most likely reflected in the usage of white English limestone, its combination with local materials implies pragmatic and economic motives. In a memo to the Irish Parliament accompanying his designs for a new parliament building Edward Lovett Pearce extolled the use of native building material, recommending Kilkenny marble or limestone for the columns of the House of Lords 'which is equal in goodness and Beauty to any Foreign Marble and the Produce of the Kingdom'.[29] The opportunity afforded by Irish stone sources both for exterior and interior decorative work is also recorded in a letter dated 29 July 1722 to Sir John Percival from George Berkeley: 'Castletown [the country house of William Conolly, Speaker of the Irish Parliament] ... is to be of fine wrought stone, harder and better coloured than the Portland'.[30] Likewise, when considering stone for chimneypieces at Castletown, Percival advised, 'You will do well to recommend to him [Conolly] the making use of all the marbles he can get of the production of Ireland for his chimneys ... I would have it as it were the epitome of the kingdom, and all the natural rarities she afford should have a place there'.[31] William Conolly utilised Kilkenny black limestone most strikingly in the hallway for the chimneypiece and black floor tiles that alternate with Portland stone, while the principal rooms had ornate chimneypieces carved

Figure 8.14: Black marble flags and chimney piece of Kilkenny limestone, Entrance Hall, Castletown, County Kildare.

Photograph by Andrew Tierney.

from Italian stone (Fig. 8.14). He didn't heed Percival's advice even though reddish marble and fossiliferous greys were known at this time from southern counties including Berkeley's diocese of Cloyne. While Pearce's urging of native stone has been interpreted as 'an obvious sop to the patriots', the extent of local materials employed at the Dublin Parliament House is striking and aligns with the economic motives of Speaker Conolly in responding to economic recession – and is articulated by Berkeley as employing 'many Hands' to 'keep the Mony circulating at home'.[32]

The native Kilkenny limestone referred to by Pearce was widely employed for external and internal work during the eighteenth century but was not a significant facing stone in Dublin, perhaps because of the distance of the quarries from Dublin and the cost of transportation. In Kilkenny city locally quarried limestone was used for general building, as seen in the Tholsel and Kilkenny Castle, and the best beds were retained for polished work known as marble. Transportation of stone southwards through Waterford was expensive and so only the prime 'marble' was sent to Dublin, London and elsewhere for internal utilisation in polished and carved elements, decoration and flooring. It was not economically viable to send large volumes of the limestone to distant markets. However, its history of use in England as a marble demonstrates the long-standing trade in stone between England and Ireland, which would increase significantly with the building of the Parliament House. Prized for interior elements and amenable to polish, Kilkenny marble had been used since the seventeenth century and was extensively employed in the eighteenth century thanks to the enterprising Alderman William Colles, who established a marble mill at Maddockstown south of Kilkenny in 1730.[33]

The importation of stone between Ireland and England was a two-way process. Inigo Jones sought out sources of Irish limestones for St Paul's Cathedral and other buildings in London and procured 'Black Irish Marble' (probably from Kilkenny) for the steps of St Paul's Cathedral.[34] Little Island red limestone from County Cork was intended for Queen Anne of Denmark's house at Greenwich and Donegal white marble for Arundel House.[35] It is surprising that Irish stone was imported when other similar lithologies were available in Britain or Belgium. Compare Kilkenny black limestone with Derbyshire or Namur limestones and only the most skilled petrologist can distinguish between them. Fossiliferous limestone was known of in Derbyshire and, later, Devonshire marbles yielded red varieties akin but not identical to the Cork red marble. Patronage of the Irish landowners, such as the Earl of Cork and the Duke of Ormonde in Kilkenny, and enhancement of their financial interests probably drove the efforts to increase importation of stone from their estates into England.

Similarly, sitting Lord Lieutenants of Ireland such as Arthur Capel, 1st Earl of Essex (1631–83) were captivated by some Irish stone varieties. In Capel's case, he ordered chimneypieces of irish Marble for his country house Cassiobury Park in Hertfordshire, which is discussed in Mechthild Baumeister and Andrew Tierney's chapter in this volume.[36]

If transportation of Kilkenny limestone was uneconomic except for marble, then Ardbraccan limestone was less constrained due to the proximity of the quarry to the river Boyne and easy access to the Irish Sea and the Dublin market. As has been noted at Kildare House (now Leinster House) in Dublin, the entrance front was faced in this stone and blocks would have arrived by barges and were delivered to the Liffey quaysides. Similarly, William Conolly's country house at Castletown was faced with a pale limestone from Carrick Hill near Edenderry, and Calp limestone quarried on his estate provided masonry for the wings and side façades. Why were these local limestones utilised? Perhaps there was an element of patriotism in doing so, but also basic economics played a considerable part in the choice. While Portland stone could have been obtained, both Conolly and Kildare agreed to the use of Irish limestones (one Ardbraccan; the other Edenderry) that reflected some characteristics of the English stone: both are quite pale and that from Edenderry is also oolitic. The choice of Irish stone undoubtedly reduced the final cost of the building works. As has been noted, Ardbraccan and Portland stone coexist at Charlemont House and again the proportions of both suggest that James Caulfeild, Earl of Charlemont was interested in economic savings; after all his was a privately financed house whereas those buildings largely faced in the more expensive Portland stone, such as the Custom House and the Royal Exchange, were publicly financed.

In early twentieth-century Ireland stone procurement and use were the matter of some political, economic and cultural debate. Following the burning of the Custom House in 1921 the dome was restored not with Portland but with Ardbraccan limestone and the colour contrast is stark, with the newer portion incongruously capping the paler older fabric; this choice of replacement stone at the height of nationalistic activities was undoubtedly influenced by these considerations rather than by architectural aesthetics. Certainly, the choice of Portland stone for the Royal College of Science (now Government Buildings), erected on Merrion Street a decade earlier in 1911, was not well received amongst some local politicians and in the public press, where it was noted that Irish stone was available and should have been used.[37]

Texture and enhancement: crafting the stone surface

Of all the stone types used in Dublin during this period Portland stone could be worked by skilled stonemasons into a very smooth finish and, where they could do so, blocks of stone and columns were closely interlocked with thin joints. This finish, as noted, most closely conforms to that of Greek and Roman buildings but it leads to monotone, flat façades – such as in parts of the Custom House and City Hall (former Royal Exchange), which the architects and their craftsmen enlivened with the discreet use of sculptural ornament. The most obvious addition of texture to Portland stone came through the inclusion of highly ornate capitals, predominantly of the Ionic and Corinthian orders. On initial entry into the Dublin market this stone presented some problems for attending architects who found that the Dublin stone carvers, used to working the Calp, were insufficiently skilled to carve the exquisite designs required. Edward Lovett Pearce had to bring in stonecutters such as William Borrowdale, Thomas Gilbert and Benjamin Simpson, seemingly from England, to work on the Parliament House being erected in 1729–39, and Lord Charlemont engaged Simon Vierpyl to work on the Casino at Marino (Fig. 8.15).[38] Transposing skilled workers from Britain was common in the Irish stone industry: early masons travelled with Dundry stone from Somerset in the twelfth and thirteenth centuries and in the

Figure 8.15: Decorative carving in Portland stone, Casino at Marino, Dublin, c.1758–76.

Courtesy of Felix Martin, Photograph by Tim Scheuer.

1800s skilled slate quarrymen moved from Wales to the Irish slate districts, ostensibly to educate the Irish workers in slate manufacture.

To achieve additional visual texture in Richard Castle's Printing House (1734–6, Fig. 8.9) in Trinity College, the front façade behind the tetrastyle portico is rusticated and minimal carving of the frieze with triglyphs and guttae was executed by the Irish stonecutter Moses Darley working with the aforementioned Thomas Gilbert, as discussed in Edward McParland's chapter in this volume.[39] The stone carver James Robinson added superlative festoons to the West Front of the College in the 1750s (Fig. 8.16). The spectacular undercutting of fruit and flowers in the highly realistic manner popularised by Grinling Gibbons could not have been achieved in any of the other stone types available to carvers in Dublin in the period. A more economical solution employed in certain Portland stone façades was to execute the carved details in a cheaper, composite material – the Rotunda Assembly Rooms (1764), for instance, is ornamented with a frieze of oxen skulls (bucrania) cast in Coade stone and a similar assemblage of materials is found in the decorations of the Rutland Fountain on Merrion Square West.[40]

Figure 8.16: Festoon, West Front, Trinity College Dublin, by James Robinson.

© CRAFTVALUE.

The other stone types prevalent in eighteenth-century Dublin – Leinster granite, Scrabo sandstone and Ardbraccan limestone – could not be given as close and smooth a finish on account of their coarser nature. It is probable that on all building sites in Dublin stonemasons squared off the blocks before being fitted and so prepared for carving; this was a practice carried out since Roman times where the banker mason cut, or bossed, the stone into shape ready for the skilled hand of the stone carver to adorn.[41] The different inherent textures of stone produced under various geological processes of formation enhanced the visual impact of the buildings in which they were utilised. Light playing on Leinster granite would have been reflected by the interlocking crystals of glassy grey quartz, white feldspar and silvery mica. The pulsed injection of magma gave rise to the Leinster granite and its cooling history dictated its texture. Within the Leinster granite batholith – which stretches from Killiney, County Dublin to County Carlow in the south – a number of plutons, or individual masses of granite, formed and each has a distinctive textural characteristic. The granites that were quarried at Baltyboys, Blessington, Woodend, Threecastles and Golden Hill in west County Wicklow, as well as those from Glencree, consist of crystals that were of similar size having been formed at the same time, whereas granite from Three Rock Mountain and Glencullen contained conspicuous crystals of mica up to half an inch (12 mm) wide (Fig. 8.3b). The equigrained granites quarried from the western edge of the granite exposure were used for Russborough House in County Wicklow, the Parliament House, the West Front of Trinity College and the General Post Office in Dublin, while the Glencree variety from the eastern side of the mountains was used by Viscount Powerscourt both for his country house near Enniskerry and his townhouse on South William Street, as discussed by Melanie Hayes in this volume. Although rather homogeneous in terms of their composition, these granites exhibit some flow textures formed during injection phases, which enliven the surface. A noted use of the coarser granite is in cut stone in some of the walls around Dublin Castle.[42] Some carving was attempted in granite, but the crystalline coarse fabric did not allow for the precise and delicate features that could be achieved in Portland stone.

Geological streetscapes: Dublin in the wider British context

The geological range of stone types in Britain is far greater than in Ireland, where most of the Mesozoic rocks were removed by erosion. In sweeping bands of stone running broadly north-east to south-west these Mesozoic districts in England yielded Purbeck limestone, Portland stone, Bath stone, Lincolnshire stone and the older Permian Anston magnesian limestone used for the Houses of Parliament in London, as well as a range of reddish and yellow Permo-Triassic sandstones.[43] With the exception of a small patch of the last-named in the north-east, these rock types do not crop out in Ireland at all. English cities – such as Nottingham and Bath, to name but two – relied on local stone sources for building, and the colour range available was very limited. Scotland produced fine-grained russet and purple sandstones from many historic quarries including those at Craigleith and Locharbriggs, which supplied much stone with the latter still being worked.[44] Granite was quarried commercially from Aberdeen from 1602 and yielded both a grey variety, Rubislaw granite, and a red stone, Peterhead granite that became highly popular in the Victorian period.[45] Granite was quarried in lesser volumes in Devon and Cornwall, but all of the British varieties differ from those in Ireland in terms of their colour and texture.

London in the eighteenth century utilised a broad range of Mesozoic limestones and sandstones, their pale colour enhancing the imperial pretensions of the capital. Polychromatic stone is not evident in London's façades and only appeared with gusto when the Victorians began to build in the city. In Edinburgh the monumental buildings of the period were constructed in yellow and red sandstones, as were the buildings in Nottingham, while the Newcastle stone was darker and geologically older.[46] Use of all of these monochromatic schemes imparted a rather flat vista to the streetscapes in which the stone appeared rather one-dimensional, and texture had to be obtained from carvers and sculptors working this stone. It was only with the deposition of copious volumes of soot on the stone surfaces during the industrial revolution that the three-dimensional elements of the detailed carvings were picked out and visually enhanced. Recent cleaning of some English buildings, especially in Newcastle upon Tyne, has reversed this visual impact. Dublin is unique amongst eighteenth-century cities in Ireland and Britain in the provision of a double lithological duality of the greys and creams of Portland stone and Leinster granite, Ardbraccan limestone and Leinster granite and the contrasting yellow of Scrabo sandstone coupled with the dark Calp limestone. This rendered a distinctive urban ambience to Dublin, which differed from the creamy or russet streetscapes of Britain produced through use of Mesozoic limestones and sandstones.

Conclusion

Whether the architects responsible for designing eighteenth-century Dublin were aware of the geological influences on their work is debatable, but the same can be said of the inhabitants who walked the streets and lived and worked in their buildings. The geological foundation and the way that stone has been used does contribute a vitality to the urban setting and subconsciously emanates a sense of stability and place. Dublin is unique amongst eighteenth-century cities in that it adopted a palette of different lithologies, which have provided a dual colour scheme. Geological material imparts texture and colour to the fabric of the city – for Dublin the lithological distinctiveness seen in its buildings and pavements provides a subliminal character that continues to impact on its citizenry and visitors.

Acknowledgements

The authors gratefully thank the editors for commissioning this chapter, and an anonymous reviewer for commentary on Jones's Banqueting Hall and details of bossed uncarved stonework in England, noted here in endnote 41. Our thanks also to Felix Martin for providing photographs of the Casino at Marino.

Notes

1 Caulfield, 'The Irish marble industry and the Museum Building', 13–51.
2 Waterman, 'Somersetshire and other foreign building stone in medieval Ireland', 63–75.
3 Primavori, 'Carrara marble', 137–54; Payne, 'The thin white line', 145–82.
4 Williamson, *Inigo's Stones*, 5, 191; Elsden and Howe, *The Stones of London*, 34; Bianco, 'Portland stone and the architectural history of London', 33–47; Campbell, 'Supply of stone for the rebuilding of St Paul's Cathedral', 23–49.
5 Key et al., 'Use of Aquia Creek sandstone', 5–6; Kapsch, *Building Washington*, 52; Unterwurzacher and Obojes, 'White marble from Laas (Lasa), South Tyrol', 26–37.
6 Details of stone sources given in Clifton-Taylor, *Pattern of English Building*, 70.
7 Hussey, 'Granite quarrying and the migration of quarrying communities', 79–101.
8 'Carrs' is an eighteenth-century term for carts used for transporting stone.
9 Curran et al., *Stone by Stone*, 53.
10 Pilkington et al., *Darley Collection Royal Irish Academy Special List No. A045*, 4.
11 Portions of the carved cornice probably survived due to being located in a relatively sheltered position compared with the ashlar walling. Nevertheless, some stone has been lost from the latter areas and were replaced with mortar repairs.
12 Monck Mason, *History and Antiquities of the Collegiate and Cathedral Church of St Patrick near Dublin*.
13 Wyse Jackson, *The Building Stones of Dublin*, 14; Ó Cionnaith, *Exercise of Authority*, 27.

14 Hussey, 'Granite as a building material in Dublin'; Gibney, *The Building Site in Eighteenth-Century Ireland*, 171.
15 Hussey, 'Granite quarrying and the migration of quarrying communities', 79–101.
16 Hussey, 'Granite quarrying and the migration of quarrying communities', 79–101.
17 Melanie Hayes, personal communication, October 2021.
18 Wyse Jackson, *The Building Stones of Dublin*, 15.
19 McParland, *Public Architecture*, 59–60.
20 NLI (National Library of Ireland) MS 3162, fol. 112 'The New Buildings carrying on at Powerscourt', 14th September 1734.
21 Hackman, *Stone to Build London*, 94, reporting on the port books for Weymouth.
22 Belmore, *The History of the Two Ulster Manors*, 264.
23 Marson, *Belmore: The Lowry Corrys of Castle Coole 1646–1913*, 63.
24 See Belmore, Earl of, 'Foreword' In Marson, *Belmore: The Lowry Corrys of Castle Coole 1646–1913*, xiii.
25 McParland, *Public Architecture*, 191.
26 Hand, 'The White Quarry', 154.
27 The cost of Ardbraccan stone for the entrance front was £586 10*s*. 8*d*. (TCD MUN/P2/142). Account of George Darley for hewn stonework at the Provost's House, reproduced in Hand, 'The White Quarry', 155–6.
28 Hand, 'The White Quarry', 138–59.
29 NLI D20,209, Note on designs for Houses of Parliament, Dublin, by E. L. Pearce, 7 March 1727/8.
30 Berkeley to Percival 29 July 1722, quoted in Rand, *Berkeley and Percival*, 194.
31 Percival to Berkeley 5 August 1722, quoted in Rand, *Berkeley and Percival*, 195–6.
32 Usher, *Protestant Dublin 1660–1760,* 140; McParland, 'Building the Parliament House in Dublin', 137.
33 Hand, '… Descriptive accounts of the Kilkenny marble works', 74–9.
34 Campbell, 'Supply of stone for the rebuilding of St Paul's Cathedral', 45.
35 Williamson, *Inigo's Stones*, 268, 272.
36 Bray, *Diary and Correspondence of John Evelyn*, 140.
37 Butler-Warke and Warke, 'Foundation stone of empire', 8.
38 McParland, *Public Architecture*, 159, 191, 211.
39 McParland, *Public Architecture*, 191.
40 Casey, *Dublin*, 164.
41 Wootton et al., 'Stoneworking techniques and processes', 8. While no examples of bossed stone have been identified in Georgian Dublin the rear façade of Nostell Priory in Yorkshire contains an unadorned pediment and the Wellington Arch in London is lacking the garlands planned for its frieze. In Dublin some of the Victorian stonework at the main entrance of St Anne's Church remains bossed and uncarved.
42 Wyse Jackson, *The Building Stones of Dublin*, 23.
43 Lott and Richardson, 'Yorkshire stone', 265–72.
44 McMillan et al, *Building Stones of Edinburgh*.
45 Donnelly, *The Aberdeen Granite Industry*. It was first introduced into Dublin in 1863, Wyse Jackson and Caulfield, *The Building and Decorative Stones of Dublin*.
46 Horton and Lott, 'Building stones of Nottingham', 115–26; Anon., *Strategic Stone Study*.

References

Anon. *Strategic Stone Study: A building stone atlas of County Durham, Tyne and Wear, and Cleveland.* Swindon: Historic England, 2017.

Belmore, Earl of. *The History of the Two Ulster Manors of Finagh, in the County of Tyrone, and Coole, otherwise Manor Atkinson, in the County of Fermanagh*. London and Dublin: Longmans, Green and Alex. Thom, 1881.

Bianco, Lino. 'Portland stone and the architectural history of London: an overview', *Mesto a Dejiny* 6 (2017): 33–47.

Bray, William, ed. *Diary and Correspondence of John Evelyn*, volume 2. London: Henry Colburn, 1850.

Butler-Warke, A. and M.R. Warke. 'Foundation stone of empire: the role of Portland stone in "heritage", commemoration and identity', *Transactions of the British Institute of Geographers* (2021): 1–15.

Campbell, James W.P. 'The supply of stone for the rebuilding of St Paul's Cathedral 1675–1710', *Construction History* 28 (2013): 23–49.

Casey, Christine. *The Buildings of Ireland: Dublin*. New Haven, CT and London: Yale University Press, 2005.

Caulfield, Louise. 'The Irish marble industry and the Museum Building'. In *The Museum Building of Trinity College Dublin: A model of Victorian craftsmanship*, edited by Christine Casey and Patrick Wyse Jackson, 13–51. Dublin: Four Courts Press, 2019.

Clifton-Taylor, Alec. *The Pattern of English Building*. London: Faber and Faber, 1987.

Curran, J., P. Warke, D. Stelfox, B. Smith and J. Savage. *Stone by Stone: A guide to the building stone in the Northern Ireland environment*. Belfast: Appletree Press, 2010.

De Latocnaye, Le Chevalier [de Bougrenet, J.L.]. *A Frenchman's Walk Through Ireland 1796–7,* translated from the French of De Latocnaye by John Stevenson. Belfast: Blackstaff Press, 1984.

Donnelly, Tom. *The Aberdeen Granite Industry*. Aberdeen: Centre for Scottish Studies, the University of Aberdeen, 1994.

Elsden, James V. and John A. Howe. *The Stones of London*. London: Colliery Guardian, 1923.

Gibney, Arthur. *The Building Site in Eighteenth-Century Ireland*, edited by Livia Hurley and Edward McParland. Dublin: Four Courts Press, 2017.

Hackman, Gill. *Stone to Build London: Portland's legacy*. Bradford-upon-Avon: Folly Books, 2014.

Hand, Tony. 'The White Quarry, Ardbraccan', *Irish Architectural and Decorative Studies* 8 (2005): 138–59.

Hand, Tony. '"Doing Everything of Marble wch can be Done with it": some descriptive accounts of the Kilkenny marble works', *Irish Architectural and Decorative Studies* 11 (2008): 74–99.

Horton, A. and G. Lott. 'Building stones of Nottingham', *Mercian Geologist* 16 (2005): 115–26.

Hussey, John. 'Granite as a building material in Dublin in the early eighteenth century', *History Ireland* 22 (2006): 18–20.

Hussey, John. 'Granite quarrying and the migration of quarrying communities from Golden Hill to Ballyknockan, *c*.1700–*c*.1850'. In *The Museum Building of Trinity College Dublin: A model of Victorian craftsmanship*, edited by Christine Casey and Patrick Wyse Jackson, 79–101. Dublin: Four Courts Press, 2019.

Kapsch, Robert J. *Building Washington: Engineering and construction of the new federal city, 1790–1840*. Baltimore: Johns Hopkins University Press, 2018.

Key, M.M. Jr., S.B. Lieber and R.J. Teagle. 'An historical geoarchaeological approach to sourcing an eighteenth century building stone: use of Aquia Creek Sandstone in Christ Church, Lancaster County, VA, USA', *Geoheritage* 12:4 (2020): 1–14.

Lott, Graham K. and C. Richardson. 'Yorkshire stone for building the Houses of Parliament (1839–c.1852)', *Proceedings of the Yorkshire Geological Society* 51 (1997): 265–72.

Marson, Peter. *Belmore: The Lowry Corrys of Castle Coole 1646–1913*. Belfast: Ulster Historical Foundation, 2007.

McMillan, A.A., R.J. Gillanders and J.A. Fairhurst. *Building Stones of Edinburgh*. Edinburgh: Edinburgh Geological Society, 1999.

McParland, Edward. *Public Architecture in Ireland 1680–1760*. New Haven, CT and London: Yale University Press, 2001.

McParland, Edward. 'Building the Parliament House in Dublin', *Parliamentary History* 21:1 (March 2002): 131–40.

Monck Mason, William. *The History and Antiquities of the Collegiate and Cathedral Church of St Patrick near Dublin*. Dublin: The author, 1820.

Ó Cionnaith, Finnian. *Exercise of Authority: Surveyor Thomas Owen and the paving, cleansing and lighting of Georgian Dublin*. Dublin: Dublin City Council, 2015.

Payne, Alina. 'The thin white line: Croatian ruins, white cities and the Adriatic imagination'. In *Dalmatia and the Mediterranean: Portable archeology and the poetics of influence*, edited by Alina Payne, 145–82. Leiden: Brill, 2014.

Pilkington, P., P. Schnabel, S. Allen and K. De Lacey. *Drawings of Chimney-pieces Created by George and Hill Darley in the Course of their Work as Stone-cutters in Dublin between c.*

1757–1813. Darley Collection Royal Irish Academy Special List No. A045. Dublin: Royal Irish Academy, 2015.
Primavori, P. 'Carrara marble: a nomination for "Global Heritage Stone Resource" from Italy', *Special Publications, Geological Society* 407 (2015): 137–54.
Rand, Benjamin. *Berkeley and Percival: The correspondence of George Berkeley afterwards Bishop of Cloyne and Sir John Percival afterwards Earl of Egmont*. Cambridge: Cambridge University Press, 1914.
Unterwurzacher, M. and U. Obojes. 'White marble from Laas (Lasa), South Tyrol – its occurrence, use and petrographic-isotopical characterization', *Austrian Journal of Earth Sciences* 105 (2012): 26–37.
Usher, Robin. *Protestant Dublin 1660–1760: Architecture and iconography*. London: Palgrave Macmillan, 2012.
Waterman, D.M. 'Somersetshire and other foreign building stone in medieval Ireland, *c*.1175–1400', *Ulster Journal of Archaeology* 33 (1970): 63–75.
Williamson, Tom. *Inigo's Stones: Inigo Jones, royal marbles and imperial power*. London: Matador, 2012.
Wootton, W., B. Russell and P. Rockwell. 'Stoneworking techniques and processes (version 1.0)', *The Art of Making in Antiquity: Stoneworking in the Roman world*, 2013. Accessed 1 July 2022. http://www.artofmaking.ac.uk/content/essays/3-stoneworking-techniques-and-processes-w-wootton-b-russell-p-rockwell/.
Wyse Jackson, Patrick N. and Louise M. Caulfield. *The Building and Decorative Stones of Dublin: A walking guide*. Dublin: Geological Survey Ireland, 2021.

Further reading

Barry, Fabio. *Painting in Stone: Architecture and poetics of marble from antiquity to the enlightenment*. New Haven, CT and London: Yale University Press, 2020.
Browne, Margaret. 'The limestone industry of Limerick'. In *Made in Limerick*, edited by D. Lee and D. Jacob, 165–94. Limerick: Limerick Civic Trust, 2003.
Glin, the Knight of and James Peill. *Irish Furniture: Woodwork and carving in Ireland from the earliest times to the Act of Union*. New Haven, CT and London: Yale University Press, 2007.
Hussey, Christopher. 'Castlecoole, County Fermanagh', *Country Life* 80:2083 (1936): 654–9; 2084 (1936): 682–7.
Montgomery, S.L. 'The eye and the rock: art, observation and the naturalistic drawing of earth strata', *Earth Sciences History* 15 (1996): 3–24.
Ruch, J. 'Coade stone in Ireland', *Quarterly Bulletin of the Irish Georgian Society* 13 (1970): 1–12.
Sheaff, Nicholas. *Iveagh House: An historic description*. Dublin: Department of Foreign Affairs, 1978.
Stalley, Roger. 'Masons and their materials in medieval Ireland'. In *Working with Limestone: The science, technology and art of medieval limestone monuments*, edited by V. Olson, 209–26. Abingdon: Ashgate, 2017.
Wyse Jackson, Patrick N. *The Building Stones of Dublin: A walking guide*. Dublin: Country House, 1993.

9

Drawing out a surface in lime and hair

Jenny Saunt

The decorative plaster ceilings produced in England between 1660 and 1700 have long been noted for their extreme appearance, presenting as they do a wild and wonderful miscellany of subject matter made in dramatic high relief and, sometimes, fully three-dimensional form.[1] In 1908 George Bankart commented that this period of plaster 'put one in mind of Christmas Bazaar decorations', and the style is well demonstrated by focusing on just a small section of the Long Gallery ceiling of Sudbury Hall, Derbyshire, made in the 1670s (Fig. 9.1).[2] Bold mouldings define the space, creating a circle inside a square, and the fields created by these are filled to bursting with locusts, flowers, foliage, fruit, scrolling ribbons and large decorative urns. All of this is executed in high relief and the flowers and locusts are fully three-dimensional. Multiplied to fill the entire 167 feet (51 metres) of the Long Gallery ceiling, this is a style of plasterwork that makes its presence felt. Yet exactly how or why this period of plasterwork looked this way has seen little analytical discussion. The plasterers who made the work have been recognised as the designers, but the mechanics of *how* their making and designing worked together has remained obscure. This chapter demonstrates how these ceilings were made, from the creation of the initial flat ground through to the last ornamental detail, to show how that making was related to decisions of form. By interrogating this process alongside the new wave of drawing manuals being published throughout that period, it also offers new understandings and insights into the reasoning and processes that produced these animated surfaces.

Figure 9.1: Section of the Long Gallery ceiling of Sudbury Hall, Derbyshire, 1670s.

© National Trust Images/Andreas von Einsiedel.

The material properties of the lime-plaster mortar mix used in this period are well recorded and researched.[3] It was a composite mix of lime putty (imagine a substance the consistency of wet clay or room-temperature butter), sand and hair, which would remain workable for up to a couple of hours – setting time was dependent on temperature and humidity of environment, but full drying out would take months. Beyond this knowledge our understanding of how this material was manipulated or modelled, and the type of decision-making process involved in that, shares the principal difficulty of all studies of building trades in early modern England: because craftsmen did not write down anything about their working practices these are now extremely hard to trace.[4] To rediscover an historical, obsolete way of making something means seeking out not only lost practical details of production but also the ways in which the makers thought and saw. In response to the problem, this chapter takes a multifaceted approach. From the outset, it is grounded in in-depth understandings of the materials and practice of a defined context of time and place, by using a combination of photographs of a reconstructed practical demonstration piece made by the author, diagrams of historic plaster construction and examples of physical evidence from conservation reports. In addition, by drawing together groups of evidence that have not previously been read alongside the process of making plaster, the tacit nature of this process is illuminated to show *how* decisions of form took shape as part of the making of plasterwork. These early modern sources include shared territories of thinking and making that parallel the plaster production, such as instruction manuals, architectural works, contemplations of matter and builders' dictionaries.

As already hinted, the theory and practice of drawing, as revealed in drawing manuals published between 1660 and 1700, are particularly rich in parallels to how the craft of plastering was understood and practised in this period. While the relationship between drawing and making plaster has not previously been the subject of any academic study, examination quickly reveals glimpses of a long-running correspondence between them – including a shared terminology. The initial act of creating the plaster surface, laying it out on its structure, was 'drawing upon laths' or 'drawing mortar', while further plastering upon this was 'drawing in lime & haire'.[5] This description referred to the physical work of drawing, or teasing, the fibrous lime plaster out to cover the surfaces of ceiling and walls, but it nonetheless resonates with the act of drawing in pencil or ink in other ways. First, the ability to draw was part of the accomplished plasterer's armoury of skills and the fact that 'the best master', plasterer Edward Goudge, 'draughted' his own work was recorded several times.[6] Second, the interaction between plastering and drawing extends to material properties. Although one operated in three dimensions and the other in two, both drawing and decorative plastering physically depict form through highly mobile mediums that are layered or 'set' or 'dry'.

The additive nature of working in plaster is a further correspondence between plastering work and drawing. Both create and edit shape by addition rather than relying only on subtraction, as is the case with carving in wood or stone. During my own education as a plaster modeller, the additive process of drawing was used as a tool that simultaneously fostered development of design and comprehension of physical forms. The repetition of action to gradually build form by addition meant drawing a shape was a type of rehearsal for modelling that shape in plaster.

Furthermore, theories of interaction between drawing, making and design were by no means new in late seventeenth-century England. In the sixteenth century, Giorgio Vasari tested classical notions of a division between theory and practice when he touched upon drawing as a means of conceiving and rehearsing design and form. He explained that from drawing 'there arises a certain conception and judgment', things 'formed to the mind', which, 'when expressed by the hands, is called design'.[7] He also described the additive process of modelling as a 'visible expression' of 'inner conception' whereby things 'imagined' are 'given form' and wrote that for those who 'cannot draw on paper', by this 'plastique' method of addition 'they effect the same thing' by 'fashioning men, animals, and other things in relief, with beautiful proportion'.[8] This relationship between drawing and making is also presumed in the title pages and introductions of published drawing manuals of the late seventeenth century, which explicitly addressed themselves to 'handicrafts' and 'artificers' as an aid to making things 'by hand'. *A Book of Drawing* (1666), for example, opened with the statement that when the 'handicraft' [sic] is 'able to draw well', then 'he hath the groundwork to make him fit for anything by hand'.[9] As the rest of this chapter will show, an examination of the stages of decorative plastering not only bears out this relationship, it demonstrates that when the making of plaster is viewed as a form of three-dimensional drawing we are able to see the thinking that shaped design.

'Smoothness', 'whiteness' and 'the geometrical figure'

The first two stages of making a decorative plaster scheme were the creation of the initial blank ceiling and the design and production of its mouldings. Working through each stage of these processes and tracing out their correspondences to drawing instruction reveals how the blank ceiling itself could be understood as a tool for design – a space to be ornamented with ideas and drawings that would be made in plaster.

The shared goal for the first stage of the plaster ceiling and drawing paper alike was a 'smooth' and 'white' surface. Roger Pratt's notes stipulate plaster of 'exceeding smoothness and whiteness' and ceilings 'as white and smooth as if they were polished'.[10] The agreement for plastering the king's lodgings at Hampton Court required that the plaster was 'white', 'well wrought' and 'without cracks'.[11] The same was sought for a good drawing surface. Pratt recommended paper that was ‘the most smooth and fine and white’.[12] The plaster surface, once finished and ‘laid’ out as a flat ceiling, is easily conceived of as a sheet of paper. When Pratt wrote of ‘things necessary for designing’, it was this same ‘most smooth and fine and white’ paper that he put at the very top of his list.[13] In this way, Pratt made the smooth white space a tool for creating design. He explained the process of designing as one that interwove the practical preparation of the drawing surface with its use as a space in which one would work, both physically and intellectually. Pratt wrote that a ‘design itself’ in the first instance should be only ‘rudely scratched out’ or ‘roughly drawn’ on this surface. He then made the roughly marked surface a space that could be left and returned to ‘often times’, so that it could be ‘well considered’ or used in terms of both time and space to gather the ‘advice’ and ‘discourses of many’.[14] What Pratt described was not only the creation of a surface, but of a tool – a space in which ideas might be laid out or organised. Just as Joseph Connors has made ‘ideas cling’ to tools in his study of the lathe, ideas might be able to cling to a ceiling’s ‘most smooth fine and white’ surface.[15]

The key to achieving smoothness and whiteness in both drawing paper and ceilings was preparation. Pratt explained that to avoid movement and warping in paper laid out for drawing it was necessary to ‘hold down’ or ‘fasten’ it at the corners and edges, so that ‘it can no ways be apt to move’.[16] The same was true of ceilings: their underlying timber framework – the ‘rafters’, ‘framing’, ‘ceiling beams’ and ‘Joysts’, which Richard Neve referred to as the ‘carcass’ of a house – should all be well fixed and held down at the corners and edges.[17] It was on to this framework that the ‘laths’ were stretched out and nailed, a process paralleling Pratt’s advice that if paper was ‘somewhat rugged’ it could be ‘firmly stretched’ out and pinned down.[18] As Neve described them, laths were ‘long, narrow, thin strips of wood’ that came in a variety of timber types and sizes – and the size, type, quality and fixing of these were all understood to impact on the next stage of work.[19]

The final part of creating the plasterer’s drawing surface was the application of plaster. This was the part that gave ceilings, or ‘seelings’ as some architectural writing had it, their name.[20] The ‘carcass’ that Neve described was, in his words, ‘sealed’ by plaster, and with the same emphasis the Royal Works recorded apartments being ‘Well trowelled and closed’.[21] Whereas a ceiling’s whiteness was largely dependent on quality of materials, the smoothness of this ‘seeling’ work was entirely a matter of technique. In order to ‘Lay the ceilings’ flat and smooth, Pratt wrote that ‘great care is to be had that they be most neatly planned with a trowel, and after cleansed’.[22] This instruction was echoed in Pratt’s advice that, in case of ridges, drawing paper could be worked over with ‘an ivory slicker’, ‘the length and breadth most Diligently to smooth it’.[23] By this description plaster is understood as the skin of a body: not a separate, applied matter but the outer surface that expresses all of the workings and character it contains.

The diagram in Figure 9.2 shows how this ‘laying’ of plaster was undertaken in three layers to achieve the best and most even surface possible. The first coat was a coarse, gritty mix that did the job of gripping to the laths with a ‘key’: the bit of plaster pushed through the gaps between the laths, forced through as the plasterer trowels the plaster on to the laths with great pressure. The key really did have to be strong and secure because every part of the finished surface, such as mouldings and modelled ornament, would end up hanging from that key, which was in turn hanging from the lath. The role of the second coat was to even out the bumps in the first structural coat, making it flat and smooth. The final coat was to ‘finish’ the work, and was routinely discussed in Royal Works accounts as the plaster being ‘floated and sett’, so the final coat may be called the ‘finish’ or ‘set coat’.[24] When only two coats of plaster were applied, the first gripped the laths and the second did the job of the third coat as well, bringing the gritty, bumpy base coat up to a smooth and flat finish. Joseph Moxon described all the different types of trowels and floats needed for this work, which, like Pratt’s ‘ivory slicker’, were used to make the surface ‘very streight and even’.[25]

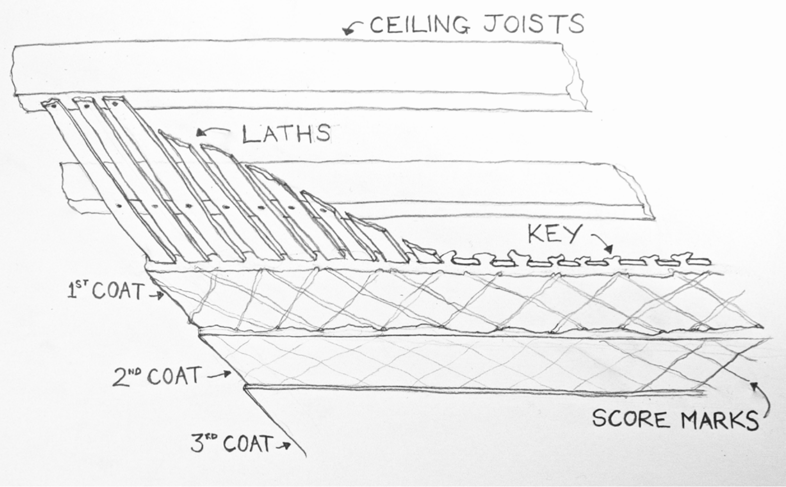


Figure 9.2: Diagram of three-coat plaster.

© Jenny Saunt.

The next stage of work was the design and production of mouldings. Though plaster mouldings are ubiquitous in buildings of this period, their design and production has been little investigated. However, when the specifics of moulding production are considered alongside the notion of 'geometrical' thinking, which drawing manuals used to explain the setting out of drawings and planning drawings of mouldings, we can see how design and making were embedded in one another in this stage of the work. Pratt's notes on ceilings instruct the reader that the mouldings, or 'divisions' as he called them, were the 'first thing to be looked to'.[26] He explained that it was 'exceedingly graceful' for ceilings to be 'divided … into noble squares, ovals, or circles, and the like' because it provided a 'just simmatrie of the parts'.[27] In the contemporary drawing manuals the 'geometrical figure' – or marking out of divisions on the page in grids, squares and circles – was starting point for making a drawing but also for learning to understand and draw shapes in order to create a composition. Henry Peacham recommended that you 'make your hand as ready as you can' by the practice of drawing 'solid and plain geometrical figures'.[28] The practice of shape making was recommended not only because it was believed to improve the hand's physical dexterity but because it was also considered a way of training in, and thus learning to control, 'gracefulness', 'symmetry' and therefore spatial and physical awareness in the practice of design.[29]

Drawing manuals taught that if a drawer could learn to see an imagined structure of gridded lines, circles or squares in all that they looked at, they would be able to analyse and perfectly recreate even the most complex of patterns or shapes. Willem Goeree's pictorial directions (1674) for drawing a child's head (Fig. 9.3) illustrated how this form could be broken down into a system of circles which were in turn ordered and divided up by lines, right angles and triangles, so that it could be understood at a glance for the arrangement of 'geometrical figures' it really was.[30] Goeree offered a way of recreating, on paper, any type of form by means of the same basic outlines. Alexander Browne's instruction (1669) was explicit about the importance of this underlying order. Its first line explains, 'such is the importance and vertue of proportion, that nothing can anyway satisfy the eye without the help thereof'.[31] He urged his readers to engage with 'the works' of Vitruvius to develop understanding of 'the grace of proportion consisting in the measure of parts'.[32] In line with Pratt, the 'first thing' that Browne 'looked to' was the divisions, the circles, ovals and squares.[33] By spaces and shapes being dictated by a grid of perspective or being broken down into triangles and squares, the underlying order of the work was ensured. In Pratt's words, it would appear 'graceful' and have the right 'just simmatrie of the parts'.[34]

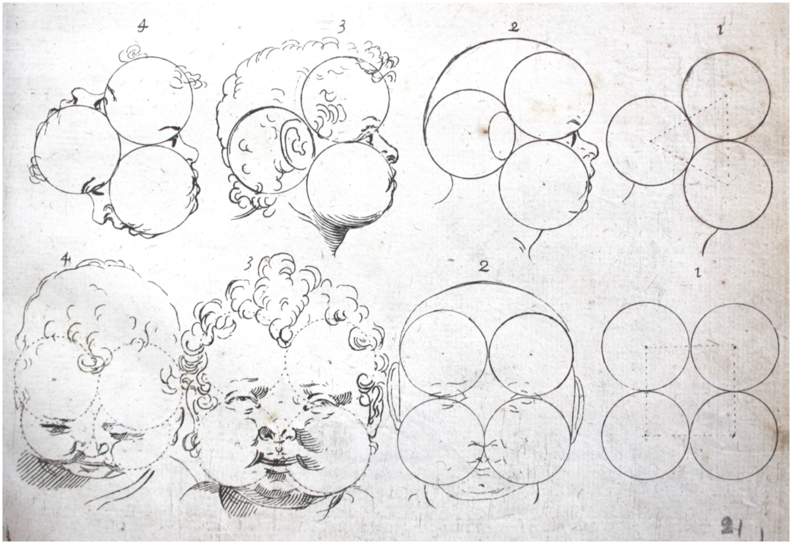


Figure 9.3: Illustration from Willem Goeree's *An Introduction to the General Art of Drawing*, published by Robert Pricke, London, 1674.

Victoria and Albert Museum. Photograph by Jenny Saunt.

If the grids provided by mouldings created a sense of underlying structure and composition in the designs of ceilings, they were simultaneously a direct link to ways of developing those designs. The use of grids, or the 'crossing' of a page, was prescribed by drawing manuals throughout the early modern period as a way, working square by square, of shrinking or enlarging images or transferring them from one surface to another.[35] In 1674, under the title 'how to draw a picture bigger or lesser', Robert Pricke published a diagram of the method (Fig. 9.4), which showed how a simple line drawing could be filled out with tone and then enlarged.

The same system of 'crossing' was used for setting out a decorative plaster ceiling at full size. As Pratt explained, 'the spaces being first measured out on top of the wall', the crossed lines could then be marked as 'intended from thence with a whited line which reached throughout' to create a giant grid on the ceiling. He went on to write that 'if there be any circle, oval etc. the centre thereof being first found out, the rest will easily be perfected with a line as aforesaid'.[36] The whited line could act as a giant compass, string held fast at the centre point and spun to mark out the necessary circle. Finally, Pratt suggested that 'if there be any difficulty therin, these divisions may first be traced out upon the floor of the room, where they are intended to be placed'.[37] In this way, the drawing could be

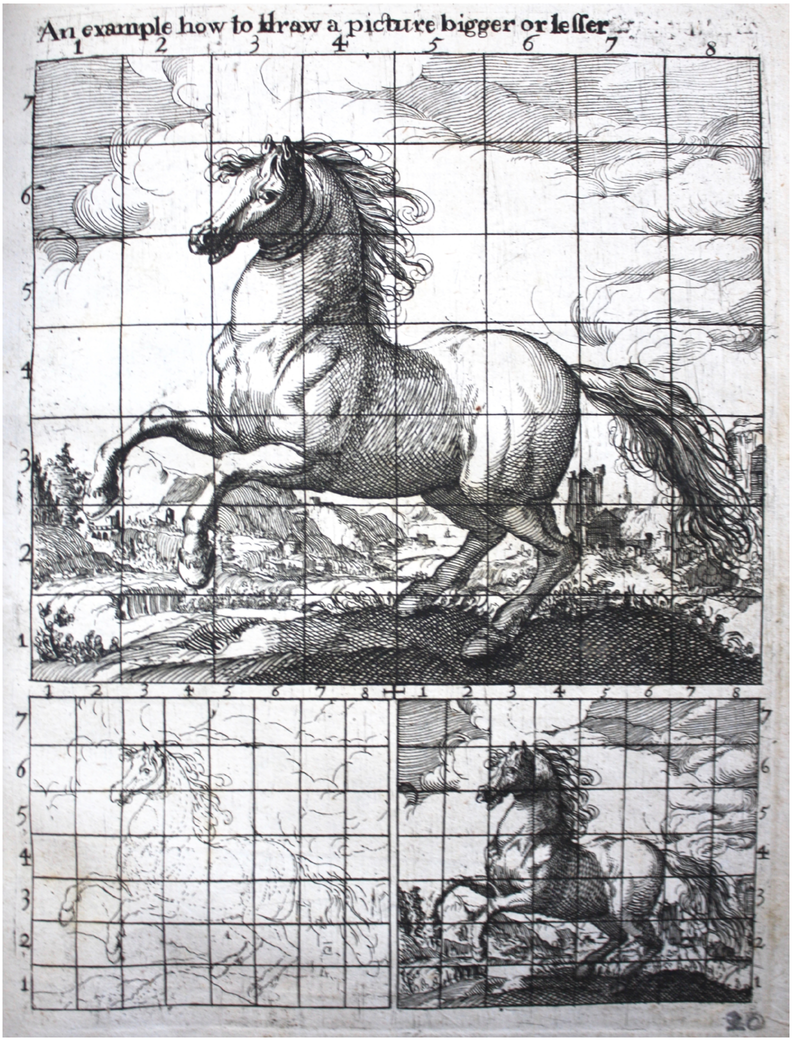


Figure 9.4: Illustration from Willem Goeree's *An Introduction to the General Art of Drawing*, published by Robert Pricke, London, 1674.

Victoria and Albert Museum. Photograph by Jenny Saunt.

enlarged to make a real-size model of the finished ceiling so that, by using the same grid system on ceiling and page, the designing done on the page made a real map for setting out the actual ceiling.

It was by establishing mouldings, 'geometrical figures' and compartments that the design and construction of the next phase of the ceiling were made possible. This was the moment when the ceiling was transformed from the plan-view 'flat thinking' of the page into a physical terrain with three-dimensional 'walls', which, in this period, could project from the face of the ceiling by anything up to a couple of feet – sometimes more. It was only when the walled areas were completely thought out as a physical reality that the filling for these containers, the hand-modelled work, could be planned. The Abbotts' drawings (Figs. 9.5 and 9.6), a collection of over 300 drawings made by several generations of one Devonshire plastering family between about 1590 and 1727, show how the production of mouldings – as walled pathways dividing up a flat, open expanse – was an active force in the development of the design of these ceilings as a whole.[38] The physicality of these mouldings enabled, even encouraged, the next stage of the plasterer's designing and making – as is suggested by a survey of drawings for decorative plaster of this period. Many show mouldings with and without further enrichment, but whole-ceiling drawings of enrichment without mouldings do not exist. For example, in the drawing shown in Figure 9.6, the mouldings were drawn in ink, creating a solid, immovable boundary wall that divided the surface area of the page with the same physical permanence as a run moulding

Figure 9.5: Pencil drawing from the Abbott book. Contrast has been digitally enhanced to make the pencil lines visible. Ideas for applied decoration on mouldings have been sketched into a pencil framework.

Devon Heritage Centre (DHC): 404M/B/1. Photograph by Jenny Saunt.

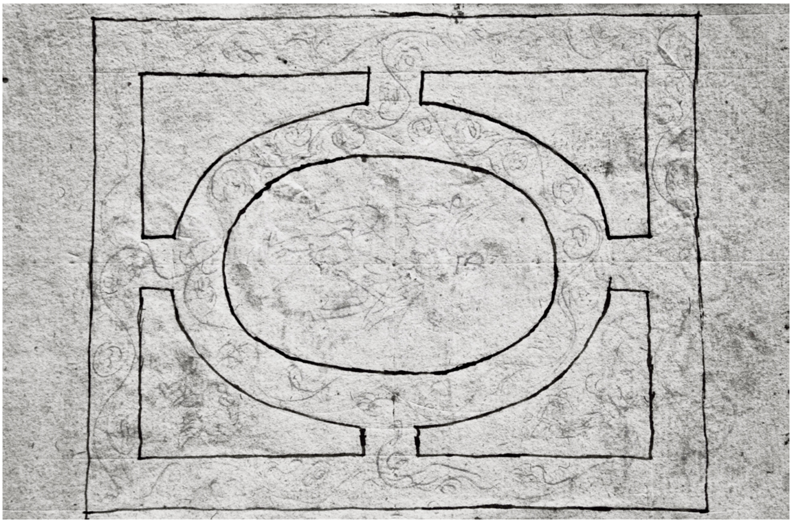


Figure 9.6: A drawing from the Abbott book. The plasterers made a framework in ink, then experimented in pencil. The pencil lines cannot be clearly seen on the page. It is only when the image is digitally enhanced, with contrast increased to the maximum, that the extent of the pencil work starts to emerge: a scrolling pattern running round the whole, the suggestion of a winged figure in the centre and also some ornamentation of the two spandrels at the bottom of the page.

DHC: 404M/B/1. Photograph by Jenny Saunt.

would divide a ceiling. Inside these ink containers the more ephemeral, active and visually busy pencil could play. The same technique is used in drawings by the plasterer Goudge, with the mouldings worked in ink while the compartments offer different options for design that are a roughly made, part-finished proposal in pencil.

‘Fundamental knowledge of … form and nature’

The final stage of creating a decorative plaster ceiling – making the hand-modelled ornament that filled its compartments – is the aspect of production on which early modern sources shed least light. The final part of this chapter retraces the process through a reconstructed practical demonstration of plaster modelling, details of extant late seventeenth-century plaster and, again, drawing-instruction manuals of the same period. The demonstration piece was made by the author – using an historic lime putty, hair and sand mortar mix – and recorded in a series of photographs showing the stages of development for freehand-modelled plaster ornament. This shows how, to create the modelled work, the plasterers drew three-dimensionally in lime and hair; that just as two-dimensional forms were gradually defined and built out of a pencil line in a drawing, plasterers physically teased ideas and ornament out of their material. Every part of the drawing instruction offered in manuals, from the 'geometrical figure' already considered to how shadows and depth and even fantastical subject matter could be developed, was all fulfilled in plaster in this final stage of the work – and all of it remained intimately connected with the stages of production and design that had come before it.

Just as there were different types of plaster-ornament production, there were different types of drawing. A description given by Robert Hooke provides valuable insight into how these types of drawing were perceived in their time. In his 1665 *Micrographia* he wrote that one must learn to 'draw single strokes true' before venturing to 'draw large pictures', suggesting that there was a natural order of progression to the resolution of that 'large picture'. He encouraged his readers to 'follow nature', 'trace her steps, and be acquainted with her manner of walking', before venturing 'into the multitude of meanders' and 'bodies of a more complicated nature'.[39] In the same way, having made straight 'single strokes' in ink and with their mouldings (Fig. 9.6), the plasterer was now free to make the 'multitude of meanders' in plaster, to 'trace the steps of nature' in pencil, to create the type of ornament that was to fill out that 'large picture'.

Drawing-instruction manuals offer the same progression and can easily be read as descriptions of the design and production of a decorative plaster ceiling: straight 'strokes' of the 'geometrical figure' (mouldings) offered structure, which could then be followed by experimentation and variety (modelled ornament). Henry Peacham wrote that 'after your hand has grown ready in the aforesaid proportions', these could be filled 'at your pleasure' with 'infinite variety'.[40] He recommended 'antique' decoration, which he described as 'an unnatural or unorderly composition for delight sake, of many beasts, birds, fishes, flowers, &c.' that was useful for filling 'all manner of compartments' and borders.[41] Peacham wrote that these types of decoration were to be 'hung with strings of beads and rib bands', or 'any kind of wild trail or vinet [little vines] after your own invention'. He also recommended 'naked boys riding and playing', 'goats, eagles, dolphins', 'cowcumbers', dogs, tritons and satyrs – concluding that 'herein you cannot bee too fantastical'.[42]

To model such an 'infinite variety' of ornament in plaster, instructions for drawing, again, offer a step-by-step guide.[43] As Pratt explained about drawing generally, one should start by making faint marks to indicate the intended placing of a drawing so that the design could be 'rudely scratched out'[44] – for example, with a single curved line that captures the intention for a curled acanthus leaf (Fig. 9.7). There was no point in making a drawing of any detail upon the ceiling at this stage, because as soon as the first plaster was applied it would be obscured. A pencil could provide a guide to placement and line, but the detail of the ornament would be made only in plaster. In plaster, scratching out the design not only provided a line to be followed, it also roughed up the surface in the right places so that the material would be able to physically grip into it. An example from a collapsed early eighteenth-century ceiling (Fig. 9.8), from which the modelled work has become detached, shows scratched lines which appear to have been made roughly and at speed rather than with slow, deliberate consideration. Figure 9.9 shows the same stage in the demonstration piece.

Figure 9.7: Lime-plaster modelling demonstration: a pencil-drawn guide line.

© Jenny Saunt.

Figure 9.8: Early eighteenth-century plasterwork where sections of the applied ornament have fallen away to reveal the scored surface underneath in the dirty white central section. Small parts of the modelled leaf have survived around the edges of the exposed scoring.

© Richard Ireland.

Figure 9.9: Lime-plaster modelling demonstration: a scratched line.
© Jenny Saunt.

With a 'rudely scratched out' indication of the placing of modelled work marked, the ceiling was ready to have forms built gradually from its surface by addition. Dorman Newman and Richard Jones's *The Excellency of the Pen and Pencil* suggested, 'touch over your draught lightly at the first', as has been done in Figure 9.10.[45] By such addition the form emerges in stages. After just a few minutes, as shown in Figure 9.11, a rough physical form projects by about half an inch (12 mm). Architectural theorist Roland Fréart, Sieur de Chambray explained that plasterers 'perform their work only by adding material', constantly 'adding and enlarging till they have fashioned and brought to perfection their intended design'.[46] Vasari described this process in relation to sketch models made in wax and clay. In his description the worker builds 'little by little, always adding material, with judgement and manipulation', shaping and impressing the material 'by means of tools' and then 'again putting on more he alters and refines'.[47] He described sketching in general as a way for the artist to 'test the spirit of that which occurs to him'. By this method, 'the hand, through study and practice of many years, may be free', able to express the 'mental image' correctly.[48] Holding a hawk [board or pallet] of plaster in one hand and a modelling tool in the other, all the while looking at their work, this 'mental image' was the only image the plasterer would have had to work from.

Though plaster was shaped with the same 'plastique' building process as wax and clay, the fact that it needed to be worked quickly – a form cannot be revisited, cut into or otherwise edited – made it different. The rapidity of the setting time meant that the plasterer was working at a three-dimensional 'drawing' that would be the finished piece but that was

Figure 9.10: Lime-plaster modelling demonstration: application of coarse 'stuff'.

© Jenny Saunt.

Figure 9.11: Lime-plaster modelling demonstration.

© Jenny Saunt.

made in the experimental 'spirit' of a sketch. Efficiency and speed in communicating form were essential. Drawing manuals explained how, by learning to hold an 'idea' in the mind, the student could make a drawing at speed. In plaster the ability to work at speed was governed by the same skill. From the moment the first spot of mix was applied to a ceiling, plasterers worked, without visual guidelines, to an idea of form that they carried in their heads, constantly on the move around that form. They worked fast, to a deadline dictated by material, so they had to be well rehearsed and sure of the shapes they were making. At this stage, a design on paper would have been useless. There would have been no time to refer to such a thing, nor any convenient place for a drawing, since the plasterer's position was not fixed, and a drawing could explain nothing of the three-dimensionality of the plasterer's work. In drawing, Peacham advises 'having the general notion or shape of the thing in your mind you mean to draw', so that you can 'mend it according to that idea you carry in your mind, in the general proportion', depending on 'no rule or compasse at all but your own judgement in mending every fault lightly, and with a quick hand'.[49] This confidence in producing shapes came from familiarity. By consciously practising a form the student could make it part of a repertoire of known forms, therefore unconscious and so easier and faster to produce.

If the form was to have any noticeable projection from the surface, it often required an armature. Typically made with pieces of wood or wire, and not intended to be visible in the finished work, the armature acted as a skeleton hidden within the flesh of the plaster. Bills for plasterwork occasionally record materials for armature, and damaged plasterwork often reveals it.[50] The idea of building flesh around a skeleton was central to drawing instruction too, as a means of learning to depict the basic proportions and shape of a body by learning to understand it as a three-dimensional entity. In theory, once the basic tenets of a human skeleton were grasped the body could be confidently drawn from any angle or with any amount of added flesh. Willem Goeree stated that 'fundamental knowledge of the form and nature of the muscles and tendons' was essential for correctly depicting the human body, and this was a truism much repeated in other drawing books of the period (this is well illustrated in Fig. 9.12).[51] The armatures of modelled plaster played a part similar to a skeleton. The example illustrated in Figure 9.13 shows how the placing of the skeleton, in this case a splint of lath, as a rigid and thereafter immovable core had to be well considered; it dictated the subsequent growth of the form. As an irreversible physical commitment, such additions of armature required the modeller to have their finished piece already fully fleshed out in their mind's eye at the moment they made decisions about the placing and shape of 'skeletons' in their work.

Figure 9.12: Illustration from Alexander Browne's *Ars Pictoria*. London, 1669, Plate 22.

Victoria and Albert Museum. Photograph by Jenny Saunt.

Figure 9.13: Lime-plaster modelling demonstration: addition of armature. © Jenny Saunt.

Once a skeleton was in place the form could grow quickly because, as *The Excellency of the Pen and Pencil* explains, 'once a body is understood, then how to clothe it becomes easy'.[52] Figures 9.14 and 9.15 show how the skeleton could be speedily and roughly fleshed out by adding on lumps of material with one's fingers. This type of bulking out was covered in drawing manuals as part of the abstract and geometrical construction of form that was a kind of hidden formula for making sense of all arrangements of matter. As James Ayres explains, three-dimensional modelling at this time relied on a kind of visualising technique that comprised the ability to think of a shape from every angle as a series of silhouettes that were all rooted in the same axis.[53] Michael Baxandall explains the same idea, writing that early modern craftsmen developed their ability to 'apprehend body as a pattern of edges or extreme lines' packed together to create shape rather than seeing body as an 'arrangement of surfaces delimiting volume'.[54] Looking again at the illustration of a child's head that Goeree broke down into abstract shapes of circles and triangles (Fig. 9.3), and comparing this with a drawing of a plaster moulding from the Gough collection (Fig. 9.16), it becomes clear that the same visualising technique has been used. To be able to conceive the desired fullness in this plaster 'bunches of leaves', somebody used pencil to first imagine the roundness underneath the finished form.

Drawing manuals taught the imagining of form, but this way of working can also be traced through plasterers' drawings and into examples of their modelled ornament. Peacham wrote that 'it is impossible that you should be ready in the bodies, before you can draw their abstract

Figure 9.14: Lime-plaster modelling demonstration.

© Jenny Saunt.

Figure 9.15: Lime-plaster modelling demonstration.

© Jenny Saunt.

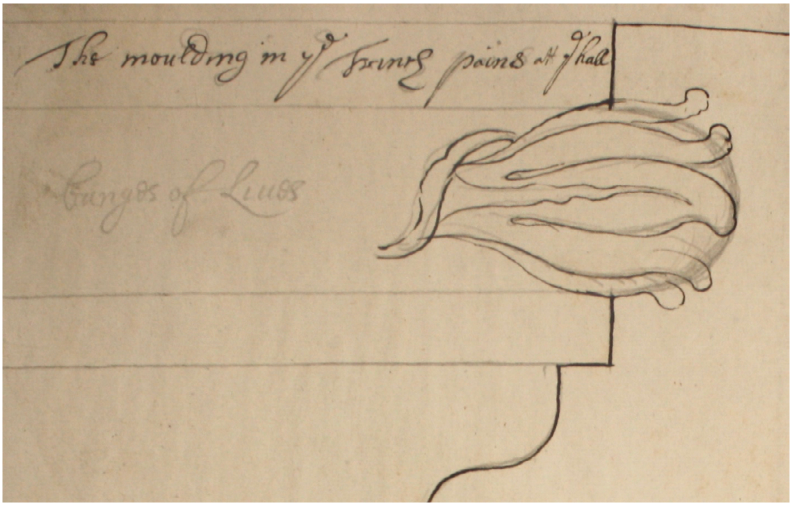


Figure 9.16: Detail from pencil-and-ink drawing of mouldings, late seventeenth century, from a collection of over 30 similar.

Bodleian Libraries, Oxford University (BLOU): MS Gough Drawings a. 3, fol. 42. Photograph by Jenny Saunt.

and general forms'.[55] In drawing, this 'abstract' mapping out was often undertaken in pencil, as seen in Figure 9.16. An example from a seventeenth-century plasterer's sketchbook, the Abbott book (Fig. 9.17), shows how, when working on a detail of ornament, plasterers also scribbled out Peacham's 'general forms' in pencil before defining a tighter version in ink that was worked over the top.[56] In plaster, a similar process of roughly blocking out form required a type of physical scribbling in materials. Once the plasterer had physically made ready the ‘proportion’ of their work in a ‘general form’, they were ready for the next stage.

Modelling was not the only technique at issue in these ceilings, however. Especially in this period, when an appearance of physical depth was valued so highly, use of shadow was an important concern. In drawing-instruction manuals the creation of depth was the means by which a drawing was brought to life. For Peacham, ‘true shadows’ were ‘the soul’ of depiction.[57] In Alexander Browne’s words, ‘light hath so great a force’ that things are ‘seen more evidently’ and ‘there appeareth a very great heightening, which giveth a wonderful spirit’,[58] whereas in shadow, ‘where the light decayeth most’, they ‘seemeth to fly inwards, and stand farther off’.[59] He reflected that ‘artificially counterfeited’ effects of shadow were so important in drawing because they altered perception: to the viewer these ‘motions are so potent in affecting our minds’.[60] To achieve this shadow, depth and animation in their work, plasterers exploited the capacity of the material itself. Hair or wool in the mix made it fibrous – meaning it could be teased out to make self-supporting, attenuated

Figure 9.17: Drawing in pencil and ink from the Abbott book.

DHC: 404M/B/1. Devon Family History Centre. Photograph by Jenny Saunt.

forms that could project up to a couple of inches (or more, depending on what stage of setting the material was at). Armatures and aggregates provided bulk that in turn created crevices.

The projection of later seventeenth-century ornamental plaster was the characteristic of this work that pushed the technical capabilities of mortar the furthest. Some projection was achieved through hair, but for some of the largest forms the plasterers again relied on armatures. The plasterwork in the Great Hall ceiling at Astley required armatures that fully realised the skeleton that Browne recommended, and the 'fundamental knowledge of the form and nature of the muscles and tendons' that Goeree advised.[61] The putti, over three feet (roughly one metre) in length, were X-rayed in 1987, when several of them had fallen from the ceiling (Figs. 9.18–20). What was revealed was a skeleton of wood, iron, leather, nails and wire, just as had been listed in the Abbotts' bills of the same period: 'nayles, timber, lead'.[62] This was a modelling technique that paralleled *The Excellency of the Pen and Pencil*'s instruction to 'view your object well, and see how near you hit the life, not only in seeming likeness, but in roundness and boldness'.[63] To achieve the required 'boldness' the plasterers had built bodies in 'likeness' from within.

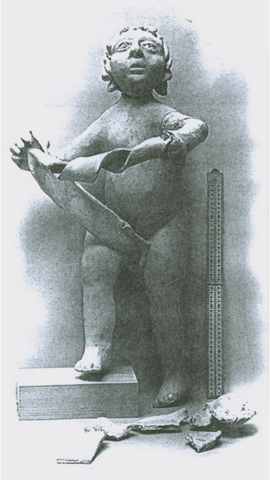


Figure 9.18: Plaster putto from Astley Hall, just over three foot (one metre) tall. Nicola Ashurst, Research and Technical Advisory Service (RTAS – now Historic England), 'Research Project: repair and conservation of a plaster cherub from the ceiling of the great hall, Astley Hall, Chorley', May 1987, Figure 1.

Photograph by D. Edwick. By permission of Chorley and South Ribble Councils.

Figure 9.19: Back view of plaster putto showing leather strips, lead, wire and wood, bound together. Nicola Ashurst, RTAS (now Historic England), ‘Research Project: repair and conservation of a plaster cherub from the ceiling of the great hall, Astley Hall, Chorley’, May 1987, Figure 2.

Photograph by D. Edwick. By permission of Chorley and South Ribble Councils.

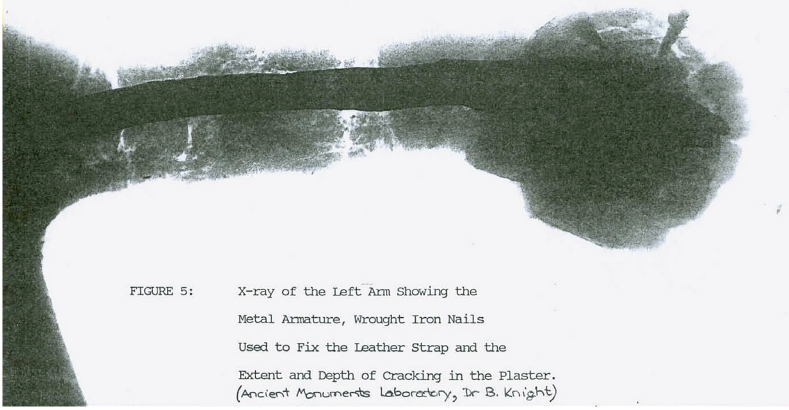


FIGURE 5: X-ray of the Left Arm Showing the Metal Armature, Wrought Iron Nails Used to Fix the Leather Strap and the Extent and Depth of Cracking in the Plaster.
(Ancient Monuments Laboratory, Dr B. Knight)

Figure 9.20: X-ray of an arm of a plaster putto from Astley Hall. Nicola Ashurst, RTAS (now Historic England), ‘Research Project: repair and conservation of a plaster cherub from the ceiling of the great hall, Astley Hall, Chorley’, May 1987, Figure 5.

X-ray by Dr B. Knight, Ancient Monuments Laboratory. By permission of Chorley and South Ribble Councils.

To finish their work, having decided the form in coarse stuff (see Fig. 9.21), the plasterer changed the mix to a fine and white lime. Figure 9.22 demonstrates Moxon's description of this stage as, first, 'laying over a thin coat of fine stuff made of clean lime and mixt with hair without any sand'.[64] Figure 9.23 shows how the plasterer would, finally, 'brish over their new plaistering when they set, or finish it', using 'fair [clean] water'.[65] The topcoat needed to be thick enough only to cover the coarse stuff. Since the white lime used for this was labour-intensive in production (requiring much sieving, washing, beating and straining), it was worth using only where it would be seen. In the terms of drawing instruction, the application of the 'set' coat was the point at which the plasterer laid aside the pencil and turned to ink, as it were. As Pratt wrote, 'lines are first drawn' out in rough, 'before they be touched with ink'[66] – as *The Excellency of the Pen and Pencil* explained, 'to finish your design' then 'trace it over with ink', finally warning that 'you must be very exact here, for there is no altering what you do with the pen'.[67] Likewise, there was no returning to a finished work in plaster because its body and this 'setting' coat were the united product of a continuous process. Whereas with work in wood and stone the shape and finish can be tweaked and polished over a period of weeks or months, with plaster there is no such possibility of editing. Once plaster is a few hours old it crumbles if cut into, and after a week it might even be too hard to cut. Plaster forms could not be considered and altered outside the moment of their creation. They had to be delivered with spontaneity, in an instant, and then stood as the physical record of an impromptu performance by plasterers that had relied on all their experience and preparation of the 'idea' they carried in their 'mind'.[68]

Figure 9.21: Lime-plaster modelling demonstration.

© Jenny Saunt.

Figure 9.22: Lime-plaster modelling demonstration.

© Jenny Saunt.

Figure 9.23: Lime-plaster modelling demonstration.

© Jenny Saunt.

In conclusion, this chapter has used late seventeenth-century drawing-instruction manuals alongside makers' manuals, dictionaries and architectural and scientific works to examine the method and thinking that plasterers employed in making a decorative ceiling. It has positioned the production of plaster ceilings as a type of physical thinking, which resonates with Vasari's explanation of drawing as a means of conceiving and rehearsing design and form.[69] With the fluidity of their material – and the understanding and ideas gathered by observation, practice and experience – plasterers were perfectly positioned to express, 'by the hands', a drawing in plaster that was 'called design'.[70] Looking closely at the stages of decorative plaster production in this context reveals the plasterer's process as a type of design that was formed as a conversation between the different characteristics of material, thinking and making that were present in every stage of the plasterer's work, which were always dependent on each other but which rose to prominence slightly differently in each one of the stages outlined. The production of a blank space, as Pratt explained, was the essential first stage of designing, providing a space on which to lay out and organise ideas. The 'geometrical' ordering of this space through the construction of mouldings was dependent on this space as it was necessary to provide more structure for the modelled work that followed. This modelled work was, in Hooke's words, a 'meander' in plaster within the defined pathways and fields: a drawing and designing of infinite 'variety' made in three-dimensional 'ink'.[71] Together, these stages of work produced a design logic that was perpetuated through making – as cyclical as the philosophical 'chain' that

Hooke described, which started with the hands and eyes, went through the mind and then back through the hands and eyes again to create the surface we recognise as late seventeenth-century plasterwork.[72]

Notes

1 Bankart, *The Art of the Plasterer*, 238, 239, 244, 252, 261–7; Jourdain, *English Decorative Plasterwork*, 88, 90; Turner, *Decorative Plasterwork in Great Britain*, 127–50; Hill and Cornforth, *English Country Houses*, 38.
2 Bankart, *The Art of the Plasterer*, 239.
3 English Heritage, *Practical Building Conservation*, 2–120.
4 Saunt, 'Decorative plasterwork in England'. For a discussion of early modern craft practitioners, see Kilburn-Toppin, 'Crafting artisanal identities in early modern London', 29–106.
5 Sudbury Hall Archive, National Trust, Derbyshire, transcription of accounts: Samuel Mansfield works, 28 August 1675, 552, and George Vernon's reckoning with Samuel Mansfield, 28 August 1675, 131; Wren, *The Wren Society*, vol. 11, 99: 'draweing mortar' (in a 1696 bill for work that records 'Haire for draweing mortar').
6 Staffordshire Record Office, Di287/18/4 (P/1083), Winde to Bridgeman in 1688 letters.
7 Vasari, *Vasari on Technique*, 205. This work was originally published in 1550, as an introduction to Vasari's *Lives of the Artists*.
8 Vasari, *Vasari on Technique*, 206.
9 Jenner, *Book of Drawing*, frontispiece.
10 Pratt, *The Architecture of Sir Roger Pratt*, 67, 77, 80.
11 The National Archives (hereafter TNA), WORK 5/145, 20 June 1682; 2 November 1688; June 1682.
12 Pratt, *The Architecture of Sir Roger Pratt*, 20.
13 Pratt, *The Architecture of Sir Roger Pratt*, 20.
14 Pratt, *The Architecture of Sir Roger Pratt*, 20–1, 60–1.
15 Connors, '*Ars tornandi*', 233.
16 Pratt, *The Architecture of Sir Roger Pratt*, 20–1.
17 Neve, *The City and Countrey Purchaser*, 184, 141.
18 Pratt, *The Architecture of Sir Roger Pratt*, 20–1.
19 TNA, WORK 5/20, 2r, 4v, 6v; WORK 5/28, 5v; Neve, *The City and Countrey Purchaser*, 186. References to 'heart laths': TNA, WORK 5/145, 28 May 1688, Whitehall; February 1670, Hampton Court. Moxon, *Mechanick Exercises*, 244, 249 also recommended heart-of-oak laths.
20 See Palladio, *The First Book of Architecture*, 132 for 'seelings'.
21 TNA (The National Archives), WORK 5/145, 28 May 1688, Whitehall; June 1682.
22 Pratt, *The Architecture of Sir Roger Pratt*, 80.
23 Pratt, *The Architecture of Sir Roger Pratt*, 79, 20.
24 TNA, WORK 5/145, 20 June 1682, Whitehall; 28 May 1688, Hampton Court; February 1670.
25 Moxon, *Mechanick Exercises*, 249; Pratt, *The Architecture of Sir Roger Pratt*, 79, 20.
26 Pratt, *The Architecture of Sir Roger Pratt*, 66.
27 *Pratt*, *The Architecture of Sir Roger Pratt*, 37, 68.
28 Peacham, *The Compleat Gentleman*, 127; Peacham, *The Art of Drawing*, 10.
29 The grid in drawing practice is discussed in the first two chapters of Bermingham, *Learning to Draw*.
30 Parallel instruction found in Newman and Jones, *The Excellency of the Pen and Pencil*, 18–19; Peacham, *The Compleat Gentleman*; Peacham, *The Art of Drawing*, 10.
31 Browne, *Ars Pictoria*, 1.
32 Browne, *Ars Pictoria*, 1.
33 Pratt, *The Architecture of Sir Roger Pratt*, 66; Browne, *Ars Pictoria*, 26.
34 Pratt, *The Architecture of Sir Roger Pratt*, 37.
35 Pratt, *The Architecture of Sir Roger Pratt*, 37; Peacham, *The Art of Drawing*, 10, 109.
36 Pratt, *The Architecture of Sir Roger Pratt*, 81.
37 Pratt, *The Architecture of Sir Roger Pratt*, 81.

38 Saunt, ‘The Abbotts and their book’, 316–17, 302–3.
39 Hooke, *Micrographia*, 1.
40 Peacham, *The Art of Drawing*, 14.
41 Peacham, *The Art of Drawing*, 36.
42 Peacham, *The Art of Drawing*, 36.
43 Peacham, *The Art of Drawing*, 14.
44 Pratt, *The Architecture of Sir Roger Pratt*, 21.
45 Newman and Jones, *The Excellency of the Pen and Pencil*, 11.
46 Fréart, *A Parallel of the Ancient Architecture*, 145–6.
47 Vasari, *Vasari on Technique*, 150.
48 Vasari, *Vasari on Technique*, 150.
49 Peacham, *The Art of Drawing*, 14–15.
50 See Ashurst, ‘Research project’: X-rays of putti that had fallen from the Great Hall ceiling at Astley revealed armatures of wood, steel, leather, nails and wire, just as the Abbotts’ bills of the same period listed ‘nayles, timber, lead’: Devon Heritage Centre (DHC), 404 M/F8. For ‘nails’, see TNA, WORK 5/20 54r, WORK 5/28 5v; Neve, *The City and Countrey Purchaser*, under ‘Nails’; Moxon, *Mechanick Exercises*, 244, 250; Sudbury Hall, National Trust Collections, Derbyshire, Account book 4, 19 November 1674, and 1678: ‘plasterers nails’. Though many references to nails are specifically for lathing at Sudbury, ‘plasterer nails’ were recorded along with 800 ‘penny nails’, 500 ‘6 penny’ nails and 7,000 ‘3 penny’ nails. The most frequent mentions of nails are in connection to lathing (the Royal Works often records lath and nails): TNA, LC9/280, no. 59 in 1692–3, no. 57 in 1694–5; WORK 5/20 2r, 4v.
51 Goeree, *An Introduction to the General Art of Drawing*, 15.
52 Newman and Jones, *The Excellency of the Pen and Pencil*, 41.
53 Ayres, *Art, Artisans and Apprentices*, 314.
54 Baxandall, *Limewood Sculptors*, 145.
55 Peacham, *The Art of Drawing*, 12.
56 Saunt, ‘The Abbotts and their book’, 285–320.
57 Peacham, *The Art of Drawing*, 127.
58 Browne, *Ars Pictoria*, 35.
59 Browne, *Ars Pictoria*, 35.
60 Browne, *Ars Pictoria*, 46.
61 Goeree, *An Introduction to the General Art of Drawing*, 15.
62 DHC 404M/F8; Ashurst, ‘Research project’.
63 Newman and Jones, *The Excellency of the Pen and Pencil*, 82.
64 Moxon, *Mechanick Exercises*, 249.
65 Moxon, *Mechanick Exercises*, 249.
66 Pratt, *The Architecture of Sir Roger Pratt*, 21.
67 Newman and Jones, *The Excellency of the Pen and Pencil*, 11.
68 Peacham, *The Art of Drawing*, 14–15.
69 Vasari, *Vasari on Technique*, 205–6.
70 Vasari, *Vasari on Technique*, 205.
71 Peacham, *The Art of Drawing*, 14; Hooke, *Micrographia*, 1.
72 Hooke, *Micrographia*, preface.

References

Ashurst, Nicola. ‘Research project: repair and conservation of a plaster cherub from the ceiling of the great hall, Astley Hall, Chorley’. Research and Technical Advisory Service, English Heritage, May 1987.

Ayres, James. *Art, Artisans and Apprentices: Apprentice painters and sculptors in the early modern British tradition*. Oxford: Oxbow Books, 2014.

Bankart, George P. *The Art of the Plasterer: An account of the decorative development of the craft*. London: B.T. Batsford, 1908.

Baxandall, Michael. *The Limewood Sculptors of Renaissance Germany*. New Haven, CT: Yale University Press, 1980.

Bermingham, Anne. *Learning to Draw: Studies in the cultural history of a polite and useful art*. New Haven, CT and London: Yale University Press for the Paul Mellon Centre for Studies in British Art, 2000.

Browne, Alexander. *Ars Pictoria: Or an academy treating of drawing, painting, limning, and etching*. London: Printed by J. Redmayne for Alexander Browne, 1669.

Connors, Joseph. '*Ars tornandi*: Baroque architecture and the lathe', *Journal of the Warburg and Courtauld Institutes* 53 (1990): 217–36.

English Heritage. *Practical Building Conservation: Mortars, renders and plasters*. Farnham: Ashgate, 2011.

Fréart, Roland, Sieur de Chambray. *A Parallel of the Ancient Architecture with the Modern, in a Collection of the Ten Principal Authors who have Written upon the Five Orders*, translated by John Evelyn. London: John Place, 1664.

Goeree, Willem. *An Introduction to the General Art of Drawing: Wherein is set forth the grounds and properties, which of this infallible and judicious art are necessary to be known and understood*, translated by J. L. London: Robert Pricke, 1674.

Hill, Oliver and John Cornforth. *English Country Houses: Caroline, 1625–1685*. London: Country Life, 1966.

Hooke, Robert. *Micrographia: Or some physiological descriptions of minute bodies made by magnifying glasses*. London: J. Martin and J. Allestry, 1665.

Jenner, Thomas. *A Book of Drawing, Limning, Washing or Colouring of Maps and Prints, and the Art of Painting, with the Names and Mixtures of Colours Used by the Picture-drawers: Or, the young-man's time well spent*. London: Printed by M. Simmons for Thomas Jenner, 1666.

Jourdain, Margaret. *English Decorative Plasterwork of the Renaissance*. London: B.T. Batsford, 1926.

Kilburn-Toppin, Jasmine. 'Crafting artisanal identities in early modern London: the spatial, material and social practices of guild communities, c.1560–1640'. PhD Thesis, Royal College of Art/Victoria and Albert Museum, 2013.

Moxon, Joseph. *Mechanick Exercises: Or the doctrine of handy-works. Applied to the arts of smithing joinery carpentry turning bricklayery. To which is added, mechanick dyalling: shewing how to draw a true sun-dyal on any given plane, however scituated; only with the help of a straight ruler and a pair of compasses, and without any arithmetical calculation*. 3rd edition. London: Printed for D. Midwinter and T. Leigh, 1703.

Neve, Richard. *The City and Countrey Purchaser, and Builder's Dictionary: Or, the compleat builder's guide*. London: J. Sprint, 1703.

Newman, Dorman and Richard Jones. *The Excellency of the Pen and Pencil, Exemplifying the Uses of Them in the Most Exquisite and Mysterious Arts of Drawing, Etching, Engraving, Limning, Painting in Oyl, Washing of Maps and Pictures*. London: Printed by Thomas Ratcliffe and Thomas Daniel for Dorman Newman and Richard Jones, 1668.

Palladio, Andrea. *The First Book of Architecture, by Andrea Palladio. Translated out of Italian: With an appendix touching doors and windows*, translated by G. R. 3rd edition. London: N. Simmons, 1676.

Peacham, Henry. *The Art of Drawing with the Pen, and Limming in Water Colours, more Exactlie then Heretofore Taught and Enlarged with the True Manner of Painting upon Glasse, the Order of Making your Furnace, Annealing, &c*. London: William Jones, 1606.

Peacham, Henry. *The Compleat Gentleman: Fashioning him absolute in the most necessary and commendable qualities concerning minde or bodie that may be required in a noble gentleman*. London: Francis Constable, 1634.

Pratt, Sir Roger. *The Architecture of Sir Robert Pratt, Charles II's Commissioner for the Rebuilding of London After the Great Fire: Now printed for the first time from his note-books*, edited by R.T. Gunther. Oxford: J. Johnson, 1928.

Saunt, Jenny. 'Decorative plasterwork in England, 1660–1700: form, materiality and making'. PhD Thesis, Courtauld Institute of Art, 2016.

Saunt, Jenny. 'The Abbotts and their book: a dynasty of decorative plasterers and their work in Devon, c.1580–1727', *Architectural History* 64 (2021): 285–320.

Turner, Laurence. *Decorative Plasterwork in Great Britain*. London: Country Life, 1927.

Vasari, Giorgio. *Vasari on Technique: Being the introduction to the three arts of design, architecture, sculpture and painting*, translated by Louisa S. Maclehose and edited by G. Baldwin Brown. London: J.M. Dent & Co., 1907.

Wren, Sir Christopher. *The Wren Society*, volume 11, edited by Arthur T. Bolton and H. Duncan Hendry. Oxford: Oxford University Press for the Wren Society, 1934.

Further reading

Baldwin, Mike. 'Graviti in publicke places and yet inwardly licencious: the Custom House, Exeter'. In *Devon Buildings Group Research Papers*, volume 2, 5–28. Crediton: Devon Building Group, 2006.

10

‘Agreeable to live in’: the wainscoted interior in eighteenth-century Britain and Ireland

Christine Casey

The timber-panelled room is redolent of warmth, privacy and comfort, a tactile and atmospheric environment that is less forbidding than stone-lined or stuccoed interiors. In panelled parlours, closets, studies and bedchambers, daily life was conducted in tandem with formal etiquette in grander rooms of parade. In institutions, wainscoting was often grandly scaled, sturdy and plain, and spoke of durability, utility and order (Fig. 10.1). The 1740s Foundling Hospital of London, whose ‘large rooms [were] wainscoted with the names of benefactors set out in goodly order’, evoked for one visitor ‘a warm, old-fashioned rich-relation kind of gravity, strongly indicative of Bank Stock’.[1] Upstaged in the domestic interior by stucco and silk hangings by the mid-eighteenth century, panelling was covered, replaced or moved to lesser interiors. Later again it migrated to international auction houses and was installed in period rooms of mansions and museums.[2] Its appeal endures. For one contemporary designer ‘it *is* the room … the vessel … the foundation for everything else in the space’.[3] Yet, beyond illustration and caption, this defining element of the early Georgian domestic interior has received scant attention in architectural history of the period, treated as a kind of background noise of little relevance to the design practice of architects. Even in France, where *boiseries* were developed to unprecedented levels of sophistication, there is a paucity of research and publication.[4] ‘Surely’, argued John

Cornforth for decorative activity in the period, ‘that is a distortion of the situation when the priorities of patrons were crucial and their patterns of expenditure so significant?’[5]

This chapter takes its cue from Cornforth and seeks to demonstrate that the form, function, material and detail of this surface treatment exercised clients, architects and craftsmen and that it was a fundamental element in the grammar of interior ornament in Britain and Ireland in the eighteenth century. Timber panelling developed as a wall covering in the later Middle Ages as a means of sealing, insulating and beautifying interiors – ensuring cleanliness, damp-proofing and thermal insulation. It emerged alongside improvements in hearth and fenestration design. At Durham Priory, for example, in the late fourteenth century, the prior’s

Figure 10.1: Late seventeenth-century oak wainscot at the Royal Hospital at Kilmainham, Dublin.

Courtesy of the Irish Architectural Archive.

lodge had a chimney, wainscoting and bay windows.[6] Wainscot was found in great houses in England from the thirteenth century, usually of Norway fir and often painted and spangled.[7] Panelling prevented moisture in the walls from entering the room, kept vermin at bay and provided a framework for the hanging of textiles and leather. Gradually vertical boards developed into a simple grid of square panels, later embellished by carvings and moulded frames.[8] Italian Renaissance models were emulated, especially the study or *studiolo* in which intarsia wood decoration was frequently found. Indeed, the Renaissance study has been considered 'the initial site of the early modern consumer revolution and of the expression of modern physical comfort'.[9]

By the seventeenth century, wainscoting had become the standard finish of the genteel interior. Though generally documented only in building accounts or in the fleeting comments of travellers, a remarkable record survives for the houses of Winchester Cathedral Close. 'The Wainscot Book' is a record of internal fittings installed in the houses of the Close from the late seventeenth century to the early nineteenth century.[10] A continuous history of occupation by Winchester's deans, canons and prebends, who paid for the use of timber fittings during their tenure and were reimbursed upon departure, provides a detailed record of wall, shutter and cupboard panelling. We encounter country joiners, city joiners and even, in 1686–7, a preferred joiner of Sir Christopher Wren, Valentine Housman, whose account demonstrates that much of the work was assembled off-site and brought to Winchester, while the surviving panelling in the houses of the Close demonstrates the transition from smaller square panelling of the Jacobean period to the large architectural panelling introduced by Inigo Jones and his circle (Fig. 10.2). Off-site fabrication was clearly standard practice for London joiners. At the Sheldonian Theatre in Oxford in the late 1660s, the work of the joiner William Clere was largely executed in his Long Acre workshop in London and sent to Oxford by barge.[11] At six shillings and sixpence per yard (just under one metre), Housman was well paid for his trouble at Winchester, exceeding by one shilling and sixpence per yard the sum agreed by Jonathan Hooke for the admittedly extensive 403 yards of wainscoting in the 100 ft (30 m) 'Longe Gallery' at Chirk Castle in Denbighshire some eight years earlier. There, Lady Mary Myddleton dealt directly with the joiners and carvers – a practice continued by her successor at Chirk, Lady Wilbraham of Weston. Even before her marriage, Lady Wilbraham was being consulted on works: in July 1677 a messenger was sent from Chirk to Weston 'for my Lady Wilbraham's direccons [sic] about the wainscot in the great room in the bell tower'.[12]

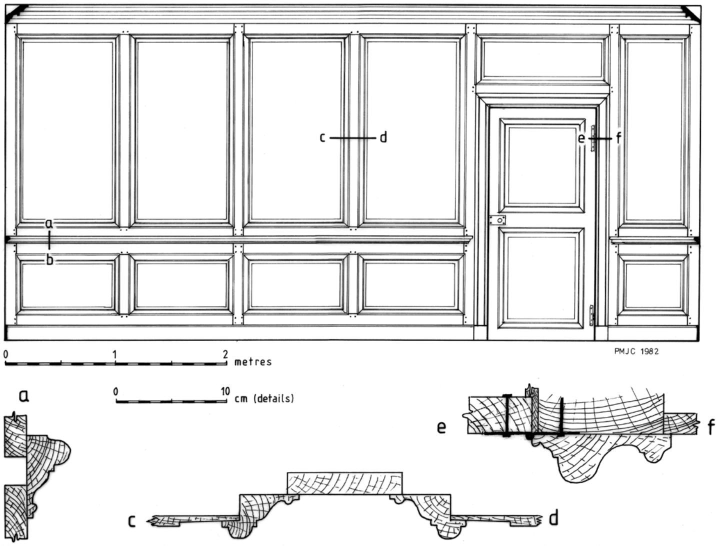


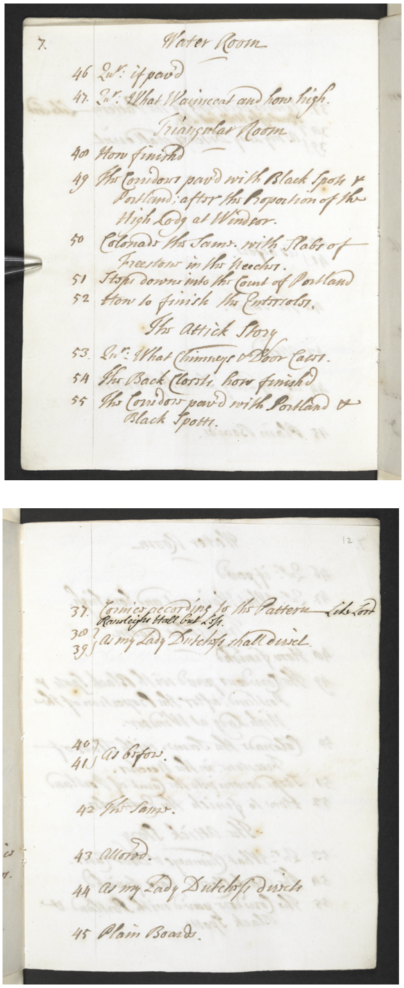
Figure 10.2: No. 3 The Close, Winchester, Wainscot by Valentine Housman, 1686–7.

© Dr John Crook.

Housman and Hooke were joiners who crafted wainscoting entirely of timber, the most common form in Britain. However, by the 1640s in royal and courtly residences, Inigo Jones in collaboration with the painter Edward Pearce had begun to emulate French multi-media interiors in which panelling, painting and plasterwork were integrated in an holistic approach to the decoration of walls, ceiling and apertures.[13] In 1655 John Webb noted of Chevening in Kent that he was then ‘making ornaments of wainscot for a roome in Kent for my Lo: Dacres … his room is very noble and hee bestows much cost upon it’.[14]

Specification: client and architect

One of the most formidable female clients of the early eighteenth century was also concerned with the pattern and arrangement of wainscoting. Sarah Churchill, Duchess of Marlborough wrote of her attention to such detail: ‘I am determined to have no one thing carved … my taste having always been to have things plain and clean, from a piece of wainscot to a lady’s face’.[15] At Wimbledon House, her joiner, James Guest, was given strict instructions to use the best materials but to install no gilding or carving.[16] The standard accounts of the finishing at Blenheim point to an absence of information on architect John Vanbrugh's intentions. However, a document produced at the trial over costs inscribed on the cover 'Mr Vanbrughs book of the directions for Blenheim', and inside 'Proposalls for Work to be done at Blenheim in 1709' (Figs. 10.3a and 10.3b), purports to be an account of his dialogue with the Duke of Marlborough concerning precise decisions on the interior finishing.[17]



7.

Water Room

46 Qur: if pav'd
47. Qur: What Wainscoat and how high.

Triangular Room

48 How finish'd
49 The Corridors pav'd with Black Spots & Portland; after the Proportion of the High Lodg at Windsor.
50 Colonads the Same. with Slabs of Freestone in the Neeches.
51 Steps downe into the Court of Portland
52 How to finish the Entersoles.

The Attick Story

53. Qur: What Chimneys & Door Cases.
54 The Back Closets, how finish'd
55 The Corridors pav'd with Portland & Black Spotts.

12

37. Cornices according to the Pattern Like Lord Rawleighs Hall but Less.
38 }
39 } As my Lady Dutchess shall direct.
40 }
41 } As before.
42 The Same.
43 Allow'd.
44 As my Lady Dutchess directs
45 Plain Boards.

Figure 10.3: (a) and (b) 'Mr Vanbrughs book of the directions for Blenheim', 1709. BL ADD MS 61354 f1–49 (f.12). © British Library.

Whether the consultations happened or not, as claimed by the Duchess of Marlborough, is immaterial, for Vanbrugh's aim was authenticity of the patron–architect deliberation and the booklet clearly demonstrates the extent to which the architect was involved in orchestrating the crafting of the interior. And despite the Duchess's protests the tenor of the Duke's responses, favouring simplicity over complexity, and his deference to her judgement ring true. The left-hand pages of the notebook contain Vanbrugh's proposals, with the Duke's responses on the right. To Vanbrugh's enquiry about ceiling compartments and a suggestion to postpone work in the Salon till the following summer, the Duke ordered materials to be prepared and specified a 'Surbass' of 'Right Wainscot Six ft high', indicating oak and not the marble panelling ultimately executed by the workshop of Grinling Gibbons. For the Bow Room, Vanbrugh asked 'if the Breaks on the other side the Chimney shall answer the Doors', namely the contemporary practice of advancing the panelling and entablature at focal points in the room (see, for an example, Fig. 10.4). 'As my Lady Dutchess shall direct', responded the Duke, 'and no Breaks to Answer the Doors'.[18] Vanbrugh further enquired whether there should be 'Window Seats of Wainscot or the spacs [sic] left to set Chairs, Stools or Tables at

Figure 10.4: Window breaks in the panelling at No. 5 Henrietta Street, Dublin, circa 1740.

Courtesy of the Irish Architectural Archive.

Pleasure'; the response: 'Wainscoat Seats fix'd. 18 Inch [i.e. 46 cm] high and 18 Inches broad'.[19] On the same page a memo by the Duke noted, 'Not to Rims [sic] any Wainscoat till my Lady Dutchess Sees it'. Further evidence for Vanbrugh's involvement in interior detail is seen in a surviving drawing, annotated by the Duchess, showing his detailed scheme for the wainscoting of the Bow Room and in a letter to Henry Joynes referring to Vanbrugh's design for an improved type of sash window.[20]

The tension between requirements of domestic comfort and the spatial, material and decorative ambitions of classical architects is pointed up by Sarah Churchill's dissatisfaction with Vanbrugh and her general distrust of the architectural profession. In 1716 she summarily dismissed Vanbrugh from Blenheim and placed the interior in the hands of James Moore, a London cabinetmaker whose practicality she admired and whom she described in 1714 as her 'Oracle', 'for hee certainly has very good Sense and I think him very honest and Understanding in many trades besides his own'.[21] Though dismissed by an outraged Vanbrugh as a 'glassmaker', Moore was in fact a royal cabinetmaker whose work, much of it strongly architectural, has been described as exhibiting 'an extraordinary level of confidence'.[22] Twentieth-century privileging of formal architectural concerns pitched this battle of wits as the thwarting of genius by pique and mediocrity. The interiors illustrated in works on Vanbrugh are almost invariably the monumental stone halls of Blenheim, Castle Howard, Grimsthorpe Castle and Seaton Delaval and not the rooms most used by their inhabitants in which very different finishes were applied. In her comments written into the Vanbrugh notebook, Sarah Churchill wrote that she had persuaded the Duke to have his own bedchamber 'finishd like mine' and 'agreable to live in' with 'a lower roof than Sir John lik'd and some other things that were convenient for constant use'.[23] Samuel Johnson later echoed these sentiments in comments on quotidian existence:

> It must be remembered, that life consists not of a series of illustrious actions, or elegant enjoyments; the greater part of our time passes in compliance with necessities, in the performance of daily duties, in the removal of small inconveniences in the procurement of petty pleasures; and we are well or ill at ease, as the main stream of life glides on smoothly, or is ruffled by small obstacles and frequent interruption. The true state of every nation is the state of common life.[24]

The demands of occupying heroic interiors were not lost on architectural historians: for Kerry Downes the hall at Blenheim showed 'how coldly and

Figure 10.5: The Library, Houghton Hall, Norfolk, an early use of mahogany.

© Andrew Locking.

impersonally grand stone can be'.[25] At the monumental Clarendon building in Oxford the conventional presumption of an over-zealous plasterer provoked Nicholas Hawksmoor's ire in an interior which he intended 'to stand fair without either wainscot or Lime and hair'.[26] John Wood the Elder designed the interiors of Prior Park in Bath, completed in 1741, to be finished in Bath stone – at once imposing in aspect and a means of promoting the stone quarries operated by his client, Ralph Allen. However, to Wood's dismay, Allen and his wife decided to line the stone walls for greater comfort, and when Richard Pococke visited in 1754 most of the rooms he saw were wainscoted in oak.[27] At Houghton Hall, though stucco and silk hangings were employed in the rooms of parade, Robert Walpole's bedroom and library were entirely panelled in mahogany (Fig. 10.5). Such dichotomies between formal grandeur and human comfort were succinctly captured in 1796/7 by a visitor to the 'superb palace' of Castle Coole in County Fermanagh: 'Comfort has been almost entirely sacrificed to beauty … a house that is comfortable appears to me to be preferable to a palace which is not'.[28]

Figure 10.6: Wainscoting, No. 85 St Stephen's Green, Dublin, circa 1740.

© CRAFTVALUE.

Materials

According to the *Builder's Dictionary* in 1734, 'for so damp a country as England is, nothing could be better contriv'd than wainscot, to ward off the moist effluvia of damp walls … being usual to have … [it] breast high[29] (Fig. 10.6). And timber's thermal and sound-insulation properties, and its damp- and vermin-proofing functions, were particularly suited to book-lined rooms. Vanbrugh inquired whether full-height or impost-height wainscoting should be installed at Blenheim, and often rooms were entirely panelled from floor to ceiling cornice. At Hardwick Old Hall in 1601 William Cavendish's Chamber was wainscoted 'to the topp', while in 1717 the Rectory in Deptford, designed by Thomas Archer, had 'upon the ground floor five rooms wainscoted to the top. All other rooms wainscoted for hangings'.[30] Speculative town houses followed suit. In Dublin in 1732 a carpenter leased a 'new brick house lately erected three intire storeys whereof except three small closets are wainscotted'.[31]
To prevent sweating of the panels from dampness in the walls, joiners used charcoal and wool or primed the backs of the joints with oil paint.[32]

In repairing the panelling of the early eighteenth-century Dining Hall of Trinity College Dublin, the carpenter Isaac Wills was obliged to plug, straighten and glue 'all the panels behind' and to put oak pieces underneath 'to keep the rats and vermin from running up behind …'.[33] Conversely, at Auchans in Ayrshire the eccentric Dowager Countess of Eglinton reportedly 'had a panel in the oak wainscot of her dining-room, which she tapped upon and opened at meal-times, when ten or twelve jolly rats came tripping forth and joined her at table'.[34] There were also disadvantages, for wainscot was a fire hazard. In 1727 *The Dublin Journal* reported 'a most terrible fire at Trinity College, occasioned as 'tis said by the carelessness of a Servant Woman, who left a Candle burning which set the Wainscot on fire, by means whereof several Rooms, Studies of Books and other Valuable things were destroyed'.[35] Likewise, in February 1741 the elegant new Palladian villa of Bellamont Forest in Cootehill, County Cavan, was, 'burned down to the ground by the carelessness of

Figure 10.7: Virtuoso joinery by Thomas Eborall at Mawley Hall, Shropshire.

© CRAFTVALUE.

the workmen, who left a fire in a room that was wainscot[ed]; and the damage is said to be upwards of £5,000'.[36]

The term wainscot originates in the Dutch for wall-board and became a synonym for oak, initially imported from the Baltic.[37] By the eighteenth century, 'wainscot' had become synonymous with timber panelling but was more usually of deal than of oak. Vanbrugh mentions several types of panelling material at Blenheim – deal for the lesser rooms and oak for the principal interiors – though more exotic woods were also often used. Celia Fiennes described Chippenham Hall as 'wainscoated with walnut tree, the panels and Rims round with Mulberry tree'.[38] At Sutton Scarsdale, Derbyshire, in 1728 (Francis) Smith of Warwick's virtuoso joiner, Thomas Eborall (celebrated for his work at Mawley Hall in Shropshire, Fig. 10.7), framed oak wainscot panels with feather-banded or cross-grained rims of yew – a material which was also used in about 1710 in the residence of Joshua Dawson in Dublin, subsequently the city Mansion House.[39] William Blathwayt, the owner of Dyrham Park in Gloucestershire and Surveyor and Auditor General of Plantation Revenue, used his colonial networks to procure exotic hardwoods.[40]

Ian Bristow has demonstrated a tendency in the period to choose surface finishes appropriate to the timber substrate.[41] Thus, at St George's, Bloomsbury, the panelled reredos was of oiled mahogany, which contrasted with the biscuit colour of the wainscot that was originally left without varnish.[42] Colours such as olive and brown were forgiving, and Bristow suggests that they 'would have tended to hide the effects of dimensional instability across the grain of the wide panels'.[43] While oak was the indigenous material of choice for high-quality wainscot, it was often painted. At the Sheldonian Theatre in Oxford the oak joinery was painted to resemble stone and cedar, while white panelling with gilded accents was favoured for elite residences following the example of Versailles.[44] Such pale colours demanded high standards in joinery, as noted by Roger Pratt at Kingston House in 1665: panels should be 'well glued, and clean wrought on the foreside so that no sign of the planes appear, as I have often seen even after painting'.[45] The title caption to a suite of engraved plates of *boiseries* published in about 1700 instructs that the panelling should be painted white to render the room light, clean and fresh.[46] Thus, while stained or stripped wood is now more common than not in surviving wainscoted rooms, the effects of pale-coloured panelling in the eighteenth-century interior should not be underestimated. Indeed, in his *Complete Body of Architecture*, 1756, Isaac Ware, in discussing interior finishes, compared the respective susceptibility of stucco, hangings and wainscot to light, finding in favour of the last-named:

> This depends upon the plain principle that the most even surface will reflect most light; and this is seen by night as well as day: a room of the same dimensions, which is wainscoted, will take six candles to light it, will in stucco require eight, and if hung ten … Of the three kinds we have named, the grandest is that in stucco; the neatest that in wainscot; and the most gaudy that in hangings … For a noble hall, nothing is so well as stucco; for a parlour, wainscot seems properest; and for the apartments of a lady, hangings.[47]

From the 1720s mahogany was increasingly available and was initially much cheaper than oak – being used extensively at Houghton by Robert Walpole, who shipped it to nearby King's Lynn. The Duke of Chandos bought mahogany for panelling the Saloon at Cannons, Middlesex, while a parlour flanking the hall at Seaton Delaval in Northumberland was entirely wainscoted with mahogany, evidently newly tried.[48] The steward for the latter, James Mewburn, wrote to Vanbrugh on 26 January 1726: 'Thomas Harles and two of his men are sett on to wainscot the North East Room with the mahogany wood, which is so well dryed and seasoned that it works extremely fine, … the crust of that wood is very hard.'[49] The name of this new, cheap, joiners' timber may speak of the 'contentious human circumstances surrounding its production', claimed to derive from the Yoruba word *M'Oganwo*, a similar West African tree which enslaved people remembered from their homeland.[50] Excess shipping capacity on return voyages to Britain from the West Indies prompted commercial promotion of mahogany cargos, and in 1722 an act of parliament removed taxes from all imports of plantation timber – just in time for work to commence at Houghton under the direction of Walpole's protégé, Thomas Ripley, a carpenter turned architect who also was overseer at the Admiralty building in Whitehall, where it is estimated that mahogany was supplied more cheaply than deal.[51] George Delaval, builder of Seaton Delaval, was a high-ranking admiral.

Composition

But what of the compositional norms which informed the arrangement of the panelling in these interiors? The earliest English text to discuss and illustrate wainscot is Joseph Moxon's *Mechanick Exercises: Or the doctrine of handy-works,* published in parts between 1677 and 1685.[52] Moxon does not provide a rationale for the composition of wainscoting, only general divisions of stiles or framing; 'lying', or low, panel; and 'large' panel over

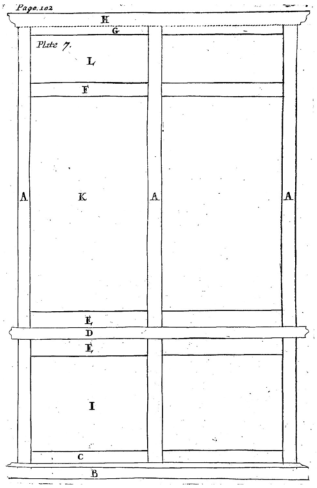


Figure 10.8: Joseph Moxon, *Mechanick Exercises*. Midwinter and Leigh, London, 1703, p. 102, Plate 7. 'AAA=The Stiles B=The Base C=The Lower Rail D=The Sur-Base EE=The Middle Rail or Rails F=The Friese [sic] Rail G=The Upper Rail H=The Cornice I=The Lying Pannel K=The Large Pannel L=The Friese Pannel'.

Public Domain, HathiTrust.

a middle rail (Fig. 10.8). The structural organisation of wainscoting generally consisted of horizontal rails at three levels, full-height stiles and part-height muntins fixed to the walls. The panels were sometimes flat and sometimes raised-and-fielded with plain edges or mouldings.

In low rooms Moxon advised that the base and sur-base could be dispensed with and in tall rooms above ten feet (three metres) high, three heights of panels might be used – the latter a case of filling up the space rather than conforming to a compositional logic, a frequent occurrence in stairhalls. More often a columnar division of base, pedestal, dado rail ('base', 'lying panel', 'sur-base'), tall vertical panel and cornice or entablature is observed. The columnar logic is seen in the Balcony Room at Dyrham Park by carver-architect Samuel Hauduroy, where the panels conform to the proportions of the Ionic order.[53] At Chicheley Hall in Buckinghamshire the panels and dado of the columnar wainscot open to reveal library shelving, lending new resonance to the contemporary term of approbation, 'neat'.[54] Where the order was full scale in the first-floor gallery of Easton Neston, Hawksmoor adopted a tripartite arrangement in conjunction with the soaring Corinthian pilasters.

The common practice in Britain and Ireland of sprung and tabled panels was supplemented with raised mouldings. While the evidence shows that architects designed wainscoted interiors, relatively few formal drawings are known. An anonymous drawing at the RIBA dated to around 1640 depicts a stylar treatment of the wall with bracket-crowned pilasters on pedestals framing the wainscoting, each bay composed of two oblong lower

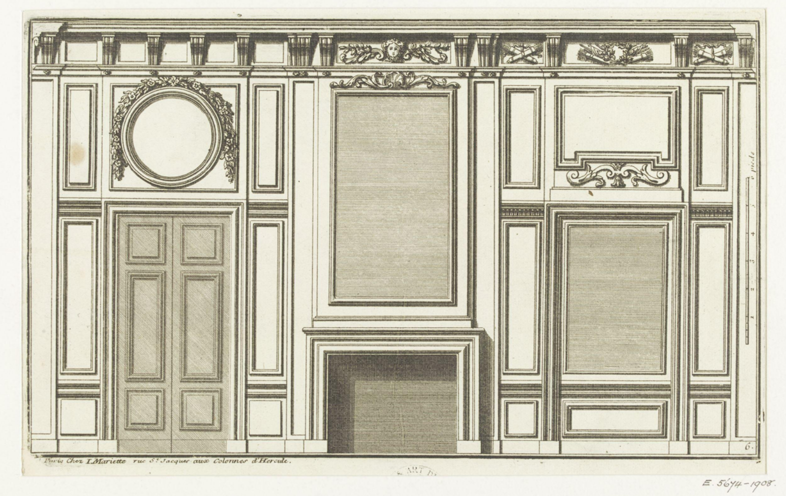


Figure 10.9: *Nouveaux desseins de lambris de menuiserie a panneaux de glace*. Paris, n.d.

© Victoria and Albert Museum, London.

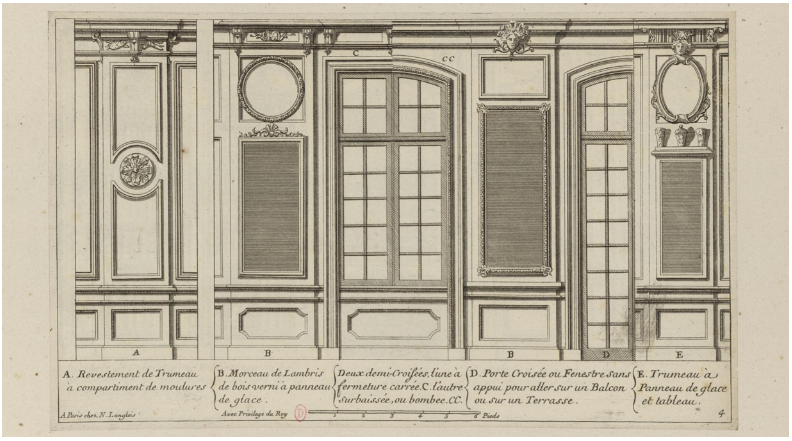


Figure 10.10: Jean-Baptiste Le Roux, *Nouveau lambris de galleries, chambres, et cabinets*, Paris, Langlois, circa 1700.

INHA (Institut national d'histoire de l'art), Paris.

panels and a large upper one flanked by narrow vertical panels.[55] Festoon ornament is partially drawn above the principal panel and foliated ornament to the moulded frames. A survey drawing at the RIBA (Royal Institute of British Architects) of the hall at Tring Manor of about 1690, a project attributed to Sir Christopher Wren, shows the original stylar wainscot with full-height Corinthian pilasters and paired panels above and below the chair rail.[56] Inspiration was provided by engraved plates of French *boiseries* included in large collections of engravings or in suites dedicated to *lambris*. Two early suites of note are *Nouveaux desseins de lambris de menuiserie a panneaux de glace* (Fig. 10.9), published in the early eighteenth century by Jean Mariette after seventeenth-century designs by Pierre Cottard, and Jean-Baptiste Le Roux's *Nouveau lambris de galleries, chambres, et cabinets* (Fig. 10.10), published by Langlois around 1700. These suites demonstrated the principal methods of wainscoting the domestic interior in France – from standard compositions of low and tall panels to more complex arrangements with intervening horizontal panels; attenuated vertical panels, or *parcloses*; and circular medallions, or *rosaces*, punctuating the tall panels.[57] Le Roux's suite depicted elaborate panelling with carved ornament, while Cottard's more restrained designs resonate in British interiors.

Work on the wainscoted interior could involve carpenters in the creation of the timber substructure, joiners in the panelling and mouldings, and carvers for the ornamental embellishments which could be fixed with nails, glue or worked into the panel. William Clere, the Sheldonian joiner, was accompanied there and on many other jobs by his brother Richard, who executed the carving.[58] Carved ornament became increasingly desirable in the Restoration period in both domestic and ecclesiastical commissions, resulting in a flourishing craft industry which culminated in the outstanding achievement of Grinling Gibbons (Fig. 10.11). However, Gibbons, for all his virtuosity, was not a solo operator but rather co-ordinated a team of highly skilled craftsmen who have only recently begun to emerge from his shadow – including Samuel Watson, Jonathan Maine, Thomas Young and William Emmet.[59] On one occasion Gibbons is recorded as enlisting a team of 50 craftsmen to complete a project on time.[60] Gibbons appears to have introduced from the Netherlands the use of finely grained limewood for decorative carving, which was much easier to work than oak and permitted virtuosity in the carving of naturalistic elements. However, by the early eighteenth century elaborate carving fell from favour and, with the Palladian revival of subsequent decades, was replaced by a greater sobriety in wainscoting reliant for its effects upon composition, projection and classical mouldings.

Figure 10.11: Carved overdoor by Grinling Gibbons.

© Victoria and Albert Museum, London.

Design and execution

The engravings of Cottard and Le Roux provide a simple scale bar and suggest depth and complexity of the mouldings, but they do not provide profiles. The same is true of surviving drawings of the period in Britain and France, in which ink and watercolour evoke rather than specify the desired projection and composition of the panel mouldings. In France in the late 1720s Jacques-François Blondel and Nicolas Pineau began to introduce part-plans of chimneypieces and adjacent panelling into published designs; however, Blondel appears to have been among the first to systematically subject joinery detail to the conventions of architectural plan, elevation and section – at least in published form. In *De la distribution des maisons de plaisance et de la decoration des édifices en general* of 1737–8, he provided detailed profiles of mouldings together with summary plans of jointing techniques (Fig. 10.12). It seems that Blondel encouraged his student, the young joiner André Jacques Roubo, to codify contemporary joinery practice, resulting in the earliest and most significant illustrated treatise on the subject, *L'art du menuisier*, published in parts amounting to four large volumes from 1769 to 1775. However, Blondel's close attention to joinery detail appears to have been the exception rather than the rule and French architects of this period are considered co-ordinators of craft activity in the domestic interior rather than generators of detailed design, providing broad compositional outlines which were fleshed out by the craftsman.[61] Indeed, French architects are known to have collaborated closely with professional carvers. Jean-Baptiste Le Roux formed a partnership with Nicolas Pineau, one of the finest decorative carvers in France, who in turn worked closely with other prominent carvers.[62]

How then did Vanbrugh, Hawksmoor and Richard Castle communicate the wainscoting plan to their joiner? Through drawings, templates or verbal instructions? While the last-named might be feasible for highly skilled joiners familiar with an architect's expectations, the room for error with untried provincial craftsmen was undoubtedly high. Indeed, Hawksmoor advised Lord Carlisle to base the execution of an entablature on the capacity of available workmen: 'If you have a good plaisterer you may do it with Stucco, but if you have a bad plaisterer, and a good Joyner and carver, then it will be best to make it in Wood'.[63] An optimum means of communicating profiles to craftsmen was through the medium of full-size drawings, a long-established European practice favoured by Sir Christopher Wren. Despite his trust in individual

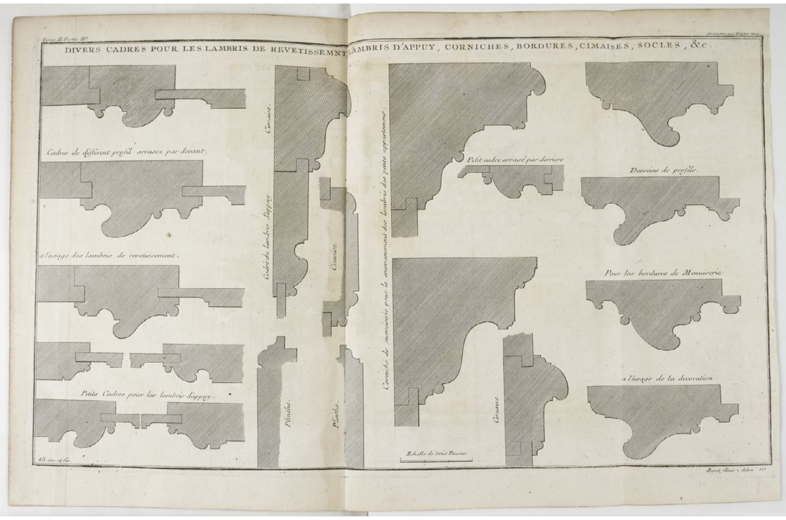


Figure 10.12: Jacques-François Blondel, *De la distribution des maisons de plaisance et de la decoration des édifices en general*, 1737–8, vol. 2, part 2, plate 99, p. 167.

INHA, Paris.

craftsmen, for whom he loosened his customary control, Wren sought to direct, in so far as possible, all aspects of execution down to the detail of architraves and cornices. Writing to the master of Trinity College, Cambridge about the construction of the library, he offered to 'take a farther paines to give all the mouldings in great [namely, large-scale drawings]' 'more proper for the use of the workmen', proclaiming architects 'as great pedants as Critics or Heralds' and promising to return the original designs 'for in the hands of the workeman they will soon be soe defaced that they will not be able from them to pursue the worke to a conclusion'.[64] However, large-scale drawings were time-consuming and unlikely to have been the norm in lesser projects.

A document for Doneraile House in Dublin (Fig. 10.13) built in the late 1740s by Richard Castle's office suggests a potential middleman between designer and craftsman – namely, the measurer. Accounts show that Simon Ribton was paid more for 'drawing out the dimensions' of the plasterers' and joiners' work than he was for measuring the entire plasterwork and joinery of the three-storey over-basement house at the end of the contract.[65] What did Ribton actually 'draw'? Large-scale drawings from architect's designs? Or outlines on the wall for the joiners and plasterers? The latter practice is found in European contracts of the early eighteenth century, in which plasterers were required to mark out the design on the ceiling for approval by the architect. Likewise, Parisian craftsmen of the early eighteenth century were obliged to work up '*en grand*' a small-scale *boiserie* design by the architect and to transfer it by pouncing to the wooden panel for approval.[66] A further method of communication was the provision of a pattern or template as a standard for the workmanship. At the Foundling Hospital in London a specification for the mouldings of the interior door panels demanded that the work was 'in all respects as good as the specimen or to be returned', while French ornamental sculptors of *boiseries* were likewise obliged to furnish three-dimensional models before commencing a contract.[67]

Surviving contracts between clients and craftsmen bear witness to the task of fashioning the wainscoted interior. An agreement of 1718 between Col. William Flower of Castle Durrow in County Laois and the joiner John Rudd demonstrates the thoroughgoing classicism in the joinery details of the period.[68] Rudd agreed to fashion wainscoting in the drawing room and best chamber of 'fram'd work with a full ogee stuck on the framing and a small ogee stuck on the margent of the panels' and, in contrast to Marlborough's eschewal of wall breaks, to 'make as many regular breaks both in the framing and entablatures of each room as he the said Flower … shall direct'. All the rest of the chambers, dressing rooms, closets and passages on the first floor

Figure 10.13: Doneraile House, Dublin, joinery of the 1740s.

Courtesy of the Irish Architectural Archive.

were to be of 'fram'd work with a full quarter round'. In 1726 Rudd was paid separately for eight oak pilasters of the Corinthian order in the wainscoted dining room, but not before Flower had consulted the surveyor-general Thomas Burgh on their monetary value – namely, nine shillings each.[69] A decade later the work of Thomas Eborall, master joiner to Smith of Warwick, in wainscoting at Sutton Scarsdale in England was similarly measured by the yard and separately for piece work. Here too the quarter rounds, back ogee and bead were standard wainscot mouldings.[70] Michael Wills, a Dublin carpenter-architect (fl.1720–60) and precocious translator of Vitruvius's *Libri decem*, in his footnotes to book four, chapter six, compared ancient and modern joinery practice: the ancients 'raising their panels … so as to be exactly on an even surface with the framing … Our panels are raised and sprung with an instrument called a skew-plain and then inserted into grooves formed with another instrument called a plow'.[71] For the mouldings of an Ionic door '[o]ur master … leaves to the judgment of the workman, whether it shall be *cyma recta*, or *reversa*: in their phrase fore ogee or back ogee. And sometimes a bead or Lesbian astragal'.[72] Wills noted the ancients' use of battens to fasten the panels and conceal the joints. 'After ages' (that is, later centuries), he tells us, 'invented another kind of moulding called a bellection for this purpose'. 'Bolection' – variously given as 'polection' and 'bellection' – is a broad term of unknown ancestry used from the late seventeenth century to describe an emphatic and widely used moulding of double curvature and

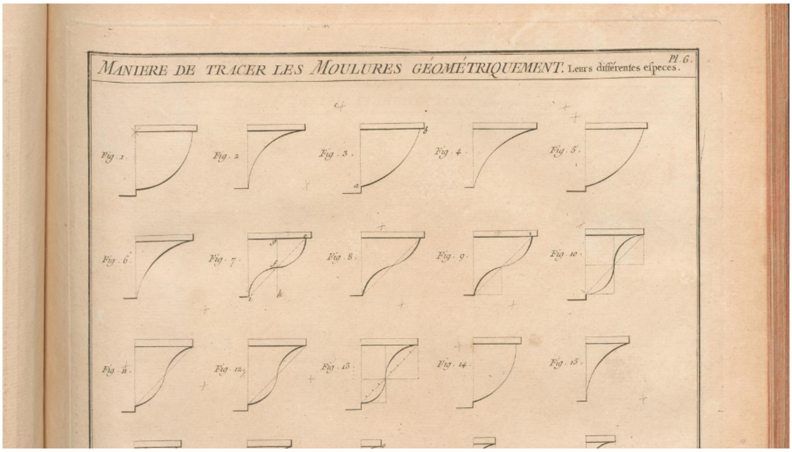


Figure 10.14: André Jacques Roubo, *L'art du menuisier*, volume 1 par M. Roubo le fils. Paris, 1769, Plate 6, 'Maniere de Tracer les Moulures'. https://gallica.bnf.fr/ark:/12148/bpt6k10671789/f181.item.

varying complexity which covers a joint between two different surfaces' levels.[73] If only Wills had told us more about his own craft, but the value systems of the period militated against it and his annotations to the Vitruvian text are largely concerned with issues of architectural design.[74]

The most commonly encountered mouldings with broad applicability for framing were the half or quarter round and the wave-like *cyma* (ogee), a term of unknown ancestry which appears to have entered construction vocabulary in the seventeenth century and was later adopted to describe arch forms and ultimately the mouldings of medieval buildings.[75] Concave at one end and convex at the other, the convex forms the lower curve of the *cyma recta* and the upper in the *cyma reversa* – a profile easily achieved by a diagonal line bisected by a perpendicular with arcs describing the swellings (Fig. 10.14). André Jacques Roubo distinguished three types of mouldings – right-angled, circular and mixed – and urged joiners to understand their geometrical construction in order to ensure accuracy in profiles, which were the ornaments of architecture and therefore of joinery.[76] Roubo identified the primary mouldings as the quarter round, the *boucine* or ogee *recta* and *reversa*, the *cavetto*, *torus* and *scotia*, unsurprisingly given the clarity of their geometrical generation. Despite colloquialisms such as *boudin, baguette*, ogee, *gorge* and throat, a standard lexicon of profiles provided the basis for joinery practice in Europe and Britain in the early modern period. Like those of Rudd and Eborall, the bill of a Parisian master joiner for work at the Bibliotheque du

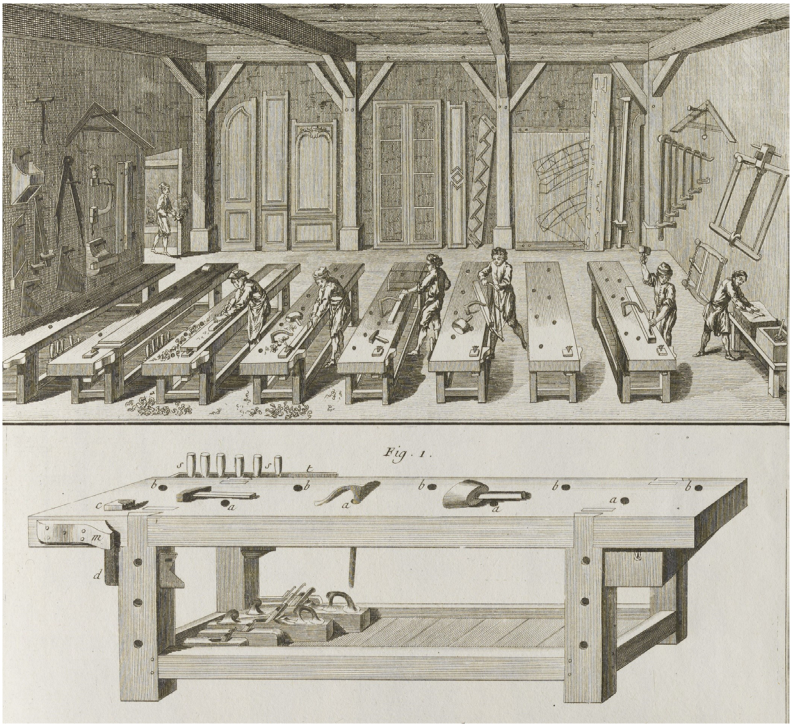


Figure 10.15: André Jacques Roubo, *L'art du menuisier*, volume 1 par M. Roubo le fils. Paris, 1769, Plate 11, 'Vue interieure de la Boutique d'un Menuisier'.

https://gallica.bnf.fr/ark:/12148/bpt6k10671789/f191.item.

Roy in 1746 – with its *baguettes*, *doucines*, *boudins* and *gorges* – reflects the *lingua franca* of the eighteenth-century craftsman.[77]

There remained the essential task of transforming the rough 'stuff' or timber boards into the smooth sections to be jointed and glued together as a seamless, abstract representation of the classical ordonnance (Fig. 10.15). 'Joinery', wrote Moxon, 'is an Art Manual, whereby several pieces of wood are so fitted and join'd together by Straight-line, squares, miters or any bevel, that they shall seem one intire piece'.[78] In the relatively low attic rooms at Blenheim the dado-to-cornice wainscot was some 8 feet (2.4 metres) high, not to speak of the soaring panels of the *piano nobile*. Rough boards of deal and oak were fixed to the joiner's work bench by screws and pins, and their irregularities were painstakingly smoothed out with progressively fine planes and chisels and the assistance of rulers and measuring devices. Labour-saving devices were employed

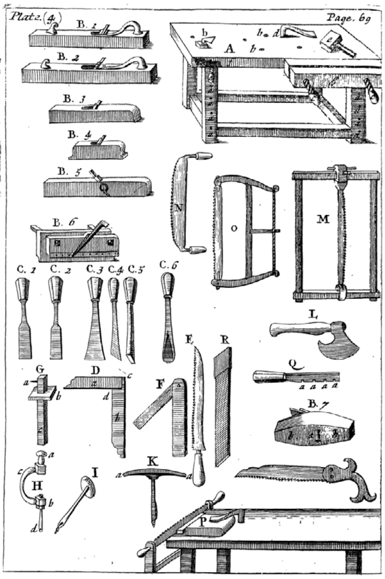


Figure 10.16: Joseph Moxon, *Mechanick Exercises*. Midwinter and Leigh, London, 1703, p. 102, Plate 7. Caption: C.1 = former C.2 = paring chisel, which 'must have a very fine and smooth edge: its Office is to follow the Former, and to pare off and smoothen the irregularities the former made'. HathiTrust.

such as moulding planes, the equivalent of the plasterer's horse or running mould. John Aheron's *General Treatise of Architecture* of 1754 distinguishes between mouldings wrought with 'common planes' – including the round, the hollow and the ogee – and those worked by hand such as impost mouldings, bases, architraves, pilasters, columns and cornice which required the use of a measuring cord in assessing their worth.[79] For the troublesome combination of angled and round elements in complex mouldings, Roubo urged craftsmen to create their own moulding planes. Moxon's account of the use of planing and paring tools testifies to the virtuosity of the skilled joiner in using them (Fig. 10.16).

The function and quality of tools was eloquently articulated. The paring chisel, for instance, 'must have a very fine smooth edge: its office is to follow the *former* and to pare off and smoothen the irregularities the *form*er has made'. Combined with the quality of the tool was the application and ingenuity of the craftsman: 'It is counted a piece of good workmanship in a joyner to have the craft of bearing his Hand so curiously even, the whole length of the board'.[80] Roubo likewise wrote of the refinement of joinery skills, the pursuit of precision and exactitude '*du le plus haut point de perfection*'.[81] In the later eighteenth century John Adam, in answer to his patron at Hopetoun, angry about the charges of his joiner, John Paterson, wrote, 'there is no doubt the prices seem high … but there is no doing a thing in an extraordinary manner without a price equal to the pains'.[82] As Pete Smith has argued, 'the careers of men … who created these fine panelled interiors with which we are so familiar, deserve to be better known'.[83]

Conclusion

In conclusion, this chapter has argued that wainscoting contributed much to the visual impact of the classical interior. It has shown that architects were involved in the design and supervision of the wainscoted interior and that clients were invested in its form, material and detailing. Technical, aesthetic, economic and ethical factors were intertwined in the choice and treatment of materials – and precision and virtuosity in the handling of tools and materials were prized by architects, clients and craftsmen alike. After two centuries of dissemination through published and tangible exemplar the language of the classical orders became thoroughly embedded in quotidian joinery practice, producing a representation of the classical ordonnance that embraced all aspects of the timber-clad wall from skirting to soffit. The enduring appeal of the wainscoted interior reflects its rich materiality, the sustained quality of its design and manufacture, and its durability and suitability to reuse.

Notes

1 Borg, 'Theodore Jacobsen', 29.
2 Pons, *French Period Rooms*, passim; Harris, *Moving Rooms*, passim; Barquist, '"The Interior Will Be as Interesting …"', 139–60.
3 Michael S. Smith, 'Foreword', Féau & Cie, *The Art of Wood Paneling*, i.
4 Forray-Carlier and Auroy, *Les boiseries du Musée Carnavalet*, 13.
5 Cornforth, *Early Georgian Interiors*, unpaginated preface.
6 Crowley, *The Invention of Comfort*, 26.
7 Wood, *The English Medieval House*, 395–7.
8 Lloyd, 'Medieval wainscoting', 232.
9 Crowley, *The Invention of Comfort*, 72.
10 Crook, *The Wainscot Book*, passim.
11 Smith, 'William Clere, master joiner', 10.
12 Hewlings, 'The contriver of Chirk', 21.
13 Higgott and Grimstone, 'Drawings by Edward Pearce senior', 1–114.
14 Gomme, 'Chevening: the big issues', 176.
15 Scott Thompson, *Letters of a Grandmother*, 70.

16 Harris '"The best workmen of all sorts"', 88.
17 British Library, Add MS 61354, f1-49.
18 British Library, Add MS 61354, f1-49, 4.
19 British Library, Add MS 61354, f1-49, 12.
20 Green and Hussey, 'Blenheim Palace re-visited, II', 1247.
21 Green, *Blenheim Palace*, 148.
22 Murdoch 'The king's cabinet-maker', 412.
23 British Library, Add MS 61354, f1-49. Written on cover.
24 Crowley, *The Invention of Comfort*, unpaginated following preface.
25 Downes, *Vanbrugh*, 71.
26 Downes, *Hawksmoor*, 240.
27 Boyce, *A Life of Ralph Allen*, 102.
28 De Latocnaye, *A Frenchman's Walk Through Ireland*, 186–7.
29 Toms, *The Builders Dictionary*, vol. 1, 'Building', unpaginated; vol. 2, 'Joinery', unpaginated.
30 Howard, 'Inventories, surveys and the history of great houses', 19; Jefferey, 'Thomas Archer's Deptford Rectory', 34.
31 Registry of Deeds, Dublin, RD82/344/58070, Jno. Cummin, carpenter, 26 March 1732.
32 Toms, *The Builders Dictionary*, vol. 2, 'Joinery', unpaginated.
33 TCD (Trinity College Dublin) Manuscripts Department, Mun/P/2/69/28, 'Carpentry jobing done for Trinity Colege Dublin on ye house account by order of the Burser'.
34 Birkbeck Hill, *Footsteps of Dr. Johnson*, 270.
35 *The Dublin Journal*, Tuesday 28 February–1 March 1726/7 O.S.
36 *Weekly Miscellany*, Saturday 21 February 1741.
37 Bowett, *Woods in British Furniture-Making*, 242–50.
38 Beard, *Craftsmen and Interior Decoration*, 59.
39 Gomme, 'An eighteenth-century builder's notebook', 200. Information from Susan Roundtree on Dublin Mansion House.
40 Lees-Milne, *English Country Houses: Baroque*, 85–94; Goulding, 'Old staircase at Dyrham Park'.
41 Bristow, *Architectural Colour*, 48.
42 Bowett, 'The mahogany reredos', 168.
43 Bristow, *Architectural Colour*, 48.
44 Smith, 'William Clere, master joiner', 11.
45 Crook, *The Wainscot Book*, xxviii.
46 Le Roux, *Nouveaux lambris*.
47 Ware, *A Complete Body of Architecture*, 469.
48 Bowett, 'Thomas Ripley', 142.
49 Bowett, 'The English mahogany trade', 40–1.
50 Anderson, *Mahogany*, 4.
51 Bowett, 'Thomas Ripley', 140.
52 Moxon, *Mechanick Exercises*, 102.
53 https://www.nationaltrustcollections.org.uk/object/454212. Accessed 3 July 2022.
54 Lees-Milne, *English Country Houses: Baroque*, 234.
55 RIBA 22986. Accessed 3 July 2022. https://www.ribapix.com/Design-for-the-interior-wainscoting-decoration-of-a-room-featuring-swagged-garland-frieze-decoration-and-pilasters-on-high-bases-framing-rectangular-panels_RIBA22986.
56 RIBA 20924. Accessed 3 July 2022. https://www.architecture.com/image-library/ribapix/image-information/poster/tring-manor-hertfordshire-survey-sections-and-plan-of-the-hall/posterid/RIBA20924.html.
57 For a wide-ranging discussion and catalogue of *boiseries*, see Pons, *Waddeson Manor*.
58 Smith, 'William Clere, master joiner', passim.
59 Brighton, 'Samuel Watson', 811–18.
60 De Witt, 'Wood carving in the age of Grinling Gibbons'.
61 Forray-Carlier and Auroy, *Les boiseries du Musée Carnavalet*, 26. See also note lxiv.
62 Pons, *Waddeson Manor*, 324–8.
63 Downes, *Hawksmoor*, 251.
64 Bolton and Hendry, *Wren Society: Original Wren drawings from All Souls*, 32–3.
65 NLI (National Library of Ireland) MS 34,165. Building accounts for Doneraile House, Kildare Street. 'The Honble Hayes St Leger To Simon Ribton for Sundry Admeasurements'.
66 Pons, *De Paris a Versailles*, 48.

67 Borg, ‘Theodore Jacobsen’, 29; Pons, *De Paris a Versailles*, 48.
68 NLI MS 11,455. Accounts and legal documents relating to the building of Castle Durrow House for the Flower family.
69 NLI MS 11,481/9. Letter from Thomas Burgh to William Flower, 29 October 1726 ‘The workmanship of ye pillars according to the account you give of them cannot be justly rated at more than nine shillings each’.
70 Gomme, ‘An eighteenth-century builder’s notebook’, 193–236.
71 Chester Beatty Library, Dublin, W192 f.134.
72 Chester Beatty Library, Dublin, W192 f.134.
73 NLI MS 11,455. Castle Durrow papers; Gomme, ‘An eighteenth-century builder’s notebook’, 201.
74 Casey, ‘“De Architectura”’, 80–95.
75 I am grateful to Roger Stalley and, by extension, to Nicola Coldstream for clarification on this point. A useful guide to mouldings is at https://georgiangroup.org.uk/wp-content/uploads/2018/05/MOULDINGS.pdf. Accessed 3 July 2022.
76 Roubo, *L’art du menuisier*, partie I, chapter 3, 40–4.
77 https://gallica.bnf.fr/ark:/12148/btv1b10080154c/f8.item.r=menuiserie.zoom. Accessed 3 July 2022.
78 Moxon, *Mechanick Exercises*, 63.
79 Aheron, *A General Treatise of Architecture*, 94.
80 Moxon, *Mechanick Exercises*, 76, 69.
81 Thamer, ‘L’art du menuisier’.
82 Rowan, ‘The building of Hopetoun’, 196.
83 Smith, ‘William Clere, master joiner’, 29.

References

Aheron, John. *A General Treatise of Architecture*. Dublin: John Butler, 1754.

Anderson, Jennifer. *Mahogany: The costs of luxury in early America*. Cambridge, MA: Harvard University Press, 2012.

Barquist, David L. ‘“The interior will be as interesting as the exterior is magnificent”: American period rooms at the Philadelphia Museum of Art’, *Winterthur Portfolio* 46:2/3 (Summer/Autumn 2012): 139–60.

Beard, Geoffrey. *Craftsmen and Interior Decoration in England 1660–1820*. London: Bloomsbury, 1986.

Birkbeck Hill, George. *Footsteps of Dr. Johnson*. London: Sampson Low, Marston, Searle and Rivington, 1890.

Bolton, Arthur and H.D. Hendry, eds. *The Fifth Volume of the Wren Society: Original Wren drawings from All Souls, Hans Sloane, and Sir John Soane’s Collections*. Oxford: Oxford University Press, 1928.

Borg, Alan. ‘Theodore Jacobsen and the building of the Foundling Hospital’, *Georgian Group Journal* 13 (2003): 12–34.

Bowett , Adam. ‘The English mahogany trade 1700–1793’. PhD Thesis, Brunel University, 1996.

Bowett, Adam. ‘Thomas Ripley and the use of early mahogany’, *Georgian Group Journal* 7 (1997): 140–5.

Bowett, Adam. ‘The mahogany reredos, pulpit and altar table at Saint George’s Church, Bloomsbury’, *Georgian Group Journal* 9 (1999): 166–75.

Bowett, Adam. *Woods in British Furniture-Making 1400–1900: An illustrated historical dictionary*. Wetherby: Oblong Creative and Royal Botanic Gardens, Kew, 2012.

Boyce, Benjamin. *A Life of Ralph Allen of Bath*. Cambridge, MA: Harvard University Press, 1967.

Brighton, Trevor. ‘Samuel Watson, not Grinling Gibbons at Chatsworth’, *Burlington Magazine* 140:1149 (December 1998): 811–18.

Bristow, Ian. *Architectural Colour in British Interiors 1615–1840*. New Haven, CT and London: Paul Mellon Centre for Studies in British Art and Yale University Press, 1996.

Casey, Christine. ‘“De Architectura”: an Irish eighteenth-century gloss’, *Architectural History* 37 (1994): 80–95.

Cornforth, John. *Early Georgian Interiors*. New Haven, CT and London: Yale University Press, 2004.

Crook, John, ed. *The Wainscot Book: The houses of Winchester Cathedral Close and their interior decoration, 1660–1800, Hampshire Record Series*, vi. Winchester: Hampshire Record Office for Hampshire County Council, 1984.

Crowley, John. E. *The Invention of Comfort: Sensibilities and design in early modern Britain and America*. Baltimore: Johns Hopkins University Press, 2000.

De Latocnaye, Le Chevalier [de Bougrenet, J.L.]. *A Frenchman's Walk Through Ireland 1796–7*, translated from the French of De Latocnaye by John Stevenson. Belfast: Blackstaff Press, 1984.

De Witt, Ada. 'Wood carving in the age of Grinling Gibbons', conference paper in 'CRAFTVALUE: craftsmanship and its conservation in the architecture of Britain and Ireland', 30 October 2020, Trinity College Dublin.

Downes, Kerry. *Vanbrugh*. London: Zwemmer, 1977.

Downes, Kerry. *Hawksmoor*. London: Zwemmer, 1979.

Féau & Cie. *The Art of Wood Paneling: Boiseries from the 17th century to today*. New York: Rizzoli, 2021.

Forray-Carlier, Ann and Marc Auroy. *Les boiseries du Musée Carnavalet*. Dourdan: Vial, 2010.

Gomme, Andor. 'Chevening: the big issues', *Georgian Group Journal* 14 (2004): 167–86.

Gomme, Andor. 'An eighteenth-century builder's notebook', *The Sixty-Seventh Volume of the Walpole Society* 67 (2005): 193–236.

Goulding, Rupert. 'Old staircase at Dyrham Park', *National Trust*. Accessed 3 July 2022. https://www.nationaltrust.org.uk/dyrham-park/features/old-staircase.

Green, David. *Blenheim Palace*. London: Country Life, 1951.

Green, David and Christopher Hussey. 'Blenheim Palace re-visited, II', *Country Life* 27 (May 1949): 1246–50.

Harris, Francis. '"The best workmen of all sorts": the building of Wimbledon House 1730–1742', *Georgian Group Journal* 2 (1992): 87–90.

Harris, John. *Moving Rooms: The trade in architectural salvages*. New Haven, CT and London: Yale University Press, 2007.

Hewlings, Richard. 'The contriver of Chirk'. In *National Trust Historic Houses and Collections Annual*, edited by David Adshead, 16–23. London: National Trust, 2012.

Higgott, Gordon and A.V. Grimstone. 'Drawings by Edward Pearce senior (fl. c.1630–c.1658): painter, decorator and interior designer', *The Walpole Society* 82 (2019/2020): 1–114.

Howard, Maurice. 'Inventories, surveys and the history of great houses 1480–1640', *Architectural History* 41 (1998): 14–29.

Jefferey, Paul. 'Thomas Archer's Deptford Rectory: a reconstruction', *Georgian Group Journal* 3 (1993): 32–42.

Lees-Milne, James. *English Country Houses: Baroque 1685–1715*. London: Country Life, 1970.

Le Roux, Jean-Baptiste. *Nouveaux lambris de galeries, chambres, et cabinets*. Paris: Langlois, c.1700.

Lloyd, Nathaniel. 'Medieval wainscoting and the development of the linen panel', *Burlington Magazine* 53:308 (November 1928): 230–3.

Moxon, Joseph. *Mechanick Exercises: Or, the doctrine of handy-works. Applied to the arts of smithing joinery carpentry turning bricklayery. To which is added, mechanick dyalling: shewing how to draw a true sun-dyal on any given plane, however scituated; only with the help of a straight ruler and a pair of compasses, and without any arithmetical calculation*. 3rd edition. London: Printed for D. Midwinter and T. Leigh, 1703.

Murdoch, Tessa. 'The king's cabinet-maker: the giltwood furniture of James Moore the Elder', *Burlington Magazine* 145:1203 (June 2003): 408–20.

Pons, Bruno. *De Paris a Versailles 1699–1736: Les sculpteurs ornemanistes parisiens et l'art décoratif des bâtiments du roi*. Strasbourg: Association des Publications près les Universités de Strasbourg, 1983.

Pons, Bruno. *French Period Rooms 1650–1800: Rebuilt in England, France and the Americas*. Quetigny: Éditions Faton, 1995.

Pons, Bruno. *Waddeson Manor Architecture and Panelling*. London: Philip Wilson, 1996.

Roubo, André Jacques. *L'art du menuisier*, 6 volumes. Paris: Académie royale des sciences, 1769–75.

Rowan, Alistair. ‘The building of Hopetoun’, *Architectural History* 27 (1984): 183–209.
Scott Thompson, Gladys, ed. *Letters of a Grandmother 1732–1735: Being the correspondence of Sarah, Duchess of Marlborough with her granddaughter Diana, Duchess of Bedford.* London: Cape, 1943.
Smith, Michael S. ‘Foreword’. In *The Art of Wood Paneling: Boiseries from the 17th century to today*, edited by Féau & Cie. New York: Rizzoli, 2020.
Smith, Pete. ‘William Clere, master joiner’, *Georgian Group Journal*, 18 (2010): 8–34.
Thamer, Hans-Ulrich. ‘L’art du menuisier: Work practices of French joiners and cabinet-markers in the eighteenth century’, *Mélanges de l’école française de Rome* 99:2 (1987): 1029–46.
Toms, W.H. *The Builders Dictionary: Or gentleman and architect’s companion*, 2 volumes. London: A. Bettesworth, C. Hitch and S. Austen, 1734.
Ware, Isaac. *A Complete Body of Architecture*. London: T. Osborne and J. Shipton, 1756.
Wood, Margaret. *The English Medieval House*. London: Ferndale, 1981.

11

A glorious ascent: staircase design, construction and craft in the circle of Richard Castle

Andrew Tierney

The staircases in the buildings associated with Richard Castle, the principal country-house architect in Ireland in the first half of the eighteenth century, have been the subject of relatively little academic enquiry. As this volume shows, the neglect of craftsmanship is widespread within architectural history – and staircases, despite their stellar role in many eighteenth-century interiors, are no exception. This is surprising given the synthesis of design, engineering and craftsmanship involved in their construction, often requiring the collaboration of architect, carpenter, joiner, turner and carver. Despite the practical function of the eighteenth-century staircase, with its exacting ratios of parts and carefully engineered flights, it was finished in a way designed to draw the eye and hand as much as the foot. A meeting point between architecture and craft, there is no more substantial or theatrically conceived set piece within the eighteenth-century interior. The work encompassed a wide range of practical and aesthetic problems: the sound and feel of the foot upon the tread and the broad support of the handrail, raising and dipping the hand over sinuous curving surfaces in its navigation around quarter and half landings; this tacit engagement of the body was supported by carefully directed light and shadow. None of this was accidental. The subtle attention to the needs of both the body and the mind is noted by Richard Neve in his 1703 builders' dictionary, when he remarks:

> That they be laid where they joyn *con un tantino di (carpe) scarpa,* (as the Italians speak:) we may Translate it somewhat (tho ' but little) sloaping , (viz . a little highest behind,) so that to the foot may in a sort both ascend and descend together ; which tho' observ'd by few, is a secret and delicate Deception of the Pains in Mounting.[1]

Given Neve's casual reference to the subtleties of Italian practice, one might expect that he was relying on a broad body of practical and theoretical literature. But this was not the case at all. The paucity of literature on staircases exposes the degree to which the architectural historian's interest has been directed by a bibliographic canon established by architects to champion architects. This dearth has been traced in James Campbell and Michael Tutton's recent edited volume on the subject, which notes that the only previous treatment in a British context is Walter Godfrey's *The English Staircase* (1911), a short volume now over a century old.[2] No single volume addresses Irish or Scottish staircases in the same way. Most of the work has been in piecemeal chapter-length studies (of which this is yet another), often with very broad chronologies. James Campbell's essay on the British staircase in the 2014 volume, for example, begins in the Iron Age. As he notes, the timing of some key technical changes – such as the creation of treads and risers (rather than solid blocks) and the idea of rebating the tread ends into strings – remains unclear.[3] Campbell also rightly observes that these features are so familiar that we take them for granted. In response, this chapter attempts to zoom in on some stylistic and technical shifts in eighteenth-century Irish staircases as a way of interrogating what we really know about the means through which 'design' and 'craft' intersect.

As background, the chapter will give a general overview of the development of staircase design in Ireland and Britain from the late seventeenth century, focusing on the variations in the treatment of string, rail and ramp (Figs. 11.1 and 11.2). The body of the text will describe how these elements are configured in four major houses of Richard Castle and will explore their relationship with earlier English exemplars in the work of John Vanbrugh and Francis Smith of Warwick. In addressing these details the chapter will consider the extent to which staircases can be interpreted as creations of the architect or whether they must be understood as part of a parallel, but somewhat independent, field of design by craftsmen. Certainly, for more routine work, carpenters and joiners might be left to their own devices. William and Alexander Mowat, in *A Treatise on Stairbuilding and Handrailing* (1900), remark that:

> In the ordinary run of work which really forms the greater part of what the stairbuilder is called upon to execute, the architect does little more than set apart the necessary stair space, and give a few details leaving all the internal arrangements of steps, etc., to be worked out by the practical man.[4]

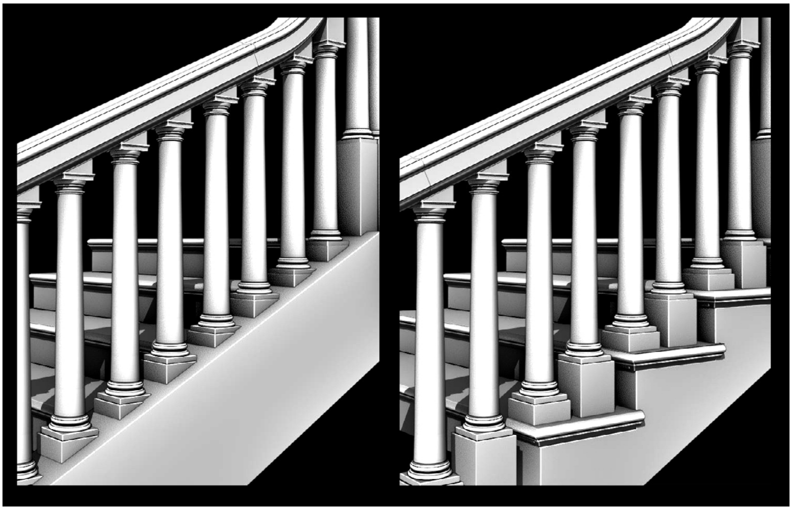


Figure 11.1: Staircase construction, closed string (left) and open string (right).

Digital rendering by Andrew Tierney.

Figure 11.2: Staircase construction, swan-neck ramp (left) and concave ramp (right).

Digital rendering by Andrew Tierney.

Architects' neglect of the topic in the architectural literature does little to strengthen the notion that they directed major developments in the field of staircase design, most of the published work being that of carpenters or carpenter-cum-architects (as discussed below). Palladio dealt only with the geometrical stairs – square, circular and elliptical – each conceived as a separate, self-contained entity, without cross-section drawings to explain their intended architectural detail. In the series of plans of Palladio's own villas, in Book II of the *Quattro Libri*, staircases are a minor feature – particularly in those villas with half upper storeys. Where dog-legged plans appear, the flights are self-contained in separate barrel-vaulted spaces, such as Sansovino's *Scala D'Oro* in the Doge's Palace, Venice, a type which reappears briefly in late sixteenth-century England at Burghley. The quarter-turn staircase, with its implied open well, does not appear in Palladio. Its legitimacy as a model type was confirmed in its use by Inigo Jones and Roger Pratt at Coleshill, Berkshire, in the mid-seventeenth century, while Jones's section drawing for a staircase and staircase hall was one of the few to be published by 1731.[5] By the time Richard Castle came to design his first country houses in Ireland, British architectural literature provided exemplars only for staircase plans – as in Colen Campbell's *Vitruvius Britannicus* (1715) and James Gibbs's *A Book of Architecture* (1728). Gibbs's landmark 1728 publication, the more detail-oriented of the two works, tells us nothing of the designs he had in mind (if any) for his staircases, carefully omitting stairhalls from his cross sections. Even by the mid-century, architects were reticent to address the issue. Isaac Ware, in his otherwise exhaustive *Complete Body of Architecture* (1756), omitted any detailed account of staircase construction, except to give advice on their position within the plan and the decorative treatment of the ceilings of staircase halls.[6] Tellingly, the only staircase illustration he provided was for that at Coleshill, attributed to Inigo Jones – a key authority for Palladians, but of a type rarely used in practice.[7] One of the few architects to give some attention to the question of staircases was the Irishman John Aheron, an eccentric provincial, whose *A General Treatise of Architecture* (1754) stands outside the mainstream. His views are discussed later on.

This neglect leaves the architectural historian in something of a quandary when unpicking how staircase designs evolved in the eighteenth century. The absence of authoritative models for staircases left a space open to be filled not by architects but by the more intuitive, tacit, incremental and experimental fine-tuning of craftsmen, the evolution of which is harder to trace. The publishing of detailed instructions by carpenters themselves was slow and piecemeal.[8] *The British Carpenter* by

Francis Price dealt with staircase design in 1733 as part of a broad treatment of carpentry that included everything from floors to the substructure of domes; but it was not until 12 years later that staircases were given prime billing in Abraham Swan's *The British Architect: Or, the builder's treasury of staircases* (1745), the title of which exposed a clear need to bring the design concerns of architects and craftsmen together in a single volume. Unsurprisingly, Swan complained of the lack of detail on staircases in the principal Italian writers on architecture, such as Serlio and Palladio.

Early eighteenth-century Irish staircases

In order to understand the staircases in the buildings of Richard Castle of the 1730s and 40s we must look at those constructed in the previous generation. There are few examples, so any conclusions regarding type are necessarily tentative. The staircase at Leixlip Castle, County Kildare, of around 1700 (Fig. 11.3) is certainly of a different character to those of a generation later. Most notably, it has a closed string with single-bulb balusters of the type introduced by Roger Pratt and Inigo Jones at Coleshill (c.1650). The newels are large and rectilinear, rising high above the handrail; the single-bulbed balusters are arranged in pairs above a closed string, a form labelled in the eighteenth-century literature a 'pedestal stair' for the manner in which the closed string forms a continuous pedestal for the balusters.[9] The back staircases at Beaulieu, County Louth, are also of this type, having narrow balusters of complicated design and fine pulvinated friezes in the string. The type had a longer life in England than in Ireland, possibly due to its association with Inigo Jones. It reached its apogee in Colen Campbell's great staircase at Houghton, Norfolk (1722), executed by James Richards, but continued to appear in houses such as Marble Hill, Twickenham (1724–9) and No. 30 Old Burlington Street (c.1730).[10] Abraham Swan constructed a staircase of this type as late as 1757 at Blair House (now Blair Castle) for the Duke of Atholl, but it was by then decidedly old-fashioned.[11] Irish carpenters and joiners show some eccentric riffing on the theme before abandoning the type entirely. One such example is that at Rathbeale Hall, County Dublin, of about 1700 (possibly by the same hands as that at Leixlip), where paired balusters sit on shared pedestals in a partially opened string while a stepped moulding rises immediately beneath the rail to avoid the problem of irregular baluster heights (Fig. 11.4).

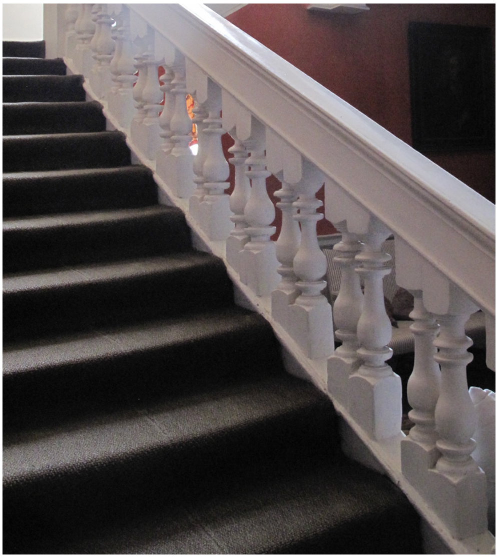


Figure 11.3: Staircase at Leixlip Castle, County Kildare.
Photograph by Andrew Tierney. Courtesy of Penny Guinness.

Irish and British stairs differ most during this period in their approach to the ramp (see Fig. 11.2) – one of the key technical and aesthetic challenges in staircase design, required to address the treatment of the handrail at a quarter turn where the steps pivot one above the other and the rail jumps up to meet the next flight. The common seventeenth-century solution was to break the run of the rail with large square newels, as at Leixlip, an inelegant but practical response. A 'swan-neck' form, where the rail is ramped organically over the newels, appears in Ireland before 1681 in the great yew staircase at Birr Castle, a type which may have taken several decades to overtake the simpler type at Leixlip. The origin of the swan-neck ramp is as yet unknown, but it appears to have been more common and survived over a longer period in Ireland than in Britain. Edward Lovett Pearce used the swan-neck ramp on his stone-and-iron staircase at No. 9 Henrietta Street as late as about 1730, but the form was widely overtaken by the English concave ramp by the end of the decade. While the swan-neck ramp is apparently ubiquitous in Ireland up until this date, its use in England was unusual in major staircases throughout the seventeenth and early eighteenth centuries.[12] There, the concave ramp had long been the standard form and is found in many mid-to-late seventeenth-century interiors such as Forde Abbey and Rolls Park,

Figure 11.4: Staircase at Rathbeale Hall, County Dublin. *Georgian Society Records*, vol. V (Dublin: 1913), Plate XCVIII.

Public Domain.

Dunster Castle, Powis Castle and Belton Hall. However, its ultimate origin and development remain unclear. With the exception of Linda Hall's work on English staircases, there has been very little work tracing the comparative regional development of details, and the evolution of different ramp types remains a puzzle.[13]

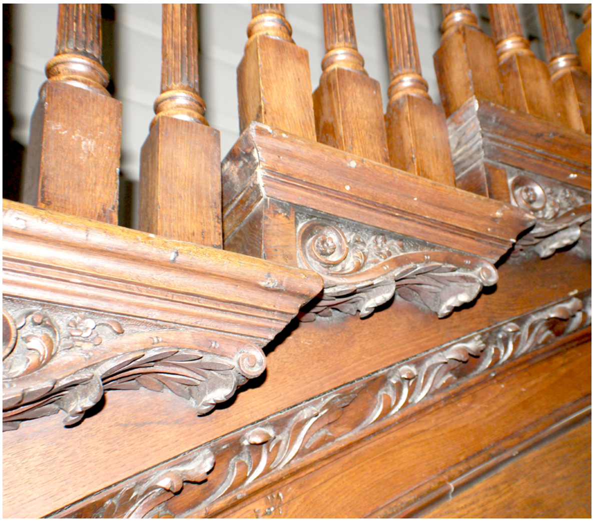



Figure 11.5: Bracketed tread ends, staircase of the Old Library, Trinity College Library, Dublin.

Photograph by Andrew Tierney.

Figure 11.6: Staircase at Red House, Youghal.

Photograph by Andrew Tierney. Courtesy of Helen Keane.

In Ireland the period before 1730 saw other innovations besides the swan-neck ramp – such as narrow, column-like balusters (sometimes a mix of fluted and twisted) rising three to a step and, very notably, the introduction of the open string, which allowed the nosing to continue around the side of the tread over a carved modillion (Fig. 11.5). The further development of the standard eighteenth-century staircase was drawn-out and largely organic in Britain and Ireland. The decorative treatment of tread ends stands out as a major innovation of the opening decades of the 1700s. Enriched with acanthus-leaf carving, it would remain a defining ornamental feature throughout the century. In the early 1700s the open-string staircase is still clearly supported by a sturdy lower string and at least one carriage beam, if not more, boxed in behind it, which did all the heavy lifting (Figs. 11.5 and 11.6). As we will see below, carpenters and joiners would find a way around that limitation in an inventive fashion. We also see an attempt in the early 1700s at curving the rail and balusters outward to form a concluding flourish at the terminal newel; it is a tentative move towards the full volute that would become one of the most enduring virtuoso features of eighteenth-century woodwork.

Figure 11.7: Staircase at Strokestown Park, County Roscommon.

Courtesy of the Irish Architectural Archive.

Figure 11.8: Staircase of the Old Library, Trinity College Dublin.
Photograph by Andrew Tierney.

Considering these changes in the opening decades of the century, it is worth pausing to review where Richard Castle and his (presumably evolving) circle of craftsmen enter the picture. The staircases in his earliest works are largely lost to us, but there are some clues. When he began his Irish career in the 1720s it was still standard practice for most rooms, including the stairhall, to be wainscoted from floor to ceiling. The stairhall at Strokestown Park in County Roscommon (c.1729), one of the earliest surviving country houses attributed to Castle, retains its wainscoting, which echoes the line of the lost stair rail (Fig. 11.7).[14] This had clearly been a staircase of the standard design found in the first two decades of the eighteenth century, characterised by open-string construction, ramped swan-neck handrails, newels carved into columns (usually Corinthian), narrow fluted and/or twisted balusters (usually three to a step), and carved acanthus-leaf tread ends. Similar examples to the Strokestown type survive at the Old Library in Trinity College (1723–5, Fig. 11.8), the Red House in Youghal (c.1705–15, Fig. 11.6), Beaulieu, County Louth (c.1710–20), and Cashel Palace, County Tipperary (1730–2). A more forward-looking staircase existed at Molyneux House, Peter Street, Dublin, of 1711, which had a very early Irish example of a concave ramp.[15]

The concave ramp did not become widespread in Ireland until the 1730s. One project that throws light on these shifts is the stair hall in the Old Library at Trinity College, which Castle (as College architect) had a hand in completing. The stylistic details – including a swan-neck ramp

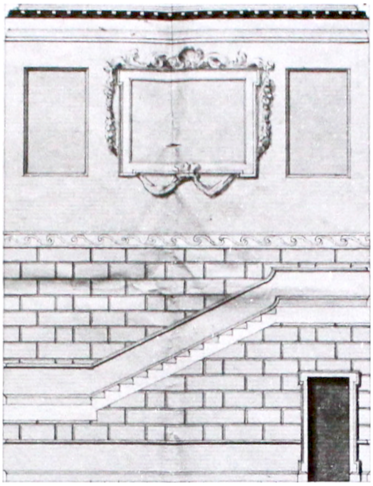


Figure 11.9: Drawing of the staircase of the Old Library, Trinity College Dublin.

Courtesy of the Board of Trinity College Dublin, University of Dublin.

– are consistent with a date in the 1720s (Fig. 11.8). However, the scheme for the completion of the space (most likely of the late 1730s or 40s) suggests that Castle (or someone working for him) considered it out of date; a surviving drawing shows the outline of a concave ramp, not the existing swan-neck ramp (Fig. 11.9).[16] For whatever reason, probably cost, the College did not execute the change. The estimate for the completion of the space makes only a single allusion to the staircase itself, which is the provision of a sum of £2 10*s*. for a 'twist' in the handrail, which would seem to indicate that a volute or scroll – by then fashionable – was intended. As no such volute exists and the gentle outward sweep is of a type consistent with the 1720s, the College clearly refrained from executing this change too. While the original scheme would most likely have been to wainscot the space entirely (as can still be seen at No. 11 Henrietta Street of 1729–30, Fig. 11.22), Castle's treatment is more up to date – introducing plaster rustication in the lower storey, a Vitruvian scroll frieze between the storeys (his signature stairhall feature) and lugged acanthus-framed panelling in the upper storey. So, the evidence of the Trinity staircase suggests several key shifts in staircase design between the 1720s and 40s: the introduction of the concave ramp, the volute and a plasterwork finish above the level of the dado.

The concave ramp and the volute terminus appear to have become popular simultaneously in Ireland in the 1730s, most likely due to their

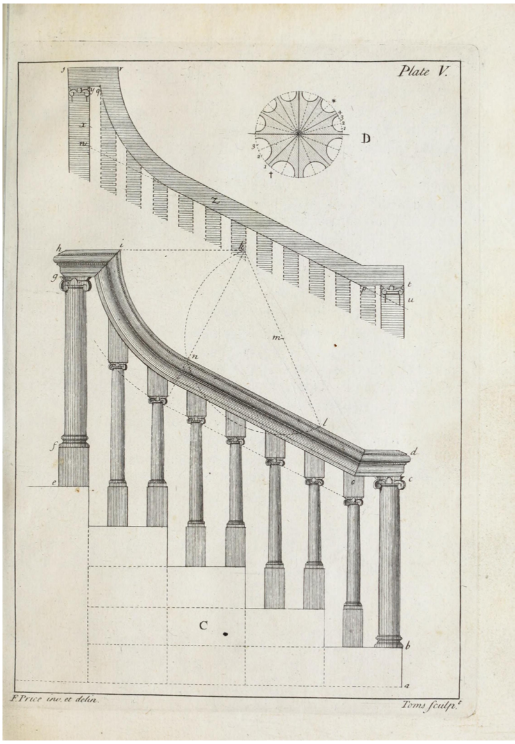


Figure 11.10: Staircase balustrade, *The British Carpenter*, 1735.

Getty Research Institute.

Figure 11.11: Staircase at No. 85 St Stephen's Green, Dublin.

Photograph by Andrew Tierney.

propagation in new architectural literature.[17] William Halfpenny published geometrical drawings for a half-twist volute and concave ramp as early as 1725 but perhaps more influential were the versions published in *The British Carpenter* by Francis Price of 1733 (expanded in his second edition of 1735; Fig. 11.10), a book which contained endorsements by Nicholas Hawkmoor, John James and James Gibbs.[18] This was the first book to address the issue of staircase design with drawings and measurements; some of it was republished in 1736 by Batty Langley, and most likely inspired similar work on staircases by William Salmon in his *Palladio Londinensis* of 1734.[19] For the first time, Irish carpenters had a clear printed guide to the geometry of the concave ramp and the means of designing both a single and double twisted volute (or 'scroll', as it is termed by Price). The ramp and volute were both used at Mount Ievers, County Clare, completed by Isaac Rothery in 1736–7, the volute being among the earliest datable examples in Ireland.[20] At No. 85 St Stephen's Green (1738) (Fig. 11.11), where these features first appear in a surviving Richard Castle work, there is remarkable precision in the execution of the curve and the joins between the sections employed to complete it. Few features gave such occasion to show off the craftsman's skill as the stair volute, and it remained a key part of the staircase repertoire for the rest of the century.

If the ramp changed form, the profile of the handrail remained constant. The handrail illustrated by Price was constructed according to a standard design and, except for a slight reduction in scale, there is no difference in the profile between those of the 1720s and those of the 1730s and 40s. In fact, this standard handrail profile dates to around

Figure 11.12: Staircase at Tyrone House, Marlborough Street, Dublin.

Photograph by Christine Casey.

Figure 11.13: Staircase at Russborough, County Wicklow.

Photograph by Andrew Tierney.

1600, showing a combination of hybridity, tradition and innovation in craftsmen's working practices that would push the chunky handrail into voluted form largely unchanged.[21] But there was some aesthetic logic in retaining this traditional broad surface area; it was, for example, the perfect means to show off polished mahogany, then a new and exotic import. Although Price had not specified its use, architects, craftsmen and clients must have recognised a natural marriage of form and material.

From the late 1730s staircases in houses completed under Castle's supervision show an astute appreciation of mahogany's potential. No. 85 St Stephen's Green, of 1738, is the earliest of three surviving staircases of this new kind, along with those at Tyrone House in Dublin (c.1740) and Russborough in County Wicklow (1742) (Figs. 11.11–13). All three are remarkably similar in design, except for a few minor variations. With the introduction of mahogany came a simplification of the baluster, which departs from the earlier fluted or twisted column in favour of a simpler Tuscan type. While three or four balusters to a step was common practice until the 1720s, the reduction to two per step (following Price's example) allowed them increase in size and surface area to show off the fine-grained tropical hardwood.[22] With its clean, simple lines this baluster type would become the model for that executed in gleaming, polished brass by William King at Castletown, County Kildare as late as 1760.

Despite the new guidance in the published literature, there were still a myriad of details with aesthetic consequences that must have been left to the master carpenter or joiner alone. The unidentified craftsman at

Figure 11.14: Staircase at No. 85 St Stephen's Green, Dublin.

Photograph by Andrew Tierney.

Figure 11.15: Staircase at Tyrone House, Dublin. *Georgian Society Records*, vol. III (Dublin: 1911), Plate XXIX.

Public Domain.

Figure 11.16: Staircase at Russborough, County Wicklow.

Photograph by Andrew Tierney.

No. 85 St Stephen's Green chose to retain the equal height of the baluster columns on each step by varying the height of the bases (Fig. 11.14). The same approach is taken at Tyrone House, but the bases are significantly shorter. At Russborough the bases on the steps are all of equal height and instead the height of the columns is varied to meet the rising line of the rail, and on the landing the elongated bases are done away with entirely by placing them on a low timber pedestal. These variations beg the question as to whether these otherwise very similar staircases were actually executed by the same master craftsman or not. At No. 85 and Tyrone House the problem is accentuated in the landings, where the bases are emphatically elongated to maintain the proportions of the columns which rise up with the ramp at the stair top (Fig. 11.15).[23] At Drogheda House, Sackville Street (now O'Connell Street), Dublin (demolished), where there was another staircase of this type, the bases on the steps and landing were all made the same height, requiring elongated balusters on the landing and leaving the others looking quite stubby by contrast.[24] A common solution to the problem, seen in the half-landing at Russborough (Fig. 11.16), was to dip the rail back down again across the landing.[25] Such variation across contemporary staircases suggests the joiners were left to their own devices to work out the details without any recourse to an authoritative source.

Structural innovation in timber staircases

In addition to the shift in materials and design, the staircases at No. 85 St Stephen's Green, Tyrone House and Russborough are of a more technically daring type than hitherto seen in Ireland. The cantilevered appearance of these staircases is not something derived from Price, showing that wider influences were at play. In their cut-string articulation of the step as an autonomous element, they mimic earlier cantilevered staircases of Portland stone – weighty, and pure of line and surface. To understand them, it is necessary to digress briefly into the history of the stone staircase in Britain and Ireland. The earliest examples in Britain were remarkable works of art and engineering that literally gave flight to stone; as such, stonemasons had laid down the gauntlet for carpenters. The first was the Tulip staircase by Inigo Jones and Nicholas Stone in the Queen's House in Greenwich (1629–35), derived from Palladio's geometrical designs.[26] Later, Jean Tijou's grand iron baluster rails dominated the Baroque period at the end of the seventeenth century in Hampton Court, Burghley and Chatsworth – and continued into the following century in grand houses

Figure 11.17: Staircase at No. 9 Henrietta Street, Dublin.

Photo courtesy of Dublin City Council.

such as Cannons in Middlesex (c.1720; relocated to Chesterfield House by Isaac Ware in 1749).[27] The earliest stone-and-iron example in Ireland may be that at No. 9 Henrietta Street from about 1730, attributed to Edward Lovett Pearce (Fig. 11.17), which accords well with the date of their more widespread appearance in England during the 1730s under the influence of William Kent.[28] Given that only eight years later we see emulation in timber at No. 85 St Stephen's Green, clearly carpenters and joiners quickly rose to the challenge. To make a material that lacked the tensile properties of stone 'cantilever' in the same way was no small thing.

The staircase at Vanbrugh's Kings Weston, Bristol (1712–19, Fig. 11.18), although since subject to rearrangement, contains the technical underpinnings of the translation of the stone staircase into timber form. Built without string, the deep rectangular steps overlapped to conceal the supporting carriage beams – thus creating an entirely fictitious version of

Figure 11.18: Staircase at Kings Weston, Bristol.

Courtesy of Kings Weston Action Group.

Figure 11.19: Structure of the staircase at No. 85 St Stephen's Green, Dublin.

Digital image by Andrew Tierney.

the original, stone structural effect. This was exactly the technique later employed by Richard Castle's craftsmen in Ireland, where the step is a hollow box designed to conceal thick carriage beams to support each seemingly weightless flight (Fig. 11.19). The difference is in the handling of the tread end, the Kings Weston example retaining the simple block profile common on late seventeenth-century stone staircases while the Irish steps are more artfully moulded into the tapering profile of the bracket. That such a structural innovation should make its way to Ireland hardly seems surprising given that Vanbrugh's client, Sir Edward Southwell, was an Irish MP. The fact that there was some interest in structurally adventurous timber staircases in the Pearce/Castle circle is seen in the early plan of Castletown House, which features a circular staircase in the manner of Nicholas Dubois' remarkable 1721 timber stairs at Chevening, Kent.[29] Structurally, the Chevening staircase has the same overlapping rectilinear steps as Kings Weston, which were designed to conceal the carriage beams. Dubois was in partnership with Alessandro Galilei, who was consulted on the design of Castletown – thus providing one avenue for such innovation into Ireland. A co-translator (with Giacomo Leoni) of Palladio's *Quattro Libri* (1715–20), Dubois' attempt at a geometrical staircase was most likely inspired by Palladio's own engravings of the type. But as a free-standing timber structure, it was a remarkable marriage of native English carpentry and Italian Renaissance idealism.

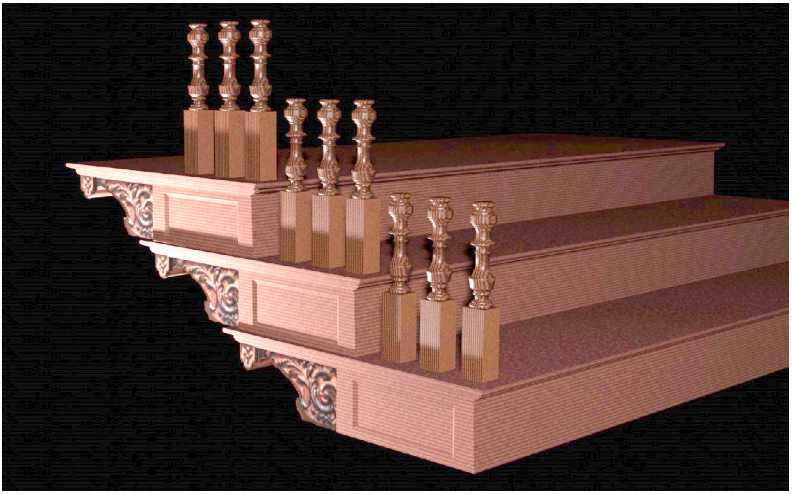


Figure 11.20: Staircase, Davenport House, Shropshire, by Francis Smith, 1726.

Digital image by Andrew Tierney.

The staircase at Kings Weston also incorporates a railing with swan-neck ramps, a type more common to Ireland than England and perhaps suggesting some Irish craftsmen on site.[30] However, the idea can also be seen in the remarkable series of stringless 'cantilevered' timber staircases in the houses of Francis Smith of Warwick.[31] All of these staircases were completed in the decade immediately prior to Castle's first staircases of this type in Ireland, and they include Stoneleigh Abbey, Warwickshire (1714–26); Chicheley Hall, Buckinghamshire (1719–25); Chillington, Staffordshire (1724); Mynde Park (c.1724); Sutton Scarsdale, Derbyshire (1724); Lutwyche Hall (1725); Davenport, Shropshire (1726; Fig. 11.20); Wingerworth Hall, Derbyshire (1727–9); Ombersley Court, Worcestershire (1730s); and Stanford Hall, Leicestershire (1730s). Another example of the type, though not associated with Smith, can be found at Bradbourne House in Kent (c.1714), which is so similar as to suggest the same craftsmen.[32] All the steps were modelled into a bracket profile, creating boldly modelled undulations on the soffit of the stairs. Possibly the earliest example of the type is at Roehampton House, Surrey (1710–12) by Thomas Archer, for whom Smith occasionally worked as contractor.[33]

When advising his client at Stanford Hall, Smith was able to sum up the type as 'Dutch Oak … the underside of the Step with Wainscoat according to the Braget [i.e. bracket]'.[34] The use of the term 'wainscot' to describe the soffit of the staircase accurately reflected the nature of these steps as the product of the joiner's craft rather than that of the structural carpenter. Richard Castle may have been describing a similar type when he advised a client for an unidentified town house that the staircase might be done in stone with iron rail or in 'Rt wainscott [i.e. oak] as shall be thought more convenient'.[35] Given that the wainscoted soffit was essentially devised to mimic a stone prototype, the term in this context most likely refers to the steps rather than the treatment of the walls. An interesting Irish precursor of this use of wainscot – though of a different style – is the very elaborate staircase at Damer House, Roscrea (c.1722), where the soffit is elaborately stepped to hide the carriage – though notably out of sync with the risers and treads above.

One important difference between the Smith of Warwick staircases and those of Richard Castle is the position of acanthus-leaf carving on the tread. In the English examples (Fig. 11.20), as Andor Gomme puts it, 'the riser returns came to be extended horizontally, leaving a rectangular panel under the nosing of the tread which continues into the lower moulding of the next step up.'[36] In the Irish examples (Figs. 11.11–13) the rectangular panel is reduced to a narrow strip, allowing the acanthus carving to extend much further, thus re-enforcing the illusion of the steps as single supportive blocks. Nevertheless, the carved, scrolled acanthus of the tread ends, carried out on a detachable panel, is a similar but not identical design on all three Irish staircases. Not as elaborate as the *rocaille* examples later given by Abraham Swan, the finest work is at No. 85, where the use of beaked heads in the acanthus scroll may have been inspired by Jean Tijou (Fig. 11.14).[37] These carved tread ends form part of the magic trick, distracting the eye from the fact that the tread end and soffit of the step are both just skin deep.

The similarity in the style and construction of Smith's staircases was due to the fact that he relied on a regular team of craftsmen and could specify and cost all the elements with remarkable exactness, even though they were not in his direct employment.[38] The surviving notebook relating to Smith's practice, almost contemporary with work at No. 85 St Stephen's Green, provides some insight into the relative contributions of carpenter and joiner to a principal staircase of this type. At Nether Haven (1736), for example, we see that Thomas Hand, the carpenter, was responsible for the 'frameing to Carry great Stairs', for which he charged 7*s*. 6*d*. per square,[39] while the joiner, Thomas Eborall, charged a lump sum of £18 for 'one story with Ramping & twisted Raile laying ye steps & turning the Ballisters'.[40] For the huge imperial staircase at Badminton, Gloucestershire, Eborall charged £145.[41] Curiously, no staircase work is attributed to the carver – suggesting that Eborall was skilled enough in carving to complete that part of the work, or it was subcontracted. Thomas Hand again

Figure 11.21: Staircase, Doneraile House, Kildare Street, Dublin.

Courtesy of the School of Art History and Cultural Policy, University College Dublin.

charged for the framing of the staircase, at 4 shillings per square.[42] At Sutton Scarsdale, Eborall charged a lump sum of £55.[43] In an unidentified building in Alcester, the carpenter Thomas Page was responsible for the staircase, though the low price suggests it was a small one.[44] At Kirtlington Park, Eborall charged £80 for the staircase.[45]

The best insight we get into the division of labour and relative costs in staircase construction by Richard Castle's team of craftsmen is from archival material for Doneraile House on Coote Street (now Kildare Street), Dublin, designed by Castle's successor between 1748 and 1753, John Ensor (Fig. 11.21). Records show that the main staircase was constructed by carpenter Richard Reilly, who charged 10*s*. 6*d*. per step.[46] This was substantially in excess of the 1*s*. cost of 'Common whole Deal Steps and Risers, Strings and Bearers per Foot run' listed in the *Universal Pocket Book* of 1740 or the 1*s*. 3*d*. listed for the 'better sort' of stairs, perhaps reflecting the more elaborate enrichments intended.[47] Featuring columnar newels of the Ionic order, this staircase is even more closely modelled on that published by Price than that at No. 85 St Stephen's Green. John Kelly, the architectural sculptor, was hired to carve the capitals on the six newel posts, for which he charged 1*s*. 16*d*. each.[48] Kelly also executed the Corinthian doorcase in the dining room, suggesting he was brought in to complete the finer details wherever required.[49] Kelly or his colleague John Houghton are likely candidates for the carving of the tread ends on the staircase of No. 85, and indeed on those of Russborough and Tyrone House.[50]

The production of a staircase was dependent on the skills of several different woodworking trades, whose roles sometimes overlapped, leading to disputes.[51] In other cases, such as that of Dublin craftsman John Jones, tradesmen were happy to advertise their skills as cabinet maker, joiner and carpenter.[52] Another joiner, Joseph Palmer, imported his own mahogany to a warehouse on Henry Street, on which basis he promised lower prices for his clients.[53] Clearly it was worth shopping around. William Halfpenny's *Twelve Beautiful Designs for Farm Houses* (1750) includes costings for staircases priced according to the region of the country in which the design is situated. John Aheron, the west-of-Ireland author of the only Irish architectural treatise of the eighteenth century, priced 'an ordinary Pair of Stairs, of about 6 or 4 Feet, with Flyers, and Winders, made of Elm Boards' at '2s. 6d. per Step, for Stuff, and Workmanship ; but for Workmanship alone 9d. is sufficient'.[54] However, for a more elaborate staircase with:

> an open Newel [i.e. well], from the Top, to the Bottom, with a Landing at every 6th, or 8th, Step, and the going being about 3 ½

> Feet all the Way, these Stairs with Rails, and Ballusters, String-boards, Posts, Balls, and Pendants; and such other Ornaments may very well be worth 4, 5, or 6s. per Step.[55]

This latter pricing is still considerably lower than what was charged by Reilly in Doneraile House, suggesting Reilly was working to a particularly high standard or that Dublin prices were much higher than those west of the Shannon – or possibly reflecting the long gestation of Aheron's treatise.[56] More difficult parts of the staircase were most likely charged at a higher cost. In his *Palladio Londinensis* (1734) William Salmon provided double the usual rate for the balusters and rail 'if circular or ramping', which he commented was 'a rule for all circular parts in general'.[57] William Stitt's *The Practical Architect's Ready Assistant*, published in Dublin in 1819, remarked that the ramp of the rail was charged at double the normal rate but the twist (measured from the eye of the volute) he costed at triple – in both materials and workmanship.[58] Further expense must have been incurred at Russborough through the introduction of star-shaped inlays on the half landing, a feature described in the 1721 edition of Richards's *Palladio* as a novelty; inlaid ornament of half landings, likewise featuring triangles/star shapes, can also be found at Kings Weston (1719), Glastonbury Hall (1726) and Burford Priory, Oxfordshire (early-to-mid eighteenth century).[59] Joiners and carpenters could certainly reduce their costs by doing much of the preliminary work in their own workshop. The daybook of the Dublin carpenter Robert Ball in the National Archives records payment to Isaac Harrison for four days work 'in the shop' on a staircase for a Mr Molyneux.[60] Similarly, records for the 1737 staircase for Castle Forward in County Donegal show it was made entirely in Dublin at a cost of £10 13*s*.[61] However, in considering these charges we must remember that labour costs charged to clients by contractors (sometimes themselves master craftsmen) were not necessarily the same as labour costs paid by contractors to their skilled workers. As Judy Stephenson has recently shown for the period around 1700 in London, there could be a 15–35 per cent differential between the two, and rates varied according to skill level and the volume of work commissioned.[62]

Stone-and-ironwork staircases

As already mentioned, the fashion for stone-and-ironwork staircases was established by French émigré Jean Tijou in several late

Figure 11.22: Staircase at No. 11 Henrietta Street, Dublin.

Courtesy of Dublin City Council.

seventeenth-century palaces (Hampton Court), houses (Chatsworth) and churches (most notably the remarkable geometric Dean's staircase at St Paul's Cathedral). Their popularity continued into the early eighteenth century in houses such as Castle Howard, North Yorkshire (1703–6), and Kimbolton, Cambridgeshire (1709–10). William Kent also employed the type in several houses, such as Raynham Hall in Norfolk. He employed the same ironwork design in both the entrance hall at Holkham Hall (also Norfolk) and in No.44 Berkeley Square, London, where the iron scrolling is repeated on each step. Among the earliest (if not *the* earliest?) surviving iron-and-stone staircases in Ireland are those at No. 9 (c.1730) and No. 11 (1729/30) Henrietta Street, associated with Edward Lovett Pearce and therefore perhaps also with his assistant Richard Castle.[63] Both are cantilevered in Portland stone, the steps in No. 9 carved into the profile of the bracket; those at No. 11 simple rectilinear blocks (a style favoured in

England) (Figs. 11.17 and 11.22). No. 9 retains the old-style swan-neck ramp, but No. 11 has a concave ramp – a very early example in an Irish context. However, the dado panelling at No. 11 was designed to match a swan-neck stair rail, suggesting either that it came from another house at a later date or that the joiners and ironworkers were not working to the same designs. By this date the joinery at No. 11 was pretty standard, even old-fashioned (certainly in contrast to the sophisticated classical treatment of the stairhall walls in No. 9). Both staircases seem to date to the early 1730s, having identical terminal newels treated as a double baluster and curved into a half twist.

The staircase at Powerscourt, County Wicklow, was exceptional in being the only wrought-iron example from Richard Castle's early country houses, but its dating is problematic. Perhaps most tellingly there is no reference to any staircase in the Powerscourt accounts for the 1730s, suggesting that an older seventeenth-century staircase may have remained in situ until after the Egyptian Hall was complete.[64] In comparison with the Henrietta Street examples, the wrought-iron baluster panels at Powerscourt are very fluidly designed and crafted (Fig. 11.23). This is a tricky design to pull off as the panels are necessarily asymmetrical, accommodating the rising line of the rail, which involves a certain distortion of the pattern. The distinctive arrangement of the c- and s-scrolls in the raking ironwork panels creates a continuous Vitruvian scroll that runs seamlessly between each section. This may originally have been intended to match the Vitruvian scroll on the landing frieze, which most likely extended around the stair hall prior to its later alteration. Dating this kind of ironwork is not easy, but the Vitruvian-scroll motif suggests an alignment with Castle's original scheme. Certainly, there are contemporary examples of such flamboyant ironwork in staircases. The staircase at No. 16 Arlington Street, London, a house by James Gibbs, has iron balusters that are even more sophisticated and dynamic. Gibbs included this stairhall in a cross-section drawing, but he omitted the ironwork. Presumably the design was his own or that of his smith Thomas Wagg, who was paid £179 10*s*. to execute the work – aptly described by Terry Friedman as 'a delightful rococo foil to the sedate Palladian architecture'.[65] Twenty years later something similarly flowing was produced at Wrotham Park, Hertfordshire (1754), a house designed by Isaac Ware. Powerscourt's flowing lines, though less enriched, also recall Hugh Lightfoot's staircase at Claydon, Buckinghamshire (after 1757). However, the fluidity of Powerscourt extends to the treatment of the timber handrail, which has a double curvature in the wreath as the stair turns without any supportive newel – completing the emancipation of the

Figure 11.23: Former staircase at Powerscourt, County Wicklow.

Courtesy of the Irish Architectural Archive.

Figure 11.24: Staircase at Belvedere, County Westmeath.

Courtesy of the Irish Architectural Archive.

handrail that began in the seventeenth century. Among Castle's own work, only the timber staircase at Belvedere, County Westmeath of about 1740 (Fig. 11.24), locked into a tight space, takes so free-style an approach. There are few English parallels, but the stair rail at the Treasurer's House in York, of the 1720s, is similarly dynamic.[66]

The quality of the ironwork at Powerscourt reflects the 'taste' and 'genius' then deemed a requirement of the blacksmith, 'this most comprehensive Branch of the Mechanic Trades' according to Richard Campbell's *London Tradesman* (1747), which classed this particular type of ironworker as 'the Gate and Palisade Smith'. This source is further evidence that the craftsman, not the architect, might be both the designer and executant of this kind of work. As Campbell explained:

> The Banisters of my Stairs must be done in Taste, and the Work must rise naturally and gradually, according to the Steps; It must neither be over-crowded with Ornaments nor too bare : It ought to appear of a Piece with every thing else about it, and must not be charged with any thing that would not discover a visible Defect if taken away. All this requires a tolerable good Head, and a good Taste, to execute with Judgment. It is impossible that [the smith] should be tolerable, without so much Knowledge of Drawing as to be able to Design his own Work exactly.[67]

Given the use of iron baluster panels and the dark colour of the steps, one might easily assume the steps in the Powerscourt stairs were of stone – perhaps black marble, such as some of the great late seventeenth-century iron-and-stone staircases in England. However, the *Georgian Society Records* of 1913 (long before the fire; see Melanie Hayes's chapter in this volume) describe it as 'a handsome mahogany staircase with wrought-iron balusters', which is confirmed by a surviving *Country Life* photograph.[68] Given the use of timber, it is particularly surprising that the steps are not elongated to accommodate an internal carriage beam – as at No. 85 St Stephen's Green, Russborough and Tyrone House. So, were the steps then solid timber? Stone steps were normally only tailed into the wall a few centimetres, relying on their absolute rigidity to support each other (so were not truly cantilevered). However, it is hard to imagine such an approach working successfully with timber, which tends to warp under this kind of pressure unless supported by iron.[69] There is an example in a house built by John Wood in Bath dating to 1730, rare in that area but known in Yorkshire – perhaps a clue to the origin of the Powerscourt example.[70] The most extraordinary example of this type is the circular

Figure 11.25: Principal staircase, The Rotunda Hospital, Dublin.

Courtesy of the Irish Architectural Archive.

staircase with timber balusters at Drayton House, Northamptonshire, which dates to the 1680s and has been tentatively attributed to the joiner Henry Lobb.[71]

The latest project of Richard Castle to have a wrought-iron rail is the Rotunda Hospital, Dublin (1750–7), completed by John Ensor after Castle's death (Fig. 11.25) and somewhat similar to another staircase at Drayton, Northamptonshire.[72] Executed by William Hutchins, the same wrought-iron pattern can be found in the chapel gallery of the Rotunda; in several staircases in Trinity College Dublin by Timothy Turner (Regent House, 1752–9; the Provost's House, 1763; the Dining Hall, 1765); and in No. 5 Ely Place, Dublin.[73] The ubiquity of the pattern suggests that the architects, if they had anything to do with it, were merely choosing from a set of designs proposed by the ironworker. Turner was paid 18*s*. 6*d*. per panel at the Provost's House, Trinity College Dublin – a very considerable sum given that there were 49 panels (one per step), and almost twice the sum that Richard Reilly charged per step in his timber staircase at Doneraile House.[74] In the manner of Jean Tijou, the design is quite similar to that found on the staircase at Kelmarsh Hall, Northamptonshire (1731), a house built by Francis Smith of Warwick to a design by James Gibbs, where likewise the iron panelling is worked into the volute. The prevalence of the Rotunda design suggests some pattern-book source, as yet unidentified, but also an insight into the process of staircase construction in the mid-eighteenth century, when the choice and success of a design depended on a craftsman's ability to execute it. What better testimonial than one's previous work?

The plan and ornamentation of the staircase hall

Commenting on the dearth of large imperial staircases in English architecture (compared with its continental counterparts), Mary Whiteley noted that 'English architects generally seem to have favoured large twin staircases in their designs for palaces and country houses that could be placed discreetly on either side or behind the entrance hall without intruding on its space'.[75] While this may have been true as an aspiration (following Palladio), it was sometimes hard to achieve. Vanbrugh's twin staircases at both Blenheim (Oxfordshire) and Castle Howard, for example, are not large in the context of the plans they serve. In almost all James Gibbs's designs for large country houses he included grand twin staircases symmetrically flanking the central axis.[76] It was a lavish provision, reflecting a conflict between symmetry on the one hand and utility and economy on the other. Unsurprisingly, so generous a concession to symmetry seems to have found little favour with his clients. Likewise, Colen Campbell in his proposed design for Robert Walpole, published in the second volume of *Vitruvius Britannicus*, included matching staircases flanking a corridor between the entrance hall and saloon,[77] but in the house he executed for Walpole at Houghton the staircase arrangement is asymmetrical. He also proposed the more economical solution of a single staircase in his speculative design for James Stanhope in the same volume, set between entrance hall and saloon; in another speculative plan on a central axis for Tobiah Jenkins, the staircase hall sits directly behind the entrance hall, accessed through a columnar screen.[78]

Similarly, Richard Castle's country houses avoided the lavishness of symmetrical staircases. Of all the works attributed whole or in part to Castle, only Summerhill, County Meath (1731), was so grandiose in plan as to provide two symmetrical main staircases – though one of his proposals for Carton, County Kildare has two rather large staircases placed symmetrically at either end of the block in addition to the main, off-centre staircase hall.[79] As in several of Gibbs's published designs, and in Campbell's two published plans for Wanstead House, London, the Summerhill staircases were placed in the centre of a triple-pile configuration of rooms flanking the entrance hall and saloon. At Leinster House, Dublin, and Russborough, Castle's main staircases were to the side of the plan. More typically Richard Castle's staircase halls were lit in a fashion notably similar to Francis Smith's. As Andor Gomme has noted of Smith, 'the main staircase hall is lit from the side, in almost every case by a single window over the middle flight or half-pace'.[80] The design of the staircase hall of Bellinter House, County Meath (c.1750), one of Castle's most successful compositions, particularly recalls that of Stoneleigh Abbey, Warwickshire (1714–26),

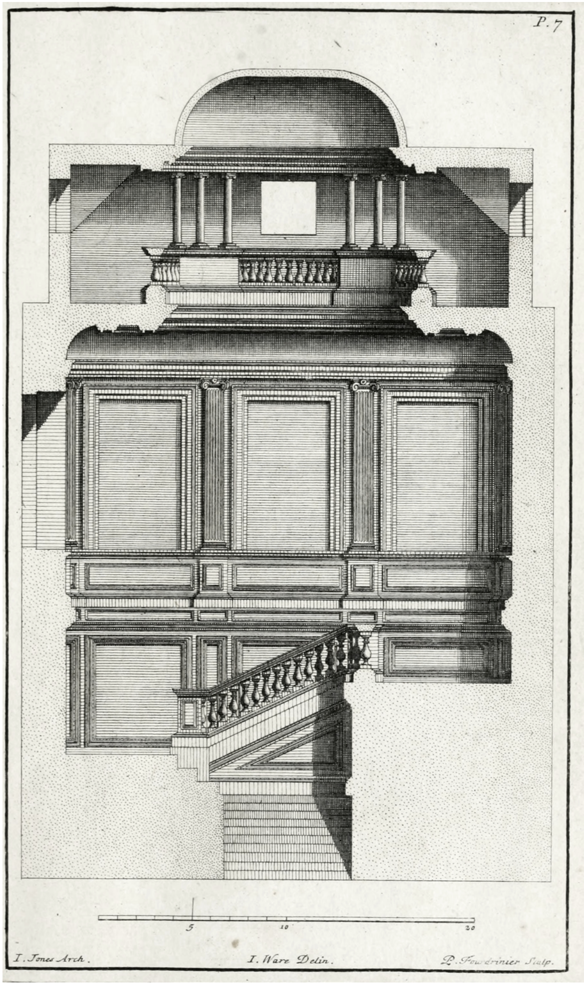


Figure 11.26: Staircase for Ashburnham House, London, Isaac Ware, *Designs of Inigo Jones and Others*, 1731, Plate 7.

Internet Archive. Getty Research Institute.

where the landing is exited through a tripartite columnar screen that echoes an opposing Venetian window.

In terms of finish, the shift from the fully wainscoted staircase hall (Strokestown, 1729; No. 11 Henrietta Street, 1729/30), fabricated by a joiner, to a stylar treatment involving friezes, pilasters, pedimented niches and entablatures, and/or decorative plasterwork (No. 9 Henrietta Street, c.1730; No. 85 St Stephen's Green, 1738) took place about 1730. It would therefore seem that Richard Castle appeared on the Irish architectural scene just as this shift was occurring, but it is not clear to what extent he was leading the trend (perhaps in conjunction with Pearce) or simply following a new style initiated by Pearce. Furthermore, it is not clear where the impetus for this shift came from. While Palladio's enclosed staircase designs offered no obvious model for the kind of open-well staircase halls that had become standard since the seventeenth century, a design by followers of Inigo Jones for Ashburnham House, London (1662), published by Isaac Ware in 1731, offered just one formal classical treatment of a double-height staircase hall, with a panelled lower storey and a pilastered and pedestaled upper storey in the Ionic order (Fig. 11.26).[81] Jones and Pratt's Coleshill, as published by Isaac Ware in 1756, offered a more astylar treatment of the walls without panelling or any demarcation between the storeys, the wall surface ornamented only with oculi niches bearing busts. How successful was Richard Castle at designing staircase halls? His record is variable. No. 85 St Stephen's Green (1738) has an architectonic treatment of partially blind arcades reminiscent of the open cortile of an Italian palazzo – but these fail to resolve with the outside wall, which is penetrated by a Venetian window that is dropped to meet the half landing and which is too wide for the wall. The arcades themselves cram uncomfortably into the space, crashing badly into the corners of the outer wall, while the stair rail at landing level abuts the architrave of the saloon door. Tyrone House (c.1740) has a comparable Venetian window in a larger wall, which sits more happily above the Vitruvian scroll in the upper storey. However, things go badly askew as the plasterwork on the wall above the lower flight is cut off by a corner, while there is not sufficient room to accommodate the pilasters flanking the doors (Fig. 11.27). A less well-known example is the plasterwork above the lower flight at Summerhill (where Castle may have been involved; it appears to have survived the fire of c.1800), which is thrown badly out of sync by the rising line of the stair.[82] Elsewhere, the proportions of the staircase hall posed obvious difficulties. The plasterwork in the narrow staircase hall at Russborough has long been acknowledged as an anomaly. One gets the sense of a *stuccatore* attempting to overcompensate for the

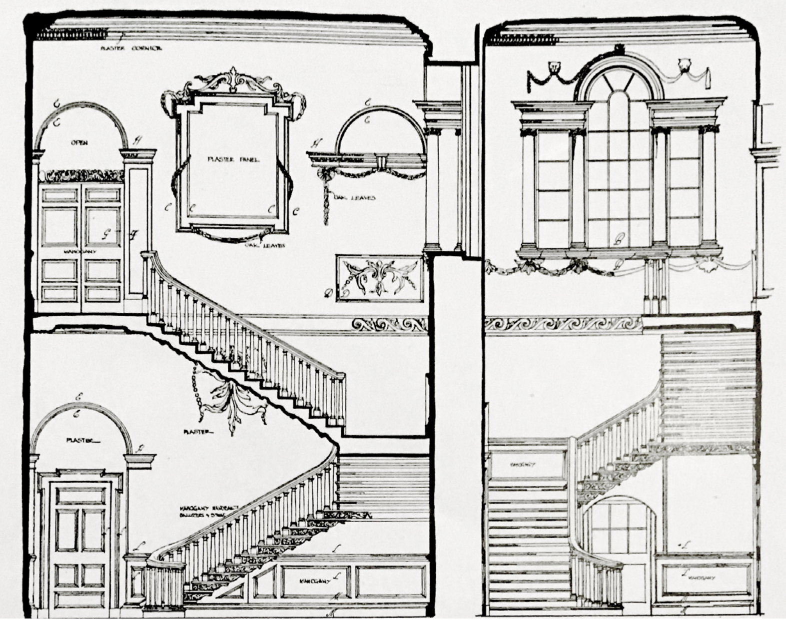


Figure 11.27: Stairhall, Tyrone House, Dublin. *Georgian Society Records*, vol. III (Dublin: 1911), Plate XXX.

Public Domain.

room's unforgiving dimensions and marginal position within the plan. Too narrow to accommodate a Venetian window, such as Castle used elsewhere, it is lit by two small windows of unequal dimensions, the lower of which breaks inelegantly through the dado of the half landing. 'If the original Design be bad, superadded Ornaments will make the whole to appear rather awkward than graceful, like a Clown in a laced Waistcoat', warned Abraham Swan, who also advised against the kind of plasterwork applied here: 'multitude of ornaments stuck on … without meaning, breed[ing] nothing but Confusion, and the Beauty of each Individual is lost in the Crowd'.[83] Designing an operable scheme for a staircase hall was clearly difficult. Nevertheless, the ornamental scheme in Pearce's staircase hall at No. 9 Henrietta Street was laid out with relative grace and repose.

How distinctive were Castle's stairhall designs? Similar treatments appear in the 'section of a staircase' published by William Halfpenny in *The Modern Builder's Assistant* of 1757.[84] This features the four interior elevations of a staircase hall, accessed through a columnar screen and lit by a Palladian window, with plaster-panelled walls. Both Eileen Harris and Frank Keohane have drawn attention to the Irish influences on

Halfpenny's work, and it has been suggested that he once worked as an assistant to Edward Lovett Pearce.[85] It could be that his stairhall illustration is a distillation of Irish work he encountered through Pearce and Castle. However, there are other English parallels. The signature motif of Castle's staircase hall (not found in Halfpenny's illustration) is the use of a Vitruvian-scroll frieze to mark the transition between the floors, as it could run seamlessly into the apron of the landing – a device used by Pearce (for the first time in Ireland?) at No. 9 Henrietta Street. The device became so commonplace in Dublin that it is hard to imagine a single source, though it was used by William Kent in the stairhall at Kensington Palace during the 1720s and at Holkham Hall (from 1734), which may have been influential.

Conclusion

Richard Castle's Irish career began at a time of transition in Irish staircase design, which he and his craftsmen participated in pushing forward. A key element of this shift was the change to the concave ramp, which was then new in Irish staircase construction. The faux cantilever mahogany staircases of No. 85 Stephen's Green, Tyrone House and Russborough represented an unprecedented technical achievement in Irish houses of the 1730s and 40s by adapting a technique used in the work of John Vanbrugh and Francis Smith of Warwick. The simple columnar treatment of the balusters, not found in Vanbrugh's or Smith's work, was probably an innovation of Richard Castle and his circle of craftsmen and influenced the great staircase at Castletown House, completed in 1760. As a design, it was perfectly conceived to show off the polished mahogany finish. The Powerscourt staircase, 'cantilevered' in timber but without concealed carriages, remains a technical outlier in his built works, the date of which remains to be confirmed. With the exception of the circular back stairs at Bellinter (a surprising *tour de force* of the carpenter's art), he largely avoided the geometric staircases of Palladio, Jones and Wren, suggesting a conservatism and practicality that was surely essential to so prolific a builder.

The often-fumbled mural treatment of his staircase halls shows a designer ill at ease with the challenges posed by the irregular and asymmetrical presence of the staircase. Although he had a reputation for demanding excellence from his craftsmen, the sloppy placing of wall detailing (for example, at No. 85 St Stephen's Green and Tyrone House) is a charge that must surely be laid at his door rather than that of his craftsmen. The staircases themselves were, after all, creations of the highest order.

Acknowledgements

My thanks to my colleagues Christine Casey and Melanie Hayes for generously sharing their archival research in relation to staircases. Also, to Melanie and Charles Duggan for helping to source photographs of Henrietta Street staircases. Lastly, my thanks to all those private owners and institutional managers who kindly facilitated access to buildings in their care.

Notes

1 Neve, *The City and Countrey Purchaser*, 248.
2 Campbell and Tutton, *Staircases*.
3 Campbell, 'The British staircase', 92.
4 Mowat and Mowat, *A Treatise on Stairbuilding and Handrailing*, 13.
5 Ware, *Designs of Inigo Jones and Others*, Plates 6 and 7.
6 Ware, *A Complete Body of Architecture*, 487–9.
7 Ware, *A Complete Body of Architecture*, 487–9, Plate 70.
8 For an overview, see Yeomans, 'Early carpenters' manuals 1592–1820', 13–33.
9 Swan, *The British Architect*, 7–8. See also Gomme, *Smith of Warwick*, 105.
10 For James Richards's career, see Beard, *Craftsmen and Interior Decoration*, 277.
11 Swan published his designs in *A Collection of Designs in Architecture*, Plates 29–32.
12 Leyburn Hall, Yorkshire, of the 1750s is a particularly late English example.
13 Hall, 'Dating through details', 141–98.
14 Glin, 'Richard Castle, architect: his biography and works', 33.
15 *Georgian Society Records*, vol. II, Plate IX.
16 TCD Mun (Trinity College Dublin, Muniments) P2 28. Estimate for finishing the staircase in the library. No date. Unsigned.
17 Dean Street Soho had a light carved-oak staircase with concave ramp and twist as early as 1725, with balusters twisted in the long-standing seventeenth-century manner.
18 Halfpenny, *The Art of Sound Building*, Fig. XLIV, facing p. 36 and Plate 15, facing page 56. The second edition of Price's book appeared in 1735 and had 16 extra plates, which Price indicated with an asterisk. The key plates for staircases (V and W) were also published in the 1733 edition.
19 Yeomans, 'Early carpenters' manuals 1592–1820, 18–24; Langley, *Ancient Masonry, both in Theory and Practice*, Plate ccccxli; Salmon, *Palladio Londinensis*, 112–18, Plates xxxi and xxxii.
20 *Georgian Society Records*, vol. III, 4.
21 Alcock and Hall, *Fixtures and Fittings in Dated Houses 1567–1763*, 8.
22 Undoubtedly there were other examples of this type. A surviving photo of No. 15 Upper Sackville Street shows a similar rail and baluster, with a Vitruvian scroll frieze dividing the storeys; also, No. 6 South Leinster Street within the same type of stairhall (built by ironsmith Timothy Turner, 1758–60), though supported by a string. See Casey, *The Buildings of Ireland: Dublin*, 549; Georgina McMahon, 'Ceiling and wall plasterwork, Dublin City, Co. Dublin, Ireland', Royal Society of Antiquaries of Ireland. Accessed 7 July 2022. http://rsai.locloudhosting.net/items/show/26401.
23 The landing balustrade was restored after the removal of an additional flight to the attic storey, c.1990.
24 *Georgian Society Records*, vol. III, Plate XXXVIII.
25 As also seen in Abraham Swan's *The British Architect*, Plate XXXVI.
26 For the early history of the cantilevered stone staircase, see Campbell 'The British staircase', 99. My thanks also to Dr Gordon Higgott for kindly showing me an advance copy of his forthcoming paper on this subject.
27 Lenygon, *Decoration in England 1660–1770*, 144.
28 Kent employed stone staircases with iron balustrades at No. 10 Downing Street (1732–5); the Treasury, Whitehall (1736); and No. 44 Berkeley Square (1742–4) – see Sekler, 'The development of the British staircase', 164.

29 Griffin, 'An architectural history of Castletown', 35.
30 Other examples of the swan-neck ramp can be found at Nether Lypiatt and Bourton House, both in Gloucestershire, and Buntingsdale Hall, Shropshire (1719–21). It is not clear whether it is more common in the west of England than in other parts of the country; if so, this may explain its popularity in Ireland.
31 Andor Gomme called it 'Smith's favourite type'; see Gomme, *Smith of Warwick*, 300.
32 For Bradbourne, see Turnor, *The Smaller English House*, 116. It is also illustrated by Sekler, 'The development of the British staircase', Fig. 216.
33 Weaver, 'Roehampton House, Surrey', 232–9. Whiffen, *Thomas Archer: Architect of the English baroque*, 3; Gomme, *Smith of Warwick*, 20, 30, 71.
34 Gomme, *Smith of Warwick*, 105.
35 Elton Hall Album V&A#284 E.2124.7–1992. For the meaning of 'right wainscott', see Law, *The History of Hampton Court Palace in Tudor Times*, 438.
36 Gomme, *Smith of Warwick*, 300.
37 Swan, *The British Architect*, Plate XXXIX.
38 Gomme, 'An eighteenth-century builder's notebook', 193.
39 It is unclear from the source whether square foot or yard is intended, but carpenter manuals of the time show that woodwork was generally measured by the cubic foot. See Gibney, *The Building Site in Eighteenth-Century Ireland*, 59–60.
40 Gomme, 'An eighteenth-century builder's notebook', 196–7.
41 Gomme, *Smith of Warwick*, 302; Gomme, 'An eighteenth-century builder's notebook', 202.
42 Gomme, 'An eighteenth-century builder's notebook', 203.
43 Gomme, 'An eighteenth-century builder's notebook', 200.
44 Gomme, 'An eighteenth-century builder's notebook', 206.
45 Gomme, 'An eighteenth-century builder's notebook', 208.
46 NLI (National Library of Ireland) MS. 34, 165 (1).
47 Anon., *Universal Pocket-book*, 44. This is a significant difference, even with the slightly lower value of the Irish pound against the British during this period.
48 NLI MS 34,165.
49 Casey, *The Buildings of Ireland: Dublin*, 530.
50 Swan, *The British Architect*, Plate XXXIX.
51 Louw, 'Demarcation disputes', 3–20.
52 *Dublin Courier*, 28 January 1761.
53 *Dublin Courier*, 14 November 1760.
54 Aheron, *A General Treatise on Architecture*, 62.
55 Aheron, *A General Treatise on Architecture*, 62.
56 Casey, '"Such a piece of curiosity"', 66–7.
57 Salmon, *Palladio Londinensis*, 43.
58 Stitt, *The Practical Architect's Ready Assistant*, 100.
59 Sekler, 'The development of the British staircase', 164. For Glastonbury Hall, see Gotch, *The Growth of the English House*, 299 (Fig. 213). For Burford Priory, see Tanner, *English Interior Woodwork*, 10, Plate XLIX.
60 NAI (National Archives of Ireland) BR/Dub 43, Daybook of Robert Ball, 11 October 1748. For Ball, see dia.ie: https://www.dia.ie/architects/view/5792/ball-robert%2A. Accessed 7 July 2022.
61 NLI MS 1047 Building accounts Castle Forward Estate, County Donegal. My thanks to Christine Casey for bringing this to my attention.
62 Stephenson, *Contracts and Pay*, 141–72.
63 For the dates and association with Pearce, see Hayes, *The Best Address in Town*, 55 and 64.
64 NLI: MS3162, MS4875, MS 4874; Powerscourt Papers.
65 Friedman, *James Gibbs*, 208–9, Fig. 234.
66 The dating of the Powerscourt staircase is further hindered by the clear evidence of the refurbishment of the staircase hall, along with the suite of rooms along the south front on the first floor. The designer of this work has never been identified. One candidate may be Sir Richard Morrison, who worked for Lord Powerscourt on some housing in Enniskerry c.1818, and who was the chief architect involved in the reception festivities for George IV, who visited Powerscourt on his tour of the country. It is possible that Morrison did some work on the staircase hall as the handrail (though not the ironwork) is very much in the manner found throughout his country houses. See Rowan, *The Architecture of Richard Morrison and William Vitruvius Morrison*, 89. For his work on the visit of George IV, see A.M. Rowan, *Dictionary of Irish Architects*: https://www.

dia.ie/works/view/37494/building/CO.+DUBLIN%2C+DUBLIN%2C+O%27CONNELL+STREET+UPPER%2C+TRIUMPHAL+ARCH. Accessed 7 July 2022.

67 Campbell, *The London Tradesman*, 165–6.

68 *Georgian Society Records*, vol. V (1913), 107; for the *Country Life* photo, see O'Reilly, *Irish Houses and Gardens*, 111–15.

69 Taylor, 'Stone cantilevered stairs'. My thanks to Richard Hewlings and James Campbell for further advice on this issue in Dublin in 2022.

70 Godfrey, *The English Staircase*, 58; Channer, 'The new staircase at No. 15 Queen Square, Bath', 77–9.

71 Bailey, 'John Webb at Drayton House', 197.

72 For the Drayton example, see Godfrey, *The English Staircase*, 61, Fig. 47c.

73 Casey, *The Buildings of Ireland: Dublin*, 163; O'Connor, 'Timothy Turner: an eighteenth-century Dublin ironsmith', 141–2.

74 TCD MUN P/2/135/11, 'Iron-mongers work done & deliver'd for the use of the Provists [sic] new house'.

75 Whiteley, 'The role and function of the interior double staircase', 9.

76 Gibbs, *A Book of Architecture*.

77 Campbell, *Vitruvius Britannicus*, vol. 2, 83–4.

78 Campbell, *Vitruvius Britannicus*, vol. 2, 41 and 86.

79 IAA (Irish Architectural Archive) Carton 1/94 R53.

80 Gomme, *Smith of Warwick*, 298.

81 Ware, *Designs of Inigo Jones and Others*, Plate 7; Campbell, 'The British Staircase', 105.

82 *Georgian Society Records*, vol. V, Plate XXXVII. The timber staircase in this photograph is not original.

83 Swan, *A Collection of Designs in Architecture*, iv.

84 See Halfpenny, *Modern Builder's Assistant*, Plates 71 and 72.

85 DIA (Dictionary of Irish Architects). Accessed 8 July 2022. https://www.dia.ie/architects/view/1777/HALFPENNY-WILLIAM%23.

References

Aheron, John. *A General Treatise on Architecture, in Five Books*. Dublin, 1754.

Alcock, N.W. and Linda Hall. *Fixtures and Fittings in Dated Houses 1567–1763*. York: Council for British Archaeology, 1994.

Anon. *Universal Pocket-book: Being the most comprehensive, useful, and compleat book of the kind, ever yet publish'd etc*. London: Printed for T. Cooper, 1740.

Bailey, 'John Webb at Drayton House', *Georgian Group Journal* 14 (2004): 187–98.

Beard, Geoffrey. *Craftsmen and Interior Decoration in England 1660–1820*. Edinburgh: John Bartholomew and Son, 1981.

Campbell, Colen. *Vitruvius Britannicus*, vol. 2. London: Printed for the author, 1717.

Campbell, James W.P. 'The British staircase'. In *Staircases: History, repair and conservation*, edited by James W.P. Campbell and Michael Tutton, 75–140. London: Taylor and Francis, 2014.

Campbell, James W.P. and Michael Tutton, eds. *Staircases: History, repair and conservation*. London: Taylor and Francis, 2014.

Campbell, Richard. *The London Tradesman*. London: T. Gardner, 1747.

Casey, Christine. '"Such a piece of curiosity": John Aheron's *A General Treatise of Architecture*', *Georgian Group Journal* 5 (1995): 65–80.

Casey, Christine. *The Buildings of Ireland: Dublin*. New Haven, CT and London: Yale University Press, 2005.

Channer, Donal. 'The New Staircase at No. 15 Queen Square, Bath', *Georgian Group Report and Journal* (1986): 77–9.

Friedman, Terry. *James Gibbs*. New Haven, CT and London: Yale University Press, 1984.

Georgian Society, The. *Records Eighteenth-Century Domestic Architecture and Decoration in Dublin*, vols 1–5. Dublin: Printed for the Society at the Dublin University Press, by Ponsonby & Gibbs, 1909–13.

Gibbs, James. *A Book of Architecture*. London: n.p., 1728.

Gibney, Arthur. *The Building Site in Eighteenth-Century Ireland*, edited by Livia Hurley and Edward McParland. Dublin: Four Courts Press, 2017.

Glin, Knight of. 'Richard Castle, architect: his biography and works', *Bulletin of the Irish Georgian Society* 7 (Jan–March 1964): 31–8.

Godfrey, Walter. *The English Staircase: An historical account of its characteristic types to the end of the XVIIIth century*. London: B.T. Batsford, 1911.

Gomme, Andor. *Smith of Warwick: Francis Smith, architect and master-builder.* Stamford: Shaun Tyas, 2000.

Gomme, Andor. 'An eighteenth-century builder's notebook', *The Walpole Society* 67 (2005): 193–236.

Gotch, Alfred. *The Growth of the English House: A short history of its architectural development from 1100 to 1800*. London: B.T. Batsford, 1909.

Griffin, David. 'An architectural history of Castletown'. In *Castletown: Decorative arts*, edited by Elizabeth Mayes, 29–46. Dublin: OPW, 2011.

Halfpenny, William. *The Art of Sound Building, Demonstrated in Geometrical Problems: Shewing geometrical lines for all kinds of arches, niches, groins, and twisted rails etc*. London: Printed for the author, 1725.

Halfpenny, William. *The Modern Builder's Assistant: Or, a concise epitome of the whole system of architecture etc*. London: Printed for James Rivington and J. Fletcher, 1757.

Hall, Linda. 'Dating through details'. In *Staircases: History, repair and conservation*, edited by James W.P. Campbell and Michael Tutton, 141–98. London: Taylor and Francis, 2014.

Hayes, Melanie. *The Best Address in Town: Henrietta Street, Dublin, and its first residents, 1720–1780*. Dublin: Four Courts Press, 2020.

Langley, Batty. *Ancient Masonry, both in Theory and Practice*. London: Printed for the author, 1736.

Law, Ernest. *The History of Hampton Court Palace in Tudor Times*. London: George Bell & Sons, 1891.

Lenygon, Francis Henry. *Decoration in England 1660–1770*. London: B.T. Batsford, 1914.

Louw, H.J. 'Demarcation disputes between the English carpenters and joiners from the sixteenth to the eighteenth century', *Construction History* 5 (1989): 3–20.

Mowat, William and Alexander Mowat. *A Treatise on Stairbuilding and Handrailing.* London: George Bell & Sons, 1900.

Neve, Richard. *The City and Countrey Purchaser, and Builder's Dictionary: Or, the compleat builder's guide*. London: J. Sprint, 1703.

O'Connor, Miriam. 'Timothy Turner: an eighteenth-century Dublin ironsmith', *Irish Arts Review* (1996): 141–2.

O'Reilly, Sean. *Irish Houses and Gardens: From the archives of Country Life*. London: Arurum Press, 1998.

Rowan, A.M., ed. *The Architecture of Richard Morrison and William Vitruvius Morrison*. Dublin: IAA, 1989.

Salmon, William. *Palladio Londinensis: Or, the London art of building*. London: Printed for Mess. Ward and Wicksteed, 1734.

Sekler, Eduard F. 'The development of the British staircase'. PhD Thesis, Courtauld Institute of Art, London, 1948.

Stephenson, Judy Z. *Contracts and Pay: Work in London construction 1660–1785*. London: Palgrave Macmillan, 2020.

Stitt, William. *The Practical Architect's Ready Assistant: Or builder's complete companion etc*. Dublin: Printed for the author by James Charles, 1819.

Swan, Abraham. *The British Architect: Or, the builder's treasury of staircases*. 2nd edition. London: Printed for the author, 1750.

Swan, Abraham. *A Collection of Designs in Architecture: Containing new plans and elevations of houses for general use*. London: Printed for and sold by the author by Mr. Brotherton, Mr. Buckland, H. Piers and Partner, 1758.

Tanner, Henry. *English Interior Woodwork of the XVI, XVII, and XVIIIth Centuries: A series of the best and most characteristic examples of chimney-pieces, panelling, staircases, doors, screens, &c., measured and drawn and with introductory and descriptive text*. London: B.T. Batsford, 1902.

Taylor, Russell. 'Stone cantilevered stairs', *Buildingconservation.com*. Accessed 8 July 2022. https://www.buildingconservation.com/articles/stonecantstairs/stonecantstairs.htm.

Turnor, Reginald. *The Smaller English House 1500–1939*. London: Batsford, 1952.
Ware, Isaac. *Designs of Inigo Jones and Others*. London: s.n., 1731.
Ware, Isaac. *A Complete Body of Architecture*. London: Printed for T. Osborne and J. Shipton, 1756.
Weaver, Lawrence. 'Roehampton House, Surrey', *Country Life* 38:971 (14 August 1915): 232–9.
Whiffen, Marcus. *Thomas Archer: Architect of the English baroque*. Los Angeles: Hennessy and Ingalls, 1973.
Whiteley, Mary. 'The role and function of the interior double staircase'. In *English Architecture: Public and private: Essays for Kerry Downes*, edited by John Bold and Edward Chaney. London: Hambledon Press, 1993.
Yeomans, David T. 'Early carpenters' manuals 1592–1820', *Construction History* 2 (1986): 13–33.

Index

References to notes are indicated by n; references to images are in *italics*.

Refinement and enrichment of surfaces in stone, wood and plaster is a fundamental aspect of early modern architecture which has been marginalised by architectural history.

Enriching Architecture aims to retrieve and rehabilitate surface achievement as a vital element of early modern buildings in Britain and Ireland. Rejected by modernism, demeaned by the conceptual 'turn' and too often reduced to its representative or social functions, we argue for the historical legitimacy of creative craft skill as a primary agent in architectural production. However, in contrast to the connoisseurial and developmental perspectives of the past, this book is concerned with how surfaces were designed, achieved and experienced.

The contributors draw upon the major rethinking of craft and materials within the wider cultural sphere in recent years to deconstruct traditional, oppositional ways of thinking about architectural production. This is not a craft for craft's sake argument but an effort to embed the tangible findings of conservation and curatorial research within an evidence-led architectural history that illuminates the processes of early modern craftsmanship. The book explores broad themes of surface treatment such as wainscot, rustication, plasterwork, and staircase embellishment together with chapters focused on virtuoso buildings and set pieces which illuminate these themes.

Christine Casey is Professor in Architectural History and a fellow of Trinity College Dublin. Her books include the definitive reference work on Dublin city, *Dublin* (Yale University Press, 2005), and *Making Magnificence* (Yale University Press, 2017).

Melanie Hayes is Post-Doctoral Research Fellow of the Irish Research Council CRAFTVALUE project at Trinity College Dublin. She is author of *The Best Address in Town: Henrietta Street, Dublin and its First Residents, 1720-80* (Four Courts Press, 2020).

Photo credit:
One week after the devastating fire
at Clandon Park, Surrey. Image No.
1143347 © National Trust Images/
Chris Lacey.

Cover design:
www.hayesdesign.co.uk

ISBN 978-1-80008-355-4

UCLPRESS