

**EUROPEAN ARCHITECTURAL DRAUGHTSMEN IN EARLY EIGHTEENTH-  
CENTURY BRITAIN AND IRELAND:  
TRAINING, METHODS, OFFICE PRACTICE**

Two Volumes

**Volume I**

Text

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## DECLARATION

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Nele Lüttmann

## SUMMARY

This wide-sweeping study delves into the intricacies of architectural draughtsmanship in early eighteenth-century Europe, focusing on the work of two Dresden draughtsmen, Richard Castle and Johann Gottlieb Borlach, who thrived in the architectural practices of Sir Edward Lovett Pearce in Ireland and James Gibbs in Britain. Their ability to adapt their skills to the conventions of British office practices and to master the prevailing grey wash style was crucial to their success. Through a contextual examination of Castle's and Borlach's lives, works, and the architectural offices they worked in, an attempt is made to explore the evolution of architectural drawing styles, the acquisition and development of drawing skills, and the collaborative nature of architectural practice.

Tracing the possible educational backgrounds of Castle and Borlach, the thesis examines the various routes to architectural and engineering expertise as well as skill acquisition in early eighteenth-century Germany. Four primary training contexts emerge: academies, craft apprenticeships, training within building authorities, and specialised military training. While each context offered distinct learning experiences, drawing skills were a common thread, with draughtsmanship being emphasised in both academic and practical settings. This involved the acquisition of drawing skills mainly by copying books, prints, drawings, or three-dimensional models. Although there was no specific educational programme for becoming an architect, the numerous educational institutions and training environments in Germany strove for relatively high teaching standards in architecture, construction, and engineering and the synergy of the individual training contexts led to skilled workforces.

Analysing a wide range of architectural drawings from Germany, France, the Netherlands, and the United Kingdom, along with detailed examinations of drawing styles in the offices of Gibbs and Castle, the development of early eighteenth-century European architectural drawing styles is traced. The transition from polychromy, characterised by the use of multiple colours, to a homogenous and monochrome grey wash style prevalent in British civil architectural drawings is particularly evident. This shift was driven by several factors, including the standardisation of drawing conventions for public projects by government institutions like the British Office of

Works, the professionalisation of the architectural trade and draughtsmanship, and the widespread dissemination of monochrome printed works and drawings. The grey wash style, with its emphasis on precision, clarity, and tonal modulation, became synonymous with the Palladian architectural idiom, favoured by both architects and clients. The resulting homogeneity of drawings poses challenges for researchers today, as it makes it difficult to distinguish and attribute different hands. Hence, a holistic approach is required to understand the collaborative nature of architectural offices and draughtsmanship.

The reconstruction of architectural offices in early eighteenth-century Europe as well as the production of drawings as part of these offices thus necessitates a multifaceted examination of surviving drawings, documents, and office equipment such as drawing instruments. Scrutinising and comparing these sources provide insights into the daily practices, working methods, and collaborative dynamics within the studios. Considering micro-details of architectural drawings and offices, such as underdrawings, stylus marks, the use of different projections, colours, and types of paper, shading and wash conventions, the scale of drawing production, and the devices of draughtsmanship, offer valuable perspectives on the working practices of architects and draughtsmen, revealing technical skills, aesthetic preferences, and collaborative strategies. The thesis particularly prioritises the latter aspect, advocating for a reframing of research methodology, moving away from individual attribution of drawings towards recognising the collective efforts of an entire architectural office. Highlighting the achievements of Richard Castle and Johann Gottlieb Borlach, this study sheds light on the crucial role of draughtsmanship in early eighteenth-century European architecture. It demonstrates how draughtsmen, through their skills, adaptability, and collaborative work, played a pivotal role in the design and construction of the architectural environment.

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## ABBREVIATIONS

|            |                                                      |
|------------|------------------------------------------------------|
| AdK        | Akademie der Künste                                  |
| AS         | All Souls College, Oxford                            |
| ASH        | Ashmolean Museum                                     |
| BL         | British Library                                      |
| BM         | British Museum                                       |
| BNF        | Bibliothèque Nationale de France                     |
| BodL       | Bodleian Libraries, Oxford                           |
| BSB        | Bayerische Staatsbibliothek                          |
| CA         | Cambridgeshire Archives                              |
| CCA        | Canadian Centre for Architecture                     |
| DDZ        | Dresdner Digitalisierungszentrum                     |
| EVLSK      | Evangelisch-Lutherisches Landeskirchenamt<br>Sachsen |
| GAS        | Gemeente Amsterdam Stadsarchief                      |
| HdK        | Hochschule der Künste                                |
| HStAM      | Hessisches Staatsarchiv Marburg                      |
| IAA        | Irish Architectural Archive                          |
| LMA        | London Metropolitan Archives                         |
| LPL        | Lambeth Palace Library                               |
| MC         | Magdalen College Archive                             |
| MIT        | Massachusetts Institute of Technology                |
| NA         | Nottinghamshire Archives                             |
| NLA HA     | Niedersächsisches Landesarchiv, Abt. Hannover        |
| NLI        | National Library of Ireland                          |
| NRO        | Norfolk Record Office                                |
| PrAdK      | Preußische Akademie der Künste                       |
| RCT        | Royal Collection Trust                               |
| RIAI       | Royal Institute of the Architects of Ireland         |
| RIBA       | Royal Institute of British Architects                |
| SächsStA-D | Sächsisches Staatsarchiv                             |

|      |                                                                             |
|------|-----------------------------------------------------------------------------|
| SLUB | Sächsische Landesbibliothek - Staats- und<br>Universitätsbibliothek Dresden |
| SM   | Sir John Soane's Museum Collection                                          |
| SPSG | Stiftung Preußische Schlösser und Gärten                                    |
| StAD | Stadtarchiv Dresden                                                         |
| TCD  | Trinity College Dublin                                                      |
| TNA  | The National Archives of the UK                                             |
| V&A  | Victoria and Albert Museum                                                  |

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- Fig. 4.24:** James Gibbs, *Design of the elevation for a Church with a Corinthian Order, London, 1713*, pen and ink with grey wash, 306 x 214 mm/12 x 8.4 in. ASH, WA1925.342.140 (Crandall III-102a).

Photo: Nele Lüttmann, 28.09.2023.

- Fig. 4.25:** James Gibbs, *Design of the elevation and plan for Johnston's Octagon (now Orleans House Gallery), Twickenham*, 1716, pen and ink with grey wash, 381 x 221 mm/15 x 8.7 in. V&A, E.3620-1913.  
Photo: Ronny Licht, 13.04.2022.
- Fig. 4.26:** James Gibbs, *Design for a carved chair with a scallop back: two views*, early eighteenth century, pen and brown ink, brown and grey wash, 142 x 179 mm/5.6 x 7 in. British Museum (BM), 1890,0512.86.  
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- Fig. 4.27:** James Gibbs, *Design for the frame and pedestal for a looking glass with a scallop design*, c. 1710s, pen and brown ink with grey wash, on two conjoined sheets with a further sheet attached and scored at the top, 280 x 205 mm/11 x 8 in. BM, 1890,0512.87.  
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- Fig. 4.28:** James Gibbs, *Decorative design*, c. 1710s, pen and black ink, grey wash over graphite, 238 x 142 mm/9.3 x 5.6 in. BM, 1913,1216.13.  
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- Fig. 4.29:** Adam Philippon, *Curieuses recherches de plusieurs beaux morceaux d'ornemens antiques et modernes* (Paris: n.p., 1645), pl. 12.  
Bibliothèque nationale de France,  
<<https://gallica.bnf.fr/ark:/12148/bpt6k1518676b/f31.item#>> (accessed 28.11.2022).
- Fig. 4.30:** James Gibbs, *Finished design for the house (first version), Wimpole Hall (?)*, 1713, pen with grey and some brown ink, with grey wash over pencil underdrawing, 357 x 598 mm/14 x 23.5 in. SM, volume 111/33.  
Photo: Nele Lüttmann, 10.09.2021.
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Photo: Nele Lüttmann, 10.09.2021.
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- Fig. 4.34:** James Gibbs, *East elevation of the church St. Mary le Strand*, 1714, pen and ink with grey wash, 373 x 136 mm/14.7 x 5.4 in. V&A, E.3600-1913.  
Photo: Ronny Licht, 13.04.2022.
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Photo: Nele Lüttmann, 13.04.2022.
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Photo: Nele Lüttmann, 13.04.2022.
- Fig. 4.37:** James Gibbs, *Plans of the cellar & 1st floor of the house, Lowther Hall*, c. 1717, pen and ink with grey and yellow wash, 595 x 470 mm/23.4 x 18.5 in. RIBA, SB67/2(3).  
Photo: Ronny Licht, 13.04.2022.
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Photo: Ronny Licht, 13.04.2022.
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Royal Collection Trust / © His Majesty King Charles III 2023,  
<<https://www.rct.uk/collection/search#/1/collection/909452/project-for-the-origo-monument-s-egidio-in-trastevere-rome>> (accessed 20.10.2022).
- Fig. 4.42:** Carlo Fontana, *Design for the Façade of Santi Faustino e Giovita, Rome*, 1652-1725, pen and brown ink, brush, and brown and grey wash, over black chalk; the background in faint red brush and wash; brown ink border on drawing, 574 x 372 mm/22.6 x 14.6 in. The Metropolitan Museum of Art, 61.658.39.  
The Met,  
<<https://www.metmuseum.org/art/collection/search/343232?ft=carlo+fontana&offset=0&rpp=40&pos=1>> (accessed 25.10.2022).

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Royal Collection Trust / © His Majesty King Charles III 2023,  
<<https://www.rct.uk/collection/search#/12/collection/909328/fontana-di-trevi>> (accessed 20.10.2022).
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Royal Collection Trust / © His Majesty King Charles III 2023,  
<<https://www.rct.uk/collection/search#/40/collection/909916>> (accessed 20.10.2022).
- Fig. 4.45:** Christopher Wren, *St Paul's Cathedral pre-fire design: Elevation of crossing and section through nave*, 1666, brown ink over pencil and scorer, shaded with grey, brown, blue, and yellow wash, 663 x 445 mm/26.1 x 17.5 in. BodL, AS II.6.  
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<<https://iiif.bodleian.ox.ac.uk/iiif/viewer/?iiif-content=https://iiif.bodleian.ox.ac.uk/iiif/canvas/49606d6e-ff20-4364-b304-c81de60450f4.json#c=0&m=0&s=0&cv=52&r=0&xywh=-1413%2C-456%2C8237%2C9102>> (accessed 25.11.2022).
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<<https://iiif.bodleian.ox.ac.uk/iiif/viewer/?iiif-content=https://iiif.bodleian.ox.ac.uk/iiif/canvas/2beb5c7f-f799-4612-a709-7a358934387b.json#c=0&m=0&s=0&cv=55&r=0&xywh=-169%2C-256%2C3371%2C3724>> (accessed 25.11.2022).
- Fig. 4.47:** Thomas Laine, *St Mildred, Bread Street: Section looking East*, c. 1681, brown ink over pencil, shaded with grey and pink wash, 240 x 217 mm/9.4 x 8.5 in. BodL, AS IV.110.  
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<<https://iiif.bodleian.ox.ac.uk/iiif/viewer/?iiif-content=https://iiif.bodleian.ox.ac.uk/iiif/canvas/6e590482-1f70-4a53-80c0-633e6419f312.json#c=0&m=0&s=0&cv=167&r=0&xywh=-255%2C-175%2C3162%2C3494>> (accessed 25.11.2022).
- Fig. 4.48:** Nicholas Hawksmoor, *Remodelling Upper Ward, Windsor Castle: Block plan of the castle*, 1698, brown ink over pencil, shaded with grey, yellow, and green wash, 376 x 699 mm/14.8 x 27.1 in. BodL, AS V.15.  
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<<https://iiif.bodleian.ox.ac.uk/iiif/viewer/?iiif-content=https://iiif.bodleian.ox.ac.uk/iiif/canvas/5ad796f2-2bef-47e0->

bc9b-e32ef2772ec6.json#?c=0&m=0&s=0&cv=344&r=0&xywh=0%2C-2255%2C8384%2C9264> (accessed 25.11.2022).

- Fig. 4.49:** William Dickinson, *Palace of Westminster: The House of Lords, Alternative design for a gallery*, c. 1704-05, brown ink over pencil, shaded with grey, yellow, green, and red wash, 358 x 463 mm/14.1 x 18.2 in. BodL, AS I.21.  
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<<https://iiif.bodleian.ox.ac.uk/iiif/viewer/?iiif-content=https://iiif.bodleian.ox.ac.uk/iiif/canvas/32b5a4cb-dde2-48d8-b0aa-dc4008b36ca0.json#?c=0&m=0&s=0&cv=398&r=0&xywh=-293%2C-1146%2C6201%2C6851>> (accessed 25.11.2022).
- Fig. 4.50:** Thomas Laine, *Christ Church, Newgate Street: Preliminary west elevation*, c. 1677-78, brown ink shaded with grey wash, 367 x 271 mm/14.4 x 10.7 in. BodL, AS II.53.  
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<<https://iiif.bodleian.ox.ac.uk/iiif/viewer/?iiif-content=https://iiif.bodleian.ox.ac.uk/iiif/canvas/322d408e-374e-4014-b5f6-d5a11f41c313.json#?c=0&m=0&s=0&cv=154&r=0&xywh=-672%2C-258%2C4663%2C5152>> (accessed 25.11.2022).
- Fig. 4.51:** Detail of fig. 4.32 showing brown ink outlines.
- Fig. 4.52:** *Elevation of a column on an inscribed base, surmounted by an urn*, early eighteenth century, pen and ink with wash, 287 x 160 mm/11.3 x 6.3 in. V&A, E.2124:18-1992.  
© Victoria and Albert Museum, London.  
<<https://collections.vam.ac.uk/item/O209369/elevation-of-a-column-on-design-sir-john-vanbrugh/>> (accessed 25.11.2022).
- Fig. 4.53:** James Gibbs, *Design for the 'Middle part of the West Side, upon a larger Scale' of King's College, Cambridge*, (detail), c. 1723, pen and ink with grey wash over indications in stylus, 345 x 239 mm/13.6 x 9.4 in. ASH, WA1925.340.23 (Crandall I-12a).  
Photo: Nele Lüttmann, 15.09.2021.
- Fig. 4.54:** James Gibbs, *Design of the decorations of a ceiling inscribed by Gibbs 'Ceiling of ye New Room at Fairlawn in Kent ye Seat of Ld. Vane'*, 1723-24, pen and black ink with grey wash over graphite, 434 x 280 mm/17.1 x 11 in. ASH, WA1925.343.44 (Crandall IV-41).  
Photo: Nele Lüttmann, 28.09.2023.
- Fig. 4.55:** James Gibbs, *Design of the 'Front towards ye Garden' for Earl Fitzwilliam (Milton House)*, c. 1720, pen and ink with grey wash over indications in stylus, 199 x 368 mm/7.8 x 14.5 in. ASH, WA1925.340.36 (Crandall I-19a).  
Photo: Nele Lüttmann, 09.09.2021.

- Fig. 4.56:** Office of James Gibbs, *Design for the section and 'Front towards ye Garden' of the first draught for the Right Honourable Earl Fitzwilliam at Milton near Peterborough*, (detail), 1720s, pen and ink with grey wash over indications in stylus, 345 x 255 mm/13.6 x 10 in. ASH, WA1925.340.35 (Crandall I-18b).  
Photo: Nele Lüttmann, 09.09.2021.
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Photo: Nele Lüttmann, 08.09.2021.
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Photo: Nele Lüttmann, 08.09.2021.
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Photo: Ronny Licht, 13.04.2022.
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Photo: Nele Lüttmann, 28.09.2023.
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Photo: Nele Lüttmann, 08.09.2021.
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Photo: Nele Lüttmann, 08.09.2021.
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Photo: Nele Lüttmann, 08.09.2021.

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Photo: Nele Lüttmann, 08.09.2021.

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Photo: Nele Lüttmann, 28.09.2023.

**Fig. 4.67:** James Gibbs, *Early design of the plan, elevation and section of a square pavilion at Stowe*, 1727, pen and ink with grey wash, 238 x 393 mm/9.3 x 15.5 in. ASH, WA1925.342.152 (Crandall III-107b).

Photo: Nele Lüttmann, 28.09.2023.

**Fig. 4.68:** Office of James Gibbs, *Design of the plan, upright, and section of a pavilion at Stowe*, 1727, pen and ink with grey wash over indications in stylus, 211 x 376 mm/8.3 x 14.8 in. ASH, WA1925.340.88 (Crandall I-47a).

Photo: Nele Lüttmann, 28.09.2023.

**Fig. 4.69:** Office of James Gibbs, *Design for the plan, upright and section of a 'Pavilion for the Right Honourable the Lord Viscount Cobham in his Garden at Stow in Buckinghamshire'*, 1727, pen and ink with grey wash over indications in stylus, 189 x 422 mm/7.4 x 16.6 in. ASH, WA1925.341.137 (Crandall II-84a).

Photo: Nele Lüttmann, 28.09.2023.

**Fig. 4.70:** Detail of fig. 4.69 showing the section.

## CHAPTER 5

**Fig. 5.1:** Mounted photograph of Richard Castle's *Plan of First Floor for Carton House*, c. 1739. IAA, 0000/005-001/094 R/93.

Courtesy of the Irish Architectural Archive.

**Fig. 5.2:** Mounted photograph of Richard Castle's *Plan of Second Floor for Carton House*, c. 1739. IAA, 0000/005-001/094 R/96.

Courtesy of the Irish Architectural Archive.

- Fig. 5.3a:** (Office of) Richard Castle, album containing designs for Headfort House, Co. Meath, 1730s, marbled boards with calf spine, inscribed “*Mr Castle’s Plan*” on the cover, 520 x 420 mm/20.5 x 16.5 in. IAA, 96/68.3/1/1.  
Courtesy of the Irish Architectural Archive.
- Fig. 5.3b:** Detail of fig. 5.3a.
- Fig. 5.4:** *Power of Attorney 10 February 1727* (detail). Stadtarchiv Dresden, 2.4.3-634 Gerichtshandelsbuch von Übigau und Mickten, 1732-1826, f. 0133.  
Courtesy of Stadtarchiv Dresden.
- Fig. 5.5:** *An illustrated essay on artificial navigation by Richard Castle, written in connection with the construction of the Newry canal, c. 1733-36* (detail). National Library of Ireland (NLI), MS 273.  
Photo: Ronny Licht, 26.06.2022.
- Fig. 5.6:** Detail of fig. 5.5, marked in red the distinctive terminal loop of the lower-case k.
- Fig. 5.7:** *Letter, Richard Castle (to Provost &c) concerning his plan for a hall and his charges for making them.* Trinity College Dublin (TCD), Muniments (MUN)/P/2/79.  
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- Fig. 5.8:** *Tradesman’s bill.* TCD, MUN/P/2/74/27.  
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- Fig. 5.10:** *Remarks upon the Plans here inclosed.* V&A, E.2124:7-1992.  
Photo: Ronny Licht, 13.04.2022.
- Fig. 5.11:** Verso of Edward Lovett Pearce, *Elevation of the south front of Drumcondra House, Co. Dublin, now All Hallow’s College*, pen and ink with wash, 158 x 198 mm/6.2 x 7.8 in. V&A, E.2124:27-1992.  
Photo: Nele Lüttmann, 13.04.2022.
- Fig. 5.12:** Edward Lovett Pearce, *Sketch plan of a villa with central octagon, (detail)*, pen and ink, 305 x 185 mm/12 x 7.3 in. V&A, E.2124:84-1992.  
Photo: Nele Lüttmann, 27.09.2023.
- Fig. 5.13:** Edward Lovett Pearce, *Plan and sectional elevation for the Stillorgan Obelisk from Stillorgan House, c. 1720s*, pencil, pen, and ink with wash and watercolour, 314 x 194 mm/12.4 x 7.6 in. V&A, E.2124:19-1992.

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<<https://collections.vam.ac.uk/item/O202093/design-lovett-pearce-edward/>> (accessed 11.01.2023).

- Fig. 5.14:** Details of Richard Castle after Edward Lovett Pearce, *Designes for a Lodge at Richmond*, c. 1727/28, pen and ink, 322 x 406 mm/12.7 x 15.9 in. V&A, E.2123:2-1992.  
Photo: Nele Lüttmann, 27.09.2023.
- Fig. 5.15:** Details of *An illustrated essay on artificial navigation by Richard Castle, written in connection with the construction of the Newry canal*, c. 1733-36. NLI, MS 273.  
Photo: Ronny Licht, 26.06.2022.
- Fig. 5.16:** Detail of concluding sentence of Richard Castle after Edward Lovett Pearce, *Designes for a Lodge at Richmond*, c. 1727/28, pen and ink, 322 x 406 mm/12.7 x 15.9 in. V&A, E.2123:2-1992.  
Photo: Nele Lüttmann, 27.09.2023.
- Fig. 5.17:** Detail of *Note on designs for Houses of Parliament, Dublin*, by E. L. Pearce, March 7, 1728. NLI, MS D.20,209.  
Photo: Melanie Hayes, 01.10.2021.
- Fig. 5.18:** Place, date, and signature on *Elevation of the south front of Drumcondra House, Co. Dublin, now All Hallow's College* (top; detail of fig. 5.11) in comparison with place, date, and signature on *Note on designs for Houses of Parliament, Dublin*, by E. L. Pearce, March 7, 1728 (bottom; detail of fig. 5.17).
- Fig. 5.19:** First page of *Note on designs for Houses of Parliament, Dublin*, by E. L. Pearce, March 7, 1728 (detail). NLI, MS D.20,209.  
Photo: Melanie Hayes, 01.10.2021.
- Fig. 5.20:** *Bill by Richard Castle, 1738, recorded by John Ensor*. TCD, MUN/P/2/68/4.  
Photo: Melanie Hayes, 12.01.2023.
- Fig. 5.21:** *Receipt from John Ensor, May 29, 1766*. NLI, MS 34,165, Doneraile Papers, 1607-1961.  
Photo: Christine Casey, 02.09.2020.
- Fig. 5.22:** *An Estimate of the Printing House intended to be Built in Dublin Colledge*, c. 1733. TCD, MUN/P/2/65/5.  
Photo: Melanie Hayes, 24.03.2021.
- Fig. 5.23:** Colen Campbell, *Vitruvius Britannicus* (London: author et al., 1725), plate 16.

**Fig. 5.24:** *Explanations on Richard Castle, Plan of the ground floor of Richmond Lodge* (left), in comparison with *Explanations on Richard Castle, Plan and elevation for a dining hall* (right).

Left:

- Richard Castle, *Plan of the ground floor of Richmond Lodge*, c. 1727/28, pen and ink with grey wash, 404 x 639 mm/15.9 x 25.3 in. V&A, E.2123:3-1992.

Photo: Nele Lüttmann: 27.09.2023.

Right:

- Richard Castle, *Plan and elevation for a dining hall*, (detail), c. 1740, pen and ink with grey and yellow wash, 520 x 336 mm/20.5 x 13.2 in. TCD, MUN/MC/83.

Photo: Nele Lüttmann, 03.11.2022.

**Fig. 5.25:** *Explanations of figure 12 in Essay on artificial navigation* (left; detail of fig. 5.5) in comparison with *Explanations on Richard Castle, Plan of the ground floor of Richmond Lodge* (right; detail of fig. 5.24).

**Fig. 5.26:** *Explanations on Richard Castle, Proposed design for Headfort House: ground-floor plan*, (scheme B), (left; detail) in comparison with an invoice by Ensor (right; detail).

Left:

- Richard Castle, *Proposed design for Headfort House: ground-floor plan*, (scheme B), 1730s, ink and grey wash, 360 x 543 mm/14.2 x 21.4 in. IAA, 96/68.3/1/7.

Courtesy of the Irish Architectural Archive.

Right:

- *Receipt from John Ensor, May 29, 1766*. NLI, MS 34,165, Doneraile Papers, 1607-1961.

Photo: Christine Casey, 02.09.2020.

**Fig. 5.27:** Edward Lovett Pearce, *Back front for an office house at Lough Gal, County Armagh*, c. 1720s, pencil, pen, and ink with wash, entire sheet scored in squares to transfer, 234 x 179 mm/9.2 x 7 in. V&A, E.2124:146-1992.

Photo: Nele Lüttmann, 27.09.2023.

**Fig. 5.28:** Edward Lovett Pearce, *Elevation of the south front of Drumcondra House, Co Dublin, now All Hallows' College*, 1727, pencil, pen, and ink with wash, 158 x 198 mm/6.2 x 7.8 in. V&A, E.2124:27-1992.

Photo: Nele Lüttmann, 27.09.2023.

**Fig. 5.29:** Different scale bar designs on drawings attributed to Edward Lovett Pearce.

From top to bottom:

- Attributed to Edward Lovett Pearce, *Alternative front elevation for a small villa*, (detail), c. 1720s, pen and ink with wash, 225 x 335 mm/8.9 x 13.2 in. V&A, E.2124:32-1992.  
Photo: Christine Casey, 18.02.2021.
- Edward Lovett Pearce, *Plan of a small rectangular building, showing a circular hall*, (detail), c. 1720s, pen and ink with wash, 233 x 304 mm/9.2 x 11.9 in. V&A, E.2124:81-1992.  
Photo: Nele Lüttmann, 27.09.2023.
- Attributed to Edward Lovett Pearce, *Plan of extensions to Ashley Park*, (detail), c. 1720s, pen and ink with wash, 331 x 428 mm/13 x 16.9 in. V&A, E.2124:90-1992.  
Photo: Christine Casey, 18.02.2021.
- Edward Lovett Pearce, *Section, front elevation and plan of a large, two-storey garden temple of the Maison Carrée type*, (detail), 1725, pen and ink with coloured wash, 253 x 375 mm/9.9 x 14.8 in. V&A, E.2124:210-1992.  
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<<https://collections.vam.ac.uk/item/O225514/design-lovett-pearce-edward/>> (accessed 10.01.2023).
- Edward Lovett Pearce, *Plan and elevation of a house with two turrets containing circular staircases*, (detail), c. 1720s, pen and ink with wash, 236 x 160 mm/9.3 x 6.3 in. V&A, E.2124:145-1992.  
Photo: Christine Casey, 18.02.2021.
- Edward Lovett Pearce, *Plan and elevation of a cruciform house*, (detail), c. 1720s, pen and ink with wash, 312 x 198 mm/12.3 x 7.8 in. V&A, E.2124:141-1992.  
Photo: Christine Casey, 18.02.2021.
- Edward Lovett Pearce, *Plan of a square building with a central octagon*, (detail), c. 1730, pencil, pen and ink, 267 x 230 mm/10.5 x 9 in. V&A, E.2124:64-1992.  
© Victoria and Albert Museum, London.  
<<https://collections.vam.ac.uk/item/O232425/design-lovett-pearce-edward/>> (accessed 08.02.2023).

**Fig. 5.30:** Different scale bar designs on drawings in the Vanbrugh Album.

From top to bottom (left):

- Circle of Edward Lovett Pearce, *Elevation of a cornice of one of the pavilions at Castletown, Co Kildare*, (detail), c. 1726, pencil, pen, and ink, 172 x 145 mm/6.8 x 5.8 in. V&A, E.2124:245-1992.  
Photo: Nele Lüttmann, 13.04.2022.
- Circle of Edward Lovett Pearce, *Part elevation and part upward-looking plan of the south loggia of the Parliament House, Dublin*, (detail), c. 1730, pencil, pen, and ink with wash, 337 x 491 mm/13.3 x 19.3 in. V&A, E.2124:184-1992.  
Photo: Ronny Licht, 13.04.2022.
- Circle of Edward Lovett Pearce, *Portico of the Parliament House in Dublin*, (detail), c. 1729, pencil, pen, and ink, 262 x 445 mm/10.3 x

17.5 in. V&A, E.2124:29-1992.

Photo: Ronny Licht, 13.04.2022.

- Office of Edward Lovett Pearce, *Basement plan of the Parliament House, Dublin*, (detail), c. 1729, pencil, pen, and ink with wash, 403 x 287 mm/15.9 x 11.3 in. V&A, E.2124:2-1992.  
Photo: Ronny Licht, 13.04.2022.
- Circle of Edward Lovett Pearce, *Elevation of a large country house with eleven bays*, (detail), c. 1720s, pen and ink with wash, 185 x 394 mm/7.3 x 15.5 in. V&A, E.2124:154-1992.  
Photo: Christine Casey, 18.02.2021.
- Circle of Edward Lovett Pearce, *Plan and perspective view of small rectangular house or lodge*, (detail), c. 1720s, pen and ink with wash, 302 x 139 mm/11.9 x 5.5 in. V&A, E.2124:113-1992.  
Photo: Nele Lüttmann, 13.04.2022.
- Office of Edward Lovett Pearce, *Plan and section of the House of Commons, Dublin*, (detail), c. 1729, pen and ink with wash, 495 x 255 mm/19.5 x 10 in. V&A, E.2124:1-1992.  
Photo: Christine Casey, 18.02.2021.

From top to bottom (right):

- Circle of Edward Lovett Pearce, *Plan of Stillorgan House, Co. Dublin*, (detail), c. 1720s, pencil, pen, and ink with wash, 213 x 375 mm/8.4 x 14.8 in. V&A, E.2124:44-1992.  
Photo: Christine Casey, 18.02.2021.
- (Office of) Edward Lovett Pearce, *Plan relating to Captain Ransom's house at Donnamore, Co. Leix*, (detail), c. 1720s, pen and ink with wash, 359 x 294 mm/14.1 x 11.6 in. V&A, E.2124:54-1992.  
Photo: Christine Casey, 18.02.2021.
- Circle of Edward Lovett Pearce, *Plan and front elevation of a small house*, (detail), c. 1720s, pen and ink with wash, 274 x 219 mm/10.8 x 8.6 in. V&A, E.2124:35-1992.  
Photo: Christine Casey, 18.02.2021.
- Circle of Edward Lovett Pearce, *Plan of a long rectangular garden*, (detail), c. 1720s, pen and ink, 261 x 425 mm/10.3 x 16.7 in. V&A, E.2124:108-1992.  
Photo: Christine Casey, 18.02.2021.
- Circle of Edward Lovett Pearce, *Plan of part pf a large building, possibly Dublin Castle*, (detail), c. 1720s, pen and ink with wash, 298 x 185 mm/11.7 x 7.3 in. V&A, E.2124:68-1992.  
Photo: Christine Casey, 18.02.2021.

**Fig. 5. 31:** Circle of Edward Lovett Pearce, *Part elevation and part upward-looking plan of the south loggia of the Parliament House, Dublin*, c. 1730, pencil, pen, and ink with wash, 337 x 491 mm/13.3 x 19.3 in. V&A, E.2124:184-1992.  
Photo: Ronny Licht, 13.04.2022.

- Fig. 5.32:** Office of Edward Lovett Pearce, *Section through the Court of Requests, Parliament House, Dublin*, c. 1730, pencil, pen, and ink with grey wash, 239 x 355 mm/9.4 x 13.9 in. V&A, E.2124:4-1992.  
Photo: Ronny Licht, 13.04.2022.
- Fig. 5.33:** Richard Castle, *Plan of garden layout of Richmond Lodge*, c. 1727/28, pen and ink with grey, yellow, and green wash, 467 x 659 mm/18.4 x 25.9 in. V&A, E.2123:1-1992.  
© Victoria and Albert Museum, London.  
<<https://collections.vam.ac.uk/item/O202091/design-lovett-pearce-edward/>> (accessed 16.01.2023).
- Fig. 5.34:** Richard Castle, *Plan of the ground floor of Richmond Lodge*, c. 1727/28, pen and ink with grey wash, 404 x 639 mm/15.9 x 25.2 in. V&A, E.2123:3-1992.  
© Victoria and Albert Museum, London.  
<<https://collections.vam.ac.uk/item/O202093/design-lovett-pearce-edward/>> (accessed 19.12.2022).
- Fig. 5.35:** Richard Castle, *Plan of the principal floor of Richmond Lodge*, c. 1727/28, pen and ink with grey wash, 402 x 640 mm/15.8 x 25.2 in. V&A, E.2123:4-1992.  
© Victoria and Albert Museum, London.  
<<https://collections.vam.ac.uk/item/O202094/design-lovett-pearce-edward/>> (accessed 19.12.2022).
- Fig. 5.36:** Richard Castle, *Plan of the attic floor of Richmond Lodge*, c. 1727/28, pen and ink with grey wash, 410 x 632 mm/16.1 x 24.9 in. V&A, E.2123:5-1992.  
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<<https://collections.vam.ac.uk/item/O202095/design-lovett-pearce-edward/>> (accessed 19.12.2022).
- Fig. 5.37:** Richard Castle, *Section through the centre of Richmond Lodge*, c. 1727/28, pen and ink with grey wash, 399 x 627 mm/15.7 x 24.7 in. V&A, E.2123:6-1992.  
© Victoria and Albert Museum, London.  
<<https://collections.vam.ac.uk/item/O202096/design-lovett-pearce-edward/>> (accessed 19.12.2022).
- Fig. 5.38:** Richard Castle, *Side elevation of one of the fronts of Richmond Lodge*, c. 1727/28, pen and ink with grey wash, 400 x 625 mm/15.7 x 24.6 in. V&A, E.2123:7-1992.  
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<<https://collections.vam.ac.uk/item/O202097/design-lovett-pearce-edward/>> (accessed 19.12.2022).

- Fig. 5.39:** Richard Castle/Edward Lovett Pearce, *Plan of the entrance lobby of Richmond Lodge*, c. 1727/28, pen and ink with grey wash, 202 x 160 mm/7.9 x 6.3 in. V&A, E.2124:103-1992.  
© Victoria and Albert Museum, London.  
<<https://collections.vam.ac.uk/item/O230712/design-castle-richard/>> (accessed 08.02.2023).
- Fig. 5.40:** Circle of Edward Lovett Pearce (?), *Ground floor plan of a rectangular palace*, c. 1730 (?), ink and grey wash, 381 x 311 mm/15 x 12.2 in. Mellerstain inv. no. 20/National Record of the Historic Environment (Canmore), BWD 57/40.  
Photo: Lesley Abernethy (with permission of the owner), 20.02.2020.
- Fig. 5.41:** Circle of Edward Lovett Pearce (?), *Principal floor plan of a rectangular palace*, c. 1730 (?), ink and grey wash, 362 x 298 mm/14.3 x 11.7 in. Mellerstain inv. no. 21/National Record of the Historic Environment (Canmore), BWD 57/41.  
Photo: Lesley Abernethy (with permission of the owner), 20.02.2020.
- Fig. 5.42:** Circle of Edward Lovett Pearce (?), *Attic floor plan of a rectangular palace*, c. 1730 (?), ink and grey wash. Mellerstain inv. no. 22/National Record of the Historic Environment (Canmore), BWD 57/42.  
Photo: Lesley Abernethy (with permission of the owner), 20.02.2020.
- Fig. 5.43:** Richard Castle, *Two plans and two elevations for a small house*, c. 1730, pen and ink with grey wash, 311 x 405 mm/12.3 x 15.9 in. V&A, E.2124:119-1992.  
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<<https://collections.vam.ac.uk/item/O230632/design-castle-richard/>> (accessed 17.01.2023).
- Fig. 5.44:** Richard Castle, *Plan for a small house with three front bays and one staircase*, c. 1730, pen and ink with grey wash, 290 x 191 mm/11.4 x 7.5 in. V&A, E.2124:43-1992.  
Photo: Ronny Licht, 13.04.2022.
- Fig. 5.45:** In the style of John Vanbrugh, *Elevation and plan of the ground floor, Inveraray Castle, Argyll*, c. 1720s, pen and ink with grey wash, 316 x 185 mm/12.4 x 7.3 in. V&A, E.2124:139-1992.  
© Victoria and Albert Museum, London.  
<<https://collections.vam.ac.uk/item/O205700/elevation-and-plan-of-the-design-sir-john-vanbrugh/>> (accessed 17.01.2023).
- Fig. 5.46:** Richard Castle, *Plan and elevation for a house*, c. 1730, pencil, pen, and ink with grey wash, 228 x 294 mm/8.9 x 11.6 in. V&A, E.2124:107-1992.  
Photo: Ronny Licht, 13.04.2022.



- Fig. 5.47:** Richard Castle, *Elevation of a town house with five stories*, c. 1730, pen and ink with grey wash, 263 x 189 mm/10.4 x 7.4 in. V&A, E.2124:182-1992.  
Photo: Ronny Licht, 13.04.2022.
- Fig. 5.48:** Richard Castle, *Elevation of a town house with five stories and a mansard roof*, pen and ink and wash on paper, c. 1730, 277 x 210 mm/10.9 x 8.3 in. V&A, E.2124:176-1992.  
© Victoria and Albert Museum, London,  
<<http://collections.vam.ac.uk/item/O230121/design-castle-richard>>  
(accessed 29.01.2021).
- Fig. 5.49:** Sébastien Le Prestre de Vauban, *Bezançon*, 1687, pencil, brown and black ink with grey and red wash, 375 x 518 mm/14.8 x 20.4 in. Service Historique de la Défense, Vincennes.  
Basile Baudez, *Inessential Colors: Architecture on Paper in Early Modern Europe* (Princeton: Princeton University Press: 2021), 84, fig. 56.
- Fig. 5.50:** *Figure 15 of An illustrated essay on artificial navigation by Richard Castle, written in connection with the construction of the Newry canal*, c. 1733-36. NLI, MS 273.  
Photo: Ronny Licht, 26.06.2023.
- Fig. 5.51:** *Figure 3 of An illustrated essay on artificial navigation by Richard Castle, written in connection with the construction of the Newry canal*, c. 1733-36. NLI, MS 273.  
Photo: Ronny Licht, 26.06.2023.
- Fig. 5.52:** *Figure 6 of An illustrated essay on artificial navigation by Richard Castle, written in connection with the construction of the Newry canal*, c. 1733-36. NLI, MS 273.  
Photo: Ronny Licht, 26.06.2023.
- Fig. 5.53:** Richard Castle, *Plan and elevation for a dining hall*, (detail), c. 1740, pen and ink with grey and yellow wash, 520 x 336 mm/20.5 x 13.2 in. TCD, MUN/MC/83.  
Photo: Nele Lüttmann, 03.11.2022.
- Fig. 5.54:** Richard Castle (?), *Measured plan and elevation of a gate house, possibly for Kildare House (later Leinster House)*, mid-eighteenth century. IAA, 86/24.7.  
Courtesy of the Irish Architectural Archive.
- Fig. 5.55:** Richard Castle (?), *Kildare House (later Leinster House): Laid-out interior for a library*, c. 1745, ink and grey wash, 334 x 268 mm/13.1 x 10.6 in. IAA, 96/68.1/1/15.  
Photo: Andrew Tierney, 19.11.2019.

- Fig. 5.56:** Richard Castle (?), *Kildare House (later Leinster House): Laid-out interior for a library*, c. 1745, ink and grey wash, 309 x 262 mm/12.2 x 10.3 in. IAA, 96/68.1/1/16.  
Photo: Andrew Tierney, 19.11.2019.
- Fig. 5.57:** Richard Castle (?), *Project for a house of seven bays with an engaged portico, with a front elevation of 3 storeys*, mid-eighteenth century. IAA, 86/24.1.  
Courtesy of the Irish Architectural Archive.
- Fig. 5.58:** Richard Castle, *General plan of the house and offices, Castle Coole*, mid-eighteenth century. From the collection of the Earl of Belmore. Photo: Bryan F. Rutledge (04.07.2013).
- Fig. 5.59:** Richard Castle, *General Ground plan, Kildare House (later Leinster House)*, c. 1745, ink and pencil with grey and greenish-grey wash, 480 x 353 mm/18.9 x 13.9 in. IAA, 96/68.1/1/4.  
Courtesy of the Irish Architectural Archive.
- Fig. 5.60:** Richard Castle, *Proposed design for Headfort House: basement plan*, (scheme A), 1730s, ink and grey wash, 359 x 480 mm/14.1 x 18.9 in. IAA, 96/68.3/1/2.  
Courtesy of the Irish Architectural Archive.
- Fig. 5.61:** Richard Castle, *Proposed design for Headfort House: ground-floor plan*, (scheme A), 1730s, ink and grey wash, 338 x 480 mm/13.3 x 18.9 in. IAA, 96/68.3/1/3.  
Courtesy of the Irish Architectural Archive.
- Fig. 5.62:** Richard Castle, *Proposed design for Headfort House: first-floor plan*, (scheme A), 1730s, ink and grey wash, 355 x 480 mm/13.9 x 18.9 in. IAA, 96/68.3/1/4.  
Courtesy of the Irish Architectural Archive.
- Fig. 5.63:** Richard Castle, *Proposed design for Headfort House: elevation of entrance front*, (scheme A), 1730s, ink and grey wash, 200 x 490 mm/7.9 x 19.3 in. (cut down). IAA, 96/68.3/1/5.  
Courtesy of the Irish Architectural Archive.
- Fig. 5.64:** Edward Lovett Pearce (?), *Plan of ye Upper Floor of Stillorgan with Alterations*, photograph of the original drawing at Elton Hall. IAA, 0000/005-017/050 R/4.  
Courtesy of the Irish Architectural Archive.
- Fig. 5.65:** Richard Castle, *Proposed design for Headfort House: ground-floor plan*, (scheme B), 1730s, ink and grey wash, 360 x 543 mm/14.2 x 21.4 in. IAA, 96/68.3/1/7.

Courtesy of the Irish Architectural Archive.

- Fig. 5.66:** Richard Castle, *Proposed design for Headfort House: basement plan*, (scheme C), 1730s, ink and grey wash. IAA, no. unknown.  
Photo: Christine Casey, 13.11.2019.
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Courtesy of the Irish Architectural Archive.
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Courtesy of the Irish Architectural Archive.
- Fig. 5.69:** John Ensor (?), *Proposed design for Headfort House: plan of ground floor and entrance elevation*, (scheme D), 1730s, ink and grey wash with pencil additions, 255 x 467 mm/10 x 18.4 in. IAA, 96/68.3/1/10.  
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Photo: Christine Casey, 13.11.2019.
- Fig. 5.71:** John Ensor (?), *Ground-floor plan for Doneraile House*, 1740s, ink, 320 x 200 mm/9 x 7.8 in. IAA, 96/68.4/5.  
Photo: Christine Casey, 13.11.2019.
- Fig. 5.72:** Richard Castle, *Basement and ground-floor plans for Doneraile House*, 1740s, ink and grey wash, IAA, 96/68.4/2.  
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- Fig. 5.73:** Richard Castle, *Proposed plans of first and second floors for Doneraile House*, 1740s, ink and grey wash, 245 x 424 mm/9.6 x 16.7 in. IAA, 96/68.4/3.  
Photo: Christine Casey, 13.11.2019.
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Photo: Christine Casey, 13.11.2019.
- Fig. 5.75:** John Ensor (?), *Old Library: laid-out interior of staircase*, late 1730/40s, pen and ink with grey wash, 457 x 415 mm/17.9 x 1.3 in. TCD, MUN/MC/26.  
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**Fig. 5.76:** John Ensor, *An Estimate for finishing the Stair Case in the Librery*. TCD, MUN/P/2/28.  
Photo: Melanie Hayes, 31.08.2020.

## CHAPTER 6

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Photo: Nele Lüttmann, 28.09.2023.

**Fig. 6.3:** *Designs of architecture for arches or gates: the several plans and uprights contained in XX plates / by John C. Borlach*. London: J. Boydell, 1776. Canadian Centre for Architecture, Call No.: 0008137. Courtesy of the Canadian Centre for Architecture.

**Fig. 6.4:** Pie diagram showing the types of paper used in the Blenheim office 1705-11.  
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**Fig. 6.6:** Nicholas Hawksmoor and Henry Joynes, *Drawing for the Park and Landscape Gardens, Blenheim Palace*, (detail), 1705, pencil, pen, and ink, brush and ink with wash, 506 x 730 mm/19.9 x 28.7 in. BodL, MS Top. Oxon. 37\* f. 2.  
Courtesy of the Bodleian Libraries.

**Fig. 6.7:** Blenheim drawing office, annotated by Nicholas Hawksmoor, *Preliminary Plan of Blenheim Palace at Main Floor Level*, late 1706-early 1707, pen and brown ink with grey wash over graphite underdrawing, 335 x 484 mm/13.1 x 19 in. SM Online, Vol 109/59.  
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<<https://collections.soane.org/OBJECT436>> (accessed 25.01.2024).

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<<https://collections.soane.org/OBJECT437>> (accessed 25.01.2024).

**Fig. 6.9:** Attributed to Henry Joynes and Nicholas Hawksmoor, *Working Drawing for the Basement Storey of Blenheim Palace*, late 1707-08 graphite on paper with ink inscriptions, 497 x 747 mm/19.57 x 29.41 in. BodL, MS Top. Oxon. 37\* f. 6.  
Courtesy of the Bodleian Libraries.

**Fig. 6.10:** Marbled paper sample, from *An illustrated essay on artificial navigation by Richard Castle, written in connection with the construction of the Newry canal, c. 1733-36*. NLI, MS 273.  
Photo: Ronny Licht, 26.06.2023.

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© Sir John Soane's Museum, London, Justin Piperger.

**Fig. 6.12:** Drawing board, early nineteenth century, pine/deal, 770 x 1360 x 19 mm/30.3 x 53.5 x 0.7 in. SM, X282.  
Photo: Nele Lüttmann, 26.09.2023.

**Fig. 6.13:** Plate 23 from Nicolas Buchotte, *Les Règles du dessein et du lavis pour les particuliers des ouvrages des bâtiments, & pour leurs coupes, profils, élévations & façades, tant de l'architecture militaire que civile* (Paris: Charles-Antoine Jombert, 1754). BNF, département Littérature et art, V-24010.  
Bibliothèque nationale de France,  
<<https://gallica.bnf.fr/ark:/12148/bpt6k65663926/f283.item#>> (accessed 07.09.2023).

**Fig. 6.14:** Detail of plate 4 from Jacques Lequeu, *Architecture civile*, 1782. BNF, département Estampes et photographie, RESERVE FOL-HA-80 (1).  
Bibliothèque nationale de France,  
<<https://gallica.bnf.fr/ark:/12148/btv1b53163986s/f21.item>> (accessed 07.09.2023).

**Fig. 6.15:** Thomas Johnson, *Trade Card*, c. 1755-60, pen and brown ink with grey wash. BM, Heal, 56.7.  
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**Fig. 6.16:** James Gandon's drawing desk, early nineteenth century. Custom House.  
travel2ireland, <<https://travel2ireland.ie/wp-content/uploads/2021/11/Gandons-Desk-1024x768.jpg>> (accessed 07.09.2023).

- Fig. 6.17:** Blue paper sample, from *An illustrated essay on artificial navigation by Richard Castle, written in connection with the construction of the Newry canal, c. 1733-36*. NLI, MS 273.  
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- Fig. 6.18a:** John Henry Bastide, *Plan and Elevation of the Horse and Foot Barracks at Dublin*, 1722, pen and ink with grey and red wash, 620 x 800 mm/24.4 x 31.5 in. TNA, MPH 1/592 (1).  
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- Fig. 6.18b:** Office of Thomas Burgh (?), *Dublin Barracks*, 1722, pen and ink with grey and red wash, 540 x 745 mm/21.3 x 29.3 in. TNA, MPH 1/592 (2).  
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- Fig. 6.19a:** Circle of Edward Lovett Pearce, *Plan of the Town of Galway*, c. 1726, pen and ink and wash, 166 x 230 mm/6.5 x 9.1 in. V&A, E.2124:247-1992.  
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- Fig. 6.19b:** Circle of Edward Lovett Pearce, *Plan of Limerick*, c. 1726, pen and ink with wash, 231 x 907 mm/9.1 x 35.7 in. V&A, E.2124:248-1992.  
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Photo: Ronny Licht, 26.06.2023.
- Fig. 6.22:** Richard Castle, *Kildare House (later Leinster House): General ground plan*, (detail), c. 1745, ink, pencil, and grey wash, 483 x 639 mm/19 x 25.2 in. IAA, 96/68.1/1/2.  
Courtesy of the Irish Architectural Archive.

- Fig. 6.23:** Richard Castle (?), four plans for a six-bay town house: *Plan of the Cellar Floor, Plan of the Parlour Floor, Plan of one Pair of Stairs Floor, Plan of the two pair of Stairs Floor*, 1730s/40s, ink and wash with pencil notes, various sizes. IAA, 89/62.1/1-4. Courtesy of the Irish Architectural Archive.
- Fig. 6.24:** Richard Castle (?), *Plan, elevation, and section of a barrack*, c. 1730, ink and colour wash, 280 x 530 mm/11 x 20.9 in. IAA, 96/68.6/3. Courtesy of the Irish Architectural Archive.
- Fig. 6.25:** *Plan[s and elevation] ... of A Charter School House* printed in *An abstract of the proceedings of the Incorporated Society in Dublin for Promoting English Protestant Schools in Ireland* (Dublin: M. Downing, 1737).  
Edward McParland, *Public architecture in Ireland 1680-1760* (New Haven, London: Yale University Press, 2001), 170 fig. 210.
- Fig. 6.26:** Christopher Wren, *Barracks in Hyde Park: Design for an unidentified barracks*, 1670s/80s, brown ink over pencil and scorer, 436 x 345 mm/17.2 x 13.6 in. BodL, AS II.101.  
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<<https://iiif.bodleian.ox.ac.uk/iiif/viewer/?iiif-content=https://iiif.bodleian.ox.ac.uk/iiif/canvas/39e27doa-efec-4651-8b23-c5140507537d.json#c=0&m=0&s=0&cv=513&r=0&xywh=-518%2C-305%2C5229%2C6098>> (accessed 25.05.2023).
- Fig. 6.27:** Nicholas Hawksmoor, *Design for a cupola*, (detail), c. 1684-86, dark brown ink over pencil and (mostly scorer), shaded with grey wash, 397 x 324 mm/15.6 x 12.8 in. BodL, AS IV.112.  
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<<https://iiif.bodleian.ox.ac.uk/iiif/viewer/?iiif-content=https://iiif.bodleian.ox.ac.uk/iiif/canvas/cc5931a1-a965-4ae4-83f1-61bf2d9d8ae4.json#c=0&m=0&s=0&cv=472&r=0&xywh=-433%2C-280%2C4801%2C5599>> (accessed 19.06.2023).
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## INTRODUCTION

The careers of two highly skilled German architectural draughtsmen, Richard Castle and Johann Gottlieb Borlach, provided the basis for this study, which seeks to trace their trajectories and explore the origins of their success more broadly. The ability of these draughtsmen to enter two major architectural practices in Britain and Ireland in the first half of the eighteenth century, raised questions about their training. Despite the challenges of language, culture, and professional standing, they were able to secure employment in the offices of the then aspiring architects Sir Edward Lovett Pearce and James Gibbs, respectively. This in turn prompted more comprehensive inquiries about the educational opportunities and career pathways open to architectural draughtsmen in the period, culminating in an analysis of architectural education in eighteenth-century Germany.<sup>1</sup> This investigation continued into an exploration of the conventions employed in European draughtsmanship and the relationship of these conventions to office practice in eighteenth-century Britain. What further emerged were questions about the homogeneous grey wash style, a product of the office system, which relied on draughtsmen to produce extremely accurate and consistent drawings, and which dominated English architectural practice throughout most of the eighteenth century. Both Richard Castle and Johann Gottlieb Borlach adapted their skills to the conventions of British office practice and naturalised the grey wash style. To answer these questions, a very close microanalysis of drawings from this period was required. Analytical approaches of this kind have so far been mostly used in a restricted manner for drawings by individual architects or from single collections, but I have applied it here on a larger scale to chart generic office practice. This forensic analysis of a wealth of different architectural drawings as well as drawing conventions such as shading and washes aims to significantly expand knowledge on office style and to flesh out the way draughtsmen operated in architectural offices. It further pursues new insights into how draughtsmen were trained as well as how a transition from craft or engineering backgrounds to architecture was achieved. Castle and Borlach offer a unique lens into the world of architectural draughtsmanship in the eighteenth century.

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<sup>1</sup> In the interest of convenience, I shall use the terms “Germany” or “German” throughout, which is representative of the territory and its population under the rule of the Holy Roman Emperors from the late Middle Ages until 1806.

Their success in Britain and Ireland is a testament to their skills and the opportunities available to expert draughtsmen in this period. Their stories also shed light on the interrelationship of European and British architectural culture in this period.

### **Project Details**

Initially, the focus of the research was to explore the biographies of Richard Castle and Johann Gottlieb Borlach, the reason being that, as Andrew Saint expressed it, “[b]iography is not only human, it is a natural introductory and organizing principle in any field of historical study. Tracing someone’s career, particularly after about 1700 when there is usually enough information to do so, gives shape to the subject’s age and circumstances and styles, and allow one to watch patterns of practice and culture unfold around their evolving lives.”<sup>2</sup> Thus, I scoured the archives in Germany in search of evidence regarding Castle and Borlach that might shed light on their biographies, in particular how exactly they came to migrate to Britain. The aim was to find out the specific circumstances of their early lives in Dresden that caused their migration and most importantly, whether they knew each other. This research was carried out at the Dresden City Archives, the Saxon State Archives in Dresden, the Saxon State and University Library Dresden, the State Archive Saxony-Anhalt, the Hessian State Archives, the Lower Saxony State Archive, and the Archive of the Lutheran Church of Saxony. It soon became clear that the archival sources reveal little or hardly any information on these matters. Similarly, research in the Dutch archives (Amsterdam City Archives, The Utrecht Archives) or in England (Guildhall Library, London Metropolitan Archives, National Archives, Westminster City Archives) proved inconclusive. This resulted in overcoming the narrow context set by the biographical study of the two individuals. For, while biography provides the “framework, a discipline and a penetration which together can unlock and explain events,” it leaves little room for capturing the communal achievement of the period.<sup>3</sup> The latter is

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<sup>2</sup> Andrew Saint, “The conundrum of ‘by’,” in *Architectural History after Colvin: the Society of Architectural Historians of Great Britain Symposium 2011*, eds. Malcolm Airs, and William Whyte (Donington: Shaun Tyas, 2013), 60.

<sup>3</sup> Saint, “The conundrum of ‘by’,” 60.



particularly pertinent with regard to the collaborative nature of architecture. I have therefore moved beyond the personal biographies and devoted more space to the analysis of architectural culture and training in the period. In doing so, the focus was shifted from individuals to larger groups or movements considered more from above. This raised questions about the training of draughtsmen and architects in Europe and Britain 1700-1730, as these were likely to have been decisive factors in an outward migration and advancement in the building industry in the British Isles. To maintain a link to Castle and Borlach, I focused on the educational contexts relevant to the two, which overlap in terms of architectural draughtsmanship, constructive crafts, and engineering.

Another approach to gaining more understanding of Castle and Borlach as individuals as well as of architectural drawing practices of the period as a whole, was to delve into object-based research, in this case eighteenth-century architectural drawings and other elements of architectural practice of the period, including the study of supports and formats of sheets, of materials, and of drawing utensils. A formal analysis of architectural drawings based on stylistic conventions, quality, and inscriptions was conducted to establish the organisation of the architectural offices of James Gibbs and Richard Castle. Comparative graphic material from Germany, the Netherlands, France, Italy, and England was consulted to achieve a bigger picture concerning the general organisation of architectural offices in the period. To this object-based analysis were added architectural treatises, pattern books, building handbooks, and two-dimensional images which began to determine and dominate European architectural drawing practice from the second decade of the eighteenth century onwards. They were not only of specific value to this project in terms of their importance as training device for draughtsmen, architects, or engineers, but also because they illustrate the output of a publishing architectural office such as that of James Gibbs. Furthermore, the conventions of contemporary publications tell us something about contemporary architectural office conventions.

These thematic approaches are organised as follows: By way of introduction, chapter I establishes the foundations of the thesis and provides an overview of the existing academic literature and the current state of the art on Richard Castle and

Johann Gottlieb Borlach. Chapter II introduces the educational institutions and environments in early modern Germany through which draughtsmanship and other subjects related to building practice were learnt and, in particular, might have been relevant to Richard Castle and Johann Gottlieb Borlach. These include the Saxon *Oberbauamt*, an artistic-academic training, the traditional guild-regulated workshop apprenticeship, and the cadet school of the Saxon military engineer corps. The aim of this chapter is to elaborate the potential background to Castle's and Borlach's training and to show the importance of high drawing skills in engineering, architecture, and craftsmanship of the period. In chapter III an attempt is made to bring together the drawing types and styles in Europe and Britain by 1720 to understand the office practice in Britain at the moment when Richard Castle and Johann Gottlieb Borlach commenced their careers in England and Ireland. In doing so, it gathers disparate research findings from existing scholarship, identifies the principal office drawing practices in Europe, and synthesises them within a single discussion. Starting with a historiography, this will be followed by a section which addresses in more detail the techniques of representation in architectural drawings. By means of examples from European architectural offices and conventions detected in the drawings of individuals, these techniques of representation are pointed out and put into relation with one another. This chapter forms the groundwork for the two following analytical chapters. Chapters IV and V are devoted to a thorough analysis of the drawings from the offices of James Gibbs and Richard Castle, considering the modes of representation and drawing conventions identified in chapter III. In doing so, the surviving drawings are subject to a detailed analysis, not only to demonstrate the quality of draughtsmanship, but first and foremost to reconstruct the procedures and practices within the two architectural practices. On the one hand, an attempt is made to identify autograph drawings by Gibbs in order to recognise Borlach's hand within Gibbs's surviving drawings. Gibbs's architectural publications will also be part of this study. On the other hand, analysing and discussing the drawings from Castle's office in the light of stylistic conventions and quality seeks to draw out Castle's relationship with his mentor Sir Edward Lovett Pearce and with John Ensor, Castle's clerk and measurer. Based on the findings from the previous chapters, the sixth and final chapter presents an attempt to extrapolate contemporary eighteenth-century

architectural office practices, with particular reference to the production of drawings, which have hitherto received scant attention within traditional narratives. Individual drawing conventions will be examined more closely, along with a consideration of office equipment and drawing instruments, in a move away from the theoretical towards the tangible object-based analyses of legacies. Answering these wide-ranging questions requires methods of broad interdisciplinary scope and involves the consultation of various media, breaking modern boundaries between scholarship on the history of architecture, engineering, and the material culture.

## CHAPTER 1

## State of Knowledge

Richard Castle (?-1751) and Johann Gottlieb Borlach (1691-?) were born to widely travelled families employed by the Elector of Saxony's court in Dresden in the late seventeenth and early eighteenth centuries. Castle's father was initially an important Amsterdam merchant probably connected with the diamond trade and later became an emissary for the Saxon salt mines given his "special knowledge and experience [...] of the identification of minerals and metals".<sup>4</sup> Castle may have learned his trade at the artillery or engineering corps. Borlach's father was a joiner, who died when he was eight years old.<sup>5</sup> He was taken up as apprentice by his stepfather, an esteemed joiner, and was ultimately employed in England by the architect James Gibbs, who had established a wide network of foreign friends and employees.<sup>6</sup>

Despite their different starting points, Castle and Borlach travelled to England for reasons as yet unknown. Castle finally established himself as an architect in Ireland, after having been employed as a draughtsman by Sir Edward Lovett Pearce (1699-1733) on designs for the Dublin Parliament House in 1728. It is possible that friends, associates, or even diplomatic contacts facilitated their migration to Britain. In combination with their skills, knowledge, and craftsmanship they eventually secured themselves positions with high-ranking architects. In the case of Castle, this culminated in a successful career in designing the town and country houses of the Irish gentry (fig. 1.1). Borlach, for his part, was instrumental in the publication of Gibbs's architectural treatises as a draughtsman, whilst his own designs were likewise published in print (fig. 1.2). Who then were these two men and what has been established about their lives so far?

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<sup>4</sup> Loreto Calderón, and Konrad Dechant, "New light on Hugh Montgomerie, Richard Castle and Number 85 Saint Stephen's Green," in *The eighteenth-century Dublin town house: form, function and finance*, ed. Christine Casey (Dublin: Four Courts Press, 2010), 195.

<sup>5</sup> Johann Andreas Bischof, "Geschichtlich-technologische Mitteilungen über das Königlich Preußische, im Herzogthum Sachsen gelegene Salzwerk zu Dürrenberg. Seit dessen Entstehung bis zum Schluss des Jahres 1826," in *Archiv für Bergbau und Hüttenwesen* 20, ed. Carl Johann Bernhard Karsten (Berlin: Reimer, 1831), 4.

<sup>6</sup> From 1711-13, for example, Gibbs attended the London academy of the German painter Sir Godfrey Kneller (1646-1723) as whose founder member he is additionally regarded. The academy was also attended by various emigrant Huguenot artists, with some of whom Gibbs later worked. See Tessa Violet Murdoch, "Huguenot artists, designers and craftsmen in Great Britain and Ireland 1680-1760" (PhD diss., University of London, 1982), 65.

## Richard Castle

Even though Richard Castle is commonly regarded as Ireland's most prolific architect and the "first to introduce into Ireland the Palladian, or later classic, style", he is in many ways still an enigma.<sup>7</sup> Despite decades of research, much remains unclear about his background and career prior to his arrival in Ireland and the training which enabled him to establish a successful architectural practice. Within the German academic community, he is rarely, if ever, referred to.<sup>8</sup> Apart from occasional and brief references in general German monographs on Palladian, Neoclassical, or Irish architecture within translated contributions by British scholars, singular papers or studies on Castle and his background are altogether lacking in German.<sup>9</sup> The most recent encounter with Castle by a German researcher is Barbara Freitag's English-language publication *The troubled life of Richard Castle*, research for which was conducted in parallel with my own PhD research.<sup>10</sup> While Freitag's book substantially adds to our knowledge of his family background, it does not convincingly illuminate the pressing question of where Castle acquired his drawing skills and training in architecture.

Underlying all research on Castle is the evidence of his own writings.<sup>11</sup> From

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<sup>7</sup> Thomas U. Sadleir, "Richard Castle, Architect," *The Journal of the Royal Society of Antiquaries of Ireland* 1, no. 3 (September 1911): 241.

<sup>8</sup> Most recently by Karen Kriedemann, "Altes und Neues' im Garten – Fortifikationselemente in englischen Landschaftsgärten zwischen 1720 und 1760," *Die Gartenkunst* 32, no. 1 (2020): 13-14; 15; Karen Kriedemann, "Old and New Objects in the Garden. Spatio-Temporal Strategies of Representation in Irish Landscape Gardens, 1700–1790" (PhD diss., University of Leipzig, 2021); see also e.g., Sven Hauschke, "Cassels," in *Allgemeines Künstlerlexikon: bio-bibliographischer Index A-Z*, ed. Günther Meißner, vol. 17 (München; Leipzig: K. G. Saur Verlag, 1997), 137.

<sup>9</sup> E.g., Giles Worsley, "Der Palladianismus der britischen Peripherie: Schottland, Irland und Amerika," in *Bauen nach der Natur – Palladio: die Erben Palladios in Nordeuropa; Begleitband zur Sonderausstellung im Museum für Hamburgische Geschichte, 30. Mai bis 31. August 1997*, ed. Jörgen Bracker (Ostfildern: G. Hatje, 1997), 121.

<sup>10</sup> Barbara Freitag, *The Troubled Life of Richard Castle, Ireland's Pre-Eminent Early Eighteenth-Century Architect* (Newcastle upon Tyne: Cambridge Scholar Publishing, 2023).

<sup>11</sup> National Library of Ireland (NLI), MS 2737, An illustrated essay on artificial navigation by Richard Castle, written in connection with the construction of the Newry canal, [ca. 1733-1736]; Richard Castle, *An essay toward supplying the City of Dublin with water* (Dublin: Sylvester Pepyat, 1735). The latter was published by John H. Farrington in 1972: John H. Farrington, "Richard Castle's 'Essay on Artificial Navigation' 1730," *Transport History* 5, no. 1 (March 1972): 67-89; no. 2 (July 1972): 155-167; and was discussed in Christine Casey, "Books and Builders. A biographical approach to Irish eighteenth-century architecture" (PhD diss., Trinity College Dublin, 1991), 207-212.

these we know that he travelled from the port of Hamburg through continental Europe in the early 1720s, arriving in London sometime around 1725 and from there making his way to Ireland about 1728.<sup>12</sup> We learn of his interest in hydraulic engineering and inland navigation, including bridge construction and fortifications, suggesting a background in civil or military engineering, though there is little or no mention of his architectural training. A two-page journal article from 1793 in the *Anthologia Hibernica*, the earliest biography of Castle, provides an important starting point for research. Given that the name of the author is unknown, it is difficult to determine whether they were a contemporary of Castle or whether the description is merely based on circulating legends that may nevertheless contain a spark of truth. This includes the reference to Kassel as the place of his birth, which has been and continues to be taken up by scholars.<sup>13</sup>

The biography describes Castle as “eminent architect [...] born in Cassel in Germany”, his name being spelled “Castles”.<sup>14</sup> After mentioning his skills and talents, highlighting his draughtsmanship, the author presents a list of buildings attributed to him, providing the first source linking Castle to actual buildings. Furthermore, there is information that it was “Sir Gustavus Hume of Castle Hume in the county of Fermanagh, Bt. for which he merits the thanks of his country” who invited Castle to Ireland, a fact that is generally accepted among scholars.<sup>15</sup> The article concludes with vivid remarks on his personality, which provide a rare insight into his character and are frequently quoted to this day. Foremost among these is Castle’s reported action on a building site: “When the effect of his works was not such as he liked, he frequently pulled them down, and whenever he came to inspect them, he required the attendance of all the artificers who followed him in a long train.”<sup>16</sup>

This portrayal has recently received more attention through various studies examining Castle’s technical knowledge of craft skills, his control over and

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<sup>12</sup> NLI, MS 2737.

<sup>13</sup> E.g., Alec W. Skempton et al., eds., *A Biographical Dictionary of Civil Engineers in Great Britain and Ireland. Volume 1: 1500-1830* (London: Thomas Telford, 2002), 121.

<sup>14</sup> Anon, “Richard Castles,” *Anthologia Hibernica* 2 (October 1793): 242. Further spellings of his name are Cassels, Cassel, and Castle, the latter form prevailing in recent scholarship.

<sup>15</sup> Anon, “Richard Castles,” 242.

<sup>16</sup> Anon, “Richard Castles,” 243.

collaboration with his craftsmen, his assurance of the quality of materials and workmanship, and his involvement in structural building innovations.<sup>17</sup> Similarly, Arthur Gibney explored Castle's craft methodology linking his practice to the introduction of new carpentry techniques in Ireland, particularly with regard to the change from framed floor structures to long joists.<sup>18</sup> Further progress has been made on the subject in the course of CRAFTVALUE, a four-year research project funded by the Irish Research Council and led by Christine Casey at Trinity College Dublin. Some of the results have already been published in the conference proceedings *Enriching Architecture* (2023), providing the latest insights into Castle's role in establishing a professional office practice in Ireland.<sup>19</sup> Melanie Hayes, for example, in her essay "Retrieving craft practice on the early eighteenth-century building site", examines Richard Castle's directive approach to building practice and identifies his collaboration with craftsmen, some of whom were previously undocumented.<sup>20</sup> Edward McParland's essay in the same volume discusses the design of rustication at the Printing House in Trinity College Dublin and, on this basis, suggests Pearce as the architect responsible.<sup>21</sup> In addition, Christine Casey's paper explores the design and execution of interior surfaces. Using the example of Doneraile House in Dublin, constructed by the Castle office in the late 1740s, Casey demonstrates that the communication of wainscot designs to the craftsmen was channelled through the

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<sup>17</sup> Christine Casey, *Making Magnificence. Architects, Stuccatori and the Eighteenth-century Interior* (New Haven; London: Yale University Press, 2017), 253; Christine Casey, "Ornament and Craftsmanship in the Architecture of James Gibbs," *The Georgian Group Journal* 27 (2019): 27-42; Christine Casey, "Silent Partner: Design and Making in the Early Modern Architecture of Britain," *Revista de Arquitectura* 23 (2021): 137. See also Melanie Hayes, "Architect and artificers: building management at Trinity College Dublin in the 1730s and 1740s," in *Between Design and Making: Artisans and Architecture 1630-1760* (forthcoming).

<sup>18</sup> Arthur Gibney, *The Building Site in Eighteenth-Century Ireland* (Dublin: Four Courts Press, 2017), 80.

<sup>19</sup> Christine Casey, and Melanie Hayes, eds., *Enriching Architecture. Craft and its conservation in Anglo-Irish Building Production, 1660-1760* (London: UCL Press, 2023).

<sup>20</sup> Melanie Hayes, "Retrieving craft practice on the early eighteenth-century building site," in *Enriching Architecture. Craft and its conservation in Anglo-Irish Building Production, 1660-1760*, ed. Christine Casey, and Melanie Hayes (London: UCL Press, 2023), 174; 189.

<sup>21</sup> Edward McParland, "The geometry of rustication: an eighteenth-century case study," in *Enriching Architecture. Craft and its conservation in Anglo-Irish Building Production, 1660-1760*, ed. Christine Casey, and Melanie Hayes (London: UCL Press, 2023), 232.



measurer.<sup>22</sup> Andrew Tierney's contribution to the book looks at the evolution of Irish staircases and concludes that Castle and his craftsmen were instrumental in establishing new staircase designs.<sup>23</sup>

Beyond decades of scattered references in dictionaries, compendia, and historical chronicles, as well as Thomas Sadleir's short biography of 1911, the primary source of understanding aspects of Castle's biography is the fundamental synopsis "Richard Castle, architect, his biography and works" compiled by the Knight of Glin in 1964.<sup>24</sup> This chronological, note-like compilation summarises Castle's biography, including attributions of his work. Most of the information about his life is derived from primary sources as well as from Castle's writings and, together with the architectural references, form the basis for most of the following publications about Castle. Although there is little remark on Castle's early life in the Knight of Glin's account, it is here that we learn about his subscription to the third volume of Colen Campbell's *Vitruvius Britannicus*, which locates him in England in 1725, and his employment as draughtsman in 1728 by Pearce, who praised his drawing talent in a letter to the Irish Parliament.<sup>25</sup>

Subsequent accounts of Castle are mainly concerned with analysing his town and country houses based on the perspectives of design and style in order to situate his work within the architectural currents of the eighteenth century. Ground-breaking

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<sup>22</sup> Christine Casey, "Agreeable to live in': the wainscoted interior in eighteenth-century Britain and Ireland," in *Enriching Architecture. Craft and its conservation in Anglo-Irish Building Production, 1660-1760*, ed. Christine Casey, and Melanie Hayes (London: UCL Press, 2023), 306.

<sup>23</sup> Andrew Tierney, "A glorious ascent: staircase design, construction and craft in the circle of Richard Castle," in *Enriching Architecture. Craft and its conservation in Anglo-Irish Building Production, 1660-1760*, ed. Christine Casey, and Melanie Hayes (London: UCL Press, 2023), 348.

<sup>24</sup> E.g., Gordon Goodwin, *Dictionary of National Biography*, ed. Leslie Stephen, s.v. "Castle, Cassel, or Cassels, Richard" (London: Smith, Elder, & Co., 1887); more recent, albeit concise: Alistair Rowan, *Oxford Dictionary of National Biography*, s.v. "Castle, Richard (d. 1751), architect and engineer" (Oxford: Oxford University Press, 2004), accessed June 28, 2024,

<https://www.oxforddnb.com/view/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-4871>; John Warburton, James Whitelaw, and Robert Walsh, *History of the City of Dublin, from the earliest accounts to the present time* (London: W. Bulmer and Co., 1818), 671; 1187; Alfred Webb, *A compendium of Irish biography: comprising sketches of distinguished Irishmen, and of eminent persons connected with Ireland by office or by their writings* (Dublin: M. H. Gill & Son, 1878), 582; Sadleir, "Richard Castle, Architect," 241-245; The Knight of Glin, "Richard Castle, architect, his biography and works," *Quarterly Bulletin of the Irish Georgian Society* 6, no. 1 (January-March 1964): 31-38.

<sup>25</sup> The Knight of Glin, "Richard Castle, architect," 32.

work in this regard has been carried out by the Knight of Glin, David J. Griffin, William Laffan, Kevin V. Mulligan, and Edward McParland, who discuss the stylistic influences on Castle's architectural vision, incorporating comparative studies within his oeuvre and brief summaries of the known facts about his career.<sup>26</sup> The consensus today is that Castle was influenced by a more general Classical ideal, encompassing various aspects and styles (i.e., English Palladianism, English and Continental Baroque), which he applied according to client and working setting.<sup>27</sup> Seán O'Reilly defines this style as "Irish early Georgian",<sup>28</sup> while Michael McCarthy suggests the term "Irish Baroque".<sup>29</sup> Stylistic plurality in the interpretation of Castle's work accords with current revisionist literature on the general multiplicity of Classicisms in the eighteenth century.<sup>30</sup>

Important new biographical context on Castle was revealed by Loreto Calderón and Konrad Dechant in an article of 2010 which for the first time clearly located his family in Dresden at the beginning of the eighteenth century where they were mixing with the upper classes of the Saxon court.<sup>31</sup> According to their research, Castle, who was in fact born David Richardo (later modified to David de Richardi), was one of four sons of an English-born and English-speaking Jew, Joseph Israel Richardo (or Richardi) and Rachel Elizabeth de Bourges (or Burges) from Bombay. In 1699, Castle's father was employed by the Elector of Saxony as Director of Munitions, Provisions, and Mines, overseeing "supplies, purchases and manufacture to and from foreign places ... of all sorts of munitions ... metals and materials"; he also spent time as

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<sup>26</sup> David J. Griffin, "Richard Castle's Egyptian Hall at Powerscourt, Co. Wicklow," *The Georgian Group Journal* 5, (1995): 119; Olive Sharkey, "Belvedere House, Gem of the Irish Midlands," *The GPA Irish Arts Review Yearbook* (1989): 249; William Laffan, and Kevin V. Mulligan, "His name is Castle," in *Russborough: a great Irish house, its families and collections*, ed. William Laffan, and Kevin V. Mulligan (Russborough: Alfred Beit Foundation, 2014), 44; Edward McParland, *Public architecture in Ireland 1680-1760* (New Haven, London: Yale University Press, 2001), 14-15; 25; 196-199; 159-162; 174-175; 196-199.

<sup>27</sup> Laffan, and Mulligan, "His name is Castle," 46; David J. Griffin, and Caroline Pegum, *Leinster House: 1744-2000* (Dublin: Irish Architectural Archive in assoc. with the Office of Public Works, 2000), 81.

<sup>28</sup> Seán O'Reilly, "Poor Palladian or Not? Some Alternative Sources for the Early Georgian Villa in Ireland," in *The Georgian Villa*, ed. Dana Arnold (Stroud: Sutton, 1996), 55.

<sup>29</sup> Michael McCarthy, "Baroque Elements in Irish Palladianism" (unpublished manuscript ex info Prof Christine Casey, January 24, 2020), typescript.

<sup>30</sup> See Barbara Arciszewska, and Elizabeth McKellar, eds., *Articulating British Classicism: New Approaches to Eighteenth-Century Architecture* (Aldershot: Ashgate, 2004).

<sup>31</sup> Calderón, and Dechant, "New light on Hugh Montgomerie," 187-190. In the late 1990s, German art historian Jacqueline Eick likewise investigated Castle's background and suspected a Saxon origin. Her studies, however, remain unpublished.

merchant in the Netherlands, which is where he and his wife's families lived.<sup>32</sup>

Despite claims to the contrary, my own research findings and those by Barbara Freitag support this narrative.<sup>33</sup> The Stadsarchief Amsterdam holds several documents, among others a *ketubah* (a Jewish marriage contract), regarding a merchant Joseph Israel from Livorno, which corroborate Calderón's and Dechant's research.<sup>34</sup> The Dutch records further reveal that Joseph Israel had a daughter from his first marriage with the deceased Esther Pensa/Penso of London, but left her to the Amsterdam orphanage because he was not financially able to support her.<sup>35</sup> Furthermore, a prenuptial agreement for the marriage of Joseph Israel and Rachel Elizabeth de Bourges from April 4, 1689, in the Utrecht Archives locates Joseph in Weesp near Amsterdam and Rachel's family in Maarsen nearby Utrecht.<sup>36</sup> This document reveals that Rachel brought a considerable dowry into the marriage. The prenuptial agreement as well as a second nuptial contract protect it as far as possible in order for her and her heirs to be able to reclaim it.<sup>37</sup> It is explicitly stated that the husband may not use the possessions of the bride for debts of the groom. It was fortunate for Rachel to have these contracts, for other archival sources indicate that Joseph Israel had to sell a house in Amsterdam which he had bought in 1689 due to insolvency in 1695.<sup>38</sup> Finally, there is a power of attorney from 1706 in which Joseph Israel appoints two representatives to supervise and direct his business concerning

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<sup>32</sup> Calderón, and Dechant, "New light on Hugh Montgomerie," 195-196. For the original archival document see Sächsisches Staatsarchiv, Hauptstaatsarchiv Dresden (SächsStA-D), 10026 Geheimes Kabinett, Nr. Loc. 03540/01.

<sup>33</sup> Gordon Balderston had expressed reservations on Calderón's and Dechant's contention that Richard Castle changed his name from David Richardo and "that he was related to the Ricardo family of Sephardic Jews of Portuguese origin which had lived 1650s-1670s in Livorno, Italy, and latterly in Amsterdam", ex info Gordon Balderston.

<sup>34</sup> In researching the Dutch archival materials, I owe much indebtedness to Brendan Glass, who assisted in the search and shared numerous transcripts and translations. For the *ketubah*, see Gemeente Amsterdam Stadsarchief (GAS), 334/5.2.6.3, 383.

<sup>35</sup> That Joseph Israel Richardo had a minor child with Esther Penso is evident from the so-called *Ondertrouw* register, in which the future bride and groom had to formally register their intention to marry. See GAS, 5001/2.2 697. On the left margin is the note "W[ees]camer voldaan de 19 Juny 1691". This means that the couple visited the orphanage and received permission to remarry. The corresponding entry can be found in the so-called *Calisregisters*. These registers provide information about people who died outside Amsterdam (Esther Penso in London) but whose partners intended to remarry. See GAS, 5004/2, 110.

<sup>36</sup> Het Utrechts Archief, 34-4.927 W. PRONCKERT (no. 145).

<sup>37</sup> For the nuptial agreement see GAS, 5075/5841, 12.06.1691.

<sup>38</sup> GAS, 5062/67, sale 06.04.1689; GAS, 5061/2174, auction 04.11.1695.

prosecutors and defenders to handle all cases until the end.<sup>39</sup> It seems that Castle's father was already preparing his move to Dresden at this time, or to Poland, as Barbara Freitag recently suggested.<sup>40</sup> Registration of Castle's birth or baptism has not been discovered, neither in Amsterdam, where his parents married in 1691, nor in Dresden, where the family lived from 1708 onwards.<sup>41</sup> However, a newly discovered entry in the London Bevis Marks Synagogue records, documenting the circumcision of a son of the foreigner Joseph Israel on December 4, 1692, might be a reference to Castle or one of his brothers.<sup>42</sup>

Calderón and Dechant unearthed further significant sources in the Dresden city archives that reveal that Joseph Israel Richardo purchased a house in Dresden in 1708 from the jurist and later mayor of Dresden Georg Friedrich Steffigen (in office 1715-36).<sup>43</sup> My own research in the Saxon archives confirms that the Richardo family was well established in more respectable circles in Dresden. The house was located in the Meißnische Gasse, a busy trade road near the market square. At the northern end of the street, the Holländisches Palais was built 1715-17 and acquired by Augustus the Strong (1670-1733) in 1717. The King of Poland commissioned the most renowned architects in Dresden, Matthäus Daniel Pöppelmann, Jean de Bodt, Zacharias Longuelune and Johann Christoph Knöffel, to convert the building into the Japanisches Palais. Both Joseph and Rachel Richardo were buried at the old Christian cemetery of the Drei-Königs-Kirchgemeinde in Dresden, which suggests a change of religion.<sup>44</sup> Rachel Richardo's entry includes the words "Reform: Reli" ("reformierter

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<sup>39</sup> GAS, 5075/7452, proxy 24.02.1706.

<sup>40</sup> Freitag, *The Troubled Life of Richard Castle*, 66-67.

<sup>41</sup> Document regarding the purchase of a house in Dresden, Meißnische Gasse 2: Stadtarchiv Dresden (StAD), 2.4.3-630, f. 0563; marriage ban: GSA, 5001/2.2, 697.

<sup>42</sup> "25 Kislev, son of Joseph Israel Forasteiro." See Richard David Barnett, and Miriam Rodrigues-Pereira, *The circumcision register of Isaac and Abraham de Paiba (1715-1775): from the manuscript record preserved in the archives of the Spanish and Portuguese Jews' Congregation of London named Sahar Asamaim (Sha'ar ha-Shamayim)* (London: Spanish and Portuguese Jews' Congregation/Jewish Historical Society of England, 1991), 143 no. 132. I am indebted to Ton Tielen, who kindly provided the transcript of the records.

<sup>43</sup> Calderón, and Dechant, "New light on Hugh Montgomerie," 190.

<sup>44</sup> For Joseph Israel Richardo's death in December 1713, see StAD, 2.1.3-C.XXI.20.9, f. 284v.; for his burial: see StAD, 2.1.3-C.XXI.20.9, f. 292r. and Evangelisch-Lutherisches Landeskirchenamt Sachsen (EVLSK), Dresden-Neustadt-Dreikönigskirche, Tauf-, Trau- und Bestattungsbuch 1700–1716, image 300; for Rachel Richardo's burial in January 1730, see StAD, 2.1.3-C.XXI.20.20, f. 19r. and EVLSK, Dresden-Neustadt-Dreikönigskirche, Bestattungsbuch 1717–1732, image 147.

Religion”), clearly indicating her connection to the Reformed Church. Indeed, it has recently been proposed that Rachel may have not been Jewish herself. Barbara Freitag suggests that while her father was of Jewish origin, her mother was Protestant, meaning that the Jewishness that is traditionally transmitted from the mothers to the children cannot have taken place in this case.<sup>45</sup> However, this matter is not entirely clear, for it naturally raises the question of interfaith marriage, which is forbidden in Judaism and was limited in the Early Modern Period.<sup>46</sup> On the contrary, being referred to as “daughter of Abraham” in the *ketubah* indicates that Rachel might have been a convert. This is a general term for Jewish proselytes, given that Abraham is considered the forefather of Judaism. According to the nuptial agreement, the name of Rachel’s (Jewish) father was Joseph de Borges. Furthermore, if one of the marrying parties was reformed, there should have been two entries for the marriage, both in the church register and in the *van den Pui* register. The latter is a register of proclamations of non-reformed bridal couples pasted on the façade (dutch: *pui*) of the town hall. However, the proclamation has so far only been discovered in this register, which suggests that neither party was at this time reformed. The burials of both Castle’s parents at the Dresden Christian cemetery nevertheless clearly demonstrate that Castle’s parents had converted at some point. Their four sons likewise seem to have been conformed to the Reformed Church, which in turn casts doubt on a circumcision in London.<sup>47</sup>

Documentation of 1730/31 records Castle as a royal lieutenant in England, while his brothers, Captain Johann Samuel von/de Richardi, Captain and Chevalier Garde Daniel von/de Richardi, and Captain and Royal Squire Benjamin von/de Richardi were also of a military background.<sup>48</sup> Daniel von Richardi, a colonel in the

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<sup>45</sup> Freitag, *The Troubled Life of Richard Castle*, 91-92.

<sup>46</sup> See Judith Bleich, “Intermarriage in the Early Modern Period,” in *Defenders of the Faith: Studies in Nineteenth- and Twentieth-Century Orthodoxy and Reform* (Boston: Academic Studies Press, 2020), 136.

<sup>47</sup> SächsStA-D, 12881 Genealogica, Nr. 4392.

<sup>48</sup> Calderón, and Dechant, “New light on Hugh Montgomerie,” 187; 192-194 note that documents pertaining to this family in the Saxon archives refer to Captain Johann Samuel de Richardi, who owned the *Vorwerk Neugarden* in the mining town of Altenberg in Saxony. Daniel de Richardi is described in 1763 as “Lieutenant Major and Chevalier Garde, of Golmicau,” while documents appertaining to the sale of the Dresden family home in 1731 refer to Benjamin de Richardi as a Captain in the service of the Landgrave of Hesse-Cassel.

Saxon Chevalier Guard, the household guard of the Saxon sovereign, later lodged in a house in Dresden Neustadt, another prime location next to the Royal Palace and Palais Brühl in Dresden.<sup>49</sup> The archival sources remain otherwise silent on Castle himself. The only vague reference to his relationship with the Saxon engineers is a note concerning three destroyed drawings dating to 1715 and 1717 bearing the signature “D. Richardi” and “de Richardi, D” that was recently discovered by Barbara Freitag.<sup>50</sup> However, this could also refer to Castle’s brother Daniel, who may have gained his first experience in other parts of the Saxon military before joining the Chevalier Garde in 1734 as a major.<sup>51</sup>

In general, there is wealth of informative material on the evidently turbulent lives of Castle’s three brothers, enabling the reconstruction of their (military) careers relatively well. For example, there are files in the Hessian archives that are related to an inheritance or guardianship suit against Benjamin von Richardi, one of Castle’s younger brothers. These disclose that Benjamin sought to claim the inheritance of his wife Johanna Maria Victoria née du Perre, who died in 1729. She, however, had chosen to leave part of her inheritance to her illegitimate daughter, whom she had placed at a convent.<sup>52</sup> There is mention of threats against the brother of Johanna Maria Victoria, whereupon Benjamin is placed under arrest and his furniture and belongings confiscated. There are further trial records which state that Benjamin travelled to London as early as 1752 to accept Castle’s inheritance.<sup>53</sup> According to Calderón and Dechant, however, it was not until 1761 that he reached Dublin together with his brother Daniel.<sup>54</sup> Freitag, conversely, refers to legal documents proving that Benjamin was documented in Dublin on November 27, 1752.<sup>55</sup> With all matters concerning Castle’s estate finally settled in 1761, Benjamin did not return to Germany thereafter,

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<sup>49</sup> Anon, *Das jetztlebende Königliche Dresden in Meissen* (Dresden: Robring, 1738), 74.

<sup>50</sup> Freitag, *The Troubled Life of Richard Castle*, 17. The drawings are war losses, and their existence is only known through entries in the indexing database AUGIAS which is accessible at the Saxon State Archives in Dresden: old archival nos. Festungsatlas I Bl 192; Festungsatlas 1 Bl. 10/11 (F 181, Nr 2); 11345 Ingenieurkorps Festungsatlas 1 Bl. 10/11. (Schr 26).

<sup>51</sup> SächsStA-D, 11246 Ranglisten, Nr. 034; Friedrich August von Göphardt, “Alphabetisches Verzeichniß der sächsischen Offiziere, 1622-1815” (manuscript transcript, 1885).

<sup>52</sup> Hessisches Staatsarchiv Marburg (HStAM), Bestand 255 Nr. R 24.

<sup>53</sup> HStAM, Bestand 261 Ältere Akten Nr. K 798.

<sup>54</sup> Calderón, and Dechant, “New light on Hugh Montgomerie,” 187.

<sup>55</sup> Freitag, *The Troubled Life of Richard Castle*, 83.

for he was still being sought in 1777 for legal proceedings concerning property in Altenberg belonging to his brother Johann Samuel von Richardi who had died in 1752.<sup>56</sup> Apparently Benjamin was finally declared deceased in 1779 by German authorities, because “nunc in casu mortis praesumto [sic]” (now in the event of presumed death) the legal dispute with the illegitimate daughter of Benjamin’s wife came to an end.<sup>57</sup> Documents that Freitag discovered in Dublin confirm this.<sup>58</sup> Castle’s other brother Daniel, as Freitag points out, never went to Dublin but was represented by Benjamin.<sup>59</sup>

Further discoveries relating to Castle’s family background by Barbara Freitag have revealed new information about Castle’s wife Jane Truffet. She was born in Lisburn, Northern Ireland, in 1701, was the daughter of a wealthy linen draper, and pre-deceased her husband. According to Freitag, she met Richard Castle in 1728 and they married three times, the first wedding taking place in secret at Lisburn, the second and third marriages in Dublin’s Huguenot and Anglican churches.<sup>60</sup> According to a burial record unearthed by Freitag, the couple had a son named Samuel, who was buried in St Mary’s Church in Dublin on November 21, 1736.<sup>61</sup>

Despite an extensive search in the Saxon archives, no new findings on Castle’s educational development have emerged. Likewise, beyond Castle’s own account of works (in water supply and navigation) he encountered in Gloucestershire and London there is little documentary evidence about his time in Britain. Research by Melanie Hayes has explored the wider context in which Castle emerged in Britain, in particular the interwoven network of Irish peers in eighteenth-century Hanoverian Britain.<sup>62</sup> Sir Gustavus Hume, Castle’s first patron in Ireland, and his connections to

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<sup>56</sup> SächsStA-D, 12881, Nr. 4392.

<sup>57</sup> HStAM, Bestand 261 Ältere Akten Nr. K 798.

<sup>58</sup> Freitag, *The Troubled Life of Richard Castle*, 86.

<sup>59</sup> Freitag, *The Troubled Life of Richard Castle*, 78.

<sup>60</sup> Freitag, *The Troubled Life of Richard Castle*, 35; 37; 53.

<sup>61</sup> Freitag, *The Troubled Life of Richard Castle*, 38.

<sup>62</sup> Melanie Hayes, “Anglo-Irish Architectural Exchange in the early eighteenth century: Patrons, Practitioners and *Pieds-à-terre*” (PhD diss., Trinity College Dublin, 2015); Melanie Hayes, “Sir Gustavus Hume (1677-1731): courtly connections and architectural connoisseurship in the early eighteenth century,” *Irish Architectural and Decorative Studies* XIX (2017): 36-53; Melanie Hayes, “An Irish Palladian in England: The case of Sir Edward Lovett Pearce,” *The Georgian Group Journal* XXIX (2021): 41-66.

the British court are particularly important. Commonly credited for having invited Castle to Ireland, Hayes points out that as Groom of the Royal Bedchamber, Hume was not only directly acquainted with King George I (whom he accompanied to Hanover and Aachen on more than one occasion), but also with the inner court circle which predominately consisted of German courtiers.<sup>63</sup> She concludes that it was “in the burgeoning architectural culture of London’s West End that Richard Castle first came in contact” with Hume.<sup>64</sup> While Castle’s British connections still remain largely elusive, what is clear from this and related research into the House of Hanover by Barbara Arciszewska, is the importance of German influence in the wider court culture of Hanoverian Britain.<sup>65</sup> Indeed, possible connections of Joseph Richardo to the Electorate of Hanover have emerged from my own research: several letters from Electress Sophia of Hanover to her circle in 1703 speak of a “*joly offisié du Roy de Pologne ... un Anglois nommé Richart*” and “*Monsr de Richard Anglois ... Colonel Artillerie du Roy de Pologne*”.<sup>66</sup>

Was it such links to royal patronage that enabled Castle’s advancement in England and Ireland? After all, his first architectural project in England that is known is a lodge for Queen Caroline at Richmond designed by Edward Lovett Pearce in late 1727/28. The related drawings, which are compiled in the original album, appear to be in Castle’s hand and might represent the first collaboration between Pearce and Castle. The latter’s involvement in this project would seem to have left a lasting impression on him, given that certain elements such as the astylar entrance front with its terminal pavilions are reflected in the elevations of some of his Irish buildings. His designs and strict “integrity” eventually conquered the Irish nobility and gentry, despite his bemoaned difficulties of “being a Stranger in this Kingdom.”<sup>67</sup>

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<sup>63</sup> Hayes, “Anglo-Irish Architectural Exchange,” 51.

<sup>64</sup> Hayes, “Anglo-Irish Architectural Exchange,” 53.

<sup>65</sup> See Barbara Arciszewska, “A Villa Fit for a King: The Role of Palladian Architecture in the Ascendancy of the House of Hanover under George I,” *RACAR: revue d’art canadienne / Canadian Art Review* 19, no. 1/2 (1992): 41–58; Barbara Arciszewska, *The Hanoverian Court and the Triumph of Palladio: the Palladian Revival in Hanover and England c. 1700* (Warszawa: Wydawn. DiG, 2002).

<sup>66</sup> Leibniz-Forschungsstelle Hannover der Akademie der Wissenschaften zu Göttingen, *Gottfried Wilhelm Leibniz* (Berlin: Akademie Verlag, 2011), 120 f.

<sup>67</sup> Anon, “Richard Castles,” 243; NLI, MS 2737.



How Castle obtained his exceptional drawing skills, evident in the Richmond Lodge Album, and his knowledge of building practice is still obscure. To date, there has been no dedicated study of Castle's drawings, despite the quality of his draughtsmanship and the extensive surviving drawings in the Irish Architectural Archive (IAA) and in the Vanbrugh and Richmond Lodge Albums in the Victoria and Albert Museum (V&A). This thesis undertakes an important step in this direction including possible routes for the acquisition of Castle's drawing and building skills in Germany. Training in England rather than in Europe, as suggested previously, is equally possible. McParland, for example, sees a "slender, but suggestive" influence of Sir John Vanbrugh in some of Castle's work.<sup>68</sup> He thus suggests him having been attached to Vanbrugh's office prior to his employment by Pearce. So far, though, not a trace of Castle has emerged from investigations of the drawing office of the Ordnance Office, the Office of Works, or the office of Pearce's cousin Vanbrugh. Little is further known about the relationship between Pearce and Castle, but it is generally assumed that Castle contributed more than his drawing skills to Pearce's office. Likewise, the role of John Ensor, Castle's own clerk and measurer, is unclear. What and how much did he contribute to Castle's practice?

Richard Castle is recorded as having died after dinner at Carton House, Co. Kildare, on February 19, 1751, while writing a letter to a carpenter employed at Kildare House (later Leinster House) in Dublin.<sup>69</sup> He was buried in the church of Maynooth, his property divided according to his will between his sister-in-law Anne Truffet and his three brothers in Saxony.<sup>70</sup> The remaining possessions such as "Household Goods, Furniture, Linen, and wearing Apparel [...], various Kinds of peculiar Taste, together with Plate, old China, Watches and Jewels of a new and curious Invention; as also, his curious and valuable Collection of Books in Architecture, Fortification, and all Parts of polite Literature &c." were auctioned in June 1752.<sup>71</sup> Given that the auction catalogues of the books, which were on display at several Dublin coffee houses, among

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<sup>68</sup> McParland, *Public Architecture in Ireland*, 199.

<sup>69</sup> Anon, "Richard Castles," 243; Freitag, *The Troubled Life of Richard Castle*, 38-40.

<sup>70</sup> NLI, GO MS 424, "Abstracts of wills and other genealogical notes compiled by Thomas Ulick Sadleir, with indexes, 1903," f. 187.

<sup>71</sup> *Dublin Journal*, May 23, 1752, 2. The newspaper notice anticipates a total of four days for the auction, but "so to continue until the Whole are sold".

them Beranger's, Lucas's, Custom House, Dublin, and Globe coffee houses as well as at "Mr. Hanly's (?), Auctioneer, on the Merchants-quay", remain missing, it is difficult to determine details about Castle's library.<sup>72</sup> Similarly, the description "Jewels of a new and curious Invention" can only be speculated upon. These may have been ornamental precious objects or gemstones imported from abroad, since they seem to have been regarded a peculiarity in Dublin at the time. Nevertheless, the personal effects listed indicate that Castle enjoyed a certain wealth and social standing, possessing the means to acquire fine household items, unique objects, and a wide-ranging collection of books. This all points to an individual who was affluent, intellectually curious, and aesthetically discerning while valuing both material comforts and the pursuit of knowledge.

### **Johann Gottlieb Borlach**

Only recently, Christine Casey identified Gibbs's long-time draughtsman Johann Gottlieb Borlach as being "of Dresden parentage and a brother of Johann Gottfried Borlach, famed engineer of the Saxon salt mines".<sup>73</sup> Prior to that his background was unspecified. References of him in contemporary English literature are scarce, more recent scholarship occasionally mentions him, mostly in connection with Gibbs.<sup>74</sup> Nevertheless, Borlach has his own albeit short entry in *A biographical dictionary of British architects* by Howard Colvin, which indicates that Colvin awarded him a certain significance.<sup>75</sup> Gibbs's much-cited will doubtless initially gave the most information and speculation on the unknown figure.<sup>76</sup> In this will of 9 May 1754, Gibbs bequeathed "to Mr John Borlach many years my draughtsman, four hundred pounds".<sup>77</sup> Although the amount of £400 is astonishing, even if Gibbs was known for

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<sup>72</sup> *Dublin Journal*, May 23, 1752, 2.

<sup>73</sup> Casey, "Ornament and Craftsmanship," 34; Casey, *Making Magnificence*, 239.

<sup>74</sup> E.g., Terry Friedman, "Gibbs, James," in *Catalogue of the Drawings Collection of the Royal Institute of British Architects (G-K)*, ed. Jill Lever (Farnborough: Gregg, 1973), 21.

<sup>75</sup> Howard Colvin, *A biographical dictionary of British architects, 1600-1840*, 4th ed. (New Haven, CT; London: Yale University Press, 2008), 144.

<sup>76</sup> Terry Friedman, *James Gibbs* (New Haven: Yale University Press, 1984), 19; 24; Casey, "Ornament and Craftsmanship," 34; James Simpson, *Vitruvius Scoticus* (Edinburgh: Harris, 1980), 13 note 102; Colvin, *A biographical dictionary*, 338.

<sup>77</sup> The National Archives of the UK (TNA), Prerogative Court of Canterbury (PROB) 1/64, Will of James Gibbs 9 May 1754. The probate transcript of the will is also at the National Archive: TNA,

his charitableness, the sources do not further comment on this.<sup>78</sup> Compared to today's currency, it would have been worth approximately £46,667.<sup>79</sup>

In Terry Friedman's Gibbs's monograph of 1984, Borlach received for the first time a detailed consideration. He is there referred to several times and his work as draughtsman for Gibbs is briefly addressed. Friedman mentions a first payment "of £10 on 17 July 1724 to one Burlock, who emerges in subsequent entries as John Borlach".<sup>80</sup> The entry at Drummond's bank enables us to locate Borlach as associating with Gibbs as early as 1724.<sup>81</sup> By September 8, 1729, Borlach effectively worked as Gibbs's draughtsman. This is proven by a letter cited by Friedman and referring to "Berlow [Borlach], who draws the designs" relating to the rebuilding of Magdalen College of the University of Oxford.<sup>82</sup> There are numerous further payments to him in the account until 1743. Further details relating to Borlach have recently been unearthed by Gordon Balderston, who discovered that in 1730 and 1733 he was assessed for rates as an inhabitant of premises on the south side of King Street, which was in the Leicester Fields division of the parish of St Anne's Westminster (later St James's).<sup>83</sup> My own research confirms that Borlach still held this address in 1734, which – described as "a good handsome Street" was close to St James's Palace, Pall Mall, etc.<sup>84</sup> William Talman, too, had three leasehold houses there.<sup>85</sup>

Given the repeated payments by Gibbs to Borlach and the large bequest in his

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PROB 11/810/277, Will of James Gibbs, Architect of Saint Marylebone, Middlesex. For the most up-to-date discussion and transcription of the will see Gordon Balderston, "James Gibbs's Will," *The Georgian Group Journal* 27, (2019): 234-236. In some cases, Borlach is mistakenly read as "John Borlack": see Friedman, *James Gibbs*, 19.

<sup>78</sup> Friedman, *James Gibbs*, 20.

<sup>79</sup> TNA currency converter 1270-2017, accessed April 1, 2020, <https://www.nationalarchives.gov.uk/currency-converter/#currency-result>.

<sup>80</sup> Friedman, *James Gibbs*, 24.

<sup>81</sup> Friedman, *James Gibbs*, 24; 336 note 20.

<sup>82</sup> Friedman, *James Gibbs*, 25; 319.

<sup>83</sup> Ex info Gordon Balderston.

<sup>84</sup> TNA, C41/48, no 77. 81; John Strype, *A Survey of the Cities of London and Westminster* (London: A. Churchill, J. Knapton, R. Knaplock, J. Walthoe, E. Horne, B. Tooke, D. Midwinter, B. Cowse, R. Robinson, and T. Ward, 1720) [online] (hriOnline, Sheffield), accessed September 4, 2023, [https://www.dhi.ac.uk/strype/TransformServlet?page=book6\\_o81&display=normal](https://www.dhi.ac.uk/strype/TransformServlet?page=book6_o81&display=normal).

<sup>85</sup> Lindsay Boynton, "William Talman's Inventory, 1719," *The Volume of the Walpole Society* 59 (1997): 253; "King Street," in *Survey of London: Volumes 29 and 30, St James Westminster, Part 1*, ed. F. H. W. Sheppard (London: London County Council, 1960), 295-307. British History Online, accessed September 4, 2023, <http://www.british-history.ac.uk/survey-london/vols29-30/pt1/pp295-307>.

will, he must have been a vital member of Gibbs's office producing a significant part of the drawings, suggesting that he was Gibbs's "principal assistant".<sup>86</sup> Still, none of the drawings from Gibbs's estate have hitherto been attributed to Borlach. Given that the surviving drawings attributed to Gibbs are more than 900 in number, this is no surprise. Furthermore, there is no comprehensive study to date that analytically and thoroughly examines Gibbs's draughtsmanship. In this thesis this is one of the issues I will attempt to tackle. For, although Borlach's assistance regarding the production of drawings in Gibbs's office is commonly acknowledged, his exact contribution has remained invisible. Rarely if ever, are drawings attributed to the office of Gibbs, most often attributions are made to Gibbs alone, generating the impression that Gibbs operated single-handedly. If drawings could be attributed to Borlach, this would develop a shift from emphasis on the solitary architect towards a group of people working together. For, in recent years, it has repeatedly come to light that eminent and busy architects such as Sir Christopher Wren quite naturally employed and delegated talented draughtsmen.<sup>87</sup> The collaborative nature of architecture has been increasingly acknowledged within academia and there has been a move away from the viewpoint of autonomous creativity.<sup>88</sup> As an architect in high demand, Gibbs would certainly have had multiple employees and run a well-functioning office, not least because he had come to know this custom in Italy.<sup>89</sup> His tenure, albeit brief, in the prestigious position of supervisor to the Commissioners for Building Fifty New Churches included numerous duties, such as designing churches, assessing proposed sites, overseeing the quality of materials and the work of the craftsmen, reviewing estimates and bills, and advising on matters of construction.<sup>90</sup> Gibbs was still employed as a surveyor on various projects after his dismissal from the commission in 1716, and was otherwise engaged in building projects entailing the preparation of plans, advising, assisting, and making contracts with the labourers. This scope of

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<sup>86</sup> Casey, "Ornament and Craftsmanship," 33-34.

<sup>87</sup> See Christopher Wren's draughtsmen: Anthony Geraghty, "Introducing Thomas Laine: Draughtsman to Sir Christopher Wren," *Architectural History* 42 (1999): 240-245; Anthony Geraghty, "Edward Woodroffe: Sir Christopher Wren's First Draughtsman," *The Burlington Magazine* 143, no. 1181 (2001): 474-479.

<sup>88</sup> Saint, "The conundrum of 'by,'" 66-67.

<sup>89</sup> Casey, "Ornament and Craftsmanship," 33.

<sup>90</sup> Friedman, *James Gibbs*, 10; 27.

duties suggests that assistants such as draughtsmen, measurers, or clerks were hired, but only Borlach is documented and identified as his draughtsman.<sup>91</sup>

Nonetheless, more recent attributions to Gibbs as sole author continue to be made, as in the case of two drawings of Raby Castle, Co. Durham. This attribution has been based on the use of the “signature scale-bar, which can be found on numerous drawings by him”.<sup>92</sup> As in the attribution of buildings “the temptation is strong to father any building of quality with the right date on to the favoured name.”<sup>93</sup> However, architectural drawings were often created by several hands. Congruence in the use of the scale bar does not necessarily prove that Gibbs was the sole creator of the drawing as a whole.<sup>94</sup> It is more likely that he had one (or more) assistant(s), who either traced Gibbs’s preparatory pencil drafts with ink or each had their allocated component which they executed on every drawing (e.g. scale bar, shading, wash, ornaments, staffage, etc.).<sup>95</sup> This was not uncommon in architectural practice. Christopher Wren’s office drawings, for example, have been shown to present a “close collaborative working on paper.”<sup>96</sup>

The only work that has clearly been attributed to Johann Gottlieb Borlach – based on the inscription of his name– are engravings after his drawings. These include, firstly, a perspective of Kinross House near Edinburgh (see fig. 6.59) and, secondly, 20 plans and elevations of gatehouses. The perspective of Kinross House was engraved by Richard Cooper after Borlach’s design (“JG. Borlach delint.”) and was included in William Adam’s *Vitruvius Scoticus* published in 1810.<sup>97</sup> Friedman agrees

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<sup>91</sup> Due to their collaboration in two building projects and a similar draughtsmanship, it is assumed that James Horne, a London joiner, was also a pupil or assistant of Gibbs. See Friedman, *James Gibbs*, 29.

<sup>92</sup> Richard Hewlings, “Gibbs at Raby Castle,” in *Cornucopia. Essays on Architecture, Sculpture and Decorative Arts in Honour of Terry Friedman (1940-2013)*, eds. James Lomax, Evelyn Silber, and Christopher Webster (Leeds: Leeds Art Fund, 2015), 52.

<sup>93</sup> Maurice Craig, “The Quest for Sir Edward Lovett Pearce,” *Irish Arts Review* 12 (1996): 33.

<sup>94</sup> Hermann Heckmann, *M. D. Pöppelmann als Zeichner* (Dresden: VEB Verlag der Kunst, 1954), 16-17.

<sup>95</sup> Heckmann, *M. D. Pöppelmann als Zeichner*, 16-17.

<sup>96</sup> “Wren and his draughtsmen,” St Paul’s Cathedral, accessed April 13, 2021, <https://www.stpauls.co.uk/history-collections/the-collections/architectural-archive/wren-office-drawings/wren-and-his-draughtsmen>.

<sup>97</sup> William Adam, *Vitruvius Scoticus: being a collection of plans, elevations, and sections of public buildings, noblemen’s and gentlemen’s houses in Scotland: principally from the designs of the late William Adam, Esq. architect* (Edinburgh: T. Underwood, 1810), plate 62.

with James Simpson's suggestion that this was originally manufactured to be included in German- or Dutch-born captain and surveyor John Abraham Sleszer's *Theatrum Scotiae* (editions 1710, 1718, 1719) and it appears that this is generally accepted among scholars.<sup>98</sup> Simpson justifies this attribution with the "style and general character of this plate [being] close to those of Sleszer's" publication.<sup>99</sup> In comparison to the other architectural depictions in *Vitruvius Scoticus*, this plate indeed breaks ranks. Its topographical, much more detailed, and illustrative appearance has no place in an architectural pattern book or treatise. It rather belongs in a volume pictorially depicting the built environment of a country, as represented by *Theatrum Scotiae*. Simpson dates the drawing to 1710/11 but it remains unclear what induced him to do so and there is no argument to support his proposition. To the perspective view of the house belong four further plans, which depict basement as well as first, second, and third floors. According to some authors, the style of this plate also differs from that of the others, which is why they attribute it to Borlach.<sup>100</sup> However, they do not fully analyse in which respect the styles differ from each other. In my opinion, it is only the representation of the scale bar which is singular within the book. Eileen Harris additionally provisionally attributes plates 90 and 91 to Borlach – but without further arguments.<sup>101</sup> They show an elevation and several plans of Balveny House, Banffshire. An early Scottish connection for Borlach is thereby established and intriguing because Richard Castle's patron, Sir Gustavus Hume, had close Scottish connections and copies of Castle's designs for Richmond Lodge inexplicably found their way to Mellerstain House in the Scottish Borders, seat of the Baillie family.

The 20 drawings of monumental gatehouses attributed to Borlach were engraved by W. H. Toms and published in 1776 by John Boydell of Cheapside, London as *Designs of Architecture, for Arches and Gates, the Several Plans, and Uprights, Contained in XX Plates*. The book was offered at Boydell's, no. 90 Cheapside, London,

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<sup>98</sup> Friedman, *James Gibbs*, 25; 336 note 19; Simpson, *Vitruvius Scoticus*, 10; 29. Eileen Harris suggests Sleszer's unsuccessful *Scotia Illustrata*, a sequel of *Theatrum Scotiae*: see Eileen Harris, *British Architectural Books and Writers 1556-1785* (Bath Press: Avon, 1990), 97; 103 note 34. It might be important for later research projects to consider Sleszer's background, too, as it shows certain parallels to those of Castle and Borlach.

<sup>99</sup> Simpson, *Vitruvius Scoticus*, 10.

<sup>100</sup> Simpson, *Vitruvius Scoticus*, 10; 29; Harris, *British Architectural Books and Writers*, 104.

<sup>101</sup> Harris, *British Architectural Books and Writers*, 104.

for the modest price of 5 shillings. The plates have survived as cut-outs glued on sheets of paper forming two scrapbooks. One copy is owned by the Canadian Centre for Architecture and is part of John Boydell's *Architecture and ornaments scrapbook* (among cut-outs from other sources).<sup>102</sup> The other copy is held by the Massachusetts Institute of Technology and was once part of American architect Charles Bulfinch's (1753-1844) library.<sup>103</sup> It is however a "John. C: Borlach, architect," who is named on the frontispiece and in the description of the *Alphabetical catalogue of plates* by John and Josiah Boydell.<sup>104</sup> It seems that the G of Gottlieb was mistakenly replaced by a C here, given that an architect Johann C. Borlach could not be traced.

Lastly, more recent studies in the United Kingdom suggest Borlach as the thread connecting Gibbs and Castle, given that his "career trajectory has uncanny parallels with that of Richard Castle".<sup>105</sup> By means of their shared descent and English roots, their connections to Saxony's royal mining works, their presence in Hanoverian London in the mid-1720s, and their move in the building or engineering industry, a link is drawn. In her recent publication on Richard Castle, Barbara Freitag, too, takes up this thread of a connection between Castle and Borlach, suggesting they travelled to England together.<sup>106</sup> However, these remarks and likewise comments on Gibbs's acquaintance with Borlach remain purely speculative.<sup>107</sup>

Within German academic research, Borlach is seldom if ever mentioned. It is solely his famous brother, the Electoral Saxon counsellor of mines and founder of

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<sup>102</sup> Canadian Centre for Architecture: *Designs of architecture for arches or gates: the several plans and uprights contained in XX plates / by John C. Borlach*. London: J. Boydell, 1776, call no.: 0008137.

<sup>103</sup> Friedman, *James Gibbs*, 273; iv; Massachusetts Institute of Technology, Rotch Library: *Designs of Architecture, for Arches and Gates, the Several Plans, and Uprights, Contained in XX Plates*, NA2880.B67 1755

<sup>104</sup> John Boydell and Josiah Boydell, *An alphabetical catalogue of plates, engraved by the most esteemed artists, after the finest pictures and drawings of the Italian, Flemish, German, French, English, and other schools, which compose the stock of John and Josiah Boydell, engravers and printsellers, No. 90, Cheapside, and at the Shakespeare Gallery, Pall Mall; preceded by an account of various works, sets of prints, galleries &c. forming a great part of the same stock* (London: W. Bulmer, 1803), iv.

<sup>105</sup> Christine Casey, "Grand tour: the passage of migrant craftsmen from Lake Lugano to County Kildare," in *Irish provincial cultures in the long eighteenth century: Making the middling sort. Essays for Toby Barnard*, eds. Raymond Gillespie, and R. F. Foster (Dublin: Four Courts Press, 2012), 58.

<sup>106</sup> Freitag, *The Troubled Life of Richard Castle*, 19.

<sup>107</sup> Freitag, *The Troubled Life of Richard Castle*, 22-27.

several saltworks Johann Gottfried Borlach (1687-1768), who had and still enjoys certain popularity and research in the field of mining history, especially salt mining, and engineering.<sup>108</sup> At this point is important to stress that the similarity of the names (Gottfried/Gottlieb) and initials (JG) of the two brothers regularly causes confusion and one must use caution not to mix up the names.<sup>109</sup>

To make matters worse, even Gottfried's life and work is by no means sufficiently studied, despite the thorough work of his earliest biographer, the Dürrenberg saltworks director Johann Andreas Bischof (1762-1832). In this near contemporary account, Johann Gottlieb is mentioned twice as being "Oberlandbaumeister" in England, whereby the second mentioning refers to Gottfried visiting his dearly beloved brother in 1738.<sup>110</sup> On this occasion Gottfried also examined several steam engines for coal mining in Chester-le-Street near Newcastle, to inspect if a so-called "Feuermaschine" (fire machine) would be suitable for the delivery of salt in the Saxon graduation works<sup>111</sup>. Despite these scarce references to Johann Gottlieb, some significant information on the family background itself is revealed, e.g., the parents' names, an English origin of the forefathers, and the training of Gottfried, including some people he knew and worked with. Among data on baptisms or burials of his immediate family members, it was possible to identify the baptism of Johann Gottlieb in the church registers of St. Anne's Church in Dresden, according to which he was baptised on December 9, 1691.<sup>112</sup> Given that Johann Gottlieb (and his three

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<sup>108</sup> Most important works include e.g., Karlheinz Blaschke, "Johann Gottfried Borlach, ein Bergingenieur des 18. Jahrhunderts," *Bergakademie* 8 (1955): 370-373, with a brief mention of Gottlieb on p. 373; Johannes Mager, *Johann Gottfried Borlach. Ein biographischer Abriß anlässlich seines 300. Geburtstages* (Halle [Saale]: Technisches Halloren- und Salinemuseum, 1990), with a mention of Gottlieb on p. 6; Johannes Mager, "Johann Gottfried Borlach (1687-1768). Sein Lebenswerk und sein Umfeld," *Zeitschrift für Heimatforschung* 12 (2003): 47-64; Johannes Mager, "Johann Gottfried Borlach (1678-1768) 'Der Vater der kursächsischen Salinen.' Aus seinem Leben und Werk," in *Auf salzigen Spuren II. Kulturgeschichtliche Streifzüge (besonders durch Sachsen, Preußen und Bayern)*, ed. Stadt Bad Dürrenberg (Leipzig: Thomas, 2006); Thomas Budde, *Auf den Spuren der Gebrüder Borlach: Aus Anlass des 325. Geburtstages von Johann Gottfried Borlach und des 235. Todestages von Johann Hermann Borlach im Jahre 2012* (Bad Kösen: Gradierwerkförderverein, 2012).

<sup>109</sup> Most recently Freitag, *The Troubled Life of Richard Castle*, 24, who confuses Johann Gottfried with a non-existent Johann Georg.

<sup>110</sup> Bischof, "Geschichtlich-technologische Mitteilungen," 5; 19.

<sup>111</sup> Ex info Gordon Balderston; see also Mager, "Johann Gottfried Borlach," 50.

<sup>112</sup> EVLKS, Dresden-Annenkirche, Tauf- und Traubuch 1683-1720, image 236. Despite the wrong name (Gottfried), the date of birth given by the National Gallery of Art, Washington (<<https://www.nga.gov/collection/artist-info.20925.html>> [accessed 03.06.2020]) is thus erroneous.



siblings) were all baptised, it is clear that the family was Protestant. A Jewish background of Johann Gottlieb as proposed by Casey is therefore no longer assumed.<sup>113</sup> The baptismal entries of the Borlach siblings document a well-established network of craftsmen within which the family was embedded in Dresden. The goldsmith and court jeweller Gottfried Döring (c. 1660-1718), for example, was Gottfried's godfather. Döring was the brother-in-law of the most important goldsmith and jeweller of the German Baroque, Johann Melchior Dinglinger (1664-1731), and manufactured several precious objects for the treasury Grünes Gewölbe at the Dresden royal palace.

Gottfried's biographer Bischof further reports that Gottfried and his younger brothers Johann Gottlieb and Hermann were instructed in drawing since they all had competency and "inborn inclinations for drawing."<sup>114</sup> A certain "D. Klöppel" gave drawing classes and court painter Heinrich Christoph Fehling (1654-1725) taught painting. Nothing is known about Klöppel, who according to Bischof was a physician at the royal court.<sup>115</sup> Fehling, on the other hand, was the director of a provisional academy of painting and drawing, which, after an initial chaotic foundation in Dresden in 1697, was reorganised and revived around 1705.<sup>116</sup> The early source material on this facility is poor, which makes it difficult to comprehend its character. There is evidence that this "Académie de Peinture", as a contemporary fancifully referred to it, from 1718 onwards was accommodated on the entire third floor of the so-called *Fraumutterhaus* in the Dresden Kreuzgasse.<sup>117</sup> It is possible that Johann Gottlieb Borlach and his brothers received drawing lessons from Fehling in the context

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<sup>113</sup> See lately Casey, "Ornament and Craftsmanship," 34.

<sup>114</sup> Bischof, "Geschichtlich-technologische Mitteilungen," 5: "*The young Borlachs also had to learn their father's profession; but their father's example instilled in his sons an innate inclination for drawing at an early age.*" ("Die jungen Borlache mußten zwar auch die väterliche Profession erlernen; doch das Beispiel des Vaters, weckte in den Söhnen schon früh die angeborenen Neigungen zum Zeichnen.")

<sup>115</sup> Bischof, "Geschichtlich-technologische Mitteilungen," 5.

<sup>116</sup> Manfred Altner, *Dresden: Von der Königlichen Kunstakademie zur Hochschule für Bildende Künste* (Dresden: Verlag der Kunst, 1990), 19-20; Moritz Wiessner, *Die Akademie der Bildenden Künste zu Dresden: von ihrer Gründung 1764 bis zum Tode v. Hagedorn's 1780: eine Studie zu einer künftigen Geschichte der Königl. Akademie der Bildenden Künste; als Festschrift zu der Feier des 100jährigen Bestehens der letzteren am 12. November 1864* (Dresden: Teubner, 1864), 3.

<sup>117</sup> Iccander, *Das fast auf dem höchsten Gipfel seiner Vollkommenheit und Glückseligkeit prangende königliche Dreßden* (Leipzig: August Martini, 1726), 59; Wiessner, *Die Akademie der Bildenden Künste zu Dresden*, 4.

of this school, perhaps prior to the joinery training, but also during it.

Furthermore, a source in Dresden's city archive proves Bischof's statement regarding the training of the Borlach brothers as joiners.<sup>118</sup> Given that their father Johann Hermann Borlach, also a joiner, had died in 1699, it can now be asserted that they were all apprenticed to their stepfather Johann George Hübner, master joiner (sometimes also referred to as cabinetmaker) in Neuostadt near Dresden.<sup>119</sup> Hübner is known to have worked for the court in Dresden. An entry in the accounts book of the court chamber from October 1717 states that Hübner was paid 37 thaler and 15 groschen for making a throne and a large audience chair for the royal mourning chamber.<sup>120</sup> Johann Gottlieb was taken up by Hübner as an apprentice on June 25, 1708, at the age of 17 – the typical age to begin serving one's apprenticeship in the construction crafts. To be accepted, the apprentice had to each pay 1 thaler and 12 pence admission charge and apprentice's dues. Often, the period of apprenticeship was three to four years. However, given that masters mostly trained only one apprentice a time and Gottfried began his apprenticeship in 1703, followed by Johann Gottlieb in 1708 and Hermann in 1713, it appears that Hübner had five years to train each brother.<sup>121</sup> If Johann Gottlieb fully served his apprenticeship, he would have probably become journeyman around 1713. Journeymen mainly travelled to the countries whose art currently influenced the European or German taste.<sup>122</sup> Given that French and English styles prevailed in Dresden in the first half of the eighteenth century, it is possible that Johann Gottlieb travelled to both countries. After journeying for at least five years, which was the requirement in Dresden, but was generally exceeded by up to 15 years, the journeymen could return and seek employment as *Meister*, provided they successfully manufactured their *Meisterstück*.

Within this joinery context, mentions of a "Borlach", though often without the first names, appear in several publications of both older and more recent date, among them twentieth-century standard works on Saxon and German furniture

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<sup>118</sup> Bischof, "Geschichtlich-technologische Mitteilungen," 4.

<sup>119</sup> StAD, 11.2.64 Tischler, 1523-1922, f. 120 ff.

<sup>120</sup> SächsStA-D, 10037 Rentkammer, Nr. 223, f. 278v.

<sup>121</sup> Fritz Hellwag, *Die Geschichte des deutschen Tischlerhandwerks vom 12. bis zum 20. Jahrhundert* (Berlin: Verlagsanstalt des Deutschen Holzarbeiter-Verbandes, 1924), 156.

<sup>122</sup> Hellwag, *Die Geschichte des deutschen Tischlerhandwerks*, 159.

respectively.<sup>123</sup> Rudolf von Arps-Aubert briefly mentions Gottfried as “Modelltischler” (patternmaker) referring to the primary source *Grünes Gewölbe: Mappe “Maculatur”* as well as to Jean August Lehniger’s 1782 published book *Description de la ville de Dresde*.<sup>124</sup> In this, probably the earliest reference to one of the Borlach brothers, the description reads as follows: “Borlach, célèbre Ebéniste à Dresde, se fit une grande réputation par de beaux modèles de sa façon” (the famous Dresden joiner, who made his name for models beautiful in their own way).<sup>125</sup> Given that Lehniger does not specify which of the Borlach brother this is, it is still to be clarified if Arps-Aubert concluded correctly in his assumption that this was Gottfried. From today’s research perspective the attribution of several lacquered escritaires to Gottfried is unfathomable and inconclusive – attributions rightly challenged by Gisela Haase in her work on Dresden furniture.<sup>126</sup>

Besides the unreliable attributions and the problem of the brothers’ similar names, another problem has been encountered within literature. Certain scholars reference Gottfried as cabinet or pattern maker based on invoices or salary records in primary sources.<sup>127</sup> However, until now it has not been possible to find the respective documents or to confirm the manufacturing of a throne and large chair for Augustus’s audience chamber in 1717 which was associated with him by some scholars. It is rather his stepfather Georg Hübner who is mentioned as responsible joiner in this instance.<sup>128</sup> A Borlach earning a salary of 300 thalers in 1728 as noted by Günther Meinert has not as yet been discovered.<sup>129</sup> Given that Meinert in his history of the Electoral Saxon building department (*Oberbauamt*) does not directly cite his sources,

<sup>123</sup> E.g., Gisela Haase, *Dresdener Möbel des 18. Jahrhunderts* (Leipzig: Seemann, 1983), 366.

<sup>124</sup> Rudolf von Arps-Aubert, *Sächsische Barockmöbel 1700-1770* (Berlin: Deutscher Verein für Kunstwissenschaft: 1939), 15. Until now, the cited primary source has unfortunately not been identified by Saxon archivists.

<sup>125</sup> Jean Auguste Lehniger, *Description de la ville de Dresde, de ce qu’elle contient de plus remarquable et de ses environs* (Dresden: Walther, 1782), 130.

<sup>126</sup> Heinrich Kreisel, *Die Kunst des Deutschen Möbels* (München: Beck, 1970), 259 fig. 835; 840 pl. XIII; Haase, *Dresdener Möbel*, 289.

<sup>127</sup> Gisela Haase, “Borlach,” in *Allgemeines Künstlerlexikon: Die Bildenden Künstler aller Zeiten und Völker*, ed. Günther Meißner, vol. 13 (München; Leipzig: K. G. Saur Verlag, 1996), 70.

<sup>128</sup> SächsStA-D, 10037, Nr. 223, f. 278v.

<sup>129</sup> Günther Meinert, “Zur Geschichte des kursächsischen Oberbauamtes im 18. Jahrhundert,” in *Forschungen aus mitteldeutschen Archiven: zum 60. Geburtstag von Hellmut Kretzschmar*, ed. Staatliche Archivverwaltung im Staatssekretariat für Innere Angelegenheiten (Berlin: Ruetten & Loening, 1953), 303.

it is difficult to track them down.

However, an intriguing note made in Johann Gottlieb Borlach's baptismal entry in Dresden refers to his position as London *Oberlandbauinspektor* (chief building inspector) at the time of his death. How did those in Dresden learn of the death? There are no testamentary documents nor a burial record in Dresden. The term *Oberlandbauinspektor* raises further questions. A position as inspector usually involved bureaucratic and financial business. Was this a self-designation indicating that Gottlieb had such duties in Gibbs's office in addition to drawing? Was it even the position he held in Gibbs's office? Or was it a post he held after working for Gibbs?

## CHAPTER 2

## **Training of Architects, *Baumeister*, and Engineers in Early Modern Germany**

To explore the role of German professionals in Britain and Ireland in the first half of the eighteenth century, this chapter is dedicated to illuminating the educational training of specialists active in the German building industry at that time. This will in turn contribute to existing knowledge about architectural practice, history, and transnational influences. Given the knowledge of the two protagonists Richard Castle and Johann Gottlieb Borlach especially in the field of draughtsmanship but also in the crafts and engineering sectors, focus will be on the training which fostered those skills. By mining German sources, analysing drawings, and consulting secondary literature, an attempt is made to extrapolate the actual artistic practice of the different training contexts and to explore this in relation to the practices of drawing in architectural design.

### **Educational Establishments in Early Modern Germany**

In early eighteenth-century Germany, a number of educational institutions and environments provided training in architectural drawing, construction, and engineering. I have identified four contexts, which are the most likely sources of education for Castle and Borlach, but which also come into question, as it were, for a large number of their fellow architectural practitioners, namely the cadet school of the Saxon military engineering corps, the traditional guild-regulated workshop apprenticeship, the Electoral Saxon *Oberbauamt* or supreme building department equivalent to the Office of Works in Britain, and an artistic academic training.

Castle is repeatedly described in archival material in the Dresden city archive as “königlich wohlbestallter Lieutenant in Engelland” (royal well-established lieutenant in England).<sup>130</sup> He must therefore surely have completed a military training of some kind and was at least promoted to the military rank of lieutenant. The cadet school and the Saxon engineering corps in Dresden are therefore two potential sources of Castle’s training: on the basis of stylistic similarities, Peter Heinrich Jahn has

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<sup>130</sup> E.g., StAD, 2.4.3-634 Gerichtshandelsbuch von Übigau und Mickten, 1732-1826, f. 0149.

suggested that the engineer-architect Johann Rudolph Fäsch (1680-1749), a teacher at the cadet school, may have been Castle's teacher.<sup>131</sup> Castle's documented skills in hydraulic engineering further suggests a training in this field. It is important to note here, that the cadet corps only admitted members of the nobility. This restriction might make it a less likely context from which Castle emerged, although the addition of "von" to the Richardi name could indicate that Castle's father was indeed ennobled at some point.<sup>132</sup> In fact, throughout the eighteenth century, numerous Electoral Saxon subjects as well as military and civilian servants in the Elector's service were ennobled.<sup>133</sup> In addition, it was generally possible to attain aristocratic equality as well as personal and hereditary nobility through the rank of officer.<sup>134</sup> No corresponding evidence has yet been found in regard to Joseph Richardo or his sons. Furthermore, the predicate "von" does not always indicate a noble rank. In addition to this, the variation "de" Richardi is peculiar. All this might imply a false title of nobility and could suggest a ploy to place the Richardi sons in a context otherwise limited to nobility. However, even if the cadet school was not an avenue open to Castle, the surviving documentation is very rich and provides valuable insight into the education in draughtsmanship in the period that is of direct relevance as practice for him. Thus, the Saxon military including the cadet corps, the *Ingenieurkorps*, and its engineering education will be discussed as a potential training environment. Engineering may also have played a role in Borlach's training: his older brother Johann Gottfried was an engineer, Electoral Saxon counsellor of mines, and was responsible for the reorganisation of saltworks in Poland as well as the establishing of several productive saltworks in the Electorate of Saxony.<sup>135</sup> Given that Borlach was apprenticed at his stepfather's joinery workshop in Dresden, the craft training and the professional milieu of journeymen in early eighteenth-century Saxony is another training route

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<sup>131</sup> I am indebted to Dr Peter Heinrich Jahn, Technische Universität Dresden, for this information.

<sup>132</sup> Andreas Dethloff, *Das kursächsische Offizierskorps 1682-1806: Sozial-, Bildungs- und Karriereprofil einer militärischen Elite* (Hamburg: Dr. Kovač, 2019), 193.

<sup>133</sup> Peter Wiegand, "Nobilitierungen, Standeserhöhungen und Adelsmatrikel," in *Adelige Lebenswelten in Sachsen*, ed. Martina Schattowsky (Köln; Weimar; Wien: Böhlau Verlag GmbH, 2018), 54.

<sup>134</sup> Angela Karl, "Chargenhandel im bayerischen Offizierskorps in der 2. Hälfte des 18. Jahrhunderts," (Phd diss., Freie Universität Berlin, 1986), 97.

<sup>135</sup> Blaschke, "Johann Gottfried Borlach," 370 ff.

that will be examined here.<sup>136</sup> Borlach is further referred to as *Oberlandbauinspektor* (senior building inspector) or *Oberlandbaumeister* (chief master builder) in some accounts and documents from the archives, which suggests a possible training besides the guild-regulated workshop apprenticeship.<sup>137</sup> The Electoral Saxon *Oberbauamt* was, along with vocational craft training, the major force in the educational and administrative culture of eighteenth-century architecture in Saxony. It was one of the main employers for building professionals, working to satisfy the enormous demand for representative and efficient architecture on the part of the Saxon rulers. Thus, the *Oberbauamt* gave rise to many eminent artisans and architects, among them Matthäus Daniel Pöppelmann (1662–1736), who is considered the first major architect in Germany to emerge from a building authority as a state building official.<sup>138</sup> It is thus another potential context in which Castle and Borlach might have received their architectural training, and which therefore requires closer consideration. Borlach's brother Johann Gottfried seems to have been employed as *Modelltischler* (patternmaker) at the building department for a certain period.<sup>139</sup> Furthermore, Castle's father was employed by the Elector of Saxony and King of Poland Augustus II

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<sup>136</sup> StAD, 11.2.64 Tischler, f. 120.

<sup>137</sup> See his baptismal entry: Evangelisch-Lutherisches Landeskirchenamt Sachsen (EVLKS), Dresden-Annenkirche, Tauf- und Traubuch 1683-1720, image 236; Bischof, "Geschichtlich-technologische Mitteilungen," 5; 19.

<sup>138</sup> Hermann Heckmann, *Matthäus Daniel Pöppelmann. Leben und Werk* (Berlin: Deutscher Kunstverlag, 1972), 132; Peter Heinrich Jahn, "Matthäus Daniel Pöppelmann (1662–1736) – 'premier Architecte de Sa Majesté'. Sein Wirken und künstlerisches Selbstverständnis als Dresdner Hofbaumeister unter August dem Starken," in *Hofkünstler und Hofhandwerker in deutschsprachigen Residenzstädten der Vormoderne*, ed. Andreas Tacke, Jens Fachbach, and Matthias Müller (Petersberg: Michael Imhof Verlag, 2017), 217.

<sup>139</sup> Meinert, "Zur Geschichte des kursächsischen Oberbauamtes," 303. Unfortunately, the author did not directly cite his sources and until now it has not been possible for me to verify his statement that Johann Gottfried Borlach earned a salary of 300 thalers in 1728 as patternmaker. However, in the state directory *Königlich-Polnischer und Churfürstlich Sächsischer Hof- und Staats-Calender* from 1728, Johann Gottfried Borlach is indeed listed as patternmaker working for the building department and also as mechanic working for the supreme finance department. In the state directory from 1735, he only appears as "mechanic". See Anon, *Königlich-Polnischer und Churfürstlich Sächsischer Hoff- und Staats-Calender auf das Jahr 1728* (Leipzig: n.p., 1728) 73; 98 and Anon, *Königlich-Polnischer und Churfürstlich Sächsischer Hoff- und Staats-Calender auf das Jahr 1735* (Leipzig: n.p., 1735), 57r. Furthermore, Bognár recently pointed out another salary record dated to 1732 (Sächsische Landesbibliothek – Staats- und Universitätsbibliothek Dresden, Mscr.Dresd.App.1190,133 Beglaubigung der Quartalsbesoldung für die Künstler-Gärtner des Oberbauamts, 3). It is stated here that in the third quarter of 1732, the patternmaker Johann Gottfried Borlach earned 75 thalers. When adding together the salaries of four quarters, this amounts to 300 thalers, which would make Meinert's statement feasible. Nevertheless, it needs to be resolved why Johann Gottfried Borlach was still employed as patternmaker in the *Oberbauamt* when he was actually already working in mining outside of Dresden at that time. Is this a mistake in names?



the Strong and could have exerted influence, as was common, to place his son at the state building department after a basic training in the military.<sup>140</sup>

Lastly, there remains the possibility of an academic training, either at a university or at a professional academy. Architects- or engineers-to-be often undertook a *studium generale* at a university and attended the arts faculty. From 1720 onwards, for example, an employment in Prussian service even required a university education.<sup>141</sup> Architecture was further taught at academies at home and abroad, e.g., in Berlin, Florence, Rome, and Paris. Italian academies were especially popular, given that teaching consisted of a combination of theoretical studies and hands-on instructions in the teachers' workshops.<sup>142</sup> It is thus not unlikely that Castle and Borlach received training in one of those institutions. In the case of Borlach in particular, this is very likely as his older brother Johann Gottfried had documented links with the Königlich-Preussische Akademie der Künste und Mechanischen Wissenschaften (Royal Prussian Academy of the Arts and Mechanical Sciences) in Berlin.<sup>143</sup> Therefore, the education at academic institutions in Saxony and Prussia especially in terms of drawing, architecture, and engineering will also be investigated. As the *Oberbauamt* is perhaps the most likely training environment for building professionals in the period, it shall be considered at the outset.

### **The Saxon *Oberbauamt***

Before considering the Saxon building office in more detail, a brief introduction to eighteenth-century Saxony may be useful. During the Thirty Years' War, which raged largely within the Holy Roman Empire, many German lands were destroyed. However, after the Peace of Westphalia in 1648, Saxony recovered relatively quickly from the aftermath of the war and with the reign of Augustus II from 1694 onwards, the electorate flourished. Also known as Augustus the Strong, he led the country to economic, infrastructural, and especially cultural prosperity. In 1697 he was crowned

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<sup>140</sup> See SächsStA-D, 10026 Geheimes Kabinett, Nr. Loc. 03524/05, f. 133-135. See below.

<sup>141</sup> Anna-Victoria Bognár, *Der Architekt in der Frühen Neuzeit. Ausbildung – Karriereweg – Berufsfelder* (Heidelberg: Heidelberg University Publishing, 2018), 96.

<sup>142</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 103.

<sup>143</sup> Bischof, "Geschichtlich-technologische Mitteilungen," 5.

King of Poland giving him command of the Electorate of Saxony as well as the Kingdom of Poland and the Grand Duchy of Lithuania. As an enthusiast of the arts, Augustus the Strong was keen to impose his rule on these territories through cultural means. Famous for promoting art and architecture, Dresden was transformed into a grand Baroque city during his reign. His son inherited the crown in 1733 and succeeded him not only politically, but also as patron of the arts. While Augustus III's main concern was the maintenance of his art collection, his reign likewise saw the execution of several elaborate building projects throughout the realm. In their architectural endeavours, the two Saxon rulers and their court relied on the Saxon *Oberbauamt*, which in its capacity as the exemplary early modern court building administration of the Holy Roman Empire assembled and administered the most respected building professionals.<sup>144</sup>

While the German court building offices of the seventeenth century had initially remained craft-oriented, over time there was an increasing attempt towards bureaucratisation. However, this bureaucratisation took different forms in the various German states. Given the turmoil of war, territorial shifts, and post-war rebuilding in Brandenburg and Prussia, for example, many building officials appear in the records, but a systematic administration was lacking.<sup>145</sup> The professionalisation of the Saxon *Oberbauamt*, by contrast, seems to have been constantly enhanced because of the more favourable preconditions there. Quite probably, the Royal Building Administration in France, with its delegation of the responsibilities of business administration, drawing, planning, site supervision, and engineering, influenced the structuring within the *Oberbauamt*, as was also the case with the Office of Works in Britain.<sup>146</sup> As with all royal building offices of German rulers, however, the Electoral

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<sup>144</sup> Anna-Victoria Bognár, "Das Sächsische Oberbauamt vom Ende des Dreißigjährigen Krieges bis zum Tod Augusts des Starken. Stellenprofile der Amtsträger zwischen Planung, Bauausführung und Bauadministration," in *Zwinger & Schloss – die Dresdner Residenz Augusts des Starken im europäischen Kontext (1694–1733)*, ed. Henrik Karge, and Peter Heinrich Jahn (Heidelberg: Heidelberg University Publishing, in prep.), 1. I am highly indebted to Dr Anna-Victoria Bognár for providing her unpublished paper and sharing her knowledge on the Saxon *Oberbauamt*.

<sup>145</sup> Anna-Victoria Bognár, "Stellen und hierarchische Strukturen in Hofbauämtern des Alten Reichs," in *Hofkünstler und Hofhandwerker in deutschsprachigen Residenzstädten der Vormoderne*, ed. Andreas Tacke, Jens Fachbach, and Matthias Müller (Petersberg: Michael Imhof Verlag, 2017), 64.

<sup>146</sup> For a detailed discussion of the Office of Works at the time see Howard Colvin, *The History of the King's Works. Volume V. 1660–1782* (London: Her Majesty's Stationery Office, 1976) and more recently Barbara Arciszewska, "The Office of the King's Works and Modernization of Architectural

Saxon *Oberbauamt* never equalled the staff numbers of the French precedent: in 1706, the Inspector General was responsible for 145 people, more than double the numbers, we shall see, of their Saxon counterpart.<sup>147</sup>

Responsibility of the *Oberbauamt* included the maintenance and new construction of all electoral buildings ranging from outlying estates, bridges, and roads to palaces and, until 1744/45, fortifications.<sup>148</sup> From that point onwards, civil and military construction were separate offices, given that the scope of construction activity had increased to such an extent that there was no longer sufficient capacity to handle all matters in one office.<sup>149</sup> Head of the department was the so-called *General-Intendant der Civil und Militär-Gebäude* (general administrator of civil and military buildings), a position similar to the Inspector General or *Surintendant des Bâtiments* of the French Royal Building Administration who was in a sense a business administrator.<sup>150</sup> The British counterpart in the Office of Works would have been the Surveyor-General. From 1696 until 1728 this position was held by General Field Marshal August Christoph Graf von Wackerbarth (1662-1734). Having previously been employed at the court of Charles Louis (1617-1680), Elector Palatine, in Heidelberg, Wackerbarth influenced the style of working and success of the *Oberbauamt* with his brisk organisational activities and his skills in maths, architecture, and engineering.<sup>151</sup> Following the election of Augustus the Strong as King

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Patronage in England,” in *Companions to the History of Architecture, Volume II: Eighteenth-Century Architecture*, ed. Caroline van Eck, and Sigrid de Jong (West Sussex: Wiley Blackwell, 2017), 339-366. Arciszewska highlights the roles of George I and William Benson as major forces in the reorganisation of the Office of Works and the institutionalisation of Palladian classicism. For an overview of the history of the Royal Building Administration in France see Myra Nan Rosenfeld, “The royal building administration in France from Charles V to Louis XIV,” in *The Architect. Chapters in the history of the profession*, ed. Spiro Kostof (New York: Oxford University Press, 1977), 161–179.

<sup>147</sup> Isabel Haupt, “Fürsten, Hofkünstler und Baubeamte. Architekten am sächsischen Oberbauamt im 18. Jahrhundert,” in *Architekt und/versus Baumeister. Die Frage nach dem Metier*, ed. Werner Oechslin (Zürich: Gta-Verlag, 2009), 214.

<sup>148</sup> Klaus Mertens, “Das kursächsische Oberbauamt und Matthäus Daniel Pöppelmann,” in *Matthäus Daniel Pöppelmann 1662–1736 und die Architektur Augusts des Starken*, ed. Kurt Milde, Klaus Mertens, and Gudrun Stenke (Dresden: Verlag der Kunst, 1990), 30.

<sup>149</sup> Kathrin Reeckmann, *Anfänge der Barockarchitektur in Sachsen. Johann Georg Starcke und seine Zeit* (Köln; Weimar; Wien: Böhlau Verlag, 2000), 14.

<sup>150</sup> Rosenfeld, “The royal building administration in France,” 161.

<sup>151</sup> Johann Heinrich Zedler, *Grosses vollständiges Universal-Lexicon aller Wissenschaften und Künste*, s.v. “Wackerbarth” (Leipzig: Zedler, 1732-54).

of Poland, Wackerbarth also managed building activity in Poland.<sup>152</sup> The militarily trained architect and engineer Jean de Bodt (1670-1745) succeeded him in office in 1728 and held the post of general administrator until 1744.<sup>153</sup> Intriguingly, de Bodt had started his career in the British army as “Engineer of the Tower” and submitted proposals for Whitehall Palace and the Royal Hospital in Greenwich in 1698.<sup>154</sup> He later worked as an architect for the Prussian king, but his relations with England did not cease during his time in Berlin. In 1708/09, he prepared drawings for Wentworth Castle, the country house of the English ambassador in Berlin, Thomas Wentworth, 3rd Baron Raby, which “remains as a remarkable and almost unique example of Franco-Prussian architecture in Georgian England.”<sup>155</sup> The general administrator had under his control the architects of the *Oberbauamt* with the respective administrative staff as well as the artists and craftsmen of the court (fig. 2.1; see also tab. 1 glossary *Oberbauamt* in the appendix with period English equivalents). The Electoral Saxon state directory *Königlich Polnischer und Churfürstlich Sächsischer Hof- und Staats-Calender* (Royal Polish and Electoral Saxon Court and State Calendar), which was published for the first time in 1728, registered 59 people working at the building authority in that year.<sup>156</sup> This included, besides the *General-Intendant der Civil und Militär-Gebäude*, five assessors, amongst whom were *Oberlandbaumeister* (chief state master builders) and architects, a secretary, officers and servants (one *Landbaumeister* [state master builder] and three *Conducteurs* [conductors]), two building clerks, one scribe, three gardeners, three master shipwrights, three artists, five painters, five sculptors, various craftsmen such as stone carvers, master masons, master carpenters, joiners, metal workers, etc., as well as several commissioners, one factor, and one agent.<sup>157</sup> Given the interest of Augustus the Strong in architecture

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<sup>152</sup> Hans-Eberhard Scholze, “Oberlandbaumeister Christoph Beyer – Ein Beitrag zur Geschichte des kurfürstlich-sächsischen Oberbauamtes,” *Wissenschaftliche Zeitschrift der Technischen Hochschule Dresden* 6, no. 1 (1956/57): 45.

<sup>153</sup> Meinert, “Zur Geschichte des kursächsischen Oberbauamtes,” 289. Hans-Joachim Kuke, “Kurven und Geschosse. Barockarchitekten in Deutschland und ihr Verhältnis zum Militär,” in »Mars und die Musen«: *Das Wechselspiel von Militär, Krieg und Kunst in der frühen Neuzeit*, ed. Jutta Nowosadtko (Berlin; Münster: LIT, 2008), 222.

<sup>154</sup> Hans-Joachim Kuke, *Jean de Bodt 1670-1745. Architekt und Ingenieur im Zeitalter des Barock* (Worms: Werner, 2002), 23; 27.

<sup>155</sup> Colvin, *A biographical dictionary*, 121.

<sup>156</sup> Haupt, “Fürsten, Hofkünstler und Baubeamte,” 214.

<sup>157</sup> Anon, *Königlich-Polnischer und Churfürstlich Sächsischer Hoff- und Staats-Calender 1728*, 97-98.

(both as an instrument of power and in drafting his own designs), as well as his willingness to mobilise funds for building projects, the availability of a well-working building authority was essential. With the help of a streamlined organisation and capable employees, the Saxon *Oberbauamt* became a major “think tank” in terms of design and construction issues.

In other territories of the Holy Roman Empire the situation was quite different. Until about the second half of the eighteenth century, there was no comparably effective building authority and building officials did not have a good reputation. Prussia’s king Frederick the Great (1712–1786), for example, stated once that “all [...] master builders are idiots or deceivers.”<sup>158</sup> Instead of them being employed for building several farm buildings and stables he requested honest master masons or carpenters to be responsible for building, given that a mason could do this just as well as a Palladio.<sup>159</sup> The Ludwigsburg building office in the historical territory Württemberg, as well as the building offices in Salzburg and Ansbach, were likewise organised in a less bureaucratic but more practical, crafts-based manner. The position of *Conducteur* did not exist here, instead there were *Adjunkte* (assistants), who worked for the master builder and master craftsmen.<sup>160</sup>

A set of regulations from February 7, 1718, lay out the internal organisation of the Saxon building department.<sup>161</sup> It not only mentions the rules for the schedule and

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<sup>158</sup> Cited after Königliche Akademie der Wissenschaften, ed., *Die Behördenorganisation und die allgemeine Staatsverwaltung Preußens im 18. Jahrhundert 7. Akten vom 2. Januar 1746 bis 20. Mai 1748* (Berlin: Parey, 1904), 565: “Alle unßere landtbauMeisters sindt Idiohten oder betriger, also erneüere ich die orders Ehrliche Mauer oder Zimermeisters zu solchen bau zu Employiren. paleste seindt nicht zu bauen, Sondern Schaf Ställe und Wirtschaftsgebeüde, das kann ein Mauerer So guht als paladio.” (“All of our state master builders are idiots or deceivers, so I am renewing the order to employ honest masons or master carpenters for building such structures. Palaces are not to be built, but sheepfolds and farm buildings, which a mason can do just as well as Palladio.”) See also Reinhart Strecke, *Anfänge und Innovation der preußischen Bauverwaltung. Von David Gilly zu Karl Friedrich Schinkel* (Köln; Weimar; Wien: Böhlau, 2000), 59.

<sup>159</sup> However, Frederick made no effort to provide the master builders with a profound and organised training. Their only opportunity to obtain a training was as assistants to the building directors, under whom they practised their skills in surveying, drawing, preparing cost estimates, and structural matters relating to bridge, lock, and industrial construction. See Rolf-Herbert Krüger, “Das Bauwesen in Brandenburg-Preußen im 18. Jahrhundert,” *Jahrbuch für brandenburgische Landesgeschichte* 64 (2013): 50.

<sup>160</sup> Bognár, “Stellen und hierarchische Strukturen in Hofbauämtern des Alten Reichs,” 69.

<sup>161</sup> A transcript of the regulations can be found in Jean Louis Sponsel, *Der Zwinger, die Hoffeste und die Schlossbaupläne zu Dresden* (Dresden: Kunstanstalt Stengel & Co., 1924), 125–129.

account of charges, but also defines the competences of the leading officials.<sup>162</sup> The regulations specify that after the royal decision for a building project had been made, the general administrator had to ensure that the required drafts and proposals were prepared. These were to be examined by the general administrator to determine the costs and time required. The reviewed and approved drawings, which were to include plan, elevation, and section, as well as cost estimate and other documents, were then to be submitted to the king. If the latter approved the proposal, the most competent and capable craftsmen and artists received the drawings according to which they were to work. It is further noted by whom the work was to be diligently inspected and who was responsible for ensuring that everything was done in accordance with the drawings in a proper and lasting manner. These comprise *Oberlandbaumeister*, “*Landbaumeister, Architecte, Conducteurs, Hof-Mäurer- und Zimmermeister*” (chief state master builder, state master builder, architect, conductors, courtly master masons, and master carpenters).<sup>163</sup> The regulations include further instructions, as well as the naming of the personnel of the upper ranks of the *Oberbauamt*. *Oberlandbaumeister* (chief state master builder) Johann Friedrich Karcher (1650–1726), for example, was to manage the horticultural section, *Oberlandbaumeister* Matthäus Daniel Pöppelmann was to attend to palace buildings, and *Architecte* Raymond Leplat (1664–1742) was to look after the interior fittings of the royal apartments and palaces.<sup>164</sup> In this case, *Architecte* seems to relate to the actual profession. In terms of duties, these were comparable to the administrative position of the *Oberlandbaumeister*.<sup>165</sup> The reason why Leplat is described as an architect might be due to his responsibility for the interior design. In contrast to this, the term *Baumeister* (master builder) almost always indicated administrative bodies and positions, not professions. It is stated, for example, that the Saxon *Landbaumeister* (state master builder) Johann Adam Hamm was a master stonemason. Therefore, *Baumeister* was not an occupational, but an official title.<sup>166</sup> How then, did one become

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<sup>162</sup> Haupt, “Fürsten, Hofkünstler und Baubeamte,” 214.

<sup>163</sup> Cited after Sponsel, *Der Zwinger*, 128.

<sup>164</sup> Sponsel, *Der Zwinger*, 128.

<sup>165</sup> Bognár, “Das Sächsische Oberbauamt,” 8.

<sup>166</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 47.

a state building official in the Saxon *Oberbauamt*?

From 1691 onwards, so-called *Conducteurs* (from the French supervisor or conductor) were permanently employed by the *Oberbauamt*.<sup>167</sup> In 1641, this office had already been introduced in the Munich *Hofbauamt* (court building office), the first German territory to do so.<sup>168</sup> The closest English equivalent to this role might be the Clerk of Works, who among others was responsible for stores, measuring workmanship, and building materials.<sup>169</sup> In France this might be the position of the Inspector, who “did drafting, drew up specifications, and directed the masons on the actual building sites.”<sup>170</sup> The Saxon *Conducteurs* were specially trained as officials for the service in the building department and appear at the very bottom of the listings of building officials in the payrolls. In a salary list from 1764, for example, their annual wages are quoted between 50 and 200 *Reichsthaler* which roughly corresponded to the salaries of court craftsmen, although the latter were hierarchically below them. In the upper ranks of the building department, other salaries were paid at that time. An *Oberlandbaumeister*, for example, received an annual salary of 1900 *Reichsthaler*, while a *Landbaumeister* earned 500 *Reichsthaler* annually. However, especially at the beginning of their employment *Conducteurs* often did not receive any payment at all, or only very little. Yet, they were by no means employees without previous knowledge. They were to a large extent fully trained or had already completed a technical basic training, for example a craft apprenticeship as mason or carpenter, given that some kind of professional training was requirement for the placement as conductor.<sup>171</sup> In a letter of recommendation for the position of a *Conducteur* from 1756, for example, it was noted that Dresden architect Johann Daniel Schade (1730-1798) had studied mathematics and already worked in the field of architecture.<sup>172</sup> For the position as *Hofconducteur* (court conductor) in Berlin, Martin Heinrich Böhme (1676-1725) was recommended by the famous architect Andreas Schlüter (1659-1714), who testified to

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<sup>167</sup> Bognár, “Stellen und hierarchische Strukturen in Hofbauämtern des Alten Reichs,” 66; 68.

<sup>168</sup> Bognár, “Stellen und hierarchische Strukturen in Hofbauämtern des Alten Reichs,” 66.

<sup>169</sup> Colvin, *The History of the King's Works*, 68.

<sup>170</sup> Rosenfeld, “The royal building administration in France,” 173.

<sup>171</sup> Bognár, “Das Sächsisches Oberbauamt,” 5; Bognár, *Der Architekt in der Frühen Neuzeit*, 120; Haupt, “Fürsten, Hofkünstler und Baubeamte,” 215; Hermann Heckmann, *Baumeister des Barock und Rokoko in Sachsen* (Berlin: Verlag für Bauwesen, 1996), 7.

<sup>172</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 109.

his skills in geometry, fortification, architecture, drawing, carpentry, masonry, etc.<sup>173</sup> Further conclusions on the existing level of knowledge of the *Conducteure* can be drawn from a document from 1735 by general administrator Jean de Bodt regarding a qualifying test for conductors at the military building department.<sup>174</sup> He required testing the applicants in arithmetic, geometry, trigonometry, planimetry, surveying, mechanics, perspective, fortification, and drawing, among others. Article 10 of de Bodt's memorandum notes for example, that engineering candidates were required to prepare various plans of fortifications including elevations as well as plans, elevations, and sections of all such structures for fortifying ground.<sup>175</sup> Point 11 details that in the assessment of prepared drawings, not only their accuracy, decorative value, and good taste were to be judged, but also whether the draughtsman could suitably depict all specifics, terrains, and plains including mountains, rocks, woods, mires, ploughed and cultivated fields, pastures, lakes, rivers, and suchlike.<sup>176</sup>

The tasks of the *Conducteure* were demanding and required both technical and organisational skills. Their field of duties can be reconstructed by looking at respective appointments and instructions preserved in the Saxon State Archive in Dresden, which date largely from the later eighteenth century.<sup>177</sup> One example, for Christian Heinrich Schütze, dating to June 28, 1754, first mentions his position as *Conducteur* within the hierarchy of officials, which was below the *Oberlandbaumeister* and *Landbaumeister*, and above certain craftsmen like masons, carpenters, and handymen.<sup>178</sup> It also sets out his administrative tasks and duties, which included finances, management of workers, and control of working hours. Schütze further had to survey construction and purchase of building materials. Paragraph 6 of his instruction reads as follows: "Should he be sent to purchase building materials, or

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<sup>173</sup> Hermann Heckmann, *Baumeister des Barock und Rokoko in Brandenburg-Preußen* (Berlin: Verlag für Bauwesen, 1998), 235.

<sup>174</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 109.

<sup>175</sup> Cited after Bognár, *Der Architekt in der Frühen Neuzeit*, 109; SächsStA-D, 10026 Geheimes Kabinett, Nr. Loc. 01080/02, f. 166v.

<sup>176</sup> Cited after Bognár, *Der Architekt in der Frühen Neuzeit*, 110.

<sup>177</sup> Almost no such records survive for the early eighteenth century as they may have been lost. However, it could be that the later instructions or appointments that have survived were similar, given that it was common practice for these to be used over a longer period of time for specifying the post. See Bognár, "Das Sächsische Oberbauamt," 2.

<sup>178</sup> SächsStA-D, 10036 Finanzarchiv, Nr. Loc. 32799, Rep. 52, Gen. Nr. 1072, f. 219r–221r. Transcribed in Bognár, *Der Architekt in der Frühen Neuzeit*, 468–470 app. 5.1.26.



otherwise be used for this purpose, he may not sign any agreement without the approval of master builder Schütze [sic] and deputy Müldner.”<sup>179</sup> It continues: “He shall pay due attention to the materials supplied for construction, so that they are used for the purpose for which they are intended, and that nothing is unnecessarily cut or even carried off and stolen”.<sup>180</sup> In the last paragraph, Schütze is instructed that any remaining materials such as stones, lime, bricks, old timber, boards, rods, etc. are to be handed over to the deputy for safekeeping.<sup>181</sup> Given the *Conducteur*’s position within the organisational hierarchy, such skills must have been acquired prior to entering the building department.

In the archive in Dresden a template of an instruction for *Conducteurs* (from 1746-73) offers further insights into the requirements of the role at the Saxon building department.<sup>182</sup> Besides loyalty and zeal for Electoral Saxony, it required an accurate and timely production of drawings: “He has to perform all tasks that are assigned to him when recording the sites, preparing the drawings and constructing the buildings, in a timely manner with all accuracy, diligence and zeal, but shall not make known anything about the projects assigned to him prematurely.”<sup>183</sup> Although no specific details are given as to what type of drawings were to be produced, it can be assumed in view of the fact that different types of drawings were required at different stages of

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<sup>179</sup> Translated after Bognár, *Der Architekt in der Frühen Neuzeit*, 469 app. 5.1.26: “Daferne er zur Einkaufung Bau Mate- / rialien verschicket, oder sonst dazu ge= / brauchet werden sollte, so darf derselbe / kein Accord ohne Genehmigung des / Baumeister Schützens und Amts-Verwalter / Müldners schließen.” *Conducteur* Schütze is not the same person as master builder Schütze, but it seems likely that both are members of the same family of building officials. See Bognár, *Der Architekt in der Frühen Neuzeit*, 113.

<sup>180</sup> Translated after Bognár, *Der Architekt in der Frühen Neuzeit*, 470 app. 5.1.26: “Hat er auf die zum Baue gelieferten / Materialien wohl Achtung zugeben, / daß solche zu dem, wozu sie bestimmt, / verbraucht, daran nichts unnöthiger / Weise zerschnitten, oder gar verschleppt / und entwendet werde.”

<sup>181</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 470 app. 5.1.26.

<sup>182</sup> SächsStA-D, 10036 Finanzarchiv, Nr. Loc. 32799, Rep. 52, Gen. Nr. 1074, f. 1r–6r. Transcribed in Bognár, *Der Architekt in der Frühen Neuzeit*, 466–468 app. 5.1.25. Even though the document dates to the second half of the eighteenth century, Bognár remarks that the lack of cited informatory literature indicates a long usage of the template. See Bognár, *Der Architekt in der Frühen Neuzeit*, 117. It is therefore not unlikely that the same or similar guidelines were used already in the first half of the eighteenth century for appointing and instructing *Conducteurs*.

<sup>183</sup> Translated after Bognár, *Der Architekt in der Frühen Neuzeit*, 466 app. 5.1.25: “Hat er diejenigen / Dienste, welche bey / Aufnehmung der / Plätze, Verferti= / gung der Riße, / und Aufführung / derer Gebäude ihm / aufgetragen werden, zu rechter Zeit mit / aller accuratesse, / Fleiß und Eyfer / zu verrichten, jeden= / noch was denen / aufgegebenen Pro= / jecten wor der Zeit / nichts bekannt zu / machen.”

construction, e.g., presentation drawings for approval by the king, working drawings for the craftsmen, etc., that *Conducteure* were capable of producing any of these, depending on the commands or order.

Certain regulations in the instruction template show fascinating parallels to Richard Castle's skillset and way of working. For example, a conductor was to supervise the work of artists and craftsmen, requiring competent knowledge in painting, sculpture, and plastering.<sup>184</sup> Castle's technical expertise across a range of craft skills may suggest an interaction with a bureaucratic office like the Saxon *Oberbauamt*.<sup>185</sup> Another regulation required that poorly executed or inefficient work was to be destroyed by the *Conducteur*: "His attention shall be directed to the work of the artists and craftsmen, and that which is found faulty or inefficient shall be rejected outright, and by no means tolerated".<sup>186</sup> This calls to mind Castle's reported action on a building site: "When the effect of his works was not such as he liked, he frequently pulled them down".<sup>187</sup> This rigorous approach is another point of correlation between the Saxon building authority and Castle's later workshop practice in Ireland.

In the instruction template it was furthermore determined that alongside the day-to-day business, a conductor must continue his studies in architecture and related sciences like drawing, arithmetic, geometry, perspective, mechanics, hydraulics, etc. Such knowledge could be applied to palaces, churches, steeples, bridges, gardens, grottos, and fountains, requiring long endurance, use, and stability.<sup>188</sup> *Conducteure* further had to acquire knowledge about the "construction of dykes, embankments, and roads, and seek to explore them in detail."<sup>189</sup> Such knowledge had to be applied in the senior positions in the *Oberbauamt*. For example, as *Oberlandbaumeister*, Pöppelmann designed and built dykes and embankments for the Elbe and Mulde

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<sup>184</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 116.

<sup>185</sup> Hayes, "Retrieving craft practice," 160-196; Hayes, "Architect and artificers."

<sup>186</sup> Translated after Bognár, *Der Architekt in der Frühen Neuzeit*, 467 app. 5.1.25: "Wird sein Augen= / merck auf die // übrige Arbeit derer / Künstler und Hand= / wercker gerichtet, / und dasjenige, was / mangelhaft oder / unthüchtig zu finden / ist, schlechterdings / verworffen, und / keinesweges ge= / dultet."

<sup>187</sup> Anon, "Richard Castles," 243.

<sup>188</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 116; 468.

<sup>189</sup> Translated after Bognár, *Der Architekt in der Frühen Neuzeit*, 468 app. 5.1.25: "Wird er sich auch die Bäume derer / Dämme, Ufer und / Straßen bekannt / machen, und genau / zu erforschen suchen..."

rivers and was responsible for the design and construction of several new bridges.<sup>190</sup> In addition, he served as an inspector for bridge maintenance and oversaw the site management of roads and hydraulic engineering.<sup>191</sup> Cascades, grottos, and fountains were similarly incorporated into Pöppelmann's designs for the extension and redevelopment of the Residence complex in Dresden from about 1715-18.<sup>192</sup> Although most of these designs were not executed, the preparation of such required a certain knowledge in this field, which Pöppelmann may have acquired in his position as *Conducteur*. It further demonstrates the profound technical and engineering expertise of Pöppelmann and the general engineering objectives of the *Oberbauamt* Castle, too, had knowledge of hydraulic engineering. His manuscript *Essay on artificial navigation* is a "statement on canal construction" featuring six colour washed views of various locks and lock systems, bridge piers and piles, as well as pile constructions that showcase his draughtsmanship in engineering.<sup>193</sup> With this series of polychrome drawings, with which Castle applied for the Newry Canal works, he approximated the drawing conventions employed in the wider European military and engineering sectors and appealed to the visual habits of the commissioners that resulted from these conventions. However, as shall be demonstrated later, Castle adapted the conventions for his own purposes. His directorship on the Newry Canal and his application for the Dublin pipe-water scheme further show his involvement in engineering practice.<sup>194</sup> Castle also designed sophisticated waterworks and cascades for his commissions in Ireland, for example for the terraced gardens at Powerscourt House, Co. Wicklow, in 1739. This evidence suggests the potential deployment of Castle within European military and engineering fields.

How *Conducteur* acquired the required expertise in the various fields as

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<sup>190</sup> Hermann Heckmann, "Arbeitsumfang und Bauwesen eines Baubeamten im 18. Jahrhundert. Zum 300. Geburtstag des Zwingererbauers M. D. Pöppelmann," *Die Bauverwaltung* 5 (1962): 252.

<sup>191</sup> Winfried Böhner, "Die Ingenieurleistungen," in *Matthäus Daniel Pöppelmann 1662-1736 und die Architektur August des Starken*, ed. Kurt Milde, Klaus Mertens, and Gudrun Stenke (Dresden: Verlag der Kunst, 1990), 421; 423.

<sup>192</sup> Patrick Goode, ed., "Pöppelmann, Matthäus Daniel," in *The Oxford Companion to Architecture* (Oxford: Oxford University Press, 2009), <https://www-oxfordreference-com.elib.tcd.ie/view/10.1093/acref/9780198605683.001.0001/acref-9780198605683-e-1019>.

<sup>193</sup> Farrington, "Richard Castle's 'Essay on Artificial Navigation'," 67.

<sup>194</sup> For a more detailed discussion on Castle's Irish engineering ventures see Casey, "Books and Builders," 190–219.

formulated in the regulations is difficult to determine. Officials in the building department had to self-finance their studies, and this was certainly also the case for the *Conducteur*.<sup>195</sup> Their training, which might have been similar to a sort of traineeship, was likely instructed by the building officials employed by the sovereign.<sup>196</sup> The quality of such training within the building department can be difficult to establish and always depended on the interest and engagement of the teacher. In a letter of recommendation dating to 1730, master mason Andreas Adam (1699–1746) is stated to have worked for six years as *Conducteur* for Matthäus Daniel Pöppelmann and his son and always showed good manners.<sup>197</sup> Several attached but now lost drawings by Adam were to demonstrate his skills in draughting, especially in the field of civil architecture. Training by imitation was clearly important, and in some cases the trainee was allowed to measure a building designed by the teacher and draw up of a plan accordingly.<sup>198</sup>

From the assistant post of *Conducteur* in the Saxon *Oberbauamt*, it was possible to gain promotion to *Landbaumeister*, entailing a higher degree of professional responsibility. This was achieved among others through self-taught study, satisfactory completion of administrative duties, and a proven track record in all disciplines of architecture, including bridge, road, and hydraulic engineering.<sup>199</sup> A *Landbaumeister* was primarily responsible for the supervision of the rural building industry, which included the state outworks, bridges, mills, forestry, and raft buildings. In doing so, steady communication with the *Oberlandbaumeister* had to be maintained. The oversight of the building scribes and craftsmen likewise formed part of the duties of a *Landbaumeister*, as did the review of estimates and the monitoring of prices, disciplinary supervision, and auditing of accounts. Unlike a *Conducteur*, he was furthermore entitled to prepare his own designs and to execute them after approval by the *Oberlandbaumeister*.<sup>200</sup> The latter in turn had supreme

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<sup>195</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 118.

<sup>196</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 103; 120.

<sup>197</sup> SächsSta-D, 10036 Finanzarchiv, Nr. Loc. 33084, Rep. 52, Spec. Nr. 0874, Nr. 4. Extracts printed in Bognár, *Der Architekt in der Frühen Neuzeit*, 118 and Heckmann, *Baumeister des Barock und Rokoko in Sachsen*, 300.

<sup>198</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 118.

<sup>199</sup> Böhner, “Die Ingenieurleistungen,” 420.

<sup>200</sup> Meinert, “Zur Geschichte des kursächsischen Oberbauamtes,” 290.

superintendence over the buildings of the court and of the technical condition of river, dyke, and defence structures. His function was primarily to approve and instruct: he specified the designs, attested drawings, supervised the execution, and monitored the progress of construction and the accounting.<sup>201</sup>

Often, conductors were promoted to *Oberlandbaumeister* or comparable jobs within the hierarchy of officials even before a post became available through the decease of the current officeholder. In contrast to their colleagues, who were not previously employed as *Conducteure*, they received directorships or similar positions more often.<sup>202</sup> Pöppelmann, for example, worked as conductor at the *Oberbauamt* from about 1691 to 1704 after having obtained an unspecified permanent position there in 1686 and probably some kind of architectural or craft training (fig. 2.2).<sup>203</sup> He then became *Landbaumeister* from 1705 to 1718. It was during this time that Pöppelmann travelled from Prague and Vienna to Rome and designed the Dresden Zwinger, the construction of which began in 1710. A substantial corpus of drawings emerged from this undertaking, marking Pöppelmann's most significant architectural work and reflecting the influence of Carlo Fontana (1638–1714), whom Pöppelmann had met in Rome.<sup>204</sup> From 1718 until 1736 Pöppelmann held the post of *Oberlandbaumeister*.<sup>205</sup> Johann Christoph Knöffel (1686–1752) trained as a mason and entered the *Oberbauamt* around 1708 (fig. 2.3). Here he met architects such as Pöppelmann and Zacharias Longuelune (1669–1748), who exerted a considerable influence on his development.<sup>206</sup> Two years later Knöffel was employed as conductor and in 1722 was promoted to *Landbaumeister*, his patron being the general administrator of the *Oberbauamt* Wackerbarth. In 1728 he rose to

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<sup>201</sup> Meinert, "Zur Geschichte des kursächsischen Oberbauamtes," 289.

<sup>202</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 112.

<sup>203</sup> Jahn, "Matthäus Daniel Pöppelmann," 217.

<sup>204</sup> Elisabeth Tiller, and Maria Lieber, eds. *Pöppelmann 3D. Bücher – Pläne – Raumwelten. Online-Katalog zur Ausstellung im Buchmuseum der Sächsischen Landesbibliothek – Staats- und Universitätsbibliothek Dresden (SLUB) vom 17. Mai bis 01. September 2013* (Dresden: SLUB Dresden, 2013), 9.

<sup>205</sup> Heckmann, *Baumeister des Barock und Rokoko in Sachsen*, 11 f.; Bognár, "Das Sächsische Oberbauamt," 6.

<sup>206</sup> Martin Schuster, "Johann Christoph Knöffel (1687-1752)," in *Heinrich Graf von Brühl (1700-1763). Bauherr und Mäzen*, ed. Landesamt für Denkmalpflege Sachsen (Dresden: Neue Druckhaus Dresden GmbH, 2020), 325.

*Oberlandbaumeister* alongside Pöppelmann.<sup>207</sup> While in this position, Knöffel requested that anyone entering the *Oberbauamt* as a *Conducteur* must be trained as a mason.<sup>208</sup> This suggests that he considered this type of craft training fundamental and essential for the advancement in the building industry. Knöffel himself proved that a masonry apprenticeship provided the springboard for a successful career, for he became the architect of choice for Augustus III and worked for the most important political figures in Saxony. While most of the buildings designed by Knöffel have not survived, an even larger body of drawings has been preserved (fig. 2.4).<sup>209</sup> The drawings, which have a certain naiveté by comparison to those of Pöppelmann, are characterised by the exclusive use of a brush, even for the finest lines, shading in the form of grey wash, and a delicacy in the polychrome washes. It is likely that Knöffel acquired his drawing skills in the course of his masonry apprenticeship and continued refining them thereafter. Samuel Locke (1710–1793), who like Knöffel first undertook a masonry apprenticeship, worked under French architect Longuelune in Dresden from whom he acquired his excellent drawing skills (fig. 2.5).<sup>210</sup> From 1734 until 1745 Locke was employed by Knöffel, for whom he produced a large number of drawings. The drawing of an elevation of Grochwitz Palace in present-day Brandenburg dated to 1736 and signed by Locke corresponds to Knöffel's drawing conventions and reveals the latter's influence on Locke (fig. 2.6). In 1739, Locke received the salaried position of a *Cammer-Conducteur*, a post he surely owed Knöffel. Previously, he had been privately financed by the latter. The post was external to the building department, yet it enabled Locke to continue working as master mason and provided him with further opportunities to earn money.<sup>211</sup> From 1751 onwards, Locke is finally recorded as conductor in the *Oberbauamt* and one year later he gained promotion to *Akzisebaudirektor* (excise building director).<sup>212</sup>

Such advancements within the Saxon *Oberbauamt* were often tied to

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<sup>207</sup> Heckmann, *Baumeister des Barock und Rokoko in Sachsen*, 231–235.

<sup>208</sup> Schuster, "Johann Christoph Knöffel," 325.

<sup>209</sup> Walter Hentschel, and Walter May, *Johann Christoph Knöffel. Der Architekt des sächsischen Rokoko* (Berlin: Akad.-Verlag, 1973), 47.

<sup>210</sup> Heckmann, *Baumeister des Barock und Rokoko in Sachsen*, 345.

<sup>211</sup> Hentschel, and May, *Johann Christoph Knöffel*, 56.

<sup>212</sup> Heckmann, *Baumeister des Barock und Rokoko in Sachsen*, 346.

examinations, as was the hiring process in the building department in general. These were not subject to fixed rules. In 1730, for example, Pöppelmann tested three competing candidates that had applied for the post of *Landbauschreiber* (state building scribe).<sup>213</sup> A building scribe administered the *Baucasse* (building funds). He was mainly responsible for the accounting, but also for the supervision of the building work on site as well as the complete and accurate documentation of the work.<sup>214</sup> Pöppelmann required the three applicants to submit a “building cost estimate, and a drawing for testing” as well as a “most humble report”.<sup>215</sup> The one possessing “both intuition of buildings on land and water” was to be given the post as building scribe.<sup>216</sup> This practice is reminiscent of Castle’s own practice in Ireland which, although not documented for recruitment tests in his office, obtained competitive quotes from various craftsmen for the Printing House at Trinity College Dublin.<sup>217</sup> From the mid-eighteenth century onwards, officials in the entire Holy Roman Empire had to generally testify their qualifications in state entrance examinations to enter the civil service. This included the building officials. Crucial for these tests was not only expert knowledge but character aptitude, the latter of which is not traceable in the source material.<sup>218</sup> In Prussia, for example, there is evidence for the *Oberbaudepartment* in Berlin, founded in 1770, that all senior building officials had to take a uniform examination in which their knowledge of technical mechanics, arithmetic, geometry, fortification, hydrostatics, as well as masonry and carpentry were tested. Drawings and estimates for major land and water structures were also required, along with an oral examination.<sup>219</sup>

Several developments in the second half of the eighteenth century eventually

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<sup>213</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 119.

<sup>214</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 213.

<sup>215</sup> Translated from SächsStA-D, 10036 Finanzarchiv, Nr. Loc. 33084, Rep. 52 Spec. Nr. 084, Nr. 5: “...einen Bau Anschlag, und Riß zur Probe anfertigen laßen, als denn solche nebst unterthänigsten Bericht einsenden, ...”

<sup>216</sup> Translated from SächsStA-D, 10036, Nr. Loc. 33084, Rep. 52 Spec. Nr. 084, Nr. 5: “...und wer unter diesen dreyen sowhol intuitu der Land- als Wassergebäude der geschickteste zu der vacanten Landbauschreiber Dienst seyn möchte...”

<sup>217</sup> Hayes, “Architect and artificers”; Gibney, *The Building Site in Eighteenth-Century Ireland*, 34. The relevant documents are cited by Gibney (note 46) and are at Trinity College Dublin (TCD), Muniments (MUN)/P/2/65/1–4.

<sup>218</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 119.

<sup>219</sup> Krüger, “Das Bauwesen in Brandenburg-Preußen,” 158.

led to the downsizing and reorganisation of the *Oberbauamt* in Saxony, and to its increasingly diminishing influence. It was now mainly local professionals who worked there, and the appointment of internationally experienced and therefore expensive architects was avoided. The cost cutting within the building authority enormously limited career opportunities; Johann Daniel Schade, for example, remained *Conducteur* for a lifetime, even though he was one of the most active architects in Saxony. The Dresden Academy of Arts, founded in 1764 following the Parisian example, now largely provided the new generation of architects; an academic training was henceforth an important criterion for the appointment of architects – a training within the building authority became a thing of the past.

To conclude, the Saxon *Oberbauamt* played an important role for the education of early eighteenth-century building specialists in Saxony and was thus one potential key factor in the instructional backgrounds of Castle and Borlach. Surviving source material like appointments, instructions, or letters of recommendation, enable us to track the scope of activities of the officials. For the *Conducteurs*, it is difficult to determine the exact procedure and content of the training itself, which can be understood more as an advanced training. What is clear, however, is that a previous training, whatever it looked like, was precondition for this varied position of responsibility within the building authority.<sup>220</sup> It can be observed that many of the employees who joined the *Oberbauamt* had already been trained as craftsmen. They brought with them their respective knowledge and individual experiences and skills and were taught a bureaucratic approach to building management in the office. The skills acquired through a craft training and their relevance for a career in the building profession must therefore not be underestimated.

### **Artistic Academic Training**

The necessity to train young talents for building authorities like the Saxon *Oberbauamt* was only one of the reasons for the emergence of new training concepts

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<sup>220</sup> Bogán, *Der Architekt in der Frühen Neuzeit*, 116.



during the late seventeenth and early eighteenth centuries.<sup>221</sup> In the course of becoming architect or engineer, a university curriculum was made use of already from the last quarter of the sixteenth century onwards.<sup>222</sup> This happened mostly within the framework of a course of study in mathematics, which included specialised instruction in the areas of applied mathematics and physics.<sup>223</sup> However, in the context of the competition for the redesign of the Louvre's third floor in 1671, the Académie Royale d'Architecture was established in Paris as the first school of architecture. Here, the students entered the studio of a professor, where they undertook most of their training. The main focus was the development of conceptual intuition through the creation of various drawings and their formal processing with reference to the different architectural styles.<sup>224</sup> Study trips complemented the training. Furthermore, lectures in architecture were introduced, which added a pedagogical level. Conventional forms of training were altogether changed, and a more systematic architecture training organised by the state was installed.<sup>225</sup> Following this example, professional academies were soon founded all over Europe, often combining architecture and fine arts.<sup>226</sup> Before discussing aspects of education at the Berlin academy of arts, which relates to Johann Gottlieb Borlach through his brother, who sojourned there from 1707-13, a brief overview of academic training opportunities in Germany is provided.<sup>227</sup>

First, there was the possibility of studying at a university. Early modern

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<sup>221</sup> Stefan Amt, "Von Vitruv bis zur Moderne. Die Entwicklung des Architektenberufs," in *Entwerfen. Architekturausbildung in Europa von Vitruv bis Mitte des 20. Jahrhunderts*, ed. Ralph Johannes (Hamburg: Junius, 2009), 19.

<sup>222</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 96.

<sup>223</sup> Amt, "Von Vitruv bis zur Moderne," 19.

<sup>224</sup> Jörg Schnier, "Entwurfsstile und Unterrichtsziele von Vitruv bis zum Bauhaus," in *Entwerfen. Architekturausbildung in Europa von Vitruv bis Mitte des 20. Jahrhunderts*, ed. Ralph Johannes (Hamburg: Junius, 2009), 96.

<sup>225</sup> Amt, "Von Vitruv bis zur Moderne," 19; Spiro Kostof, ed., *The architect. Chapters in the history of the profession* (London: University of California Press, 1986), 178. For further information on French training in architecture see for example Reed Benhamou, "The Education of the Architect in Eighteenth-Century France," *British Journal for Eighteenth-Century Studies* 12 (1989): 187-199; Basile Baudez, *Architecture et tradition académique au temps des Lumières* (Rennes: Presses Univ. de Rennes, 2012); Alexandre Cojannot, and Alexandre Gady, *Dessiner pour bâtir: le métier d'architecte au XVII<sup>e</sup> siècle* (Paris: Le Passage, 2017); Hélène Rousteau-Chambon, *L'enseignement à l'Académie royale d'architecture* (Rennes: Presses Univ. de Rennes, 2016).

<sup>226</sup> Michael Hesse, *Handbuch der Neuzeitlichen Architektur* (Darmstadt: Wissenschaftliche Buchgesellschaft, 2012), 365.

<sup>227</sup> Bischof, "Geschichtlich-technologische Mitteilungen," 5 f.

universities in Germany often had four faculties, i.e., the theological, the legal, the medical, and the arts faculties, which covered the basic studies.<sup>228</sup> However, at most of the older, but also at some of the newly founded universities (e.g., Erfurt, Cologne, and Tübingen), studies at the faculty of arts were mainly focused on the trivium. For architects, this was unappealing, as it only involved grammar, dialectics, and rhetoric.<sup>229</sup> Architecture was not provided as a separate subject, although some universities, such as the one in Leiden, Netherlands, included architecture in the curriculum of mathematics as early as the seventeenth century.<sup>230</sup> Over time, the trivium became less important and priority was instead given to the quadrivium, which included arithmetic, geometry, astronomy, and music.<sup>231</sup> Some universities even offered the study of mathematics and physics as part of the quadrivium.<sup>232</sup> These two subjects were taught primarily on the basis of classical authors; little attention was paid to contemporary works.<sup>233</sup> The duration of study at the faculty of arts was between one and a half and two years at undergraduate level. On average, students entered university at the ages of 14-16.<sup>234</sup> Interestingly, Protestant students often studied incognito at Catholic universities or Jesuit colleges, the latter focusing on mathematical disciplines and the geometry of war.<sup>235</sup> Many students who graduated from gymnasiums condemned the unprofitable arts of the philosophical faculties and quickly turned towards the actual professional studies. Therefore, German grammar and middle schools had high teaching standards resembling that at the universities

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<sup>228</sup> Albert Liess, "Die artistische Fakultät der Universität Ingolstadt 1472–1588," in *Die Ludwig-Maximilians-Universität in ihren Fakultäten 2*, ed. Laetitia Böhm, and Johannes Spörl (Berlin: Duncker & Humblot, 1980), 9.

<sup>229</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 96-98.

<sup>230</sup> Hermann Heckmann, "Barockarchitektur im deutschen Sprachraum," in *Entwerfen. Architekturausbildung in Europa von Vitruv bis Mitte des 20. Jahrhunderts*, ed. Ralph Johannes (Hamburg: Junius, 2009), 286.

<sup>231</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 99.

<sup>232</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 99.

<sup>233</sup> Sabine Ahrens, *Die alte Universität – aus der Geschichte der Academia Julia zu Helmstedt* (Helmstedt: Landkreis Helmstedt, 2000), 89 f.

<sup>234</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 99.

<sup>235</sup> Denis De Lucca, "The contribution of the Jesuits to military architecture in the Baroque age" (PhD diss., University of Liverpool, 2010), 24 f. On the contribution of religious orders especially on military architecture see Susan Klaiber, "Architecture and Mathematics in Early Modern Religious Orders," in *Geometrical objects. Architecture and the Mathematical Sciences 1400-1800*, ed. Anthony Gerbino (Cham: Springer International Publishing, 2016), 137-164.

from the mid-seventeenth century onwards.<sup>236</sup> After the end of the Thirty Years' War (1618-48), the universities slowly expanded in the field of natural sciences, which was of value both for soon-to-be military architects and architects working in the civil sector.<sup>237</sup> The Georg-August-University in Göttingen, Lower Saxony, for example, founded in 1737, offered a diverse range of courses not only in mathematics but also in civil and military architecture, surveying, pyrotechnics, fortification construction, and statics.<sup>238</sup> Drawing courses as such were introduced at many German universities only in the course of the eighteenth century.<sup>239</sup>

Secondly, there was the possibility of attending an academy. Given that architects in Germany were able to attend the leading, mostly public academies in Florence, Rome, and Paris free of charge, they initially refrained from training at professional academies at home.<sup>240</sup> With the emergence of new institutions and their improved curricula, this changed. Even though the prospectus at the academies differed little from that at the universities in terms of teaching basic subjects like mathematics or technical subjects, in contrast to the universities, the academies also provided the works of contemporary authors. In addition, vocational academies or academies with departments of architecture allowed more time for subject-specific instruction. The age of entry was around 16 years. The duration of the architectural studies at the academies was three to four years, given that the courses were designed as full degree or postgraduate programmes.<sup>241</sup> The connection to and inclusion of teaching of the other two fine arts (painting and sculpture) at the academies facilitated a level of proficiency in the arts subjects which was not achievable by the universities. Nor could the universities keep up with the practical nature of the academies, which included field trips, competitions, exhibitions, and practical exercises. Thus,

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<sup>236</sup> Gustav Seber, "Zur Geschichte der Fakultäten und der Bibliothek bis zum Beginn des 17. Jahrhunderts," in *Geschichte der Universität Jena 1548/58–1958*, ed. Max Steinmetz (Jena: Fischer, 1958), 75.

<sup>237</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 100.

<sup>238</sup> Heckmann, "Barockarchitektur im deutschen Sprachraum," 286.

<sup>239</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 101.

<sup>240</sup> Martina Kitzing-Bretz, "Der Markgräflisch Baden-Badische Hofbaumeister und Bauinspektor Franz Ignaz Krohmer (1714-1789)" (PhD diss., Heidelberg University, 2001), 20. See also Marcel Schumacher, "Von Wien nach Paris. Der Parisaufenthalt Joseph Emanuel Fischers von Erlach im Kontext der Architektenreisen nach 1715," *Frühneuzeit-Info* 19, no. 2 (2009): 48–58.

<sup>241</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 103.

education at academies became increasingly popular.<sup>242</sup>

On July 11, 1696, the Academie der Mahl-, Bild- und Baukunst was established in Berlin.<sup>243</sup> Here, too, the ambitious plans of a sovereign to remodel his residential city into a grand European metropolis resulted in the construction of numerous palaces in and around Berlin from 1688 onwards.<sup>244</sup> To reduce the costs of constantly importing artists, Frederick III, Elector of Brandenburg (1657-1713), sought to establish an academy of arts based on the French model. Its aim was to increase Berlin's attractiveness for foreign painters, sculptors, architects, engineers, and craftspeople and use the assembled artistic potency for the training of young talent.<sup>245</sup>

Unfortunately, the academy records from the eighteenth century were decimated by a fire in 1743 together with subsequent losses, leaving today's knowledge of this era derived mainly from secondary sources. Along with the archives and the inventory, the entire art collections of the academy were destroyed, including works used in classes, such as plaster casts, paintings, drawings, and engravings. Surviving sources, however, include numerous regulations from the founding and early years, which today are valuable sources for determining the character of the academy. The *Entwurf zum Reglement der in Berlin zu errichtenden "Academie der Mahl, Bild und Baukunst"* (draft of the regulations for the establishment of the "academy of the art of painting, sculpture, and architecture"), which was written between 1694 and 1696, declares that Frederick's new institution was to be a university of the arts, where one was to study not a craft, but the secrets of the arts.<sup>246</sup> It was further proposed that the academy should not only serve as a school, but also as a community or assembly for the creation, evaluation, and consultation of artists and connoisseurs.<sup>247</sup> Several

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<sup>242</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 103.

<sup>243</sup> Hesse, *Handbuch der Neuzeitlichen Architektur*, 367.

<sup>244</sup> Akademie der Künste (AdK), and Hochschule der Künste (HdK), eds., *Die Kunst hat nie ein Mensch allein besessen": 1696-1996; dreihundert Jahre Akademie der Künste, Hochschule der Künste; eine Ausstellung der Akademie der Künste und Hochschule der Künste, 9. Juni bis 15. September 1996* (Berlin: Henschel, 1996), 19.

<sup>245</sup> AdK, and HdK, *Die Kunst hat nie ein Mensch allein besessen*, 19.

<sup>246</sup> Preußische Akademie der Künste (PrAdK) 1434, <<https://archiv.adk.de/objekt/2305563>>. Lieselotte Wiesinger, "Berliner Maler um 1700 und die Gründung der Akademie der Künste," in *Berlin und die Antike. Architektur, Kunstgewerbe, Malerei, Skulptur, Theater und Wissenschaft vom 16. Jahrhundert bis heute*, ed. Willmuth Arenhövel (Berlin: Hellmich KG, 1979), 92.

<sup>247</sup> Wiesinger, "Berliner Maler um 1700," 80.

drawings by Augustin Terwesten (1649-1711), who was one of the founding members of the academy, are an important source for reconstructing instruction and learning in the early days of the academy.<sup>248</sup> Terwesten had already contributed to the establishing of an academy in his Dutch home city of The Hague and his five idealistic designs for the organisation of the academy classes, which were presented to the elector, had a significant role in the foundation of the academy in 1696.<sup>249</sup> Dated c. 1694, the drawings illustrate the importance drawing had within the academic curriculum.<sup>250</sup> Terwesten's proposal for the space dedicated to the basic curriculum envisions a room hung with numerous two-dimensional images that include both figurative and geometric representations (fig. 2.7). Arranged around a table, several students are engaged in drawing studies, copying from sheets positioned on the table. Two students sitting on stools likewise copy from the works displayed in front of them. According to Terwesten's vision, pupils in the elementary class were to be taught the basics of arts and sciences, which included painting, sculpture, architecture, fortification, etc.<sup>251</sup> His proposal for the architecture class shows a room filled with people gathered around a table chatting animatedly (fig. 2.8). The topic of discussion is an architectural drawing presented on the table. The table is covered with other drawings and drawing tools. The walls are again fitted with two-dimensional images showing perspective studies or plans of fortifications.<sup>252</sup> In the architecture class, architecture, perspective, mathematics, geometry, and fortification were to be taught to enable students to gain knowledge in all arts and sciences. In addition to drawing, oral discussion seems to have been an important part of the curriculum. In the advanced class, students were to draw from three-dimensional rather than two-dimensional models in order to progress (fig. 2.9). Lessons in human anatomy and

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<sup>248</sup> AdK, and HdK, "Die Kunst hat nie ein Mensch allein besessen," 27. The drawings were lost after World War II and only survive as illustrations. See Hans Müller, *Die Königliche Akademie der Künste zu Berlin. 1696 bis 1896. Erster Teil: Von der Begründung durch Friedrich III. von Brandenburg bis zur Wiederherstellung durch Friedrich Wilhelm II. von Preussen* (Berlin: Rich. Bong, 1896), 5-7.

<sup>249</sup> AdK, and HdK, "Die Kunst hat nie ein Mensch allein besessen," 28.

<sup>250</sup> Wiesinger, "Berliner Maler um 1700," 82.

<sup>251</sup> Müller, *Die Königliche Akademie der Künste zu Berlin*, 8.

<sup>252</sup> Wiesinger, "Berliner Maler um 1700," 84. Lieselotte Wiesinger proposes some of the etchings hanging on the walls to originate from Giulio Troili's teaching book *Paradossi per praticare la prospettiva*, but the sketchy manner does not allow a conclusive identification. Wiesinger, "Berliner Maler um 1700," 82.

perspective completed this level, with drawing exercises leading to the understanding of the human body (fig. 2.10). Finally, Terwesten's proposal for the large boardroom shows a space with walls that feature bookshelves, busts, and plan cabinets in addition to two-dimensional pictorial works (fig. 2.11). On the left side of the drawing, a student is depicted presenting a drawing to the instructors, which is used to examine the student's skills. Judging from these five drawings, Terwesten envisaged small classes for the Berlin academy, in which teaching would consist of practice and theory instead of formal lecturing. Various drawing exercises as well as conversations were to be guided and controlled by the teaching staff. The academy's regulations from the following years indicate that, at least on paper, Terwesten's suggestions seem to have been largely adopted.

The official constitution of the academy comprising 15 paragraphs was passed on March 20, 1699.<sup>253</sup> It contains details regarding the structure of the academy, its functions, and the training options.<sup>254</sup> Under the supervising protector and the coordinating director there were four rectors who delivered the classes. They were to provide a model every month and give instruction in life drawing twice a week. The rectors were further required to prepare drawings themselves and provide them to their classes for copying and engraving. This was to ensure a diverse and high-quality teaching material. An examination in drawing had to be passed for the post of rector. For architecture, geometry, perspective, and anatomy, taught once a week, special teaching staff was hired. The remaining paragraphs of the constitution refer to the rights and duties of members and the conditions of admission. For example, the king guaranteed members of the academy priority treatment when appointing court artists and exemption from guild coercion.<sup>255</sup> It continues, that "every painter or artist shall annually produce a work of art of his profession, which shall remain with the academy."<sup>256</sup> Furthermore, it is determined that artists wishing to become a member of the academy had to present certificates and submit a sample in the respective

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<sup>253</sup> PrAdK 0108, <<https://archiv.adk.de/objekt/2305549>>. Printed facsimile in Müller, *Die Königliche Akademie der Künste zu Berlin*, 62-68.

<sup>254</sup> AdK, and HdK, "Die Kunst hat nie ein Mensch allein besessen," 30.

<sup>255</sup> AdK, and HdK, "Die Kunst hat nie ein Mensch allein besessen," 30.

<sup>256</sup> Cited after Müller, *Die Königliche Akademie der Künste zu Berlin*, 67.

profession. In the following years, these statutes were continuously followed, and the constitution was supplemented.

One of the rectors of the academy from 1700 to 1713 was *Schlossbaudirektor* (palace building director) Andreas Schlüter. From 1702 to 1704 he additionally held the post of director.<sup>257</sup> Contemporaries note Schlüter's brilliance as a draughtsman, he was inventive and very obliging: it is said that he willingly helped other artists by providing his drawings as reference, whether for tapestries, chairs, goldwork, cabinet work, or else.<sup>258</sup> According to the founding statute, Schlüter had to prepare drawings for the academy, which were then reproduced by the students. Thus, his drawing style influenced not only the staff in his building office, but also the students at the academy. These included, for example, Martin Heinrich Böhme and Paul Decker the Elder (1677-1713).<sup>259</sup> Borlach's brother Gottfried, who probably attended the academy from 1707 to 1713, is said to have been acquainted with Böhme, but more precise information is lacking.<sup>260</sup> In any case, this period would fall within Schlüter's rectorship, so that at least an encounter of some kind between Gottfried Borlach and Schlüter cannot be ruled out.

Schlüter's drawings seem to have served to some extent as teaching material even after his death. Three academy drawings by an anonymous draughtsman from c. 1750, now at The Museum für Kunst und Gewerbe Hamburg, feature several elements from Schlüter's first design for the garden façade of the Palais Kameke of 1711 (fig. 2.12). It is assumed that the anonymous drawings were made in the course of an exercise that consisted of developing ideas and designs for pleasure palaces. The design for the garden façade of a *Maison de Plaisance* reproduces the lucarnes with crowning vases, the laurel festoons above the corner projections, and the roof

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<sup>257</sup> See the latest catalogue on Schlüter: Hans-Ullrich Kessler, *Andreas Schlüter und das barocke Berlin* (München: Hirmer, 2014).

<sup>258</sup> Guido Hinterkeuser, "Eine Zeichnung von Andreas Schlüter für das Landhaus Kameke," In *Aspekte der Kunst und Architektur in Berlin um 1700*, ed. Guido Hinterkeuser (Potsdam: Generaldirektion der Stiftung Preußischen Schlösser und Gärten Berlin-Brandenburg, 2002), 109; Abraham Humbert, "Nachrichten von verschiedenen Künstlern in Berlin," in *Nachrichten von Künstlern und Kunst-Sachen* (Leipzig: Johann Paul Kraus, 1768), 83.

<sup>259</sup> Hinterkeuser, "Eine Zeichnung von Andreas Schlüter," 113.

<sup>260</sup> Bischof, "Geschichtlich-technologische Mitteilungen," 6.

sculptures from Schlüter's drawing (fig. 2.13).<sup>261</sup> The student was certainly familiar with this drawing, perhaps he had it at his disposal in class. Schlüter's drawing originates from the descendants of the Berlin architect and draughtsman Andreas Krüger (1719-1759).<sup>262</sup> Krüger worked at the architectural office of Georg Wenzeslaus von Knobelsdorff (1699-1753), architect of Frederick the Great, and in 1755 designed the "Craatzisches Haus" at Blücherplatz 2 in Potsdam.<sup>263</sup> The scheme was based on a design by Lord Burlington for General Wade's house on Old Burlington Street in London completed in 1723.<sup>264</sup> More relevant in this context, however, is that since 1747, Krüger was a drawing teacher at the newly founded Ökonomisch-Mathematische Realschule in Berlin.<sup>265</sup> This vocational school was established as a universal educational institution for the youth of all classes and of both sexes.<sup>266</sup> It is conceivable that Schlüter's drawing was used as teaching material in this context, which resulted in the three Hamburg drawings. An even earlier use as instructional material at the Berlin academy during Schlüter's rectorship and beyond might likewise be possible.

There are some direct references to drawing in later regulations of the academy as well, for instance in the act of October 6, 1700. According to this, the drawings, copperplate engravings, models, and bas-reliefs presented to the students were to be traced publicly with thorough diligence. Instead of measuring or tracing with a compass, "everyone ought to learn a good manner and to draw by eye."<sup>267</sup> It is further instructed that while drawing, everyone must behave quietly, "without any chattering, laughing, bickering, or other unseemly gestures and disarray."<sup>268</sup> A surviving timetable dating to December 1700 offers further insight into the operations at the

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<sup>261</sup> Hinterkeuser, "Eine Zeichnung von Andreas Schlüter," 116.

<sup>262</sup> Hinterkeuser, "Eine Zeichnung von Andreas Schlüter," 114.

<sup>263</sup> Thomas Sander, "Ein Palladio am Blücherplatz oder die berühmte Kehrseite von General Wade's House in London," *Mitteilungen des Vereins für Kultur und Geschichte Potsdams* 25 (2020): 9.

<sup>264</sup> Christine Casey, "A Palladian palazzo in Ireland's capital," *Country Life* 204, no. 50 (December 2010): 48. Three years after the house in Potsdam had been built, another replica was built with the Provost's House in Dublin.

<sup>265</sup> Rolf-Herbert Krüger, *Das Bauwesen in Brandenburg-Preußen im 18. Jahrhundert* (Berlin: Berliner Wissenschafts-Verlag, 2020), 23 note 69.

<sup>266</sup> Stefan Kipf, "Der Schulmann als vir doctissimus. Preußische Schulprogramme im Spannungsfeld von Wissenschaft und Öffentlichkeit," *Zeitschrift für Germanistik* 23, no. 2 (2013): 267.

<sup>267</sup> Cited after Müller, *Die Königliche Akademie der Künste zu Berlin*, 69.

<sup>268</sup> Cited after Müller, *Die Königliche Akademie der Künste zu Berlin*, 70.



academy.<sup>269</sup> With ten hours of drawing lessons per week (thereof six hours drawing in class), it is clear that the training of draughtsmanship was of major importance at the academy. Geometry and fortification with four hours per week took up the second place. Dating from the same period are the *leges* for the so-called Collegia publica, where anatomy, architecture, and similar subjects were taught. These stipulated, for example, that prior knowledge of geometry was essential for these classes. No later than two months after the end of the course, each student had to submit a drawing, made by one's own hand and signed. Those drawings were then exhibited in the auditorium. A disregard of this rule could lead to a loss of academic rights.<sup>270</sup>

For the “establishment and improvement of the arts, and in particular for the better encouragement of those studying them,” prizes began to be awarded from 1701 onwards – a practice adopted from the academy in Paris.<sup>271</sup> Four awards were now offered on an annual basis to students, artists, and amateurs from within and outside of the academy's realms.<sup>272</sup> The fourth prize was awarded for a drawing after a copper engraving or a three-dimensional model, the third for a drawing after the figure of a gladiator. The second prize was awarded for the sculpting and production of a bas-relief, and the highest award was given for a drawing produced according to one's own taste on certain, alternating topics.<sup>273</sup> These mostly related to the glorification of the ruling house, e.g., the coronation of the king (1701), the birth of the Prince of Orange (1708), and the strengthening of the country by gaining new provinces (1709).<sup>274</sup> An award for the art of building was additionally introduced. As with the other four prizes, participation was open to academics and artists or amateurs from within or outside of the academy.<sup>275</sup> In 1701, the preparation of a design for a triumphal arch or gate of honour was requested. In 1705, the task was to design a gate of honour or mausoleum

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<sup>269</sup> *Reglement, Oder Eintheilung der Tage und Stunden, Wie dieselbe Wochentlich der studierenden Jugend zum besten Bey der Königlichen Preussischen Academie der Künste und Mechanischen Wissenschaften genutzt und angewendet werden*: see Müller, *Die Königliche Akademie der Künste zu Berlin*, 71.

<sup>270</sup> Müller, *Die Königliche Akademie der Künste zu Berlin*, 71.

<sup>271</sup> Cited after Müller, *Die Königliche Akademie der Künste zu Berlin*, 73.

<sup>272</sup> AdK, and HdK, “Die Kunst hat nie ein Mensch allein besessen,” 28.

<sup>273</sup> Müller, *Die Königliche Akademie der Künste zu Berlin*, 73 f.

<sup>274</sup> AdK, and HdK, “Die Kunst hat nie ein Mensch allein besessen,” 28.

<sup>275</sup> Müller, *Die Königliche Akademie der Künste zu Berlin*, 74.

for Queen Sophia Charlotte of Hanover (1668-1705).<sup>276</sup> The assignment in 1709 was for architects to draw an orangery; those who studied perspective were to prepare a perspective sketch of a dodecahedron, including its shadow. The 1713 competition called for architects to draw a warehouse and for students of perspective to prepare a drawing of a twenty-pointed star leaning against a cross. Both drawings had to include shading.<sup>277</sup> Unfortunately, the works fell victim to the fire of 1743, which has made it impossible to assess the performance of the submitted pieces or to provide objective evidence of practices at the academy.

In 1705, the mechanical sciences were added to the curriculum, and the name of the academy was changed to Akademie der Künste und Mechanischen Wissenschaften (Academy of Arts and Mechanical Sciences).<sup>278</sup> One year later, an ordinance was issued on April 8, 1706, which explicitly lists the content and structure of each college.<sup>279</sup> Reference is further made to literature as classroom material. The students at the college of civil architecture are to be introduced to those authors who can deliver the “general idea of architecture and its classification.”<sup>280</sup> More advanced students are expected to explicitly engage with Giacomo Barozzi da Vignola. For, “all the famous masters who have written on this subject of architecture [can] be quite easily understood [...] if only one of them is thoroughly explained beforehand.”<sup>281</sup> Simply put: if you understand Vignola, you understand them all. Finally, those authors should be studied “who have compiled the parallels of the remaining architects.”<sup>282</sup> This could refer to Roland Fréart de Chambray’s *Parallèle de l’architecture antique et de la modern* (1650), an anthology of ten ancient and modern writers on the classical orders which was widely distributed.<sup>283</sup> It is not surprising that Vignola is the only one

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<sup>276</sup> Müller, *Die Königliche Akademie der Künste zu Berlin*, 74.

<sup>277</sup> Müller, *Die Königliche Akademie der Künste zu Berlin*, 75.

<sup>278</sup> PrAdK I.0532, Ernst Heinrich Toelken, *Rede bei der zur Feier des Geburtsfestes seiner Majestät Königs Friedrich Wilhelm IV am 15ten Oktober 1844 von der Königlichen Akademie veranstalteten öffentlichen Sitzung im Saale der Sing-Akademie* (Berlin: Königliche Akademie der Wissenschaften, 1844), 16, <https://archiv.adk.de/objekt/2421389>.

<sup>279</sup> *In was vor Ordnung die Collegia Publica bey der Königlichen Preussischen Academie der Künste und Mechanischen Wissenschaften allhier in Berlin das Jahr hindurch Sollen gelesen und abgehandelt werden*: see Müller, *Die Königliche Akademie der Künste zu Berlin*, 72.

<sup>280</sup> Cited after Müller, *Die Königliche Akademie der Künste zu Berlin*, 72.

<sup>281</sup> Cited after Müller, *Die Königliche Akademie der Künste zu Berlin*, 72.

<sup>282</sup> Cited after Müller, *Die Königliche Akademie der Künste zu Berlin*, 72.

<sup>283</sup> I am indebted to Prof Christine Casey for this information.

specifically referenced for the instruction at the college of civil architecture, given that he was the author of one of the most popular manuals of the five architectural orders. By the early seventeenth century, many contracts contain reference to following Vignola's "conforming" copy and by the late eighteenth century there were almost 250 editions in eight languages.<sup>284</sup> Accordingly, this book must have been available to students in the academy, probably even in multiple editions. Efforts to establish a comprehensive library for school purposes had been underway since 1695.<sup>285</sup> Vignola's *Regola delli cinque ordini d'architettura* (first published 1562) was one of the leading authorities for the study of architecture, as his method for the modular proportioning of orders appealed both to the practicing master builder and to a new group of clients and laymen lacking a classical education.<sup>286</sup> He will be encountered again later in the vocational apprenticeship context. It is possible that the academy was in possession of the German-language editions of 1617 or 1699. Italian or French editions, such as Augustin Charles D'Aviler's, might also be conceivable. As the last chapter will demonstrate, reproductions of drawings after Vignola also proliferated and were fundamental in the development and dissemination of architectural knowledge, which ultimately contributed to the canonisation of the work.

To conclude, despite the presence of many regulations, it is difficult to reconstruct the actual tuition conducted at the Berlin academy. This is due to the unavailability of inventories and students' works, which would allow a better assessment of the quality of the teaching. In any case, in the first half of the eighteenth century, academy training seems to have worked only in combination with other educational contexts, for example, a craft apprenticeship. There is no case known to me from this period in which an architect reached his profession exclusively through academic training. Johann Gottfried Borlach, too, attended the academy after training as a joiner before returning to Dresden and being employed at the Saxon court. The

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<sup>284</sup> Michael Waters, "Vignola and the Culture of Architectural Copying" (lecture, SAHGB/IHR Seminar, November 3, 2022). Many thanks to Prof Christine Casey for sharing her notes on the lecture.

<sup>285</sup> Müller, *Die Königliche Akademie der Künste zu Berlin*, 30.

<sup>286</sup> Eduard Isphording, *Mit Richtscheit und Zirkel. Architekturtraktate, Säulenbücher, Perspektiv- und Baulehren, Musterbücher und Ansichtenwerke bis zur Mitte des 19. Jahrhunderts* (Nürnberg: Verlag des Germanischen Nationalmuseums, 2014), 222.

academy thus served to further develop the skills and knowledge already acquired elsewhere. Nevertheless, the early efforts to establish a solid education at the Berlin academy can be traced from the remaining sources. With the death of King Frederick I of Prussia in 1713, however, the academy's promising potential withered for almost half a century and activities at the academy came to a virtual standstill.<sup>287</sup> It was not until the second half of the eighteenth century that academic teaching took its place alongside the training routes that had been in place until then, such as practical craft training or training provided by court architects or master builders.<sup>288</sup>

### Apprenticeship Context

Besides architects like Schlüter, who were trained in sculpture, many building specialists originated from a guild-based craft apprenticeship system, given that it was possible to acquire architectural expertise therein.<sup>289</sup> Indeed, an apprenticeship within construction crafts was the most common route within the profession of architects, although a purely craft-based training was no longer sufficient for pursuing the profession from c. 1720 onwards.<sup>290</sup> This section provides an overview of the construction crafts apprenticeship in early eighteenth-century Germany, focusing on carpentry, stonemasonry, and masonry, as these trades provided the majority of architects among the crafts.<sup>291</sup> Furthermore, a close look will be taken at the joinery apprenticeship in Saxony in the first half of the eighteenth century, as this was where and when Johann Gottlieb Borlach was trained. The structure of the apprenticeship system and its importance for the transregional labour market of journeymen allow for the possibility that Borlach may have travelled to England during his journeyman years.

Important sources for research on the guild-based apprenticeship system are

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<sup>287</sup> PrAdK I.0532, Toelken, *Rede*, 18; Michael Bollé, "Akademien und Kunstschohlen im deutschsprachigen Raum," in *Entwerfen. Architektenausbildung in Europa von Vitruv bis Mitte des 20. Jahrhunderts*, ed. Ralph Johannes (Hamburg: Junius, 2009), 454.

<sup>288</sup> Ekkehard Mai, "Kunstakademien und Architektenausbildung," in *Der Architekt – Geschichte und Gegenwart eines Berufsstandes*, ed. Winfried Nerdinger (München; London; New York: 2012), 541 f.

<sup>289</sup> Amt, "Von Vitruv bis zur Moderne," 14.

<sup>290</sup> Isphording, *Mit Richtscheit und Zirkel*, 63; Bognár, *Der Architekt in der Frühen Neuzeit*, 86.

<sup>291</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 82.

guild norms and regulations. However, given that these did not clearly define the learning progress and its objectives, there are hardly any records of the actual vocational teaching content within the craft workshops.<sup>292</sup> It was a learning-by-doing concept without curriculum: apprentices learned by imitating ancient craft customs which were passed on by the guilds and craft families.<sup>293</sup> While it was the master who determined the training, both master and apprentice had an interest in the quality of it. A training in larger cities and centres of trade offered a much higher level compared to rural areas, which is why apprentices tended to prefer training in such places.<sup>294</sup> Consequently, the number of middle and long-distance migrant apprentices in larger cities would often be high.

While the exact content of the training is difficult to determine, guild records and other archival sources provide some insight into the practical training course. In the following, a brief and general description is provided for the craft apprenticeship. Often, this would take place at the paternal workshop.<sup>295</sup> Stonemasons and masons were trained together for the first three years of their apprenticeship and only then specialised.<sup>296</sup> Although German guild principles regulated that a master was not allowed to engage more than one apprentice and two journeymen, exceptions were made especially in the urban building trade.<sup>297</sup> Given that the construction crafts had high physical requirements, the apprentices here were usually older and might already have worked as labourers for master craftsmen beforehand.<sup>298</sup> After the initial apprenticeship, the journeymen years followed. At that time, the candidates had reached the age of 18-22. During the years of travelling, the previously acquired skills

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<sup>292</sup> Georg Stöger, and Reinhold Reith, “Actors and Practices of German Apprenticeship, Fifteenth-Nineteenth Centuries,” in *Apprenticeship in Early Modern Europe*, ed. Maarten Prak, and Patrick Wallis (Cambridge: Cambridge University Press, 2019), 155.

<sup>293</sup> Dietrich Erben, “Architektur als öffentliche Angelegenheit. Ein berufssoziologisches Porträt des Architekten im Barock,” in *Der Architekt. Geschichte und Gegenwart eines Berufsstandes*, ed. Winfried Nerdinger (München: Prestel, 2012), 107; Heckmann, “Barockarchitektur im deutschen Sprachraum,” 277.

<sup>294</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 84.

<sup>295</sup> Heckmann, “Barockarchitektur im deutschen Sprachraum,” 280.

<sup>296</sup> Heinz Moser, *Die Steinmetz- und Maurerzunft in Innsbruck. Von der Mitte des 15. bis zur Mitte des 18. Jahrhunderts* (Innsbruck: Stadtmagistrat Innsbruck, 1973), 86.

<sup>297</sup> Michael Stürmer, *Handwerk und höfische Kultur. Europäische Möbelkunst im 18. Jahrhundert* (München: C. H. Beck, 1982), 74.

<sup>298</sup> Stöger, and Reith, “Actors and Practices of German Apprenticeship,” 148; 156.

were further refined. The Bavarian mason Philipp Jakob Zwerger (1685-1758), for example, was a journeyman for eight years and meanwhile perfected his skills in construction management and drawing before applying for the position of *Hofmaurerpolier* (courtly mason foreman) in Munich.<sup>299</sup> To become master, the journeymen had to pay a fee and pass an oral or practical examination, and/or a qualifying period (the so-called *Muthungsjahr*). During this time, their work was regularly inspected by the guild elders or quarterly exams had to be taken. The final master craftsman's examination had become common practice from 1600 onwards.<sup>300</sup> This often involved the production of a *Meisterstück* (piece of work to qualify as master craftsman) including the preparation of drawings and models. In addition to practical skills, theoretical knowledge and the ability to think conceptually became a growing necessity over time in order to qualify for master status.<sup>301</sup> However, not all apprentices would become masters.<sup>302</sup>

The various requirements construction craftspeople had to meet to become accepted by the guilds as master craftsmen indicate a diverse professional training during the apprenticeship and journeyman years. These requirements can be found in the guild regulations. For example, from 1615 onwards, it is documented that a stonemason in Dresden had to undertake two years of journeying and/or one year of qualifying period. A three florins (hereafter fl.) admission fee had to be paid and quarterly examinations had to be taken. For the *Meisterstück*, the plan and elevation of a church with steeple, spiral stair tower, and vault as well as the plans and elevations of a three-storey house with basement and bulbous gable had to be designed. In addition, a quotation had to be prepared, which was to comprise material and personnel costs.<sup>303</sup> This shows that craft, drawing, and office management skills were examined, which consequently implies instruction in all those areas. That these requirements were still valid until the mid-eighteenth century is proven by the transcript made in 1744 of the original regulations from 1615. There were similar

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<sup>299</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 83.

<sup>300</sup> Moser, *Die Steinmetz- und Maurerzunft in Innsbruck*, 105.

<sup>301</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 84.

<sup>302</sup> Maarten Prak et al., "Access to the Trade: Monopoly and Mobility in European Craft Guilds in the Seventeenth and Eighteenth Centuries," *Journal of Social History* 54, no 2 (2020): 426.

<sup>303</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 86 Übersicht 5.

requirements for the master craftsman's examination for admission to the Dresden guild of masons, which were valid from 1615 onwards and were still in use in the mid-eighteenth century. In addition to one year of qualifying period and an admission fee of three fl., which corresponds to the requirements for the stonemasons, the preparation of an unspecified *Meisterstück* was demanded.<sup>304</sup> From 1727 onwards, the preparation of designs for a pyramid and other drawings was additionally required, which had not been the case until then. The drafting of a quotation was not requested. Candidates for the master craftsman's examination to join the Dresden guild of carpenters in the late seventeenth century had to complete one year as a foreman and/or one year of qualifying period during which quarterly exams had to be taken. Specifications about an admission fee are not provided. An unspecified drawing was to be prepared for the *Meisterstück*. Almost one century later, in 1750, the regulations had changed into two years of journeying and/or one year of qualifying period, a fee of five thaler, and the preparation of drawings showing a roof structure with various bevels and angles, a steeple, and a column.<sup>305</sup> Thus, the requirements for carpenters changed the most of all three crafts over the years. This could be related to the fact that carpentry construction methods became more complex and demanding, requiring longer and improved training.

The vocational training for joiners and their admission to the joiner's guild was equally challenging. The duration of the initial phase of joinery apprenticeship was mostly three to four years and, as mentioned above, masters were restricted to training one apprentice at a time.<sup>306</sup> While the joinery training in everyday workshop life most likely consisted of manual work for the master, there is evidence that the basics of architecture were taught. Several documents from the Brunswick's joiner's guild, for example, prove that working in accordance with the architectural orders and divisions was mandatory, indicating an instruction in these areas.<sup>307</sup> As noted above, teaching

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<sup>304</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 87 Übersicht 6.

<sup>305</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 89 Übersicht 7.

<sup>306</sup> Haase, *Dresdener Möbel*, 18; Friedrich Friese, *Der vornehmsten Künstler und Handwerker Ceremonial-Politica* (Leipzig: Groschuff, 1705), 99.

<sup>307</sup> Andrea Winter, "Meisterstücke der Braunschweiger Tischlergilde: Die großen Braunschweiger Schränke von 1685-1789. Gildegeschichtliche Voraussetzungen und Kunstgeschichtliche Aspekte" (PhD diss., Braunschweig University of Art, 1960), 84.

depended mainly on the competence and motivation of the master, but at the same time, the apprentice had to follow suit. Nevertheless, masters could be held responsible for an inadequate training. At the end of the apprenticeship period, the trainees took their journeyman's examination. This could include the manufacture of a test piece and explaining the architectural orders by means of a drawing. Once the exam was passed, the dean of the guild issued the certificate of apprenticeship, and the candidates were acquitted from apprentice to journeyman. However, before they were sent on their journeys, they had to endure certain baptismal rites for the admittance to the brotherhood of journeymen.<sup>308</sup> These rituals impressively prove the presence of architecture, especially of the architectural orders, within the profession of joinery. One such ritual involved the drawing of an architectural column on the body of the aspirant. Using a large wooden divider with a brush dipped in black paint, one of the older journeymen had to sketch the column according to the master's wishes. When the work was finished, the master pronounced "the column is no good and of no use" and the new journeyman's face was smeared with soot.<sup>309</sup> In the following, a sermon had to be delivered, which according to a documented example from 1705 contained rhymes on the order of the columns, e.g., "the first column / called Tuscan / is known to us joiners very well / it carries heavy load like a wall / it is compared to a rugged farmer."<sup>310</sup> The rhyme on the Ionic order was: "the third is called Ionic / it consists of seven parts / the shape and proportion compares to a female person."<sup>311</sup> These lines are borrowed from Hans Blum's *Von den fünf Seulen* from 1550, which itself was based on Sebastiano Serlio and became one of the most widely known and frequented primers on ancient Italian architectural theory.<sup>312</sup> The inclusion of these phrases in the sermon demonstrates the influence of architectural books on the joinery

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<sup>308</sup> Michael Stürmer, *Herbst des Alten Handwerks: Quellen zur Sozialgeschichte des 18. Jahrhunderts* (München: Deutscher Taschenbuchverlag, 1979), 157.

<sup>309</sup> Friese, *Der vornehmsten Künstler und Handwercker*, 101: "die Seule wäre nicht recht / und sey nichts nütze."

<sup>310</sup> Friese, *Der vornehmsten Künstler und Handwercker*, 107: "Die erste Seule / Toscana genannt / die ist uns Tischlern wohl bekannt / trägt schwere Last als wie eine Mauer / wird verglichen einem groben Bauer."

<sup>311</sup> Friese, *Der vornehmsten Künstler und Handwercker*, 107: "Die dritte heißt man Jonica eben / wird von sieben Theilen zusammen gegeben / ihre Gestalt und Proportion vergleicht sich einer Weibs=Person."

<sup>312</sup> Reinhard Peesch, "Säulenbücher. Zur Antikenrezeption in den Tischlerzünften des 16. bis 18. Jahrhunderts," *Jahrbuch für Volkskunde und Kulturgeschichte* 19 (1976): 88.



profession. Furthermore, the playful engagement with the order of the columns illustrates the significance it had within the joiner's craft and is evidence that the apprentices would already have acquired knowledge of it during their first years of training.

Popular destinations for journeymen were important centres of furniture production, but also foreign countries whose art had a current influence on German taste.<sup>313</sup> It is recorded that Dresden journeymen often travelled to Hamburg, Stettin, Wroclaw, Kiel, Gdansk, Erfurt, Frankfurt, Nuremberg, Bautzen, Brandenburg, Berlin, Leipzig, Görlitz and Prague as well as locations in Denmark, Poland, Italy, and Hungary.<sup>314</sup> The journeymen stayed for several weeks at a master's workshop, whereas the minimum period of stay was 14 days to guarantee productive workshop operations.<sup>315</sup> During the years of travel, the only possession the journeymen carried with them was a small toolbox, often finely decorated, sometimes even with marquetry (fig. 2.14). It contained essentials and was carefully treasured, for it proved the owner's skills.<sup>316</sup> While journeying from workshop to workshop, knowledge was first of all acquired from practice. Yet, it was also possible to acquire skills elsewhere. The carpenter Franz Schädler (1733-1796) from Hanover, for example, writes in his application for the position of master carpenter at court that as a journeyman in the 1750s he had travelled to Brunswick to work at the building of the Voigtsches Haus, which under his direction was successfully realised.<sup>317</sup> Schädler further notes that from Brunswick he continued his journey to Göttingen, where he enrolled at university and studied with the scientist Tobias Mayer for two years.<sup>318</sup> This means that besides working in the master workshops, journeymen were able to independently develop their skills.

That the architectural orders also played a major role during the journeyman

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<sup>313</sup> Haase, *Dresdener Möbel*, 19; Hellwag, *Die Geschichte des deutschen Tischlerhandwerks*, 159.

<sup>314</sup> Haase, *Dresdener Möbel*, 19.

<sup>315</sup> Haase, *Dresdener Möbel*, 19.

<sup>316</sup> Stürmer, *Handwerk und höfische Kultur*, 80.

<sup>317</sup> Niedersächsisches Landesarchiv, Abt. Hannover (NLA HA), Dep. 103 XXIV, Nr. 647, f. 33v.; f. 34r.: "habe zuletzt in Braunschweig das große Voigtsche Hauß aufgezimmeret, und ist selbiges unter meiner mir anvertrauten Direction glücklich zu Stande gebracht."

<sup>318</sup> NLA HA, Dep. 103 XXIV, Nr. 647, f. 34v.: "Nach diesen ging ich 2 Jahre nach Göttingen und lernte daselbst bey H. Profesor Meyer."

years is proven by festive processions organised by journeyman joiners in some German towns, as for example documented in Brunswick, Frankfurt, and Hamburg.<sup>319</sup> Central to those parades were the columns of the five orders, which were presented to the crowds in the form of gold-plated models and drawings, as it is recorded for Brunswick in 1725 and later.<sup>320</sup> Journeymen dressed up accordingly sometimes accompanied these processions: a country-like costume represented the Tuscan order, a suit of armour the Doric order; the costume of a gentlewoman represented the Ionic order, that of damsel the Corinthian and Roman orders.<sup>321</sup>

The duration of the journeyman years differed slightly throughout Germany. In Dresden, where Borlach was trained, journeymen joiners were required to travel for at least five years, but this was often exceeded up to 15 years. Therefore, some journeymen were around 30 years of age when they finally made their way home. Upon their return they reported to the guild to formally request issuance of the rank of master craftsman and the final admittance to the guild.<sup>322</sup> Often, the applicants then had to take one year of qualifying period until their request was granted and they were given the measurements after which they had to draw up a sketch. Only when the sketch was approved, were they admitted to the master craftsman's examination and could work on the *Meisterstück*, whereas the given time frame was not to be exceeded.<sup>323</sup> Due to the rather conservative character of the guilds in Germany, the candidates were forced to manufacture bulky, outdated showpieces; self-chosen, quickly-made, and sellable pieces, as was already common in France, were not accepted until the late eighteenth century.<sup>324</sup> In Saxony, the joiner's guild required the manufacture of a large wardrobe, the so-called *Architekturschrank* (architectural wardrobe; fig. 2.15), including the preparation of two elaborate drawings.<sup>325</sup> As the name of this type of furniture implies, the wardrobe was to achieve a balanced relationship between an architectural design in accordance with the classical five

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<sup>319</sup> Winter, "Meisterstücke der Braunschweiger Tischlergilde," 85.

<sup>320</sup> Stürmer, *Herbst des Alten Handwerks*, 53 f.

<sup>321</sup> Winter, "Meisterstücke der Braunschweiger Tischlergilde," 85.

<sup>322</sup> Haase, *Dresdener Möbel*, 19; Arps-Aubert, *Sächsische Barockmöbel*, 12.

<sup>323</sup> Arps-Aubert, *Sächsische Barockmöbel*, 12.

<sup>324</sup> Stürmer, *Handwerk und höfische Kultur*, 70.

<sup>325</sup> Arps-Aubert, *Sächsische Barockmöbel*, 38.

orders, in particular the dimensions and proportions of the Corinthian order, and the decoration of the furniture corpus.<sup>326</sup> A solid knowledge and understanding of architecture is essential to the design of such wardrobes. Examination drawings likewise attest to this kind of expertise. Surviving drawings range from simple line drawings to more elaborate designs with wash and shading. The signed work by Johann Gottfried Schneider, a joiner from a small Saxon town near Dresden, is a particularly artistic example that probably dates to the first half of the eighteenth century (fig. 2.16).<sup>327</sup> The sheet features the elevation, plan, and section of a contemporary architectural wardrobe. It is apparent that the examinee has made every effort to execute a neat and elaborate drawing. Nevertheless, there are some inaccuracies and errors. The ornaments appear to have been drawn freehand, which is why their symmetry is not always perfect and at times the lines have been redrawn. Similarly, the two figures in the centre of the wardrobe doors are of a fairly low level in terms of draughtsmanship. Despite this, the draughtsman's high aspirations are clear, for he employs shading and polychrome washes in light red and yellowish green. Other examination drawings by Saxon joiners show perspective elements (fig. 2.17). At the time of their master craftsman's examinations, the candidates were obviously familiar with drawing and had already adopted specific conventions. Both *Meisterstücke* and drawings prove that lessons in architecture and (architectural) drawing were a vital and traditional element of the training of joiners in Dresden and in Germany in general.<sup>328</sup> The autonomous production of those works was the final proof that the joiners mastered architectural design and its reproduction on paper and as furniture in the three-dimensional space.

An addendum by the Dresden guild of 1719 to the crafts resolutions of 1712 indicates that besides the learning-by-doing principle, architectural treatises and

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<sup>326</sup> Haase, *Dresdener Möbel*, 38.

<sup>327</sup> Johann Gottfried Schneider apparently passed his master's examination. Two bills issued by the master joiner in 1758 for joinery work delivered to the Royal Prussian Army have been preserved. According to these, Schneider charged, among others, 10 *Groschen* for five fir posts, each six ells long ("5. Stollen Dannen Holtz, 6 Ellen lang"). Stadtarchiv Bautzen, 61000-5398, Abrechnung des Tischlermeisters Johann Gottfried Schneider über die an die Armee gelieferten Tischlerarbeiten.

<sup>328</sup> Reinier Baarsen, "Acquisitions: European Drawings for Domestic Furniture 1625-1810," *The Rijksmuseum Bulletin* 68, no. 2 (2020): 183; Achim Stiegel, "Berlin Furniture Drawings by Carl Wilhelm Marckworth (1798-1875)," *The Rijksmuseum Bulletin* 68, no. 2 (2020): 138.

manuals also played a role within the joinery training. It is noted here, that for the preparation of the drawing for the master craftsman's examination, joiner Georg Caspar Erasmus's *Neues Nürnberger Seülen-Buch* first published in 1667 was to be consulted.<sup>329</sup> This highly popular book must thus have been available to the trainees. It became one of the primary manuals for joiners throughout the whole of Germany and was re-issued several times within a few years. In contrast to the ornamental pattern books from the early seventeenth century, it contained descriptive instructions on the construction of the five orders according to their characteristic proportions.<sup>330</sup> Furthermore, for an easier use within the crafts, Erasmus removed the column from its architectural context and considered it an ornamental form in its own right. In 1733, the Dresden guild additionally recommended Vignola's *Regola* as theoretical reference work for the apprentices.<sup>331</sup> However, manuals such as Erasmus's seem to have been the most significant conveyors of knowledge in terms of the five orders and their application to craftsmanship from the mid-seventeenth century onwards. Unlike the usual architectural books by architects or mathematicians, craftsmen and especially joiners were their authors and they developed models for the practical application of the orders. Works by practitioners like Johann Indau (*Wienerisches Architectur-Kunst, Und Säulen-Buch*, first published 1686) or Johann Christian Senckeisen (*Leipziger Architectur- Kunst und Seulen-Buch*, first published c. 1700) influenced furniture making for a long time, for they provided practical instructions as well as visual templates (fig. 2.18).<sup>332</sup> In his *Säulen-Buch*, Indau emphasises the importance of drawing in order to understand the individual architectural elements and their terminology: "To begin with, it is required of those who wish to enter into the study of architecture that, in God's name, they should first draw the cornices, which are the components of architecture, and learn how one and the other are called."<sup>333</sup> Senckeisen, meanwhile, dedicated his textbook to joiners still in training

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<sup>329</sup> Haase, *Dresdener Möbel*, 17.

<sup>330</sup> Winter, "Meisterstücke der Braunschweiger Tischlergilde," 88.

<sup>331</sup> Haase, *Dresdener Möbel*, 17.

<sup>332</sup> Kreisel, *Die Kunst des Deutschen Möbels*, 160.

<sup>333</sup> Johann Indau, *Wienerisches Architectur- Kunst- Und Säulen-Buch* (Augsburg; Peter Detleffsen, 1722), 1: "Zum Anfang wird erfordert von dem jenigen /wlecher sich in die Studia der Architectur-Kunst begeben will / daß er zum Anfang in Gottes Namen sich befleisse ein Gesimbs / welches die Glieder der Architectur seyn / zu zeichnen und zu lernen / wie eins und das andere genennet wird."

and added a glossary to his book that translated the terms used by the craftspeople into those used by architects. The aim was not only to improve communication between the two groups on the construction site, but also to strengthen the craftsmen's understanding of "great books" such as Vignola's.<sup>334</sup> Marcus Nonnenmacher's *Der Architectonische Tischler, oder, Pragerisches Säulen-Buch* first published in 1710 was another important reference work for joiners, focusing particularly on the order of the columns and their practical realisation. In the preface of the book, Nonnenmacher explains that architecture is an inherent part of joinery: "The theory of the orders of the columns is the principal achievement both for [the joiner's] profession as well as for that of others / especially for that of the master builder [...]; a joiner cannot claim his art to be glorious / has he not deeply devoted himself to the bedrock of architecture."<sup>335</sup> In his capacity as a craftsman involved in manufacturing, Nonnenmacher communicates the knowledge of craft technology and practical experience that had previously exclusively been taught by the guild masters.<sup>336</sup> His book and those by other craftsmen shared the craft skills with a supra-local, national, and international audience. Officially described by the guilds as reference works, they became an integral part of the training and working practice of joiners and supported the deepening of the craftsmen's knowledge.

To conclude, even though it is difficult to fully reconstruct the precise training content and structure within the construction crafts apprenticeship in early modern Germany, let alone the personal experience and circumstances of the individual, there are a number of sources that provide a certain insight. Archival sources like guild regulations, letters of application, or contemporary accounts, as well as examination drawings, *Meisterstücke*, and day-to-day furniture and interiors, prove the demanding training of craftsmen, much of which consisted of practical experience, but also went beyond this. The fact that the apprenticeship could be combined with

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<sup>334</sup> Johann Christian Senckeisen, *Leipziger Architectur-, Kunst- und Seulen-Buch* (Leipzig: Christoph Friedrich Rumpf, 1707), 2.

<sup>335</sup> Marcus Nonnenmacher, *Der Architectonische Tischler, oder, Pragerisches Säulen-Buch* (Nürnberg: Posch, 1710), preface: "Und weil die Lehre von den Säulen=Ordnungen das Haupt=Werk so wohl seiner Profession, als auch anderer, sonderlich aber der Baumeister ist; Ein Tischler auch den Ruhm seiner Kunst nicht behaupten kann, wann er nicht sehr tieff in die Gründe der Archiectur eingestiegen."

<sup>336</sup> Peesch, "Säulenbücher," 90.

supplementary training during the journeyman years, as is documented for Franz Schädler, carpenter-architect from Hanover, shows that the craftsmen were acquiring additional skills that were not taught in the workshops. The study of architecture, and most importantly the knowledge of the orders, was regarded as the science of the joinery profession and was therefore an integral part of the craft training.<sup>337</sup> This knowledge was increasingly acquired through manuals and architectural treatises, which were available in the masters' workshops or guilds, or even in one's own possession.<sup>338</sup> From these, or from single-sheet reproductions, columns and other architectural elements could be copied. This practice is described by Erasmus in the preface of his *Seülen-Buch*: "besides my craft and work .... I have often redrawn the five columns from the greater so-called Vignola."<sup>339</sup> The command of the architectural orders could thus be obtained by drawing. Drawing training was therefore an important component of the apprenticeship. Other than understanding architecture, this also had practical reasons. The full-blown capability of presenting ideas on paper was crucial for the following career trajectory, given that it was a criterion for advancement. For, excellent drawing was not only necessary for producing high-quality presentation drawings for receiving commissions, but also served as precise instruction for other craftsmen. The early modern German craft apprenticeship with its focus on architecture and drawing grew skilled craftsmen prepared to design and create space following architectural norms. Furthermore, this training provided the springboard to becoming highly respected building specialists in their own rights. This is certainly true for Johann Gottlieb Borlach. During his joinery apprenticeship he was able to gain the architectural skills he needed to later work in the office of James Gibbs. Consequently, the thesis of a decline of the craft system in the early modern period and the negative assessments attached to a craft apprenticeship by some researchers require revaluation. The practice of apprenticeship explained above enabled practitioners to work in highly specialised fields and manufacture high-quality, hand-

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<sup>337</sup> Winter, "Meisterstücke der Braunschweiger Tischlergilde," 85.

<sup>338</sup> Peesch, "Säulenbücher," 98.

<sup>339</sup> Georg Caspar Erasmus, *Neues Nürnberger Seülen-Buch* (Nürnberg: Lochner, 1672), preface: "neben meinem Handwerk und Beruf ... darum ich zum öfteren / die fünf Sruhlen / aus den grössern so genannten Vignola nachgezeichnet / habe."

crafted works.

### **The Military and the Saxon Engineering Corps**

Becoming an architect was also possible in the form of an officers' training with a schooling as engineer or *Kriegsbaumeister* (war master builder). As experts or master builders for fortifications, they were the counterpart to the civil master builders from the early seventeenth century onwards.<sup>340</sup> Johannes Faulhaber (1580-1635), himself a seventeenth-century engineer, fortification architect, and mathematician, defines the profession of engineering as follows: "an engineer is not a common builder, but a fortification and war master builder / who possesses a sharp ingenuity."<sup>341</sup> The skill set of an engineer therefore not only included that of a civil architect, but additionally encompassed knowledge of offensive and defensive warfare, including attacking, fortifying, and defending.<sup>342</sup> These tactical and engineering tasks, which would also include the conceiving of inventions, technology, and mathematics, were not acquired through a simple apprenticeship.<sup>343</sup> In addition to experience in construction, an engineer had to have completed a military training, for example as a master gunsmith or artillery officer.<sup>344</sup> In the following, the possible educational paths within the Saxon army in the first half of the eighteenth century will be examined with particular reference to the attainment of the engineering profession. Although some of the sources date from after Castle's and Borlach's time of training, by analysing these materials, it is possible to reconstruct the preceding educational framework and methodological approaches that formed the basis of the later, more formalised training available from about the mid-eighteenth century onwards.

In the early modern period, the career of an officer in all European armies, including the Electoral Saxon army, was generally based more on war craft and

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<sup>340</sup> Ulrich Schütte, *Architekt und Ingenieur: Baumeister in Krieg und Frieden* (Wolfenbüttel: Herzog-August-Bibliothek, 1984), 18.

<sup>341</sup> Translated after Johann Faulhaber, *Anderer Theil der Ingenieurs Schul. Darinnen die Regular Fortification, sampt den Aussenwercken / durch und ohne Rechnung mit neuen Inventionibus gelehrt werden* (Ulm: Saur, 1633), 3.

<sup>342</sup> Schütte, *Architekt und Ingenieur*, 23.

<sup>343</sup> Schütte, *Architekt und Ingenieur*, 23.

<sup>344</sup> Hartwig Neumann, *Festungsbaukunst und Festungsbautechnik. Deutsche Wehrbautechnik vom XV. bis XX. Jahrhundert* (Bonn: Bernard und Graefe, 1994), 148.

experience than on a scientific, standardised education.<sup>345</sup> An officer candidate for non-technical troops did not have to fulfil any particular mental or physical requirements at the start of his career, nor were there any standardised and compulsory courses of education during the military “in-service-training”.<sup>346</sup> In most cases, it was birth status as well as economic and social capital alone that determined the admission and advancement of an officer candidate rather than a scientific education.<sup>347</sup> Only from about the mid-eighteenth century onwards professionalisation within the military can be observed, i.e., the development of certain tasks into professions that underwent a formalised and increasingly specialised training and whose practitioners considered themselves members of a specific professional group.<sup>348</sup> The specialisation of the profession of the engineer already occurred in the course of the seventeenth century, when artillery and engineer troops were upgraded with technical specialists within the armies.<sup>349</sup> Therefore, candidates had to fulfil at least some entry requirements and had to have certain basic knowledge.

Although previous education was not necessarily a prerequisite for an officer’s career, the nobility and bourgeoisie had accepted certain educational ideals, institutions, and styles. This could involve, for example, a university education, a grand tour, a stay at a princely court, or attendance at a primary school.<sup>350</sup> One such institution were the so-called knight academies (*Ritterakademien*), which were intended to train young noblemen to be men of the world and prepare them for all

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<sup>345</sup> Carmen Winkel, “Auf dem Weg zum professionellen Offizier? Formen und Institutionen der Offiziersausbildung in der preußischen Armee (1713-1786),” in *Das ist Militärgeschichte! Probleme – Projekte – Perspektiven*, ed. Matthias Rogg and Christian T. Müller (Paderborn; München; Wien; Zürich: Schöningh, 2013), 410.

<sup>346</sup> Dethloff, *Das kursächsische Offizierskorps*, 162; Carmen Winkel, *Im Netz des Königs. Netzwerke und Patronage in der preußischen Armee 1713-1786* (Paderborn; München; Wien; Zürich: Ferdinand Schöningh, 2013), 39.

<sup>347</sup> Winkel, “Auf dem Weg zum professionellen Offizier,” 410.

<sup>348</sup> *Enzyklopädie der Neuzeit Online*, ed. Friedrich Jaeger, Georg Eckert, Ulrike Ludwig, Benjamin Steiner, and Jörg Wesche, s.v. “Professionalisierung,” accessed August 1, 2023, [http://dx.doi.org/10.1163/2352-0248\\_edn\\_COM\\_331652](http://dx.doi.org/10.1163/2352-0248_edn_COM_331652).

<sup>349</sup> Neumann, *Festungsbaukunst und Festungsbautechnik*, 149.

<sup>350</sup> Dethloff, *Das kursächsische Offizierskorps*, 162.



kinds of tasks in state administration, court life, and warfare.<sup>351</sup> Working as a page was another popular training setting for young nobles, who served in the retinue of a prince or lord, in exchange for which they were guaranteed an appropriate education.<sup>352</sup> Through the models of the knight academies and pageries, the so-called cadet institutes were developed, specialising in training the youth for military service. In a letter dated June 6, 1729, the writer and courtier Karl Ludwig von Pöllnitz (1692-1775) captures the cadet schools and pageries in the Kingdom of Prussia as follows: “I will, however, just acquaint you of a Foundation by the present King, in favour of the young Gentlemen of his Dominions, which are the Academies of Cadets, in Berlin, Magdebourg, and other Towns, where they are taught the Rudiments of War; so that ‘tis a Nursery from whence the King makes a Draught of good Officers. His Majesty has moreover ordered his General of Foot to take each a young Gentleman, whose Fortune does not happen to be equal to his Birth, to keep them as Pages, and to make them learn their Exercises, and every thing that an Officer ought to know. An excellent Institution this, and a fine Resource for the poor Nobility!”<sup>353</sup>

In Saxony, an *Adeliche Compagnie Cadets* (noble company of cadets) was established in January 1692, which was to qualify young men both as courtiers and officers.<sup>354</sup> As mentioned above, this was an institution only open to the offspring of the nobility. Even though this may have excluded Castle from joining, the following section provides an account of the training methods there. After all, the extensive records available provide valuable information about the education of draughtsmen during this period. The age at entry to the cadet corps ranged from 9 to 25 years, with an average age of 15 years.<sup>355</sup> While the curriculum indeed provided lessons in geometry, fortification, and languages, the training of the cadets was affected by their

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<sup>351</sup> *Enzyklopädie der Neuzeit Online*, ed. Friedrich Jaeger, Georg Eckert, Ulrike Ludwig, Benjamin Steiner, and Jörg Wesche, s.v. “Ritterakademie,” accessed August 1, 2023, <[http://dx.doi.org/10.1163/2352-0248\\_edn\\_SIM\\_341235](http://dx.doi.org/10.1163/2352-0248_edn_SIM_341235).

<sup>352</sup> Dethloff, *Das kursächsische Offizierskorps*, 163.

<sup>353</sup> Karl Ludwig von Pöllnitz, *The Memoirs of Charles-Lewis Baron de Pollnitz* (London: Daniel Browne, 1737), 148-49.

<sup>354</sup> Max Jähns, *Geschichte der Kriegswissenschaften, vornehmlich in Deutschland. Zweite Abteilung. XVII. und XVIII. Jahrhundert bis zum Auftreten Friedrichs des Großen 1740* (München; Leipzig: R. Oldenbourg, 1890), 1251. Increased efforts to establish such private military academies were likewise made in England in the last decade of the seventeenth century.

<sup>355</sup> Dethloff, *Das kursächsische Offizierskorps*, 193.

military assignments, like participating in military expeditions and celebrations.<sup>356</sup> They were further enlisted as garrison duty and palace guards, or employed as orderlies and couriers.<sup>357</sup> Because of this, educating and disciplining the cadets proved to be difficult. When the new commandant, August Christoph Graf von Wackerbarth, took office in 1718, he brought about fundamental changes in both discipline and training. Wackerbarth was responsible for the first educational reform for junior officers, which not only restructured the duty and training of the cadet corps, but also improved administration structures. The training course for cadets was completely reorganised and, in addition to military tasks such as fencing and rifle handling, the curriculum was extended and now also included the study of arithmetic, geography, mathematics, fortification, architecture, and morale.<sup>358</sup> In the course of the reform, Wackerbarth made his private book collection available to the training company.<sup>359</sup> It contained about 500 volumes covering a cross-section of all sorts of science, including theology, mathematics, and the natural sciences, medicine, as well as philosophy. There were further some fundamental military books, particularly from the seventeenth century, such as Johann Jacob Wallhausen's *Corpus Militare* (1617).<sup>360</sup> It can be assumed that these books were used as teaching material by the cadets. It is further reported that in fortification drawing, the cadets prepared a self-constructed, neatly washed, and coloured drawing with finely rendered letters, according to the conventions of the time, together with elaborate pictorial decoration.<sup>361</sup>

The ways the cadets developed their drawing skills are indicated by contemporary depictions and descriptions. In a handbook for noblemen, there is a chapter on the education of princes or young noblemen containing an illustration showing a study room (fig. 2.19). To the left of the image is a table around which several boys are gathered, engaged in activities such as writing, reading, and drawing.

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<sup>356</sup> Johannes Höser, *Verzeichnis der sächsischen Kadetten 1719 bis 1724. Mit einem Verzeichnis der Kadetten 1713-24* (Leipzig: Zentralstelle für Deutsche Personen- und Familiengeschichte, 1937), 5.

<sup>357</sup> Dethloff, *Das kursächsische Offizierskorps*, 182.

<sup>358</sup> Johann (Hans) Friedrich von Flemming, *Der vollkommene Teutsche Soldat* (Leipzig: Johann Christian Martin, 1726), 136.

<sup>359</sup> Heinrich Meschwitz, *Geschichte des Königlich Sächsischen Kadetten- und Pagen-Korps: von dessen Begründung bis zur Gegenwart* (Dresden: Damm, 1907), 71.

<sup>360</sup> Dethloff, *Das kursächsische Offizierskorps*, 211.

<sup>361</sup> Meschwitz, *Geschichte des Königlich Sächsischen Kadetten- und Pagen-Korps*, 54.

One of them clearly copies a drawing placed in front of him. The fifth chapter of the compendium *Der Vollkommene Teutsche Soldat* from 1726 by Johann (Hans) Friedrich von Flemming (1670-1733), first lieutenant under Augustus the Strong, is devoted to the subject of “reading, writing, painting, and drawing for young people.” An accompanying two-page engraving illustrates a study hall with students writing, drawing, copying, discussing, and listening, along with several instructors (fig. 2.20). The walls are hung with representations of gun barrels, fortification plans, and maps. The end wall is equipped with a large map displaying the siege of a waterfront fortress with a so-called *tenaille* defensive work.<sup>362</sup> Books on racks are also provided, referencing a soldier’s library which is something that according to Flemming every soldier should have. He explains: “In order to learn to draw, they [the young people] must begin with good drawings made by competent people, and first make a start from the easy ones before they proceed to the difficult ones. If they want to learn to draw on their own, they must either cover the engraving with paper soaked in oil, so that the image shines through the oil-soaked paper, and they may simply trace it, or through a large pane of glass [...] If one repeats this a few times, one thereby attains a skill in drawing, and one can thus learn to draw on one’s own.”<sup>363</sup> It would be better, however, to have a teacher who “shows the main principles and divisions that are important for any figure. In due time, as soon as he has acquired some skill in drawing, he must lead him to life and to nature [...], for otherwise, even if he is very skilled in tracing the engravings, and he has not been led to nature, it will appear quite strange to him afterwards, and he will not be able to progress.”<sup>364</sup> Flemming also mentions lay

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<sup>362</sup> Schütte, *Architekt und Ingenieur*, 115 cat. no. 83. *Tenaille* refers to a low outwork with star-shaped layout in the main ditch between two bastions.

<sup>363</sup> Cited after Flemming, *Der Vollkommene Teutsche Soldat*, 15: “Um das Reißen zu lernen, müssen sie [die jungen Leute] bey guten Zeichnungen anfangen, die von tüchtigen Leuten verfertiget, und erstlich von denen leichtern den Anfang machen, bevor sie zu schwehren schreiten. Wollen sie vor sich selbst erlernen, so müssen sie den Kupferstich entweder mit Oehl getränckten Pappier belegen, damit das Bild durch das Oel getränckte Pappier scheine, und sie nur nachfahren dürfen, oder durch eine grosse Glasscheibe [...] Wiederholet man solches einigemahl, so gelanget man dadurch zu einer Fertigkeit im Zeichnen, und man kann so das Reißen vor sich selbst erlernen.”

<sup>364</sup> Cited after Flemming, *Der Vollkommene Teutsche Soldat*, 15: “Haupt-Fundamenta und Abtheilungen zeigt, worauf es bey einer jedwedigen Figur ankomme. Er muss ihn bey Zeiten, so bald als er nur im Zeichnen einige Fertigkeit erlanget, auf das Leben und auf die Natur führen [...], denn sonst, wenn er noch so geschickt ist in Nachzeichnung der Kupferstiche, und er ist nicht zur Natur angeführet worden, so deuchtet es ihm hernach ganz fremde, und kann nicht fortkommen.”

figures, suggesting their value to beginners in the art of drawing.

Despite efforts to provide solid training at the Adelige Compagnie Cadets, there was still room for improvement. Thus, when the post of master scribe and arithmetician became vacant in 1720, Wackerbarth subjected the twelve applicants to an examination requiring proof that the chosen candidate mastered “the rule of three and *Welsche Practica*, geometry, decimal arithmetic, trigonometry, respective the measurement of triangles, square and cubic roots, spatial geometry and the theory of fortification, especially the *architectura civilii practice*.”<sup>365</sup> In 1724, Wackerbarth still complained that the cadets did not study the sciences in the manner required for the habilitation of a nobleman and did not even master the simplest French terms after two to four years of instruction.<sup>366</sup> In 1725, he developed a memorandum for the establishment of a new knight and military academy, which was supported and signed by several peers.<sup>367</sup> The document is several pages long and precisely lists the advanced educational content that was to be taught in the new academy. Among them are dancing, equestrian vaulting, the art of artillery, basics in rhetoric and the art of speaking, the study of logics, maths, arithmetic, geometry, civil and military architecture, history, geography, politics, *ius naturale*, *ius gentium*, and heraldry. The new academy was to become something between an institution for the training of officers, a grammar school, and a university, welcoming natives and non-natives, nobility, and citizens, and representing a teaching institute of such scope and structure as had never been seen before in Europe.<sup>368</sup> After some toing and froing, the proposal was finally accepted and the Ritter- und Militärakademie was founded. This involved the erection of housing and teaching buildings for the cadets and the division of the pupils into different classes according to their age. Language lessons were held daily, while classes in engineering, dancing, drawing, arithmetic, geography, and fencing were held twice a week.<sup>369</sup> In addition to this, the cadets had to continue to be on guard duty. After Wackerbarth’s death in 1734, there were no further significant changes.

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<sup>365</sup> Cited after Meschwitz, *Geschichte des Königlich Sächsischen Kadetten- und Pagen-Korps*, 54. The *Welsche Practica* is an Italian method for solving applied arithmetical problems.

<sup>366</sup> Meschwitz, *Geschichte des Königlich Sächsischen Kadetten- und Pagen-Korps*, 53 f.

<sup>367</sup> SächsStA-D, 11332 Kriegsgerichte besonderer Behörden und Formationen bis 1867, Nr. 840.

<sup>368</sup> Meschwitz, *Geschichte des Königlich Sächsischen Kadetten- und Pagen-Korps*, 55.

<sup>369</sup> Dethloff, *Das kursächsische Offizierskorps*, 185.

Indeed, it can be assumed that the level of teaching somewhat declined. For, in 1748, there was an appeal for mismanagement in the establishment and Elector Frederick Christian (1722-1763) was appointed chief of the company of cadets. Under his leadership, attempts were made to resolve the problems in the following years. In this way, the library was enlarged and the entrance fees of the newly admitted cadets were used to purchase teaching materials. On average, the stay in the cadet corps was four years and three months. Afterwards, a placement in all branches of the Electoral Saxon army was possible.

While only members of the nobility were admitted to the pre-1726 cadet corps, career opportunities increasingly emerged for craftspeople and members of the bourgeoisie in military engineering, especially in the fields of artillery and engineering, and in developed armies and their officer corps.<sup>370</sup> This was due, on the one hand, to the fact that the positions in the artillery and among the engineers were not considered particularly appropriate for the nobility and, on the other hand, because specialised technical expertise was required, which, in turn, was mainly possessed by the bourgeoisie. Furthermore, the guild character of artillery and engineering led to officers in these branches often originating from craft, civic, and farming backgrounds.<sup>371</sup> In 1712, Wackerbarth established the first independent corps of engineers (*Ingenieurkorps*) consisting of eight engineers (officers) and 16 conductors (non-commissioned officers).<sup>372</sup> Head of the corps was until 1745 the general administrator of civil and military buildings, who also presided over the *Oberbauamt*. Previously, the engineers had been part of the artillery and received their orders from a senior engineer who reported to the general staff. Now they operated as an independent troop unit directly subordinate to the Elector. Until the establishment of separate schools and courses from around the mid-eighteenth century onwards, candidates who wished to join the engineering corps had to be instructed by an officer or non-commissioned officer.<sup>373</sup> From these they received

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<sup>370</sup> Dethloff, *Das kursächsische Offizierskorps*, 45.

<sup>371</sup> Karl, "Chargenhandel im bayerischen Offizierskorps," 62.

<sup>372</sup> Uwe Fraunholz, "Erbauen und Zerstören. Sächsische Ingenieur-Offiziere und Baumeister an der via regia im Barockzeitalter," in *Menschen unterwegs. Die via regia und ihre Akteure*, ed. Winfried Müller, and Swen Steinberger (Dresden: Sandstein, 2011), 115.

<sup>373</sup> Dethloff, *Das kursächsische Offizierskorps*, 45.

training in return for a premium. Thus, at first, the instructor's ideals and the pupil's previous knowledge were decisive for scope, focus, and quality of the training.<sup>374</sup> However, since many of the engineer officers who were teaching had poor qualifications and had only made it into the corps through nepotism, they had limited ability to pass on knowledge. Following their lessons with the officers, the aspirants joined an infantry regiment, where they became familiar with frontline service.<sup>375</sup> From there, they could join the engineering corps, although, as already mentioned, patronage played a major role in the selection process and less consideration was given to ability and knowledge. In order to raise standards within the engineering corps, from 1733 onwards, scholarships were awarded to deprived aspiring engineer officers who wished to take private lessons in mathematics and military engineering.<sup>376</sup> Furthermore, from 1735, de Bodt, who had succeeded Wackerbarth as lieutenant-general after his retirement in 1728 (and thus had also taken over the management of the *Oberbauamt*), embarked on the reorganisation of the engineering corps. Henceforth, in order to be promoted to the rank of officer in the engineering corps, candidates had to pass various examinations in mathematical sciences (arithmetic, geometry, trigonometry, and stereometry), practical surveying, mechanics, perspective, fortification, and drawing.<sup>377</sup> These entry qualifications followed the French example of military engineer Sébastien Le Prestre de Vauban (1633-1707).<sup>378</sup> De Bodt further tried to improve the training of the engineers within the corps. In 1737 he hired a master workman to teach some engineers in architecture and stereometry.<sup>379</sup> At the same time, de Bodt submitted an application for the appointment of a professor of mathematics, which was, however, not approved.

Despite all efforts, patronage could not be eliminated. Documents from the archive in Dresden testify to how the king's favour was courted in the hope of

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<sup>374</sup> Bognár, *Der Architekt in der Frühen Neuzeit*, 93.

<sup>375</sup> Friedrich Wilhelm Hansch, *Geschichte des Königlich Sächsischen Ingenieur- und Pionierkorps (Pionier-Batallions Nr. 12)* (Dresden: Päßler, 1898), 70.

<sup>376</sup> Thomas Hänseroth, "Von der 'Bevöstigung' zur Eisenbahn: Das Sächsische Ingenieurcorps und seine Ausbildung im 18. und frühen 19. Jahrhundert," in *Sozialgeschichte der Technik. Ulrich Troitzsch zum 60. Geburtstag*, ed. Günter Bayerl and Wolfhard Weber (Münster: Waxmann, 1998), 133 f.

<sup>377</sup> Hansch, *Geschichte des Königlich Sächsischen Ingenieur- und Pionierkorps*, 97 f.

<sup>378</sup> Hänseroth, "Von der 'Bevöstigung' zur Eisenbahn," 134.

<sup>379</sup> Hansch, *Geschichte des Königlich Sächsischen Ingenieur- und Pionierkorps*, 97 f.

promotion. In a letter from January 1739 to King Augustus III of Poland (1696-1763), engineer-architect Johann Rudolf Fäsch first asks for financial support for his son Georg Rudolph's tour to Italy to study civil and military architecture. Even though the king had already given 200 *Reichsthaler*, Fäsch, who was a teacher at the cadet corps, proposes to raise this donation to 500 *Reichsthaler* and an additional cash injection of 300 *Reichsthaler*. He argues that his son's travels are not a pleasure trip but a study trip for the benefit of the construction of the king's new bastion. Furthermore, Georg Rudolph would strictly follow the king's instructions on this tour, enquiring for "this and that" in various places and transact business, for which, of course, money would be needed. In a second letter six months later (June 1, 1739), Fäsch pleads with the privy councillor Johann Christian von Hennicke (1681-1752) to employ his son as engineer in the engineering corps after his return to Dresden.<sup>380</sup> The father's request was successful: in 1740, Georg Rudolph Fäsch was appointed sous-lieutenant in the engineering corps.<sup>381</sup>

The career of Carl Friedrich Pöppelmann (c. 1695/1701-1750), son of Matthäus Daniel Pöppelmann, is another example for the importance of personal contact and royal interest and goodwill for a successful professional development.<sup>382</sup> Several letters by Carl Friedrich to Augustus II the Strong and Wackerbarth from November 1725 attest to his efforts to advance.<sup>383</sup> In his pleas he asks for adjustment of his wage to that of the position of an engineer captain, to which he had been promoted in July that year.<sup>384</sup> Eventually, he achieved the leap from the engineering corps. Carl Friedrich Pöppelmann was appointed private draughtsman to the Saxon sovereigns and was given a position directly subordinate to them. This ultimately led to his ennoblement in 1742. Clearly, individuals in the king's favour enjoyed special career opportunities within Saxon's building industry, while the living conditions of

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<sup>380</sup> Both letters in: SächsStA-D, 10026, Nr. Loc. 03524/05.

<sup>381</sup> Göphardt, "Alphabetisches Verzeichniß der sächsischen Offiziere, 1622-1815".

<sup>382</sup> See Walter Hentschel, *Die Sächsische Baukunst des 18. Jahrhunderts in Polen* (Berlin: Henschelverlag, 1967), 59-68.

<sup>383</sup> SächsStA-D, 11237 Geheimes Kriegsratskollegium, Nr. Loc. 10922/08.

<sup>384</sup> Contained in the same folder is a similar writing by Johann Christian Hoffmann from March 19, 1725. It is a letter of application. Hoffmann states that he has learned the art of engineering from major Fürstenhoff, followed by a five-year long employment as *Conducteur* for major general Grawert. Given the death of the latter, Hoffmann asks for a position as conductor in the corps and announces to present a sketch when paying his courtesy visit.

most engineer officers were often desolate due to low pay and low prestige.<sup>385</sup>

The preferment of individuals, as well as the lasting incompetence of the majority of the members of the engineering corps was finally addressed by de Bodt in an impassioned memorandum from March 31, 1742.<sup>386</sup> He suggested, among other things, that advancement within the corps ought to be based on performance and application.<sup>387</sup> The main result of the memorandum was the appointment of an *Ingenieur-Geometer* (engineer-geometer) and a *Zeichenmeister* (drawing master) by order of the elector. These formed the basis of the permanent teaching staff of the Dresden engineering academy (Ingenieurakademie), which eventually opened its doors on December 16, 1743. It is regarded as the first engineering academy within Europe.<sup>388</sup> These academies, though they post-date the departure of Castle and Borlach, provide further insight into what was considered best practice in military environments. Instruction included the following subjects: maths and its applications, fortification, surveying (theoretical and practical), cartography, geography, civil architecture, model making, as well as mechanics including hydromechanics.<sup>389</sup> Drawing exercises also took a large part of the education. These certainly consisted, as outlined above, particularly of the copying of engravings or drawings.

Detailed directions for the engineer-geometer Christian Polycarp Leyser and the engineer-drawing master Johann Carl Schätz from 1743 provide information on the skills needed for those positions at the engineering academy.<sup>390</sup> Leyser, for example, had to master geography, “architectura civilis” (including the drawing of elevations and constructing buildings using the various orders), geometry, planimetry, surveying, and trigonometry, whereas all those had to come into operation both on

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<sup>385</sup> Hänseroth, “Von der ‘Bevöstigung’ zur Eisenbahn,” 136; Haupt, “Fürsten, Hofkünstler und Baubeamte,” 215.

<sup>386</sup> Thomas Wollschläger, *Die ‘Military Revolution’ und der deutsche Territorialstaat unter besonderer Berücksichtigung Brandenburg-Preußens und Sachsens: Determinanten der Staatskonsolidierung im europäischen Kontext 1670-1740* (Norderstedt: Books on Demand GmbH, 2002), 85.; SächsStA-D, 11345 Ingenieurkorps, Nr. 48.

<sup>387</sup> Hänseroth, “Von der ‘Bevöstigung’ zur Eisenbahn,” 136.

<sup>388</sup> Freek Schmidt, “Open to All: Architectural Education,” in *Companions to the History of Architecture, Volume II: Eighteenth-Century Architecture*, ed. Caroline van Eck, and Sigrid de Jong (West Sussex: Wiley Blackwell, 2017), 7.

<sup>389</sup> Hänseroth, “Von der ‘Bevöstigung’ zur Eisenbahn,” 136.

<sup>390</sup> SächsStA-D, 12884 Karten und Risse, Nr. Loc. 10983, Die Annehmung der Zeichenmeister, 1743.



paper and in the field. Schätz on the other hand, had to give lessons in drawing, which had to comprise the drawing up and washing of figures, cartouches, and coats of arms, as well as varying situations, i.e., fields, forests, and different tree species, castles, and rivers on a large and small scale. Although this formalisation post-dates the training of Castle and Borlach, the development of training in engineering education provides insight into the standards sought by men such as Wackerbarth and the types of sources and tools that guided the training of military engineers in the seventeenth century.

In addition to instruction by educational staff, knowledge was obtained through books. Even beyond the training context, these continued to serve as important sources for the further professional development. This is attested to by the document registering the estate of engineer-lieutenant Christian Friedrich Sattler, who died on August 15, 1766.<sup>391</sup> It contains a register of his extensive book collection comprising architectural, mathematical, and other scientific topics, such as Leonhard Christoph Sturm's German edition of Augustin Charles D'Aviler's *Cours d'Architecture, Qui Comprend Les Ordres De Vignole* (*Ausführliche Anleitung zu der ganzen Civil-Bau-Kunst*, 1747), the seventh edition of Benjamin Hederich's *Anleitung zu den vornehmsten mathematischen Wissenschaften* (1754), and Jacob Meyer's *Arithmetica Decimalis, Das ist, Rechen-Kunst der Zehenden Zahl* (1669). Sturm and Hederich were both working as teachers, which might have made their books particularly valuable for instruction. From 1695 until 1702, Sturm had taught mathematics at the Ritterakademie in Wolfenbüttel, which had been established in 1687. Between 1700 and 1705, he published a three-volume work that was specifically intended as a teaching manual for institutions like these. Hederich was one of the leading pedagogues in the eighteenth century and publisher of numerous reference works and textbooks.<sup>392</sup> Sattler's estate further included a large number of plans, drawings, and copper engravings of fortifications and geometry, which may have provided his personal teaching and reference material.

To conclude, training in the military context steadily improved from the beginning of the eighteenth century onwards, affecting first the technical troops such

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<sup>391</sup> SächsStA-D, 11332 Kriegsgerichte besonderer Behörden und Formationen bis 1867, Nr. 832.

<sup>392</sup> Isphording, *Mit Richtscheit und Zirkel*, 212.

as the engineering corps, and eventually impacting other branches of the military including the cadet corps. Instruction by officers was replaced more and more by professional teaching staff and completed by study from books. As a result, the trainees' skills increased considerably, even if senior figures such as Wackerbarth or de Bodt still considered them inadequate. With the establishing of the Ingenieurakademie in Dresden, Electoral Saxony provided the curriculum, which – consisting of theory and practical experience – was commonly taught in the European educational establishments for engineer officers from the second half of the eighteenth century onwards.<sup>393</sup> It existed in this form – with an interruption during the Seven Years' War (1756-1763) – until 1816. Drawing played an important role as a teaching component in both the cadet and the engineering corps. While advancement opportunities were often linked to the king's favour, the conditions for this kind of nepotism became increasingly difficult, for example, through the introduction of exams. Nevertheless, the influence of the sovereign on the careers of individuals seems to have been considerable, which may not have been the case to the same extent in the above-mentioned training contexts – except perhaps in the *Oberbauamt*.

## Conclusion

This chapter has provided a bird's eye view of the potential training routes for architectural and engineering draughtsmanship in the late seventeenth and early eighteenth centuries, with a particular reference to Germany. It has been shown that during this period there was an increasing emphasis on professionalism and expertise in these fields leading to the development of new training concepts and institutions. The chapter further highlighted the importance of drawing skills for architects and engineers and shows how the introduction of novel training routes and methods contributed to the emergence of a new generation of highly skilled draughtsmen.

The Saxon *Oberbauamt* was one of the key actors in this, becoming the most important supplier of employment and training due to its hierarchical and bureaucratic structures as well as the unique local situation. The high level of

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<sup>393</sup> Hänseroth, "Von der 'Bevöstigung' zur Eisenbahn," 136.

professionalism and expertise of the office contributed to Saxony becoming one of the leading centres of architecture in Europe in the eighteenth century. In order to qualify as a state building official in the Saxon building authority, a certain level of proficiency was required. A background in crafts was an important component for a career in this institution. Once employed as a *Conducteur*, in effect the entry-level position, further on-the-job training would lead to promotion to higher positions. But even before their employment at the office, conductors may be considered multi-skilled professionals. Their key responsibilities were administrative and technical tasks, and they were expected to advance their studies in architecture and related sciences. Certain parallels between the work in the *Oberbauamt* and the skillset and working methods of Richard Castle suggest that he acquired his skills and knowledge through an interaction with the *Oberbauamt* or a comparable office, e.g., the Office of Works. In this context, the survey of the *Oberbauamt* provided a valuable context for the Office of Works and Office of Ordnance in England, both of which will be discussed later. In addition, the importance of drawing skills for building officials in Saxony became evident. Just like Castle, Pöppelmann, Knöffel, and Locke were skilled draughtsmen, and their drawings were essential for the design and construction of the buildings they worked on.

Various factors led to the emergence of new educational concepts for architects and engineers in the late seventeenth and early eighteenth centuries. The founding of the Académie Royale d'Architecture in Paris was a key event in this process, and its more systematic and state-organised approach to architectural training was soon adopted by other European countries. While universities only offered architecture in the framework of other subject areas, the first academies in Germany provided a broader range of courses and associated architecture with the other arts. This led to academies gaining in popularity among aspiring architects due to their practical and state-of-the-art teaching. These academies were not originally intended as a replacement for the traditional craft apprenticeship, but rather as complementary institutions that would be able to serve to produce better educated and qualified architects and artists. The Berlin academy of arts was a pioneer in the development of artistic and architectural education, despite the fact that at times it

lacked a clear implementation. Nevertheless, it was one of the first art academies in Europe to be established on a formal basis, with a constitution and a regular teaching programme. The academy's curriculum was comprehensive and covered a wide range of subjects. Drawing was central to the academy's mission to train students in arts and architecture, and members were expected to develop a high level of skill in this area. The academy's lecturers included some of the most important professionals of the time, such as Andreas Schlüter, who strongly influenced the new generation of architects and artists.

The traditional guild-based apprenticeship system in early eighteenth-century Germany offered another important route for building specialists to acquire architectural expertise. This involved a demanding and rigorous training programme that provided the craftsmen with a wide range of skills, including practical experience, architectural knowledge, and draughtsmanship. These qualities enabled craftsmen to design and create according to architectural standards and to work in highly specialised fields. A practical craft education was of considerable relevance to aspiring architects and could also offer opportunities for social mobility, i.e., people from more modest backgrounds were able to pursue a career in architecture. A characteristic of the craft apprenticeship system lay in the transregional flexibility it offered to journeymen. This had several advantages, including enabling journeymen to learn about new ideas and practices, disseminate their knowledge and skills, and establish contacts with potential employers elsewhere. In addition, architectural training and drawing were essential elements of the eighteenth-century joinery training. This training was intended to provide joiners with the necessary skills and knowledge to produce high-quality furniture and other woodwork in line with the latest architectural trends. This was accomplished through the integration of the classical five orders into everyday (workshop) life, drawing on architectural treatises and manuals, and an increase in craftsmen-authors who developed models for the practical application of the orders. The construction crafts apprenticeship system was thus an important source of skilled labour for the early modern German building industry and beyond.

Another context for obtaining architectural knowledge and skill was a

specialised training in the army. While the general requirements for an officer's career in the early modern period were based more on birth status and economic and social capital than on a scientific education, the eighteenth century saw increasing emphasis on professionalising the military and its training facilities. This development was due to several factors, including the increasing complexity of warfare and the need for highly skilled engineers. This led to the development of formalised training programmes for engineers and other technical specialists. Drawing became an important part of the cadet training and cadets developed their drawing skills through a variety of methods, such as copying existing drawings or studying fortification plans and maps. The Saxon Electorate was committed to providing a high-quality education to its future officers, and the curriculum of institutions such as the Ritter- und Militärakademie was constantly being updated to incorporate the latest advances in military science and technology. These efforts are also reflected in reforms within the engineering corps, which helped to improve the quality of training and professionalism in the corps, albeit patronage and personal relationships remained a problem in securing promotions and advancement. The establishment of the Dresden Ingenieurakademie marked the final significant improvement in the training of military engineers in Saxony and was a significant step towards meritocracy in the Saxon army. Evidently, the training of military engineers in Saxony underwent a significant change in the eighteenth century from a system of patronage and personal relationships to one based on professionalisation and performance orientation. At the same time, the development of drawing skills might reflect the changing nature of warfare. The increasing complexity and technological sophistication of military operations resulted in a growing need for officers to be able to skilfully draw maps, fortifications, and other technical illustrations.

## CHAPTER 3

## The Art of Draughtsmanship in Early Modern Europe: People, Places, and Conventions

In this chapter I seek to bring together the drawing types and styles prevalent in Europe and Britain by 1720 to understand office practice in Britain at the point when Richard Castle and Johann Gottlieb Borlach commenced their architectural careers in England and Ireland. The aim is to collect disparate research evidence from existing scholarship, identify the principal drawing practices in Europe, and combine them within a single discussion. In so doing, a further step will be taken to acknowledge the art of draughtsmanship as a group activity. The following geographical regions as well as architectural schools and offices form the focus for a detailed assessment. Closer attention is given to Dresden and the local building industry with Matthäus Daniel Pöppelmann and Zacharias Longuelune. It was in Dresden where the families of Richard Castle and Johann Gottlieb Borlach were based and where Johann Gottlieb Borlach received his training as a joiner in 1708.<sup>394</sup> Furthermore, Berlin and the building department with the engineer-architect and *Schlossbaumeister* (castle builder) Martin Heinrich Böhme are of particular relevance, given that he may have influenced contact with Johann Gottlieb Borlach through his brother, Johann Gottfried Borlach, who probably was acquainted with Böhme.<sup>395</sup> Additionally, Gottfried Borlach is believed to have studied at the Berlin Academy of Arts between 1707 and 1713, suggesting that Johann Gottlieb Borlach may also have migrated to Berlin.<sup>396</sup> For this reason, Andreas Schlüter is considered. He was a member of the academy from 1696 to 1714, serving as rector in 1698 and from 1700 to 1713, and as director from 1702 to 1704. Schlüter was further director of the Berlin building department from 1700 to 1713. His successor as palace building director, Johann Friedrich Eosander (1669-1728), is of equal interest. Another important figure is Jean de Bodt. The military architect and engineer was not only working for the Prussian court in Berlin. Before that, he served in the British army. Following his tenure in Berlin, de Bodt then worked in Saxony from 1728. De Bodt is thus an important link between the different locations and was well placed to

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<sup>394</sup> StAD, 11.2.64 Tischler, f. 120.

<sup>395</sup> Bischof, "Geschichtlich-technologische Mitteilungen," 6.

<sup>396</sup> Bischof, "Geschichtlich-technologische Mitteilungen," 6.

influence the trajectory of Castle and Borlach towards England. In addition, the architectural task of building a stately gate is a major theme in de Bodt's work.<sup>397</sup> He designed ephemeral gates of honour, for example for the *Entrée Triumphante* of Frederick I into Berlin after his coronation on May 6, 1701, and made use of his tasks in fortification to design the entrances in a representative manner. The subject of triumphal arches is relevant, for the only designs reliably attributed to Borlach are the gatehouse designs noted above and published in 1776 as *Designs of Architecture, for Arches and Gates, the Several Plans, and Uprights, Contained in XX Plates*.<sup>398</sup>

Beyond Germany, Paris as the seventeenth-century world power and artistic heart of Europe cannot be ignored. It was in France that the first standardised drawing conventions (e.g., colour, scale bar) were formulated, setting a benchmark for quality and form. Many French architects were engaged in royal households in Germany. Besides, France is considered fundamental for Sir Christopher Wren's architectural work, which in turn influenced several generations of British architects. In addition to this, Roman architectural drawings receive a closer investigation. For, not only did a large number of Italian building specialists work in the British Isles, such as Giacomo Leoni (1686-1746?) and Alessandro Galilei (1691-1737), but Rome and Italy in general were an important educational setting for architects and artists. James Gibbs studied under Carlo Fontana, rendering Fontana's studio and his drawing practices of particular relevance to this study. Finally, the Dutch Republic requires consideration, as Richard Castle's parents are traceable in Amsterdam trades circles by the late seventeenth century.<sup>399</sup> Furthermore, we are told by a biographer that James Gibbs spent some time in Holland on his way to Rome.<sup>400</sup> It seems that at the time, a stay in Holland for training was not unusual. There is for instance a reference to an 18-month educational visit to Holland by English architect

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<sup>397</sup> Kuke, *Jean de Bodt*, 110.

<sup>398</sup> Of this publication only the separately cut plates exist, which have been pasted into two scrapbooks. One was presumably owned by John Boydell and was part of the library of the Graham Foundation in Chicago, which was passed on to the Canadian Centre for Architecture (CCA) in the 1980s. I am indebted to Tim Klähn (CCA) for this information. The other scrapbook belonged to Charles Bulfinch and is presently at the Rotch Library, Massachusetts Institute of Technology.

<sup>399</sup> Calderón, and Dechant, "New light on Hugh Montgomerie," 195.

<sup>400</sup> Friedman, *James Gibbs*, 4 f.; Sir John Soane's Museum Collection (SM), Vol. 26, "A short accompt of Mr James Gibbs architect and of several things he built in England &c. after his returne from Italy," 83.



John Sanderson (d. 1774).<sup>401</sup> In addition, trade between the British Isles and the Dutch Republic thrived not only in goods, but also in technology, building materials, material culture, landscape, and urban design.<sup>402</sup> Both in the literature review and in the subsequent sections, these key points of reference will be discussed.

### **The Architectural Drawing – A Historiography**

The scholarly literature on architectural drawings in Europe has traditionally been limited to three types. Firstly, catalogues and discussions of drawings in a specific collection, often in the form of exhibition catalogues. Secondly, extensive monographs on individual architects, in which their style and technique are discussed. A third common approach is to consider architectural drawings and architectural draughtsmanship as evidence of the design process of specific buildings and building projects. In the following, I will present an overview of the historiography on architectural drawings, highlighting questions and problems especially in relation to eighteenth-century architectural drawings.

To the first category of collection-related exploration of architectural drawings belongs Winfried Nerdinger's publication *Die Architekturzeichnung: vom barocken Idealplan zur Axonometrie* from 1985.<sup>403</sup> Based on the holdings of drawings in the collection of the Technical University of München, Nerdinger provides insights into the graphic diversity and multiple functions of architectural drawings against the backdrop of economic and social changes. However, the book's scope is limited by its focus on the holdings of the collection, which mainly date from the late eighteenth to the mid-twentieth century. Other relevant examples of collection-based studies of architectural drawings include Ekhart Berckenhagen's publications on drawings from the Kunstbibliothek Berlin (1970; 1979), John Harris's writings on drawings in several collections from the 1970s, and Howard Colvin's and Maurice Craig's 1996

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<sup>401</sup> Derbyshire Record Office, D231/M/E/76, letter from John Sanderson to Leeke Okeover regarding a disagreement with his cousin John Sanderson, May 10, 1745. Thanks to Prof Christine Casey for drawing my attention to this.

<sup>402</sup> Hentie Louw, "Dutch Influence on British Architecture in the Late-Stuart Period, c. 1660-c. 1714," *Dutch Crossing* 33, no. 2 (October 2009): 84.

<sup>403</sup> Winfried Nerdinger, ed., *Die Architekturzeichnung: vom barocken Idealplan zur Axonometrie* (München: Prestel, 1986).

catalogue *Architectural Drawings in the library of Elton Hall by Sir John Vanbrugh and Sir Edward Lovett Pearce* from 1964.<sup>404</sup> Now styled as the Vanbrugh Album in the collection of the Victoria and Albert Museum, the Elton Hall drawings are an important source for Irish architectural history and the Pearce-Castle architectural office. These drawings are catalogued in some more detail by Charlotte Lorimer and Charles Newton in *The collection of drawings by Sir John Vanbrugh and his circle in the Victoria and Albert Museum* (1996). Occasionally references are usefully made to the drawings in other collections and publications.<sup>405</sup> Maurice Craig's and Desmond Fitzgerald's exhibition catalogue *Irish Architectural Drawings* (1965) provides a brief overview of drawings from the Architectural Records Association's collection in the National Library of Ireland as well as from other public and private collections in Ireland and Britain.<sup>406</sup> Gordon Higgott's online catalogue of 226 drawings by Sir Christopher Wren and his office in the St Paul's Collection as well as Anthony Geraghty's catalogue of drawings by Wren from the collection of All Souls College, Oxford, published in 2007 are more recent and esteemed examples for English architectural drawings.<sup>407</sup> Higgott's and Geraghty's work on Wren and his office exemplifies a major step in research in the late twentieth century, when

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<sup>404</sup> Ekhart Berckenhagen, *Die französischen Zeichnungen der Kunstbibliothek Berlin* (Berlin: Hessling, 1970); Ekhart Berckenhagen, *Architektenzeichnungen 1479-1979. Von 400 europäischen und amerikanischen Architekten aus dem Bestand der Kunstbibliothek Berlin* (Berlin: Kunstbibliothek, 1979); John Harris, *A catalogue of British drawings for architecture, decoration, sculpture and landscape gardening, 1550-1900, in American collections* (Upper Saddle River, N.J.: Gregg Press, 1971); John Harris, *Catalogue of the drawings collection of the Royal Institute of British Architects. Inigo Jones & John Webb* (Farnborough: Gregg, 1972); John Harris, *Catalogue of the drawings collection of the Royal Institute of British Architects: Colen Campbell* (Farnborough: Gregg, 1973); John Harris, and Alan Anderson Tait, *Catalogue of the Drawings by Inigo Jones, John Webb and Isaac De Caus at Worcester* (Oxford: Clarendon Press, 1979); John Harris, Jill Lever, and Margaret Richardson, *Great drawings from the collection of the Royal Institute of British Architects* (London: Trefoil Books, 1983).

<sup>405</sup> E.g., Edward McParland, "Edward Lovett Pearce and the Parliament House in Dublin," *The Burlington Magazine* 131, no. 1031 (February 1989): 91-100.

<sup>406</sup> Maurice Craig, and Desmond Fitzgerald, *Irish architectural drawings: An exhibition to commemorate the 25th anniversary of the Irish Architectural Records Association* (Dublin: Municipal Gallery of Art, 1965).

<sup>407</sup> Gordon Higgott, "The Wren Office Drawings," St Paul's Cathedral, accessed March 30, 2022, <https://www.stpauls.co.uk/wren-office-drawings>; Anthony Geraghty, *The Architectural Drawings of Sir Christopher Wren at All Souls College, Oxford: A Complete Catalogue* (London: Aldershot Lund Humphries, 2007). An online publication of this catalogue, published in 2018 and supplemented by a small group of drawings by Nicholas Hawksmoor can be found here: <http://library.asc.ox.ac.uk/wren/index.html>. See also Gordon Higgott, "The Revised Design for St Paul's Cathedral, 1685-90: Wren, Hawksmoor and Les Invalides," *The Burlington Magazine* 146, no. 1217 (2004): 534-547.

scholars began to identify and acknowledge the contribution of draughtsmen and assistants, leading to an emergence of interest in the offices of architects and their activities. This resulted in a number of articles on draughtsmen and architectural office practice.<sup>408</sup> The emphasis on offices is essential for this chapter and will be discussed below. It is worth noting that some collections have digitised their holdings of drawings and made them available online. Sir John Soane's Museum Collection with its section "English Baroque Drawings" is perhaps the most outstanding example.<sup>409</sup>

The second frequent way of approaching architectural drawings is in the context of monographs on individual architects. An example in this category for the early modern period in England is John Harris's and Gordon Higgott's *Inigo Jones: Complete Architectural Drawings* (1989), which presents drawings by Jones from the holdings of the Royal Institute of British Architects Collection (RIBA), Worcester College Library, the Ashmolean Museum, and the Devonshire Collections. The book also contains a dedicated chapter on Jones's drawing style and technique. Susan Weber's 2013 publication on William Kent includes both finished architectural drawings and sketch designs from various collections as well as a separate chapter devoted to Kent's drawings.<sup>410</sup> Terry Friedman's 1984 monograph on James Gibbs is "the first book to chart fully the architect's long and prosperous career" and although there is no specific chapter on Gibbs's architectural drawings, many of them are reproduced and discussed throughout the book.<sup>411</sup> Axel Klausmeier's 2000 book *Thomas Ripley, Architekt* addresses Ripley's drawings and his demand for

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<sup>408</sup> Geraghty, "Introducing Thomas Laine," 240-245; Geraghty, "Edward Woodroffe," 474-479; "Wren and his draughtsmen;" Anthony Gerbino, and Stephen Johnston, "Structure and Scale: The Office of Works at St Paul's," in *Compass and rule: architecture as mathematical practice in England, 1500-1750*, ed. Anthony Gerbino and Stephen Johnston (London: Yale University Press, 2009), 97-110; Elizabeth Deans, "Rethinking Drawing and Office Practices in Early Eighteenth-Century England: A Study of William Dickinson's Pocketbook," *The Georgian Group Journal* XXIX (2021): 1-22.

<sup>409</sup> Gordon Higgott, "English Baroque Drawings," Sir John Soane's Museum Collection Online, accessed March 30, 2022, [http://collections.soane.org/drawings?ci\\_search\\_type=ARCI&mi\\_search\\_type=adv&sort=7&tn=Drawings&t=SCHEME473](http://collections.soane.org/drawings?ci_search_type=ARCI&mi_search_type=adv&sort=7&tn=Drawings&t=SCHEME473).

<sup>410</sup> Susan Weber, ed., *William Kent: designing Georgian Britain* (New Haven: Yale University Press, 2013).

<sup>411</sup> Friedman, *James Gibbs*, 1.

draughtsmen from the Royal Office of the King's Works.<sup>412</sup> An important monograph on a German architect of relevance is Hermann Heckmann's *M. D. Pöppelmann als Zeichner* (1954), which assembles architectural drawings by Matthäus Daniel Pöppelmann and his assistants from several German collections and institutions. It is the only publication to examine Pöppelmann's drawings in detail and to look at his draughtsmen in depth.

Thirdly, architectural drawings are often used by scholars to elucidate design practices or the history of specific buildings or building types. However, it is at times difficult to disentangle this literature from the first two categories. Thus, in many cases, the sources are repetitive. One of the most prestigious building projects in early modern Germany is the Dresden Zwinger, an ensemble of Baroque architecture by Matthäus Daniel Pöppelmann. Older works, such as Jean Louis Sponsel's *Der Zwinger, die Hoffeste und die Schlossbaupläne zu Dresden* (1924), which is still considered the most important source on the Zwinger, and more recent contributions explain aspects of the planning and building history of the Zwinger on the basis of drawings.<sup>413</sup> Similarly, Kerry Downes's *Sir Christopher Wren: The Design of St. Paul's Cathedral* (1988) and *Sir Christopher Wren and the Making of St Paul's* (1991) use drawings to illustrate the large-scale development and building history of St Paul's Cathedral.<sup>414</sup> Gordon Higgott's above-mentioned online catalogue of drawings by Wren and his office in the Cathedral's collections, held at London Metropolitan Archives and at St Paul's, outlines the various construction phases using drawings.<sup>415</sup> Ingrid Sindermann Mittmann's 1982 dissertation on Houghton Hall is important for another relevant building project in England. Sindermann

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<sup>412</sup> Axel Klausmeier, *Thomas Ripley, Architekt. Fallstudie einer Karriere im Royal Office of the King's Works im Zeitalter des Neopalladianismus* (Frankfurt am Main: Lang, 2000), 9.

<sup>413</sup> E.g., Peter Heinrich Jahn, and Dirk Welich, "Zurück in die Zukunft – Die Visualisierung planungs- und baugeschichtlicher Aspekte des Dresdner Zwingers. Mit einem Zwischenbericht zur Recherche der Planungs- und Baugeschichte," *Jahrbuch Staatliche Schlösser, Burgen und Gärten Sachsen* 16 (2009): 51-72. A comprehensive monograph co-edited by Dr Peter Heinrich Jahn, which combines previous research results as well as the latest findings based on the 2017 conference "Zwinger & Schloss - Die Dresdner Residenz Augustus des Starken im Europäischen Kontext (1694-1733)" is currently in preparation.

<sup>414</sup> Kerry Downes, *Sir Christopher Wren: The Design of St. Paul's Cathedral* (London: Trefoil Publications, 1988); Kerry Downes, *Sir Christopher Wren and the Making of St Paul's* (London: Royal Academy of Arts, 1991).

<sup>415</sup> Higgott, "The Wren Office Drawings."

Mittmann identifies the surviving drawings and other visual sources from various phases of the development of the house and uses them to describe the significant changes in the design process.<sup>416</sup> *Leinster House* by David J. Griffin and Caroline Pegum (2000) assembles Richard Castle's drawings for the Dublin building project from the Irish Architectural Archive and the collection of Patrick Guinness. Edward McParland's *Public Architecture in Ireland 1680-1760* (2001) uses many architectural drawings relating to various large-scale Irish building projects, such as Dublin Castle or Trinity College Dublin, to elucidate the history of architectural design. Among them are drawings from the Vanbrugh Album, but also from several Irish archives and museums, such as the IAA, Trinity College Dublin, or the National Library of Ireland. Looking at the academic landscape in other European countries, such as Italy, the Netherlands, or France, it appears that the study of architectural drawings has mainly been approached by scholars according to the three methodologies mentioned above. The relevant bibliographical examples are not included here in view of redundancy.

Due to their thematic and physical limitation to design processes, individuals and their oeuvre, or collections, the publications mentioned above tend to engage only tangentially with architectural drawings as objects in themselves. More importantly, they do not analyse drawing practice in a broader and transnational sense. For, the various drawing practices and conventions that existed in Europe in the eighteenth century will not be represented in a single collection nor by a single architect. Comprehensive accounts of architectural drawing methods of the eighteenth century do not exist. However, some studies explore architectural drawings in more detail. With a few exceptions, those passages on the form and process of architectural drawings are often concealed deep in the research and approach the subject in an unfocussed, unmethodical way. The exceptions include Reginald Blomfield's monograph *Architectural Drawing and Draughtsmen* (1912), which is however over a hundred years old, and the more recent article "Architectural

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<sup>416</sup> Ingrid Sindermann Mittmann, "Houghton Hall. Studien zum Neopalladianismus am Beispiel eines englischen Landsitzes aus dem 18. Jahrhundert" (Phd diss., University of Freiburg, 1982).

Drawings: Problems of Status and Value” by Margaret Richardson from 1983.<sup>417</sup> The recent Historic England guide *Understanding Architectural Drawings and Historical Visual Sources* (2019), edited by Susie Barson, offers an introduction to the subject of working with and interpreting architectural drawings and other visual sources. It is an essential source for this chapter. Contributions that address the techniques of representation in architectural drawings more broadly include chapters by Robin Evans “Architectural Projection” (1989), James S. Ackerman “Introduction: The Conventions and Rhetoric of Architectural Drawing” (2000), or Christiane Salge “Von der Perspektivstudie zum Architekturbild” (2017).<sup>418</sup> The Dutch dissertation “Tekenen ter Verlichting. Architectuurtekeningen in de achttiende-eeuwse Republiek” by Eva Röell from 2010 is particularly noteworthy for its broad scope and comparative approach and is exemplary for my work. Röell examines a wide range of architectural drawings from different collections and looks beyond the borders of the Dutch Republic to consider drawing practices in other parts of Europe. Elske Gerritsen’s *Zeventiende-eeuwse Architectuurtekeningen* (2007), which examines drawings in design and building practice in the Dutch Republic during the seventeenth century, can be seen as forerunner and reference work for Röell’s dissertation. It is a true lighthouse project within Dutch research on architectural drawings. The monograph *Dessiner pour bâtir* by Alexandre Cojannot and Alexandre Gady (2017), which contains valuable insights into French drawing practices of the seventeenth century, is another important signpost for this discussion. Some details regarding Italian drawing conventions are provided in the German exhibition catalogue *Von Bernini bis Piranesi: Römische Architekturzeichnungen des Barock* (1993), edited by Corinna Höper and

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<sup>417</sup> Reginald Blomfield, *Architectural Drawing and Draughtsmen* (London; Toronto: Cassell, 1912); Margaret Richardson, “Architectural Drawings: Problems of Status and Value,” *Oxford Art Journal* 5, no. 2 (1983): 13-21.

<sup>418</sup> Robin Evans, “Architectural Projection,” in *Architecture and Its Image: Four Centuries of Architectural Representation*, ed. Eve Blau, and Edward Kaufman (Montreal: Canadian Centre for Architecture, 1989), 18-35; James S. Ackerman, “Introduction: The Conventions and Rhetoric of Architectural Drawing,” in *Conventions of Architectural Drawing: Representation and Misrepresentation*, ed. James S. Ackermann, and Wolfgang Jung (Cambridge, MA: Harvard University, 2000), 9-36; Christiane Salge, “Von der Perspektivstudie zum Architekturbild,” in *Die Quadratur des Raumes. Bildmedien der Architektur in Neuzeit und Moderne*, ed. Monika Melters, and Christoph Wagner (Berlin: Gebr. Mann Verlag, 2017), 130-157.

Elisabeth Kieven. The latter further offers some information on the use of colour in Italian architectural drawings of the early modern period in “Il Disegno Architettonico Come Mezzo di Comunicazione tra Committente e Architetto”, a contribution in the 1991 exhibition catalogue *In Urbe Architectus. Modelli, Disegni, Misure; La professione dell'architetto a Roma 1680-1750*. This book, in its discussion of the profession of architecture in Rome from 1680 to 1750, occasionally covers the training of draughtsmen, the production of drawings, and the work of draughtsmen in the drawing office. The conference proceedings *Aspekte der Kunst und Architektur in Berlin um 1700* (2000) analyses in several individual studies architectural drawings from Berlin during the reign of Frederick I of Prussia (1701-1713). In terms of English drawing conventions, Anthony Geraghty's numerous publications are essential, providing information on drawing techniques and certain office practices.<sup>419</sup> In this context, Elizabeth Deans's article “Rethinking Drawing and Office Practices in Early Eighteenth-Century England: A Study of William Dickinson's Pocketbook” is of interest, too.<sup>420</sup> Deans describes in more detail the drawing skills of William Dickinson (c. 1671-1725) by means of his pocketbook and draws a connection to English eighteenth-century office practices. A recent contribution to the use of colour in European architectural drawings of the early modern period is Basile Baudez's monograph *Inessential Colors*.<sup>421</sup> Baudez challenges the long-held interpretation of architectural drawings as illustrations of design practice and instead highlights their qualities as autonomous objects and graphic communicators. Baudez's work is particularly valuable for its inclusion of military maps and fortification drawings as well as “pictorial images” like landscape drawings or *vedute*. The “sheer chronological and geographical range of the examples,” however, raises questions concerning the difference in cultural and intellectual contexts.<sup>422</sup> To explore this, further studies are seen to be needed on “the

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<sup>419</sup> E.g., Anthony Geraghty, “The Drawings: Technique and Purpose,” accessed June 28, 2022, [http://library.asc.ox.ac.uk/wren/technique\\_purpose.html](http://library.asc.ox.ac.uk/wren/technique_purpose.html).

<sup>420</sup> Deans, “Rethinking Drawing and Office Practices,” 1-22.

<sup>421</sup> Basile Baudez, *Inessential Colors: Architecture on Paper in Early Modern Europe* (Princeton: Princeton University Press: 2021).

<sup>422</sup> Anthony Vidler, “Inessential Colors: Architecture on Paper in Early Modern Europe (2021) – Review,” *Drawing Matter* (March 2022), <https://drawingmatter.org/inessential-colors-architecture-on-paper-in-early-modern-europe-2021-review/>.

roles of diverse professional formations and training, in drawing schools, engraving shops, and architecture and engineering schools.”<sup>423</sup> The problem of separation between “l’image figurative” and “le graphisme technique” has already been addressed earlier in Yves Deforge’s book *Le Graphisme Technique* (1976).<sup>424</sup> A joint, albeit complicated study of different drawing genres and the wider European view on architectural drawings in monographic form have so far been rare, therefore such books are an important step within research.<sup>425</sup>

In addition to this, scholars have addressed certain aspects of architectural drawing practice, such as quality, the use of colour, or scale bar conventions, to attribute drawings to specific individuals, offices, or groups. For example, Richard Hewlings attributes drawings to the hand of James Gibbs based on scale bars and a distinctive feature, the “lower-case v”.<sup>426</sup> John Harris conducted fundamental work on attributing drawings based on the wash technique, defining “the grey wash style” as a distinctive feature of the English Palladians in the Office of Works.<sup>427</sup> To arrive at this conclusion, Harris analysed architectural drawings from various international collections (e.g., RIBA Collection, Devonshire Collections, Ashmolean Museum, Public Record Office, Sir John Soane’s Museum, Yale Center for British Art). However, Harris’s focus on the grey wash style raises the question of what techniques were used outside the Office of Works, such as in the Office of Ordnance. According to Geoffrey Parnell, the Ordnance Drawing (or Draught) Room developed its “own practices, style, and architectural education” for the production of maps required by the military.<sup>428</sup> Further research is required to elucidate these practices.

While as we have seen, many publications address the topic of architectural

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<sup>423</sup> Vidler, “Inessential Colors.”

<sup>424</sup> Yves Deforge, *Le graphisme technique* (Paris: Champion, 1976), 84.

<sup>425</sup> Astrid Lang, *Die frühneuzeitliche Architekturzeichnung als Medium intra- und interkultureller Kommunikation. Entwurfs- und Repräsentationskonventionen nördlich der Alpen und ihre Bedeutung für den Kulturtransfer um 1500 am Beispiel der Architekturzeichnungen von Hermann Vischer d.J.* (Petersberg: Imhof, 2012) explores late medieval architectural drawings across national borders: conventions of construction, design, and representation north and south of the Alps are discussed here.

<sup>426</sup> Hewlings, “Gibbs at Raby Castle,” 52.

<sup>427</sup> John Harris, “The Grey Wash Style of the Palladian Office of Works,” *The Georgian Group Journal* 12, (2002): 50.

<sup>428</sup> See Geoffrey Parnell, “The Ordnance Drawing Room 1716-52,” *English Heritage Historical Review* 9 (2014): 121.



drawings in general and eighteenth-century architectural drawings are a frequent subject of scholarship, several important points require further emphasis. First, the interpretation and analysis of architectural drawings has mostly been conducted on a country-specific basis in the past. However, given the knowledge exchange between European countries in the period, architectural drawings must be analysed on a transnational perspective when considering and contextualising drawing practices and conventions. In the same way as goods, certain drawing conventions were transported across Europe and absorbed throughout the different regions. They circulated through various channels, such as itinerant draughtsmen, but also through the huge flux of drawings and other two-dimensional representations that were distributed throughout the whole of Europe. The adoption of certain conventions might have had practical as well as symbolic causes. On the one hand, some conventions offered technical solutions to a persistent problem, and improved legibility as well as transregional comprehension; on the other hand, they communicated the prestige of the author, who was well-informed about the latest drawing practices. The impact from other regions on drawing conventions in England is particularly significant. For English architectural drawings it is therefore essential to expand the view across the English Channel and include developments and movements beyond the national borders.

Second, many publications focus on works from a single collection. Yet, to achieve an overall classification of different types of architectural drawings and prevailing conventions, it is not sufficient to examine the drawings of a single collection, because they can seldom be considered representative of the entire drawing industry at the time. Ideally, therefore, a large-scale cross-collection comparison must be carried out. To the collection-based analysis of architectural drawings can be added the problem of the separation of the genres of drawing. While it is important to some extent to distinguish between the different contexts of drawings (e.g., engineering, military architecture, and civil architecture), the separation of these within previous scholarship misses the fact that architecture and thus architectural drawings of the early modern period were closely connected with the sciences. Many conventions which originated in the military drawing practice

were adopted for the drawings used in civil architecture. It is therefore impossible to avoid considering military architecture together with civil architecture in the evolution of architectural draughtsmanship. What then, are the drawing types and styles in Europe and Britain in the early eighteenth century?

### **Techniques of Representation in Architectural Drawing**

Based on the historiography, this section addresses in more detail the techniques of representation in eighteenth-century European architectural drawings. Besides introducing the various types of drawings, the conventions of drawing will be examined. These include different representative conventions, for example, projections (orthography, perspective, axonometry), display modes (plan, elevation, section), and colour conventions (monochromy/polychromy, washes).

### **Types of Drawings**

The evolution of a building design leads from the first sketch to the preliminary design, the finished design, the presentation drawing, and on to the working drawing. In this process, the sketch represents the first idea put down on paper.<sup>429</sup> In the preliminary design, the architect clarifies the basic structure and layout of the building dimensions and explores options for the final execution.<sup>430</sup> Often the architect prepares a series of schematic drawings of the same character or captures variants on the same sheet, as can be seen on the elevation for the Mausoleum at Castle Howard that shows colonnaded and arcaded alternatives either side of the axis (fig. 3.1).<sup>431</sup> Once the client has approved of the design, the final scheme is drawn up, mostly consisting of a fully developed formal set of plans, elevations, sections, and details.<sup>432</sup> Finished designs are often constructed to scale and neatly drawn featuring shading or wash and showing

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<sup>429</sup> Heckmann, *M. D. Pöppelmann als Zeichner*, 12.

<sup>430</sup> Heckmann, *M. D. Pöppelmann als Zeichner*, 12.

<sup>431</sup> Susie Barson, ed., *Understanding Architectural Drawings* (Swindon: Historic England, 2019), 4.

<sup>432</sup> Eleanor Gawne, "Cataloguing Architectural Drawings," *Journal of the Society of Archivists* 24, no 2 (2003): 178.

only a few annotations.<sup>433</sup> The distinction between sketch, preliminary design, and finished design may not always be clear-cut.<sup>434</sup> Eventually, a finished design can be turned into a presentation drawing for convincing the client by adding figurative, topographical, and vegetative elements of decoration in a more graphic and visually appealing way (fig. 3.2).<sup>435</sup> Similarly, illusionistic trompe-l'œil effects can be used on presentation drawings (fig. 3.3).<sup>436</sup> Finished designs or presentation drawings were not suitable for use on the construction site and therefore working drawings were prepared. These included dimensions and specified details for builders or craftsmen.<sup>437</sup> Individual elements were sometimes depicted in life-size, such as the detail of the capital and base of an Ionic column at Lyme Park drawn by Giacomo Leoni, c. 1720 (fig. 3.4). Working drawings are mostly executed without attention to an attractive or finished appearance. Given that drawings of this type were exposed to enormous wear and tear on site, fewer of them have survived compared to finished designs or presentation drawings. Terry Friedman refers to hundreds of working drawings in Gibbs's estate and mentions a "comprehensive group of thirty-one working drawings" for Kelmarsh Hall in the so-called Kelmarsh Hall Album at RIBA.<sup>438</sup> The size of the drawings given by Friedman in the catalogue however contradicts his assumption that they are working drawings, given that they do not exceed a size of 525 mm. Working drawings are usually very large in size, being true to scale. The life-size working drawing by Leoni, for example, has a considerable size of 1194 x 1382 mm (see fig. 3.4). Two large details for Carton House, Co. Kildare, from Richard Castle's office are further examples of working drawings (fig. 3.5a-b). The measured wall elevation of the interior of the entrance hall for Kildare House (later Leinster House), Dublin, attributed to Castle is likewise described as working drawing due to the detail it contains (fig. 3.6).<sup>439</sup> Several working drawings might further be contained in the Vanbrugh Album at the V&A, for instance the detail of a cornice of the Corinthian

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<sup>433</sup> Corinna Höper, and Elisabeth Kieven, *Von Bernini bis Piranesi: Römische Architekturzeichnungen des Barock* (Stuttgart: Hatje, 1993), 12; Barson, *Understanding Architectural Drawings*, 4.

<sup>434</sup> Heckmann, *M. D. Pöppelmann als Zeichner*, 13.

<sup>435</sup> Höper, and Kieven, *Von Bernini bis Piranesi*, 12.

<sup>436</sup> Heckmann, *M. D. Pöppelmann als Zeichner*, 21.

<sup>437</sup> Gawne, "Cataloguing Architectural Drawings," 178.

<sup>438</sup> Friedman, *James Gibbs*, 2; 127.

<sup>439</sup> Griffin, and Pegum, *Leinster House*, 29.

order for an unidentified project from the circle of Vanbrugh.<sup>440</sup> The drawing of a cornice for the cabinet of the Duchesse d'Orléans from the office of Jules Hardouin-Mansart is a French example of a working drawing (fig. 3.7).

In addition to these types of drawings, several others are known. Site survey drawings often form part of a feasibility study of an existing building that is to be rebuilt, extended, redesigned, or even demolished.<sup>441</sup> Record drawings were either for the office record or intended for publication.<sup>442</sup> Contract drawings were usually signed and dated by architect, client, and builder.<sup>443</sup> They are the final designs for implementation of construction and were part of the contract.<sup>444</sup> *Design for the upright and section of 'Marybone Chapell'*, c. 1721-24 (fig. 3.8a-b), is a rare example for a contract drawing among the Gibbs collection. The verso bears the inscription "... Our hands this eighth day of August 1721. Witnesses Ja: Gibbs: Wm: Thomas Edward Harley Benj: Timbrell Tho. Phillips." Only this and two other drawings can with certainty be identified as Gibbs's contract drawings, having confirmations of approval of the designs on the reverse side, though Friedmann suggests more.<sup>445</sup> The first is *Early design for the monument to Henry Duke of Newcastle*, 1727-28 (fig. 3.9). Friedman seems to have based the classification of this drawing as a contract drawing on the fact that it carries the inscription "For Ld Oxford at Bolsover" as well as details about the marble. The *Intermediate design for the monument to Edward Colston* from 1728-29, is described without explanation as probably a replica of a contract drawing (fig. 3.10). One might rather consider a classification as preliminary drawing or, as suggested by Bryan Little, as alternative design.<sup>446</sup> These cases show the difficulty of secondary classification of such drawings, especially when inscriptions or references are missing. Among the extensive collection of Wren's and Hawksmoor's drawings at All Souls College, none are identified as contract drawings. The fact that there are so few identifiable contract drawings known today may be due to the fact

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<sup>440</sup> Victoria and Albert Museum (V&A) E.2124:26-1992.

<sup>441</sup> Gawne, "Cataloguing Architectural Drawings," 178.

<sup>442</sup> Barson, *Understanding Architectural Drawings*, 7.

<sup>443</sup> Gawne, "Cataloguing Architectural Drawings," 178.

<sup>444</sup> Barson, *Understanding Architectural Drawings*, 10.

<sup>445</sup> See Ashmolean Museum (ASH) WA1925.341.72 and ASH WA1925.348.1 for the contract drawings; Friedman, *James Gibbs*, 298; 325.

<sup>446</sup> Bryan Little, *The life and work of James Gibbs 1682-1754* (London: Batsford, 1955), pl. 17.

that they remained in the possession of the clients, specific signatories, or craftsmen and were simply lost in the course of time or at the construction site. Not every project perhaps required the preparation of a contract drawing. The technique of sketch, finished design, and presentation drawing remained consistent over the centuries, but frequent adaptations to new aesthetic and social circumstances led to a variety of different architectural drawings in eighteenth-century Europe.<sup>447</sup>

### Visual Conventions

The Académie Royale d'Architecture, established in Paris in 1671, introduced a rigorous and systematic architectural training already early on, resulting in a standardisation of the representational modes. The rest of Europe followed suit during the eighteenth century. In the following, the different varieties and methods of expression of eighteenth-century architectural drawing practice will be delineated and discussed.

### Projections and Display Modes

Eighteenth-century architectural drawings employed two primary projections, the more abstract orthographic or orthogonal projection and the more pictorial perspective projection or perspective.<sup>448</sup> Diverging opinions about the ways of depicting architecture (professional vs. popular) led to a certain tension between the different types of projections.<sup>449</sup> The three most common display modes in orthogonal projection are ground plan, elevation, and axial section. These had been standardised both for military and civil architecture north of the Alps during the seventeenth century. While reading orthographic drawings may require some experience, their usefulness in the construction process is considerable, because dimensions can be derived directly from them. It is claimed that Inigo Jones (1573-1652) introduced orthogonal drawing conventions into British architectural practice after his second trip to Italy in 1613-14 and studying buildings and treatises by

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<sup>447</sup> Höper, and Kieven, *Von Bernini bis Piranesi*, 26.

<sup>448</sup> Eva Röell, "Tekenen ter Verlichting. Architectuurtekeningen in de achttiende-eeuwse Republiek," (PhD diss., Utrecht University, 2010), 72.

<sup>449</sup> This fundamental discussion returns repeatedly throughout art history.

Andrea Palladio.<sup>450</sup> Palladio's *I Quattro Libri* (1570) was in many ways a reference work for generations of architects, both in terms of the content of the information presented and by virtue of the extremely high graphic quality of the layout and the relationship between images and text.<sup>451</sup> With few exceptions, all of Palladio's architectural representations are rendered in orthographic projection. The rationality of this method of representation favoured by Palladio, which allowed the buildings and their parts to be shown to scale and to be measured from the sheet, contributed significantly to the general acceptance of this type of representation for architectural drawings.<sup>452</sup> Orthographic ground plans, elevations, and sections were likewise used by Carlo Fontana in his Roman studio and they were required for annual academic competitions such as the "Concorsi Clementini" of the Accademia di San Luca (fig. 3.11).<sup>453</sup> With the establishment of these competitions, the Accademia di San Luca and its scholars gained considerable international recognition. A stay in Rome and studying at the academy with architects like Fontana was a major part of an (architectural) education, an opportunity that a grand tour could provide.<sup>454</sup> Artists of different nations strove to study in Rome, which had become an important centre of the exploration of antiquity. This resulted in the academy having an ever-increasing international impact, on the one hand due to the numerous foreign artists in the city and, on the other hand, due to the countless architects distributing abroad their knowledge, techniques, and design methods acquired in Rome.<sup>455</sup> Peers and architects in training flocked to Fontana's studio from all over Europe to study the Italian canon, e.g., Matthäus Daniel Pöppelmann

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<sup>450</sup> Barson, *Understanding Architectural Drawings*, 11.

<sup>451</sup> Alberto Sdegno, "Andrea Palladio Graphic Designer," in *Proceedings of the 2nd International and Interdisciplinary Conference on Image and Imagination*, ed. Enrico Cicalò (Cham: Springer International Publishing, 2020), 876.

<sup>452</sup> Wolfgang Lotz, "Das Raumbild in der italienischen Architekturzeichnung der Renaissance," *Mitteilungen des Kunsthistorischen Instituts in Florenz* 7, no. 3/4 (July 1956): 226.

<sup>453</sup> Elisabeth Kieven, "Il Disegno Architettonico Come Mezzo di Comunicazione tra Committente e Architetto," in *In urbe architectus: modelli, disegni, misure; la professione dell'architetto Roma 1680-1750*, ed. Bruno Contardi (Roma: Argos Ed., 1991), 76; Peter Prange, "Die Barocke Architekturzeichnung in Rom," in *Entwurf und Phantasie. Zeichnungen des Johann Bernhard Fischer von Erlach (1656-1723)*, ed. Peter Prange (Salzburger Barockmuseum, 2004), 33.

<sup>454</sup> For a discussion on Fontana's studio as training ground, see Hellmut Hager, "Carlo Fontana: Pupil, Partner, Principal, Preceptor," *Studies in the History of Art* 38 (1993): 122-155.

<sup>455</sup> Angela Cipriani, "Die Accademia di San Luca in Rom," in *Entwerfen. Architekturausbildung in Europa von Vitruv bis Mitte des 20. Jahrhunderts*, ed. Ralph Johannes (Hamburg: Junius, 2009), 344.

from Germany, James Gibbs from England, Nicodemus Tessin the Younger from Sweden, the Italian-born Johann Lucas Hildebrandt, and the Italian Filippo Juvarra.<sup>456</sup> Influenced by their local experiences, these travellers circulated their findings throughout Europe.

Orthogonal line drawings, consisting of ground plan, front elevation, and axial section, were also produced by Sir Christopher Wren and his circle in the Royal Office of the King's Works, St Paul's Cathedral, and in the offices responsible for rebuilding the City churches.<sup>457</sup> Though Wren was immersed in the "Classical tradition", he may have used these modes of representation for more practical reasons than perhaps the intellectually driven Inigo Jones, which stemmed from his scientific background as an astronomer and mathematician. As John Summerson and Jim Bennett, among others, have noted before, Wren approached architecture through the practices of mechanical design, physical modelling, and life drawing.<sup>458</sup> The orthographically projected plans, sections, and elevations were associated with the idea of precision and accuracy because of their relationship to geometry and other mathematical practices like surveying.<sup>459</sup> They were thus at the intersection between optics, mechanical practices, architecture, and mathematical sciences.<sup>460</sup> Furthermore, Wren regarded mathematical and geometrical expressions as particularly useful means of communicating about natural things, making the orthographic projective representations the best possible means. They offered producer and user a privileged access to the design of a building.<sup>461</sup> The most fundamental of the three was the plan, for it was the one from which the other two were drawn up.

The following generation of architects of the Palladian revival in Britain likewise "drew out their designs consciously as Palladio himself might have done: in

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<sup>456</sup> Cipriani, "Die Accademia di San Luca in Rom," 352.

<sup>457</sup> Barson, *Understanding Architectural Drawings*, 12; Gavin Stamp, *The Great Perspectivists* (London: Trefoil Books, 1982), 10.

<sup>458</sup> See John Newenham Summerson, "Wren: Why Architecture?" in *The Unromantic Castle, and Other Essays* (London: Thames and Hudson), 63-68; Jim Bennett, *The Mathematical Science of Christopher Wren* (Cambridge: Cambridge University Press, 2002).

<sup>459</sup> Alexander Wragge-Morley, "Restitution, description and knowledge in English architecture and natural philosophy, 1650-1750," *Arq: Architectural Research Quarterly* 14, no. 3 (2010): 248.

<sup>460</sup> Gregorio Astengo, "Parallelogrammum Prosopographicum," *Nexus Network Journal* 22 (June 2020): 751.

<sup>461</sup> Wragge-Morley, "Restitution, description and knowledge in English architecture," 250.

plan, elevation, and section.”<sup>462</sup> The rise of interest in Inigo Jones and Palladio around 1710, sparked by various developments, was certainly one reason for this. The Palladians may have viewed orthographic projection as an aesthetic vehicle for their ideals of architectural representation owing to its connection to the visual culture of the Italian Renaissance, preserved through two-dimensional images and treatises. Furthermore, Wren certainly played a significant role in promoting the use of these projections. The building practitioners and draughtsmen who were under his authority in the architectural offices copied this pattern, thus passing on his preferred practice of orthographic representation to the next generation. In this way, the triad of plan, elevation, and section continued to be used throughout eighteenth-century Europe, but over time there were changes in typology and quality of the drawings, both in terms of their perception and practical application.<sup>463</sup>

Besides the orthographic projection of plan, elevation, and section, the presentation of orthographic interiors deserves a comment, more precisely the laid-out interiors, also known as the developed surface interior. These are only to be found in the British Isles, including Ireland, and in the Dutch Republic.<sup>464</sup> They are special orthographic interior representations in which the floor plan with floor or ceiling panels and views of the four walls are drawn combined on one sheet.<sup>465</sup> The walls are folded down radially according to their position. The earliest examples for laid-out interiors can be found in the Dutch Republic and are attributed to Jacob Roman (1640-1715; fig. 3.12). Around 1720, the laid-out interiors had found their way into English mainstream architectural practice and the Palladian architects of the Burlington circle, too, began to favour the laid-out interior as method of rendering

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<sup>462</sup> Stamp, *The Great Perspectivists*, 11; Robin Evans, *The Projective Cast. Architecture and Its Three Geometries* (Cambridge, MA: The MIT Press, 1995), 119.

<sup>463</sup> Röell, “Tekenen ter Verlichting,” 258; Richardson, “Architectural Drawings,” 15.

<sup>464</sup> For the evolution of the laid-out interior drawing see Robin Evans, “The Developed Surface: An Enquiry into the Brief Life of an Eighteenth-Century Drawing Technique,” in *Translations from Drawing to Building and Other Essays* (London: Architectural Association, 1997), 195-230.

<sup>465</sup> Klaus Jan Philipp, *Architektur – gezeichnet. Vom Mittelalter bis heute* (Basel: Birkhäuser, 2020), 158; Meredith Martin, “The Ascendancy of the Interior in Eighteenth-Century French Architectural Theory,” in *Architectural Space in Eighteenth-Century Europe. Constructing Identities and Interiors*, ed. Denise Amy Baxter, and Meredith Martin (Farnham: Ashgate, 2010), 23.



interiors (fig. 3.13).<sup>466</sup> Among the drawings attributed to James Gibbs are laid-out interiors. Richard Castle, too, used this method for displaying his interior designs. The orthographic laid-out interiors are an impressive example of the relevance of the Netherlands as a source region for innovative architectural trends.<sup>467</sup>

The orthographic projection was not the only convention available to architectural designers in early modern Europe. In fact, not everyone was convinced by this type of projection. In Leonhard Christoph Sturm's 1699 comment on Augustin-Charles D'Avilers *Cours d'architecture*, the architectural theorist complains that not many clients and practitioners in Germany would understand the common orthogonal floor plan.<sup>468</sup> And even if there were some, who knew that wash represented the walls, white the space of the rooms, etc., they would not be able to visualise the building.<sup>469</sup> Sturm thus considered it his responsibility to educate his readers about the perspective ground plan, "which will be much clearer and much more comprehensible to everyone," and which is actually a precursor of an axonometric projection (see below).<sup>470</sup> In France, the Academy of Architecture in Paris had demanded since its foundation in 1671 that students draw in perspective in addition to the usual orthographic representations. Several European academies and schools, such as the Accademia di San Luca in Rome, likewise introduced this approach, and it became standard practice to have the ground plans, elevations, and

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<sup>466</sup> Laura Jacobus, "On 'Whether a man could see before him and behind him both at once.' The role of drawing in the design on interior space in England c. 1600-1800," *Architectural History* 31 (1988): 154.

<sup>467</sup> For a discussion on the influence of Netherlandish architecture in early modern Europe, see Konrad Ottenheim, and Krista De Jonge, eds., *The Low Countries at the Crossroads: Netherlandish Architecture as an Export Product in Early Modern Europe* (Turnhout: Brepols Publishers, 2013).

<sup>468</sup> Klaus Jan Philipp, *Die Axonometrie als symbolische Form? Architekturdarstellung als visualisierte Theorie* (Hamburg: Textem-Verl., 2011), 15; Leonhard Christoph Sturm, *Ausführliche Anleitung zu der gantzen Civil-Baukunst* (Amsterdam: Huguetan, 1699), 332, <https://doi.org/10.11588/diglit.1593#0401>. "Die gewöhnliche Art Grundrisse / welche der Autor allhier vorgiebet / hat den Mangel / zum wenigsten bey uns in Teutschland / daß sie von den wenigsten Bauherrn / ja von den wenigsten Bauleuthen verstanden wird."

<sup>469</sup> Sturm, *Ausführliche Anleitung*, 332: "Finden sich schon einige die da Wissen daß das Schattirte die Mauren / das weisse den Platz der Zimmer u. s. w. bedeute / so können sie sich doch daraus keine Vorstellung des Gebäudes machen."

<sup>470</sup> Sturm, *Ausführliche Anleitung*, 332: "welcher viel deutlicher / und von jederman viel verständlicher seyn wird." The terms axonometry and isometry were only developed and theoretically established in the nineteenth century and were therefore not known by Sturm and others yet. See Klaus Jan Philipp, "Eine kurze Geschichte der Architekturzeichnung," in *Architekturzeichnungen. Handbuch und Planungshilfe* (Berlin: DOM publ., 2012), 16.

sections of a design culminate in a perspective.<sup>471</sup> Others entirely rejected the perspective architectural view because of its picturesque representation and were in favour of the more analytical orthogonal projections.<sup>472</sup>

Nevertheless, the theory of perspective received considerable attention throughout the early modern period and knowledge of mathematical perspective was deemed an imperative for architects and draughtsmen. Most architects had books on this subject in their private libraries.<sup>473</sup> James Gibbs, Nicholas Hawksmoor, and Matthäus Daniel Pöppelmann all had copies of Serlio's *Architettura*, which presented many of the architectural representations in perspective. The major success of the work and its influence are widely known. Pöppelmann also possessed a revised Latin edition of Hans Vredeman de Vries's *Perspective*, first published in 1604. He was strongly influenced by de Vries's suggestive perspective *vedute* and presented most of his architectural designs in perspective.<sup>474</sup> Joseph Moxon's *Practical Perspective* (1670) was likewise widely distributed and included in the libraries of Gibbs and Hawksmoor.<sup>475</sup> Another influential example of a treatise on perspective is Andrea Pozzo's two-volume work *Perspectiva pictorum et architectorum* (first volume published 1693, second volume in 1700). Translations and reprints in French, German, English, and Dutch led to a wide distribution of this work. Wren and Hawksmoor owned copies that had been issued in 1707.<sup>476</sup> Pozzo's manual is a practical guide for drawing architecture using the geometrical perspective.<sup>477</sup> For, in theory, a skilled draughtsman had to master the linear one-point perspective in order to understand and create an architectural design.<sup>478</sup> This also applied to the engineers of the British Office of Ordnance. According to an instruction issued in 1683, these had to be able "to draw and design the situation of any place, in their due

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<sup>471</sup> Philipp, *Architektur – gezeichnet*, 175.

<sup>472</sup> Philipp, *Architektur – gezeichnet*, 23.

<sup>473</sup> Röell, "Tekenen ter Verlichting," 73.

<sup>474</sup> Tiller, and Lieber, *Pöppelmann 3D*, 42.

<sup>475</sup> Friedman, *James Gibbs*, 327-330; David J. Watkin, *Sale Catalogues of Libraries of Eminent Persons. Volume 4: Architects* (London: Mansell, 1972), 103.

<sup>476</sup> Watkin, *Sale Catalogues*, 36; Kerry Downes, "Hawksmoor's Sale Catalogue," *The Burlington Magazine* 95, no. 607 (October 1953): 335.

<sup>477</sup> Isphording, *Mit Richtscheit und Zirkel*, 192.

<sup>478</sup> Röell, "Tekenen ter Verlichting," 73.

Prospect, Uprights, and Perspective.”<sup>479</sup>

A further major source for architectural perspective views, but also for floor plans, elevations, and sections were the artistic prints by architect and engraver Jean Marot (1619-1679). These were very highly popular among European building professionals and architecture enthusiasts and found their way into many private libraries.<sup>480</sup> Three editions by Jean Marot and his son Daniel were kept in Gibbs’s library, including the so-called *Petit Marot* (c. 1665).<sup>481</sup> This was also owned by Wren’s friend and colleague Robert Hooke (1635-1703).<sup>482</sup> In the collection of Nicodemus Tessin the Younger the so-called *Grand Marot* is listed, which was probably first published in 1686.<sup>483</sup> In these anthologies, the designs of the greatest architects of the period, including Gianlorenzo Bernini and Louis Le Vau are reinterpreted or modified and combined with Marot’s own, mostly unexecuted designs.<sup>484</sup> These include designs for the Electoral Palace at Mannheim in Germany, demonstrating that Marot did not limit himself to the showcasing of architectural projects in France.<sup>485</sup>

Despite the availability of perspective manuals and pattern books as well as a training in perspective drawing, in practice it was still rather uncommon for architectural designers to employ the perspective projection before the third quarter of the eighteenth century.<sup>486</sup> This is possibly due to the fact that perspective drawings displaying the appearance of a building for design purposes, “distort its angles and

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<sup>479</sup> Geoffrey Parnell, “The Buildings and Works of the Office of Ordnance at the Tower of London, 1660- 1722” (PhD diss., King’s College London, 1995), 92.

<sup>480</sup> Kristina Deutsch, “Im Auftrag des Kurfürsten? Jean Marots Entwurf für das Mannheimer Schloss,” in *Architektur- und Ornamentgraphik der Frühen Neuzeit - Migrationsprozesse in Europa*, eds. Sabine Frommel, and Eckhard Leuschner (Roma: Campisano Ed., 2014), 273; see also Kristina Deutsch’s recent monograph on Marot: *Jean Marot: Un graveur d’architecture à l’époque de Louis XIV* (Berlin; Boston: de Gruyter, 2015).

<sup>481</sup> Friedman, *James Gibbs*, 329. The *Petit Marot* is a quarto format with the title *Recueil des Plans, Profils et Elevations des plusieurs Palais, Chasteaux, Eglises Sepulcres Grotes et Hostels bâtis dans Paris*. It is not dated but was published in 1659 at the latest.

<sup>482</sup> Anthony Geraghty, “Robert Hooke’s Collection of Architectural Books and Prints,” *Architectural History* 47 (2004): 114.

<sup>483</sup> Deutsch, “Im Auftrag des Kurfürsten,” 273. The first edition of the anthology, published in small folio format, was issued without title, place, year, and name of publisher.

<sup>484</sup> Deutsch, “Im Auftrag des Kurfürsten,” 275.

<sup>485</sup> Kristina Deutsch, “«Marot. Il se nommait Jean... »,” *Nouvelles de l’estampe* 236 (2011): para. 4.

<sup>486</sup> Stamp, *The Great Perspectivists*, 10.

proportions because all the lines of projection end in one point”.<sup>487</sup> Therefore, they were rather impractical for the construction process. Where perspective architectural drawings were created in the early eighteenth century, it was mostly found in presentation drawings. The architect Jean de Bodt, who was an excellent draughtsman, for example, captured the designs for his royal clients in a comprehensive series, starting with a perspective and continuing with ground plan, elevation, and section, as he did for the Invalidenhaus in Berlin, c. 1703 (fig. 3.14a-c).<sup>488</sup> In doing so, de Bodt used perspective as a powerful illustrative aid for communicating the appearance of buildings not yet constructed in a way that non-professionals could understand.<sup>489</sup> As a pictorial representation system borrowed from painting and conforming to common visual habits, perspective views were better suited to give the lay client an immediate idea of the planned project than the more abstract orthographic projections. There are some exceptions, however: several perspective sketches have been attributed to Sir John Vanbrugh and Hawksmoor occasionally modelled designs in perspective in his exploratory drawings (see below).<sup>490</sup> William Kent (1685-1748), too, used perspective for some of his architectural designs.<sup>491</sup> Towards the end of the eighteenth century, perspective became more widely established as a convention in architectural drawing.<sup>492</sup> At that time there was a change in architectural representation triggered by several factors, such as the evolution and autonomy of architectural drawing, a theoretical and practical convergence between architecture and painting, and a new dissemination and exhibition culture that increased the audience for architecture on paper.<sup>493</sup> Architectural drawings increasingly became artworks in their own right, adopting figurative codes and techniques in a painterly manner. This involved perspective,

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<sup>487</sup> Wragge-Morley, “Restitution, description and knowledge in English architecture,” 250.

<sup>488</sup> Guido Hinterkeuser, ed., *Aspekte der Kunst und Architektur in Berlin um 1700* (Potsdam: Generaldirektion der Stiftung Preußischen Schlösser und Gärten Berlin-Brandenburg, 2002), 87.

<sup>489</sup> Marian Moffett, Michael Fazio, and Lawrence Wodehouse, *A World History of Architecture* (London: King, 2003), 7; Philipp, *Die Axonometrie als symbolische Form*, 12.

<sup>490</sup> Anthony Geraghty, “Nicholas Hawksmoor’s Drawing Technique of the 1690s and John Locke’s *Essay Concerning Human Understanding*,” in *Rethinking the Baroque*, ed. Helen Hills (Farnham: Ashgate, 2011), 129.

<sup>491</sup> Stamp, *The Great Perspectivists*, 11.

<sup>492</sup> Richardson, “Architectural Drawings,” 15; Salge, “Von der Perspektivstudie zum Architekturbild,” 132.

<sup>493</sup> Nerdinger, *Die Architekturzeichnung*, 8; Baudez, *Inessential Colors*, 149.

polychromy, and the artful application of painted shades and shadows that lend dramatic effects to the genre of architectural drawing.

It can be observed that in many seventeenth- and eighteenth-century drawings, spatial forms of representation were combined with orthogonal views.<sup>494</sup> In the case of Hawksmoor's drawing for the Barracks at Berwick, the gateway of the entrance façade is depicted in perspective, to support and reinforce the orthogonal projection (fig. 3.15). In Edward Lovett Pearce's drawing of the garden of Stillorgan House, Co. Dublin, the perspective view clarifies the precise architectural integration of the orthogonal elevation above within the overall complex (fig. 3.16). A balance between the geometric-schematic orthographic projection and the painterly perspective view was provided by the axonometric projection.<sup>495</sup> Geometric axonometry was developed in the seventeenth century by military and mechanical engineers and was mainly used in surveying and scientific or technical-military fields.<sup>496</sup> Particularly in France, the axonometric projection had already been used effectively around 1700 for analytical construction work.<sup>497</sup> Given its model-like didactic potential, a variant of the axonometric projection – the so-called military perspective – very soon found its way into civil architecture and provided useful in terms of communicating design and analysing architecture.<sup>498</sup> However, examples of this drawing practice in the rest of Europe were still rare in the early eighteenth century.

### Colour Conventions

It has become apparent that the method of displaying drawn architecture in Europe in the seventeenth and eighteenth centuries was largely uniform and architectural

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<sup>494</sup> Monika Melters, "Der Entwurf. Überlegungen zur visuellen Kommunikation von Architektur im historischen, theoretischen und mediengeschichtlichen Kontext," in *Diagrammatik der Architektur*, ed. Dietrich Boshung, and Julian Jachmann (München: Fink, 2013), 72.

<sup>495</sup> Philipp, "Eine kurze Geschichte der Architekturzeichnung," 18.

<sup>496</sup> Manilo Brusatin, *Geschichte der Linien*, trans. Sabine Schulz (Berlin: Diaphanes, 2003), 55. In contrast, the orthogonal projection emerged only late as the standard projection of engineering and craft technical drawing. See Barbara Wittmann, ed., *Werkzeuge des Entwerfens* (Zürich: Diaphanes, 2018), 165.

<sup>497</sup> Philipp, *Architektur – gezeichnet*, 145.

<sup>498</sup> Wittmann, *Werkzeuge des Entwerfens*, 167.

designs were mostly rendered in orthogonal projections or perspectives as plans, sections, and elevations. In the following, the drawing technique will be examined in more detail. Among these, the use of colour is paramount, with France and the Fontana school in Italy being particularly relevant in the use of colour in European architectural drawings of the early eighteenth century.

### **Standardised Colour Schemes in French Military Engineering**

In the seventeenth century, French military engineers developed a system of representational colour to provide instant information. To achieve uniformity in drawings, the military engineer Sébastien Le Prestre de Vauban first laid out a colour scheme that was to be the standard throughout the century.<sup>499</sup> Vauban had become head of the French fortifications department in 1678 and was determined to upgrade it with a uniform and rational administrative and technical system. This included the introduction of standardised drawing rules and military colour codes. While these conventions had circulated in manuscript maps before, they were not always uniform.<sup>500</sup> In his 1677 text *Le directeur général des fortifications*, Vauban outlined his proposals for improving the department.<sup>501</sup> He included suggestions for “a codification of the graphic rules used by engineers, in particular for the drafting of plans of fortified towns.”<sup>502</sup> Accordingly, completed structures and those “en nature”, if they had wall cladding, were to be washed in red, while structures covered with earth or turf were to be washed in Indian ink or greyish colours. The closer the fortification approached completion, the darker the tone of the wash ought to be.<sup>503</sup> Planned

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<sup>499</sup> Janis Langins, *Conserving the Enlightenment: French military engineering from Vauban to the Revolution* (Cambridge, MA: MIT Press, 2004), 145.

<sup>500</sup> Bénédicte Miyamoto, “Colour-Coded Manuscript Maps in the Military Enlightenment. The Circulation of Map-mindedness,” *Revue de la Société d’études anglo-américaines des XVIIe et XVIIIe siècles* 78 (2021): para. 2.

<sup>501</sup> A pirated copy of this was printed in Holland in 1685 and soon became a bestseller. It was subsequently reprinted in several new editions and as excerpts in the late seventeenth and eighteenth centuries, gaining widespread circulation.

<sup>502</sup> Isabelle Warmoes, “The Rationalisation and Codification of the Cartographic Practices of French Military Engineers under Louis XIV,” in *Draughtsman Engineers Serving the Spanish Monarchy in the Sixteenth to Eighteenth Centuries*, ed. Alicia Cámara Muñoz (n.p.: La Fundación Juanelo Turriano, 2016), 299.

<sup>503</sup> Sébastien Le Prestre de Vauban, *Le directeur général des fortifications* (Den Haag: Moetjens, 1689), 69-71: “... de laver de rouge toutes celles qui seront achevées & en nature, si les pieces qu’elles représenteront sont revêtuës de muraille, & d’encre de la Chine ou de grisaille, si c’est simplement de

structures that had not yet been completed were to be washed in yellow.<sup>504</sup> Vauban concluded these regulations with the imperative that they be adhered to in order to avoid confusion.<sup>505</sup> As such, all French military engineers were obliged to adhere to these precepts, and as a result, they manifested themselves in their cartographic practice. Given that the engineers were required to make copies of their drawings, for example for the contractor, the standardised cartographic drawing rules were increasingly multiplied.<sup>506</sup> Clearly, the training of engineers involved induction in this type of drawing in order to correctly apply the colours according to their coding. However, considering that Vauban formulated entry examinations for recruiting young engineers in *Le directeur général*, which covered not only geometry and surveying but also mathematics, geometry, civil architecture, and drawing, it can be assumed that they would already have had sufficient basic knowledge of drawing and graphic codes.<sup>507</sup>

In any case, the inclusion of the codifications in the official training of engineers led to these becoming “true conventional norms.”<sup>508</sup> In the course of the military Enlightenment these colour codes were included in textbooks, which served as teaching material for future military engineers.<sup>509</sup> Many hand-written and colour-washed manuscripts were produced, which were again manually reproduced. One example is *Traité de fortifications* by Joseph Sauveur (1653-1716). The mathematician was a member of the Academy of Sciences and was appointed by Vauban in 1703 to succeed him as an examiner for military engineering candidates.<sup>510</sup> It is possible that Sauveur’s treatise, which is based on Vauban’s work and explains the general

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*terre ou de gazon; distinguant le parapet du terre plein par une touche plus forte aux endroits où il y en aura de commencés. Mais où il n’y en aura point encore, le lavis sera tout uni, avec cette remarque, que plus l’ouvrage sera avancé & près de sa perfection, plus il faudra aussi fortifier le dit lavis & approcher sa couleur de celle des ouvrages parfaits.”*

<sup>504</sup> Vauban, *Le directeur général des fortifications*, 71: “Les pieces qui ne seront qu’en projet, & auxquelles on n’aura pas encore travaillé, seront lavées de jaune.”

<sup>505</sup> Vauban, *Le directeur général des fortifications*, 72: “... pour éviter la confusion que le coloris des plans, diversifiés indifféremment de toutes sortes de couleurs, pourroit causer, en prenant la signification de l’un, pour celle de l’autre.”

<sup>506</sup> Langins, *Conserving the Enlightenment*, 148.

<sup>507</sup> Langins, *Conserving the Enlightenment*, 142.

<sup>508</sup> Baudez, *Inessential Colors*, 90.

<sup>509</sup> For the discussion of the military Enlightenment see Christy Pichichero, *Military Enlightenment: War and Culture in the French Empire from Louis XIV to Napoleon* (Ithaca: Cornell UP, 2017).

<sup>510</sup> Langins, *Conserving the Enlightenment*, 52.

principles of fortifications, emerged in this context. The colour scheme of the illustrations seems to be fashioned after Vauban's recommendations. Plate IV of Book III of a copy in the Bayerische Staatsbibliothek in Munich, for example, shows a plan of the town and citadel of the Île de Ré (fig. 3.17).<sup>511</sup> Washed in different intensities of red are the stone-faced structures, while the areas covered by earth or turf are grey washed. Additionally, the water is represented here in shades of blue and the raised and sloping terrain is washed in shades of green. Several handwritten copies of the *Traité de fortifications* circulated, and it was not until 1848 that parts of the book were printed.

The copying of manuals was a widespread military practice within the army. Military engineers were trained in surveying, map-making, and drawing to scale, which allowed them to create handwritten copies of illustrated manuals and reproduce fortification designs and artillery drills for their commanding officers.<sup>512</sup> Furthermore, military engineers, whose careers were often transnational and dependent on patronage, could showcase their talents to potential new clients through compilations of military treatises. An example of this is *Traité d'architecture militaire* by Jacques Wibault or Wybault (?-1727).<sup>513</sup> The French-Flanders Huguenot engineer pursued a career in the English army and by 1704 had entered Irish service, where he was responsible for various fortification and army engineering tasks. His *Traité* from 1701 is dedicated to the Duke of Ormond and contains sophisticated and elaborate architectural drawings featuring details of various European fortifications including Vauban's complex at Neuf-Brisach in Alsace and the Dutch military engineer Bernard de Gomme's works at Portsmouth (figs. 3.18-3.19).<sup>514</sup> It is a typical work within early modern fortification manuals, displaying the drawing skills and

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<sup>511</sup> Bayerische Staatsbibliothek (BSB), Cod.icon. 215, "Traité des fortifications - Kopie nach Joseph Sauveur (1653 - 1716)," <https://mdz-nbn-resolving.de/urn:nbn:de:bvb:12-bsb00051002-5>. The copy dates from c. 1700 and originates from the Mannheim court library.

<sup>512</sup> Miyamoto, "Colour-Coded Manuscript Maps," para. 14.

<sup>513</sup> Irish Architectural Archive (IAA), 0077/009-93. My sincere thanks to Colum O'Riordan and the team at the IAA for providing the digitised images.

<sup>514</sup> Michèle Virol, "Savoirs d'ingénieur acquis auprès de Vauban, savoirs prisés par les Anglais?" *Documents pour l'histoire des techniques* 19 (2010): 22.



knowledge of contemporary fortification design of its author.<sup>515</sup>

Vauban's visual rhetoric of military engineering, intended to facilitate reporting and administration, improved the quality of maps and plans, and subsequently found its way into civil architecture. This was enhanced by the emergence of printed publications advocating Vauban's system. The most famous example is perhaps *L'art de laver* (1687) by Hubert/Henri Gautier, inspector of the *Ponts et Chaussées*. The book was reprinted in an expanded version as *L'art de dessiner* (1697) and translated into several languages.<sup>516</sup> Gautier's technical manual specified both the intensity of the hue and the precise pigment use.<sup>517</sup> Nicolas Buchotte's *Les Règles du dessein et du lavis*, first published in 1722, likewise contributed to the dissemination of a standardised colour scheme. Buchotte recommends that the terrain in a plan should be presented as naturalistically as possible in terms of colour, without, however, giving the impression of a miniature painting.<sup>518</sup> Likewise, he distinguishes between the use of coloured washes for military and civil architecture. While Buchotte is cited in several later manuals, for example in *La science des ombres* by the French tactician, surveyor, and engineer Louis-Charles Dupain de Montesson from 1750, he does not seem to appear in English architectural library catalogues.<sup>519</sup>

### Fontana, Marchionni, and the Rise of Coloured Drawings

The architects of the *Bâtiments du Roi* likewise used colour in their drawings and

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<sup>515</sup> "Wibault, Jacques," Catalogue, IAA, accessed August 08, 2022, <http://iarc.cloudapp.net/Details/archive/110001061#>.

<sup>516</sup> Alfonso Muñoz Cosme, "Drawing Instruments, Engineering Methods and Representative Systems in Sixteenth- through Eighteenth Centuries in Fortification Design," in *Draughtsman Engineers Serving in the Spanish Monarchy in the Sixteenth to Eighteenth Centuries*, ed. Alicia Cámara Muñoz (n.p.: La Fundación Juanelo Turriano, 2016), 35.

<sup>517</sup> Miyamoto, "Colour-Coded Manuscript Maps," para. 22.

<sup>518</sup> Nicolas Buchotte, *Les Règles du dessein et du lavis pour les particuliers des ouvrages des bâtiments, & pour leurs coupes, profils, élévations & façades, tant de l'architecture militaire que civile* (Paris: Charles-Antoine Jombert, 1754), 24: "Enfin les différentes qualitez d'un terrain dans l'accompagnement d'un Plan, doivent être traitées le plus naturellement qu'il est impossible, sans pourtant sortir du goût du lavis, pour entrer dans celui de la mignature."

<sup>519</sup> Baudez, *Inessential Colors*, 94; Louis-Charles Dupain de Montesson, *La science des ombres, par rapport au dessein: ouvrage nécessaire à ceux que veulent dessiner l'architecture civile & militaire, ou qui se destinent à la peinture* (Paris: Charles-Antoine Jombert, 1750), 95 f.; Harris, "The Grey Wash Style," 57 note 11.

illustrated the materials in their polychromy (figs. 3.20-3.21), although they did not adhere to such strict rules as the military engineers.<sup>520</sup> The increasingly institutionalised training in architecture at the Académie Royale d'Architecture and the regular competitions and prizes involved, led to more elaborate, colourful presentation drawings which were displayed at the annual exhibitions.<sup>521</sup> In this way, colour eventually appeared in the drawings of entrants to the “Concorsi Clementini,” as seen in the 1728 design by Carlo Marchionni (1702-1786; fig. 3.22). This was despite the continued preference for monochrome ink drawings in Italy throughout the eighteenth century.<sup>522</sup> Carlo Fontana may have had a decisive influence on the popularisation of coloured architectural drawings. His drawing technique, well documented through an extensive collection at Windsor Castle (The Royal Collection Trust), is exceptional within Italian architectural draughtsmanship. These drawings are bound in thirteen volumes compiled and ordered by Fontana himself. From 1721 onwards, the volumes were for some time in the possession of Cardinal Alessandro Albani. The latter appears to have made them available for study, as evidenced by many copies made by the Italian architect Bernardo Antonio Vittone (1704-1770). Fontana's influence extended beyond his death and continued to play a role in the training of architects too old to have benefited from teaching by the master himself.<sup>523</sup> His drawings reveal a particular use of colour to mark different architectural features. A black or grey wash in a plan represented “the fabric due to be built,” while a pinkish red, yellow, or brown showed the existing walls (fig. 3.23).<sup>524</sup> Yellow could also represent gilding and blue was used to display water, a “red for brickwork in an elevation, or for the site of a stove in a plan.”<sup>525</sup> Some of Fontana's drawings are more monochrome, showing either a delicate grey wash over

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<sup>520</sup> Katharina Krause, “Zu Zeichnungen französischer Architekten um 1700,” *Zeitschrift für Kunstgeschichte* 53, no. 1 (1990): 65.

<sup>521</sup> Salge, “Von der Perspektivstudie zum Architekturbild,” 131 f.

<sup>522</sup> Tracy Ehrlich, “Carlo Marchionni, Architetto Romano: Drawing the Self in Eighteenth-Century Rome,” *Journal 18* 8 (Autumn 2019): 8, <https://www.journal18.org/4255>.

<sup>523</sup> John Pinto, review of *Carlo Fontana: The Drawings at Windsor Castle* by Allan Braham and Hellmut Hager, *The Burlington Magazine* 120, no. 908 (November 1978): 771.

<sup>524</sup> Allan Braham, and Hellmut Hager, *Carlo Fontana: The Drawings at Windsor Castle* (London: Zwemmer, 1977), 21.

<sup>525</sup> Braham, and Hager, *Carlo Fontana*, 21.

a graphite outline, or tone on tone in bister (fig. 3.24).<sup>526</sup>

It is assumed that Fontana, as a large-scale building contractor, had a sizeable construction office staffed with many assistants and students.<sup>527</sup> The drawings produced in his studio, however, show a striking stylistic consistency: the individual designs cannot be distinguished from Fontana's autograph drawings.<sup>528</sup> Autograph drawing in this sense defines a drawing that is undoubtedly by Fontana's hand, without any indication that elements of the drawing are by someone else or that it is a copy after Fontana. His signed drawings, for example, are considered to be autograph drawings (see fig. 3.24). In general, however, it is complicated and problematic to identify autograph drawings, an issue that will be discussed in the next chapters. In the architectural offices, certain responsibilities in the preparation of drawings were carried out by certain individuals. For example, Fontana may have drawn only a portion of a façade to be continued by a draughtsman. There may further be certain elements of the drawing such as ornaments, shading, frame, scale bar, etc., which were executed by different hands. In addition, if there are single designs in multiple versions, it might be that these are copies after Fontana's original, yet it is difficult to attribute or identify original and copy. The design for the facade of San Giovanni in Laterano, for example, which is in the Gibbs collection at the Ashmolean Museum, has been more or less firmly attributed to Fontana (fig. 3.25). However, Hellmut Hager argues, that based on the drawing technique with linear brushstrokes and a lack of shading, which results in a stiff quality of the figures, reveals it to be a copy after an original by Fontana, possibly even prepared by Gibbs himself.<sup>529</sup> In this case, a number of drawing parameters, including aspects of quality, indicate that this is not an autograph drawing by Fontana. The homogeneity of the drawings suggests that the draughtsmen working at Fontana's studio were seemingly expected to closely imitate his drawing style, which is why they

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<sup>526</sup> Bister is a brown dye that is obtained from infused and filtered chimney soot. See Baudez, *Inessential Colors*, 233.

<sup>527</sup> Höper, and Kieven, *Von Bernini bis Piranesi*, 167.

<sup>528</sup> Giovanna Curcio, "La Città degli Architetti," in *In urbe architectus: modelli, disegni, misure; la professione dell'architetto Roma 1680-1750*, ed. Bruno Contardi (Roma: Argos Ed., 1991), 146.

<sup>529</sup> Hellmut Hager, "One Project Ascribed to Carlo Fontana for the Façade of S. Giovanni in Laterano," *The Burlington Magazine* 117, no. 863 (February 1975): 105.

also adopted his colour conventions. This enabled Fontana to exert considerable influence on the young generation of architects, which was further amplified by his publications of several engraved volumes on St. Peter's Basilica and other Roman buildings.

Marchionni, one of Fontana's students, took his style even further. His architectural renderings challenged the longstanding design conventions in Italy during the eighteenth century, because he not only used shades of blue and green for representational purposes in areas of water or sky, but he also employed colour in dramatic, unconventional ways (see fig. 3.22).<sup>530</sup> Seven of Marchionni's elaborate drawings were owned by Gibbs and are now in the collection of the Ashmolean Museum in Oxford.<sup>531</sup> Four of these are views of Roman bridges for a survey (fig. 3.26), with the first sheet of the set dated 1735. One sheet depicts a plan of the Theatre of Pompey in the basement of the Palazzo Pio, another several underground sections of the theatre. The final drawing displays views and partial plans of the Terme di Agrippa. Marchionni stylises the drawings as works of art and combines pictorial devices with design conventions. The polychromy in reserved intensity is used both as a means of conveying information and as a design feature. The use of grey wash for the architectural representations and ground plan walls but also for shadows, clouds, terrain, or background scenes is predominant. However, colours such as blue or brown are used too, for example, water surfaces are washed in shades of blue, the riverbanks and certain materials in shades of brown. A light red wash is used to represent the masonry in section for the sections of the Theatre of Pompey. The inscriptions and measurements are likewise written in a deeply saturated red ink. By doing so, Marchionni translates "technical information into pictorial language."<sup>532</sup> The fact that Gibbs was in possession of these drawings reveals, on the one hand, his interest in Italian drawings and knowledge of Marchionni's draughting technique. On the other hand, they witness the transfer of conventions through the circulation of drawings. It was not necessary to stand in the direct periphery of a draughtsman to learn and copy his style of drawing. The aesthetics and improved

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<sup>530</sup> Ehrlich, "Carlo Marchionni," 26 note 13.

<sup>531</sup> ASH WA1925.342.1-7.

<sup>532</sup> Ehrlich, "Carlo Marchionni," 15.

legibility of the drawings by Fontana and Marchionni presumably played a decisive role in the shift towards an increasingly pictorial approach to architectural design in Italy and beyond towards the end of the eighteenth century, and in the more frequent use of colour. Furthermore, by adopting certain colour conventions, practitioners like Gibbs could reference the wealth of knowledge and drawing skills they had acquired by studying these drawings, be it during a period in a master's studio or in the privacy of their own homes.

### **Coloured Washes in German Architectural Drawings**

Before adopting the standardised French colour system, other European countries such as Germany and the Dutch Low Countries had employed a rich but random colour palette for architectural drawings. Several decades passed before the specifications in the manuals by the French engineers were more strictly followed. Pöppelmann's drawings thus show a variety of coloured washes (e.g., brown, red, green) and are especially characterised by a mostly coppery-greenish blue wash (fig. 3.27). When Zacharias Longuelune (1669-1748), a Frenchman who was appointed *Oberlandbaumeister* of the Electoral Saxon *Oberbauamt* between 1725 and 1728, replaced Pöppelmann, the French influence on the Dresden drawing practice increased. Longuelune's drawings present a wealth of painterly elements, especially in the sculptural areas but also in general to achieve a more three-dimensional quality.<sup>533</sup> Rich and masterly applied washes, which might have been the result of Longuelune's training as a painter, are a characteristic feature of his designs. Many works were drawn in very fine and sharp graphite lines, which were then traced with a pointed brush in pale colours ranging from light red to dark blue-grey (fig. 3.28). A recurring feature of Longuelune's façade designs is the greyish blue wash of the roofs evoking the patina of the copper finish. Longuelune's delicate hues – cut walls washed in a soft light red, flowerbeds and fountains in various greens – impressed not only the draughtsmen working in his office, who adapted his style, but also the

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<sup>533</sup> Heinrich Gerhard Franz, *Zacharias Longuelune und die Baukunst des 18. Jahrhunderts in Dresden* (Berlin: Dt. Verein f. Kunstwissenschaft, 1953), 12.

following generation of architects and draughtsmen.<sup>534</sup> This led to the development of a consistent style of drawing in the Saxon *Oberbauamt*, which, like that of the Fontana studio, hinders the attribution of the drawings.<sup>535</sup> Longuelune's characteristic drawing style with its painterly sfumato-like features and the soft flow of the pen is also demonstrated in an earlier drawing from 1705/06 documenting Andreas Schlüter's project for a steeple above the chapel of the Berlin Palace (fig. 3.29). The drawing was created at a time when Longuelune was draughtsman at Jean de Bodt's office (1703-1713) and it is possible that de Bodt also participated in its completion.<sup>536</sup> De Bodt must have encountered the practice of coloured architectural drawings in France. In his presentation drawings, the washes allude to the building materials: green for copper, blue for slate, gold or yellow for gilding (figs. 3.30-3.31).<sup>537</sup>

Besides de Bodt, two other individuals dominated the building industry in Berlin at the beginning of the eighteenth century: Andreas Schlüter and Johann Eosander. Only a few drawings can be attributed to the former, who according to contemporaries drew "saubere perspektivische Risse" ("clean perspective designs;" fig. 3.32; see fig. 2.12, chapter II).<sup>538</sup> Eosander, like de Bodt, worked both in Berlin and Dresden, but only a few drawings relating to Eosander's projects there exist, and none of them can be identified as being autograph drawings due to both aspects of quality and draughtsmanship.<sup>539</sup> Several signed and colour washed fortification drawings for Stettin from Eosander's pre-Berlin period, made before 1699, are however identified as autograph drawings (figs. 3.33-3.34).<sup>540</sup> It is noticeable that Eosander drew his lines in brown ink, perhaps sepia. Sepia in architectural drawings was less used than black inks. There is the assumption that Eosander stopped

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<sup>534</sup> Heckmann, *M. D. Pöppelmann als Zeichner*, 52 f.

<sup>535</sup> Hans-Joachim Kuke, "Zum Problem der Händescheidung – Berliner Architekturzeichnungen Jean de Bodts im Kontext," in *Aspekte der Kunst und Architektur in Berlin um 1700*, ed. Guido Hinterkeuser (Potsdam: Generaldirektion der Stiftung Preußischen Schlösser und Gärten Berlin-Brandenburg, 2002), 146.

<sup>536</sup> Kuke, "Zum Problem der Händescheidung," 145.

<sup>537</sup> Kuke, "Zum Problem der Händescheidung," 142.

<sup>538</sup> Hinterkeuser, "Eine Zeichnung von Andreas Schlüter," 109.

<sup>539</sup> Alexander Holland, "Zeichnungen aus dem Umfeld Johann Friedrich Eosanders," in *Aspekte der Kunst und Architektur in Berlin um 1700*, ed. Guido Hinterkeuser (Potsdam: Generaldirektion der Stiftung Preußischen Schlösser und Gärten Berlin-Brandenburg, 2002), 122.

<sup>540</sup> Holland, "Zeichnungen aus dem Umfeld Johann Friedrich Eosanders," 124.

drawing himself once he was called to Berlin. The surviving drawings that can be associated with Berlin construction projects under his direction are quite different from his Stettin drawings and do not feature a homogeneous drawing style. The drawing of a staircase for Charlottenburg Palace (fig. 3.35), for example, is executed with a thin pen and is accurately washed, with the sections coloured in brown. Even though this is described as a working drawing, the ornaments of the staircase railing are finely detailed and neatly drawn. The comparison with the plans from Stettin indicates that Eosander did not draw it himself.<sup>541</sup> It is attributed elsewhere to de Bodt.<sup>542</sup> A design for the ground plan of the palace and garden of Monbijou Palace from 1706/09 displays yet another drawing style and quality (fig. 3.36). The pen-and-ink drawing is sloppily washed and does not feature a high level of draughtsmanship. The quality is too poor for Eosander and it is assumed to be a drawing by a gardener, given that architecture was not the main focus of the draughtsman's interest.<sup>543</sup> These drawings show that Eosander did not appear to have required a uniform office style from the draughtsmen he employed and that they had different qualifications with regard to drawing.<sup>544</sup> However, the source material on available drawings related to Eosander and his Berlin projects is limited, requiring caution in drawing definitive conclusions.

One of Eosander's draughtsmen was Martin Heinrich Böhme, who had previously belonged to Schlüter's building office. Böhme certainly prepared drawings for both architects. So far, however, there is only one drawing that was safely attributed to him. It is a monochrome design for the courtyard façade of the Berlin Palace from 1714/16 (fig. 3.37) and dates from a time when Eosander was no longer in Berlin having left in 1713 and entered the service of Augustus the Strong as a lieutenant general in 1722. In contrast to the Berlin drawings, the drawings for Eosander's last building project, the Lusthaus Übigau in Dresden, are characterised by a stylistic uniformity (figs. 3.38-3.39). All of them show precise lines, drawn with a fine pen, and are very neatly coloured. It is assumed that the sheets were not

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<sup>541</sup> Holland, "Zeichnungen aus dem Umfeld Johann Friedrich Eosanders," 125.

<sup>542</sup> Kuke, *Jean de Bodt*, 133.

<sup>543</sup> Holland, "Zeichnungen aus dem Umfeld Johann Friedrich Eosanders," 126.

<sup>544</sup> Holland, "Zeichnungen aus dem Umfeld Johann Friedrich Eosanders," 129.

produced by professional architectural draughtsmen, but by engineers who could draw and paint very neatly but were less proficient in depicting sculptural details.<sup>545</sup> This is an indication of the similar level of training within the Saxon *Ingenieurkorps*, of which Eosander is said to have become head in 1726, prior to de Bodt's accession to the post in 1728.<sup>546</sup>

### **Architectural Drawing Conventions in England: Polychromy vs. Monochromy**

While on the Continent the way in which colour was used in architectural drawings tended to be similar, in England there were different trajectories. First, there was Christopher Wren, who repeatedly used polychrome washes for depicting materials of different kinds: grey for stone, red for brick, blue for leaded roofs, yellow for gilded features (fig. 3.40).<sup>547</sup> In doing so, he adapted the method of architectural representation in accordance with the drawing type, of which he had developed three: the exploratory drawing, the presentation drawing, and the construction drawing.<sup>548</sup> Wren might have encountered polychromy during his visit to Paris in 1665-66 from which he returned with "almost all France in paper."<sup>549</sup> Together with drawings by Jules Hardouin-Mansart's office, Wren owned five of Vauban's engravings as well as his manual "Fortification" – presumably *Le directeur général* from 1685.<sup>550</sup> In contrast, Wren's assistant and draughtsman Nicholas Hawksmoor employed "monochrome black and white, but with a painterly use of washes" resulting in a pictorial appearance (fig. 3.41).<sup>551</sup> This is again considered the result of French influence, perhaps that of the Huguenot engraver and copyist Simon Gribelin, who is claimed to have trained Hawksmoor the "art of grey-wash shading".<sup>552</sup> Gribelin himself, as was recently shown by Gordon Higgott, occasionally worked as Wren's

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<sup>545</sup> Holland, "Zeichnungen aus dem Umfeld Johann Friedrich Eosanders," 128.

<sup>546</sup> Alexander Holland, *Johann Friedrich Eosander genannt von Göthe (1669-1728). Anmerkungen zu Karriere und Werk des Architekten, Ingenieurs und Hofmannes am Hof Friedrichs I. in Preußen* (Weimar: VDG, 2002), 127; see also note 541.

<sup>547</sup> Geraghty, *The Architectural Drawings of Sir Christopher Wren*, 10.

<sup>548</sup> Geraghty, "The Drawings."

<sup>549</sup> Geraghty, "Robert Hooke's Collection of Architectural Books and Prints," 113.

<sup>550</sup> Watkin, *Sale Catalogues*, 23; Higgott, "The Revised Design for St Paul's Cathedral," 542.

<sup>551</sup> Baudez, *Inessential Colors*, 26.

<sup>552</sup> "Wren and his draughtsmen."



draughtsman at St Paul's Cathedral from about 1685 until 1702, preparing at least 27 drawings in pencil, ink, and wash both for documenting and engraving the building process.<sup>553</sup> Some of these drawings were previously assigned to Hawksmoor, given that they display a “mastery of evenly graded washed shading and darker tones on the recessed planes” associated with him.<sup>554</sup> Indeed, in the 1690s, Hawksmoor relied entirely on tonal modelling in certain areas and omitted or only hinted at outlines, as for example in the preliminary design for the west towers of St Paul's Cathedral, c. 1699.<sup>555</sup> This gradual application of washes to achieve three-dimensionality would become a characteristic in Hawksmoor's drawings, although he occasionally also resorted to shadows “hatched with long pen strokes”.<sup>556</sup> In this way, grey wash signifies the recession of certain building parts, for example for the central parts of the façades on elevations for his City church drawings. This technique of depicting a stepped or curved façade on a two-dimensional sheet without the need for a plan is also found on a drawing Hawksmoor prepared for Whitehall Palace in 1698 (fig. 3.42). Here he also added an additional layer of wash to those areas shaded by a projected light source from the left.<sup>557</sup>

In the 1720s, a new generation of draughtsmen and architects active in the Office of Works began to dominate the English architectural drawing practice until the mid-century with their so-called “Palladian monochromy”.<sup>558</sup> The Office of Works gathered the “largest and most prestigious concentration of architectural expertise” in early modern Britain.<sup>559</sup> Therefore, and in absence of an academy of architecture, this building office exerted considerable influence over the types of

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<sup>553</sup> Gordon Higgott, “Documenting the design of St Paul's Cathedral through drawings and engravings: the contribution of Simon Gribelin (1661-1733),” in *Le dessin d'architecture dans tous ses états. 2. Le dessin d'architecture, document ou monument?*, ed. Claude Mignot (Paris: Société du Salon du Dessin, 2015), 46.

<sup>554</sup> Higgott, “Documenting the design of St Paul's,” 46-47.

<sup>555</sup> London Metropolitan Archives (LMA), SC/GL/WRE/140 (former reference: St Paul's catalogue number WRE/6/1/3). For a detailed discussion of Hawksmoor's drawing technique of the 1690s see Geraghty, “Nicholas Hawksmoor's Drawing Technique,” 125-142.

<sup>556</sup> Tom Foxall, “Schooled by Wren, or a School by Wren? The Conception of Christ's Hospital Writing School, London,” *Architectural History* 51 (2018): 102 f.; 107.

<sup>557</sup> Foxall, “Schooled by Wren, or a School by Wren,” 102.

<sup>558</sup> Harris, “The Grey Wash Style,” 48; 56.

<sup>559</sup> See Colvin, *The History of the King's Works*; Howard Colvin, “Lord Burlington and the Office of Works,” in *Lord Burlington and His Circle. Papers given at a Georgian Group symposium at the Victoria and Albert Museum on the 22nd May 1982* (London: Georgian Group, 1982), 97.

architectural drawings employed and its conventions. John Harris describes this kind of monochrome drawing convention as the “Campbellian-Burlingtonian phase of neo-Palladianism.”<sup>560</sup> Both Campbell and Burlington reflected “not only the severity of the revived Palladian style but also the engraved architectural images in books which they are graphically imitating”.<sup>561</sup> It was Burlington’s influence that, after the restructuring of the Office of Works following the accession of George I in 1714, caused many of the available positions to be occupied by his friends, protégés, and like-minded peers, like Henry Flitcroft (1697-1769).<sup>562</sup> Burlington may also have been the first to welcome the Italian Giacomo Leoni on his arrival in England.<sup>563</sup> However, Leoni’s drawing style is characterised by a Continental polychromy not seen in the work of architects from the Burlington circle. In plans, he employed light red and grey washes, likely to indicate the different construction situations (fig. 3.43). The same colours represent the building materials in the sections, e.g., masonry and wood (fig. 3.44).

Leoni was not the only European building professional to travel across the English Channel. Alessandro Galilei, who likewise used light red wash in his drawings, Richard Castle, and Johann Gottlieb Borlach made their way to the British Isles, too. Here they employed the drawing practices they had assimilated in Europe. British draughtsmen and architects trained on or touring the Continent, like James Gibbs, Edward Lovett Pearce, and William Kent, also transferred the drawing methods they had encountered there to England. Kent’s delicate washes of his mature draughtsmanship, predominantly in shades of grey and yellow-brown as well as sepia, are certainly the result of his ten-year stay in Italy.<sup>564</sup> The use of sepia might also reflect his painterly background. An indication of Gibbs’s Roman experiences and the school of Fontana is the use of light red wash to indicate masonry in sections in conjunction with the distinctive finished rendering in grey pen and ink and grey

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<sup>560</sup> Harris, “The Grey Wash Style,” 56.

<sup>561</sup> Richardson, “Architectural Drawings,” 20.

<sup>562</sup> Burlington’s predominance in influencing the Office of Works has recently been challenged. See Arciszewska, “The Office of the King’s Works,” 339-366.

<sup>563</sup> Albert Edward Richardson, *Monumental Classic Architecture in Great Britain and Ireland* (Mineola, NY: Dover, 2001), 10; John Woodhouse, “Venice’s European Diaspora: The Case of James Leoni (1685-1746),” *The Modern Language Review* 103, no. 4 (October 2008): xlviii.

<sup>564</sup> Weber, *William Kent*, 151; 153.

wash.<sup>565</sup> About 28 of the drawings attributed to Gibbs feature this colour convention, among them also plans. Three plans have been attributed to him, which furthermore show yellow washes. Like the light red washes in plans, these probably indicate different states of construction. Edward Lovett Pearce travelled to Italy on his grand tour, where he made contact with Galilei and purchased drawings from him.<sup>566</sup> Some drawings of plans and elevations in the Vanbrugh Album in Pearce's hand bear witness to this exchange in that they feature light red wash indicating masonry (fig. 3.45). A measured wall elevation for the lower part of the window and inner walls of the entrance hall for Kildare House (later Leinster House), attributed to Richard Castle, features yellow wash. While yellow represents the material wood in other drawings (see chapter V), this would not seem to apply here. In this case, it is more likely that the use of yellow wash indicates alterations and additions to an originally different design (see fig. 3.6). Besides a possible Continental influence, military-engineering drawing practice comes into question as source of inspiration for this specific use of colour. For, several drawings from the Office of Ordnance feature this convention. The drawing of the water engine in St Thomas's Tower at the Tower of London (1721) by Clement Lemprière (1683-1746), draughtsman to the Ordnance Office and also Gibbs's draughtsman, bears an inscription that explains the yellow wash indicating "design'd Alterations, and Additions" (fig. 3.46).<sup>567</sup> The plan and profile of the north side of the Surveyor General's House (1722) proposes new vaults to the house which are washed in yellow (fig. 3.47). It is tempting to assume that Castle operated within the orbit of the Office of Ordnance before his arrival in Ireland and therefore applied the colour yellow in accordance with the conventions there.<sup>568</sup> Particularly with regard to colour conventions, the designs of the Office of Ordnance differ significantly from those of the Office of Works. This may be related to the different fields of activity, occupation, and training (military vs. civil). Already in the

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<sup>565</sup> Friedman, *James Gibbs*, 289.

<sup>566</sup> McParland, *Public Architecture in Ireland*, 182.

<sup>567</sup> Parnell, "The Buildings and Works of the Office of Ordnance," 173.

<sup>568</sup> Basile Baudez describes an exception to the use of the colour yellow that never became a convention but that could also apply to Castle's drawing. Pierre Breau, a Parisian contractor who worked regularly for the crown, used colours to distinguish the different types of stone. Thus, in an elevation of Château Clagny (built 1675-76) there appear colours that correspond to the different qualities of stone: grey for hard stone, yellow for soft stone, and light red for facing stones. See Baudez, *Inessential Colors*, 117.

early eighteenth century, most of the drawings of the Office of Ordnance are characterised by a particular polychromy, which can doubtless be traced back to Continental models from the military-engineering field that were spread by books and the employment of mercenaries and foreign technicians.<sup>569</sup>

### Shading

Shading or sciagraphy is a significant feature of almost every early modern architectural drawing.<sup>570</sup> Used to achieve a sense of depth and solidity in architectural drawings, it provided comprehensibility to structural contexts that otherwise would only be apparent from a floor plan. The origins of shading are probably to be traced to Italy.<sup>571</sup> Italian architects such as Baldassare Peruzzi (1481-1536) had used shading early to emphasise three-dimensionality of designs.<sup>572</sup> Even Palladio created shadow effects by using a few hatchings to accentuate projecting or rounded parts of the building when presenting designs in his *Quattro Libri*.<sup>573</sup> While Leon Battista Alberti (1404-1472) had demanded that architectural drawings were to be executed without shading, for Vincenzo Scamozzi (1548-1616), on the other hand, shading was an essential technique that served to enhance the volume and three-dimensionality of what was actually a two-dimensional representation.<sup>574</sup> It is Scamozzi, who provided the only detailed description for the execution of a finished architectural drawing, specifying modes of refinement that are still used today: “The drawings of Architecture must be made of simple, pure lines, and delicate strokes of watercolours, clear, muted, & somewhat dark: made in excellent ink; in such a way as to imitate the shadows made by natural or artificial bodies of the same kind: taking the light on the left side, and making the shadows on our right, as a proper site for seeing, and studying all

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<sup>569</sup> Baudez, *Inessential Colors*, 100; Ann Bermingham, *Learning to draw: studies in the cultural history of a polite and useful art* (New Haven: Yale University Press, 2000), 83.

<sup>570</sup> Heckmann, *M. D. Pöppelmann als Zeichner*, 23.

<sup>571</sup> Philipp, *Architektur – gezeichnet*, 93.

<sup>572</sup> Ann C. Huppert, *Becoming an Architect in Renaissance Italy: Art, Science, and the Career of Baldassarre Peruzzi* (New Haven: Yale University Press, 2015), 85.

<sup>573</sup> Philipp, *Architektur – gezeichnet*, 65.

<sup>574</sup> Leon Battista Alberti, *Zehn Bücher über die Baukunst*, trans., pref., and annot. Max Theuer (Darmstadt: Wissenschaftliche Buchgesellschaft, 1991), II,1, 69 f.; Kieven, “Il Disegno Architettonico,” 77.

things.”<sup>575</sup> Incidentally, he concludes by recommending to leave “all the obscurity of colours to miniaturists.”<sup>576</sup> Scamozzi’s *L’idea della architettura universale*, first published in 1615, was distributed widely and the considerable influence it exerted throughout Europe together with Scamozzi’s drawings is well known.<sup>577</sup> As an example, Lord Burlington’s remark from a letter is quoted here: “[I] left a Scamozzi packt upon the table [...] I beg you to send it in a box by the Coach.”<sup>578</sup> Scamozzi’s influence did not stop in England, it reached as far as Ireland: reference has been made to his importance for Richard Castle.<sup>579</sup>

Besides Scamozzi, other publications on the subject of shading emerged during the eighteenth century, e.g., the above mentioned *La science des ombres* by de Montesson.<sup>580</sup> De Montesson specified rules for the design of shades of any kind and shape to rationalise the technique of measuring and drawing shadows especially for the French engineers.<sup>581</sup> Until then, it had been common to learn how to draw shadows by imitation, without understanding the actual underlying principles. This theorisation and scientification of the drawing technique and its explanation in a manual is symptomatic of the eighteenth century.<sup>582</sup> Despite being rejected by architects who followed the plain and simple style advocated by Alberti, incorporating shadow projections into views, sections, and even plans advanced to become a

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<sup>575</sup> Vincenzo Scamozzi, *L’idea della architettura universale* (Venezia: n.p., 1615), I,XIV, 48: “*I disegni d’Architettura devono esser fatti di semplici, e pure linee, e tocchi leggiadramente d’acquarelle, chiare, mezane, & alquanto scurette: fatte d’ottimo inchiostro; in modo che imitino l’ombre, che fanno i corpi naturali, ò artificiale, della medesima specie: pigliando il lume à parte sinistra, e facendo l’ombre alla nostra destra, come sito proprio à vedere, e studiare tutte le cose.*” (“The drawings of Architecture must be made of simple, pure lines, and delicate strokes of watercolours, clear, muted, & somewhat dark: made in excellent ink; in such a way as to imitate the shadows made by natural or artificial bodies of the same kind: taking the light on the left side, and making the shadows on our right, as a proper site for seeing, and studying all things.”)

<sup>576</sup> Scamozzi, *L’idea della architettura*, I,XIV, 48: “*lasciando tutto le vaghezze de’colori a’miniatori.*”

<sup>577</sup> Hubertus Günther, “Vincenzo Scamozzi: Lektüren eines gelehrten Architekten,” Zentralinstitut für Kunstgeschichte, accessed July 21, 2021, <http://scamozzi.zikg.eu/index.php?id=44>.

<sup>578</sup> Andrew Hopkins, “Searching for Palladio, discovering Scamozzi: Arundel, Jones and Burlington,” in *Vincenzo Scamozzi teorico europeo*, ed. Franco Barbieri, Maria Elisa Avagnina, and Paolo Sanvito (Vicenza: Accademia Olimpica, 2016), 91.

<sup>579</sup> Griffin, and Pegum, *Leinster House*, 9.

<sup>580</sup> Laura Trazic, *On solidity in architecture: Ornament, Shadow, and Construction* (n.p.: n.p., n.d), 340.

[https://www.researchgate.net/publication/349952413\\_On\\_solidity\\_in\\_architecture\\_Ornament\\_Shadow\\_and\\_Construction](https://www.researchgate.net/publication/349952413_On_solidity_in_architecture_Ornament_Shadow_and_Construction).

<sup>581</sup> De Montesson, *La science des ombres*.

<sup>582</sup> Röell, “Tekenen ter Verlichting,” 97.

fashionable accessory for eighteenth-century military and civil architectural drawings.<sup>583</sup> Nicolas de Chastillon (1699-1765), head of the *École royale du génie de Mézières*, for example, determined strict conventions for shading. After all, the principles underlying shading were there to provide a clearer sense, something that was a constant concern for the practising military engineer.<sup>584</sup> The building office of the *Bâtiments du Roi* likewise adhered to certain shading conventions: the shadows had to be indicated in finely nuanced washes with the light source coming from the left.<sup>585</sup> Beyond the spheres of the French building office, other methods of shading were used. The French architect-engineer Pierre Bullet (c. 1639-1716), for example, indicated shadows and brightness values of building materials using parallel hatching (fig. 3.48).<sup>586</sup>

The convention of hatched shading was also employed in Britain. Edward Woodroffe (1668-1675), Christopher Wren's first draughtsman, often used "ruled hatched shading."<sup>587</sup> His Greek cross elevation of St. Paul's Cathedral (fig. 3.49), c. 1670-72, vividly demonstrates this style of shading: he "vigorously overlaid the cathedral design with hatching, conveying the cylindrical bulk of the dome and the concavity of the quadrant facades. The rear planes of the cathedral are darkly shaded. Walls are shaded with vertical hatching, roofs with horizontal hatching. Doors and windows are shaded with cross hatching, while the fall of light over the dome is conveyed by additional segmental lines."<sup>588</sup> It is possible that John Webb (1611-1672), who employed a similar hatched shading technique, had trained Woodroffe.<sup>589</sup> A different source seems plausible, too. Woodroffe's hatching consists of precisely constructed horizontals and verticals. The reason for this is that he borrowed this technique from the conventions of French architectural engravings and treatises, of which he had copies in his private library.<sup>590</sup> In Jean Marot's engraving of the elevation of the *Église de la Sorbonne*, for example, this hatching technique is clearly visible (fig.

<sup>583</sup> Alberti, *Zehn Bücher über die Baukunst*, II,1, 69.

<sup>584</sup> Langins, *Conserving the Enlightenment*, 452 note 33.

<sup>585</sup> Krause, "Zu Zeichnungen französischer Architekten," 65.

<sup>586</sup> Krause, "Zu Zeichnungen französischer Architekten," 65.

<sup>587</sup> Geraghty, "Edward Woodroffe," 476.

<sup>588</sup> Geraghty, "Edward Woodroffe," 478.

<sup>589</sup> Geraghty, "Edward Woodroffe," 477.

<sup>590</sup> Geraghty, "Edward Woodroffe," 477.

3.50).<sup>591</sup> Another of Wren's draughtsmen, Nicholas Hawksmoor, was influenced by French architectural engravings such as those by Jean and Daniel Marot.<sup>592</sup> In many of his drawings for Wren from the 1680s and 1690s, Hawksmoor vigorously and confidently used a vertical and hatched pen shading. While neither the *Grand Marot* nor the *Petit Marot* is listed in Hawksmoor's sale catalogue of 1740, it is assumed that he nonetheless used or owned it.<sup>593</sup> As discussed earlier, Hawksmoor later mainly applied grey wash shading. It might therefore be presumed that he initially relied more on two-dimensional templates and developed his technique under skilled guidance by Wren, Gribelin, and others. For, it can be observed that over time his penwork becomes neater, and line shading is largely absent.<sup>594</sup> Thomas Laine (1652-1683/84), who preceded Hawksmoor in Wren's service, shaded all but one of his drawings in a skilful manner according to a light source on the left. Exterior doors and windows are modelled with a dark wash, while the mouldings are shaded with a "precise logic: within the moulding to the left, and outside the moulding to the right."<sup>595</sup> This painterly application of wash-shading probably derives from his background as a painter-stainer. His virtuoso technique is particularly visible in sections: the window openings appear without wash, which leads to a pleasant effect of "luminosity and transparency."<sup>596</sup> The following generation of architects and draughtsmen in Britain who had committed themselves to the "grey wash style" used the visual illusion of shade in their designs, too. Klausmeier describes Thomas Ripley's drawings as characteristic in the shading of the roof surfaces, the windows, and the projections (fig. 3.51).<sup>597</sup> He leaves the projecting elements blank, whereas the receding parts of the building are lightly washed. The roof slopes feature a precisely graduated method of shading consisting of a smooth ruling, the spacing of which narrows towards the ridge, and a grey wash in the upper part of the roof. This technique of ruling roofs can

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<sup>591</sup> Geraghty, "Edward Woodroffe," 478.

<sup>592</sup> Geraghty, "Edward Woodroffe," 478; Higgott, "The Revised Design for St Paul's Cathedral," 542.

<sup>593</sup> Downes, "Hawksmoor's Sale Catalogue," 335.

<sup>594</sup> "Wren and his draughtsmen."

<sup>595</sup> Geraghty, "Introducing Thomas Laine," 242.

<sup>596</sup> Geraghty, "Introducing Thomas Laine," 242.

<sup>597</sup> Klausmeier, *Thomas Ripley*, 116.

also be seen occasionally in drawings attributed to Gibbs.<sup>598</sup>

Various techniques of shading can also be observed in Germany. In Saxony, Matthäus Daniel Pöppelman included the depiction of shade in his drawings in the form of wash-shading (see fig. 3.27).<sup>599</sup> In the case of openings, a shaded border along the left and upper sides of the opening almost always enhanced the sculptural effect. Where windows are arranged in façades that protrude from the rest of the front, the openings were sometimes rendered darker. Often only one part of the window opening is dark, i.e., it is imagined to be open, while the other part has glazing bars with a light glass surface. Likewise, the doors were often depicted as being open, their wings at times shown in perspective (fig. 3.52).<sup>600</sup> The so-called “black hole rhythm,” dark voids with glazing bars omitted, was another common way to represent glass in European eighteenth-century architectural drawings.<sup>601</sup> This convention together with light wash-shadings can be seen in a drawing from 1697 signed by Johann Eosander (see fig. 3.34). The window openings in the only drawing attributed to Martin Heinrich Böhme are depicted with glazing bars, the glass surfaces diagonally hatched (see fig. 3.37). Most of the shading on this drawing is in the form of hatching (horizontal, vertical, or grid-like); extensive washes do not appear. Again, the influence of the prints and engravings mentioned above is evident. In contrast, the shading in Jean de Bodt’s and Zacharias Longuelune’s drawings is rendered in nuanced washes, which might be traced back to their French origin (see figs. 3.28 and 3.30).

### Scale Bars

Given that a uniform use of scales did not exist in the early modern period, efforts were

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<sup>598</sup> Although in most of Gibbs’s office drawings the light source is placed at the upper left, there are some drawings where it is assumed to be at the upper right. For a more detailed discussion of Gibbs’s office drawings see chapter IV.

<sup>599</sup> Heckmann, *M. D. Pöppelmann als Zeichner*, 23.

<sup>600</sup> Heckmann, *M. D. Pöppelmann als Zeichner*, 23.

<sup>601</sup> Konrad Ottenheym, “‘Die Liebe zur Baukunst nach Maß und Regeln der Alten’ – Der Klassizismus in den nördlichen Niederlanden des 17. Jahrhunderts,” in *Bauen nach der Natur – Palladio: die Erben Palladios in Nordeuropa; Begleitband zur Sonderausstellung im Museum für Hamburgische Geschichte*, 30. Mai bis 31. August 1997, ed. Jörgen Bracker (Ostfildern: G. Hatje, 1997), 144; Stamp, *The Great Perspectivists*, 11.



made to establish consistent rules with regard to measurements and scales within the building practice in the architectural treatises of the eighteenth century. Buchotte, for example, in *Les Règles du dessein* captured Vauban's scales that were suitable for maps and drawings, and supplemented them with larger scales for the employment by masons, carpenters, and metal workers.<sup>602</sup> He expressed the opinion that a drawing should never be made to an arbitrary scale – quite contrary to the common practice among building specialists – and the measurement employed should always be the *pied du roi* (king's foot). In addition, the scale bar displayed on the drawing should be subdivided and simple, without ornamentation at either end.

In practice, though, things looked quite different. Contrary to the practice of defined scales developed in the nineteenth century, like 1:100, and so forth, used today, in the seventeenth and eighteenth centuries the scale of drawings corresponded to the size of the available sheet as well as to the dimensions of the object that was to be depicted on the sheet.<sup>603</sup> The scale was increased in proportion to the size of the pictured feature: a façade was usually drawn at a smaller scale than the detail of a pilaster. In addition, there was a range of locally valid standard units of measurement, such as the foot (*pied/piede*), the inch, the rod, the *klafter* (*toise*), etc., whose lengths and divisions varied according to region, town, and craft.<sup>604</sup> On their drawings, the architects or draughtsmen in most cases provided the dimensional unit of the location for the execution of the design, sometimes supplemented by a scale in a different size.

The measure was noted on a scale of arbitrary length that was placed in, or next to (in most cases below), the design.<sup>605</sup> A drawing that was important for the construction process or served to ensure correct execution was often provided with additional dimensions for technical reasons, or these were noted in attached written descriptions. This does not apply to full-size drawings and small-scale presentation drawings. Here, only the most important dimensions were inserted where

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<sup>602</sup> Buchotte, *Les Règles du dessein*, 48-54.

<sup>603</sup> Kieven, "Il Disegno Architettonico," 77.

<sup>604</sup> Röell, "Tekenen ter Verlichting," 92.

<sup>605</sup> Höper, and Kieven, *Von Bernini bis Piranesi*, 15.

requested.<sup>606</sup> It is noticeable that the thickness of walls, the clear width of chimneys, etc., were usually not indicated; it seems that an understanding of their dimensions was common know-how among craftsmen.<sup>607</sup> It thus depended on the type of drawing whether and what kind of scale was chosen.

The appearance of the scales could take different forms, ranging from a simple straight line with subdivisions at regular intervals and no further indications, to a more elaborate scale bar with segments on which tenth, eleventh, twelfth (and sometimes 100th, 110th, or 120th) units might also be measured. Another way of representing a scale on architectural drawings is that of the diagonal scale, as can be found on a drawing attributed to Richard Castle's laid-out interior for the ground floor dining/private room for Kildare House (later Leinster House) c. 1745 (fig. 3-53). A diagonal scale usually consists of eleven horizontal parallel lines of the same length, which represent the hundredths of a unit, with a regularly vertical division into equally sized rectangles or squares.<sup>608</sup> The last section (either leftmost or rightmost) was again divided into units by ten diagonal lines, representing the tenths of a unit.<sup>609</sup> Castle's diagonal scale bar consists of 13 horizontal parallel lines and has no vertical subdivision. The reason for this might be that at that time there was no standardisation of diagonal scales within the building practice. Diagonal scales were used in numerous areas such as surveying, engineering, topography, geography, physical science, navigation, and carpentry, they were depicted in many mathematical books from the early 1700s onwards (e.g., Edward Wells, *The young gentleman's Trigonometry, Mechanics, and Opticks* from 1714), and the use of it was required for many military and school entrance examinations in London.<sup>610</sup> Various manuals refer to the diagonal scale as a necessary tool for pupils and schools.<sup>611</sup> Nevertheless, the depiction of this type of scale on an architectural drawing is rare. At the Stadtmuseum Berlin, another example can be found on a

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<sup>606</sup> Röell, "Tekenen ter Verlichting," 93.

<sup>607</sup> Heckmann, *M. D. Pöppelmann als Zeichner*, 20.

<sup>608</sup> Kristina Leifeste Brantley, "A forgotten contrivance: A study of the diagonal scale and its appearance in mathematics texts from 1714 to the present," *BSHM Bulletin* 30, no. 1 (2015): 52. <https://doi.org/10.1080/17498430.2014.917391>.

<sup>609</sup> Leifeste Brantley, "A forgotten contrivance," 53.

<sup>610</sup> Leifeste Brantley, "A forgotten contrivance," 65.

<sup>611</sup> Leifeste Brantley, "A forgotten contrivance," 65.

drawing for an unknown project, presumably after a design by Jean de Bodt (fig. 3.54). A drawing showing the plan of the garden at Stillorgan House, showing Edward Lovett Pearce's design for the grotto, features just such a diagonal scale bar (fig. 3.55).

From the arrangement of the scales, their labelling, and small accompanying symbols, it may be possible to draw certain conclusions about the affiliation of the draughtsmen to a particular architectural office. However, this practice is controversial, given that scale bars let alone their labelling do not always have to be made by the same hand as the drawing.<sup>612</sup> Christopher Wren's drawings often have a scale "with combined comma and colon marks at the 5ft-divisions [...]. He separated numbered dimensions with dots rather than dashes and rarely used 'feet' and 'inch' abbreviations."<sup>613</sup> Likewise, several drawings are attributed to Thomas Ripley based on the scale bar. A particularly distinctive hook at differing points above the scale bar serves as an identifier for his authorship (fig. 3.56).<sup>614</sup> Nicholas Hawksmoor's signature scale bar features a "characteristically scribed '5'" with a "very short lower loop" (fig. 3.57).<sup>615</sup> This kind of scale bar "figured in his attractive handwriting" was introduced by Hawksmoor in his revised designs for St Paul's Cathedral from the years c. 1685-87.<sup>616</sup> Another distinctive feature he used are the "dots and chevrons to mark off the 10 ft subdivisions" (fig. 3.58), as well as scale-bars with triple-dot division. Occasionally he placed his scales in ornate banners (fig. 3.59).<sup>617</sup> Within the Drawing Room of the Office of Ordnance, an "identical use of scales" prevailed, resulting in a consistent drawing style.<sup>618</sup> Gibbs's characteristic scale bar with the "representation of zero on the scale-bar by a lower-case v with the second part of the stroke slightly curved, almost like a lower-case r" has been noted above (fig. 3.60).<sup>619</sup> Was this a practice Gibbs picked up in Carlo Fontana's studio?

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<sup>612</sup> Joachim Hotz, *Das "Skizzenbuch Balthasar Neumanns". Studien zur Arbeitsweise des Würzburger Meisters und zur Dekorationskunst im 18. Jahrhundert* (Wiesbaden: Reichert, 1981), 62.

<sup>613</sup> "Wren and his draughtsmen."

<sup>614</sup> Klausmeier, *Thomas Ripley*, 16; 116.

<sup>615</sup> Foxall, "Schooled by Wren, or a School by Wren," 103. See also Higgott, "The Revised Design for St Paul's Cathedral," 539.

<sup>616</sup> Geraghty, "The Drawings."

<sup>617</sup> Geraghty, "The Drawings."

<sup>618</sup> Parnell, "The Buildings and Works of the Office of Ordnance," 151.

<sup>619</sup> Hewlings, "Gibbs at Raby Castle," 52.

The scales here are mostly not bars but consist of dots. Above these dots there are sometimes similar symbols but inverted, resembling arrowheads (fig. 3.61; not “v” but “^”). In *Design for the monument of a ‘Person of Quality’* attributed to Gibbs, this arrowhead symbol can be seen as well (fig. 3.62).

In Germany, too, some scale bars were associated with architects. For Zacharias Longuelune and his circle in Dresden, it seems characteristic to place the sub-division at the right end of the scale line (fig. 3.63).<sup>620</sup> Furthermore, it was common practice in Dresden to measure with Dresdner Ellen and accordingly the designation “Ellen”, “Ellens”, or “Dresdner Ellen” appeared at times at the end of the scale line.<sup>621</sup> However, since building specialists of different nationalities worked in Dresden, it is possible that other measurements are given on Saxon drawings, e.g., *Rheinländische Rute* or *pedes*.

## Flaps

In order to provide documentation of alternative designs and to avoid having to redraw the entire construction, flaps or strips of paper were pasted onto the sheet as additional partial drawings that could be folded backwards and forwards to study the different alternatives.<sup>622</sup> This technique is found from time to time within the eighteenth-century European drawing practice and was for example frequently used by James Gibbs. In more remote areas, however, local architects hardly ever employed it.<sup>623</sup> It might therefore be another convention that travelled with the people. In this way, the practice of adding flaps probably eventually came to Ireland, too: some of Richard Castle’s designs show alternative ideas on attached flaps.

## Frames

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<sup>620</sup> Heckmann, *M. D. Pöppelmann als Zeichner*, 20.

<sup>621</sup> A cubit like this was 2 feet or 24 inches equal to 0.5664 metres. Heckmann, *M. D. Pöppelmann als Zeichner*, 20.

<sup>622</sup> Philipp, *Architektur – gezeichnet*, 159.

<sup>623</sup> Terry Friedman, *The Eighteenth-Century Church in Britain* (New Haven; London: Yale University Press: 2011), 146; 643 note 34.

Drawn frames were often added to finished designs and presentation drawings.<sup>624</sup> The presentation of architectural drawings in the exhibitions of the academies and the growing number of engravings in architectural treatises might have led to an increased use of framing in the eighteenth century.<sup>625</sup> Architectural drawings were more and more regarded as individual works of art and as such were provided with drawn frames. These consisted mostly of simple lines in black ink, the most common being a double line comprising one thin and one bold line. The width of the line was mostly adapted to the size of the sheet.<sup>626</sup> However, there were no fixed rules regarding the appearance of a frame. Thus, even within groups of drawings attributed to a certain person, there is no consistent use of identical-looking frames, but rather they can vary from single- to triple-line, whereby the boldest line may be on the inside or outside. This could be an indication that the different draughtsmen working in the building office designed the frames arbitrarily according to individual taste.

## Conclusion

The chapter has provided a comprehensive overview of the development of architectural drawing in eighteenth-century Europe, taking into account the transnational and interdisciplinary aspects of architectural drawing practice. This has not been the case in previous studies on architectural draughtsmanship due to their more focused scope and approach. In the chapter, the context for the production of architectural drawing in the offices of James Gibbs and Richard Castle was explored in seeking to understand the international and local influences that shaped architectural draughtsmanship in the period. One of the principal achievements is its scope; by casting the net wide to embrace Continental Europe, the chapter offered a sense of the styles and conventions of drawing which would have been known to European draughtsmen and architects and which found their

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<sup>624</sup> It should be noted that some drawings may have been cropped and therefore no longer have a frame.

<sup>625</sup> Röell, "Tekenen ter Verlichting," 98.

<sup>626</sup> Heckmann, *M. D. Pöppelmann als Zeichner*, 17.

way in one form or another into office practice in Britain.

A major finding is the diversity and complexity of drawing practices in early modern Europe. Although there were certain common tendencies, such as the increasing use of standardised colour or shading techniques in the engineering sector, there were regional differences. This can be seen in the varying colour conventions used in England's and Germany's civil architecture and in the different approaches to adding information such as scale bars, frames, or flaps. Those conventions depended on the individual draughtsman or architect, the type of drawing, and the intended audience. Another important conclusion is the changing status of architecture and draughtsmanship in the eighteenth century. Architecture became increasingly professionalised, and drawings were regarded as works of art in their own right. This is reflected in the development of new conventions, which enabled architects to communicate and present their ideas more effectively. The chapter further emphasised the role of architects and draughtsmen in the development of architectural drawing as well as the impact of travel and the circulation of ideas on draughtsmanship. Architects and engineers from different places such as Vauban in France, Fontana in Italy, or Wren in England played an important role in promoting the use of colour in architectural drawings. The influence of individual architects can also be seen in the different office styles that emerged across Europe in Berlin, Dresden, and London. These often-homogenous office styles were shaped by the education of draughtsmen, whose different contexts were described in the previous chapter, the skills, the personal preferences, and the experience of the leading architects. They distributed their office styles in their roles as teachers, site managers, or building officials and in this way influenced the next generation of building professionals, who trained with and worked for them. Two-dimensional architectural representations and treatises likewise contributed to the dissemination of drawing conventions as well as the broader trends in European architectural thought. The following chapters shall further elucidate this.

In comparing what happened in Britain to the range of styles, it has become apparent that, unlike in other regions of Europe, a homogeneous, grey wash style seems to have begun dominating architectural draughtsmanship in the first half of

the eighteenth century, at least in the field of civil architecture. This style seems to have been primarily mediated by government institutions such as the Office of Works, possibly due to the increasing professionalisation of the architectural trade. Foreign or continentally trained architects such as Leoni or Gibbs tended to favour polychromy. They were not subject to rules in the production of their drawings, as they worked for private clients that allowed them to retain a certain individuality. Nevertheless, they too seem to have more or less adapted to the monochrome style of the Palladians prevalent across the British Isles, which will be elaborated further below. The grey wash style can be described as a distinctive British characteristic, the predominance of which did not exist in other European regions. There are various reasons for this. On the one hand, the building professionals who came to Britain adopted this style, regardless of whether they had previously practised other conventions. On the other hand, the leading architects, who for the most part also worked for the building authority, were not foreigners but British, while in Saxony or Prussia, for example, a large number of foreign architects of diverse backgrounds was employed (e.g., Longuelune, de Bodt). Furthermore, in the early eighteenth century, only a few of the British architects, among them Gibbs and Pearce, had set off on a grand tour and were able to gain first-hand experience on Classical antiquity. Most of them relied on the instructions of others and on two-dimensional, monochrome representations such as engravings and prints to understand aspects of architecture. Lastly, the limitation of the grey wash style to the British Isles is perhaps related to a one-sided transfer. In other words, the influx to Britain was more extensive than that from the British Isles to the Continent. Another reason might be the different forms of patronage and cultural production on the Continent, which in England were less royal and aristocratic but much more ephemeral, ad hoc, commercial, and socially embedded. As Ann Bermingham notes, unlike the centralised form of cultural patronage in France, “the pattern in England was one of popular dissemination through the commercial market.”<sup>627</sup> It will emerge later, that the spread of the grey wash style can also be seen as a form of “commercial” dissemination.

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<sup>627</sup> Bermingham, *Learning to draw*, xii.

Based on the observations presented here, the following discussion of the architectural practices of James Gibbs and Richard Castle will be clearly contextualised.



## CHAPTER 4

## **James Gibbs's Office Drawings: Survey, Analysis, Comparison**

This chapter will be devoted to a detailed analysis of the drawings from James Gibbs's office, considering the modes of representation and drawing conventions identified in chapter III. A detailed examination of Gibbs's draughtsmanship has not so far been conducted and no more than brief and scattered remarks can be found in the literature on Gibbs. Terry Friedman, for example, summarises Gibbs's drawings as "characteristic finished rendering[s] in grey pen and ink and grey wash" and analyses the drawings principally in terms of design development while they are entirely excluded from John Harris's study of the drawing style in the Office of Works. In addition, although Johann Gottlieb Borlach is frequently referred to as Gibbs's draughtsman in existing literature, no attempt to establish an identification of the hand of Borlach has yet been made and the drawings are largely attributed to Gibbs.

The chapter endeavours to approach the question of Gibbs's original drawing style, considering drawings from various collections spanning his entire career. An effort is further made to classify the drawings in accordance with the various types of drawings. Only by closely examining and identifying his style and conventions is it possible to identify potential draughtsmen or assistants whose methods might diverge from those of Gibbs. To support this analysis of the drawing style, several autographic documents are consulted to assess Gibbs's handwriting and compare it to inscriptions on the drawings. There have already been isolated studies on this, but most have remained cursory. Other source material is likewise consulted for comparison and to complete the context of the production of drawings in the architectural office. The aim of these analyses is to reconstruct the procedures and practices in Gibbs's architectural office, of which no details have yet materialised. An attempt will be made to identify autograph drawings by Gibbs and to consider if it is possible to distinguish the work of Borlach from that of his employer. Gibbs's architectural publications will also be part of this study. In terms of architectural draughtsmanship practices, the question of whether attribution is a reliable tool in the identification of early eighteenth-century architectural drawings will be discussed.

While a comprehensive art-historical processing of the more than 900 drawings including their cataloguing based on previous research such as by Terry

Friedman and William Wright Crandall Jr. would be of great interest, this is beyond the scope of this thesis.<sup>628</sup> This chapter is therefore intended as a preliminary effort to engage more closely with this huge and fascinating body of drawings and the specific drawing style of Gibbs and his office.

### **The Drawings: an Inventory**

By way of introduction, this section provides a general overview of the body of drawings which Gibbs left behind. This is a challenging process and cannot presently be considered complete. Friedman presented Gibbs's drawing estate in his 1984 monograph, which provided a first overview.<sup>629</sup> It is my aim, however, to anatomise the entire surviving corpus more clearly. According to my knowledge, an estimated 960 drawings attributed to Gibbs have survived.<sup>630</sup> It should be mentioned here that the attribution of some of these drawings is still open to discussion. The largest number of drawings is held by the Ashmolean Museum with c. 702 sheets, which are contained within seven large-format albums (volumes I-VII). Friedman links these drawings to a statement in Gibbs's will that "all my ... Books of Prints and Drawings" shall be bequeathed to the "trustees for executing the trusts in the Will of John Radcliffe Dr in Physick deceased" to remain in the Radcliffe Library.<sup>631</sup> These were listed as "Plafons and other Ornaments of Arch: all Drawings" in *A Catalogue of Mr Gibbs's Books which he has given to the Radcliffe Library at Oxford 1754*.<sup>632</sup> In 1925 the drawings were transferred to the Ashmolean Museum where they were catalogued by William Wright Crandall Jr. as part of his bachelor's thesis in 1933.<sup>633</sup> Six volumes were then created: I. "Original Drawings for the Plates of Mr. Gibbs's Book of Designs and Ornaments, And for his Book of Rules for drawing the several Parts of Architectur, as likewise for the Radcliff Library," II. "Several of Mr Gibbs's Drawings for Buildings,

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<sup>628</sup> William Wright Crandall, Jr., "A Catalogue of the Drawings of James Gibbs in the Ashmolean Museum, Oxford, and their Connection with His Life and Work" (Bachelor thesis, University of Oxford, 1933).

<sup>629</sup> Friedman, *James Gibbs*, 289-326.

<sup>630</sup> It is difficult to give an exact number, given that in some archives the drawings are grouped together without specific numbers being given.

<sup>631</sup> Friedman, *James Gibbs*, 289; TNA, PROB 1/64; TNA, PROB 11/810/277 (probate).

<sup>632</sup> Friedman, *James Gibbs*, 289; Bodleian Libraries (BodL), MS. Eng. misc. c. 28.

<sup>633</sup> Crandall, "A Catalogue of the Drawings of James Gibbs."

as Churches, Houses, Chimney-Peeces, Ceilings, Monumens, and other things,” III. “A Collection of Drawings of Roman Bridges, And Ornaments in Perspective, Of Temples, Houses, Monuments, Chimney Peeces, Shields, &c,” V. “Drawings for the new Building of Hamstade Marishal the seat of the Rt Honble The Lord Craven. 1739,” VI. “Plans for Wiston House,” and VII. “Several designs for St Martins Church with d...” (for volume IV see below).<sup>634</sup> Some of the volumes include drawings by other architects or artists that Gibbs probably collected during his lifetime such as Filippo Juvarra, Carlo Marchionni, William and John Talman, and Paolo Lafranchini. Those drawings were attributed accordingly by several scholars. There are further some drawings awaiting attribution, and there may be false attributions to Gibbs that might be revised. In 1817 the Ashmolean Museum purchased from the engraver and publisher Joseph John Skelton “Several Drawings for Churches Houses, Pulpets, Fretwork Ceilings Chimney Peeces, Pedestals for Dyals Shields &c. by J:G:”, which were catalogued as volume IV among the other Gibbs’s volumes .<sup>635</sup> Later, an eighth volume was added, bound in original boards and titled “A Book of Drawings of Kiveton in Yorkshire. – The Seat of His Grace The Duke of Leeds By James Gibbs Architect. 1741.” It was acquired from the Oxford antiquarian bookseller W. A. Chislett in 1952/53 and added as a supplement to Crandall’s catalogues. Both volume IV and VIII were thus never included in Gibbs’s original bequest to the Radcliffe Library.<sup>636</sup> Drawings included here that are not by Gibbs may not have been owned or collected by him but were added by later owners. The 75 drawings in the possession of the Victoria and Albert Museum were bought at a Sotheby’s sale November 18, 1913.<sup>637</sup> They were assembled as lot 229, “Collection of his Original Drawings and Sketches in Architecture, Architectural Details and Ornaments, 75 in number, [several of which were engraved in the artist’s ‘A Book of Architecture’].” There are 18 further drawings by Gibbs in the V&A, that were “purchased from E. Parsons, London, 1898.”<sup>638</sup> This probably refers to Edwin Parsons & Sons, dealers in books, prints, and drawings,

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<sup>634</sup> Friedman, *James Gibbs*, 289.

<sup>635</sup> Friedman, *James Gibbs*, 289.

<sup>636</sup> Pete Smith, “James Gibbs at Kiveton Park in Yorkshire,” *The Georgian Group Journal* 27 (2019): 171.

<sup>637</sup> Friedman, *James Gibbs*, 289.

<sup>638</sup> Friedman, *James Gibbs*, 289.

which were the source for many acquisitions by the V&A. The drawings are inscribed “Nics. Maskall Stanhope Street” or simply “Maskall,” likely referring to the bricklayer Nicholas Maskall as former owner.<sup>639</sup> The online catalogue of the V&A does not provide any information about those drawings. A small group of nine drawings, that was originally part of lot 229 at the Sotheby’s sale, was consigned to the British Museum. Furthermore, there are 53 attributed Gibbs drawings at RIBA. These have various provenances. The Kelmarsh Hall Album and the design for a town house in Mortimer Street, St Marylebone, for example, originate from the estate of the commissioner William Hanbury.<sup>640</sup> Other drawings were acquired at various auctions (Sotheby’s October 1950 and December 1959), are donations (e.g., Wates Foundation), or permanent loans from various institutions and individuals (e.g., Dean & Chapter of Westminster Abbey). A ground floor plan for the remodelling of Wentworth Woodhouse, South Yorkshire, was found among the drawings collected by Colen Campbell and was acquired in 1967 from the Newby Hall-Studley Royal Collections.<sup>641</sup> 16 further drawings were collected by Sir John Soane and are now at Sir John Soane’s Museum. Other scattered sheets are distributed among various other archives and public and private collections, such as London Metropolitan Archives, Society of Antiquaries, Yale Center for British Art, Bodleian Libraries, Raby Castle Archive, and many more. It is likely that more drawings by Gibbs and his office circulate. For example, on July 6, 2010, a folio of 24 architectural drawings with drawings of Rufford Abbey and Ollerton Church was auctioned at Sotheby’s (lot 215, “Old Master & British Drawings”), 20 of which were attributed to Gibbs.<sup>642</sup> These are now kept at the Nottinghamshire Archives.

## Composition

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<sup>639</sup> Friedman, *James Gibbs*, 289. Accession numbers V&A D.1159-1898 to D.1175-1898.

<sup>640</sup> Friedman, “Gibbs, James,” 22.

<sup>641</sup> Friedman, “Gibbs, James,” 23.

<sup>642</sup> “A folio of twenty-four architectural drawings,” Sotheby’s, accessed October 18, 2022, <https://www.sothebys.com/en/auctions/ecatalogue/2010/old-master-british-drawings-l10040/lot.215.html>. For a detailed discussion of the drawings and its attribution to Gibbs see Richard Hewlings, “Sir George Savile’s Architectural Drawings,” *English Heritage Historical Review* 6, no. 1 (December 2013): 80-109.

Most preserved drawings in all collections consist of finished designs, i.e., they are washed and shaded and constructed to scale. The next largest category are preliminary designs, which are for the most part more rudimentary and schematic without wash or shading. Several of the drawings from these two first categories could be record drawings for office use (duplicates) or publication. Especially the latter is feasible, given that around 246 drawings (almost 30%) relate to Gibbs's publications *A Book of Architecture* (1728), *Rules for Drawing* (1732), and *Bibliotheca Radcliviana* (1747). In addition, there is a small number of contract drawings, presentation designs, and study drawings. Working drawings are extremely rare. As mentioned above, Friedman refers to hundreds of working drawings, but thus far I have only been able to categorise three of them reliably as such.<sup>643</sup> Sketches are likewise scarce given that they may not have been considered of high value. It seems that these are mostly only found when they are on the versos of more finished drawings.<sup>644</sup> It is debatable whether this demonstrates an economical use of paper. For, contrary to the persistent belief that early modern paper was expensive and scarce, it was an object with "multiple 'affordances and connotations' that varied in price, availability, and function."<sup>645</sup>

Within the body of drawings Gibbs bequeathed to the Radcliffe Library after his death (volumes I-III and V-VII at the Ashmolean Museum) there are, however, sketches that are on separate sheets. These are either not by Gibbs, such as the sketch plan by Alexander Edward of the Château de Marly (ASH WA1925.342.65) or the sketch of two schemes for a chimneypiece attributed to William Kent (ASH WA1925.341.207), which might have been kept by Gibbs for prestige reasons. For other cases it has been suggested that they may have been preserved as documents because they were not designs for Gibbs's projects but sketches of other buildings.<sup>646</sup> The drawings from Gibbs's bequest have a particular value in comparison to the others, given that they were specifically chosen by him to be preserved. He curated a selection that was intended to be relevant beyond his death, possibly with the aim of

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<sup>643</sup> V&A E.3658-1913, ASH WA1925.343.34, and ASH WA1925.343.36.

<sup>644</sup> For example, ASH WA1925.340.51, ASH WA1925.341.47, ASH WA1925.341.118, ASH WA1925.341.171.

<sup>645</sup> Alison Wiggins, "Paper and Elite Ephemerality," in *Practices of Ephemerality in Early Modern England*, ed. Callan Davies, Hannah Lilley, and Catherine Richardson (New York: Routledge, 2023).

<sup>646</sup> ASH WA1925.342.91; see Crandall, "A Catalogue of the Drawings of James Gibbs," cat. III-66a-b.

continuing to distinguish himself as productive architect. The drawings in the other collections have been maintained under different conditions and may therefore include those that Gibbs himself would not have passed on.

The Catalogue of Works in Friedman's monograph on Gibbs lists a total of 164 building projects in which Gibbs was involved, of which 109 were executed and 55 were not.<sup>647</sup> The projects cover the design of singular fixtures, e.g., chimneypieces, but also monuments and larger construction schemes involving multiple buildings. For some of the projects, Gibbs only acted as consultant. Drawings have not survived for all projects, and Gibbs might not have produced drawings for every project. It can be determined that Gibbs made or supplied drawings for c. 122 projects. The number of drawings per project varies considerably from only one or a few to around 49 (St Martin-in-the-Fields, Westminster, and Radcliffe Library, Oxford). Projects for which there likewise was a high number of drawings are as follows: 20 for Mansion House, City of London (unexecuted), 15 for St Mary le Strand, Westminster (executed), and Royal Palace, location unknown, (unexecuted), 17 for Catton Hall, Derbyshire (unexecuted), and Lowther Hall, Westmorland (unexecuted), 20 for Wiston Park, Sussex (unexecuted), 25 for Hampstead Marshall, Berkshire (partly executed), 25 for Milton House, Northamptonshire (unexecuted), 31 for Wimpole Hall, Cambridgeshire (partly executed), and Kelmarsh Hall, Northamptonshire (executed), and 35 for Kiveton Park, South Yorkshire (unexecuted). It must be noted here that the original number of drawings might in most cases be higher. This is because the drawings are often only documented by letters that do not state the exact number of drawings. This means that only an estimated figure can be assumed. In addition, for some projects this estimate is reduced because some of the drawings may have been preparatory drawings for engravings. For example, of the c. 49 drawings for St Martin-in-the-Fields, 18 are related to *A Book of Architecture* (plates 1-15, 29-30, 100). For St Mary le Strand, nine of 15 drawings are related to the engravings in *A Book of Architecture* (plates 16-23, 31). It is further important to mention that sketches, preliminary drawings, and working drawings that have not been preserved are not reflected in

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<sup>647</sup> Friedman, *James Gibbs*, 289-326.

these estimated figures.

### **Draughtsman Borlach**

When looking at the corresponding dates of all projects Gibbs was involved in, it is noticeable that his most active period was in the 1720s. At the peak of his building activity, Gibbs was in his prime, aged between 38 and 48 years. It was at this time that he prepared the publication of *A Book of Architecture and Rules for Drawing*. Precisely at this time, in the early 1720s, Johann Gottlieb Borlach first appeared in connection with Gibbs. According to an entry in Gibbs's bank account at Drummonds, 33-year-old Borlach was paid £10 on July 17, 1724.<sup>648</sup> For comparison, in two letters written by Gibbs in 1719 and 1721 to Edward Harley, 2nd Earl of Oxford, detailing the cost of drawings for Wimpole Hall, the amount of £10 10s is invoiced for "several drawings for ye Chapple", "two Fronts for Wimpol more carefully drawn then the first" and for "two new drawing [sic] for ye monument carefully done".<sup>649</sup> However, for £6 6s "four drawings for Summer Houses" were being charged.<sup>650</sup> The "several drawings for ye Chapple" and the four drawings for summer houses were likely to have been smaller and less finished than the others.

Although Borlach does not occur in the ledger again until a few years later – on January 27, 1727 – the amount of £27 10s is considerably higher.<sup>651</sup> By way of context, the c. 580 x 1220 mm model Gibbs submitted on May 14, 1713, for "Church with a Corinthian Order" cost £28.<sup>652</sup> Borlach therefore clearly played a more significant part in Gibbs's business at this time. In March that year Gibbs announced his intention to print "by Subscription Plans, Uprights, Sections and Perspectives of Buildings," claiming that 90 of the 140 plates were already engraved.<sup>653</sup> The engravers Elisha Kirkall and George Vertue are listed earlier in Gibbs's Drummonds ledger and the

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<sup>648</sup> Friedman, *James Gibbs*, 24; NatWest Group archives, Drummonds Branch, James Gibbs DR/427/4.

<sup>649</sup> British Library (BL), Add MS 7036 Portland Papers, f. 141-142. I am indebted to Prof Christine Casey for bringing this to my attention.

<sup>650</sup> BL, Add MS 7036 Portland Papers, f. 141.

<sup>651</sup> NatWest Group archives, DR/427/8. This would be c. £3,192.96 in today's currency.

<sup>652</sup> Friedman, *James Gibbs*, 304.

<sup>653</sup> Harris, *British Architectural Books and Writers*, 209.



book published in May 1728 contained a total of 74 engravings by them.<sup>654</sup> This is consistent with Eileen Harris's comment that the plates were engraved over a period of about four years, "the earliest known one being that of the monument of the Duke of Newcastle (pl. 111) signed by George Vertue and dated 1725."<sup>655</sup> Some of the plates were issued independently and later incorporated in the book.<sup>656</sup> The larger payment to Borlach in January 1727 could, as Friedman suggests, relate to the production of preparatory drawings for the engravings.<sup>657</sup> In fact, a court case from 1733/34 hitherto overlooked by architectural historians, to be described in more detail in chapter VI, reveals that Borlach was employed by Gibbs to prepare the drawings for *Rules for Drawing* probably on foot of the earlier book project.<sup>658</sup>

Further payments to Borlach are recorded at Drummonds four years later, in 1731, in the months of April, June, September, and November, totalling £67 17s 6d.<sup>659</sup> These, together with a payment on January 7, 1732, amounting to £20, may be associated with the preparatory drawings for Gibbs's *Rules for Drawing* published in 1732. Borlach may further have been involved in a second edition published by Gibbs in 1736, as from 1733 to 1736 various payments were made of more or less the same amount (£11 11s – £15). Except for 1740, from 1736 until March 28, 1743, there are multiple payments to Borlach in Gibbs's Drummonds bank account.<sup>660</sup> In total, 25 payments are documented from 1724 to 1743. Most of these are within the range of £10-15 (18), with the amount of +/- £12 making up the largest proportion (11).

Two payments to Borlach are particularly significant: on August 6, 1736, "Jno Borlack" was paid £40. By way of comparison, Gibbs's letter to Harley from 1721 quotes this sum for "the moddel [sic] neatly done in pear tree and the figures done in

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<sup>654</sup> NatWest Group archives, DR/427/7-8. On January 19, 1726, "Mr Kirkhall" was paid £30 and on February 8, 1727, £20. "Geo. Vertue" was paid £26 5s on February 16, 1727.

<sup>655</sup> Harris, *British Architectural Books*, 210.

<sup>656</sup> Harris, *British Architectural Books*, 210. These include the large perspectives of St Martin-in-the-Fields (pl. 1), St Mary le Strand (pl. 21), the Duke of Newcastle's monument (pl. 111), Matthew Prior's monument (pl. 112), the plan, elevation, and perspective of the quadrangle proposed for King's College, Cambridge (plates 32, 33, 36).

<sup>657</sup> Friedman, *James Gibbs*, 25.

<sup>658</sup> TNA, C41/48, no 77. I am indebted to Prof Tomás Gómez-Arostegui, who provided images of the affidavit and other documents related to the case.

<sup>659</sup> NatWest Group archives, DR/427/11. In today's currency, this would approximately be £7,995.17.

<sup>660</sup> Friedman, *James Gibbs*, 336 note 20; NatWest Group archives, DR/427/11; NatWest Group archives DR/427/13-19; NatWest Group archives DR/427/21-23.

baked earth” for the monument to John Holles, 1st Duke of Newcastle of 1721.<sup>661</sup> Thus the service Borlach provided in 1736 for a salary of £40 equals the price for making a model in 1721. While it is unknown whether he made such models for Gibbs, given that he was trained as a “Modelltischler” (patternmaker or pattern joiner), he may well have been able to do so. The second significant sum of money Borlach received was £30 on August 14, 1739.<sup>662</sup> The same sum is recorded, for example, as having been paid to Gibbs for a set of about a dozen drawings for Kirtlington Park, Oxfordshire, in 1741.<sup>663</sup> Doubtless, the cost of drawings to clients entailed a profit margin. The dating and the amount of these two payments to Borlach suggests that he may have contributed to Gibbs’s last architectural book, *Bibliotheca Radcliviana*. Although it was not published until the building was completed in 1747, two suites of engravings of Gibbs’s designs were available in 1737 and 1740.<sup>664</sup> No further payments to Borlach are recorded in Gibbs’s Drummonds ledger after 1743. However, the bequest to him recorded in Gibbs’s will of 1754 suggests that Borlach still maintained a close relationship and continued to work for Gibbs. From 1743 onwards, they may have settled their finances in a different way, for example, Borlach may have been paid directly by the clients.

In any case, the Drummonds payments evidence that Borlach was well paid, most likely from his occupation as a draughtsman. It remains to be determined whether he was to some extent involved in other tasks. This can be observed at least in other contemporary architectural offices. Edward Woodroffe, for example, served as Christopher Wren’s first draughtsman and at the same time had considerable responsibilities in other offices. In the former he had to attend not only to drawing but also to administrative duties. This included commissioning craftsmen, carrying out site visits, issuing invoices, and paying workmen, for which he was salaried at £920.<sup>665</sup> He was further responsible as surveyor for Westminster Abbey.<sup>666</sup> Additionally, as

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<sup>661</sup> BL, Add MS 7036 Portland Papers, f. 142.

<sup>662</sup> NatWest Group archives, DR/427/16; NatWest Group archives DR/427/19.

<sup>663</sup> Terry Friedman, “James Gibbs and ‘This Most Miserable Business of Architecture’,” in *Georgian Architectural Practice*, ed. Giles Worsley (London: Georgian Group, 1992), 14.

<sup>664</sup> Harris, *British Architectural Books*, 211.

<sup>665</sup> Geraghty, “Edward Woodroffe,” 475.

<sup>666</sup> James W. P. Campbell, *Building St Paul’s* (London: Thames & Hudson, 2007), 43.

Wren's draughtsman, Woodroffe acted beyond the official scope of his duties at the St Paul's and City church offices, as evidenced by various drawings. Anthony Geraghty describes Woodroffe's role in Wren's office as "entirely subordinate", even though he was "capable of architectural invention".<sup>667</sup> This is a scenario that might also be applicable to the Gibbs-Borlach relationship. In this context, it is perhaps interesting to note how Wren communicated his designs to Woodroffe: The drawings were underdrawn by Wren ("drawn dead" technique with pencil and underscoring) and completed by Woodroffe in pen and ink.<sup>668</sup>

### Suites of Drawings

While taking stock of the surviving body of Gibbs's drawings, it further became apparent that there are suites of sheets for individual projects, which are compiled in albums. At the Kedleston archives is an album entitled "Plans & Uprights of Kedleston" that possibly dates from 1726 and may be attested by an entry in the household daybook indicating that Gibbs received £10 10s on September 14, 1726.<sup>669</sup> As noted above, this amount is given as two or "several" drawings in other documents evidencing payments to Gibbs.<sup>670</sup> Today this album exists as a binding only from which the drawings were removed before the National Trust acquired Kedleston Hall. There are two drawings attributed to Gibbs that may have been in this album.<sup>671</sup> However, it is not entirely clear whether the drawings were indeed made by Gibbs, for initially one of the sheets, showing sections and a plan of the hall, was attributed to the architect James Stuart (1713-1788). The current attribution to Gibbs is based on the assessment of Leslie Harris.<sup>672</sup> The album contains, or contained, other drawings by various hands, including Robert Adam and Matthew Brettingham the Elder (1699-

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<sup>667</sup> Geraghty, "The Drawings."

<sup>668</sup> Geraghty, "Edward Woodroffe," 476.

<sup>669</sup> Friedman, *James Gibbs*, 299.

<sup>670</sup> BL, Add MS 7036 Portland Papers, f. 141-142.

<sup>671</sup> Morgan Feely, email to the author, October 10, 2023. The two drawings have the inventory numbers NT 109421 and NT 109479 and can be accessed online via National Trust Collections: <https://www.nationaltrustcollections.org.uk/results?SearchTerms=Gibbs&Places=1627d485fffffe0702132e047787ef18&Categories=637414e7fffffe074fe56fd119a6f33a> (accessed October 23, 2023).

<sup>672</sup> Leslie Harris, *Robert Adam and Kedleston. The Making of a Neo-Classical Masterpiece* (Wisbech: Balding + Mansell, 1987), 16.

1769) from the second half of the eighteenth century. It has been suggested by Harris that the binding was made after 1768. This would mean that the designs assigned to Gibbs could only have been added to the album at a later date.

A bound volume at the RIBA contains besides topographical views and sketches not by Gibbs, 32 plans, elevations, and sections for Kelmarsh Hall in “Gibbs’s hand”.<sup>673</sup> These were probably made in 1728-32 and had remained in the house for some time.<sup>674</sup> According to Friedman, the album contains 31 “working” drawings “used by the various craftsmen”.<sup>675</sup> Most of the drawings Friedman attributes to Gibbs are unfinished and seem rather roughly drawn, without grey wash. Except for six drawings, such as the elevation of the library showing four walls (fig. 4.1), the quality and style including the scale bars, are quite different from Gibbs’s other drawings.<sup>676</sup> However, the inscriptions that are partially found on the drawings appear to be in Gibbs’s script. Nevertheless, attributing the drawings to Gibbs remains doubtful in my opinion. The drawings without inscriptions are still less apt for an attribution to him.<sup>677</sup> For one drawing Friedman assumes that “the details [...] may be by another hand, perhaps the stuccatori.”<sup>678</sup> The name “Joshua Ringrose” on a drawing of a plan provides clue here.<sup>679</sup> I suggest that this may be the carpenter and joiner Joshua Ringrose, who “had ‘works’ at Kelmarsh.”<sup>680</sup> Ringrose was described by an eighteenth-century source as “a very able architect [and] a good engineer.”<sup>681</sup> Instead of being Gibbs’s working drawings, the majority of drawings in the album may rather have been preliminary drawings or finished designs by Ringrose or others. Due to the very

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<sup>673</sup> Royal Institute of British Architects (RIBA) VOL/73. See Friedman, “Gibbs, James,” 21.

<sup>674</sup> Friedman, *James Gibbs*, 318.

<sup>675</sup> Friedman, *James Gibbs*, 127. The size of the drawings given by Friedman in the catalogue opposes his assumption that they are working drawings, given that they do not exceed a size of 525 mm. Working drawings are usually very large in size, being true to scale. The life-size working drawing by Giacomo Leoni for Lyme Park, for example, has a considerable size of 1194 x 1382 mm (see fig. 3.4, chapter III). With the exception of one drawing showing details of mouldings in an unidentified principal room (RIBA VOL/73 no.19), no specific details are presented, which is another argument against working drawings.

<sup>676</sup> RIBA VOL/73 nos. 15-20.

<sup>677</sup> RIBA VOL/73 nos. 5-13.

<sup>678</sup> RIBA VOL/73 no. 14; Friedman, “Gibbs, James,” 22.

<sup>679</sup> RIBA VOL/73 no. 32; Friedman, “Gibbs, James,” 21.

<sup>680</sup> See Victor A. Hatley, *Northamptonshire Militia Lists 1777* (Kettering: Dalkeith Press Limited, 1973), xiii note 7; 71.

<sup>681</sup> See John Mastin, *The history and antiquities of Naseby, in the county of Northampton* (Cambridge: Francis Hodson, 1792), 53.

diverse drawings included, it is likely that the album was not made by Gibbs. It may have been assembled by the commissioner William Hanbury for his private collection.

The drawings for Kiveton Park from 1741 (volume VIII at the Ashmolean Museum) seem to represent a complete scheme of finished designs or presentation drawings, including “survey drawings and plans, proposals for alterations and additions to the main house and a series of detailed plans, sections and elevations for nine garden structures,” which were presented to Thomas Osborne, 4th Duke of Leeds.<sup>682</sup> Despite no construction taking place, the drawings apparently remained with the Duke and were never returned to Gibbs. For, as previously mentioned, the Ashmolean Museum acquired them in 1952/53 from bookseller W. A. Chislett, and only then were they incorporated into the Gibbs collection. Furthermore, the four penultimate designs for the proposed remodelling of Lowther Hall at the RIBA would appear to have been bound in a volume at some earlier stage including several plans, elevations, and a section of the house and out-buildings.<sup>683</sup> These albums seem to have been left with the clients and were not returned to Gibbs. The drawings do not represent complete schemes but are select finished designs or presentation drawings for Gibbs’s clients. Except for the somewhat cruder, unfinished drawings in the Kelmarsh Hall Album, sketches, preliminary designs, or working drawings are not included. There are two more sets of drawings that were part of Gibbs’s bequest and are at the Ashmolean Museum as volumes V and VI. The first (volume V) contains 23 drawings “in their original boards” for Hampstead Marshall, Berkshire, and is dated to 1739.<sup>684</sup> These are plans, elevations, and interior sections, the latter two both finished and schematic without grey wash or shading. The second (volume VI) comprises nine drawings, all finished plans, elevations, and sections.<sup>685</sup> Neither project was executed, which explains why the drawings remained in Gibbs’s

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<sup>682</sup> Smith, “James Gibbs at Kiveton,” 171.

<sup>683</sup> RIBA SB67/2. Friedman, “Gibbs, James,” 22.

<sup>684</sup> Friedman, *James Gibbs*, 291. Friedman attributes two other drawings to this project that are not included in volume V, but in volume II (ASH WA1925.341.16 and ASH WA1925.341.17). See Friedman, *James Gibbs*, 291.

<sup>685</sup> Another drawing is part of the project but is included in volume II (ASH WA1925.341.202). This is an alternative to ASH WA1925.347.9 with a mansard roof instead of the attic floor. See Crandall, “A Catalogue of the Drawings of James Gibbs,” cat. II-139.

possession.

Overall, there is no project that survives as set of drawings from sketch to presentation drawing. An absolute rarity within the Gibbs's bequest are designs for a project that include a sketch, a finished design, and possibly a preparatory drawing for plate 40 in *A Book of Architecture* (figs. 4.2-4.4). The drawings are for Sudbrook House, now Richmond Golf Club, in Petersham, built between 1715 and 1719.<sup>686</sup> While the finished design and preparatory drawing for the engraving are drawn in the "conventional Gibbs's manner", on the sketch Gibbs applied grey wash as a shading effect to create three-dimensionality in addition to a loose parallel hatching to the shaded surfaces. He presents the interior of the room having already a clear idea of its layout. The architectural structure is rendered with clarity, whilst the decorative elements are executed in a sketchier manner. The question of why Gibbs chose to keep this particular sketch is easily explained. On the one hand, he was probably aware of the special nature of this "most important contribution" to the development of the English villa.<sup>687</sup> In *A Book of Architecture* he specifically refers to Sudbrook as a "Villa".<sup>688</sup> On the other hand, the finished grey wash shading lends the sketch a decorative character rather than that of a sketch. The high standards that Gibbs set for himself and that he wanted to express to the outside world are thus reflected in this drawing which is so much more than a sketch.

Following this overview of Gibbs's surviving drawings, which has described the body of the more than 900 items, the next step is to conduct a script analysis to determine whether it is possible to identify an autograph Gibbs drawing on the basis of his handwriting.

### Script Analysis

As explained in the previous chapter, drawing techniques and conventions in certain

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<sup>686</sup> Friedman, *James Gibbs*, 323; Crandall, "A Catalogue of the Drawings of James Gibbs," cat. III-97b.

<sup>687</sup> Friedman, *James Gibbs*, 138.

<sup>688</sup> Friedman, *James Gibbs*, 133; James Gibbs, *A Book of Architecture, Containing Designs of Buildings and Ornaments* (London: n.p. 1728), 9.

areas of the eighteenth-century building industry are sometimes difficult to differentiate because – as far as can be discerned – many draughtsmen worked according to standard (office) conventions. Therefore, an examination of handwritings on drawings in comparison with corresponding autographic documents can help to determine an attribution. This approach, however, entails several methodological challenges. On the one hand, there might have been specialists for the inscriptions owing to work-sharing in an architectural office. The draughtsman is not necessarily the author of the inscriptions. In addition, handwriting examinations require authentic handwriting samples, both in calligraphy and in workaday writing.<sup>689</sup> Then there is the problem of script emulation and imitation. It is generally assumed that French architects, for example, who were trained at the academy in Paris, received lessons in calligraphy in order to develop an impersonal, standardised script.<sup>690</sup> This can also be observed among other architects of the time.<sup>691</sup> In addition, it seems that sometimes the script of the leading architect was deliberately copied. When examining a handwriting, one must likewise anticipate the possibility that scripts can change, whether as a result of external influences such as writing materials, time pressure, physical and psychological factors, or through deliberate modifications.<sup>692</sup>

### **Gibbs's Handwriting**

Before addressing inscriptions and possible Gibbs autographs on drawings, the handwriting of some documents is described that are certainly in Gibbs's hand and therefore suitable for comparative purposes. The documents chosen were written at different stages of Gibbs's life and are thus an important record of his handwriting at the respective time. In a second step the inscriptions on the drawings will be taken into consideration and compared with those autograph documents. The documents to

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<sup>689</sup> Gerd Dethlefs, "Das Baubüro von Johann Conrad Schlaun. Zu den Zeichnungen Johann Conrad Schlauns und seiner Mitarbeiter," *Westfalen* 74 (1996): 8-9.

<sup>690</sup> Dethlefs, "Das Baubüro von Johann Conrad Schlaun," 9.

<sup>691</sup> Kuke, *Jean de Bodt*, 15.

<sup>692</sup> Martin Wagendorfer, "Mehrere Schriften – ein Schreiber? Überlegungen zur Zuweisung von Schreiberhänden," in *Automatische Handschriftenerkennung und historische Dokumentenanalyse*, eds. Klaus Herbers, and Viktoria Trenkle (published online: 2015).

be examined include the petition for the place of surveyor to the Commission for Building Fifty New Churches, dated October 14, 1713, as one of the earliest autographs by Gibbs (fig. 4.5).<sup>693</sup> In addition, several letters were studied, for example a letter from Gibbs to the English poet Alexander Pope,<sup>694</sup> believed to have been written c. 1725 (fig. 4.6), and a letter from Gibbs to Edward Butler, President of Magdalen College Oxford, dating to February 11, 1732, and recording Gibbs's handwriting at the age of 50 (fig. 4.7).<sup>695</sup> Furthermore, his handwritten will dated to May 9, 1754, was included (fig. 4.8) as well as the so-called Gibbs's manuscript in the collection of Sir John Soane's Museum.<sup>696</sup> Given that Gibbs had both time enough to prepare a will and the ability to write it, it is not unusual that he chose to draw up the will himself in his own hand (holographic will).<sup>697</sup> One indication that the will is indeed holographic is the personal touch of the handwriting, it is not a court hand as can be seen on the probate transcript. In addition, the will concludes with an oath identifying Gibbs as the author and attested to by two witnesses. The Gibbs's manuscript on the other hand is an intriguing document consisting of two parts: a travel account of buildings mainly from Italy ("A few Short Cursory Remarks"; fig. 4.9) and a biography of Gibbs's life and works ("A Short Accompt"; fig. 4.10).<sup>698</sup> Scholars have previously offered various interpretations of authorship and dating of the manuscript. Some have raised the proposition that it was written by an "intimate friend of Gibbs', very possibly by John Borlach, his favourite draughtsman."<sup>699</sup> John Holloway in 1955 had a closer look at the script and compared a section of the manuscript with inscriptions on two drawings attributed to Gibbs. Holloway concluded that both parts were written by Gibbs, although he noted that the scripts of the first and second part were differing which he

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<sup>693</sup> Lambeth Palace Library (LPL), MS 2726, f. 73-74.

<sup>694</sup> BL, Add MS 4808, Vol. II. (ff. 233), James Gibbs, architect: Letters to A. Pope: circ. 1718, circ. 1725, 203v.

<sup>695</sup> Magdalen College Archive (MC), FA14/1/2C/8, Letter from James to President Butler.

<sup>696</sup> TNA, PROB 1/64; Gibbs's manuscript: SM, Vol. 26, "The Gibbs Notebook."

<sup>697</sup> Michael Pammer, "Death and the Transfer of Wealth: Bequest Patterns and Cultural Change in the Eighteenth Century," *Journal of Social History* 33, no. 4 (2000): 913-934.

<sup>698</sup> SM, Vol. 26, "The Gibbs Notebook."

<sup>699</sup> H. B. S. Gibbs, "The Life and Work of James Gibbs," thesis (n.d. [c. 1898-1913]), 1. This had also been proposed by Herbert Percy Horne, "Some Account of the Life and Public Works of James Gibbs, Architect [Part 1]," *Century Guild Hobby Horse* 3, no. 13 (January 1889): 29.



related to different times of writing.<sup>700</sup> Friedman followed Holloway's suggestion regarding the different creation dates but was of the opinion that the first part was written by Gibbs while the second part was by someone else.<sup>701</sup> Most recently, William Aslet convincingly argued that both parts of the manuscript were written by Gibbs and that they date to the 1750s.<sup>702</sup> After comparing the two texts in detail, I would agree that they both are from the same hand. Like Aslet, I do not see major differences in the scripts of the first and second parts, contrary to Holloway's interpretation. If another person did write the "Short Accompt," it was a scribe who could imitate Gibbs's handwriting perfectly. In addition to the similarities of the script, a phrase in Gibbs's will may refer to the manuscript, which states that he bequeathed to Thomas Erskine, the Earl of Mar's son, "all my plate [i.e., precious metal, usually silver], an Inventory of which is in my Memorandum Book."<sup>703</sup> The inventory in question is not preserved in the manuscript, as it may have been taken out in order to sort out the silver bequest accordingly.

In a comparison of these documents, it is noticeable that the overall impression of the ductus is very similar among all of them. The script can be described as a looped, rightwards-slanting casual cursive. Many of the letters are joined-up, leaving only little space in between, while the words mostly remain separate. The ascenders and descenders are mostly looped (e.g., b, h, l, and y, f, g) and extend beyond the corpus size of the letters that is mostly rather squat. Particularly striking is the design of the d, with its ascender often curving in a swash to the left. Within his writings, Gibbs used short and long s, single-storey a minuscules and majuscules, and round hand A capitals, as well as single-storey g minuscules. Every now and then there are capital letters in the continuous text, some of which extend beyond the corpus size. As authentic Gibbs's autographs, all documents are suitable for a handwriting

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<sup>700</sup> John Holloway, "A James Gibbs Autobiography," *The Burlington Magazine* 97, no. 626 (May 1955): 148.

<sup>701</sup> Friedman, *James Gibbs*, 1-2.

<sup>702</sup> William Aslet, "James Gibbs's Autobiography Revisited," *The Georgian Group Journal* XXV (2017): 113; William Aslet, "The Gibbs Manuscript in Sir John Soane's Museum, London," *The Volume of the Walpole Society* 83 (2021): 129. The latter also contains a full transcript of the manuscript. However, some inconsistencies remain. For example, there seems to have been a correction to Gibbs's date of birth in part 2.

<sup>703</sup> TNA, PROB 1/64.

comparison with annotations on the drawings.

### Inscribed (Autograph?) Drawings

About 30% of the drawings attributed to Gibbs have inscriptions or annotations. Drawings that contain only measurements or divisions are not included here. Among the inscriptions in pencil and ink are calligraphies and somewhat more hastily added notes. Six drawings in the collection of Gibbs drawings in the Ashmolean Museum and two plans at the London Metropolitan Archives bear inscriptions that suggest that they may have been created by Gibbs. It ought to be stressed here, however, that such inscriptions need to be treated with caution, as they may well have been added to the drawings later. This is the case, for example, with some drawings in the so-called Jarratt Album in the Irish Architectural Archive. Edward McParland notes that the signature of Joseph Jarratt “Joseph Jarrat. Arch.<sup>t</sup>” was “added to the drawings not when they were made but when they were assembled, in the eighteenth century, into this scrapbook or album.”<sup>704</sup>

The design for the side elevation of the “Round Draught being of the Ionick Order” of St Martin-in-the-Fields (fig. 4.11) is one of the drawings showing an inscription. In pencil “Ja: Gibbs Arch del[ineavit]” is written at the lower left corner of the sheet. While this inscription is not mentioned by Crandall or Friedman, for Aslet it is “an unambiguous statement of authorship.”<sup>705</sup> The drawing could possibly have been made in 1720, following the request for plans and estimates for the new church on June 23.<sup>706</sup> The design is reversed as an engraving (plate 10) in *A Book of Architecture* and thus seems to have served as preparatory drawing. The engraving in the book has the same inscription “Ja: Gibbs Arch: del:”. The only difference between the drawing and the engraving is that the clock on the latter has a dial. On the drawing, the clock face is not shown. The script on the drawing is a cursive font (fig. 4.12). Compared to the other examples of Gibbs’s scripts referred to above, in my opinion,

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<sup>704</sup> McParland, *Public architecture in Ireland*, 109.

<sup>705</sup> William Aslet, “Il Ritorno di ‘Signor Gibbi’ in Patria: James Gibbs’s Training in Italy,” *The Georgian Group Journal* 27 (2019): 11 note 28.

<sup>706</sup> Friedman, *James Gibbs*, 310.

there is not a one hundred per cent conformity. The font is less slanted to the right and less looped. This means that the J and especially the G are less swung than usual, the G lacks both the upper and lower scrolls. These differences might be explained in the sense that the inscription here was less formal or official than on other documents. It is not a signature per se, as one would find on a letter, but a creatorship inscription that presumably no one except the engraver would have seen. Nevertheless, a level of uncertainty remains as to whether this is really a Gibbs's autograph.

The combination with the drawing style, however, is evidence in favour of Gibbs. The orthogonal elevation is neatly drawn. The lines have been traced precisely, some were drawn freehand (e.g., in the area of the roof, at the vases and balusters, or at other decorative elements). In numerous places, under-scoring can be seen, and in some places, prick marks left by the compass for the construction of the curved lines are visible. Under-scoring with a scoring implement, or stylus, was a technique already used by Palladio as the main under-drawing method on his finished designs and was likewise adopted by British architects such as Inigo Jones.<sup>707</sup> The entire building is washed with grey ink, in keeping with the incidence of light coming from the upper left-hand corner. The white of the paper is used to capture light and perspective. This means that the parts that are exposed to less light are shaded accordingly. Grey wash and shading are skilfully executed and lend a certain perspectival quality to the drawing. The window and door openings are washed in black ink, the openings of the steeple are not washed. The quoins around the openings and at the corners are perfunctory, indicated by single outlines without joints or shading. The design is enclosed within a double line frame that incorporates a simple scale bar with vertical divisions and scale bar numbers. The scale bar numbers are fitted with dots and there is a lower-case v without punctuation below the zero tick. Despite the neat execution of the drawing, there are some irregularities. For example, corrections were carried out in several areas. The balustrade below the steeple and by the apse was adjusted, whereas the new balusters were not shaded. The faint traces of the original locations of the flaming urns are still visible. Corrections have likewise been made to the circular

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<sup>707</sup> John Harris, and Gordon Higgott, *Inigo Jones: Complete Architectural Drawings* (London: Zwemmer, 1989), 26.

body of the church: the niches at ground level have been scratched out. It is also noticeable that the steps to the entrance on the left extend beyond the double frame. Finally, it looks like the ink has rubbed off in various places. One explanation could be that the original design was revised for the engraving to make it more attractive for publication. Despite these touch-ups, and in combination with the handwriting and general drawing style, it is reasonable to suggest that this is an autograph Gibbs drawing.

Before proceeding to the other inscriptions on drawings that might prove Gibbs's authorship, at this point I would like to compare the above drawing with a drawing that has the very faint pencil inscription "Ja Gibbs Arch:" (fig. 4.13). The drawing shows a design for the side elevation of the "First Round Draught" of the church of St. Martin-in-the-Fields, hence it dates to the same period as the above drawing. The inscription "Ja Gibbs Arch:" implies that Gibbs was the architect, but not specifically the author of the drawing. The same inscription appears on the related engraving for plate 14 in *A Book of Architecture*. It is noticeable that the engraving is not reversed, i.e., shadows, sculptures, or clock-face, for example, are on the same side on both the drawing and the engraved image. This means that the image was drawn in reverse on the printing plate in order not to get a reverse image in the engraving. However, in the majority of the engravings for Gibbs's publications, the images appear not to have been drawn in reverse on the printing plate, resulting in a reversed engraving (e.g., shading is on the other side, etc.). In any case, the writing here is slanting somewhat further to the right and even though it is really very faint, it seems to be the same hand as on the previous drawing (fig. 4.14). It is therefore possible that this is Gibbs's script, who noted for his publication that he was the architect of the building but did not make the drawing. Might it therefore be the work of another draughtsman? In fact, in direct comparison with fig. 4.11 (ASH WA1925.340.30), the sheet has a different quality, even though it stylistically follows the other drawing and is neatly drawn. The overall impression is somehow a little cruder. A darker ink seems to have been used for the grey wash that covers the entire building. Furthermore, the shading and wash appear patchy in places, i.e., they are not as evenly applied as on the other drawing. The three-dimensionality of the building is less pronounced given that

the hue of the wash has less variation. For example, it is not clearly discernible that the semicylindrical entrances lie more to the front than the body of the church behind them. There do not seem to be any scored construction lines, the drawing technique was a different one. However, compass prick marks for the curved lines are partly visible and construction points can be seen in the lowermost opening of the steeple. In contrast to the first drawing, the openings of the steeples are washed in black, but the openings at the side of the building are less intensely washed. The outermost windows in the body of the church are not contrasted any further. The clock dial is designed, which was not the case on the first drawing. No scale bar is given. A similar effect to the other drawing is seen in the treatment of the rustication around the windows, which is likewise simple without joints. Even if the differences are subtle, it remains possible that this drawing was not made by Gibbs. The inscription likewise provides no evidence that it was Gibbs who executed the drawing. There is another drawing of the same design, this time a side elevation (fig. 4.15), that is likewise inscribed faintly in pencil with “Ja Gibbs Arch.” The drawing technique resembles that of fig. 4.13 (ASH WA1925.340.25), rather than of fig. 4.11 (ASH WA1925.340.30).<sup>708</sup> This, together with the inscription lacking any indication of the drawing process, might suggest that these two drawings are indeed by a different hand than fig. 4.13. Whether this hand was Borlach’s is uncertain. Although he only appears in 1724 with the payment in Gibbs’s bank account, it is possible that he was already in London before then and employed by Gibbs. Another possibility is that Borlach produced copies of the originals as preparatory engravings for *A Book of Architecture* from 1724 onwards. The two drawings might thus be reproductions by Borlach rather than the original designs submitted to the Vestry earlier. Those three drawings are the only ones that have pencil inscriptions to indicate their authorship.

Another seven drawings have ink inscriptions that could identify Gibbs as their author. Four of them can be assigned to the same project, the house for Sir Watkin Williams-Wynn, 3rd Baronet, at Wynnstay, Wales (figs. 4.16-4.19). They possibly date to 1736-39 but the project was never executed.<sup>709</sup> The inscription on all these drawings

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<sup>708</sup> This design was published as plate 15 in *A Book of Architecture*.

<sup>709</sup> Friedman, *James Gibbs*, 298.

is in sepia ink and reads “By James Gibbs Arch.” Unlike the drawings discussed above, this inscription is described in Crandall’s catalogue as “signed”.<sup>710</sup> The set of orthogonal drawings consists of two plans, a section, and an elevation. All drawings are finished, suggesting that they were part of the final scheme and submitted to the client. This would also explain why the drawings are titled. The drawings are drawn in the grey wash style with shading following a light source in the upper left. Even on the plans, the shading is indicated by correspondingly thickened lines. All designs are executed sophisticated, neat, and accurate. The side elevation is finished with light red wash in the area of the sectioned wall mass. A ceiling design belonging to the scheme, which however does not have a “signature”, is likewise framed by light red wash. Only the ground floor plan shows a scale, which is valid for all subsequent designs. No scale bar numbers or a lower-case v are given.

Another possible autograph drawing with Gibbs’s “signature” is a plan for the church of St Nicholas at Aberdeen, inscribed in sepia ink “A Plan for the Church of St Nicolas at Aberdeen proposed to be built in this manner by Ja: Gibbs Arch:” (fig. 4.20). It dates c. 1741-55, making it a late drawing.<sup>711</sup> It is probably a preliminary drawing, for it is not washed nor shaded and shows various additional inscriptions to explain the plan. In addition, both a scale and further room dimensions have been included along with a pulpit. The scale bar numbers are fitted with full stops, while the lower-case v is without a dot. In addition to this set of plans, there are four further schematic drawings in this style, which have titles but no “signature”.<sup>712</sup> Another set of drawings exists for this design, but these are the finished drawings including a pulpit design, which have no inscriptions at all.<sup>713</sup> The script is very similar on all five drawings (see figs. 4.16-4.19) and it is probably the work of one writer. A comparison with the scripts of the above analysed documents likewise reveals similarities, even though this seems to be a more effortful calligraphy than for example seen in Gibbs’s letters. This means that the writing is altogether neater and less rightward slanted. Apart from that, the characteristics of Gibbs’s looped casual cursive are represented. The drawing

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<sup>710</sup> Crandall, “A Catalogue of the Drawings of James Gibbs,” cat. III-42 and III-43.

<sup>711</sup> Friedman, *James Gibbs*, 290.

<sup>712</sup> ASH WA1925.342.209-212.

<sup>713</sup> ASH WA1925.343.1-5; pulpit design V&A D.1163-1898.

technique does not seem to show any deviations either.

The last two drawings that establish Gibbs as their possible author according to inscriptions are two plans from the London Metropolitan Archive that show proposed designs for the Leadenhall Market site (Mansion House) and date to 1735.<sup>714</sup> Both ground-floor and first-floor plans are inscribed in a looped casual cursive “Jacobo Gibbs Architecto” (figs. 4.21-4.22) that seems to be in accordance with previous handwriting samples. The handwriting of the remaining inscriptions – the “References” – likewise appear to correspond to Gibbs’s autograph. While the term “Architecto” does not per se refer to Gibbs as draughtsman, the design of the plans and the use of light red wash for the indication of the buildings to be demolished are supportive of his authorship. Given that Giacomo Leoni, John James, Batty Langley, and George Dance the Elder (1695–1768) likewise submitted designs for the project, it would seem significant that the authorship of the design was noted here to prevent confusion. Indeed, the proposals by James, Langley, and Dance at the London Metropolitan Archives likewise bear signatures indicating their respective authorships. Langley in particular is known for the piracy of designs, which will be discussed in more detail in chapter VI. However, his designs for Leadenhall Market cannot compete with those of Gibbs.<sup>715</sup> On the reverse of his drawing, which is not particularly sophisticated and not in keeping with the common drawing conventions of the time, is the intriguing note “Proposed Ground Plans for Mansion House Leadenhall Street Gibbs & Batty Langley Architects. 1735”.<sup>716</sup> Gibbs’s name, however, has been crossed out. While this inscription may well be a later addition, the date on the front of Langley’s drawing is almost certainly in Gibbs’s handwriting. A comparison with the date on Gibbs’s own design illustrates the congruence (fig. 4.23). The “1735” date on Langley’s design, however, has been overwritten with “1732” in black ink by another hand. What this is all about needs to be explored in more detail elsewhere.

To sum up, although there is no certainty, the combination of handwriting,

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<sup>714</sup> LMA, COL/PL/01/028/C/003 and COL/PL/01/028/C/004.

<sup>715</sup> For the various Leadenhall Market site designs see Sally Jeffery, *The Mansion House* (Chichester: Phillimore for the Corporation of London, 1993), 21-29.

<sup>716</sup> LMA, COL/PL/01/028/C/001.

analysed on the basis of several autograph documents, and drawing style provide a convincing case for identifying certain drawings as Gibbs's autograph drawings. Nevertheless, it cannot be entirely ruled out that Gibbs may have only added the inscriptions, for example, on the drawings for Wynnstay or St Nicholas, and that others may have actually executed them. It has been shown, however, that between the drawing inscribed "Ja: Gibbs Arch del" and the drawings inscribed "Ja Gibbs Arch:" it was possible to discern certain, albeit minimal, differences in the drawing style.

### **Drawing Style**

Although it has been unavoidable to address the drawing style to some extent in the preceding discussion, a more thorough analysis of it is provided in this section. Before Gibbs adopted a homogeneous drawing style around 1720 featuring the characteristic and sophisticated grey wash office style, the drawings from the earlier years seem to display a degree of diversity. Some of Gibbs's early drawings are indeed monochrome, such as the elevation of the Church with a Corinthian Order in London probably from 1713 or the elevation and plan for Johnston's Octagon (now Orleans House Gallery) in Twickenham prepared by 1716 (figs. 4.24-4.25).<sup>717</sup> But it was not until sometime later that he exclusively used his invariable style which conformed to the drawing conventions of the Burlington circle in Britain fashionable at the time.

### **Early Drawings**

A group of drawings that very clearly demonstrate the experimental drawing technique of the young Gibbs are the drawings that are referred to as Gibbs's study drawings. Eighteen of them are owned by the V&A, seven are in the British Museum. There is no evidence to establish a date for those drawings, but the attribution to Gibbs is generally accepted. Particularly notable are two sheets of drawings held at the British Museum that show designs for furniture (figs. 4.26-4.27). Depicted are a chair

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<sup>717</sup> Friedman, *James Gibbs*, 304; 316.



(side and back view) and two alternative designs for the frame and pedestal for a looking glass (side view), with the alternative presented on a flap conjoined to the sheet. All designs feature a shell and further Baroque ornamentation. The drawings are done in brown ink and skilfully and vividly shaded with grey and partially also brown washes. In places, the shading is composed of parallel hatching, for example in the areas of the chair frame and shell (see fig. 4.26). A peculiarity of the chair drawing is that it was possibly intended to include a seated person. A sleeve or cuff and an outlined hand can be seen above the armrest in the side view. The parallel hatching for the additional shading could be experimental in nature or an indication for an engraving template. It is not unlikely that these designs are copies from engravings or pattern books. The practice of copying was widely used as a means of acquiring drawing skills and was promoted in early Italian drawing manuals as a method by which students could incorporate a master's *disegno* and his *maniera*.<sup>718</sup> It is known, that "Fontana encouraged his students to draw the works of sixteenth and seventeenth-century masters."<sup>719</sup> Some of the study drawings attributed to Gibbs are in fact copies from Adam Philippon's *Curieuses recherches de plusieurs beaux morceaux d'ornements antiques, et modernes* published in 1645.<sup>720</sup> Two drawings are further derived from Abraham Bloemaert's *Livre à dessiner* published in 1600.<sup>721</sup> Both titles are listed in Gibbs's book catalogue.<sup>722</sup> It is possible that the other study drawings were likewise copied from prints. However, the two sheets described above are very different from the drawings to which a print template has been allocated. While the former are sketchily drawn, the latter are executed very neatly and precisely, closely following the printed templates. In some cases, Gibbs even adopted the dark background of printed plates (figs. 4.28-4.29). In terms of shading, however, Gibbs

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<sup>718</sup> Bermingham, *Learning to draw*, 42.

<sup>719</sup> Casey, "Ornament and Craftsmanship," 29.

<sup>720</sup> Casey, "Ornament and Craftsmanship," 29. V&A: E.3655-1913, E.3656-1913, E.3660-1913, E.3661-1913, E.3662-1913, E.3665-1913; British Museum (BM): 1913,1216.13. Some of the plates from this book appear later in the 1751 edition of *Oeuvres D'Architecture De Jean Le Pautre*. Jean Lepautre was Philippon's pupil and engraved 26 plates for *Curieuses recherches*.

<sup>721</sup> Abraham Bloemaert, *Livre à dessiner de Bloemaert* (Amsterdam: Nicolaus Visscher, 1600), pl. 55, <https://gallica.bnf.fr/ark:/12148/btv1b52510153f/f117.item.zoom#>; pl. 63, <https://gallica.bnf.fr/ark:/12148/btv1b52510153f/f133.item.zoom>; BM: 1913,1216.12, 1913,1216.15.

<sup>722</sup> BodL, MS. Eng. misc. c. 28, fol. 3. Philippon's book is listed as "Divers Figures" and was identified as such in Casey, "Ornament and Craftsmanship," 29. See also "Gibbs's Fine Art Library" in Friedman, *James Gibbs*, 327.

was applying his distinctive tonal grey wash style, rather than adopting the hatched shading of the engravings.

One of the earliest known architectural drawings – and perhaps indeed the earliest – attributable to Gibbs is a plan of Wimpole Hall for Edward Harley (fig. 4.30). A special feature of this drawing is that it is dated at the lower right in pen and brown ink “Feb: 4:th 1712/13 MDCXiii”, presumably by Gibbs, although this is not easily assessed due to the limited number of letters. However, since Gibbs had established close ties with the family by this time, it is possible to attribute this design to him.<sup>723</sup> It likely represents the first version for the house and shows a plan raised at ground-floor level. At first sight, the plan seems neat, and yet it differs from Gibbs’s more mature later style. A closer look reveals a number of oddities, some of which, however, cannot be explained solely by the fact that it may be a preliminary drawing. First of all, it is notable that a “very light grey wash is used to mark the ground area of the site behind the front property line.”<sup>724</sup> It further seems that not all the lines have been drawn with a ruling pen or using a ruler. Numerous lines, especially short ones, were drawn freehand. In addition to this, “freehand (quill) pen and brown ink is used to mark window and fireplace reveals and the oven and work-tops in the kitchen.”<sup>725</sup> Stairs are pencilled in along the centre of the right-hand outer edge of the library wing. The wall mass is indicated in a dark grey wash, which in part has been applied patchy and in the area of the double-hemicycle staircase of the library is partially darker. A scale bar consisting of two horizontal lines and vertical divisions with scale bar numbers in brown ink is given. This preliminary design is developed on a finished drawing or presentation drawing, which shows the plan at ground-floor level on a larger scale (fig. 4.31).<sup>726</sup> The proposal includes some structural changes. The drawing makes a neater impression than the previous one, but still seems somewhat immature. The light grey wash to mark the ground area was not transferred onto this design. Instead, light red wash is used, which indicates an existing wall structure. There are

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<sup>723</sup> Friedman, *James Gibbs*, 87.

<sup>724</sup> “Finished design for the house (first version),” Sir John Soane’s Museum Collection Online, accessed October 26, 2022, <http://collections.soane.org/OBJECT1919>.

<sup>725</sup> “Finished design for the house (first version).”

<sup>726</sup> While Friedman, *James Gibbs*, 113; 295, states that this drawing is likewise dated 1713, only fig. 4.30 seems to be dated. Nevertheless, it is likely that the drawing was created around the same time.

no additions in pencil, neither is there a scale bar. The sheet, however, appears to have been cut and it is possible that the scale bar was on the cut section.

Another early design that can be confidently attributed to Gibbs, and which represents yet another different drawing style, is his first draft for a column in honour of Queen Anne. This was to be erected instead of a tower in front of the church of St Mary le Strand.<sup>727</sup> The British Museum keeps the drawings of an elevation and a plan (figs. 4.32-4.33), which were likely created in 1714.<sup>728</sup> They are finished designs or presentation drawings. The elevation of the column (see fig. 4.32) is given in the form of an orthogonal projection in brown ink. While the outlines of the monument are precisely executed, the lines of the decorative elements, figures, and scenes appear somewhat looser and less rigorous. They are roughly outlined and sketchy. Casual shading in light grey contributes to a sculptural effect of those figurative decorations. Partial washes in different shades of grey are applied as shades across the column shaft, but not the entire surface has been grey washed. This results in a three-dimensional effect due to the skilfully executed tonal modelling from light grey to dark grey towards the curvature. The assumed light source is located at the top left. There is no scale bar nor any other measurements. The plan of Queen Anne's column (see fig. 4.33) is likewise laid out in brown ink as an orthogonal projection. Again, no scale bar or measurements are given. In contrast to the elevation, the entire plan is grey washed, there are no sections that are left unwashed, not even the openings. It is noticeable that the outlines of the plinth run through the entrance area.

The *East elevation of the church St. Mary le Strand* (fig. 4.34) is likewise an example for Gibbs's early draughtsmanship. The drawing may have been produced in the final design phase in late 1714. Stylistically it fits into the 1710s and might be a finished design or even a presentation drawing. It may also be a preparatory drawing as Friedman suggests, for it is published as an engraving in *A Book of Architecture* (plate 18).<sup>729</sup> Given that the engraving in the book bears the inscription "Ja. Gibbs

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<sup>727</sup> E. G. W. Bill, *The Queen Anne Churches. A catalogue of papers in Lambeth Palace Library of the Commissions for Building Fifty New Churches in London and Westminster 1711-1759* (London: Mansell, 1979), xiii.

<sup>728</sup> Friedman, *James Gibbs*, 307-308.

<sup>729</sup> Friedman, *James Gibbs*, 312.

Arch: del:”, it is likely that Gibbs drew the original that served as a reference for the engraving. In any case, Gibbs seems to have extensively washed the sheet with a light grey. Upon this background, he then laid out the orthogonal projection of the apsidal elevation of the east façade of the church. The ink is of a dark brown colour. No scale or dimensions are given. There seem to be no pencil marks beneath the ink. In some places there is evidence of the use of tools for constructing the lines. Markings, scored lines, and prick marks of a compass and ruler can be seen in several places. The lines of the figurative elements differ from the outlines of the building. They seem to have been sketched rather quickly and roughly freehand. The surfaces of the church are almost entirely coloured in grey wash, except for some parts, e.g., the outer right columns and other parts that are most exposed to the light or furthest away from the assumed light source at the top left. Openings like doors and windows are washed in a darker grey. Shadow effects are employed in a controlled manner creating a sculptural effect, although they do not appear as vivid and flowing as in the Queen Anne’s column drawing. This could be explained by the fact that the bright grey tone in that drawing highlights the shading, which is not the case with the side elevation of St. Mary le Strand. Here the colour tones are monotonous. The figurative elements and ornaments are likewise shaded differently. The style of a bright grey casual shading as seen on the drawing of Queen Anne’s column or the above-mentioned study drawings is not found here. This might have something to do with the surface already being mostly grey washed. For this work Gibbs adopted a somewhat monochrome tone in tone drawing technique.

Further drawings that give an insight into Gibbs’s early, diverse drawing technique are compiled within the first scheme for Lowther Hall (figs. 4.35-4.38). This was probably created after Gibbs’s visit there on August 11, 1717.<sup>730</sup> It comprises four plans and two elevations remodelling the old Stuart house for Henry Lowther, 3rd Viscount Lonsdale. The plans showing the different floors of the house all have wall elements shaded in bright yellow. These represent the planned improvements, while the dark grey washed walls indicate the fabric that was to remain.<sup>731</sup> As far as I know,

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<sup>730</sup> Friedman, *James Gibbs*, 325.

<sup>731</sup> Howard Colvin, Joseph Mordaunt Crook, and Terry Friedman, eds., *Architectural Drawings from Lowther Castle Westmorland* (Leeds: W. S. Maney and Son Limited, 1980), 24.

there are no other plans by Gibbs that feature this kind of yellow wash.<sup>732</sup> Although the 1739 plans for Hampstead Marshall incorporate seventeenth-century features that were to be retained, these were indicated in light grey wash, while the improvements were washed in a darker grey. Despite the different structural features, monochromaticity was not abandoned here, which is an important difference between the earlier and later Gibbs drawings. The plans for Lowther further display a certain carelessness. The wash is often not precisely applied; in some cases, it exceeds the outlines of the wall mass or does not fill it entirely (fig. 4.39). Moreover, many lines are skewed and crooked, although it is likely that these drawings are finished designs or presentation drawings. Even the single-line frames surrounding the designs seem to have been sloppily drawn. The scale bars likewise look different from those usually seen on Gibbs's drawings. They are simple, two-line scales with vertical subdivisions. The heads of the scale bars have three dots at each of the subdivisions 10, 5, and 0, which are arranged in a triangle (fig. 4.40). This type of marking of the subdivisions occasionally appears in Gibbs's early drawings, while later the scale bars with lower-case v dominate. The triple-dot division method may be described as a widespread convention. It is known, for example, from drawings attributed to Nicholas Hawksmoor, from numerous drawings by various hands in the Vanbrugh Album at the V&A, as well as from three drawings in the Richmond Lodge Album attributed to Richard Castle.

The “upright of the wings and offices from South to North with ye Section of ye house” and the “upright of the principal Front ... from East to west” likewise show a somewhat unpolished method of drawing (see fig. 4.38). Both orthogonal views are depicted on one sheet adorned with grey wash, with Gibbs adjusting the wash based on the incidence of light. However, this is somewhat clumsy and inaccurate, most notably in the area of the roofs. Wash and shading appear blurred and partly vague, either spilling over the lines or not filling them completely. The rustication seems to

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<sup>732</sup> The attribution of a partly yellow washed plan (RIBA SD12/11) to Gibbs is somewhat doubtful in my opinion. Friedman, too, later suggests that his previously assumed connection of Gibbs with Wentworth Woodhouse might be wrong. See Friedman, *James Gibbs*, 322. Richard Hewlings has recently ascribed the plan to Robert Thornton. See Richard Hewlings, “The Classical Leviathan: Wentworth Woodhouse, South Yorkshire, The Home of Mr. and Mrs. Newbold, Part I,” *Country Life* 204 (February 2010): 46-53.

show channelled and V-joints that are shaded. Construction lines and compass marks are visible. There is a second scheme for Lowther Hall, which was submitted by Gibbs a few years later, probably after 1728.<sup>733</sup> The drawings for the new design include various plans for the different buildings and components as well as elevations and sections. Stylistically, they resemble the drawings of the first scheme, but there are two major differences. Firstly, the plans do not show any yellow wash and secondly, the cut wall masses of the sections are washed in light red. Another noticeable feature of all of Gibbs's Lowther drawings are their inscriptions containing odd spellings such as "Grownd Plan" (see fig. 4.40) or "Principale".<sup>734</sup> Whether these indicate the hand of a non-native English speaker is questionable, however, as spellings such as "cellers", "roomes", "dore", "floore" etc. occur among Gibbs's works and in other contemporary sources.<sup>735</sup>

These early Gibbs drawings show certain influences in terms of drawing style. Firstly, the drawing style resembles contemporary architectural drawings from Italy, more precisely from the studio of Carlo Fontana, where Gibbs had studied for several years. The importance of Fontana as pioneer of a professional drawing style has been outlined above. He established a standardised and effective approach to drawing that allowed for seamless collaboration among multiple draughtsmen, ensuring a cohesive and consistent style across project drawings.<sup>736</sup> Stylistic features that Gibbs imitated in some of his early drawings include the application of brown ink to show the outlines of the design, followed by an application of a grey wash (see figs. 4.26 and 4.32). Further, it can be observed that Gibbs at times used grey wash to indicate a background, for example in some of his study drawings (see fig. 4.28), in his early plan for Wimpole Hall (see fig. 4.30), and for the east elevation of St Mary le Strand (see fig. 4.34). This technique of including a background was employed by Fontana, as seen in his drawing *Project for the Origo Monument, S Egidio in Trastevere, Rome* dating

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<sup>733</sup> RIBA SB67/2(5-17); Friedman, *James Gibbs*, 325.

<sup>734</sup> E.g., RIBA SB67/2(7) or RIBA SB67/2(11).

<sup>735</sup> For example, on other Gibbs's drawings, in his correspondence, or in the Gibbs's manuscript. The spelling "Cellers" appears on drawings by James Gandon for a villa, for instance. These designs were made before Gandon left England for Ireland in 1781. See Colvin, Crook, and Friedman, *Architectural Drawings from Lowther Castle*, 40-41.

<sup>736</sup> Aslet, "Il Ritorno di 'Signor Gibbi'," 4.

to 1706 (fig. 4.41). The surface behind the motif was extensively washed. Fontana's *Design for the Façade of Santi Faustino e Giovita, Rome* (fig. 4.42) likewise shows this technique. Here the church façade stands out against a background in faint red brush and wash. Perhaps the most important drawing technique Gibbs acquired from Fontana is the application of coloured washes like light red and yellow to indicate different structural features and to provide an easy legibility of the drawing (see fig. 4.31). Reference has already been made above to the use of colour in Fontana's drawings. The method of shading and contouring in the figurative scenes of some early drawings (see fig 4.32) likewise resembles Fontana's designs. This is shown, for example, in his drawing of the Fontana di Trevi from 1706 (fig. 4.43). The figures and decorative elements are loosely drawn and vividly shaded. Fontana's *Elevation of the entrance to the Baptistery, St Peter's Rome* is similarly conceived (fig. 4.44). For Gibbs's east elevation of St Mary le Strand or the drawings for Queen Anne's column, he adopted a somewhat monochrome drawing technique tone in tone, which also exists in Fontana's œuvre (see fig. 3.24, chapter III). The brown ink outlines known from Fontana's drawings (see fig. 4.44) are likewise taken up in the Queen Anne's column elevation. Among these early drawings by Gibbs, the design for St Mary le Strand is particularly interesting. For although the building has previously been described as the most Roman of Gibbs's work, compared to the other drawings just described here, the drawing has a less Italian character.<sup>737</sup> Was Gibbs trying to conform more to contemporary English drawing conventions promoted by the Burlington circle? Is this a transitional drawing towards the more conventional grey wash drawing style of Gibbs found in his later drawings?

### Transitional Drawings

The designs for Wimpole have been described as transitional drawings marking Gibbs's shift "from the School of Fontana to that of Wren and Inigo Jones, as derived

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<sup>737</sup> Friedman, *James Gibbs*, 51; John Newenham Summerson, *Architecture in Britain, 1530-1830* (Middlesex: Penguin Books, 1953), 209.

ultimately from Palladio's study of Antiquity" (see figs. 4.30-4.31).<sup>738</sup> Indeed, Wren and Jones represent a major source of influence for Gibbs's early designs, though the literature mainly emphasises the Italian influence on his draughtsmanship. A friendship between Gibbs and Christopher Wren is substantiated in the Gibbs's manuscript in Sir John Soane's Museum, where it is stated that Wren was "much pleased" with Gibbs's drawings.<sup>739</sup> It is evident that Gibbs frequented the circle of Wren, given that in 1713 Wren gave him a letter of recommendation for the position on the Commission for Building Fifty New Churches. It is noted here that Wren has "been for some time acquainted with Mr. Gibbs."<sup>740</sup> In addition, it has been proposed that "young Gibbs may have been employed by Wren" on the drawings for Wimpole.<sup>741</sup>

Perhaps the most obvious reference of Gibbs's early drawings to the draughtsmanship of Wren and his office is in terms of the use of colour. Many of the drawings by Wren and his draughtsmen feature polychrome washes for depicting materials of different kinds. Wren made use of such coloured washes especially in his presentation drawings of the 1660s, e.g., for his unexecuted pre-fire designs for St Paul's (figs. 4.45-4.46). In *Scheme for encasing the nave piers* (see fig. 4.46), the existing fabric is shaded in brown, while the proposed work is "edged in pink at the pedestal level and washed and edged in pink at pilaster level."<sup>742</sup> Similar to the practice in Fontana's studio, Wren's office cultivated a drawing training, which benefited from various imported techniques, especially from France. Drawings and prints from France and occasionally from Italy served as teaching material for drawing. In addition, a French draughtsman was invited into Wren's office which affected the work of his English draughtsmen. Thomas Laine's drawing style sometimes included polychrome washes.<sup>743</sup> His *Section looking East*, a design for the church of St Mildred in Bread Street (fig. 4.47), is shaded with grey and light red washes, whereby the light

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<sup>738</sup> Arthur T. Bolton, and H. Duncan Hendry, eds., "Miscellaneous Designs and Drawings by Sir Chr. Wren and others, including James Gibbs and Nicholas Hawksmoor, for houses, public buildings and decorations, with the plans for the rebuilding of the city of London after the fire," *Wren Society* 12 (1935): 14.

<sup>739</sup> SM, Vol. 26, "The Gibbs Notebook," f. 83v.

<sup>740</sup> LPL, MS 2726, f. 71.

<sup>741</sup> Bolton, and Hendry, "Miscellaneous Designs," 11.

<sup>742</sup> Anthony Geraghty, "The pre-fire design," accessed November 25, 2022, [https://library.asc.ox.ac.uk/wren/pre\\_fire\\_design.html#46](https://library.asc.ox.ac.uk/wren/pre_fire_design.html#46).

<sup>743</sup> "Wren and his draughtsmen."



red wash is applied to the sectioned wall areas. Although Nicholas Hawksmoor is more known for his monochrome grey wash drawing style, there are some drawings that feature polychrome washes, such as in his presentation drawings for remodelling the Upper Ward at Whitehall Palace, c. 1698. In *Block plan of the castle* (fig. 4.48) grey, yellow, and green washes are applied, whereas the yellow parts indicate the proposed alterations. The last of Wren's draughtsmen, William Dickinson, likewise "learnt to apply coloured [washes] with smoothness and precision."<sup>744</sup> In his four presentation drawings for the House of Lords from c. 1704-05, a polychrome palette of grey, yellow, green, and red washes is applied. His *Alternative design for a gallery* (fig. 4.49) shows the House of Lords in a yellow wash, the rest of the plan in grey. The proposed gallery is shaded green, the fittings are washed in a light red.<sup>745</sup> While in Gibbs's later drawings these polychrome colour codes disappear in favour of a monochromaticity, in elevations the application of light red washes is continued.

In addition, the use of brown ink for the outlines of designs and the shading effects employed by British architects and draughtsmen, might likewise be reflected in some of Gibbs's early drawings. Drawings with brown ink outlines shaded with grey wash, such as the west elevation of Christ Church, Newgate Street, by Thomas Laine dated c. 1677-78 (fig. 4.50), are echoed in Gibbs's designs for Queen Anne's column (fig. 4.51). Examples of this kind of draughtsmanship appear from time to time. The Vanbrugh Album in the V&A for example, contains the elevation of a column on an inscribed base for an unidentified project, dated to the early eighteenth century (fig. 4.52). Brown ink was used for the outlines which were then shaded with grey wash. Finally, there is a particular drawing technique that Gibbs used, which was equally applied by some English architects.<sup>746</sup> Inigo Jones, John Webb, Wren and Hawksmoor, for example, sometimes set out their designs with a scoring implement. The stylus was already employed by Palladio and Scamozzi for setting out a design as an almost invisible preparatory technique. In his *L'idea della architettura* Scamozzi

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<sup>744</sup> "Wren and his draughtsmen."

<sup>745</sup> Anthony Geraghty, "The Palace of Westminster," accessed November 25, 2022, [https://library.asc.ox.ac.uk/wren/westminster\\_palace.html#347](https://library.asc.ox.ac.uk/wren/westminster_palace.html#347).

<sup>746</sup> I am indebted to Gordon Higgott for the advice on the use of scoring implement.

recommended an ivory stylus to establish the construction lines.<sup>747</sup> Fontana, too, would have been familiar with the techniques recommended by Scamozzi, which were common in architectural drawing in the sixteenth to seventeenth centuries in Italy, as noted above. Jones and Webb used this technique frequently and although later in the century graphite was generally preferred to the stylus as a preparatory medium, Wren and others occasionally continued to use the stylus. Gibbs was an exceptionally precise draughtsman which is why the technique must have appealed to him. For, stylus lines carefully drawn with an ivory- or ebony-tipped stylus provided the cleanest form of preparatory drawing (fig. 4.53).<sup>748</sup>

The remaining source of inspiration for Gibbs are engravings or drawings. As has already become clear from his study drawings, he copied from two-dimensional images, which doubtless influenced his drawing style. While some of them reveal a certain freestyle, others reflect the monochromatic style of his later drawings. This difference may be due to the fact that his templates were both printed works as well as drawings. Gibbs owned a volume containing several ink and watercolour designs by the French painter and decorator Jean Cotellet. As Christine Casey has shown, they provided a *modus operandi* for office practice regarding the form and execution of drawings of wall and ceiling decoration.<sup>749</sup> The designs for half-ceilings with bold inked preparatory room outlines and infill ornamentation in graphite are indeed reproduced in the drafting practices of Gibbs's office. Similarly, the distinctive

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<sup>747</sup> Scamozzi, *L'idea della architettura*, I,I, 48: "*Nel disegnare le piante de gli edifici in buona forma noi offeruiamo de tirare col stileto di Avorio, e dapoi con la penna tutte le linee delle grossezze delle mura, così per lunghezza, come per la larghezza, hauendo riguardo alla qualità dell'edificio & anco alla forte della materia di che douerà esser fatto, perche altra grossezza ricercano le pietre de'monti, e tussi, come si usa à Roma, & à Napoli, & altroue, & altro poi di mattoni; come in questi nostri paesi, intantoche distinguono tutte le parti l'una dall'altra. Dapoi le compartiamo le porte, e le finestre, & i camini, & i nicchij, se ve ne vanno, ne'luoghi loro destinati; le quali si conoscono attraversando le già dette linee parallele, delle grossezze delle mura.*" ("In drawing the plans of buildings in good form, we offer to draw with the stylus of Ivory, and thereafter with the pen all the lines of the thickness of the walls, both in length and in width, having regard to the quality of the building & also to the strength of the material of which it is to be made, because the stones of the mountains and streams require other thicknesses, as is the custom in Rome, & Naples, & other places, & other bricks; as in these our countries, inasmuch as they distinguish all parts from each other. We then compare the doors, and windows, & chimneys, & niches, if there are any, in the places destined for them; which are known by traversing the aforesaid parallel lines, of the thickness of the walls.")

<sup>748</sup> Further examples of Gibbs's use of the stylus can be found in the list of illustrations indicating the technique for each drawing.

<sup>749</sup> Casey, "Ornament and Craftsmanship," 29.

subdivision of Cotellet's ceilings, like those of Jones and Webb, is echoed in the orderly, grid-like soffits found in the Gibbs's office drawings.<sup>750</sup> This, however, can first be seen in his later drawings from c. 1720 onwards (fig. 4.54).

### Monochrome Drawings

Towards 1720, Gibbs began to favour the monochrome grey wash style and moved away from the more varied drawing styles discussed above. Perhaps this is related to the fact that he had become an architect in demand and was now embarking on setting up his own office. In the following, a closer look at this drawing style ensues. For this purpose, drawings for a project for which Gibbs is said to have made drawings according to his manuscript are considered. Indeed, in the list of Gibbs's works, there are occasionally specific statements regarding the preparation of drawings for certain projects. For Milton House for example, "He made a great many drawings."<sup>751</sup> The first drawing to be discussed is an alternative design for this house (fig. 4.55).<sup>752</sup> Given that the other drawings for the project, which are in the Ashmolean Museum, relate to *A Book of Architecture*, these are discussed separately later.<sup>753</sup> The drawing dates to around 1726 and shows an orthogonal elevation of the garden front positioned on a base line. It may be a finished design or a presentation drawing. It is precisely executed in black ink and finished with grey wash and shading that is applied according to a light source in the upper left corner. In some places, thicker lines further emphasise the shadow effects. The surfaces closest to the viewer (and protruding furthest) are not washed, the openings are shaded black. The roof is evenly washed in grey. The rustication of the central element is sophisticatedly designed. It is clear that these are chamfered stones with smooth-faced V-joints, which are shaded accordingly. The execution of the rustication of the end elements indicates simpler channelled joints. The balusters of the staircase and the portico are intriguing. Instead of a modest shading, the outlines are rendered with a bold pen in black ink. In places compass

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<sup>750</sup> Casey, "Ornament and Craftsmanship," 29.

<sup>751</sup> SM, Vol. 26, "The Gibbs Notebook," 90.

<sup>752</sup> Crandall, "A Catalogue of the Drawings of James Gibbs," cat. I-19a.

<sup>753</sup> The 19 plans at the Northamptonshire Record Office could not be included.

prick marks can be recognised. A frame may have been cut off; along the upper right edge of the sheet a trace of a line can be seen.<sup>754</sup> There is no scale bar and no other measurements. On the whole, this is an accomplished drawing that, compared to the earlier drawings, is mostly sophisticated – although the balusters on the stairs and portico appear somewhat curious.<sup>755</sup>

This drawing is now compared with one of the drawings that was engraved for plate 49 in *A Book of Architecture* and may therefore have been a preparatory drawing by Borlach.<sup>756</sup> The engraving bears the inscription “Jacobo Gibbs Architecto.”, which does not explicitly refer to Gibbs as the draughtsman of the preparatory drawing. The sheet features a section and an elevation, each of which is captioned. Only the elevation will be addressed here (fig. 4.56), as it is more comparable with the other drawing. At first glance, the drawing style of the elevation appears very similar to that on fig. 4.55 (ASH WA1925.340.36). It is neatly drawn, grey washed, and shaded. However, there are some inaccuracies, especially in the rustication of the central part of the building. This is less skilfully and rather “sloppily” rendered (fig. 4.57). The indication of the chamfering V-joints and a shading does not quite materialise here. Other differences to the first drawing are the scale bar with punctuated scale bar numbers except for the 70 and a punctuated lower-case v below the zero tick. The wash of the roof is likewise executed differently. Instead of applying a consistent wash to the entire roof, the upper part of the roof has a darker grey wash than the lower part. Another difference is the design of the stairs. While here and in the related engraving they are curved stairs without balustrades, the original drawing shows square stairs with balustrade (see fig. 4.55). Such small details in the execution of a drawing in combination with the inscription on the engraving might indeed suggest that this drawing was not made by Gibbs. Small irregularities like these occur throughout when juxtaposing drawings that might have been preparatory drawings for engravings with those that are not related to Gibbs’s publications.

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<sup>754</sup> There are many drawings where the remains of a black line can be seen along the edges, which, besides a former frame, might possibly also be the mark for the cut edge of the sheet.

<sup>755</sup> Could this be an indication that the balusters were added by another draughtsman?

<sup>756</sup> Crandall, “A Catalogue of the Drawings of James Gibbs,” cat. I-18b.

## Preliminary Drawings for Engravings

Of the 150 plates in *A Book of Architecture*, 132 have an inscription referring to Gibbs as architect (e.g., “Ja. Gibbs Architecto.”). Eleven plates have inscriptions indicating that Gibbs was the architect and the draughtsman of the design (e.g., “Ja. Gibbs Arch: del:”). The inscription on three plates indicates that Gibbs was the architect, the designer, and the draughtsman of the design (e.g., “Jacobus Gibbs Archt. invent. et delt.”). Three further plates do not bear an inscription at all. The inscription on one plate states that Gibbs was the draughtsman of the design (“delienavit Ja: Gibbs.”), but not the architect or designer. There are thus in total 15 plates in *A Book of Architecture* which suggest that Gibbs actually drew the preparatory drawings. While the plates in *Rules for Drawing* are not inscribed with a note of authorship, all 21 plates in *Bibliotheca Radcliviana* are inscribed with “Jacobus Gibbs Architecto”. None of the engraved designs of these two publications thus indicate that Gibbs made their preparatory drawings. It can therefore be assumed that the preparatory drawings of the engraved designs from the publications that do not specifically point to Gibbs as draughtsman (132 engraved designs in *A Book of Architecture*, 21 in *Bibliotheca Radcliviana*, and 64 in *Rules for Drawing*), were produced by a draughtsman other than Gibbs. This practice does not seem to have been uncommon. The architect and designer John Vardy (1718-1765), who prepared for publication *Some Designs of Mr. Inigo Jones and Mr William Kent* (1744), inscribed the engravings with “W. Kent Invt.” and “I. Vardy delin. et Sculpt.” crediting Kent with the design but specifying his own role as draughtsman and engraver. Vardy likewise drew and engraved the final design of the Horse Guards for Kent and added to the engraving the inscription “Wm Kent invt.” and “J. Vardy delin: et Sculpt.”<sup>757</sup> Inscriptions of this kind on engravings can thus provide clues regarding the authorship of architectural drawings. However, not all plates of *A Book of Architecture* have surviving preliminary drawings. Some 117 drawings have survived, corresponding or partially corresponding to the 132 engraved designs that name Gibbs as architect. Of the 15 plates on which Gibbs is described as

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<sup>757</sup> John Harris, “Architectural and Ornamental Draftsman,” in *William Kent. Designing Georgian Britain*, ed. Susan Weber (New Haven: Yale University Press, 2013), 158.

draughtsman, seven drawings survive, whereas for one plate two different drawings survive.<sup>758</sup> These drawings will be discussed below, some of which have been described in detail earlier (figs. 4.58-4.61; see figs. 3.8a, 4.13, and 4.34).

The drawings are designs for executed building projects from the first quarter of the eighteenth century, more precisely for the two prestigious building projects of St Martin-in-the-Fields and St Mary le Strand, as well as for Marylebone Chapel (now St Peter, Vere Street). Juxtaposed with these are seven preparatory drawings (figs. 4.62-4.66; see figs. 4.4 and 4.56) whose related engraved designs are inscribed “James Gibbs Architecto” etc. and hence point to an office draughtsman. These drawings were selected for comparison based on four criteria. They date to the first quarter of the eighteenth century, depict either the same building project (St. Martin-in-the-Fields) or the same building type (church: All Saints, now the Cathedral at Derby, Derbyshire), or share a similar arrangement with elevation and section. Fig. 4.65 (ASH WA1925.340.15) is an anonymous and unexecuted design for a house “made for a Gentleman”,<sup>759</sup> the others are drawings for executed projects. While comparing these drawings with each other, certain patterns can be discerned. Altogether they are quite homogeneous, finished, and precise drawings, grey washed and shaded. Nevertheless, there are slight differences. This monotony in the practice of architectural drawing, which nonetheless reveals certain stylistic differences, is something known from other architectural publications, such as from Jean Marriete’s *Architecture françoise*, which was published around the same time as Gibbs’s *Book of Architecture* between 1727 and 1732. Mariette employed various, preferably young, draughtsmen who adhered to the established codes and whose preparatory drawings are thus difficult to distinguish.<sup>760</sup>

The most striking feature of the drawings by Gibbs is the light red wash, which is absent in the drawings not ascribed to Gibbs’s own hand. Instead, the wall masses are left blank. The light red wash could thus be seen a specific Gibbs characteristic

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<sup>758</sup> Plate 25: ASH WA1925.340.24 (fig. 3.8a), V&A E.3601-1913 (fig. 4.60).

<sup>759</sup> Gibbs, *A Book of Architecture*, xii; pl. 44.

<sup>760</sup> Emmanuelle Brugerolles, “De l’architecture au document: l’exemple des dessins préparatoires pour l’*Architecture françoise* de Jean Mariette,” in *Le dessin d’architecture dans tous ses états. 2. Le dessin d’architecture, document ou monument?*, ed. Claude Mignot (Paris: Société du Salon du Dessin, 2015), 75.

used on certain drawings to accentuate the wall mass in order to offer practical information and legibility to clients and building specialists. Given that this was not required for drawings that only served as preparatory drawings for published engravings, it can be assumed that these drawings had originally served another purpose and were now reused as preparatory drawings. This could also be indicated by the frames that can be seen on these drawings, but not on the drawings not ascribed to Gibbs's hand and only serving as preparatory drawings for engravings. The drawings that were repurposed as preparatory drawings for engravings were either originally presentation drawings, like fig. 4.61 (ASH WA1925.342.159), contract drawings, like fig. 3.8a (ASH WA1925.340.24), or in another way central to the project, which might explain why Gibbs would have drawn them himself. In addition to that, Gibbs's drawings rarely have inscriptions, while most of the office drawings do. The fact that most drawings not ascribed to Gibbs's hand are either equal to the engraved plates or show only slight deviations in design and, crucially, all result in reversed engravings (i.e., the images were not drawn in reverse on the printing plate), suggests that they are draughtsman-authored preliminary drawings. Although four of the seven preparatory drawings by Gibbs are reversed as engravings, too, they differ more substantially from counterparts in *A Book of Architecture*.<sup>761</sup> Finally, there seem to be slight differences in the conventions of scale bars and measurements between the preparatory drawings by Gibbs and those by other draughtsmen, but these differences are not consistent enough to be used as evidence.

### **Comparative Analysis of Drawings for the Gibbs's Building at Stowe**

Small differences between drawings that have nothing to do with publications or engravings can likewise be observed. There might perhaps be something in these differences that exhibits the designer's sense of mass, volume, and composition, indicating that Gibbs sought assistance from draughtsmen also for commissions not relating to publication projects. A brief comparative analysis of two designs for the so-called Gibbs's Building or Belvedere at Stowe, Buckinghamshire (figs. 4.67-4.68), aims

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<sup>761</sup> ASH WA1925.340.24 (fig. 3.8a), ASH WA1925.340.30 (fig. 4.11), ASH WA1925.342.159 (fig. 4.61), V&A E.3601-1913 (fig. 4.60).

to provide some light on distinguishing architect's drawings from draughtsmen's drawings. The sheets are possibly finished designs or presentation drawings and may date from 1727. Fig. 4.67 (ASH WA1925.342.152) shows from left to right the plan, elevation, and section of a pavilion executed in black ink. All three components are finished with grey wash, whereas elevation and section are additionally shaded, the light source being assumed in the upper left. The outlines of the plan have a distinctive white border to the wall mass except at the opening. Here a single line indicates a step. The vaulting is given with a dashed line, further dashed lines in the four corners of the buttresses indicate a structural grading. The door in the elevation is washed in a dark shade. The cut walls in the section are not washed but left blank. A faint construction line can be seen running through the centre of the cupola and a compass prick mark is visible beneath the arch of the opening in the elevation. Both elevation and section are positioned on a base line. At the lower right is the inscription "For Ld Cobham at Stow" in brown ink in what seems to be Gibbs's looped cursive handwriting. A double line scale bar with below scale bar numbers and lower-case v is provided, all of which are finished with a dot. Additional measurements ("12: 6." and "6.") are indicated in the plan. Fig. 4.68 (ASH WA1925.340.88) is an alternative design for the pavilion following the setup of the first drawing with plan, elevation, and section executed in black ink and finished with grey wash. Both drawings closely resemble each other in terms of drawing style and implementation, however, there are some slight differences. Here the highest number on the scale bar is 20, which on fig. 4.67 (ASH WA1925.342.152) was 30, additional measurements are not inserted, and the wall colour of the plan is washed with a slightly darker shade. Furthermore, there are no dashed lines to indicate additional structural features. Most strikingly, the shading of the section is more fully articulated, while on fig. 4.67 it appears rather blurred. This may suggest that different hands were responsible for shading and general execution of these two drawings. Could it be that the alternative design was made by a draughtsman, based on the first drawing by Gibbs? While both drawings were kept by Gibbs and never appeared in a publication, a final version of the pavilion was published as reversed engraving plate 75 in *A Book of Architecture* (fig. 4.69), which



is inscribed “Jacobus Gibbs Architectus”.<sup>762</sup> By now it is clear that this inscription suggests that Gibbs did not make the preparatory drawing for this related engraving. The finished drawing follows the order of the two previous drawings. It shows a development of the design of the first drawing with rustication and an escutcheon above the door and demonstrates a higher level of proficiency and refinement, suggesting that it was produced by a skilled draughtsman with a deep understanding of architectural detailing. The plan on the left has the same distinctive white border to the wall mass. The openings are indicated by dashed lines, the double steps at each doorway with single lines, and structural features on the inside with single dashed lines (cupola and arches) and one solid line (moulding, bench, shelf). It seems that compared to the other two drawings, it was essential to accurately depict the structural elements. This is further emphasised by the single dashed line indicating the beginning of the cupola in the cut wall of the section (fig. 4.70). The elevation is skilfully shaded, the rustication indicating smooth-faced V-joints. The shading of the section is likewise accurate, resembling that on fig. 4.68 (ASH WA1925.340.88) and less indistinct than on fig. 4.67. There is a base line on which elevation and section are positioned, but it is interrupted between the two projections. Most strikingly perhaps is the missing scale bar, which was however included on the later engraving. In summary, while the three drawings are generally very similar, the subtle differences in the handling of shading, additional lines for structural features, and scale bars/measurements might suggest a division of labour within Gibbs’s office.

## Conclusion

In addition to the updated and comprehensive inventory of Gibbs’s surviving drawings and the analysis of his script, this chapter has presented a detailed analysis of his drawing techniques which evolved over the course of his life. The in-depth study of the drawings revealed a hitherto unequalled view on Gibbs’s architectural output. For the first time, an attempt was made to situate his drawn and engraved legacy within his career in order to obtain a more thorough understanding of his development as an

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<sup>762</sup> Gibbs, *A Book of Architecture*, pl. 75.

architect and way of working.

Several different drawing styles have been identified in Gibbs's early work, suggesting that he was still developing his own unique style at this time. Nevertheless, even in this early phase, the drawings show a level of quality that would later earn him a reputation as one of Britain's most successful architects. The study drawings (see figs. 4.26-4.28), to begin with, are characterised by their experimental nature and the use of parallel hatching and grey washes and are evidence of Gibbs's interest in the acquisition of drawing skills and Baroque ornamentation. The early Wimpole Hall plan (see fig. 4.30) appears as more ambitious drawing, but still shows signs of immaturity, such as the unsteady freehand outlines and patchy wash. A noteworthy feature is the use of a light grey wash to mark a base surface, a technique that Gibbs would continue to use in his later work (see fig. 4.21). The drawings for Queen Anne's column and St Mary le Strand (see figs. 4.32-4.34) are finished presentation drawings that demonstrate Gibbs's mastery of orthogonal projection and tonal modelling. The Queen Anne's column drawing is particularly remarkable for the use of shading to create a sculptural effect. Before he adopted the formal grey wash style, Gibbs clearly played with various conventions, which he adopted from Italy, England, or from prints and drawings. This wide range of influences is evident in the use of polychrome washes, brown ink outlines, and stylus scoring. Gibbs's early drawings, although not yet fully developed, are a clear demonstration of his draughtsmanship. They reveal that by experimenting with different techniques and styles, he established his own unique architectural language, both on paper and in buildings.

Around 1720, the transition occurred towards the monochrome grey wash drawing style, which had become the prevalent style in England and was practised by the architects of the Burlington circle. The influences that were evident in Gibbs's earlier drawings almost completely disappeared. One of the few remnants of his early experiences seems to be light red wash of the wall mass in sections. He might have maintained this convention to distinguish himself from the Campbellian-Burlingtonian practice and to showcase his Italian training and British influences. The Italian Giacomo Leoni likewise employed this polychrome convention for the architectural drawings for his British clients. For the most part, however, the

draughtsmanship of Gibbs's later drawings, such as the one for Milton House (see fig. 4.55), is characterised by its precise and sophisticated use of black ink, grey wash, and shading. This is clearly in contrast to his earlier, more heterogeneous drawings. The Milton House drawing is especially remarkable for its attention to detail, such as the carefully rendered rustication. A comparison with the preparatory drawing that was engraved for plate 49 in *A Book of Architecture* revealed that while the style is similar to that of Gibbs's own drawing for Milton House, there are certain inaccuracies, for example in the modelling of the rustication. This indicates that the preparatory drawing was not made by Gibbs, but by a draughtsman who closely followed Gibbs's monochrome grey wash style. In this way, a homogeneous office style was cultivated, a phenomenon that, as described in chapter III, was often customary in European architectural offices of the period. Based on the evidence of the surviving drawings, it is indeed likely that Gibbs did not draw all of the preparatory drawings for the engraved designs in his publications. Only 15 of the 150 plates in *A Book of Architecture* specifically identify Gibbs as draughtsman. The other 135 plates seem to have been drawn by office draughtsmen such as Borlach. While those drawings are of a high quality, they show certain differences from Gibbs's own drawings, such as the absence of a light red wash and the presence of inscriptions. One can therefore clearly identify a set of preliminary drawings for the engravings most likely made by a draughtsman or office, reflecting a house or office style required by Gibbs. Some drawings which seem to have been used as preparatory drawings for engravings depart from the plain, homogeneous style otherwise employed for drawings of this kind. Their highly finished design, with light red wash for example, suggests that they were originally presentation or contract drawings and thus initially produced by Gibbs for a different purpose than as preparatory drawings for publications.

The final comparative analysis of three drawings for the Gibbs's Building at Stowe has further emphasised that Gibbs did not produce all of the drawings for his projects himself, but relied on draughtsmen. Despite being very similar in terms of their overall design and style, there are some subtle differences in the execution of the shading, structural details, and scale bars/measurements. The cursory similarity of the drawings gives the impression that they were all drawn by Gibbs, but it appears

that they were prepared by different people following Gibbs's instructions. As established in the previous chapter, it frequently occurred that architects fostered a homogenous office style, and it was precisely this type of grey wash office style following the current trends, that Gibbs wanted his draughtsmen to follow.

## CHAPTER 5

## **Richard Castle's Drawings: Survey, Analysis, Comparison**

This chapter analyses the architectural drawings from the office of Richard Castle. Although Castle's drawing skills are frequently highlighted in the literature and his first biographer's statement "Mr. Castles was remarkably ready at drawing" is often quoted, there are in fact no detailed discussions of his drawing style.<sup>763</sup> The surviving drawings will thus be subject to close analysis, the aim of which is less to demonstrate Castle's drawing skills but more to reconstruct his background and the working methods of his architectural practice. This involves an initial stocktaking providing an overview of the existing drawings by Castle, a task that has not been carried out before. To substantiate an attribution of the drawings, several autograph documents are consulted to compare their handwriting with the inscriptions on the drawings. Analysing and discussing the drawings in the light of style conventions and quality involves contextualisation of Castle's relationship with Sir John Vanbrugh and Sir Edward Lovett Pearce. The latter was a cousin of Vanbrugh and possibly his "pupil-assistant" in the early 1720s.<sup>764</sup> Pearce employed Castle as his draughtsman for building the new Parliament House in Dublin begun in 1729. A connection between Vanbrugh and Castle has likewise been suspected for some time. Lastly, it may further be possible to draw conclusions about John Ensor, Castle's clerk and measurer, who took over the practice after his death.

## **Richard Castle's Drawings: an Inventory**

Compared to the drawings preserved by Gibbs and his office, the number of drawings by Castle and his office is far less. Currently there are about 103 drawings that are attributed to him. However, there may be others hidden away in archives and private collections.<sup>765</sup> The Irish Architectural Archive holds c. 62 drawings. The majority of those drawings (47) have been collected from various sources by the Honourable Desmond Guinness and the late Mariga Guinness in the 1960s and the Guinness

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<sup>763</sup> Anon, "Richard Castles," 242.

<sup>764</sup> Kerry Downes, *Sir John Vanbrugh. A Biography* (New York: St. Martin's Press, 1987), 443.

<sup>765</sup> E.g., Lady Goff collection. See McParland, "Edward Lovett Pearce and the Parliament House in Dublin," 94.

Drawings Collection is now the largest accumulation of Castle drawings. It was acquired by the IAA in 1996.<sup>766</sup> A large part comes from the Estate Office of the Duke of Leinster and includes 23 drawings for Kildare House (later Leinster House) in Dublin and twelve designs for Carton House, Co. Kildare, the latter assembled within a portfolio. There are further two volumes containing altogether eight proposed designs by Castle for Headfort House, Co. Meath, which appear to have been purchased directly from the Headfort estate. One of the albums additionally contains a drawing of a plan and elevation assigned to Ensor. Another group of three drawings for Doneraile House, 45 Kildare Street, Co. Dublin, was acquired at public auction for the Guinness Drawings Collection. The collection further holds a drawing of an unidentified barrack, which may be in Castle's hand and is recorded in an inscribed photograph that throws light on its provenance.<sup>767</sup> The inscription indicates that it was photographed by members of the IAA at Castletown House, Co. Kildare, in 1983, while the *Catalogue of the Guinness Drawings Collection 96/68* lists the drawing as being of uncertain provenance.<sup>768</sup> A further eight drawings are included in the Charleville Forest Drawings Collection at the IAA. These were acquired by the archive from Charleville Forest, Co. Offaly, at the "Architectural and Decorative Drawings" auction at Christie's in London held December 11, 1985.<sup>769</sup> Five designs for a six-bay town house survive in the so-called Powerscourt Albums at the IAA, which have been attributed to Castle by David Griffin on stylistic grounds.<sup>770</sup> The albums were compiled by Mervyn Wingfield, 7th Viscount Powerscourt, from his family papers in the winter of 1893-94.<sup>771</sup> Finally, there are two plans for Carton House, which are part of the Royal Institute of the Architects of Ireland (RIAI) Murray Collection housed at the

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<sup>766</sup> "Catalogue of the Guinness Drawings Collection 96/68," IAA, n.p. I am indebted to the IAA for providing the catalogue.

<sup>767</sup> As far as I am concerned, drawing style, script, and design of the *Explanation* do not correspond to those of the other drawings attributed to Castle. Neither does Ensor seem to be involved in this. Did someone deliberately imitate the style of Castle's drawings in order to capitalise on his success in acquiring projects?

<sup>768</sup> "Catalogue of the Guinness Drawings Collection 96/68," IAA 96/68.6/3. The photograph has the inventory number 47/74 R1.

<sup>769</sup> "Charleville Forest Drawings Collection," IAA Catalogue, accessed December 14, 2022, <http://iarc.cloudapp.net/Details/archive/110081209>; see also *The Times*, December 10, 1985, 12.

<sup>770</sup> "Castle, Richard," Biography, IAA, accessed December 14, 2022, <https://www.dia.ie/architects/view/347/CASTLE-RICHARD>.

<sup>771</sup> "Powerscourt Albums," IAA Catalogue, accessed December 15, 2022, <http://iarc.cloudapp.net/Details/archive/110081505>.

IAA.<sup>772</sup> There is another drawing at the IAA showing a sundial, formerly attributed to Castle, but more likely in Isaac Ware's hand.<sup>773</sup> A design for an overmantel, possibly a proposal for the Chinese Room at Carton, might show a chimney piece drawn by Castle.<sup>774</sup> Both these drawings are not included in the total number given that Castle's authorship is doubtful. Another group of about ten drawings for Leinster House are in the private possession of Patrick Guinness. In addition, the Manuscripts & Archives Research Library at Trinity College Dublin owns two drawings attributed to Castle. A further five drawings for Castle Coole, Co. Fermanagh, attributed to Castle were identified by Edward McParland in the collection of the Earl of Belmore at Castle Coole.<sup>775</sup>

Several Castle drawings are included in collections in England. Twelve are in the collection of the Victoria and Albert Museum. These have survived within two albums which contain architectural drawings by various architects and draughtsmen, and originate from the library of Elton Hall, Cambridgeshire. The so-called Vanbrugh Album comprises a total of 254 drawings which were probably pasted and bound in their present form between 1945 and 1954. Six of these drawings are attributed to Castle, along with a few pages of notes concerning a project. Furthermore, the so-called Pearce Album (also known as Richmond Lodge Album) contains "a manuscript text and five designs for a large Palladian 'lodge' in Richard Castle's hand, to designs by Pearce (after 1727)."<sup>776</sup> A coloured site plan completes the portfolio. Originally, all drawings in the Vanbrugh and Richmond Lodge Albums now at the V&A were owned by Pearce, who kept them for his own purposes. The drawings were thus made before

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<sup>772</sup> This collection originates from the Murray family, whose members were practising architects in Dublin for several generations. In 1923, the collection of about 1230 architectural drawings was presented to the RIAI. One of the plans was overpainted at a later date. It shows revisions by the builder and architect Robinson Carolin (c. 1793-1878), who was working at Carton as draughtsman for Francis Johnston (1760-1829). The key to this plan was torn off at some point (presumably when the plan was being revised) and entered the Guinness Drawings Collection separately from the plan.

<sup>773</sup> "Designs for a sundial," IAA Catalogue, accessed December 16, 2022, <http://iarc.cloudapp.net/Details/archive/110000582>. IAA 96/68.2/4/7.

<sup>774</sup> "Catalogue of the Guinness Drawings Collection 96/68," IAA 96/68.2/4/6.

<sup>775</sup> David J. Griffin, "Richard Castle's Designs for Castle Coole, Co Fermanagh," in *Avenues to the Past. Essays Presented to Sir Charles Brett on his 75th Year*, eds. Terence Reeves-Smyth and Richard Oram (Belfast: Ulster Architectural Heritage Society, 2003), 142. Many thanks to archivist Eva Ewart for her support and to Lord Belmore giving permission to reproduce the drawings.

<sup>776</sup> Charlotte Lorimer, and Charles Newton, *The collection of drawings by Sir John Vanbrugh* (London: V & A, 1996), 3; see also 63.



1733, for Pearce died in 1733, after which they came into the ownership of Viscount Allen of Stillorgan House, Co. Dublin, a patron of Pearce.<sup>777</sup> A third album (The Stillorgan Album) containing 17 drawings for Stillorgan House and demesne remains in the possession of the Probys of Elton Hall. According to David Griffin, this album might, too, contain drawings by Castle, “in particular of the house as existing.”<sup>778</sup> Black and white photographs of the drawings are kept in the IAA, but these are hardly suitable for providing reliable statements on authorship. It is possible that further drawings are in private hands or still hiding (unidentified) in the archives of country houses or country record offices.

Lastly, another important set of drawings is included in Castle’s *Essay on artificial navigation* from c. 1733.<sup>779</sup> According to the text, the manuscript originally contained 15 figures to illustrate the author’s remarks as well as an unnumbered figure showing the curvature of the earth. Today, however, only this and eight others remain. The manuscript was originally in the library of the Dukes of Leinster (FitzGerald family) at Carton.<sup>780</sup> In June 1949 it was offered at the sale of the Duke of Leinster’s library at Carton House, where it was acquired by the National Library of Ireland.<sup>781</sup> The surviving drawings for the essay “range from picturesque bird’s-eye views of canals to detailed plans and sections for lock constructions, to drawings of the various types of piles employed in different terrains.”<sup>782</sup> Alongside the architectural drawings, these drawings form an important output within Castle’s graphic oeuvre, illustrating not only his skills as a draughtsman but also as an engineer. This and the conventions used here might provide evidence of Castle’s background and training.

Unlike Gibbs, Castle does not seem to have kept a collection of drawings

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<sup>777</sup> Through inheritance they came to England into the possession of the descendant of the Allens of Stillorgan, William Proby of Elton Hall. In 1992 they were then acquired by the V&A. See Craig, “The Quest for Sir Edward Lovett Pearce,” 27; Lorimer, and Newton, *The collection of drawings by Sir John Vanbrugh*, 4.

<sup>778</sup> Howard Colvin, and Maurice Craig, *Architectural Drawings in the library of Elton Hall by Sir John Vanbrugh and Sir Edward Lovett Pearce* (Oxford: Oxford University Press, 1964), 1; Lorimer, and Newton, *The collection of drawings by Sir John Vanbrugh*, 86.

<sup>779</sup> NLI, MS 2737.

<sup>780</sup> Casey, “Books and Builders,” 207.

<sup>781</sup> William Alan McCutcheon, *The Canals of the North of Ireland* (Dawlish: David & Charles, 1968), 155 note 5.

<sup>782</sup> Casey, “Books and Builders,” 209.

himself. However, it is possible that these drawings were among the “personal estate” left to his three brothers in Saxony.<sup>783</sup> In the advertisement for the auction of his property one year after his death, drawings are not specifically mentioned, although they may have been included in the “curious and valuable collection of books.”<sup>784</sup> Whilst Ensor took over Castle’s practice after his death, no significant number of drawings from this context would seem to have survived either. In fact, Ensor’s drawings are even fewer in number. It appears that most of Castle’s drawings were kept by his clients on their estates and were preserved in this way. The other major body of drawings was in Pearce’s possession, which might be explained by the latter’s sudden and untimely death. Castle himself, in contrast to Gibbs, does not seem to have been interested in preserving his own drawings or those of other draughtsmen or architects though it is possible that they have been lost in the course of time. Another reason for the lower number of surviving drawings is that Castle had no apparent intention to publish an architectural book. In Gibbs’s bequest at the Ashmolean Museum, preparatory drawings for engravings constitute a large proportion of the surviving drawings. Whereas Castle’s pamphlet *An Essay Toward Supplying the City of Dublin with Water* published in 1735 and his manuscript *Essay on artificial navigation*, which was never published but according to Christine Casey “certainly intended for eventual printing,” reveal that he was interested in publishing, there is no evidence that he intended to publish anything in the field of architecture.<sup>785</sup>

### Composition

The surviving drawings are, according to my knowledge, almost without exception finished drawings, which means that they are washed and shaded and drawn to scale. They can therefore be classified as finished designs and presentation designs. Often the architectural designs are accompanied by explanations and keys that Castle added for clarification, which is another indication that they were presented to clients. Neither more schematic preliminary designs without wash and shading, nor contract

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<sup>783</sup> NLI, GO MS 424, f. 187.

<sup>784</sup> *Dublin Journal*, May 23, 1752, 2.

<sup>785</sup> Casey, “Books and Builders,” 209

drawings are among the surviving drawings. Two pencil sketches have survived, but certainly only because they are on the reverses of higher quality drawings. As observed with Gibbs's collections, sketches and unfinished drawings were clearly not held in high regard. There is furthermore one drawing of a measured wall elevation for Leinster House, which is described as working drawing and is attributed to Castle (see fig. 3.6, chapter III), as well as two further working drawings showing details for Carton House attributed more generally to his office (see fig. 3.5a-b, chapter III).

The online Catalogue of Works compiled by the IAA lists 73 building projects in which Castle was involved.<sup>786</sup> However, the surviving drawings suggest involvement in further projects, including Richmond Lodge in England, and Stillorgan House and Charleville Forest in Ireland, as well as at least seven other projects – making a total of 83 projects. 70 of these projects were executed in whole or in part, of which eight were executed or completed by Ensor after Castle's design. Six projects were not executed, and probably neither the seven other projects for which drawings exist. Drawings for c. 18 projects have survived, of which potentially six were executed. However, it is unclear whether Castle produced drawings for all 83 projects. It may have been that some of his work was only as an advisor, as was the case with Gibbs. The surviving drawings for the various projects consist mainly of plans, elevations, and sections of buildings. In addition, there are several interior views or details. So far, designs for monuments or the like are not known. The number of drawings available for each project varies. With a total of 33 drawings, the most drawings by far have been preserved for Leinster House. For Carton House there are 14 surviving drawings, plus two further lost floor plans which are preserved as photographs at the IAA (figs. 5.1-5.2).<sup>787</sup> The latter show alternative schemes for the first and second floors. For the remaining projects, the number of drawings remains in single digits, e.g., eight drawings exist for Headfort House (not executed), six for Richmond Lodge (not executed), and five for Castle Coole (execution uncertain). With many projects only one drawing remains, e.g., for the Dining Hall at Trinity College.

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<sup>786</sup> "Castle, Richard," Works, IAA, accessed December 19, 2022, [https://www.dia.ie/architects/view/347/CASTLE-RICHARD#tab\\_works](https://www.dia.ie/architects/view/347/CASTLE-RICHARD#tab_works).

<sup>787</sup> Reference nos. IAA I/94 R93 and R96.

## Suites of Drawings

Most of the drawings are preserved as suites for individual projects within albums, some of which were assembled in this format at a later date, as in the case of the Powerscourt Albums or the Vanbrugh Album. In other cases, however, they are likely to have remained in their original compilation. The twelve designs for Carton House and demesne from c. 1739 in the Guinness Drawings Collection are arranged in an album which is bound with marbled boards and calf back and corners.<sup>788</sup> While the inscription “Old plans of the proposed alterations of the house at Carton” suggests a nineteenth-century hand, the type of binding seems to have been a standard method of Castle’s architectural office to present the designs in an appropriate manner.<sup>789</sup> In the same way, the four different schemes for Headfort House and demesne dated to the 1730s are compiled in two albums (fig. 5.3a-b).<sup>790</sup> The covers are made of marbled boards and calf spines, bound with cords, and tied with ribbons at the sides. Aside from the endpapers, the inner book consists of blue sheets. The drawings are either mounted on the blue sheets or loosely inserted among them, having been removed for presentation.<sup>791</sup> One album is titled “Mr Castles Plan” in black ink,<sup>792</sup> while the other—likewise in black ink—is titled “Mr Ensors P[lans?]”.<sup>793</sup> The binding of the latter album features calf corners in addition to the calf spine. Included here are five designs for three different schemes (B-D), four plans of the various floors and one sheet combining an unwashed entrance elevation with a ground-floor plan. This last sheet is attributed to Ensor and it is the only one mounted on a loose white paper for exhibition purposes.<sup>794</sup> The remaining drawings are attributed to Castle—despite

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<sup>788</sup> Reminder: two drawings for Carton are not included in this album, they are part of the RIAI Murray Collection at the IAA.

<sup>789</sup> “Catalogue of the Guinness Drawings Collection 96/68,” IAA 96/68.2/2/1.

<sup>790</sup> “Catalogue of the Guinness Drawings Collection 96/68,” IAA 96/68.3/1.

<sup>791</sup> David J. Griffin, “A Richard Castle Design for Headfort, Co. Meath,” in *Dublin and beyond the Pale: studies in honour of Patrick Healy*, ed. Conleth Manning (Wicklow: Wordwell, 1998), 269.

<sup>792</sup> John Harris reports that the cover had been inscribed as “Mr Castle’s plan and a damn bad one.” See John Harris, *Headfort House & Robert Adam. Drawings from the collection of Mr and Mrs Paul Mellon* (London: RIBA, 1973), fig. 1. However, this seems to be erroneous, given that an inscription of this kind can only be found on the reverse of an anonymous plan (IAA 96/68.3/3/3: “plan of House & a right bad one”).

<sup>793</sup> The inscription on the cover is unfortunately not completely preserved, but the ink writing “Mr Ensors Plan” can be read again on the front endpaper.

<sup>794</sup> “Catalogue of the Guinness Drawings Collection 96/68,” IAA 96/68.3/1/10.

being in the folder labelled as containing Ensor's plans – with the first ground-floor plan bearing the inscription “by M<sup>r</sup> Castle”.

Contained in the Castle folder are three plans of the various floors and an elevation, all belonging to one scheme (A). The differences in the quality of the drawings indeed suggest that the other designs in the Ensor folder were created by Castle. The writings on the album covers are therefore misleading. Although they resemble the inscriptions on some of the drawings in the albums, it remains possible that they were added later, presumably by Sir Thomas Taylor, 2nd Baronet, as has been suggested previously.<sup>795</sup> It is further conceivable, that the original arrangement of the portfolios was different and that the removal of individual sheets for exhibitions or other instances led to the mix-up with the other album. Possibly, the drawings by Castle were originally contained in one portfolio, while Ensor's design was in the respectively titled album, likely along with other drawings for his scheme.

The Richmond Lodge Album and the Stillorgan Album likewise suggest an early eighteenth-century creation owing to their making as well as the mounting of the drawings on blue paper. The former album has a calf binding with a large central panel of marbled paper and a contemporary paper label on the upper cover which is titled “Designs For a Lodge at Richmond.”<sup>796</sup> In addition, the spine is decorated with gilt lettering.<sup>797</sup> Both the spine and the binding show later repairs.<sup>798</sup> The Stillorgan Album follows the style of binding with marbled boards, but includes a modern calf rebacking. The upper cover is “crudely” titled “Designs for Stillorgan 1731” in early ink.<sup>799</sup> This type of binding of the portfolios combining calf and marbled boards and sewed in blue sheets was common in the eighteenth century.<sup>800</sup> For his *Essay on artificial navigation*, Castle, too, employed the same kind of binding. The manuscript is paper based with marbled boards, with the title pasted on a white sheet of paper on the front board.<sup>801</sup> While the text is written on folio sheets by the French papermaker Jean

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<sup>795</sup> Harris, *Headfort House*, fig. 1; Griffin, “A Richard Castle Design for Headfort,” 269.

<sup>796</sup> Colvin, and Craig, *Architectural Drawings*, 1.

<sup>797</sup> Lorimer, and Newton, *The collection of drawings by Sir John Vanbrugh*, 63.

<sup>798</sup> Lorimer, and Newton, *The collection of drawings by Sir John Vanbrugh*, 70.

<sup>799</sup> Colvin, and Craig, *Architectural Drawings*, 1.

<sup>800</sup> Casey, “Books and Builders,” 13.

<sup>801</sup> I am indebted to Liam O'Rourke, NLI, for providing this information.

Villedary, divided into two octavo-sized columns framed by red lined borders, the figures are mounted on blue paper (see chapter VI for a detailed account on the use of paper in the architectural offices).<sup>802</sup>

Of the four building projects for which the drawings are preserved in their original folders, only Carton was executed. This explains the two working drawings for the main block. In the IAA catalogue these are described as being included in the album, but it is unlikely that this was the case originally, given that working drawings were not intended for the client but for the craftsmen.<sup>803</sup> There is no project that survives as set of drawings from sketch to presentation drawing. Although the designs for Headfort were not executed, the drawings remained with the client and were not returned to the designers. In contrast, the designs for Richmond Lodge, which likewise remained unexecuted, were in Pearce's property. In the case of the unexecuted designs for Stillorgan, it is uncertain whether they came into the possession of Viscount Allen only after Pearce's death or whether he had owned them before. In order to review the attribution of the 103 drawings to Castle as described above and to potentially obtain information on Castle's working methods, a script analysis will be conducted.

### **Script Analysis**

In line with the methodology adopted in the previous chapter, this script analysis attempts to determine Castle's handwriting. By cross-checking it against the drawing style, it may be possible to examine his authorship of drawings. In addition to this, by comparing Castle's script with that of his mentor Edward Lovett Pearce and his assistant John Ensor, their roles in the production of architectural drawings within the respective offices may be revealed. The analysis of a range of documents, including letters, invoices, and inscribed architectural drawings from c. 1720-50, allows the identification of distinct handwriting styles and provides insights into the collaborative working methods within the architectural practice.

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<sup>802</sup> Casey, "Books and Builders," 209.

<sup>803</sup> "Catalogue of the Guinness Drawings Collection 96/68," IAA 96/68.2/1/13-14.

Castle's handwriting exhibits two distinct styles: a more formal calligraphy and a more informal everyday script. His formal handwriting, used for official or particularly important documents such as his power of attorney from February 10, 1729, and *Essay on artificial navigation* dated to c. 1733, may be described as a very neat rightwards-slanting casual cursive (figs. 5.4-5.5).<sup>804</sup> Many of the letters are joined-up, resulting in a tight letter-spacing. The words mostly remain separate, though often with little space in-between. Ascenders and descenders are designed both with and without loops that extend beyond the slender corpus size. Like Gibbs, Castle often designed his d with its ascenders curving in a swash to the left. Note the design of the lower-case k, with its terminals often forming a loop below the base line (fig. 5.6). Furthermore, Castle used short and long s, single-storey a minuscules and majuscules and round hand A capitals, as well as single-storey g minuscules. Capital letters are used frequently throughout and are mostly designed in a particularly ornate manner with swashes, loops, or curved terminals, sometimes extending beyond the corpus size.

Castle's somewhat less elaborate everyday script seems to be a larger, more expansive casual cursive that tends to give the impression of having been written quickly. It is evident in letters, invoices, cost estimates, receipts, and other informal documents (fig. 5.7-5.8). The letters rise slenderly, slant to the right and are mostly joined-up. Yet, the letter-spacing seems wider, and the spacing between words is likewise wide. Often the ascenders and descenders are looped and extend far beyond the corpus size. The d once again show swashes to the left. Castle's everyday handwriting includes short and long s, single-storey a minuscules and majuscules, and round hand A capitals, as well as single-storey g minuscules. Many words in the body of the text start with capital letters, most of which extend far beyond the corpus size. Those ways of writing have been observed before and appear to be common for the time. In addition, the design of the letter combination th, for example in "the", is particularly striking. The bar of the t often extends into the loop of the h (fig. 5.9) and thus would have to be inserted after writing the word.

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<sup>804</sup> StAD, 2.4.3-634, f.0133; NLI, MS 2737.

On the basis of this analysis, the attribution of a document to Castle's hand is now uncertain. This concerns *Remarks upon the Plans here inclosed* [sic], dated to pre-1733 (fig. 5.10).<sup>805</sup> In contrast to the larger cursive found elsewhere, this script is a rather squat and slightly sloped casual cursive. This makes it very similar to Pearce's script, which can be described as compact and slightly slanting casual cursive, the letters being partly joined together and partly not. Not all ascenders and descenders are looped and the word spacing is irregular, being either wide or joined up (figs. 5.11-5.12). It might be that these *Remarks* were not written by Castle, as has been assumed previously, but by Pearce, making the attribution incorrect.<sup>806</sup> Or was this Castle's earlier everyday handwriting, which changed by the time he arrived in Ireland? Another possibility is that Castle, since he was working for Pearce at the time, adapted to the script of his employer, as was often the case, which is however unlikely for a draft such as this. Given that Pearce resorted to assistants in his office to finalise his drafts, both written and drawn, it is possible that the draft was indeed authored by Pearce to be transcribed in fair copy by someone else, presumably for submission to the client. Such indications of labour division are evident in several documents and drawings attributed to Pearce. His study *Plan and sectional elevation for the Stillorgan Obelisk* (fig. 5.13), for example, is inscribed "Draw this fair out by a Scale of five feet to an inch."<sup>807</sup> Elsewhere, a certain Arthur is instructed to "copy these papers in a fair hand."<sup>808</sup> On the sketch for the plan for the Deanery of Christ Church Cathedral, Co. Dublin, attributed to Pearce, the following instruction can be read: "To be finesht by Wednesday night."<sup>809</sup> Given that this last example was written in a style that I cannot relate entirely to Pearce, I assume that an employee of Pearce made a note of the deadline on Pearce's sketch in order to be able to deliver the fine-drawing of the plan in time.<sup>810</sup> Similarly, in the case of the Richmond Lodge Album, it is

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<sup>805</sup> V&A E.2124:7-1992.

<sup>806</sup> Lorimer, and Newton, *The collection of drawings by Sir John Vanbrugh*, 107; 124.

<sup>807</sup> V&A E.2124:19-1992.

<sup>808</sup> V&A E.2124:14-1992. Not much is known about Arthur. He would appear to have risen from being Vanbrugh's servant to his office assistant and was presumably employed by Pearce after Vanbrugh's death. See Colvin, and Craig, *Architectural Drawings*, xxxix; Downes, *Sir John Vanbrugh*, 442; Craig, "The Quest for Sir Edward Lovett Pearce," 28.

<sup>809</sup> V&A E.2124:39-1992.

<sup>810</sup> In my opinion, the same handwriting can be found on *Estimate of the Charge of the Several Works in a New Entended house to be Built for Col. Legonire about 6 miles from Dublin by a plan of Sr*



generally assumed that the drawings and the related two-page description *Designes for a Lodge at Richmond* were based on preliminary drafts by Pearce, which were then fair-copied by Castle for presentation in the album.<sup>811</sup> The script indeed resembles the neat rightwards-slanting casual cursive we know from Castle's power of attorney or his *Essay on artificial navigation*. Certain spellings, such as the abbreviation of "though" ("altho^" and "tho^" in *Designes for a Lodge at Richmond*), which for example occur in *Essay on artificial navigation* ("altho^" and "tho^"), also suggest that Castle was the author of the text and drawings in the Richmond Lodge Album (figs. 5.14-5.15). The concluding sentence of *Designes for a Lodge at Richmond*, however, exhibits a different style of writing, which has already been noted (fig. 5.16).<sup>812</sup> The script of this sentence is similar to Pearce's everyday writing. It is conceivable that Pearce added this insertion after Castle had completed the document, feeling it important to give the client an approximate cost of no more than "18 or 20000."<sup>813</sup> A similar phenomenon can be observed in Pearce's memorandum *An Explanation of the Following Designs for a Parliamt House in Dublin*.<sup>814</sup> In the famous penultimate paragraph, where Pearce refers to Castle, a sentence in a more slender cursive is found that does not correspond to the script of the remaining manuscript (fig. 5.17). It is unlikely that this is Pearce's hand – why would he suddenly write in a different script – and Edward McParland refers to it as a "probably later" hand.<sup>815</sup> In general, it is uncertain whether the memorandum was written by Pearce or whether it was fair-copied by a scribe after a draft by Pearce. So far, there are no examples of calligraphy that can be safely attributed to Pearce, and while the script of place, date, and signature at the end of the document is comparable with Pearce's handwriting examples from drawings in the Vanbrugh Album, this is not the case for

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*Edward Lovet Pearce* (V&A E.2124:6-1992). So far, this script has not been identified, it most probably was written by one of Pearce's employees (Arthur?). Charlotte Lorimer and Charles Newton assessed the document as originating from the "circle of" Pearce. See Lorimer, and Newton, *The collection of drawings by Sir John Vanbrugh*, 86; 113. Howard Colvin and Maurice Craig noted the "clerkly hand." See Colvin, and Craig, *Architectural Drawings*, 2.

<sup>811</sup> V&A E.2123-1992; Lorimer, and Newton, *The collection of drawings by Sir John Vanbrugh*, 108.

<sup>812</sup> Lorimer, and Newton, *The collection of drawings by Sir John Vanbrugh*, 65.

<sup>813</sup> V&A E.2123:2-1992.

<sup>814</sup> NLI, MS D.20,209, "Note on designs for Houses of Parliament, Dublin, by E. L. Pearce, March 7, 1728." For a detailed discussion of the memorandum and a copy of it, see McParland, "Edward Lovett Pearce," 96.

<sup>815</sup> McParland, "Edward Lovett Pearce," 100 note 41.

the rest of the memorandum (fig. 5.18). The memorandum's text is executed in a very neat cursive slanting to the right. Despite the squatness of the script, its ascenders and descender are mostly looped. Most of the letters are joined, in part the words, too. Accordingly, the spacing between letters and words is rather small. The d are fitted with wide swashes to the left. The capital letters that appear frequently throughout the text are often specially looped or swashed (fig. 5.19). Whether Pearce himself wrote the memorandum or not, the different scripts certainly indicate that several hands were involved in Pearce's office output.

Analysis of handwriting likewise provides evidence of a division of labour in Castle's office. An invoice from 1738 relating to the Printing House project at Trinity College Dublin contains the scripts of Castle and Ensor, which clearly differ from each other.<sup>816</sup> Above, the less formal, fast cursive of Castle; below, the very neat and ornate looped cursive of Ensor (fig. 5.20). A clear distinguishing feature is furthermore the writing of the "the", which Castle, as mentioned above, mostly writes with the bar of the t extending into the loop of the h, whereas Ensor joins the h with a looped bar in the middle of the t (fig. 5.21). In addition to the handwriting analysis, this invoice reveals aspects of the working relationship between the two. Listed is a charge for the preparation of a plan – a rare reference to the expense of drawings within Castle's office. According to this, Castle charged £50 for "Making a Plan for the Printing House and Executing the same." However, a partial sum of £27 was to be paid to Ensor directly: "Pray pay to Mr John Ensor the above Ballance and his led [sic] shall be a suffitien [sic] discharge from your humble serv Richard Castle." Ensor was in his early 20s at the time and was clearly assisting Castle in a leading role here. Given that the bill includes surveying sundry works, it cannot be conclusively clarified whether Ensor's "led" (lead) included the preparation of the plan for the Printing House. In any case, Ensor, who was associated with Castle from 1734 onwards, even before he officially became his clerk and measurer in the 1740s, seems to have carried out paperwork for Castle already earlier.<sup>817</sup> *An Estimate of the Printing House intended to be Built in Dublin Colledge* [sic], listing the various works and their costs and

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<sup>816</sup> TCD, MUN/P/2/68/4, Bill by Richard Castle, 1738, recorded by John Ensor.

<sup>817</sup> "Ensor, John," Biography, IAA, accessed January 12, 2023, <https://www.dia.ie/architects/view/1791/ENSOR-JOHN>.

probably dating from c. 1733 was, in my opinion, penned by him, perhaps copied after a preliminary draft or dictated by Castle (fig. 5.22).<sup>818</sup> It is possible that minor office and desk work were indeed Ensor's main tasks at first, considering him being in his late teens when meeting Castle. This appears to have included the adding of the explanatory notes (*Explanations*) to the finished drawings. These can be found on most of Castle's plans, containing information on the use of space as well as the room dimensions. The practice of adding explanations directly to drawings can occasionally be observed among architectural drawings from other offices, for example with Christopher Wren and his draughtsmen Nicholas Hawksmoor and William Dickinson. Similarly, Vanbrugh and Pearce would sometimes add inscriptions of this sort to their drawings. In these examples, however, it is noticeable that it is mostly sketches or preliminary drawings on which these can be found. Castle, on the other hand, included them on his finished drawings and presentation designs. Furthermore, it can be observed that *Explanations* appear on many of Castle's drawings, whereas they are otherwise used more infrequently. Nevertheless, Castle might have picked up this practice from Vanbrugh or Pearce. Inscriptions of this kind were likewise common in the field of architectural publications. Several plans in Colen Campbell's third volume of *Vitruvius Britannicus* (1725), for example, which Castle subscribed to, include legends of this sort (fig. 5.23). Other authors of architectural books comprised brief explanations on their plates, such as Paul Decker in *Fürstlicher Baumeister Oder: Architectura Civilis* (1711-16), of which for example Gibbs owned two volumes.<sup>819</sup> Gibbs, however, only added short legends to a handful of his plans, examples of which will be discussed in more detail in chapter VI.

The explanatory inscriptions on the drawings attributed to Castle are almost without exception calligraphies. It should be noted here that calligraphies like this are easier to imitate than everyday scripts, which tend to be more individual. This makes it difficult to determine a hand behind the *Explanations*. However, a comparison of the script of the *Explanations* on the Richmond Lodge drawings with the *Explanations* on post-1733 drawings, reveals a noticeable difference (fig. 5.24). The

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<sup>818</sup> TCD, MUN/P/2/65/5, An Estimate of the Expence of the Printing House Intended to be Built in Dublin Colledge.

<sup>819</sup> Friedman, *James Gibbs*, 328.

script on the Richmond Lodge drawings is more like the neat and slender rightwards-slanting casual cursive from Castle's power of attorney or his *Essay on artificial navigation* (fig. 5.25), while the *Explanations* on his drawings for Irish projects post-1733 strongly resembles Ensor's youthful, heavily looped everyday script known from documents such as the invoice discussed above (fig. 5.26). It is an extremely neat casual cursive, with somewhat broad letters that are both joined and not joined. The letter-spacing is rather tight, while the spacing between words is wider. Most ascenders and descenders are executed with loops. The majority of words begin with ornately designed capital letters. This distinctive script was consistently employed for the *Explanations* on finished or presentation drawings from c. 1733s onwards. It is thus likely that Ensor added them to the drawings prepared by Castle.

To conclude, this script analysis has revealed that Castle employed two main handwriting styles, ranging from a formal and neat calligraphy to a more informal and more expansive everyday cursive. Besides this, the analysis sheds light on the organisation of work within the architectural offices of Castle and Pearce, although firm attributions are sometimes difficult to make due to the variety of scripts. Nevertheless, it can be noted that both Castle, as Pearce's assistant, and Ensor, as Castle's assistant, performed different clerical tasks within the architectural offices, making them key employees and sharing responsibility for completing architectural projects. Pearce appears to have employed several assistants to copy and refine drafts, as evidenced by the appearance of various scripts in documents attributed to Pearce. The latter's reliance on Castle became evident from *Designes for a Lodge at Richmond*, which Castle appears to have fair-copied. Similarly, Castle called upon the services of Ensor, whose distinctive looped cursive is found on many estimates and invoices, but also as explanatory inscriptions on Castle's post-1733 drawings. Finally, the importance of handwriting analysis for understanding the authorship of documents and drawings as well as the collaboration between architects and their assistants has been shown. The examination of stylistic differences in handwriting provides insights into the working practices and the dynamics of collaboration within architectural offices. In the following, an attempt will be made to clarify the collaboration regarding the execution of the drawings. That none of the drawings

attributed to Castle include signatures or inscriptions indicative of an authorship complicates the matter.

## **Drawing Style**

### **Office Styles of Vanbrugh and Pearce**

To better understand Castle's drawing style, this section begins by briefly looking at the drawings by Pearce and Vanbrugh. From the small number of finished or presentation drawings that can firmly be attributed to Pearce, it can be assumed that he relied heavily on Castle and other draughtsmen. In fact, it is primarily sketches and preliminary drawings preserved in the Vanbrugh Album that, in combination with the handwriting, can be conclusively attributed to him. The number of finished presentation drawings included in the album is generally relatively low. In contrast to the surviving drawings by Castle and Gibbs, Pearce's sketches and preparatory drawings are much more numerous, and are not only found on the reverse sides of finished drawings but on individual sheets. The same is true for Vanbrugh. The sketches and preliminary drawings, most of which were executed in ink, testify to Pearce's architectural understanding. They are detailed, often featuring hatching and shading that define the spaces (fig. 5.27). Those sheets, and particularly this example that has been scored in squares for transfer, are important witnesses to the working methods in his office.<sup>820</sup> For, they suggest that Pearce was more engaged in preliminary draughts (both for drawings and for accompanying descriptions) and would leave the fine-drawing or fair-copy to his assistants. This would explain the different styles and qualities of the more finished drawings in the Vanbrugh Album that are for the most part attributed to his office and circle.

There is another problem regarding the attribution of drawings to Pearce in that it is difficult to distinguish drawings by Pearce from those by Vanbrugh. The Vanbrugh Album includes "designs clearly identified as by either, but there are many that might be by Pearce after Vanbrugh, or by a draughtsman copying their

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<sup>820</sup> Lorimer, and Newton, *The collection of drawings by Sir John Vanbrugh*, 66; 160.

designs.”<sup>821</sup> This suggests that Pearce may have worked for Vanbrugh and adopted his working methods. Vanbrugh has been described as the “weakest draughtsman among the great architects.”<sup>822</sup> But as with Pearce, his sketches and preliminary drawings are suggestive of a three-dimensional grasp of volume and mass. For more finished drawings or presentation designs he, too, relied on the skills of his assistants. For his early commissions for Castle Howard, North Yorkshire, Blenheim Palace, Oxfordshire, and Kimbolton Castle, Cambridgeshire, his draughtsman was Hawksmoor. The drawings that can safely be attributed to Vanbrugh are characterised by a modest pen-work and a bold and crude colouring.<sup>823</sup> This is also how Pearce’s more finished drawings can be described in the broadest sense. The latter’s drawing style for those kinds of drawings is somewhat casual. Characteristic features, however, are thick, crude outlines, often in brown ink, as well as an equally crude grey wash and shading, which, for the most part, is irregular and not very precise (fig. 5.28). In some cases, Pearce added hatching as additional shading or employed coloured washes such as light red for cut wall mass or brickwork. Extensive grey wash covering the entire surface of elevations of the kind we know from Gibbs, for example, is less common. Decorative elements and ornamental enrichments seem to have been sketched at speed, and they, too, are somewhat askew and crooked. While Richard Garnier describes Pearce’s scale bars as “generally dimensioned *sopra*”, it seems to me that the design of the scale bars appears rather varied.<sup>824</sup> There are, for example, double or triple ruled scale bars without or with scale bar numbers written above or below and in varying scripts, or scale bars with washed or hatched subdivisions. Then there are scale bars that are framed, or perspective scale bars with a lower black bar (fig. 5.29). In general, a wealth of different scale bar designs can be observed on the drawings in the Vanbrugh Album (fig. 5.30). Some of these scale bars seem to correspond to a certain drawing style, which might indicate that those drawings were created by different draughtsmen, perhaps after preliminary sketches by Pearce. The same

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<sup>821</sup> John Harris, “Ashley Park, Surrey: A Matter of Sir John Vanbrugh and Sir Edward Lovett Pearce,” in *Decantations: a Tribute to Maurice Craig*, ed. Agnes Bernelle (Dublin: Lilliput Press, 1992), 83.

<sup>822</sup> Laurence Whistler, *The Imagination of Vanbrugh and his Fellow Artists* (London: Art & Technics Limited, 1954), 4.

<sup>823</sup> Whistler, *The Imagination of Vanbrugh*, 4.

<sup>824</sup> Richard Garnier, “New light on No. 70 Whitehall (Dorset House),” *The Georgian Group Journal* XXV (2017): 64.

applies to the room dimensions in the plans, which are inserted in various ways, e.g., set cruciform, and might likewise indicate different draughtsmen. It would certainly be worthwhile re-examining the Vanbrugh Album in detail to group the drawings according to their scale bar designs and indication of measurements.

The fact that different draughtsmen worked for Pearce can further be seen in the seven surviving designs for Parliament House in the Vanbrugh Album.<sup>825</sup> These can be dated to the late 1720s, a time when Castle was already working for Pearce. So far, none of the drawings has been conclusively attributed to Pearce, only generally to his office. There is a strong argument against Castle's involvement, though, given the quality of the drawings (fig. 5.31) – except perhaps for the section of the Court of Requests (unexecuted) from the late 1720s (fig. 5.32). Considering the drawings from the Richmond Lodge Album, the qualitative differences to the Parliament House drawings become clear.

### **Richmond Lodge Album**

As is to be expected of presentation drawings of this kind, the Richmond Lodge drawings seem altogether neater, more orderly, and homogeneous. They are the earliest drawings attributed to Castle and the earliest “evidence of collaboration between Pearce and Richard Castle,” dated c. 1727/28.<sup>826</sup> The site plan that is the opening drawing of the album shows the planned site of Richmond Lodge alongside the Thames (fig. 5.33). The river is oddly designated as the “River of Thames”. Most of the features are shown in an orthogonal view, but the trees are in perspective, casting shadows towards the right. The plan is washed in different imitative colours: green for the grass and trees, yellow for the paths and roads, and greyish blue for the water. There is a compass rose and a double ruled scale bar with subdivisions and scale

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<sup>825</sup> V&A E.2124:1-1992; V&A E.2124:2-1992; V&A E.2124:4-1992; V&A E.2124:29-1992; V&A E.2124:163-1992; V&A E.2124:165-1992; V&A E.2124:184-1992. V&A E.2124:31-1992, which had originally also been associated with Parliament House, is more likely to have been a study by Pearce for the bath of Augustus in Rome, according to McParland, *Public architecture in Ireland*, 184. There are further drawings relating to Parliament House which are in the Lady Goff Collection and published in McParland, “Edward Lovett Pearce,” fig. 15; 28.

<sup>826</sup> Hayes, “An Irish Palladian in England,” 57.

bar numbers above the scale. A bold frame at the lower edge of the sheet is visible, which is missing along the other borders. The plan may have been adapted to the size of the album and trimmed. For this reason, the bottom edge was likewise folded. The walls on the three orthogonal floor plans showing the ground floor (no. 1), principal floor (no. 2), and attic floor (no. 3) are largely evenly washed in grey (figs. 5.34-5.36). There are both dimensions in the rooms and scale bars that are uniformly designed with a black bar below an unwashed bar showing subdivisions with numbers and three dots arranged in a triangle above the scale. The scale bar of the first plan is marked with the addition “Feet:” and is not noted in the other plans. Lower case letters in the rooms refer to the *Explanations*. As it is the most important floor, plan no. 2 (principal floor) is bordered by a double frame, consisting of a thin inner line and a bold outer line. Despite the care with which these plans were executed, some minor flaws can be noted. For example, not all lines were drawn absolutely straight. In the plan showing the ground floor (no. 1), there appear to have been corrections or additions in brown ink in the area of the half-columns along the walls in the “Chief Entrance” (*Explanation a*) at the top. In addition, in the same plan, the wall in the upper left apartment for a chief officer (*Explanation g*) appears to have been washed in a different shade of grey. Section (no. 4) and elevation (no. 5) are equally sophisticated and neat drawings (figs. 5.37-5.38). Above a perspective square rises the orthogonal section. This kind of perspective square as base line can sometimes be observed in drawings by Vanbrugh and his circle.<sup>827</sup> The monochrome, grey-washed style is reminiscent of Campbellian-Burlingtonian and Gibbsian practices. The well-executed shading is modelled on an assumed light source at the upper left corner. Cut wall mass, sections of the structural framework, and surfaces closer to the light source are left without wash. Interiors and other shadows are washed accordingly. For the door and window openings, black ink wash was used. The roof was not evenly coloured in grey but has been washed in nuances from top to bottom. Again, lower case letters in the drawing refer to the explanatory text beside it. The wash in the coved ceiling of the “Great Gallery” (*Explanation f*) has a different quality than elsewhere and seems to not have been applied as evenly as elsewhere. The section of the coved ceiling reveals

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<sup>827</sup> E.g., V&A E.2124:79-1992; V&A E.2124:127-1992.



the real constructive details. The hipped dormer in the upper right of the roof area, which is not cut, has a hatched wash and is not evenly grey-washed. The scale bar is again a double line with subdivisions. This time, however, there are only numbers above the subdivisions of the scale bar and no dotted triangles. The additions “feet” and “Extends 175 feet” have been inserted beside the scale bar. The elevation is likewise depicted in orthogonal projection but has no base line. As with the section, the entire surface of the building is grey-washed and shaded in line with the light source at the upper left. The roof surface is gradually shaded from top to bottom. The window and door openings are finished in black wash. Both wash and shading are skilfully executed with few smudges or overpainting. The various types of rustication in the ground storey are further skilfully rendered in detail. It is clearly visible that, on the one hand, there are chamfered stones with smooth-faced V-joints, which are shaded accordingly. On the other hand, there is chamfered rock-faced rustication at the corners of the outer bays and vermiculated stones at the rusticated columns. The two *stemma*-like elements on the outer corners of the building are elaborately drawn but appear somewhat oversized. Charlotte Lorimer and Charles Newton have already drawn attention to the occurrence of this feature on another sheet in the Vanbrugh Album.<sup>828</sup> This shows an elevation of the Palazzo Larderel già Giacomini in Florence and may be a drawing after plate 47 from Ferdinando Ruggieri’s *Studio d’architettura civile* (1722). To date, it has not been possible to identify the draughtsman of this sheet. It could be that Pearce copied it as study drawing, or that he acquired it on his grand tour in Italy or later. Letters prove that Pearce was in contact with Alessandro Galilei in 1724 and desired to obtain drawings from him for “the Palace”.<sup>829</sup> In any case, this detail was included in the presentation drawing for Richmond Lodge – a subtle nod to the Italian palazzi in whose succession Queen Caroline’s palace was to stand. No additional *Explanations* have been added to the Richmond Lodge elevation, only the title “One of y.<sup>e</sup> Fronts which Differs little from ye other three.”<sup>830</sup>

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<sup>828</sup> Lorimer, and Newton, *The collection of drawings by Sir John Vanbrugh*, 120. V&A E.2124:178-1992.

<sup>829</sup> McParland, *Public architecture in Ireland*, 182. McParland relates the drawings mentioned in the letters to “the project for London prepared by Galilei while he was in England.” See McParland, *Public architecture in Ireland*, 40 note 82.

<sup>830</sup> V&A E.2123:7-1992.

There is another drawing for Richmond Lodge, attributed to Castle, but not included in the album as it is presumably a preliminary design not intended for the client (fig. 5.39). It is found among the other drawings in the Vanbrugh Album. The design is an alternative treatment of the ground floor of the entrance hall with a different room layout, different arrangement of the stair compartments, and different sequence to the design of the building. In terms of draughtsmanship, it follows the previous designs, but is not as refined, accurate, and neatly executed. The lines, some of which are drawn messily, are executed in black ink, the walls are rendered in patchy grey wash. Construction lines and pin pricks as well as dimensions in pencil are partly visible. Further dimensions are added in brown ink, as well as lines for vaultings or other architectural features such as niches. The handwriting seems to correspond to Pearce's script. It is possible that the changes in the building structure were likewise made by him, if not the entire drawing. In terms of draughtsmanship, the sheet appears less sophisticated. The inaccuracy of the plan does not reflect Castle's drawing style but may be explained by the sheet being a preliminary drawing. Since his involvement in the project is evidenced by the Richmond Lodge album, it is possible that Castle prepared the drawing, even if there is not a one hundred per cent resemblance to his other drawings.

Of the three orthogonal floor plans for Richmond Lodge there are three drawn counterparts, which are to this day in the collection of drawings at Mellerstain House, Scottish Borders (figs. 5.40-5.42).<sup>831</sup> Mellerstain House was rebuilt from 1725 according to plans by William Adam (1689-1748), but only two of the wings were executed by 1729. It was not until the second half of the eighteenth century that the pavilions were connected by a central block, built by Adam's son Robert. So far there is no information on how the drawings came into the collection, nor who made them or why. There are many possible scenarios, including a connection to Castle through Sir Gustavus Hume. The mistress of Mellerstain, Lady Grizel/Grisell Baillie (1665-

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<sup>831</sup> I would like to thank Lesley Abernethy for providing photos of the drawings, which she took with permission of the owner. The drawings are included in the online catalogue of the National Record of the Historic Environment (Canmore) as BWD 57/40, BWD 57/41, and BWD 57/42. They were recorded in a photographic survey conducted by the National Monuments Record of Scotland, probably in June 1961.

1746), was a Hume by birth and thus a relative of Castle's first patron. The three plans are nearly identical to the Richmond Lodge plans, with only a few minor deviations. The Mellerstain drawings are smaller in size, at least ground floor and principal floor plans (no measurements of the attic plan were available).<sup>832</sup> The walls of the plans are grey washed, there are numbered scale bars, and measurements in the rooms as well as lettering suggest accompanying legends which are however missing. Both measurements and letters are written partly in pencil and partly in ink but appear to match with the Richmond Lodge drawings. What is striking about the measurements is that for ground floor and principal floor plans the format "XX by XX" is sometimes used, something that does not occur in the Richmond Lodge drawings nor in any other drawing attributed to Castle. Likewise, the specification of square metres "Sq<sup>r</sup>" or "Square" in some rooms differs from the Richmond Lodge drawings, where such data is not given. The script of the titles of the drawings is consistent with Castle's neat rightwards-slanting casual cursive which he used, for example, in his *Essay on artificial navigation* (see fig. 5.5), and also resembles the inscription on the Richmond Lodge drawings. It is further noticeable on the ground floor plan that, unlike the Richmond Lodge version, brown ink was not used, and that the columns in the lower right corner room are not grey washed. One wall section in the attic floor plan likewise has not been washed. Overall, the Mellerstain drawings do not appear to have been prepared with quite the same level of accuracy as the Richmond Lodge drawings. Many lines are skewed, and the grey wash is often messily applied. Further studies are necessary to reveal the mystery of the Mellerstain drawings and to identify a possible author.

### Castle's Early Trace in the Vanbrugh Album

In the Vanbrugh Album there are five further drawings that are attributed to Castle and were thus made before 1733, i.e., before the death of Edward Lovett Pearce. These are drafts for various projects, none of which have been identified and thus most likely remained unexecuted. The drawings are characterised by the same sophisticated and

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<sup>832</sup> Ground floor: 404 x 639 mm (Richmond Lodge) vs. 381 x 311 mm (Mellerstain); principal floor: 402 x 640 mm (Richmond Lodge) vs. 362 x 298 mm (Mellerstain).

tidy pen technique. There are, however, in my view, some contradictions that concern the drawings when compared with other sheets from the Vanbrugh Album. For example, the three drawings for a small house (figs. 5.43-5.44) are very similar in setup, drawing style, and scale bar design to a number of drawings associated with the circle or office of Vanbrugh or described as being “in the style of Vanbrugh”. In particular, the *Elevation and plan of the ground floor, Inveraray Castle, Argyll, Scotland* (fig. 5.45), which may have once been in an album together with other designs for Inveraray Castle and is described as being “in the style of” Vanbrugh, finds close resemblance in *Two plans and two elevations for a small house* (see fig. 5.43).<sup>833</sup> Both drawings show a setup of plan at the top and elevation below. The drawing style of both sheets is neat, although the drawing attributed to Castle is a little more sophisticated. While some of the details in the drawing of Inveraray Castle are slightly off (e.g., the shadows in the window openings or the design of the entrance), there are no such errors in Castle’s drawing. However, the similarity in the design of the scale bars is striking. These are scale bars consisting of a single bar with subdivisions numbered 12, 6, 12, 24, 36, and 48 – the same numbers on both sheets. In addition, the markings of the subdivisions – stylised fleur-de-lis – likewise correspond on both drawings. The measurements in the rooms further appear to have been written in the same script. The titles of the three Castle drawings (see figs. 5.43-5.44) seem to have been written in Castle’s handwriting. No other drawing in the Vanbrugh Album includes titles or longer inscriptions in this script. Now, what could this mean? Can sheets from the Vanbrugh Album that resemble this drawing style and scale bar design all be attributed to Castle, or is the attribution of the other drawings to Castle incorrect? Did Castle, perhaps for training purposes, initially copy the drawing style of another draughtsman? Or was Castle working for Vanbrugh, his task being to add scale bars to the finished drawings?

In any case, the drawing for Inveraray Castle (see fig. 5.45) seems to be based

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<sup>833</sup> Lorimer, and Newton, *The collection of drawings by Sir John Vanbrugh*, 35 f.; V&A E.2124:43-1992 shows the “Upper Floor” of the same design and is therefore also attributed to Castle; Inveraray Castle drawings in the Vanbrugh Album: V&A E.2124:120-1992, V&A E.2124:132-1992, V&A E.2124:138-1992, V&A E.2124:139-1992.

on a sketch by Vanbrugh, dated c. 1720.<sup>834</sup> This is at least some evidence that a draughtsman employed by Vanbrugh made a presentation drawing of this sketch, a practice that can also be seen in Pearce's office. On two other drawings, a plan and an elevation, which are attributed to Castle and possibly relate to the same project for a town house, the scale bars are yet again designed differently (figs. 5.46-5.47).<sup>835</sup> Despite the precise and sophisticated drawing style of the two finished drawings with accurately applied grey wash and shading, the design of the scale bar is noticeable. Here, two bars are placed one above the other, whereas the lower one is coloured black and the upper one is not washed. The subdivisions are marked with scale bar numbers, which were placed below the scale bar except for the 5. Below the scale bar on the ground plan (see fig. 5.46), the inscription "Feet" was added. While scale bars may generally vary in their design, it is surprising that this scheme (and that on the drawing above, see fig. 5.43) appears only in the drawings in the Vanbrugh Album and not in other (later) drawings attributed to Castle. This could be explained by the fact that Castle was still working as an employee and adapted to the instructions of his superiors or copied other employed draughtsmen. *Elevation of a town house with five stories and a mansard roof* might similarly confirm this (fig. 5.48). This possible design for a house on London's Hanover Square is the only architectural drawing attributed to Castle that features a reddish wash to indicate brick masonry. While this convention is found in some of the drawings by Pearce and his office/circle (see fig. 3.45, chapter III), Castle does not seem to have pursued it in his own practice, although other coloured washes do occasionally occur. As discussed above, the use of colours was based on different conventions. Given that the colour red imitates the masonry here, it seems reasonable to assume an imitative colour system is being resorted to. It is possible that Castle and Pearce picked up this convention from architectural drawings on the continent. Furthermore, it is conceivable that both encountered coloured washes in the context of engineering and the military. At least for Pearce, a background in the military is evidenced.

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<sup>834</sup> Lorimer, and Newton, *The collection of drawings by Sir John Vanbrugh*, 35; 143.

<sup>835</sup> Lorimer, and Newton, *The collection of drawings by Sir John Vanbrugh*, 109; 150; 169.

## Newry Canal Drawings

One of the strongest arguments that Castle, too, had a military engineering past might be found in his *Essay on artificial navigation*. The six remaining colour washed views of various locks and lock systems, bridge piers and piles, as well as pile constructions, find their parallel in earlier French engineering and fortification drawings (fig. 5.49). The polychromy of Castle's lock drawings using different shades of red, yellow, blue, brown, and grey contrasts strongly with his other drawings. Here Castle referenced the colour system established by Sébastien Le Prestre de Vauban and adopted by military engineers and architects throughout Europe. However, Castle did not fully implement this system. While Vauban used a conventional colour system, e.g., red for completed works and yellow for planned structures, Castle seems to have approached a more imitative colour system. He adjusted the colours according to the materials. A very bright red (pink) thus primarily represents masonry walls, while timber and beam structures appear in a yellowish wash. Blue indicates the water and grey the paved banks. Even the metal feet of the timber piles are washed in grey to reflect the material. With this series of polychrome drawings, Castle aimed to impress the Commissioners of Inland Navigation for Ireland. He achieved this by mimicking the engineering drawings they were accustomed to seeing and incorporating visual styles that reflected their expectations. At first sight, the polychromy of the drawings may indicate that they are exclusively technical, precise, and comprehensible. A closer look, however, reveals the eye-catchingly artistic, almost overstated presentation of the designs. The timber beams with which the bottoms of the locks are to be planked bear a realistic vein, the hard stones below are individually outlined. The earthen banks are textured in various shades of green and grey, and *figure 11* shows the termination of the drawing in the form of a scarp. Furthermore, *figure 15* (fig. 5.50) is partially drawn in perspective and the construction is embedded in a naturalistically rendered landscape with trees and a mountain range in the background. The two detailed, monochrome, and perspective landscape scenes (figs. 5.51-5.52) are likewise elaborately executed and have yet to find a counterpart among Castle's surviving drawings. In addition to showcasing Castle's draughtsmanship, the manuscript is, as John H. Farrington writes, a "statement on canal construction for the information of the commissioners

[...] and [...] a personal account of Castle's suitability for a post".<sup>836</sup> As such, *Essay on artificial navigation* follows in the tradition of manuscripts which were produced primarily by military engineers to disseminate their knowledge by writing treatises on technologies they mastered.

According to Michèle Virol, preparing a treatise to demonstrate theoretical and practical knowledge was often an essential tool in finding a new employer.<sup>837</sup> The transnationally operating military engineers in particular were dependent on patronage for employment and "advertised their talents to nobility and high-ranking militaries by dedicating translations and compilations of military treatises to them, and by circulating masterful manuscript copies."<sup>838</sup> The manuscript by Jacques Wibault referred to above is to be located in the same tradition, and Castle's manuscript might have served this purpose, too. Furthermore, both the text and the drawings are reminiscent of printed treatises on the subject, for example *Traité des Moyens de Rendre les Rivières Navigables* attributed to the engineer Henri-Albert Bouillet (d. 1707) and published in 1693. Bouillet notes in the preface that some of his descriptions are taken from Dutch writings.<sup>839</sup> Translating the texts of others and publishing them as part of one's own work was common practice among military engineers in the seventeenth and eighteenth centuries. Bouillet's treatise, for example, was translated into German in 1728 by the engineer-architect Johann Rudolph Fäsch. Reproducing manuals and copying castrametation, fortification, and famous battle plans was a major component of the training of military draughtsmen and officers.<sup>840</sup> Castle likely relied on copying from respective treatises in preparing his manuscript. He certainly had a sketchbook in which he drew sluices on site and later adapted and refined them for presentation in his manuscript. Besides polychromy, another striking feature of these drawings is the use of two different scale bars. *Figure 7* has a scale bar

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<sup>836</sup> Farrington, "Richard Castle's 'Essay on Artificial Navigation'," 67.

<sup>837</sup> Michèle Virol, "La traduction des ouvrages des ingénieurs: stratégies d'auteurs, pratiques de libraires et volonté des princes (1600-1750)," in *L'Europe des sciences et des techniques. Un dialogue des savoirs, XVe-XVIIIe siècle*, eds. Liliane Hilaire-Pérez, Fabien Simon, and Marie Thébaud-Sorger (Rennes: Presses universitaires de Rennes, 2016), para. 4.

<sup>838</sup> Miyamoto, "Colour-Coded Manuscript Maps," para. 15.

<sup>839</sup> Henri-Albert Bouillet, *Traité des Moyens de Rendre les Rivières Navigables* (Paris: Estienne Michallet, 1693), preface.

<sup>840</sup> Bénédicte Miyamoto, "Significant Red: Watercolour and the Uses of Red Pigments in Military and Architectural Conventions," *La Couleur* 75 (2018): para. 26.

with numbered subdivisions that are alternately washed in black and not washed, while *figures 11* and *15* each have diagonal scale bars. It is difficult to say why this has occurred. Given the context of the sheet within the portfolio, Castle's handwriting, and the consistency of the drawings with the other drawings in the manuscript, it is unlikely that the figures were prepared by different draughtsmen. Perhaps it is more of an indication that a uniform design of the scale bars received little attention and thus are in some cases unsuitable for providing conclusions about the authors of drawings. In any case, Castle's *Essay on artificial navigation* not only showcases his engineering knowledge but also strategically reflects the visual language expected by potential employers, hinting at a possible military engineering background.

### **The Use of Colour**

The architectural drawings Castle prepared for civil architecture engagements in Ireland have a different appearance compared to the drawings in *Essay on artificial navigation*. They are predominately executed in the fashionable Palladian monochromy, likely to suit the visual language of his wealthy, non-professional clients. Coloured washes are found only occasionally, for example in the measured wall elevation mentioned above (see chapter III and fig. 3.6), in which the yellow wash probably indicates changes and additions to an earlier design. In other cases, coloured washes are used to represent different materials, as in his plan for the Dining Hall at Trinity College, c. 1740, in which the wooden benches and tables were washed in yellow (fig. 5.53). A yellowish green ink was likewise chosen for a measured plan and elevation of a gate house (fig. 5.54), possibly for the lodge at Kildare House (later Leinster House), to distinguish the wooden elements (glazing bars and doors) from the stone façade. Besides the use of coloured wash, however, this drawing is somewhat atypical for Castle in other ways. Firstly, it is rendered less accurately, the lines of the building terminate messily, shading and wash are partly applied inconsistently, and many construction lines and pin pricks are visible. Secondly, on his other exterior elevations, Castle never drew in the glazing bars, but usually washed the window openings in grey and black ink. Glazing bars are only found in two laid-out interiors for alternative designs for the later Duke of Leinster's library at Leinster House (figs.



5.55-5.56). Besides the glazing bars in the window openings, these two drawings likewise differ in other ways from Castle's draughtsmanship. At least ornaments and grey wash do not seem to have the same quality as elsewhere. Are these indications that they have been added by another draughtsman? For the gate house elevation (see fig. 5.54), there are further untypical features for a Castle drawing. It looks as if the measurements in the rooms were written by a different hand than the scale bar numbers. William Garner attributes the script of the measurements to Castle, a point on which I would agree.<sup>841</sup> Finally, and perhaps most strikingly, the shadows cast by the columns and the door surround are not simply washed in grey, but also include parallel hatching. This type of shading is found on only one other drawing attributed to Castle.<sup>842</sup> The front elevation for a project for a house of seven bays with an engaged portico (fig. 5.57) is part of the Charleville Forest Drawings Collection, like the previous sheet. Are these drawings by Castle? Or could the differing drawing style be an indication for a different draughtsman such as Ensor? The above-mentioned design for a sundial shows shading that likewise consists of parallel hatching.<sup>843</sup> This stylistic feature is one of the reasons why I assume that the drawing was attributed to Isaac Ware. Can the two drawings in the Charleville Forest Drawings Collection likewise rather have a relation to Ware?

Another drawing with coloured wash is *General plan of the house and offices, Castle Coole* (fig. 5.58). Various shades of grey and muted yellow and green are applied to the drawing. While the green wash can easily be explained as referencing the natural colours of trees and landscape, the yellow wash is more of a puzzle. This is applied to the rooms of the "Mansion House" (A) as well as to some stables (D-F). It might relate to the construction status of these spaces, but as it is unclear whether Castle's schemes for Castle Coole were ever realised, it is not possible to be more specific about the yellow colour at the moment.<sup>844</sup> That yellow wash was indeed used for alterations and additions in Castle's drawing repertoire was shown above. Further, in a few drawings

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<sup>841</sup> "Designs for entrance gates and lodges attributed to Richard Castle and Francis Johnston, also a copied Palladio house design thought to be used for the Provost's House, Trinity College," IAA Catalogue, accessed January 27, 2023, <http://iarc.cloudapp.net/Details/archive/110081212>.

<sup>842</sup> IAA 86/24.1.

<sup>843</sup> IAA 96/68.2/4/7.

<sup>844</sup> Griffin, "Richard Castle's Designs for Castle Coole," 141.

blue is employed to represent water, for instance to depict the cistern on a ground plan for Leinster House, c. 1745.<sup>845</sup> Another plan for Leinster House (fig. 5.59) shows a special colour wash. To illustrate that the east or garden front had an open basement area and a steep wall leading up from this recess to the ground level, Castle drew in an area that he washed in a colour that appears greenish-grey. The difference in height between the basement and the ground floor level is shown in perspective, supported by the particular shading of the wash. This practice could have its origins in fortification architecture, where sloping terrain was represented in such a way (see figs. 3.18-3.19, chapter III). The fact that Castle occasionally employed polychromy for his civil architecture projects may indeed relate to a military-engineering background. However, as seen before, colour was also used beyond the context of military architecture. Wren and his office, as well as Italian and German architects and draughtsmen, and to a certain extent Gibbs and Pearce, repeatedly made use of coloured washes for their architectural drawings.

### **Castle's Office Style**

Nevertheless, Castle's œuvre is dominated by drawings in the grey wash style of the kind seen in the Campbellian-Burlingtonian practice and in the work of other contemporary architects such as Gibbs and Thomas Ripley outside the Burlington circle. This includes the drawings for Headfort House that are collected in the two albums discussed above. These albums are especially interesting in that they contain a drawing attributed to Ensor alongside Castle's drawings, allowing a comparison of the drawing styles of Castle and his employee. As was mentioned earlier, three floor plans and an elevation are included in one of the albums (figs. 5.60-5.63). This set of drawings, which has been allocated by the IAA as scheme A, is homogeneously designed and neatly executed for presentation purposes. According to Griffin, this is "the only complete set of surviving drawings for a major country house by Ireland's most prolific country house architect."<sup>846</sup> The plans show the room layout in the basement, the "Principal Floor" (i.e., the ground floor), and the "Attick Floor" (i.e., the

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<sup>845</sup> IAA 96/68.1/1/2.

<sup>846</sup> Griffin, "A Richard Castle Design for Headfort," 269.

first floor) and are titled accordingly in black ink. The walls are washed using dark ink. On the plan of the basement (see fig. 5.60), some walls are additionally washed in a lighter grey. These may represent foundation walls of the structures at ground level, which do not extend all the way down to the basement level. Dashed lines in the rooms indicate vaults. On the plan of the ground floor (see fig. 5.61), which in this case is a raised ground floor, certain walls in the area of the kitchen and stable yard including the lavatories are likewise washed in a lighter grey. This may imply that these structures are at ground level and not at raised ground level. The external stairway is not washed. A special feature of the plan of the first floor (see fig. 5.62) is that the rooms that do not have another floor, show the roofs in perspective. The design thus combines two types of spatial forms of representation. The pointed roofs exhibit subtle shading that, unlike in most cases, appears to be oriented according to a light source in the lower right corner. Perspective views of roof surfaces in plans are rare in eighteenth-century architectural drawings. A plan for the upper floor of Stillorgan House is another example showing the roofs in such a manner (fig. 5.64).

All three plans for Headfort House provide *Explanations* detailing the use and size of the rooms. The elevation (see fig. 5.63) displays the building in orthogonal projection. The sheet seems to be trimmed; this may have happened retrospectively to prepare it for exhibition display. Above a baseline rises the elevation of the house, which is washed in grey and additionally shaded based on a light source in the upper left. The surfaces that are closest to the viewer (the pavilions), are the most light-coloured. The window and door openings are washed in dark colours, but they, too, feature shading. The shading of the roofs is graded. Neither is there a title nor an *Explanation*. Furthermore, none of the drawings show a scale bar. In the second album five drawings for three further schemes are included, but these are not full sets. There is a plan for the “Principal Floor” (ground floor), which is part of scheme B (fig. 5.65). In addition, three plans have survived for scheme C: basement, ground floor, and first floor (figs. 5.66-5.68). Finally, there is a sheet showing an elevation and a plan of the ground floor for scheme D, which has been mentioned before (fig. 5.69). The four drawings displaying the plans are consistent with the drawings from the first album in terms of their precise draughtsmanship. However, there are small details

that – apart from the structural changes – do not seem to correspond. For example, differently designed scale bars are sometimes given in addition to the measurements provided as part of the *Explanations*, and the plan for the ground floor of scheme C has no title. Besides, room heights have been added to some of the room descriptions in the *Explanations*, something that did not occur before, while in the plan itself data on the lengths and widths of the rooms and building parts are provided cruciform. The latter can occasionally be observed in other drawings by Castle. Further, a two-tone wash has been applied to the walls again, probably to distinguish the walls at ground level (light grey wash) from those of the raised ground floor (dark grey wash). This drawing thus contrasts with the ground floor plan for scheme B (see fig. 5.65), which has all the walls washed in a light grey tone. The plans for the basement and first floor for scheme C similarly show dimensions noted cruciform within the rooms and not as part of the *Explanation*. Scale bars have not been added. Instead, information on the height of the floors is given beneath the titles (basement: “11 Feet High”, second floor: “13 Feet High”). Might the drawings of scheme C with these deviations be seen as an indication of Ensor’s increasing involvement in Castle’s drawings? An involvement that not only manifests itself in the fact that he added the *Explanations*, but also inserted room heights. Furthermore, Ensor seems to have preferred writing the sizes of the rooms into the plans, instead of keeping them in the *Explanations*. When comparing the scale bar on the plan of the ground floor for scheme C with the plan of ground floor and entrance elevation for scheme D (see fig. 5.69) it shows that they are identical. In this case it is likely that both scales were drawn by the same hand. It was mentioned earlier that the quality of the drawing style of this sheet clearly differs from that of the other drawings for this project. The overall impression of the drawing is less sophisticated and somewhat amateurish, which is not entirely explained by the fact that this is an unfinished design. The lines appear crude and often terminate sloppily. Decorative elements in the elevation such as capitals, friezes, or balusters seem to have been drawn hastily and vaguely. The grey wash of the walls in the plan is partially applied imprecisely. Nevertheless, a distinction is also made here between the walls of the building using a darker wash and another wall structure using a lighter wash. Pencil lines in the plan and elevation indicate possible corrections or alterations reminiscent of the arcades and the interior design with Dressing Room and Breakfast

Room of scheme C (see fig. 5.67). The round arch of the aedicular Ionic doorcase in the elevation was drawn freehand, but the lines are swaying. In the plan, room names and cruciform dimensions are noted. It is a little surprising that this unfinished and somewhat clumsy drawing is included in the portfolio. Griffin suggests that after Castle's death, Sir Thomas the 2nd Baronet commissioned Ensor to prepare "a reduced version of his designs".<sup>847</sup> John Harris considers the drawing may even be dated to c. 1760.<sup>848</sup> In contrast, the IAA catalogue dates the drawing to the 1730s, the same as Castle's own designs for Headfort House. This date would make the work one of Ensor's first drawings, produced in parallel with Castle's designs.

### Office Draughtsmen

In addition to the Headfort House drawing, two further designs are attributed to Ensor. These are two plans for Doneraile House in Dublin (figs. 5.70-5.71) built in the late 1740s by Castle's office after designs by Ensor.<sup>849</sup> An invoice by Ensor dated March 25, 1748, may be related to these drawings, referring to "Directing & Drawing Different Designs for finishing ye New House in Kildare Street" for which Ensor charged £13 13s.<sup>850</sup> Given that the two drawings are not particularly demanding, the amount is probably mainly related to Ensor's function as manager of the building site. While the grey wash plan (see fig. 5.70) can more certainly be attributed to Ensor due to the somewhat unsteady drawing style and the handwriting of the dimensions, the attribution of the second plan (see fig. 5.71) to him seems slightly doubtful. This drawing is described as an "enlarged working version" of the previous drawing.<sup>851</sup> It is noticeable that the room at the top left of this sheet is designed differently, that is, without any further subdivision and with only one window, but with a door instead. Although this might be a working drawing, the design seems to be more neatly and sophisticatedly drawn than the grey-washed plan. Furthermore, the handwriting does

<sup>847</sup> Griffin, "A Richard Castle Design for Headfort," 272.

<sup>848</sup> Harris, *Headfort House*, fig. 2.

<sup>849</sup> David J. Griffin, "Richard Castle's Designs for Doneraile House, Kildare Street, Dublin," *Martello* (Spring 1990): 1; Casey, "'Agreeable to live in,'" 306.

<sup>850</sup> NLI, MS 34,165, Doneraile Papers, 1607-1961.

<sup>851</sup> "Catalogue of the Guinness Drawings Collection 96/68," IAA 96/68.4/5.

not correspond to Ensor's usual script. Perhaps this is more likely a drawing by a craftsman made after Ensor's design. This would explain, for example, why the exact dimensions are given for each section of the staircase. Following a comparison with the building accounts for Doneraile House, the handwriting may be related to that of Michael Reily, joiner. Another possible candidate could be carpenter-architect Michael Wills (fl. 1719-1777), who also worked on Doneraile House in a supervisory capacity 1747-49.<sup>852</sup> There are also unexecuted designs for Doneraile House attributed to Castle himself. These are four plans representing the various storeys and one elevation (figs. 5.72-5.74). In comparison with the two previous drawings, the qualitative and formal differences are distinct. Not only is the overall drawing style much more sophisticated, there are also – at least in the plans – titles and *Explanations* regarding the use of the rooms as well as dimensions. The elevation of the proposed town house is a characteristic Castle drawing featuring a tidy drawing style and grey wash including shading. The design of the window and door openings in dark grey wash with additional shading is also known from Castle's drawing practice. Ensor's assistance can be assumed insofar as he might have added the dimensions to the elevation and the inscription "Top of ye wall Plate".

Lastly, one of the two drawings in the Manuscripts & Archives Research Library at Trinity College depicts a laid-out interior of the staircase of the Old Library (fig. 5.75). The drawing can be linked to *An Estimate for finishing the Stair Case in the Librery* [sic], believed to date from the late 1730s or 40s and with a plan "annext" (fig. 5.76).<sup>853</sup> Details such as "Olive & Palm branch & Shell Over the Door" or "Festoon foldage [sic] & Drapery Round the 3 Great Panells" confirm the drawing's association with the estimate. The document was penned in Ensor's looped script. That does not automatically mean that he (independently) prepared the drawing, that clearly follows the style of Richard Castle. There are however some details, such as the clumsy execution of the Vitruvian scroll frieze, the messy handling of the lines and partly also of the wash, which do not quite come up to the quality of the other drawings attributed to Castle. It is possible that Ensor worked on the drawing or parts of it under Castle's

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<sup>852</sup> NLI, MS 34,165.

<sup>853</sup> TCD, MUN/P/2/28, *An Estimate for finishing the Stair Case in the Librery Pursuant to the Annext Plan*; Tierney "A glorious ascent," 326.

guidance.

## Conclusion

This chapter represents the first in-depth exploration of Castle's drawn legacy to date, offering an overview of Castle's distinct drawing style and office procedures while also examining his collaborations with Edward Lovett Pearce and John Ensor. To begin with, the inventory of his drawings provided an overview of his significant body of work and presented insights into his architectural practice and design process. Script analysis has revealed that Castle used different scripts for different types of documents. His more official documents were written in a neat and ornate calligraphy, while his everyday handwriting on letters, invoices, and other less formal documents was more expansive and informal. From this handwriting analysis, a novel picture of his working relationship with Pearce and Ensor emerged. For example, whilst the *Explanations* seem to be a distinctive characteristic of Castle's drawings, for the later post-1730s period they appear to have been written by Ensor. This suggests that Ensor may have played a more significant role in the production of Castle's finished drawings than previously thought.

A comparison and examination of drawings by Sir John Vanbrugh and Sir Edward Lovett Pearce in the collection of the V&A to contextualise Castle's earliest contact with an architectural office revealed insights into the practices of these two figures. It emerged that Pearce's drawing style is more casual than that of his contemporaries Gibbs and Castle and relied heavily on his assistants for the fine-drawing or fair-copying of his drawings and writings. This explains the different styles and qualities of the more finished drawings in the Vanbrugh Album, most of which are attributed to Pearce's office and circle. This is confirmed not least by the variety of different scale bars. It was further observed that it is difficult to distinguish drawings by Pearce from those by Vanbrugh. This suggests that Pearce may have worked for Vanbrugh and adopted his working methods. Vanbrugh, being not a particularly skilled draughtsman, would likewise rely on the skills of his assistants for more finished drawings or presentation designs. In doing so, both Vanbrugh and Pearce

seem to have placed less emphasis on a homogenous drawing office style. However, Pearce's early death may have prevented him from developing his own distinct office style, in the same way that Castle established his characteristic style upon his arrival in Ireland.

The Richmond Lodge drawings attributed to Castle are neatly executed in a monochrome, grey wash style reminiscent of Campbellian-Burlingtonian and Gibbsian practices. They are well-executed in terms of draughtsmanship, shading, and wash and present a set of orderly and homogenous presentation designs. As earliest evidence of collaboration between Pearce and Castle they provide evidence of the early work of Castle and of the relationship between Pearce and Castle. By the end of the 1720s, Castle clearly seems to have mastered the prevailing grey wash style. It remains speculative whether Castle implemented this style on his own initiative or whether he received corresponding instructions from Pearce, given that so far, no distinct office style has been traceable for the latter.

The drawings from the Vanbrugh Album attributed to Castle demonstrate a more varied draughtsmanship compared to the Richmond Lodge designs and later drawings. Nevertheless, they are characterised by a sophisticated and tidy pen technique, regardless of some crudities. Based on the evidence presented, it was concluded that there is some uncertainty about the attribution of the five drawings to Castle. One possibility is that these drawings were actually produced by Castle, but because they were made early in his career, when he may have worked as an employee of Vanbrugh or Pearce, he adhered to their drawing style. This would explain the similarities in drawing style and scale bar design between some of these drawings and other drawings in the Vanbrugh Album. Another possibility is that the attribution of these drawings to Castle is incorrect. The polychrome drawings in Castle's *Essay on artificial navigation* also deviate from the style of drawing he later established in Ireland. This is certainly due to the technical nature of the drawings, which are comparable to earlier French engineering and fortification drawings that used a similar colour system. Although Castle did not fully implement this system and instead used colours to represent the building materials in order to create more visually appealing drawings, the manuscript is an indication of a military past. The canal



drawings are hybrid forms of pictorial and technical representations following in the tradition of military cartographical and topographical treatises. Castle's use of coloured washes in architectural drawings for civil architecture engagements in Ireland is relatively rare. He typically used polychromy to emphasise certain features of the drawing, such as to distinguish different building materials, or to show the construction status of a building.

Furthermore, the analysis of the drawings for Headfort House provided insight into Castle's office style and working practices. The drawings for scheme A are of a high quality and are indistinguishable from Castle's other drawings. However, the drawings for schemes C and D are slightly less well executed and might therefore show signs of Ensor's increasing involvement. The drawing for scheme D is particularly noteworthy, as it is clearly unfinished and somewhat amateurish. This suggests that Ensor may have been responsible for its preparation, possibly making it one of his first drawings. The fact that it was included in the portfolio suggests that Ensor's work was valued, even if it did not meet Castle's high drawing standards.

Lastly, it was shown that there are traces of other draughtsmen, such as Michael Wills, that may have worked for Castle or even Ensor and who broadly adopted Castle's office style. Further drawings previously assigned to Castle may have been drawn by somebody else, judging from certain drawing conventions and techniques, such as the depiction of glazing bars, parallel hatched shading, etc. However, as they follow Castle's general draughtsmanship, it is difficult to determine definite authorship. One should therefore refrain from attributing them to Castle and instead more generally assign them to his office. Overall, Castle's drawings reveal a meticulous approach to architectural representation, employing a range of techniques, including grey wash, polychromy, and detailed penwork. Over time, he developed his own distinctive style, which became influential for the work of his assistants.

## CHAPTER 6

## **Architectural Drawing and Office Practices in the Early Eighteenth Century**

In the final chapter of the thesis an analytical account of the drawing methods used by the Castle and Gibbs workshops is considered within the wider context of their contemporaries. The question of why James Gibbs and Richard Castle, as well as fellow architects, attempted to achieve a homogenous drawing style in their offices, which hardly allowed for any originality in the architectural drawings but rather points to a desire for anonymity, will be addressed. To achieve the contextualisation, previous research findings on the subject are consulted and brought together. Established observations and conclusions from the previous chapters are likewise drawn upon. In addition, the recreation of the drawing office, including fittings and stationery, by means of archival documents will further situate the offices of Castle and Gibbs in a wider context of drawing office styles and methods. For, “instruments, drawings and books in their immediate material presence offer the most engaging and compelling experience of this historical narrative.”<sup>854</sup> All the more so when they are considered together in their original contexts. Pertinent examples from different architects of the period are included for comparative purposes. These include drawings from the offices of contemporaries of Castle, Gibbs, and Borlach, including those of Sir John Vanbrugh and Sir Edward Lovett Pearce, Lord Burlington and Colen Campbell, Thomas Ripley and the Office of Works, as well as the Ordnance Office. For the first time, an attempt is made to provide a broader and more holistic sense of the architectural drawing and office practices of the various building professionals of this period, including draughtsmen who have hitherto remained elusive behind the office style of the master. This last chapter is an approach to exploring the context of architectural practices through architectural drawings and making inferences from this micro level in relation to the larger macro level of the Palladian era.

### **The Drawing Office – What We Know and What We Need to Know**

As already mentioned in chapter III, there are pronounced gaps in scholarly research

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<sup>854</sup> Anthony Gerbino, and Stephen Johnston, eds. *Compass and rule: architecture as mathematical practice in England, 1500-1750* (London: Yale University Press, 2009), 7.

on architectural draughtsmanship of the early eighteenth century. This also concerns the production of drawings in the drawing office in general as well as the furnishing and tools of drawing offices in the early modern period. In other words, the environments in which drawings are created are referred to only in the context of overarching thematic areas, such as architectural drawings from specific collections, monographs on architects, histories of design and style, or building projects. Mostly the focus tends to be restricted to major architects and their works, while relations with other contemporary drawing offices are not developed. In the following, I provide a brief overview of the existing state of knowledge on drawing offices and their furnishings while indicating where more research is needed.

The monumental construction of St Paul's Cathedral is one of the most studied building projects of the early modern period. As a result, there are several references to Christopher Wren's office at St Paul's in the literature on this topic, which can be considered as trailblazing. Only two of these will be named here and not elaborated on, as Wren largely predates the time frame of my studies. James W. P. Campbell in *Building St Paul's* (2007) is one of the few to have reconstructed the furnishings of the drawing office in more detail.<sup>855</sup> Another major source for the office at St Paul's is Anthony Gerbino's and Stephen Johnston's exhibition catalogue *Compass and Rule* (2009). Here, the focus falls more on the administrative structures of Wren's office and less on their furnishings, which nonetheless gives an insight into the organisation of work there.

*The History of the King's Works* (vol. V, 1976), edited by Howard Colvin, is fundamental to understanding the organisation of the British building authority. A short section addresses the offices at Whitehall, detailing not only their appearance during Wren's time as Surveyor of the King's Works but also afterwards.<sup>856</sup> It includes an account of alterations to the space over time based on bills and other sources, while also referring to some of the furnishings in the various office rooms. For example, in 1669, the Clerks' room was fitted with cupboards, shelves, and presses.<sup>857</sup> Accounts

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<sup>855</sup> Campbell, *Building St Paul's*, 45-51.

<sup>856</sup> Colvin, *The History of the King's Works*, 448-451.

<sup>857</sup> Colvin, *The History of the King's Works*, 449.

further provide, albeit sparse, information on the furnishing and remodelling of the office from 1716-17, which included the relocation of a book press and the acquisition of a clock.<sup>858</sup> From old plans of the ground floor, it can be established that the main room of the office was lit by a tripartite window.<sup>859</sup>

Further information on the drawing offices of the Office of Works may be obtained from catalogues of architectural drawings from single collections or from biographies of the architects employed there, although the degree of detail provided varies and is often limited to no more than a few sentences. Anthony Geraghty in the catalogue of Wren's architectural drawings at All Souls College, Oxford, for example, notes that the drawings produced by the Office were kept at Whitehall for consultation for future projects.<sup>860</sup> In Kerry Downes's *Hawksmoor* (1959), an edition of Vitruvius is mentioned as being "part of the office furniture" at the City Churches office, which may have been Claude Perrault's edition first published in 1673.<sup>861</sup> In Downes's biography of Vanbrugh there is a brief reference to an office in his house at Whitehall. According to an invoice dated May 1709, joinery works amounting to £12 9s 4d are recorded that included the fitting up of presses, a drawing board, and a writing table.<sup>862</sup> What the drawing offices looked like at the respective construction sites of the various building projects in which Vanbrugh and Nicholas Hawksmoor were involved has yet to be established. However, it becomes apparent, at least in the case of Vanbrugh, that he made extensive use of draughtsmen and assistants and therefore needed the corresponding space. In the catalogue of the Elton Hall Album by Howard Colvin and Maurice Craig, which represents "the largest single collection of Vanbrugh's drawings", it is explicitly stated that several draughtsmen produced the drawings.<sup>863</sup> The authors identify drawings within this collection "that are believed to have been made under Vanbrugh's personal direction" and which are therefore described in the catalogue as "from the office of Sir John Vanbrugh".<sup>864</sup> While this

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<sup>858</sup> Colvin, *The History of the King's Works*, 451.

<sup>859</sup> Colvin, *The History of the King's Works*, 449.

<sup>860</sup> Anthony Geraghty, "Provenance," accessed May 24, 2023, <https://library.asc.ox.ac.uk/wren/provenance.html>.

<sup>861</sup> Kerry Downes, *Hawksmoor* (London: Zwemmer, 1959), 28.

<sup>862</sup> Downes, *Sir John Vanbrugh*, 305.

<sup>863</sup> Colvin, and Craig, *Architectural Drawings*, xxxiv.

<sup>864</sup> Colvin, and Craig, *Architectural Drawings*, xxiv.

suggests a division of labour with regard to the production of drawings, no further details are given about the office practices or the organisation and furnishing of Vanbrugh's drawing office. In the German monograph *Thomas Ripley, Architekt* by Axel Klausmeier, it is stated that Ripley made use of draughtsmen from the Office of Works, who followed particular conventions and a generic drawing technique, but the question of the appearance of Ripley's drawing office is not addressed.<sup>865</sup> A comparative discussion of drawings by Campbell, Ripley, and Gibbs, and thus of the three various drawing offices, is provided in Ingrid Sindermann Mittmann's dissertation on Houghton Hall, Norfolk.<sup>866</sup> However, the focus is on the significance of the drawings for the respective construction phases at Houghton and does not include a description of the individual drawing offices.

John Harris's deliberations in his article *The Grey Wash Style of the Palladian Office of Works* is one of the rare attempts at a comparative and overarching study of the drawing style of several architects.<sup>867</sup> He identifies the grey wash style as the office drawing style of the Office of Works and reconstructs its dissemination throughout the office. The author ties the origin of the grey wash style to Campbell and his desire to produce drawings whose "drafting quality would be reflected in the engraving after transference to copper by the burin."<sup>868</sup> It will become clear below that this however was not always the case, given that the preparatory drawings for the engravings have different elaborations, not all being finished in the grey wash style. Harris explores the relationships between the various architects, including some of their working methods and their use of the grey wash style. The impact of this style was so significant that many of the drawings in the Palladian Office of Works are considered "indistinguishable from each other."<sup>869</sup>

On the furnishing of the Drawing Room or Drawing Office of the Office of Ordnance, including the draughtsmen employed there, Geoffrey Parnell has

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<sup>865</sup> Klausmeier, *Thomas Ripley*, 15 f.

<sup>866</sup> Sindermann Mittmann, "Houghton Hall," 42-67.

<sup>867</sup> Harris, "The Grey Wash Style," 48-58.

<sup>868</sup> Harris, "The Grey Wash Style," 50.

<sup>869</sup> Harris, "The Grey Wash Style," 56.

undertaken significant research.<sup>870</sup> In 1714, with surveyor-general Brigadier Michael Richards (1673-1721), a reorganisation of the Office of Ordnance was implemented to achieve greater efficiency and proper recording of projects.<sup>871</sup> Richards proposed that a “Collection of all plans, Projects, Profills, Estimates, &ca of all Fortifications in great Britain or any other her Majtys [sic] Dominions” be assembled with plans and sections being pasted into books separately from “Explanations of all Plans, & Profiles”.<sup>872</sup> From 1716 onwards, the office premises were located in the eastern annexe of the White Tower, in two large rooms in the north. The record drawings by draughtsman and cartographer Clement Lemprière from 1717 are an important source for the reconstruction of the rooms and depict the interior of the drawing room with presses and a multitude of shelves along the walls (fig. 6.1).<sup>873</sup> Parnell further defines a “consistent style of draughtsmanship” of the office drawings, “which frequently includes the identical use of scales and headings”.<sup>874</sup> On the basis of the will of Robert Whitehand (1669-1725), a first-generation draughtsman of the Drawing Room, the author demonstrates that the training of young draughtsmen was already established there in the first half of the eighteenth century. Whitehand devised that his “Draughts Designs Sketches Mathematical Instruments and Rulers the several Draughts in fframes and Schemes of Opticks” were to be made available for the “Use, benefit and Improvement of the young persons instructed in the drawing Room in the Tower”.<sup>875</sup> This suggests that drawings and designs were used as instructional material and were likely being copied for practice purposes. In addition, Parnell presents archival sources from 1733 and 1744, which show the expenses of Lemprière in purchasing drawing equipment. These provide a clear picture of the materials required for the

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<sup>870</sup> Parnell, “The Buildings and Works of the Office of Ordnance;” Parnell, “The Ordnance Drawing Room,” 121-179.

<sup>871</sup> Parnell, “The Buildings and Works of the Office of Ordnance,” 128.

<sup>872</sup> Cited after Parnell, “The Buildings and Works of the Office of Ordnance,” 128; original document BL, Stowe MS 477, RICHARDS COLLECTIONS, f. 4.

<sup>873</sup> The Ordnance Office records and drawings are largely held in the National Archives at Kew. See for example, War Office records WO 44-55, records of the Office of Works and its successors for the drawings (WORK 31). Other material can be found in the Domestic Records of the Public Record Office (PRO), records of the Admiralty, Naval Forces, Royal Marines, Coastguard, and related bodies (ADM), and State Paper Office (SP). Further items are located at the British Library as well as in other public or private collections, such as the Royal Armouries Library, Tower of London.

<sup>874</sup> Parnell, “The Buildings and Works of the Office of Ordnance,” 151.

<sup>875</sup> Parnell, “The Ordnance Drawing Room,” 129; TNA, PROB 11/604/61, Will of Robert Whitehand, Captain of Tower of London, Middlesex.

Drawing Office, which included, for example, two “Mahogany Plain Table[s]”, each priced at £5 10s, or “A new best Drawing Pen” for £5.<sup>876</sup>

Information on architects’ drawing offices outside the Office of Works or Office of Ordnance is more limited still. In the Gibbs monograph, Terry Friedman suggests that Gibbs’s office was located in his terrace-house in Henrietta Street in Marylebone.<sup>877</sup> He makes an argument for this based on the comprehensive fine art library as well as the collection of art and sculpture that Gibbs gathered there. In this context, it might be important to remark that there is a record that Borlach once “Lodg’d or Lived at the house of the said James Gibbs.”<sup>878</sup> Friedman further adds that Gibbs did not maintain an office “in the strict sense of the term” without elaborating on this.<sup>879</sup> However, the fact that Gibbs kept so many of his drawings certainly reveals aspects of his architectural and drawing practices.

Regarding the drawings of the Elton Hall Album associated with Sir Edward Lovett Pearce, it was noted by Colvin and Craig that some of them were made by assistants.<sup>880</sup> A distinction is thus made between drawings “by Pearce” and “from Pearce’s office”. Further, some of these drawings appear to have been prepared by Pearce “in the mood and style of Vanbrugh”.<sup>881</sup> Statements about Pearce’s drawing office and its furnishing remain vague, apart from the suggestion that Pearce inherited Vanbrugh’s secretary “Arthur” after his death.<sup>882</sup> The suggestions that drawings originate “from the office of Richard Castle” or that Castle was “certainly in the office” of Pearce by 1728 allude to the existence of their architectural offices in Ireland.<sup>883</sup> In the catalogue of drawings of the Elton Hall Album compiled by Lorimer and Newton (1996), a similar categorisation as established by Colvin and Craig is followed, i.e., there are drawings attributed directly to Pearce (and Vanbrugh), but also those “from

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<sup>876</sup> Parnell, “The Ordnance Drawing Room,” 154 Appendix B.

<sup>877</sup> Friedman, *James Gibbs*, 23.

<sup>878</sup> TNA, C 11/1559/23, Hitch v Langley.

<sup>879</sup> Friedman, *James Gibbs*, 24.

<sup>880</sup> Colvin, and Craig, *Architectural Drawings*, xxxix.

<sup>881</sup> Colvin, and Craig, *Architectural Drawings*, xxxix.

<sup>882</sup> Colvin, and Craig, *Architectural Drawings*, xxxix. This suggestion can be found in other publications, see McParland, *Public architecture in Ireland*, 185.

<sup>883</sup> McParland, *Public architecture in Ireland*, 131; 183.



the office[s] of” the two.<sup>884</sup>

For Castle, Melanie Hayes has been making significant advances recently in identifying his office practices and management of the building site.<sup>885</sup> The author uncovered documents from the 1740s relating to Castle’s office at Trinity College Dublin: “William Wall’s bill for painting in 1741 included ‘5 yards 6 feet Painting on ye Finishing in Mr Castles Office’, as well as painting four ‘Winser Chairs in ditto a Green colour’.”<sup>886</sup> Other documents record stationery delivered to John Kane, foreman and overseer of labourers in Castle’s office, “for the use of Mr Castles Office”, including several orders for paper, ink, quills, as well as two memorandum books “for Jno. Kaine.”<sup>887</sup> In terms of stationery and tools, recent works by Eva Röell and Basile Baudez as well as Susan C. Piedmont-Palladino’s exhibition catalogue *Tools of the Imagination* provide a more detailed overview of drawing materials and instruments in use in the eighteenth century, such as paper, drawing boards, brushes, and inks.<sup>888</sup> However, given that the authors hardly link these to the practical application contexts of architects and their offices or discuss them on a comparative basis, these works can only serve as orientation guides.

The above review shows that the issue of drawing offices has been addressed to a limited extent within scholarship. It further became apparent that most of the references cited here have already been mentioned in chapter III. This is a reminder of the scarcity of academic publications on the general topic of architectural draughtsmanship. What is now needed is a more coherent picture of the various offices of the period. This requires the offices of the individual architects or building departments, like the Office of Works or the Office of Ordnance, which have been treated separately, to be considered collectively. Only a comparative view of different offices can further the understanding of architectural practice in a wider context. In the following, a preliminary attempt at a comparative analysis is made, incorporating

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<sup>884</sup> Lorimer, and Newton, *The collection of drawings by Sir John Vanbrugh*, 5.

<sup>885</sup> Hayes, “Retrieving craft practice,” 160-196; Hayes, “Architect and artificers.”

<sup>886</sup> Hayes, “Architect and artificers,” TCD, MUN/P/2/81/46.

<sup>887</sup> Hayes, “Architect and artificers,” TCD, MUN/P/4/49/37 and 43.

<sup>888</sup> Susan C. Piedmont-Palladino, *Tools of the imagination: drawing tools and technologies from the eighteenth century to the present* (New York, NY: Princeton Architectural Press, 2007); Röell, “Tekenen ter Verlichting,” 81-92; Baudez, *Inessential Colors*, 219-236.

archival material. The aim is to answer the question of why certain conventions prevailed in the eighteenth-century drawing practice and why a homogenous drawing style was preferred in Britain.

### **Scale of Production in Architectural Practices**

Three main categories of drawings made in an architectural office can be determined: 1) drawings for building projects; 2) drawings serving as preliminary drawings for engravings; and 3) record or study drawings for retention in the office. The boundaries between the categories may sometimes be fluid.

The first category of drawings for building projects includes different types of drawings, such as sketch, preliminary design, finished design, presentation drawing, or working drawing. In the bodies of drawings from the offices of Gibbs and Castle that I have examined, it is noticeable that there are hardly any drawings that represent the conceptual stages of the building process. On the other hand, many sketches and preliminary designs by Vanbrugh and Pearce, survive, whose reliance on assistants or draughtsmen for the elaboration and fair copy of their designs perhaps gave sketches a higher value. The sketches are, in this case, as Laura Jacobus writes, “a record of the workings of the architect’s mind.”<sup>889</sup> For Gibbs and Castle, the absence of sketches may indicate that they were more involved in the process of drawing themselves. Thus, for them, it was perhaps not the architectural sketch that was an immediate record of their artistic skill and their authorship of the design, but rather the finished drawing.<sup>890</sup> The latter was furthermore better suited to show the definitive design, including correct dimensions etc., as intended by the architect. It was therefore more important to keep finished or record drawings than sketches.

From the first sketch to the presentation drawing that illustrates the building as it would actually appear it is often a long process. Numerous drawings are prepared

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<sup>889</sup> Jacobus, “On ‘Whether a Man Could See before Him and behind Him Both at Once’,” 157.

<sup>890</sup> For a discussion on the significance of sketches in architecture see e.g., Sebastian Fitzner, “Im Zwischenraum von lineamenta und portraiture. Überlegungen zur historischen und historiografischen Stellung der Architekturzeichnung,” in *Die Quadratur des Raumes. Bildmedien der Architektur in Neuzeit und Moderne*, eds. Monika Melters and Christoph Wagner (Berlin: Gebr. Mann Verlag, 2017), 87.

for considering and rejecting alternatives until, in conjunction with the other parties involved and taking into account the actual feasibility of construction, a final result is found that is satisfactory to all.<sup>891</sup> It is therefore hardly possible to specify an exact number of drawings required for a project. Especially since it was not necessarily only the senior architect who produced drawings, but also his subordinate assistants, including the craftsmen. In addition, it often happened that not only one architect was working on a building project, but as was the case at Houghton, several architects, all of whom submitted their own designs. Often architects were only consulted for designs. They would then provide drawings but were not involved in the building process. Thus, there are different scenarios for each building project, each of which results in varying numbers of drawings.

Although there are a total of 288 surviving drawings for the mammoth St Paul's project, for example, it cannot be ruled out that the number of drawings produced was much larger.<sup>892</sup> Given that Wren was often absent from the building site, he would for example produce scaled-up working drawings of details and mouldings, which he would then send to the workmen to follow. However, he himself was aware that drawings used on the construction site were easily damaged or lost. In a letter regarding the construction of the library at Trinity College in Cambridge, he promised to return the drawings he wished to draw out full-size for the craftsmen, otherwise they would be "defaced" to the point of uselessness.<sup>893</sup> As Christine Casey notes, however, the production of such large-scale drawings involved time and was therefore probably not the norm.<sup>894</sup> In Castle's case, it was even argued that because of his close monitoring and control over operations not only in his office but also on the building site, there might not have been much need to produce a large number of constructional drawings.<sup>895</sup>

By looking at portfolios for certain projects by Gibbs and Castle, an attempt can be made to obtain at least some idea of the numbers of drawings prepared in their

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<sup>891</sup> Philipp, *Architektur – gezeichnet*, 13.

<sup>892</sup> Campbell, *Building St Paul's*, 51.

<sup>893</sup> Casey, "Agreeable to live in," 306.

<sup>894</sup> Casey, "Agreeable to live in," 306.

<sup>895</sup> Hayes, "Architect and artificers;" Gibney, *The Building Site in Eighteenth-Century Ireland*, 45.

offices. However, as these albums mostly do not include sketches, preliminary drawings, working drawings, or contract drawings, there is limited potential for providing definitive information. In addition, every design process for a project was unique, depending on the scope and whether the client was satisfied with the drawings or asked for more. It is lastly possible that drawings have been removed from folders. In the following, some projects for which albums exist are described as examples of office production. The Gibbs album of drawings for Kiveton Park (volume VIII at the Ashmolean Museum), dated to 1741, includes 32 pages of drawings.<sup>896</sup> Sometimes more than one view is displayed on one page. The design for the Bowling Green House, for example, shows the side elevation below the side section (fig. 6.2). This means that there are a total of 61 separate drawings. The drawings are exclusively presentation drawings, which have been finished in grey wash and in part also in light red wash. Given that this project was not executed, it is likely that there were only sketches and/or preliminary drawings to these presentation drawings. Assuming that there was at least one preliminary drawing for each drawing, the total number of drawings would be 122.<sup>897</sup>

There are four designs ascribed to Lowther Hall, which were probably originally included in a portfolio, and which are dated c. 1717. In total this penultimate scheme comprises six individual drawings. These are polychrome presentation drawings for which there may have been preliminary drawings (and sketches). This means that a total of at least twelve individual drawings were needed to create this album. However, there are another 13 sheets for Lowther attributed to Gibbs and comprising a total of 17 individual drawings. They were not included in the above portfolio and show a different, post-fire scheme dated to c. 1728.<sup>898</sup> There appear to be eleven preliminary designs (= 15 individual drawings) and two presentation designs (= two individual drawings). Besides possible sketches, there was probably one preliminary drawing for each of the presentation drawings. This would result in a minimum number of 19

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<sup>896</sup> For a more detailed account of the drawings for Kiveton, see Smith, "James Gibbs at Kiveton," 171-190.

<sup>897</sup> For each presentation drawing, I presume that one preliminary drawing has been made. Sketches are not considered, as they are even less countable than preliminary drawings.

<sup>898</sup> Colvin, Crook, and Friedman, *Architectural Drawings from Lowther Castle*, 13; 26.

drawings that were required for this scheme. Therefore, at least 31 drawings were made for the two Lowther schemes (not considering sketches). In addition, Gibbs had conceived another scheme for Lowther, for which no drawings have survived, only engravings in *Vitruvius Britannicus* (vol. II, 1717, plates 78-80).<sup>899</sup> This would add at least two more drawings to the total of 31, as well as further possible preliminary drawings. In any case, the non-execution of the project indicates that no further working or contract drawings were produced. Campbell, too, submitted his own designs for the remodelling of Lowther c. 1725-29 (20 sheets).<sup>900</sup> Clearly, a large number of drawings were produced for this project.

The drawings in the Richmond Lodge Album, in all probability prepared by Castle, amount to a total of six, including a site plan, three plans, an elevation, and a section (see figs. 5.33-5.38, chapter V). Since Pearce is thought to be the designer of the building, he certainly provided sketches or preliminary drawings for Castle to copy. This would mean at least one for each of these drawings, resulting in twelve drawings. Given that this project was not executed either, it can be concluded that no working or contract drawings had to be produced. Another drawing for Richmond Lodge, not included in the album as it is probably a preliminary drawing, indicates an original existence of further drawings (see fig. 5.39, chapter V). This drawing shows an alternative proposal for the entrance lobby. Therefore, there might have been another scheme with corresponding drawings, which were rejected and not developed into presentation drawings. In addition, there are the three identical floor plans in the Mellerstain collection, the context of which has not yet been clarified.

The twelve designs for Carton House from c. 1739, which are arranged in an album, represent different types of drawings. Eight of the drawings are presentation drawings intended for the client. The album also contains two working drawings (see figs. 3.5a-b, chapter III). The compilation of the drawings is somewhat strange and may not represent their original arrangement. After all, full-scale working drawings were not appropriate for the client's portfolio. The fact that there are four more plans for Carton – two in the RIAI Murray Collection and two preserved as photographs –

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<sup>899</sup> RIBA VOL/73. See Friedman, "Gibbs, James," 23.

<sup>900</sup> Colvin, Crook, and Friedman, *Architectural Drawings from Lowther Castle*, 13; 26 f.

that are no longer included in the album, supports the thesis that the drawings have been relocated over time. These are probably likewise presentation drawings, given that they all feature *Explanations*. All in all, there were thus at least twelve presentation drawings for Carton. It is important to note, however, that the surviving presentation drawings for Carton House only represent unexecuted schemes which means that there are missing drawings for the house as built.

The following picture emerges from the surviving or documented Carton drawings: for each of the twelve presentation drawings (ten surviving drawings and two preserved as photographs) there was probably at least one preliminary drawing and for the surviving preliminary drawings there was at least one presentation drawing. This amounts to at least 30 drawings for Carton (without sketches). It is likely, however, that additional floor designs or working drawings for details were produced, so the total number of potential drawings was even higher. While the composition of the album may not be original, the mix of different types of drawings included illustrates the scope of office drawing production. Castle was obviously working on multiple schemes for the remodelling of Carton House, producing a variety of different types of drawings including preliminary drawings, a significant number of high-quality finished presentation drawings, and working drawings. The album clearly does not represent the full range of drawings that were made for the project, as, for example, the drawings for the executed scheme are missing. Given that Castle was altering and extending an earlier house here, though, fewer drawings were perhaps required altogether in comparison to building entirely new structures.<sup>901</sup>

About 33 drawings attributed to Castle survive from the construction of Kildare House (later Leinster House), most of which are highly finished presentation drawings. These are certainly only a fraction of the drawings that were once prepared for this major project. For on the one hand, it is likely that not all the drawings have survived in general but were lost over the years. On the other hand, there were the corresponding sketches and preparatory drawings for the 33 remaining drawings, which were not preserved. In addition, there must have been a quantity of contract

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<sup>901</sup> I would like to thank David Griffin for his expertise regarding the drawings for Carton House.

and/or full-scale working drawings for the craftsmen. The output of drawings rises further by adding the drawings produced by the craftsmen in accordance with Castle, of which, for example, two plasterwork designs attributed to Filippo Lafranchini from the 1750s for the interior of Leinster House survive. Furthermore, it was not only Castle or his office and craftsmen who produced drawings for Leinster House. After Castle's passing during the construction of the house, Isaac Ware contributed a series of interior designs to complete the project. So, while it has been shown that the actual number of drawings produced for a project varied considerably and cannot be completely reconstructed today, the sheer scale of office drawing production can still be surmised from the patchy evidence referred to above. In many cases, it is probably not too far-fetched for the number of drawings produced by an eighteenth-century architectural office for one project of scale to run into the hundreds. The offices generated a variety of different types of drawings, including sketches, preliminary drawings, presentation drawings, contract drawings, working drawings, site plans, part plans, surveys, floor plans, elevations, sections, room arrangements, alternative designs, and variants, etc. It is safe to assume that the surviving drawings that withstood the test of time until today comprise only a tiny percentage of the abundance of drawings produced in the past.

The existence of so many Gibbs's office drawings suggests that he kept copies of his project drawings. Given that only a few of Castle's drawings have been preserved would consequently suggest that he did not make copies. The practice of producing project copies seems to have been less common due to the effort involved. Giacomo Leoni in a letter to his client Peter Legh XII regarding the remodelling of Lyme Park notes that "I have not had time to shadow ye. Sketch, nor to take a Copy of it".<sup>902</sup> However, he asks Legh "that some of your workmen may Copyed [sic] and Send it me."<sup>903</sup> It is clear from William Chambers's correspondence that he also did not keep copies of various project drawings.<sup>904</sup> Gibbs on the other hand, would seem to have

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<sup>902</sup> Catherine Danter, "The Eighteenth-Century Rebuilding of Lyme Park, Cheshire, and the Leoni Collection at the John Rylands University Library of Manchester, Deansgate," *Bulletin of the John Rylands University Library of Manchester* 82, no. 1 (2000): 65; 73.

<sup>903</sup> Danter, "The Eighteenth-Century Rebuilding of Lyme Park," 65; 73

<sup>904</sup> My thanks to Prof Christine Casey for bringing this to my attention.

been extremely concerned to ensure that none of his designs would circulate. This is at least evident from one of his letters. Upon his dismissal from the surveyorship in 1716, he requested the Commissioners “to give to no body the designs of the Church in the Strand nor suffer the same to be copyied, in order to have them printed, becaus I am now about graving them my self at my own proper Charge in order to publish them.”<sup>905</sup>

This brings us to the second category of drawings produced in an office: drawings serving as preliminary drawings for engravings. These are mostly found in the work of architects who have an extensive publication record. In Gibbs’s estate, the preliminary drawings for his publications *A Book of Architecture*, *Rules for Drawing*, and *Bibliotheca Radcliviana* represent about 30% of the surviving drawings. A large number of such drawings for publications have likewise been preserved for Colen Campbell and Isaac Ware. It is likely that they were stored away carefully in order to prevent illegal copying or plagiarism, which was commonplace in architectural publishing of the period.<sup>906</sup> Gibbs experienced first-hand that the market for architectural treatises and manuals was highly competitive and litigious, and that ideas and drawings had to be protected from tampering and piracy. His designs were published by Campbell without his authorship being acknowledged.<sup>907</sup> The latter further had attempted to copyright his idea of the “method of dividing the Orders Mechanically into equal parts” which was published in *Rules for Drawing*, but without success.<sup>908</sup> It was taken up by Batty Langley in *Ancient Masonry* (1733-34), followed by Edward Hoppus in *Gentleman and Builder’s Repository* (1737).

That Gibbs sought to protect his designs is clear from his claim of 1733 for an injunction against the notorious pirating engraver and printmaker Benjamin Cole, who had announced the printing of a book that “Gibbs alleged would be a copy, abridgement, or abstract of his *Rules for Drawing*”.<sup>909</sup> This little noticed case, offers

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<sup>905</sup> Friedmann, *James Gibbs*, 257.

<sup>906</sup> Casey, “Books and Builders,” 102.

<sup>907</sup> Burlington House and Witham Park; see Friedman, *James Gibbs*, 39.

<sup>908</sup> Harris, *British Architectural Books and Writers*, 211.

<sup>909</sup> Isabella Alexander, “All Change for the Digital Economy: Copyright and Business Models in the Early Eighteenth Century,” *Berkeley Technology Law Journal* 25, no. 3 (2010): 1370; TNA, C 11/261/60, *Gibbs v Cole*. The case *Gibbs v Cole* (1734) is referred to in William Green & Sons, and



fascinating insight into the treatment of intellectual property and its protection in the early eighteenth century. So far, no exploration into this case was carried out in the context of architectural history. Gibbs supported his claim by his royal privilege as well as by the copyright act of 1710 (Statute of Anne).<sup>910</sup> Cole on the other hand claimed that Gibbs had not fulfilled the conditions of the statute for registration and delivery and that his book was to be compiled from books other than Gibbs's.<sup>911</sup> Despite this, the injunction was issued, and Cole was required to pay the plaintiff's costs. The court's statement reads, that "a small variation of the invention would not entitle the defendant to break in upon the patent".<sup>912</sup> Further and interestingly, it was immaterial that Gibbs himself had taken some entire sections from earlier authors, as in his case this was considered "necessary in order to the introducing of what is new".<sup>913</sup>

John Dickens's description of the case additionally reports that on May 1, 1734, affidavits "of Job Mills, and of John Baldoch were read in support" of the injunction.<sup>914</sup> A comparison with the original documents has revealed that Dickens's "Baldoch" is in fact a mis-transcription of Borlach's name.<sup>915</sup> The fact that the latter made an affidavit in favour of Gibbs reflects a relationship of trust between Borlach and Gibbs. According to the Register of Chancery affidavits, Borlach, resident at the time in King Street, St James', was employed by Gibbs to make "the sevl drawings for a book intituled Rules for Drawing" for which he was remunerated. Borlach further identifies Gibbs as "sole author" and declares that he himself "is not nor ever was y<sup>e</sup> author [...]" but only did the s<sup>d</sup> drawings".

On April 27, 1738, Gibbs sold his copyrights for *A Book of Architecture and Rules for Drawing* to a consortium of booksellers, despite having had tremendous

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Steven & Sons Limited, *The English Reports XXIV, Chancery IV* (Edinburgh: Morrison & Gibb Limited, 1903): 1051-1052; William Peere Williams, *Reports of cases argued and determined in the High Court of Chancery and of some special cases adjudged in the Court of King's Bench* (London: Majesty's Law Printers, 1787), 255; John Dickens, *Reports of cases argued and determined in the High Court of Chancery* (London: A. Strahan for J. Butterworth, 1803), 64.

<sup>910</sup> For information on the first copyright law named after Queen Anne, further copyright acts, and royal privileges see Shef Rogers, "The use of royal licenses for printing in England, 1695-1760: a bibliography," *The Library* 1, no. 2 (June 2000): 133-192.

<sup>911</sup> Alexander, "All Change for the Digital Economy," 1370.

<sup>912</sup> Green & Sons, and Steven & Sons Limited, *The English Reports*, 1052.

<sup>913</sup> Green & Sons, and Steven & Sons Limited, *The English Reports*, 1052.

<sup>914</sup> Dickens, *Reports of cases*, 64.

<sup>915</sup> TNA, C41/48, no 77.

success with them. Perhaps he no longer had the desire to spend his time and energy in litigations like the aforementioned. But it was also common practice. Booksellers even favoured such purchases, because the copyright of a proven work was usually more valuable than of an untried new one.<sup>916</sup> The following year, in the summer of 1739, the new owners Charles Hitch, William Innys, Richard Manby, and John and Paul Knapton claimed an injunction against Batty Langley, accused of breach of copyright of the publication which Gibbs “with Great Labour and Study designed drew composed and wrote”.<sup>917</sup> The case, consisting of complaint and answer, is another vivid contemporary document and provides further insight into the competitive world of publishing at the time.<sup>918</sup> In the bill, the plaintiffs state that for the sum of £300, Gibbs granted them the privileges of printing, reprinting, and publishing, and in doing so likewise provided them with “all and singular the copper plates belonging to the said Books respectively and all the copies thereof then printed”.<sup>919</sup> Regardless of this, “Batty Langley Since the Time of [...] said purchase hath without [...] Consent printed Coppyed and published and hath sold or caused to be printed copied published and sold great parts of the said two several books And threatens and gives out that he will shortly print Copy publish and Sell the whole thereof whereby the sale of the said Books to be printed and published by [us] as afore said is and has been for a considerable Time very much lessend and hindred to the great injury wrong and Oppression of [us]”. It was further declared that “said Batty Langley sometimes Denies that the said James Gibbs was the Author of the Said Books”, although the latter had properly registered the titles in the register book of the Stationers Company. Langley’s response addresses the authorship of the books and alleges that Borlach “was the real author of such Books & not the said James Gibbs”. Although he admitted to borrowing “ffourteen designs of capitals entablatures chimney pieces cornices and windows” from engraved copper plate prints from his collection, these “together do not exceed ffour sheets and a half of paper”. He nevertheless denied that this was a breach of the

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<sup>916</sup> Harris, *British Architectural Books and Writers*, 57.

<sup>917</sup> Ex info Gordon Balderston.

<sup>918</sup> TNA, C 11/1559/23.

<sup>919</sup> The amount of £300 is puzzling because as Gibbs told George Vertue, he had received a sum of £400 for the sale of his books. See Harris, *British Architectural Books and Writers*, 211; Friedman, *James Gibbs*, 261. The amount of £400 is by the way the exact amount that Gibbs left to Borlach in his will.

Statute of Anne. For he had, prior to the publication of Gibbs's *Book of Architecture* "purchased from divers workmen at a very great Expense near (?) two hundred Sketches and correct drawings or draughts of plans and Elevations [...] and various kinds of works and ornaments which he was then inform'd had been built and found after the designs or draughts of the said James Gibbs". He improved these, which is why they are "not in every part universally the same" but merely have a "similitude or Likeness" to the engravings in Gibbs's publications. Furthermore, a manual such as his, intended to the benefit of practitioners, would not be in breach of the copyright act, given that "Compiling Collections of all kinds of Learning have been doom'd Lawfull and advantageous to the Community". The trial did not go beyond his defence, even though Langley was appointed a "counsel in forma pauperis".<sup>920</sup> It is likely that an out-of-court agreement was made, since his books were subsequently printed in many editions.

The above cases illustrate the vast number of drawings made and circulating in the period both as copies of printed sources and as preliminary drawings for engravings. For Borlach's publication *Designs of Architecture for Arches or Gates* no preliminary drawings have survived (fig. 6.3). It was published on January 1, 1776, by John Boydell and includes 20 engravings with elevations and matching plans for gatehouses engraved by William Henry Toms (c. 1700-1765).<sup>921</sup> Since the latter had died in 1765 and his output had already declined in the 1750s, there seems to be a considerable gap in time between the production of the engravings and the publication of the book. This might also explain why Borlach's middle name is given with a C instead of a G on the title page. Perhaps Borlach himself had already passed away, too, and his middle name was either unknown or no longer certain by that time. It appears that all plates were originally marked "J. Borlach invt.", crediting him with the design but not specifically referring to him as the draughtsman of the (preliminary) drawings. No further information is given on who was responsible for this work. The fact that on

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<sup>920</sup> Alexander, "All Change for the Digital Economy," 1372.

<sup>921</sup> John Boydell, *A catalogue of prints* (London: Boydell, 1776), 73, <https://link.gale.com/apps/doc/CW0106327422/GDCS?u=tcd&sid=bookmark-GDCS&xid=2c7e9b27&pg=73>. The reference to Toms is of great importance, for it was previously assumed that the plates had been engraved by Boydell himself.

all elevations the imprint “Published Jan: 1st 1776 by John Boydell Engraver in Cheapside.” is added, might suggest that they were also available to purchase separately.

To conclude this section, I will briefly touch upon the third category of drawings produced in an architectural office, which involves drawings that were used for acquiring and preserving knowledge of architecture and design. These may be created in the office, but also outside the office context while travelling or wherever architectural features may be sketched, to be referred to at some point in a design process or used as teaching material.<sup>922</sup> Portfolios of drawings and engravings, for example, were used as templates by craftsmen such as *stuccatori*. They were presented to clients as samples, served as a guide to model ceilings, and may have been used as training resources for apprentices.<sup>923</sup> Despite the more laborious production process, drawings were prioritised over prints here, as there was less risk of falsification through reproduction. The drawing offered more of a guarantee of authenticity and – depending on the draughtsman – quality.<sup>924</sup> Drawings were often copied from prints or other drawings, which then served as a visual communicator of architectural information. Thereby, copying from drawings or copying from engravings might result in a different drawing technique/appearance of the drawing.

Study drawings such as those attributed to Gibbs, which are now in the V&A and British Museum, likewise fall into this third category. Interestingly, they were not kept by him as they were not among his estate but were in the possession of the collector and amateur draughtsman Richard Bull (1725-1805), and the collector Dr John Percy (1817-1889), respectively, as well as of an anonymous person who sold the drawings in 1913. This suggests that Gibbs himself did not attach significant intrinsic value to those drawings and that they had no further function for him, otherwise they would have remained in his possession and/or office. For a collector like Bull, on the other hand, these drawings were a worthy addition to his notable collection of

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<sup>922</sup> Philipp, *Architektur – gezeichnet*, 13.

<sup>923</sup> Sophie Chessum, “‘Onslow Palace’: new evidence of eighteenth-century craft technique at Clandon Park,” in *Enriching Architecture. Craft and its conservation in Anglo-Irish Building Production, 1660-1760*, ed. Christine Casey, and Melanie Hayes (London: UCL Press, 2023), 49.

<sup>924</sup> Matthew Walker, *Architects and Intellectual Culture in Post-Restoration England* (Oxford: Oxford University Press, 2017), 84.

drawings, prints and books, which among others included works by Sir Christopher Wren, William Talman, and Grinling Gibbons.

Given that drawings were regarded as reliable source of architectural knowledge in the early eighteenth century, it was not uncommon that copies of a widely engraved building were produced and kept or even collected.<sup>925</sup> In addition to creating drawn copies of architecture, the exchange of these was equally fundamental. It was through this practice that architectural information was shared and transmitted. It has been mentioned before that Wren returned from his Paris trip with drawings and engravings that were used as visual material in his office. Many French drawings and engravings continued to be sent from Paris to the office in London.<sup>926</sup> Pearce possessed Vanbrugh's office drawings and drawings by Alessandro Galilei. Gibbs, too, had a large collection of Italian drawings, in addition to his own drawings and parts of the Talman Collection, which itself contained, among others, drawings by the sculptor Edward Pearce.<sup>927</sup> Gibbs's Houghton Hall drawings, in turn, were discovered among Campbell's collection, which in itself comprised a large collection of designs associated with the architect James Smith (c. 1645–1731). The bricklayer Maskall owned some of Gibbs's drawings as well.<sup>928</sup> Nothing is known about Borlach's estate so far. As previously mentioned, Castle's collection may have been bequeathed to his brothers, or may be behind the description "curious and valuable collection of books in Architecture" as stated in the advertisement for the auction of his property on June 1st, 1752.<sup>929</sup>

In conclusion, it is evident that a large number of different types of drawings were made in or for an architectural office. Today, it is almost impossible to determine how many drawings originally circulated in the offices, but the number seems to have been considerable. It is likewise difficult to give concrete figures of drawings required

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<sup>925</sup> Walker, *Architects and Intellectual Culture*, 87–88.

<sup>926</sup> Elizabeth Deans, "Reconsidering Wren in France," (lecture, Ax:son Johnson Centre for the Study of Classical Architecture, University of Cambridge, October 28, 2022).

<sup>927</sup> For information on John Talman's Collection of Drawings see Cinzia Maria Sicca, ed., *John Talman. An Early-Eighteenth-Century Connoisseur* (New Haven: Yale Center for British Art/Paul Mellon Centre for Studies in British Art, 2008).

<sup>928</sup> Friedman, *James Gibbs*, 269; 289.

<sup>929</sup> *Dublin Journal*, May 23, 1752, 2.

per project. Nevertheless, portfolios of drawings for individual projects and the quantities of surviving drawings in the various categories can at least provide a rough idea of the enormous scale of production. The amount of the drawings for each of the three categories is dependent on the activities of the architects in charge and the structure and organisation of their offices. The distribution of the different types of drawings within each of the categories likewise depends on these factors. Sketches are available in large quantities in those office settings where the leading architects, like Vanbrugh and Pearce, did not themselves undertake the fair copy of their sketches or preliminary drawings, but relied on a multitude of draughtsmen and assistants to finish these. In contrast, for Gibbs and Castle conceptual drawings were clearly not considered worth keeping. This might be related to the fact that they employed a smaller number of draughtsmen or were themselves more involved in the process of finishing the drawings. Then again, Gibbs kept many project drawings and preliminary drawings for his publications. Copyright, patent control, and the protection of intellectual property were already relevant subjects back then. This is evident from the many copyright disputes and court cases, as well as from the high number of preliminary drawings for engravings that were retained by the architects. By keeping these drawings, authorship or contribution to the design was established if necessary. The drawings could also be used as a legal defence against possible accusations of plagiarism. Furthermore, project drawings recorded different elements of the design as specified by the architect, which would sometimes get “lost in translation from design to execution” and result in a different outcome that had been intended.<sup>930</sup> These include, for example, the definitive measurements. In what is likely a record drawing by a draughtsman of Sir John Vanbrugh’s office showing the elevation of the New White Tower at Greenwich, Vanbrugh notes that the dimensions he provided do not correspond to what was carried out.<sup>931</sup> Vice versa, mistakes could equally be credited to the architect, as in the case of the drawings for Radcliffe Camera provided by James Gibbs to the *stuccatore* Giuseppe Artari. Gibbs’s incorrect ceiling height led to Artari having to “significantly alter his work in design and execution”,

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<sup>930</sup> Casey, “Silent Partner,” 141.

<sup>931</sup> V&A E.2124:136-1992; see Casey, “Silent Partner,” 141; Colvin, and Craig, *Architectural Drawings*, 20.

which – not being his error – he was appropriately compensated for.<sup>932</sup> The drawings made in the architectural office thus had other functions besides the representation of designs. They were a guarantee of authenticity, proof of original design and specification, and sources of architectural knowledge.

### **Conventions Revisited**

In the following, certain conventions of architectural draughtsmanship that have been established in chapter III will be discussed in greater detail, which were particularly relevant for the various architectural offices of the period under study. The use of paper in the offices and its relationship to office furnishings, the addition of explanatory text to drawings, and the practice of grey-washing drawings will be considered. In this way, insight into the office practices can be achieved and standards and/or particularities identified.

### **Drawing Sizes**

This section illustrates the use of paper in the eighteenth-century architectural office. Based on the evaluation of several archival sources, whereby – where possible – the size of the sheets and related drawing boards can be discussed. Inventories, orders, and bills allow a reconstruction of the equipment in the drawing offices. This includes the required drawing material, which is defined with varying degrees of specificity. On the other hand, architectural drawings are used for comparison with the archival sources. In this way, insight into the respective office practices can be gained that allows conclusions to be made about the production of drawings in the various offices.

Eighteenth-century architectural drawings differ considerably in size, paper then being produced and sold in the form of large uncut sheets. The sheets were bundled in packages according to the same size and quality, using two main measures of paper quantity. The first is the quire, which describes a measure of paper quantity

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<sup>932</sup> Casey, “Silent Partner,” 141.

comprising either 24 or 25 sheets, equal to 1/20 ream.<sup>933</sup> The ream is the other measure of paper quantity, which in eighteenth-century Britain mostly consisted of 480 sheets. Even today, those measures of paper quantity remain in use, whereby a quire is now usually a collection of 25 sheets of the same size and quality and a ream consists of 20 quire or 500 sheets of the same size and quality.

Previously, the size of the sheets depended on the dimensions of the mould and frame, which often varied considerably in size.<sup>934</sup> Sheet sizes obtained by folding the sheets were called folio (one fold, four pages), quarto (two folds, eight pages), octavo (three folds, 16 pages), etc. However, in this way the actual size of the folded sheets cannot be determined. An official specification of English paper sizes did not exist until the Paper Duties Act of 1780, but according to Philip Gaskell these had been standard for most of the eighteenth century.<sup>935</sup> The English paper trade used a variety of names such as post, crown, demy, and royal, to designate sheet sizes, with some of the names for paper sizes probably initially derived from watermarks (e.g., crown, foolscap).<sup>936</sup> However, in the course of the century, there was a proliferation of names and sizes and in some cases, sizes changed, with papers such as demy and crown growing larger, for example. Furthermore, a distinction was made between printing and writing papers. Although there were papers whose names and dimensions were specific to each group (e.g., printing paper: crown, writing paper: super royal), these two groups also contained sizes of the same name (e.g., demy existed both as a writing and printing paper, the dimensions of the demy printing paper being larger than those of the demy writing paper).<sup>937</sup> Another factor to bear in mind when considering sheet sizes is that the original size of the drawings may no longer be given due to trimming of the sheet. This is a complicating factor for relating paper sizes and surviving drawings and may be the case, for example, if drawings have been pasted into albums

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<sup>933</sup> See Ronald Edward Zupko, *A Dictionary of weights and measures for the British Isles: the Middle Ages to the 20th century* (Philadelphia: American Philosophical Society, 1985), 344.

<sup>934</sup> Robin Kinross, *A4 and before. Towards a long history of paper sizes* (Wassenaar: NIAS, 2009), 9-10.

<sup>935</sup> Paper Duties Act 1781 21 Geo. 3. c. 24; Philip Gaskell, "Notes on Eighteenth-Century British Paper," *The Library* s5-XII, no. 1 (March 1957): 35.

<sup>936</sup> Thomas Tanselle, "The Bibliographical Description of Paper," *Bibliographical Society of the University of Virginia* (1971): 37.

<sup>937</sup> Gaskell, "Notes on Eighteenth-Century British Paper," 34.



or framed. The Gibbs drawings preserved in the seven albums at the Ashmolean Museum, for example, often have similar sizes, but partially also show signs of trimming, suggesting that the original size may have been different.

The monthly accounts of payments for the building of Blenheim Palace from 1705-14 are an exceptionally rich source and provide detailed evidence of Vanbrugh's office at Blenheim.<sup>938</sup> Documenting office stationery orders and expenses over a longer period, they reveal what had to be ordered regularly and what was more of a one-time purchase. In addition, the accounts can be linked to building activities and events at Blenheim, adding a new dimension to existing sources and research. For example, the list from June 1705 shows that the office stationery expenses at the beginning of the building process at Blenheim were within reasonable limits. Nevertheless, the carpenter John Simmons had already prepared drawing equipment for the office, e.g., drawing squares, drawing rules, and a "Box to put the Plan of the House In".<sup>939</sup> Letters from Nicholas Hawksmoor to Henry Joynes from June and July 1705 indicate a shortage of drawing equipment on site.<sup>940</sup> For, Hawksmoor had the stationer Mr. Castle send an additional supply of "paper and Books" to Blenheim.<sup>941</sup> This suggests that draughtsmen were already busy drawing at this time, even though (or perhaps because) the establishment of a local administrative structure may not yet have been completed.

When recapitulating the types of paper ordered for the period 1705-11, it is noticeable that most of the paper purchased for the Blenheim office is not described in detail, being simply listed as "paper" (fig. 6.4). For this reason, this paper may not have been of a premium quality, but rather everyday office paper. The next largest quantity of paper ordered was cap for wrapping followed by foolscap, small paper,

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<sup>938</sup> BL, Blenheim Papers Add MSS 19592; 19595-19597, MONTHLY ACCOUNTS of payments for the building of Blenheim Palace. I am indebted to Prof Christine Casey for bringing this to my attention.

<sup>939</sup> BL, Blenheim Papers Add MS 19592.

<sup>940</sup> For the original letters see BL, Add MS 19607, CORRESPONDENCE of Henry Joynes with Nicholas Hawksmoor, Assistant Surveyor of the works at Blenheim; 1705-1715. A transcript of the letters can be found in Downes, *Hawksmoor*, 235-236: "*Ensure that ye Stone be measured and all thir dimensions enterd, in such paper as you have till you can get books, which I will speedily send downe to you [sic].*"

<sup>941</sup> Downes, *Sir John Vanbrugh*, 297; Downes, *Hawksmoor*, 235: "*Mr Castle is packing up paper and Books to come by the Woodstock carrier on Fryday next.*"

writing paper, demy, French paper, and letter paper for writing and drawing (see tab. 2 and fig. 6.5). Special types were mostly only listed as individual orders and in smaller quantities, such as gilt paper with 250 sheets, blue demy with 48 sheets, imperial with 24 sheets, and “stamp” paper with 25 sheets. In addition, a total of 30 pocketbooks were required. Rough sheet dimensions can only be determined for the foolscap (c. 330.2 x 406.4 mm/13 x 16 in.), demy (c. 387.4 x 482.6 mm/15.25 x 19 in.), demy blue (c. 400 x 501.6 mm/15.75 x 19.75 in.), and imperial (c. 559 x 768 mm/22 x 30.25 in.) types.<sup>942</sup>

While the accounts provide evidence of a minimum consumption of c. 25,093 sheets of paper from 1705 to 1711 for the office at Blenheim at a cost of over £38 5s 7d, it is difficult to allocate pertinent architectural drawings and to identify standard drawing sizes.<sup>943</sup> Nevertheless, the average amount of paper purchased – c. 4,182 sheets per year at c. £6 7s 7d– gives a general indication of the office’s paper consumption.<sup>944</sup> For comparison, the household disbursements of William Cavendish, 1st Earl of Devonshire, from 1597-1607 records more than 21,199 sheets of loose blank paper costing over £20 13s 5d and 31 blank paper books.<sup>945</sup> Thus, a noble household such as that of William Cavendish, at the time located at Hardwick Old and New Halls in Derbyshire, required less paper in ten years than the Blenheim office required in c. six years. That said, there are some 100 years between Cavendish’s records and those

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<sup>942</sup> The sheet sizes for foolscap and demy have been derived from Charles Leadbetter, *The Royal Gauger* (London: E. Wicksteed, 1739), 44. However, they cannot be considered definite. In Gaskell, “Notes on Eighteenth-Century British Paper,” 41, the table is based on various paper duty acts of the late eighteenth century and on Richard Johnson, *New Duty on Paper. The Paper-Maker and Stationer’s Assistant* (London: Debrett, 1794), 4v-8r quoting other measurements for the sheet sizes. Given that Leadbetter’s table does not specify the sheet size for imperial paper, I have here referred to Johnson’s table for the measurements.

<sup>943</sup> Calculation of the sheets was carried out by adding up the different orders for paper from the above cited Blenheim accounts for the years 1705-11. For this I have set quire as equalling 24 sheets and ream as equalling 480 sheets, given that this is the historic paper measurement. However, the definitive amount of paper used by the office cannot be determined conclusively. On three occasions in the accounts, there are items for paper without any indication of the quantity. In addition, the letters by Hawksmoor mentioned above prove that there were other paper suppliers. To calculate the cost of the paper, I added the figures given in the Blenheim accounts 1705-11. The cost is only an approximate amount because sometimes the paper rates were listed along with other items such as ink, not specifying the price for each.

<sup>944</sup> To arrive at the average amount of paper used for the six-year period from 1705-11, I divided the calculated amount of 25,093 sheets by six. To arrive at the average cost of paper, I divided the sum of £38 5s 7d by six.

<sup>945</sup> Wiggins, “Paper and Elite Ephemerality.”

of Blenheim, which was a working construction office. A large part of the paper would have been used for the many volumes of account books. When comparing the £38 5s 7d spent on paper at the Blenheim office with the total building costs, which amounted to some £300,000 between 1705-11, of which a total of £220,000 was granted by Queen Anne and enabling a further debt of £45,000, it becomes clear that paper accounted for only a relatively small proportion of the costs.<sup>946</sup> For the Blenheim office it can further be observed that writing utensils such as quills, ink, and sealing wax were ordered regularly. Candles, especially in winter, were as much a permanent part of the office as brooms, flint glasses, and oil, green serge, and silk “to Cover the Office Tables”.

None of the drawings for Blenheim correspond exactly with the formats of these ordered papers, though the dimensions of some drawings approximate the sheet sizes of the papers, i.e., they may have been trimmed. Baudez notes, but without expanding on this, that when a drawing was completed, “the paper had to be cut [...] and this explains why nearly all surviving sheets are smaller than the usual commercial sizes.”<sup>947</sup> The 1705 site plan *Drawing for the Park and Landscape Gardens, Blenheim Palace* by Hawksmoor and Joynes (fig. 6.6) with its dimensions of 506 x 730 mm/19.92 x 28.74 in. could for example correspond to the measurements of a trimmed imperial paper (c. 559 x 768 mm/22.01 x 30.24 in.). The *Preliminary Plan of Blenheim Palace at Main Floor Level* from late 1706/early 1707, which James Augustin Legard attributes to the “Blenheim drawing office” and measuring 335 x 484 mm/13.19 x 19.06 in. could be a trimmed demy (c. 387.4 x 482.6 mm/15.25 x 19 in.) (fig. 6.7).<sup>948</sup> The *Preliminary Plan of Blenheim Palace at Basement Level*, likewise attributed to the Blenheim drawing office and dating to the same time, has a similar format of 354 x 492 mm/13.94 x 19.37 in. (fig. 6.8). Finally, the *Working Drawing for the Basement Storey of Blenheim Palace* (late 1707-08), measuring 497 x 747

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<sup>946</sup> James Legard, “Queen Anne, Court Culture and the Construction of Blenheim Palace,” *Journal for Eighteenth-Century Studies* 37, no. 2 (2014): 185; Peter Trebilcock, “Managing design and construction,” in *Designing Better Buildings. Quality and Value in the Built Environment*, ed. Sebastian Macmillan (London: Routledge, 2004), 159.

<sup>947</sup> Baudez, *Inessential Colors*, 223.

<sup>948</sup> James Augustin Legard, “Vanbrugh, Blenheim Palace, and the Meanings of Baroque Architecture” (PhD diss., University of York, 2013), 10 fig. 50.

mm/19.57 x 29.41 in., may again be a trimmed imperial format (fig. 6.9). In general, it can be observed that the sheet sizes of the drawings for Blenheim vary.

A contract for the “Mattlayer and Turner” Henry Hind, dated August 21, 1716, lists “several sorts of Goods and Wares” that he was to deliver to the Whitehall office of the Office of Works.<sup>949</sup> In addition to “Good fine new Matt” that might have been used for covering tables, the document includes stationery and other essential furnishings of an eighteenth-century architectural office. This comprises lanterns in various sizes for sufficient lighting, mops and brooms for cleaning, and baskets for keeping the office organised. The 28-item paper order is long, with the different types of paper required explicitly listed. However, it is not clear from this what quantities were involved. The following papers were ordered:

- pot: ordinary and finer (both c. 311.1 x 393.7 mm/12.25 x 15.5 in.), “Superfine Pott King’s Armes” (size unclear);
- foolscap: normal (c. 330.2 x 406.4 mm/13 x 16 in.) and superfine (c. 342.9 x 412.75 mm/13.5 x 16.25 in.);
- various sizes of post paper: large (c. 419.1 x 533.4 mm/16.5 x 21 in.), small (c. 342.9 x 419.1 mm/13.5 x 16.5 in.), large and small quarto (both sizes unclear);
- demy (c. 387.4 x 482.6 mm/15.25 x 19 in.);
- medium (c. 444.5 x 571.5 mm/17.5 x 22.5 in.);
- royal (c. 482.6 x 609.6 mm/19 x 24 in.);
- super royal (c. 488.95 x 698.5 mm/19.25 x 27.5 in.);
- imperial (c. 559 x 768 mm/22 x 30.25 in.);
- “Folio Fool’s Cap gilt” (size unclear);
- ditto in quarto (size unclear);
- marble paper (size unclear);
- royal blue (c. 469.9 x 596.9 mm/18.5 x 23.5 in.);
- small blue (size unclear).<sup>950</sup>

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<sup>949</sup> TNA, WORK 5/145, Contracts.

<sup>950</sup> Sheet sizes were derived from Leadbetter, *The Royal Gauger*, 44 and when not given there from Johnson, *New Duty on Paper*, 4v-8r.

Two pocketbooks with gilt edge finish are further listed (“An [octavo] Demy Pocket Book gilt” and „An [octavo] D<sup>o</sup> Fool’s Cap”) as well as writing equipment such as pencils, pens, wafers, wax, ink, tortoiseshell penknives, round rulers, and black and silver sand. It is noticeable that a variety of 19 different papers are requested here, varying in both size and weight and thus also in quality. In the office at Blenheim only c. 13 different types of paper were in use. The diversity of the papers may suggest a range of different purposes, including their use for different types of architectural drawings, but likewise for different types of written documents. The most expensive paper in the list and therefore potentially of premium quality, is imperial, with a price per ream of £6 15s and £6 10s, respectively.<sup>951</sup> It is likely that more finished drawings like presentation drawings would have been produced on paper of this type. The least expensive paper is “Ordinary Pott” at 8s 6d. It is probably the smallest in size (c. 311.1 x 393.7 mm/12.25 x 15.5 in.) and may have been used as jotting paper for sketches or such like.<sup>952</sup> The quire marbled paper (24 sheets) ordered for 2s may have been required to produce portfolio covers or other kinds of coverings, as seen in Richard Castle’s office for example (fig. 6.10).

Drawings by William Dickinson for the areas of Whitehall, Westminster, and St. James’s Palace, which were catalogued by Geraghty and are at All Souls College, Oxford, were most suitable for a comparison with the types of paper ordered for the Whitehall office. These three areas were administered by a joint office of works. The result is that here, too, there is no drawing that corresponds completely with the determined paper sizes. The dimensions of the drawings mostly vary, i.e., no standardised paper size was used, but the paper was probably cut in pieces of convenient size by the draughtsmen in the office. A plan for St. James’s Palace, for example, of which there is also a duplicate, is attributed to Dickinson and dated to 1712.<sup>953</sup> With dimensions of 494 x 732 mm/19.45 x 28.82 in. and 536 x 751 mm/21.1 x 29.57 in., the two survey plans could be trimmed imperial formats (c. 559 x 768 mm/22 x 30.25 in.). The same applies to Dickinson’s c. 1711 colour washed designs for

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<sup>951</sup> Size and weight could not be determined for all papers in the list.

<sup>952</sup> Johnson, *New Duty on Paper*, 5v-6r. Leadbetter lists pot under “Printing Super Royal” and gives dimensions of 311.2 x 393.7 mm/12.25 x 15.5 in., see Leadbetter, *The Royal Gauger*, 44.

<sup>953</sup> All Souls College, Oxford (AS) I.2 (Geraghty 250), AS III.1 (Geraghty 251).

remodelling the west side of Westminster Hall. They measure 519 x 733 mm/20.43 x 28.86 in. and 506 x 715 mm/19.92 x 28.15 in.<sup>954</sup> Two undocumented proposals for the rebuilding of St James's Palace, dated c. 1715-20, might further correspond to trimmed imperial paper. Both of these finished plans of ground and first floor are at Sir John Soane's Museum and are almost identical in size, measuring 545 x 755 mm/21.46 x 29.72 in. and 545 x 760 mm/21.46 x 29.92 in. respectively.<sup>955</sup> Smaller sizes such as the sketched survey plans of Captain Turner's house, Westminster, at 299 x 193 mm/11.77 x 7.6 in., or the sketch design for a temporary Lords chamber (1719) at 369 x 187 mm/14.53 x 7.36 in. are most probably also trimmed larger formats.<sup>956</sup>

Except for pack thread, no other packaging material seems to have been needed at the Whitehall office at the time. The order of wax and sealing wafers indicates at least that letters were dispatched.<sup>957</sup> Drawings were likely posted in a variety of ways. There is evidence, for example, of the practice of sending drawings in boxes, as was done by the architect Thomas Hewett (c. 1656/58-1726) in order to deliver plans to his patrons in 1725.<sup>958</sup> Nicholas Hawksmoor, too, dispatched to his client the third Earl of Carlisle "a Box of sundry Drawings" by coach.<sup>959</sup> The accounts for the Kimbolton Castle building project record that the postage for "Two Packets of draughts sent from London by Mr Haweksmoore [sic]" amounting to 1s 4d was paid by the local surveyor William Coleman.<sup>960</sup> It is further noted, that Coleman ordered "Six large Sheets of Drawing Paper Used by Mr Haweksmoore" at a price of 2s.<sup>961</sup> Sending drawings by post and in boxes is also documented in Giacomo Leoni's correspondence. In a letter

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<sup>954</sup> AS III.11 (Geraghty 356), AS III.10 (Geraghty 357).

<sup>955</sup> SM drawer 62/1/7-8.

<sup>956</sup> AS III.15 (Geraghty 358), AS III.22 (Geraghty 362).

<sup>957</sup> A wafer is a thin disc of paste (flour mixed with water, gum, and colouring) which was used to seal letters in the mid-1700s. See Katherine Mainolfi Koppenhaver, "Seals, Stamps, and Paper," in *Forensic Document Examination: Principles and Practice* (Totowa, N. J.: Humana Press, 2007), 203.

<sup>958</sup> Hayes, "An Irish Palladian in England," 56.

<sup>959</sup> Geoffrey Webb, "The letters and drawings of Nicholas Hawksmoor relating to the building of the Mausoleum at Castle Howard," *The Volume of the Walpole Society* 19 (1930-31): 118. Thanks to Dr Melanie Hayes for drawing my attention to this.

<sup>960</sup> Cambridgeshire Archives (CA), KPGMD/3500/13, Folder/19, f. 8. I would like to thank Prof Christine Casey for pointing this out to me. For William Coleman see Whistler, *The Imagination of Vanbrugh*, 135 ff.

<sup>961</sup> CA, KPGMD/3500/13, Folder/19, f. 8.

dated August 6, 1726, for example, he notes that he has given the carrier Robert Holbrooke a box “with all the Draughts framed, and paked Carefully”.<sup>962</sup> He also adds “three of his Books” to the parcel, most certainly his Palladio translation of 1715. In another letter dated April 5, 1740, Leoni states that he mailed a design with the “night post”.<sup>963</sup> While the account that the architect Henry Woodyer (1816-1896) requested his drawings to be sent by post rolled around an umbrella was a century later, it is nevertheless possible that in the eighteenth century, too, drawings were dispatched by post in rolled form, perhaps wrapped in packing paper and fastened with a thread.<sup>964</sup> This is particularly conceivable for small format drawings. The 140 x 190 mm/5.51 x 7.48 in. drawing attributed to Gibbs, featuring a plan and elevation for an unidentified office building or farmhouse with the reverse endorsement “To John Thornhag[h] / Member of Parl[iament] / at Shireoaks ne” could be an indication that it was sent by post even without any additional packaging.<sup>965</sup> Such endorsements appear on some other drawings as well, pointing to a postal shipment.<sup>966</sup> From one of John Webb’s letters it emerges that he sent drawings “sewed up in past bord”, which according to John Alfred Gotch means that the carrier was given a pasteboard case, wherein the drawings were sewn up.<sup>967</sup>

An order for the Drawing Room of the Office of Ordnance dated April 8, 1723, provides details of the office supply there.<sup>968</sup> The list includes only stationery and no other goods and does not mention prices. 400 “Goose Pens” as well as 200 “Goose Quills” and 400 “Crow Pens” were ordered, along with two “Penn Knives” with which mistakes could be erased before the ink had dried and quills could be sharpened. While goose feathers were standard, crow feathers were preferred due to their sturdiness.<sup>969</sup> How long natural quills could be used depended on various factors, such

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<sup>962</sup> Danter, “The Eighteenth-Century Rebuilding of Lyme Park,” 74.

<sup>963</sup> Danter, “The Eighteenth-Century Rebuilding of Lyme Park,” 80.

<sup>964</sup> Anthony Quiney, “Altogether a Capital Fellow and a Serious Fellow Too’: A Brief Account of the Life and Work of Henry Woodyer, 1816-1896,” *Architectural History* 38 (1995): 195.

<sup>965</sup> Hewlings, “Sir George Savile’s Architectural Drawings,” 83-85; Nottinghamshire Archives (NA) DP/97/2/1/2.

<sup>966</sup> Drawings of Rufford Abbey: NA DP/97/1/1, NA DP/97/1/9.

<sup>967</sup> John Alfred Gotch, “Some newly found drawings and letters of John Webb,” *Journal of the Royal Institute of British Architects* 28, no. 19 (September 1921): 566; 570. I am indebted to Prof Christine Casey for bringing this to my notice.

<sup>968</sup> TNA, WO 55/2281, Ordnance Office and War Office: Miscellaneous Entry Books and Papers.

<sup>969</sup> Baudez, *Inessential Colors*, 231; Campbell, *Building St Paul’s*, 51.

as usage, paper, skill of the writer, material, etc. Since after a certain amount of use quills soften, several prepared quills were set ready, to avoid sharpening during the writing or drawing process. Nicholas Buchotte, in his book *Les Règles du dessein*, recommended a stock of two or three hundred quills.<sup>970</sup> The Drawing Room order clearly exceeded this. For Wren's Cathedral office, too, an order of quills is documented. In September 1690, 600 were ordered for a total of 6s.<sup>971</sup> Although quills are needed in large quantities for drawing and writing, they are ephemeral objects that, once worn out, were not kept. Therefore, hardly any quills have survived from this period. In winter 2021, while clearing out the drawing office of John Soane ahead of a year-long restoration of the space at Sir John Soane's Museum, three original quills were found hidden in a drawer, probably used by some of Soane's 54 pupils, clerks, or assistants working in the office between 1784 and 1837 (fig. 6.11).<sup>972</sup> Worn and stained with ink, they are fascinating and rare finds that represent materialised elements of historical draughtsmanship and labour in an architectural office.

The Ordnance Drawing Room order further contains 36 pencils of various thicknesses, as well as "1 Quart" (= c. 1.1 l) of black ink and "1/2 Pinte" of red ink (= c. 284 ml). Black ink was essential for both writing and drawing and therefore had to be available in larger quantities than red ink. In addition, paper was required – six different types in total. The most demand was for letter paper, of which 480 sheets were ordered, followed by 240 sheets "Debenture", 288 sheets imperial, 48 sheets royal and "Thinn Post" paper, and 18 sheets of Indian paper. The latter was annotated with the note "not fold over" and is possibly a premium paper given the small quantity ordered. The name of this paper, however, is not clear. The paper may have been imported from India. Yet, because India had fallen under the sovereignty of the British Empire it had to compete with cheap, mass-produced European paper to meet the demand. This resulted in waste papers and rags being used as raw materials, which led to a deterioration of Indian paper and ultimately to an accelerated decline of the

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<sup>970</sup> Baudez, *Inessential Colors*, 231.

<sup>971</sup> Campbell, *Building St Paul's*, 51.

<sup>972</sup> I am indebted to Helen Dorey, Deputy Director and Inspectress, and Joanna Tinworth, Curator (Collections) at Sir John Soane's Museum, for providing information and images on the drawing instruments in the collection.



Indian papermaking industry.<sup>973</sup> The quality of Indian paper was thus low and possibly unsuitable for drawings, that is, at least for highly finished ones. In the eighteenth century, the term Indian paper was furthermore used to refer to Chinese wallpaper.<sup>974</sup> The imperial and royal papers in the list would be suitable for producing drawings or engravings. Langley for his publication *Ancient Masonry*, for example, purchased large quantities of “Royal Paper”.<sup>975</sup> Looking at some Ordnance Office drawings from this period, it is noticeable that there are indeed some drawings that are very similar to the paper format imperial (c. 559 x 768 mm/22 x 30.25 in.) that is included in the order. Three drawings have an identical sheet size of 535 x 760 mm/21.06 x 30.24 in., meaning that they may have been cut from an imperial format.<sup>976</sup> Four other drawings are of similar sizes, likewise indicating a trimmed imperial format.<sup>977</sup> Another group of five drawings also shares similar, almost identical, sheet sizes, but not matching the imperial measurements.<sup>978</sup> Their sizes are neither compatible with the other papers in the order, whose sizes could be determined. However, they would fit short demy (c. 355 x 514 mm/13.98 x 20.24 in.), a paper that is not on the list.<sup>979</sup>

It was not possible to determine the size of the letter paper clearly used for correspondence. Debenture may be a type of notepaper and thin post with dimensions of c. 387 x 495 mm/15.24 x 19.49 in. would qualify for drawings, though perhaps not the most finished ones. It remains unclear whether the group of five drawings might have been on letter paper, debenture, or Indian paper. Finally, the order includes three memorandum books and packing materials such as red tape, pack thread, and sealing

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<sup>973</sup> Laura Brill, and Melissa Buschey, *Indian Handmade Paper Bibliography* (2005), 1.

<sup>974</sup> Emile de Bruijn, “The sale and distribution of Chinese wallpapers in Britain and Ireland between the eighteenth century and the present,” *History of Retailing and Consumption* 4, no. 3 (2018): 263. A receipt from Dalemian Mansion, Cumbria, mentions the purchase of “16 sheets of Indian paper” with a price of 13s per sheet.

<sup>975</sup> Christine McAleavy, “Batty Langley, Robert Morris and the writing of *Ancient Masonry*,” *The Georgian Group Journal* XXV (2017): 100.

<sup>976</sup> TNA, WORK 31/129, TNA, WORK 31/130, and TNA, WORK 31/132.

<sup>977</sup> TNA, WORK 31/123 at 535 x 735 mm/21.06 x 28.94 in., TNA, WORK 31/124 at 520 x 725 mm/20.47 x 28.54 in., TNA, MPE 1/331 at 521 x 749 mm/20.51 x 29.49 in., and TNA, MPH 1/592 (2) at 540 x 745 mm/21.26 x 29.33 in.

<sup>978</sup> TNA, WORK 31/131 at 355 x 520 mm/13.98 x 20.47 in., TNA, WORK 31/151 at 345 x 510 mm/13.58 x 20.08 in., TNA, WORK 31/152 at 355 x 510 mm/13.98 x 20.08 in., TNA, WORK 31/153 at 355 x 510 mm/13.98 x 20.08 in., and TNA, WORK 31/73 at 355 x 510 mm/13.98 x 20.08 in.

<sup>979</sup> Gaskell, “Notes on Eighteenth-Century British Paper,” 41.

wax. While Lemprière's expenditure on the purchase of drawing equipment only lists writing and drawing instruments, William Deane's account for drawing equipment from July 20, 1743, provides insight into other aspects of office ordering.<sup>980</sup> Included here are several drawing boards and instruments for different sizes of paper, such as a "Drawing Board in Mahogany & T Square for a sheet of Imperial paper" for £3, or "another for half a sheet of Imperial Paper" for £2 10s. This means that the two drawing boards had sizes of at least c. 559 x 768 mm/22 x 30.25 in. and c. 559 x 384 mm/22 x 15.13 in. to accommodate full and a half imperial sheets respectively.

Drawing boards were simple planks or plain wooden surfaces that were either propped up on tables or used flat and could be turned over easily.<sup>981</sup> They had become standard drafting tools along with the T-square in the 1720s.<sup>982</sup> Perhaps owing to their simplicity and inconspicuousness, few boards have survived. One collection that owns a total of four drawing boards is Sir John Soane's Museum, whereas one was found in the back of a picture frame, recycled as a backboard (fig. 6.12).<sup>983</sup> While one drawing board dates from the twentieth century, three of them originate from the property of the architect John Soane and are listed in the 1837 inventory of his possessions: "Mahogany Drawing Board, Double Elephant / 2 Deal ditto Antiquarian size & 1 smaller".<sup>984</sup> As in the Drawing Room order, the drawing boards are described according to sheet size. Given that Double Elephant has a size of c. 584.2 x 711.2 mm/23 x 28 in., the drawing board must be of the necessary size. Antiquarian is a large paper format that does not appear among the pre-nineteenth-century sources, but measured between 914.4 x 1,371.6 mm/36 x 54 in. and 736.6 x 1,320.8 mm/29 x 52 in. Consequently, the drawing board needed to be quite large as well. A description in William Salmon's *Palladio Londinensis* (1734 edition) confirms that drawing boards were often adapted to the required paper sizes. Though he first gives dimensions of "about 19 Inches in Length, and 16 Inches in Width", he then adds that

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<sup>980</sup> Parnell, "The Ordnance Drawing Room," 152-154, Appendix A and B. Deane (fl. 1725-1747) called himself "Mathematical Instrument Maker to his Majesty's Office of Ordnance", see John R. Millburn, "The Office of Ordnance and the Instrument-Making Trade in the Mid-Eighteenth Century," *Annals of Science* 45 (1988): 222.

<sup>981</sup> Campbell, *Building St Paul's*, 49; Baudez, *Inessential Colors*, 223.

<sup>982</sup> Piedmont-Palladino, *Tools of the imagination*, 4.

<sup>983</sup> Helen Dorey, email to author, August 30, 2023.

<sup>984</sup> Joanna Tinworth, email to author, August 23, 2023.

the board “made of Wainscot, Mohogany, or some other hard Wood” could be “any Size that the Largeness of the Paper you use may require, with Pieces glewed [sic] on to each end to keep it from warping.”<sup>985</sup> While few original drawing boards have survived, at least there are illustrations of them in drawing manuals, such as in Buchotte’s *Les Règles du dessein* and on Jean Jacques Lequeu’s iconic *Les instruments du dessinateur* from 1782 that was to be published in his *Architecture civile* (figs. 6.13-6.14). Buchotte recommends woods such as pear, apple, or walnut for drawing boards and squares and a format of 508 x 381 mm/20 x 15 in.<sup>986</sup> This would make his drawing board smaller than those ordered for the Drawing Room of the Office of Ordnance. The suggested wood is native wood, unlike mahogany, but apple, pear, and walnut were nevertheless precious hardwoods. Lequeu describes his drawing board as “well dried walnut or beech top, assembled with mitre joints.”<sup>987</sup> In his drawing he further depicts several drawing instruments, such as quill and penknife, the latter consisting of a thick wooden handle with a sharp metal blade. Another example of a drawing board appears on the trade card of drawing master, carver, and gilder Thomas Johnson (1723-1799) from c. 1755-60 (fig. 6.15). The image shows a drawing board placed on a large and solid table holding a piece of paper upon which a man is drawing with a compass. The trade card is likewise particularly interesting with regard to the other features of the rather sparsely furnished room. Next to the drawing on the table is a book labelled “Archi”, likely referring to an architectural treatise. On a shelf on the wall are three further books and a piece of paper, which with their inscriptions “Perspective”, “Landskips”, “Flowers”, and “Fig[.] & Disegnes(?)”, represent important materials for reference and instruction along with the architectural book. A rare and more developed example of a drawing table with adjustable tabletop is that of the architect James Gandon (1742-1823), now in the Dublin Custom House (fig. 6.16). Lastly, the Office of Ordnance Drawing Room placed orders for “2 large screws

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<sup>985</sup> William Salmon, *Palladio Londinensis; or the London art of building in three parts* (London: A. Ward; J. Clarke; J. Oswald; E. Wicksteed, 1734), 19.

<sup>986</sup> Buchotte, *Les Règles du dessein*, 31: “La planchette [...] qui doit être d’un bois doux, comme de pommier, poirier, noyer, & autre semblable, aura environ 20 pouces dans un sens, & 15 pouces de l’autre.”

<sup>987</sup> Bibliothèque Nationale de France (BNF), FRBNF45372312, *Architecture civile de Jean Jacques Le Queu, 1777-1825*, pl. 4: “Table de bois de noyer où de hêtre bien sec, garnis d’emboîtures assemblée à onglet.”

for large books of Draughts” for £1 4s. Altogether, this points to an excellent equipment and organisation of the office and a high level of professionalism. This is further reflected in the repair of writing instruments, including rulers, brass compasses, and drawing pens.

From the documented stationery orders of John Kane, who worked as foreman and overseer of labourers in Castle’s office at Trinity College, it appears that in the period July 1744 to October 1745 a total of five deliveries of “2 Quires of Paper” (48 sheets) were made for 1s 2d each, in most cases at an interval of three to four months.<sup>988</sup> The delivery of May 16, 1745, was relatively quickly followed by the next one on June 12. Each of the five deliveries contained about 48 sheets, which makes a total amount of c. 240 sheets. However, since the name of the paper is not indicated here it is not possible to determine the size of it nor, therefore, its intended use. As it appears to be cheaper paper, it might be of lower quality and smaller format. In comparison, the Blenheim accounts give 1s 6d for two quires (48 sheets) of “Smaller Paper”, or 1s 6d for “2 Quire of paper”, both of which are above the price of the paper mentioned here.<sup>989</sup> On October 2, 1745, there follows the delivery of a “Quarto Paper book” for 1s 1d for Castle’s office. There are further deliveries on May 16 and September 27, 1745, of “1/2 Pint of Ink” for each 4d. The delivery of “1/4 Hundred quills” for 4d on September 27 may not seem a large order compared to the above mentioned orders. Given that these are the only Bursar’s vouchers, we do not know with what regularity this equipment was ordered for Castle’s office. They were perhaps intended for Kane’s personal use in the office and were therefore only ordered in small numbers.

While this archival evidence does not provide details about the paper types, Castle’s drawings reveal that no uniform sheet sizes were used, although in many cases identical or similar sheet sizes occurred. This applies particularly to drawings created for specific schemes or projects and are assembled in original portfolios. However, none of the drawings seem to correspond entirely to commercially available paper

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<sup>988</sup> TCD, MUN/P/4/49/37: July 6, September 13, January 21, May 16; TCD, MUN/P/4/49/43: June 12.

<sup>989</sup> BL, Blenheim Papers Add MS 19592.

sizes, suggesting that they have been cut in the office or later. Six of the seven drawings included in the Richmond Lodge Album, whose covers measure 427 x 343 mm/16.81 x 13.5 in., have similar dimensions, the exception being the site map.<sup>990</sup> They could be different trimmed formats, including various royal writing sizes and double pot (c. 387 x 495 mm/17 x 25.5 in.). The drawings were certainly cut to comply to the dimensions of the album. Although the site plan is slightly larger, by folding the lower part of the sheet it too fits into the format of the album.

Many of the drawings for Carton House that are enclosed in the album measuring 305 x 495 mm/12.01 x 19.49 in. likewise have similar sheet dimensions. The two working drawings (see figs. 3.5a-b, chapter III), have identical sizes of 550 x 900 mm/21.65 x 35.43 in.<sup>991</sup> Although paper of this size (and larger) was commercially available, two sheets were stuck together here in order to obtain a large format. While they would fit into the album lengthwise, their height would make them stick out of the format of the album. This is yet another indication that they were not originally included here. Three plans from the album – ground floor, first floor and second floor, probably for the same scheme – show similar sheet sizes that might indicate a cut foolscap format.<sup>992</sup> Two other drawings featuring elevations are larger in size.<sup>993</sup> A number of trimmed papers are suitable for these sizes, e.g., printing royal, fan paper large, chancery double, or cartridge paper (see tab. 2 for paper sizes). The remaining five drawings from the portfolio have various dimensions, which might relate to trimmed pot paper. The different sheet sizes might be an indication that not all drawings were originally contained in this album. As already mentioned, this is also supported by the presence of different types of drawings. Furthermore, it seems possible that the drawings were trimmed later, for example, if framed and displayed by previous owners.

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<sup>990</sup> The dimensions of the drawings are as follows: V&A E.2123:3-1992 at 404 x 649 mm/15.91 x 25.55 in., V&A E.2123:4-1992 at 402 x 640 mm/15.83 x 25.2 in., V&A E.2123:5-1992 at 410 x 632 mm/16.14 x 24.88 in., V&A E.2123:6-1992 at 399 x 627 mm/15.71 x 24.69 in., and V&A E.2123:7-1992 at 400 x 625 mm/15.75 x 24.61 in. The site plan is slightly larger at 470 x 656 mm/18.5 x 25.79 in.

<sup>991</sup> IAA 96/68.2/1/13, IAA 96/68.2/1/14.

<sup>992</sup> IAA 96/68.2/1/4 at 267 x 368 mm/10.51 x 14.49 in., IAA 96/68.2/1/5 at 273 x 371 mm/10.75 x 14.61 in., IAA 96/68.2/1/6 at 273 x 371 mm/10.75 x 15.61 in.

<sup>993</sup> IAA 96/68.2/1/9 at 349 x 521 mm/13.74 x 20.51 in., IAA 96/68.2/1/10 at 356 x 521 mm/14.02 x 20.51 in.

A similar picture emerges for the two albums that contain designs for Headfort House. In the folder comprising scheme A, measuring 520 x 420 mm/20.47 x 16.54 in., the three drawings featuring basement, ground, and first floor plans have very similar or identical dimensions, which may point to papers such as demy, large post, fan paper or “bastard”/double copy, as well as to various larger trimmed formats.<sup>994</sup> The fourth drawing of scheme A with the elevation of the entrance front shows clear signs of later cutting along the upper sheet margin. It looks as if there were once two drawings depicted on the sheet, perhaps not only the entrance front but also the rear of the house. The original size of the sheet was thus probably similar to that of the scheme A plans and consequently had the same original format.<sup>995</sup> In the second folder of a slightly different format than the first, measuring 560 x 393 mm/22.05 x 15.47 in., which contains schemes B to D, two drawings each showing a ground floor for scheme B and C have similar sizes indicating trimmed royal and super royal as well as cartridge paper.<sup>996</sup> The scheme C drawing for the attic floor seems to correspond to that of the basement floor.<sup>997</sup> Their size could relate to various trimmed formats. The drawing with elevation and plan for scheme D, which is attributed to John Ensor, has yet another size.<sup>998</sup> This could relate to trimmed paper such as “bastard” or double copy, small fan paper, crown, large post, demy, or larger formats.

The drawings for Kildare House (later Leinster House) are not part of an album. Nevertheless, two groups of drawings can be identified which each have similar sizes. Two large-format drawings showing the general ground plan with courtyard and offices as well as the drawing featuring plan and elevations for the courtyard have almost identical dimensions, indicating a trimmed imperial paper.<sup>999</sup> Three smaller ones (ground plan, attic floor, and entrance of front elevation) are likewise roughly of

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<sup>994</sup> IAA 96/68.3/1/2 at 359 x 480 mm/14.13 x 18.9 in., IAA 96/68.3/1/3 at 338 x 480 mm/13.31 x 18.9 in., IAA 96/68.3/1/4 at 355 x 480 mm/13.98 x 18.9 in.

<sup>995</sup> “Catalogue of the Guinness Drawings Collection 96/68,” IAA 96/68.3/1/5 at 200 x 490 mm/7.87 x 19.29 in.

<sup>996</sup> IAA 96/68.3/1/7 at 360 x 543 mm/14.17 x 21.38 in., IAA 96/68.3/1/8 at 390 x 553 mm/15.35 x 21.77 in.

<sup>997</sup> Attic floor IAA 96/68.3/1/9 at 220 x 383 mm/8.66 x 15.08 in. The dimensions of the drawing of the basement floor could not be determined.

<sup>998</sup> IAA 96/68.3/1/10 at 255 x 467 mm/10.4 x 18.39 in.

<sup>999</sup> IAA 96/68.1/1/2 at 483 x 639 mm/19.02 x 25.16 in., IAA 96/68.1/1/3 frame window measuring 465 x 622 mm/18.31 x 24.49 in., and IAA 96/68.1/1/20 at 633 x 496 mm/24.92 x 19.53 in.

the same format, which might relate to a trimmed foolscap format.<sup>1000</sup> The other drawings have a variety of sizes, wherefore several papers might relate, such as demy or larger formats.

The drawings from the Vanbrugh Album made for different projects and attributed to Castle all have different sizes: the smallest measures 202 x 160 mm/7.95 x 6.3 in, the two largest 311 x 405 mm/12.24 x in 15.94 in. and 495 x 255 mm/19.49 x 10.04 in. Trimmed large formats would be compatible with them, such as royal, demy, or foolscap. Whether the formats of the drawings were different from the beginning or whether they had a uniform size that was lost only when the drawings were cut for compilation in the album is difficult to determine. A similar situation probably applies to the drawings in the Powerscourt Album, which are of irregular small sizes. Given that the album was assembled in the late nineteenth century, it is reasonable to assume that the drawings originally had different sizes. Whether this was a uniform size is not certain but given that the drawings were for one project or scheme, it could be possible. Of the three drawings for a house with seven bays in the Charleville Forest Drawings Collection, there are two similarly sized sheets with elevations that could relate to pot paper, and a larger sheet featuring two plans that could relate to royal or cartridge paper (see tab. 2 for paper sizes).<sup>1001</sup> The two similar sized plans for a seven bay house, likewise at the Charleville Drawings Collection, might indicate a royal format.<sup>1002</sup> Among the Castle drawings, no further similar sheet sizes could be determined.<sup>1003</sup>

To my knowledge, there are no archival records that provide information about Gibbs's office, its furnishings, and the writing or drawing equipment required. However, the drawings can offer useful information on this matter. As already observed for Castle, drawings that are in their original portfolios or were created for

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<sup>1000</sup> IAA 96/68.1/1/1 at 400 x 238 mm/15.75 x 9.37 in., IAA 96/68.1/1/5 at 412 x 226 mm/16.22 x 8.9 in., and IAA 96/68.1/1/7 at 403 x 215 mm/15.87 x 8.46 in.

<sup>1001</sup> IAA 86/24.1 at 384 x 270 mm/15.12 x 10.63 in., IAA 86/24.2 at 381 x 252 mm/15 x 9.92 in., and IAA 86/24.3 at 445 x 591 mm/17.52 x 23.27 in.

<sup>1002</sup> IAA 86/24.5 at c. 600 x 470 mm/23.62 x 18.5 in. and IAA 86/24.6 at 496 x 622 mm/19.53 x 24.49 in.

<sup>1003</sup> In part, the reason for this is that it was not possible to obtain the relevant measurements. This includes the drawings in the Patrick Guinness collection, in the collection of the Earl of Belmore at Castle Coole, and in the Stillorgan Album at Elton Hall.

specific schemes or projects often have the same or similar sizes. This is the case, for example, with “A Book of Drawings of Kiveton in Yorkshire” (volume VIII at the Ashmolean Museum), the portfolio measuring 500 x 375 mm/19.69 x 14.76 in. Most of the sheets (26) have identical dimensions of around 280 x 440 mm/11.02 x 17.32 in., but are vertically and horizontally arranged, i.e., they have different page orientations.<sup>1004</sup> They might thus correspond to foolscap paper (c. 330.2 x 406.4 mm/13 x 16 in.), for example, but also to trimmed larger sizes (see tab. 2 for paper sizes). Three double sheet drawings are larger in size, measuring some 440 x 560 mm/17.32 x 22.05 in. and are also arranged vertically and horizontally. These measurements could indicate either printing royal or cartridge paper. Likewise, of the 17 designs for the rebuilding of Lowther Hall in the bound volume measuring 745 x 520 mm/29.33 x 20.47 in., ten have identical dimensions of 465 x 570 mm/18.31 x 22.44 in., which again could correspond to printing royal or cartridge paper. Three drawings are larger, measuring 745 x 520 mm/29.33 x 20.47 in. (horizontally orientated) and 520 x 750 mm/20.47 x 29.52 in. (vertically orientated), respectively. With this they might relate to imperial paper, the size of which had to be trimmed due to the size of the album.

The drawings assembled in the Kelmarsh Hall Album at the RIBA exhibit greater variability in terms of sheet sizes. While there are some drawings that have identical or similar sizes, there is also a wide range of different sheet sizes. Most of the drawings can be related to trimmed pot paper. These include the three small scale drawings showing variants for the side elevation and a section of the house each measuring 150 x 190 mm/5.91 x 7.48 in. Similarly, two slightly larger drawings, a plan and an elevation, with identical dimensions of 240 x 190 mm/9.45 x 7.48 in. could be trimmed pot paper. The same applies to two other drawings measuring 260 x 370 mm/10.24 x 14.57 in. and a similar sized drawing measuring 265 x 370 mm/10.43 x 14.57 in., as well as three further drawings measuring 280 x 375 mm/11.02 x 14.76 in., 290 x 375 mm/11.42 x 14.76 in., and 285 x 360 mm/11.22 x 14.17 in. There are four other groups consisting of two drawings each, which have similar or identical

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<sup>1004</sup> No sheet dimensions could be determined for ASH WA1953.32.12, ASH WA1953.32.15, and ASH WA1953.32.16.



dimensions.<sup>1005</sup> None can be matched to the commercially available paper sizes, all of them are probably trimmed sizes, such as pot paper, foolscap, demy, or larger sizes. The other drawings are of various sizes, which could correspond to different paper sizes, e.g., foolscap, chancery double, or large fan paper (see tab. 2 for paper sizes).

The drawings at the Ashmolean Museum not assembled within project portfolios are more difficult to assess. Many have similar or identical sheet sizes, but in some cases, there are indeed signs of trimming. This is particularly the case for the drawings that qualify as preparatory drawings for the engravings for *A Book of Architecture*. Despite the trimming, or perhaps because of it, there is a certain variability in the sheet sizes, especially when compared to the preparatory drawings that were made for the engravings for *Rules for Drawing*. All those sheets have the same dimensions of more or less 200 x 350 mm/7.87 x 13.78 in. (vertically orientated), or 350 x 200 mm/13.78 x 7.87 in. (horizontally orientated). These are also the measurements of the preparatory drawings for the engravings for *Bibliotheca Radcliviana*. No corresponding commercially available paper has been found for this rectangular format. Perhaps this paper was made especially to the demand of Gibbs. It is also possible that the original format was larger and was cut to achieve the desired format needed for the drawings when compiled in the large Gibbs volumes. Comparing the sheet sizes of the preliminary drawings for the three publications with the sheet sizes of the plates, it is noticeable that with only a few exceptions the sheets of the drawings are smaller.<sup>1006</sup>

The different sheet sizes of the preparatory drawings for Gibbs's publishing projects could indicate his increasing professionalisation. For, while publishing architectural designs was an essential part of architectural practice, enabling a high income and respectable reputation, it required the enterprise and resources to do

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<sup>1005</sup> RIBA SB67/2(9) and RIBA SB67/2(27) with 255 x 380 mm/10.04 x 14.96 in.; RIBA SB67/2(32) and RIBA SB67/2(33) with 310 x 405 mm/12.2 x 15.94 in.; RIBA SB67/2(15) with 420 x 510 mm/16.54 x 20.08 in. and RIBA SB67/2(16) with 410 x 500 mm/16.14 x 19.69 in.; RIBA SB67/2(22) with 280 x 405 mm/11.02 x 15.94 in. and RIBA SB67/2(23) with 270 x 405 mm/10.63 x 15.94 in.

<sup>1006</sup> *A Book of Architecture* (1728): 527 x 381 mm/20.75 x 15 in.; *Rules for Drawing* (1738): 483 x 318 mm/19 x 12.52 in.; *Bibliotheca Radcliviana* (1747): 422 x 267 mm/16.61 x 10.51 in. The measurements are taken from the copies in the collection of the Metropolitan Museum of Art, New York.

so.<sup>1007</sup> While for *A Book of Architecture* he was still finding his way into the publishing business and existing sources were copied over a longer period of time, dependant on the means available to order them from the engraver with the necessary skills and time at that particular point, *Rules for Drawing* and *Bibliotheca Radcliviana* were new projects. Following the experience Gibbs had now gained, these two publications were handled in a different way and, with Borlach's support, were completed and released more smoothly.

To conclude, the above accounts illustrate the similar requirements of the different architectural offices. In addition to paper, writing tools, packaging material, and lighting, other essential office equipment included cleaning supplies such as brooms and mops, which seemed to be a constant necessity in order to ensure the smooth running of everyday office life. The fact that eighteenth-century architectural offices had to ensure a tidy working environment with sufficient lighting may seem a minor detail, but the effort required to achieve this at the time was substantial compared to today. The most common types of paper to appear in the archival records are imperial, royal, foolscap, and demy, all of which were ordered in large quantities. Blue paper (e.g., blue demy, royal blue, and small blue) was another important component of the offices (fig. 6.17). The Blenheim office, the Whitehall office, and the Drawing Room of the Ordnance Office all used blue paper. This was cheaper than high quality white paper and was made into covers, envelopes, interim book wrappers, lining papers, letter papers, office stationery, and wrapping paper.<sup>1008</sup> Preserved albums show that blue paper was also used in Castle's office. A further distinctive item is the gilt paper, which is recorded for both the offices at Blenheim and Whitehall. It is noticeable that the Whitehall office of the Office of Works in particular employed a high diversity of paper types, suggesting that there was a variety of uses to it. Determining standard sizes for architectural drawings in the offices proves to be difficult. Drawings that are part of an album often have similar sheet sizes, but these are not necessarily the same for drawings in other albums. Often the drawings of an office vary in their format, which might partly be due to secondary trimming

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<sup>1007</sup> T. P. Connor, "The making of 'Vitruvius Britannicus'," *Architectural History* 20 (1977): 15.

<sup>1008</sup> Irene Brückle, "The historical manufacture of blue-coloured paper," *Paper Conservator* 17, no. 1 (1993): 21.

measures. If drawings for a particular building project have different dimensions, this might indicate different periods of production during the design and construction process. What is striking are the roughly identical dimensions of the preparatory drawings for Gibbs's *Rules for Drawing* and *Bibliotheca Radcliviana*, which differ considerably from the sheet sizes of the preparatory drawings for *A Book of Architecture*.

### Explanatory Text

Besides titles, architectural drawings of the early modern period might have additional explanatory texts. I have grouped these into three standard categories: 1) legends that describe the subject matter (simple legend); 2) legends that provide constructional information or design instructions (constructional legend); and 3) legends containing information about the material (material legend). The majority consists of category 1, followed by categories 2 and 3. The origins of category 1 explanatory texts on architectural drawings are likely to be found in cartography. Already the earliest printed map of an English town, published in 1559 by William Cuningham, included a legend with the city's landmarks using capital letters.<sup>1009</sup> The French military engineer Sébastien Le Prestre de Vauban later required French engineers and draughtsmen to add legends to all plans, allowing for the immediate and precise identification of all structures shown.<sup>1010</sup> It became common practice for survey plans, maps, and engineering drawings to include descriptive legends using capital letters or figures to provide an explanatory summary of what was depicted.

Many maps and plans of the British Office of Ordnance seem to have explanatory texts of category 1 as standard. These do not appear to have been subject to a strict design and accordingly they tend to differ in appearance. Either titled

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<sup>1009</sup> Anthony Gerbino, "The Paper Revolution: The Origin of Large-scale Technical Drawing under Henry VIII," in *Compass & Rule: Architecture as Mathematical Practice in England*, eds. Anthony Gerbino and Stephen Johnston (New Haven: Yale University Press, 2009), 35.

<sup>1010</sup> Warmoes, "The Rationalisation and Codification," 304; Sébastien Le Prestre de Vauban, *Instruction pour les ingénieurs et des dessineurs (sic) qui lèvent les plans des places du roi ou des cartes* (Paris: L'Imprimerie Royale, 1714), 4-5: "Ils n'oublieront pas de [...] joindre une legende relative aux chiffres qui marqueront le nom de Portes, celui des Bastions & autres Ouvrages des principaux Edifices, des Magazins, Casernes & de tous le Bastiments appartenans au Roy."

“References” or “Explanation”, they describe in varying detail what is being illustrated using capital letters. They are partly enclosed within separate boxes or cartouches; others are placed alongside the drawings with no separation. Measurements are never part of these legends. The *Plan and Elevation of the Horse and Foot Barracks at Dublin*, for example, copied by Board of Ordnance military engineer and army officer John Henry Bastide (c. 1700-1770) in 1722 features a category 1 explanatory text on a trompe-l’œil scroll consisting of capital letter, full stop, and description in blockletters (fig. 6.18a). The outlines and walls of the plan of the Royal (later Collins) Barracks are washed in light red, while the elevation is washed and shaded in the grey wash style. The original drawing that Bastide copied still exists, too, although it does not show any score marks for tracing (fig. 6.18b). McParland attributes it to the office of Thomas Burgh, surveyor general and architect of the barracks.<sup>1011</sup> The quality of Bastide’s copy surpasses that of the original. It is further noticeable that Bastide has not drawn the outlines of the ground plan in black ink, but in red ink, and has refrained from using light red wash in the elevation. Similarly, the design of the explanatory text differs in the two drawings. In the original, the legend is titled “References” and a piece of drapery attached to three nails serves as its background. The explanations of the letters are in cursive script rather than in block letters. On the one hand, the two drawings represent a link between the Office of Ordnance in London and Dublin. On the other hand, Bastide’s copy demonstrates that reproductions of drawings were considered an important source of architectural knowledge. It is possible that this copy was made to be included in the Ordnance’s office collection.

The above-mentioned drawing of a water engine by trained cartographer Clement Lemprière from 1721 likewise features a category 1 legend within a box (see fig. 3.46, chapter III). Two small plans of the fortified towns of Limerick and Galway from the Vanbrugh Album at the V&A, attributed to the circle of Pearce and presumably related to his military concern, have legends with capital letters and explanatory text within a separate box next to the drawing (figs. 6.19a-b). Two related drawings include prepared boxes for the legends, but these have not been filled in (figs. 6.19c-d). Both those maps of Drogheda and possibly Athlone, can thus be considered

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<sup>1011</sup> McParland, *Public architecture in Ireland*, 123.

unfinished.

Another drawing from the Vanbrugh Album deviates somewhat from the standard category 1 form discussed so far. This is a plan of the basement and ground floors of a small house, attributed to the circle of Pearce and dated to the mid-eighteenth century (fig. 6.20).<sup>1012</sup> The two somewhat crude plans are accompanied on the left by two legends, which are each set within a double framed box. The floor names are given as titles, followed by the listing of the various rooms arranged using lower case letters. The distinctive detail here is that the dimensions of the rooms in feet and inches are added to the legend. Legends containing precisely these four components (title, capital letters, room descriptions, and measurements) are not encountered on maps or engineering drawings. However, expanded legends like these can be considered a special characteristic of Castle's architectural drawings.

On these, upper and/or lower case letters and in some cases additional numbers provide the key for the explanations of what is shown. The descriptions are often written in neat calligraphy next to or below the drawings beneath the title "Explanation". The earliest of such explanatory texts in Castle's oeuvre occur in connection with the drawings for Richmond Lodge and the *Essay on artificial navigation*. The latter includes on *figure 11* a legend detailing the plan and the profile of the upper floor of a lock (fig. 6.21). It is not titled but dimensions are given in inch x inch. None of the other surviving navigation drawings contains any such explanatory text. Of the six drawings in the Richmond Lodge Album, four have explanatory texts. These consist of descriptions of the rooms or features without giving dimensions but with the title "Explanation". While the explanatory text of these drawings still seems inconsistent, this is no longer the case with the legends on the later drawings. It seems that a specific format was established, consisting of title, letter, and room name or usage, and dimensions in feet and inches x feet and inches (fig. 6.22). To maintain a neat formatting, underlines or dots are inserted as blanks. Inverted commas enclose the letters and the measurements. In some cases, the explanatory texts provide more detailed information, such as that on the drawing of the plan and elevation for a Dining

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<sup>1012</sup> Lorimer, and Newton, *The collection of drawings by Sir John Vanbrugh*, 144.

Hall at Trinity College (see fig. 5.53, chapter V). Here, two options for the arrangement of the tables as well as their seating capacities are explained, for which a short descriptive text is inserted. A Nota bene (“NB”) is further added, which sometimes also occurs as part of the explanatory texts on other drawings, such as the *Proposed plans of first and second floors for Doneraile House* where an alternative use of space is offered (see fig. 5.73, chapter V).<sup>1013</sup>

There are four drawings attributed to Castle where the explanatory text deviates from this standard format. This concerns, on the one hand, the four plans for a six-bay town house in the Powerscourt Albums at the IAA (fig. 6.23). The legends of these drawings are messy. While they follow the standard of an expanded legend consisting of title, letter, room name, and measurements in feet and inches x feet and inches, they lack inverted commas that encompass the letters and measurements. The dimensions are separated by colons and not by underlines as is otherwise the case. Quickly placed dots are used as blanks. In addition, the room names/usages for several spaces are not given; only the corresponding dimensions are indicated. The script is not a neat, looped calligraphy but seems more of a fast everyday hand.

The other three drawings where the explanatory text differs from the standard are scheme C plans for Headfort House (see figs. 5.66-5.68, chapter V). The explanatory texts on these feature titles, letters, and room specifications, but the corresponding measurements are not given. These are noted directly in the plan, where appropriate in cruciform layout. In particular, the legends of the plans of the basement and first floors are rather reduced, making them category 1 simple legends (see figs. 5.66 and 5.68, chapter V). In addition, the script looks different. It is slanted more to the right and is less of a calligraphy. These two drawings are further distinguished by the fact that the room height is indicated below the title. The explanatory text of the ground-floor plan, on the other hand, is somewhat closer to Castle’s standard format; here the letters are enclosed in inverted commas, there are underlines, and some of the information is more detailed (see fig. 5.67, chapter V). For example, the occupancy capacity for horses is given for the stables. Only the room

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<sup>1013</sup> IAA 96/68.4/3.

heights are given in the legend, length and width are marked on the plan. The font likewise slightly differs from the neat calligraphy that is otherwise used for explanatory texts. These deviations from the established standard might indicate a different authorship. This might further suggest that this conventional practice of Castle found dissemination beyond his office in Irish architectural draughtsmanship.

A drawing for an unidentified barrack held at the IAA and mentioned in chapter V might support this suggestion (fig. 6.24). It is described as possibly in the hand of Castle and dated to 1730, the time of Pearce's surveyor generalship.<sup>1014</sup> The descriptive legend on the left and the "Explanation of the Plan" on the right, which lists the dimensions of the rooms from left to right, using long underlines and quotation marks, would seem to emulate Castle's format for explanatory texts. But the confusion of the two separate legends and their incompleteness (the letter g is not described) as well as their general design deviates from Castle's standard. The somewhat unrefined draughtsmanship and the application of brown wash are likewise untypical of Castle's work. In my opinion, Castle was not practically involved in the production of this drawing. However, it seems possible that the draughtsman was familiar with Castle's drawings and his style of annotations.

The model design *Plan[s and elevation] ... of A Charter School House* printed in *An abstract of the proceedings of the Incorporated Society in Dublin* published in 1737 may provide further support for this argument (fig. 6.25). The two plans of the ground and first floors of the school building are each accompanied by a legend with capital letters, description of the use of the rooms, and measurements, and thus have similarities to Castle's explanatory texts. Castle was a subscriber to the Incorporated Society, and it is recorded that he "drew the plans for the Charter Schools".<sup>1015</sup> Following McParland, I believe that Castle was not the architect of the published model design.<sup>1016</sup> However, the draughtsman may have been influenced by Castle's style of the explanatory texts.

Before considering examples of explanatory texts on other architectural

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<sup>1014</sup> McParland, *Public architecture in Ireland*, 133-134; IAA 96/68.6/3.

<sup>1015</sup> McParland, *Public architecture in Ireland*, 174.

<sup>1016</sup> McParland, *Public architecture in Ireland*, 174.

drawings of the period, one word about John Ensor. In the script analysis in chapter V, the similarity of the explanatory texts on Castle's drawings from the mid-1730s onwards with John Ensor's script has already been pointed out. Perhaps, then, the expanded legend format is attributable to him, building on the simple legends that Castle had included on the Richmond Lodge Album drawings for Pearce. So far, I have not found an example of an architectural drawing that fully conforms to Castle's characteristic standard representation of expanded legends involving the four components of title, letters, descriptions, and dimensions. In general, architectural drawings with explanatory text are rare. Among Wren's drawings, there are but a few that include category 1 explanatory texts. The plan for an unidentified barrack dating to the 1670s or 1680s includes a legend below the drawing, consisting of capital letters and corresponding descriptions, some of which are more detailed and indicate, for example, the capacities for horses in the stables (fig. 6.26). Dimensions are not given; a title is likewise missing.

Hawksmoor supplied some of his drawings with explanatory texts of the categories 1-3. The *Elevation of the south side of the kitchen at Castle Howard* shows a category 2 explanatory text consisting of a legend with capital letters, followed by constructional instructions. This type of explanatory text is likewise found on the presentation drawing for an unidentified cupola of c. 1684-86 (fig. 6.27).<sup>1017</sup> Descriptions such as "F The Cap ought to be pigs eye" are presumably intended for the client or builder. The design for the drum and cupola over the west gate of All Soul's College features a category 3 legend (fig. 6.28). Using capital letters, instructions are given on the building material. For example, C to D may be "Heddington freestone" but "E to F must be of Burford Stone".<sup>1018</sup>

Although many drawings by Pearce include explanatory texts with constructional information, these are not arranged in the form of legends. Therefore, they do not fit into the categories 1-3 established above. The drawing with a plan and

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<sup>1017</sup> Anthony Geraghty, "Design for a cupola," accessed May 25, 2023, <https://library.asc.ox.ac.uk/wren/cupola.html#411>.

<sup>1018</sup> Anthony Geraghty, "Drawings by Nicholas Hawksmoor for the rebuilding of All Souls College, Oxford, c. 1708-34," accessed May 26, 2023, <https://library.asc.ox.ac.uk/wren/hawksmoor.html#460>.



elevation of a cruciform building notes for example that “The cornice of the upper room is to be placed equal with the level of 12ft-6 and to be high in itself \_\_\_\_\_ 1ft” (fig. 6.29). While the inscription is clearly in the hand of Pearce, the drawing itself is described as “perhaps” or “possibly by Pearce”.<sup>1019</sup> In fact, plan and scale bar resemble drawings by Castle (see figs. 5.43-5.44, chapter V), but the design of the elevation with its rough shading does not correspond to the sophisticated Castle style. The drawing of a market house for Lough Gall, attributed to Pearce, likewise contains constructional comments (fig. 6.30). It can therefore be assumed that the format of the explanatory texts on the drawings for Richmond Lodge, which Castle drew for Pearce, was Castle’s responsibility.

Explanatory texts of all categories are rare among Gibbs’s drawings, but they do occur occasionally. A plan of the basement floor for the post-fire remodelling of Lowther Hall, for example, includes a legend consisting of capital letters followed by colons and short descriptions (fig. 6.31). Another plan relating to the house at Kiveton Park from volume VIII of the Ashmolean Museum likewise features a legend, titled “References” and consisting of capital letter, full stop, and descriptions (fig. 6.32). This particular type of legend further appears in two drawings relating to King’s College (figs. 6.33-6.34). While on fig. 6.33, the descriptions are written in an untidy cursive script, the text on fig. 6.34 is in neat block letters. Both drawings represent preliminary drawings for engravings, with fig. 6.33 for plate 32 of *A Book of Architecture* and fig. 6.34 (which is almost the same) “probably to be engraved for the Provost and Fellows”.<sup>1020</sup> Explanatory texts of category 1 were transferred from drawings to printed works in order to ensure that the viewer could easily understand what was depicted. Thus, such legends are a conventional part of standard architectural publications and engravings. This is exemplified by George Vertue’s *A Plan for Rebuilding Magdalen College* from 1731, which incorporates a legend on a trompe-l’œil scroll of paper (fig. 6.35). An example of a category 3 explanatory text on Gibbs’s drawings is *Early design for the monument to Henry Duke of Newcastle*, which informs about the different materials to be used: “A. Black B. White & varied C. Statuary D. Purple E. Black &

<sup>1019</sup> Colvin, and Craig, *Architectural Drawings*, 17; Lorimer, and Newton, *The collection of drawings by Sir John Vanbrugh*, 77 f.; 154.

<sup>1020</sup> Crandall, “A Catalogue of the Drawings of James Gibbs,” cat. I-46.

yellow [?] F. Mattleld [sic]" (see fig. 3.9, chapter III).

In conclusion, while explanatory text of the three categories is a frequent feature on military maps, engineering drawings, and prints, it is less common in the field of architectural drawings. It can be observed that all three types of legends often vary in terms of design and level of detail of the information given. This is not true of Castle's explanatory texts on the drawings made in Ireland from the mid-1730s onwards. They are found on most finished plans and mainly follow a strict structure of title, letter, description, and dimensions – mostly in a neat calligraphy. Thus, Castle's expanded legends have a certain signature value that sets his drawings apart from contemporary grey wash style architectural drawings. None of the English Palladian architects employed a comparable form of legend. Castle, however, exclusively added explanatory text of category 1 to his drawings, examples with legends containing information on construction and materials are, according to my knowledge, not present. Such information was communicated in a different way. The drawing of the unidentified barracks and the print of the charter schoolhouse might indicate that Castle's format of explanatory texts was imitated by other architects and draughtsmen in Ireland.

### **The Grey Wash Style**

John Harris's article *The Grey Wash Style of the Palladian Office of Works*, mentioned on several occasion above, notes for the period c. 1715 to c. 1730 a "grey wash style" characteristic of certain neo-Palladian drawings.<sup>1021</sup> The author describes the technique as pen and light grey wash applied in a very careful and precise manner, with the outlines of the black pen washed in with great diligence. He associates this "grey or *grisaille* style" with Burlingtonian Palladianism and the Office of Works.<sup>1022</sup> As noted earlier, this monochrome technique was linked to architectural engravings, which the Palladians sought to imitate in their drawings. Campbell is referred to as the "master of the grey wash style" and is considered responsible for a turning point towards the achievement of the grey wash style with his magnum opus *Vitruvius*

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<sup>1021</sup> Harris, "The Grey Wash Style," 48.

<sup>1022</sup> Harris, "The Grey Wash Style," 48.

*Britannicus*, which commenced around 1713.<sup>1023</sup> For this undertaking he re-drew around 200 plans and elevations for Henry Hulsbergh (d. 1729) and an unidentified assistant to engrave,<sup>1024</sup> often intending that the quality of the drawing was to be reflected in the engraving. This can be seen, for example, in the elevation *Unexecuted design for a church for Lincoln's Inn Fields, London* (fig. 6.36). This drawing was made for engraving by Campbell for inclusion in the *Vitruvius Britannicus* volume I, plate 9 (fig. 6.37). Although there are minimal architectural differences between the drawing and the engraving, the grey wash style of the drawing, including shading, is exactly reproduced on the engraving. However, this was not the case for all preliminary drawings for the engravings. As will be discussed in more detail below, there were many linear pen and ink drawings that were reproduced with shading and wash when engraved.

Harris suggests that Campbell's appointment as chief clerk and deputy surveyor of the King's Works in September 1718, albeit for a short ten months, was partly responsible for the dissemination of the grey wash technique within the office.<sup>1025</sup> A similar argument was recently made by Barbara Arciszewska, who emphasised William Benson's (1682-1754) responsibility for the employment of Campbell.<sup>1026</sup> While Benson is better known for his misconduct within the Office of Works, its reorganisation under him was a first step towards established Palladian classicism within the office. Lord Burlington's interest in Campbell, possibly sparked by the publication of *Vitruvius Britannicus*, may likewise have contributed to the popularity of this convention.<sup>1027</sup> In 1717 "the guiding spirit" of the Palladian revival employed Campbell to modernise his house in Piccadilly.<sup>1028</sup> The proposed elevation for remodelling and refacing Burlington House, Piccadilly, attributed to Campbell and dating from this period, however, is not grey washed (fig. 6.38). The drawing is probably an early design for the project and therefore a preliminary design, not a

<sup>1023</sup> Harris, "The Grey Wash Style," 48; 50.

<sup>1024</sup> Joanne Erin O'Hara, "Colen Campbell and the Preparatory Drawings for *Vitruvius Britannicus*," (PhD diss., University of York, 2010), 152-155.

<sup>1025</sup> Harris, "The Grey Wash Style," 52.

<sup>1026</sup> Arciszewska, "The Office of the King's Works," 343.

<sup>1027</sup> Colvin, *A biographical dictionary*, 183.

<sup>1028</sup> Colvin, "Lord Burlington and the Office of Works," 97.

finished or presentation drawing. Thus, the use of the grey wash style involves a distinction between the types of drawings. Lord Burlington's earliest, somewhat inelegant drawing from 1719/20 for Tottenham Park, Wiltshire, on the other hand, precisely features the grey wash style (fig. 6.39). It is assumed that this drawing was produced under the instruction of Lord Burlington's draughtsman, office manager, and clerk of works Henry Flitcroft.<sup>1029</sup> The latter prepared a drawing for Tottenham Park himself, probably based on Lord Burlington's design, which is dated c. 1721. Flitcroft may have been introduced to the grey wash style through his work for Lord Burlington's Chiswick House, a project supervised by Campbell. He was subsequently employed by Lord Burlington to refine his sketches or preliminary designs, which he accomplished in a "perfect grey wash style".<sup>1030</sup> Flitcroft's style is so similar to Campbell's that earlier attributions of drawings for Chiswick Orangery and for General Wade's house in Old Burlington Street to Campbell were later revised and credited to Flitcroft.<sup>1031</sup> The designs submitted by the two for the house at No. 30 Old Burlington Street in c. 1721 illustrate the homogeneity of their grey wash style and the difficulty of distinguishing between their draughtsmanship (figs. 6.40-6.41). The two designs differ marginally in some architectural details, but the grey wash is identical in both drawings: the entire surface of the elevations rendered in outlines of black pen is washed, leaving out the projecting elements; the roof surfaces articulated by tonal modelling, with the darkest shade of grey at the roof ridge; and even the shadows cast within the grey washed window and door openings are the same. Through the patronage of Lord Burlington, Flitcroft was appointed clerk of the works at Whitehall, Westminster, and St James's in 1726, and in this position further distributed the grey wash style.

Thomas Ripley, who joined the Office of Works in 1715, was another exponent of the grey wash style. According to Harris he had become acquainted with this convention during his work at Houghton Hall, a project in which Campbell (and Gibbs,

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<sup>1029</sup> Harris, "The Grey Wash Style," 50.

<sup>1030</sup> Harris, "The Grey Wash Style," 50.

<sup>1031</sup> Howard Edward Stutchbury, *The Architecture of Colen Campbell* (Manchester: Manchester University Press, 1967), 37.

see below) were also involved.<sup>1032</sup> The three elevations for his principal country house project Wolterton Hall in Norfolk for Horatio Walpole of 1724/25 exhibit this style (figs. 6.42-6.43; see also fig. 3.51, chapter III). The surfaces outlined in black pen are completely washed with grey ink, with lighter shades or without wash for the projecting parts of the building. Window and door openings are washed in dark grey and feature shading. Similarly, short shadows cast elsewhere indicate a light source in the upper left corner of the sheet. Ripley's distinctive way of depicting the roof surfaces using a combination of parallel ruling and grey wash has already been discussed (see chapter III). The Office of Works draughtsmen who worked for Ripley adopted the grey wash convention and, in some cases, even copied his mode of representation for the roofs, as can be seen in the elevation of the west side of the east range of Queen Mary's Court, Greenwich Royal Hospital (fig. 6.44).

Isaac Ware, who was apprenticed to Ripley for seven years, likewise further encouraged the grey wash style in the office. Through Ripley's patronage he became clerk itinerant and draughtsman in the Office of Works in 1728 and "would become a perfectionist" in the grey wash style.<sup>1033</sup> Ware also benefited from Lord Burlington's patronage and later prepared designs for Robert Fitzgerald, nineteenth Earl of Kildare, for a bridge at Carton, Co. Kildare, and for Leinster House, Dublin.<sup>1034</sup> Both his careful and accomplished preliminary drawings for his various architectural publications and most of the interior designs for Leinster House are grey-washed in the above described manner.

The last grey wash style advocate Harris refers to is Roger Morris, who had close ties with Campbell. Morris joined the Office of Works in 1727 as clerk of the works at Richmond New Park Lodge, and in 1734 became Master Carpenter in the Office of Ordnance.<sup>1035</sup> His c. 1724 drawing for Pembroke House, Whitehall, where he probably acted as Campbell's draughtsman, is in keeping with the grey wash style (fig. 6.45). The sheet is inscribed "Rog<sup>r</sup> Morris. Delt." As with all other drawings, the elevation is outlined in black pen and its surface is washed in grey, whereas the projecting sections

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<sup>1032</sup> Harris, "The Grey Wash Style," 52.

<sup>1033</sup> Harris, "The Grey Wash Style," 54.

<sup>1034</sup> Griffin, and Pegum, *Leinster House*, 3.

<sup>1035</sup> Harris, "The Grey Wash Style," 54.

are washed in a lighter tone or not at all. Window and door openings are washed in dark grey and shaded. Where required, further cast shadows were added.

### **“indistinguishable from each other”**

In his article, Harris omits an important representative of the grey wash style – James Gibbs, probably due to the fact that he operated outside the Office of Works.<sup>1036</sup> Possibly, however, Harris did not regard Gibbs as a representative of the grey wash style, as Baudez upholds in his study, characterising him as “exception within the British world of monochrome drawing in the first half of the eighteenth century.”<sup>1037</sup> However, as has been demonstrated above, the grey wash style is indeed a dominant element of Gibbs’s drawings, especially of those from around 1720 onwards. They reveal “a characteristic finished rendering in grey pen and ink and grey wash”, which Gibbs established as his office style even before the rise of some of the advocates in the Office of Works.<sup>1038</sup> The only colour Gibbs continues to occasionally use in the post-1720 drawings is a light red wash for cut wall mass. Why then would Gibbs embrace a style whose origins were associated with Campbell, one of his greatest rivals? In order to answer this, an analysis of Gibbs’s environment at this time might be instructive.

In 1715, two years before Campbell, Gibbs was commissioned by Lord Burlington to remodel Burlington House.<sup>1039</sup> Gibbs had thus come to Lord Burlington’s attention earlier than Campbell and it seemed that he had secured an influential patron. Before long, however, Campbell replaced him as Lord Burlington’s architect, the latter no longer approving of Gibbs’s “modern Italian” style.<sup>1040</sup> In addition to Lord Burlington’s rejection, Gibbs soon after experienced further

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<sup>1036</sup> Harris refers to Gibbs only once in connection with Ripley, who is described as his clerk of the works at Houghton, see Harris, “The Grey Wash Style,” 52.

<sup>1037</sup> Baudez, *Inessential Colors*, 28.

<sup>1038</sup> Friedman, *James Gibbs*, 289.

<sup>1039</sup> Friedman, *James Gibbs*, 201.

<sup>1040</sup> “Burlington House,” in *Survey of London: Volumes 31 and 32, St James Westminster*, Part 2, ed. Francis Henry Wollaston Sheppard (London: London County Council, 1963), 390-429. *British History Online*, accessed May 31, 2023, <http://www.british-history.ac.uk/survey-london/vols31-2/pt2/pp390-429>. Campbell was himself later dropped by Lord Burlington in favour of William Kent and Flitcroft. See Colvin, *A biographical dictionary*, 183.

humiliation from his competitor Campbell. The latter neglected to acknowledge Gibbs's previous improvements at Burlington House and reproduced his designs in *Vitruvius Britannicus* without acknowledging him.<sup>1041</sup> Burlington had presumably given the drawings by Gibbs to Campbell. The two rival architects, along with Ripley, would meet again during the construction of Houghton Hall. Both Gibbs's and Campbell's drawings for Houghton, the latter revising Gibbs's earlier designs, follow the grey wash style. The surfaces of the elevations are rendered in grey, whereby the projecting parts are washed in a lighter grey or remain unwashed. In Gibbs's *Elevation of the West Front of Houghton Hall, with Domes*, it is noticeable that the window and door openings are washed in black without any shading visible in the openings (fig. 6.46). In Campbell's *Elevation of the West or Garden front (first design)*, on the other hand, the openings are washed in a lighter grey and additional shading is included (fig. 6.47). Furthermore, the entire rusticated basement is washed in a darker grey. Apart from that, Gibbs's drawing seems more accomplished and accurate, which may be due to the exact reproduction of certain details that Campbell's drawing lacks. This includes, for example, the precise application of the wash and the detailed elaboration of the capitals of the columns or the steps, both of which are depicted in a rather rudimentary way in Campbell's work. Obviously, the competing architects shared the same mode of representation, but in the end, Campbell was more successful with his neo-Palladian architecture, at least at Houghton. Were these competitions for prestigious commissions and other professional jealousies the reason why, from about 1720 onwards, Gibbs mainly finished his drawings in a homogeneous grey wash style and avoided the coloured washes he had used more frequently before? Clearly, he must have realised that the monochrome style was visually appealing in the long run to major British clients. At around the same time, one can observe that he also began to adhere to the Campbellian-Burlingtonian Palladianism. This can be seen at Ditchley House, Oxfordshire, "which most clearly demonstrates his departure from the

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<sup>1041</sup> Friedman, *James Gibbs*, 39. Joanne Erin O'Hara recently argued that Campbell's approach to selecting works may have been less about strategic planning or seeking out specific designers, and more about seizing readily available material. See O'Hara, "Colen Campbell," 74; 117. As previously mentioned, Gibbs was extremely careful to ensure that his designs were not shared with or printed by third parties, which might have resulted in Campbell simply having no way of accessing them. According to O'Hara, it may have been at Gibbs's own insistence that his work was not included in the *Vitruvius Britannicus*. See O'Hara, "Colen Campbell," 75.

Baroque”.<sup>1042</sup> Although he had attempted to adapt, he was unsuccessful here, too, for by 1723-25 he was ousted by Flitcroft and Kent.<sup>1043</sup> Gibbs nevertheless continued to use the grey wash convention as his office style.

Borlach, who was responsible for the preparation of drawings for prospective publications in Gibbs’s office, clearly followed the grey wash style practised by his employer.<sup>1044</sup> Only two of the works considered as preliminary drawings for the engravings in *A Book of Architecture* are without grey wash, these being depictions of proportions of gates and doors.<sup>1045</sup> So far, however, there is no definite evidence that Borlach was indeed the author of the drawings for this specific project, even though the above mentioned legal case clearly shows his contribution to *Rules of Drawing*. Nevertheless, his involvement in another project, as evidenced by a letter from classical scholar Edward Holdsworth (1684-1746), may equally have applied to *A Book of Architecture*.<sup>1046</sup> The letter is dated September 8, 1729, and documents Borlach’s contribution in the preparation of drawings for engraving relating to the rebuilding of Magdalen College of the University of Oxford. Besides Holdsworth identifying Borlach as the draughtsman of the “fair Drawings” for the engravings, details are given about the appearance of the drawings as presented to the engraver. Holdsworth notes, that the drawings would soon be in place, “there being nothing wanting but the Shading & some little ornaments to prepare the work for the Engraver”. It can therefore be assumed that Borlach copied sketches or preliminary drawings and developed them into more elaborate, finished drawings including shading and ornaments as preparatory drawings for engraving. The adding of shading to the “very neatly drawn” works may be indicative of the grey wash style advocated by Gibbs. Borlach thus clearly knew how to fit into the uniform method of representation in contemporary British architecture. The majority of finished drawings attributed to Richard Castle likewise embrace the grey wash style. The black pen outlines are washed with fluent

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<sup>1042</sup> Friedman, *James Gibbs*, 118.

<sup>1043</sup> John Harris, “James Gibbs, Eminence Grise at Houghton,” in *New Light on English Palladianism: papers given at the Georgian Group symposium 1988*, ed. Charles Hind (London: The Georgian Group, 1990), 8.

<sup>1044</sup> Friedman, *James Gibbs*, 25.

<sup>1045</sup> ASH WA1925.340.106, ASH WA1925.340.107.

<sup>1046</sup> MC, FA14/1/2C/7, Letter from Holdsworth to President Butler, 8 Sep 1729.



brushwork in various shades of grey and enhanced with shading. It is tempting to consider the assimilation of this convention as the missing link to Campbell, Burlington and/or the Office of Works, which has always been suspected but was never proven. In her doctoral thesis, Melanie Hayes points out that Castle's drawing style has been linked to that of Flitcroft and that Castle's entrance elevation of Leinster House in Dublin was influenced by Campbell's Burlington House.<sup>1047</sup> Similarly, Colvin notes that the drawings for Richmond Lodge "might [...] be mistaken for a project by Colen Campbell".<sup>1048</sup> Castle's naturalisation of this uniform method of representation practiced by his contemporaries attests to the fact that, like Gibbs, he recognised the wide appeal of the grey wash style convention and succeeded in capitalising on it. Borlach and Castle were not an exception, though. Foreign immigrants were often called upon in the field of manufacturing throughout the eighteenth century to produce and reproduce both printed and hand-drawn two-dimensional designs for their use by the rapidly expanding luxury sector. This expansion and the technical innovations in manufacturing had led to an increase in the need for drawing and engraving skills, which the local sources could not provide. These skill shortages thus required support from overseas and it often were French or German workers that were "constantly employed in drawing and designing".<sup>1049</sup>

Already towards the end of the seventeenth century, Sir Christopher Wren had warned that English design could not compete with Continental models, which is why he and others, including naval administrator Samuel Pepys (1633-1703), campaigned for the introduction of drawing lessons at the London charity school of Christ's Hospital.<sup>1050</sup> The school had been founded in 1673 as the Royal Mathematical School and was dedicated to the training of young men for maritime careers. The provision of drawing instructions was to improve the boys' chances of finding an apprenticeship.<sup>1051</sup> The school's writing master, John Smith (fl. 1675-1714), likewise

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<sup>1047</sup> Hayes, "Anglo-Irish Architectural Exchange," 62.

<sup>1048</sup> Colvin, *The History of the King's Works*, 220.

<sup>1049</sup> John Styles, "Manufacturing, Consumption, and Design in Eighteenth-Century England," in *Consumption and the World of Goods*, eds. John Brewer and Roy Porter (London: Routledge, 2003), 544.

<sup>1050</sup> Bermingham, *Learning to draw*, 85.

<sup>1051</sup> Clifford Jones, *The Sea and the Sky. The History of the Royal Mathematical School of Christ's Hospital* (self-pub., 2015), 152.

recognised the importance of drawing skills for a wide range of craft professions, including painters, engravers, stone masons, shipwrights, and silversmiths.<sup>1052</sup> The first drawing teacher, William Faithorne (1656-1701?), son of a painter and engraver, was appointed in 1693, but was dismissed a few years later for being regarded as incompetent. It was to take until 1705 before an agreement could be reached on a suitable candidate as drawing teacher for 40 boys. The committee minute books of Christ's Hospital at the London Metropolitan Archives provide an insight into the recruitment process of May 1705, which required candidates to present their qualifications and to produce a "draught or view of Christ Church Steeple, and the prospect of the steeples as far as Guildhall".<sup>1053</sup> It was decided that Bernard Lens, "draws the quickest and the best, and having been a Teacher of that Art several years," was best suited for the position.<sup>1054</sup> Bernard Lens II (1659-1725) had previously established one of the first drawing schools in England in 1697 together with the engraver John Sturt (1658-1730), situated near the Hand and Pen in St Paul's Churchyard.<sup>1055</sup> A broadsheet from 1697 advertising the drawing school promises the "incredible Service and Advantage" that drawing would offer for "all our Handicrafts" resulting in a "constant Nursery or Breed of Youths proper for Artificers".<sup>1056</sup> The Christ's Hospital committee minute books further reveal that Lens prepared drawings at home, which were copied by the students in class, and that a selection of drawings that were particularly "neat [and] handsome" were to be framed for presentation to the public.<sup>1057</sup> With the introduction of drawing at Christ's Hospital, an important step was taken in establishing drawing as part of civilian education in Britain.<sup>1058</sup> On the other hand, it was an attempt to improve English trade and commerce. Many charity schools and private academies were subsequently founded to promote drawing.

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<sup>1052</sup> Jones, *The Sea and the Sky*, 152.

<sup>1053</sup> LMA, CLC/210/B/005/MS12811/007, f. 397.

<sup>1054</sup> LMA, CLC/210/B/005/MS12811/007, f. 397.

<sup>1055</sup> The Hand and Pen was a writing school led by writing master John Ayres (fl. 1680-1700).

<sup>1056</sup> Bernard Lens, and John Sturt, *At the dravving-school near the Hand and Pen in St. Paul's church-yard* (n.p.: n.p., 1697), <http://name.umdl.umich.edu/B25765.0001.001>.

<sup>1057</sup> LMA, CLC/210/B/005/MS12811/007, f. 538.

<sup>1058</sup> For an overview of teaching drawing to the general public in England in the eighteenth century and its effects see for example Kimberly Mae Sloan, "The teaching of non-professional artists in eighteenth-century England" (PhD diss., University of London, 1986); Kim Sloan, "Drawing – A 'Polite Recreation' in Eighteenth-Century England," *Studies in Eighteenth-Century Culture* 11 (1982): 217-240 and Bermingham, *Learning to draw*.

However, foreign labour remained an important part of the British economy for a long time.

To conclude, it has been shown that the grey wash style became a standard convention of architectural draughtsmanship beyond the Office of Works and the Palladian designs of the Campbell and Burlington circles. This bears witness to the desire of architects to achieve a homogenous style that was amenable to publication and that at times approximated published treatises. In this way, it appealed to the visual habits of the client elite but also made it available to wider public. The homogeneity of this method of representation, however, complicates the distinguishing of individual hands and this may have been a further crucial point leading to the wide dissemination of the style. The far-reaching adoption of a uniform mode of representation ultimately led to an increased equality of opportunity within the highly competitive and skittish British building industry. The anonymity of the architectural drawings of this period rarely provides any insight about their authors. With many using the same drawing conventions, the background or training of the draughtsmen becomes less relevant. This particularly benefited foreigners like Castle and Borlach who sought employment outside their home countries and enjoyed success by conforming to the uniform mode of representation.

### **Standards in Draughtsmanship**

While the tendency to suppress individuality in architectural representation achieved with the help of the grey wash style is evident, there was still the possibility to stand out to a limited extent. Gibbs did this, for example, through the continuous use of light red wash in the cut wall mass of sections, while Castle's drawings exhibit some individuality in the addition of explanatory text. Different levels of skill can also of course be detected in architectural draughtsmanship of the period. In fact, while Castle was praised for his expert draughtsmanship, this was not the case with some of his contemporaries. According to Pearce, there was "no Body in" Dublin in 1728 who was "capable of drawing fair designs", but "one Person ... his Name is Castle".<sup>1059</sup>

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<sup>1059</sup> McParland, "Edward Lovett Pearce," 100.

Christine Casey notes that there appear to have been “little expert drawing other than that from Richard Castle’s office” throughout the first half of the century in Ireland.<sup>1060</sup> The “competent if rather dull” drawings by Michael Wills, draughtsman and assistant in the office of Thomas Burgh, for example, barely meet the high standard of Castle.<sup>1061</sup> They seem to have attracted little acknowledgement in general within the contemporary building industry. This is evidenced by their rejection in a competition for a Dublin Society architecture premium in May 1745. Six contestants were invited to submit designs for small houses. The only two identifiable candidates are Michael Wills and George Ensor (1724-1803). Casey characterises Wills’s submitted drawings, which are now in the RIBA, as “routine”.<sup>1062</sup> Nevertheless, the nomination of a winner was apparently not an easy decision to make at first, at least for non-experts. The committee, consisting of eight members of the Dublin Society, called upon architects to give their professional opinion on the submitted drawings. It was Castle who assisted the committee and it “was agreed that the plans of Mr George Ensor were preferable to those of the rest of the candidates.”<sup>1063</sup> Were it George Ensor’s drawing and design skills, or the fact that he was the younger half-brother of his clerk and measurer John Ensor that influenced Castle’s choice?

Wills’s idiosyncratic entry consisted of a portfolio of finished drawings featuring twelve elevations and 17 plans on 16 sheets, which are numbered and display quadruple ruled borders. In addition to that, the reverse sheets of the drawings nos. 1-2, 3-4, and 7 show ten further elevations and plans. According to Casey, these were drawn at a later date in response to the competition’s outcome.<sup>1064</sup> Between the drawings are blue sheets on some of which costs are specified.<sup>1065</sup> Included at the beginning is a list with descriptions of the respective drawings, along with room heights and the scale for all drawings. All plans as well as the elevations no. 1 and 2 provide dimensions (figs. 6.48-6.49). In terms of drawing technique, certain

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<sup>1060</sup> Casey, “Books and Builders,” 42.

<sup>1061</sup> Christine Casey, “‘De architectura’: An Irish Eighteenth-Century Gloss,” *Architectural History* 37 (1994): 87.

<sup>1062</sup> Casey, “‘De architectura,’” 88. RIBA Wills M (VOS/131).

<sup>1063</sup> Casey, “Books and Builders,” 112.

<sup>1064</sup> Casey, “Books and Builders,” 171.

<sup>1065</sup> Jill Lever, ed., *Catalogue of the Drawings Collection of the Royal Institute of British Architects T-Z* (Amersham: Avebury Publ., 1984), 247.

conventions of the grey wash style are followed, i.e., all elevations and plans are drawn in black penwork and entirely washed in grey ink.<sup>1066</sup> The window and door openings are washed in a darker colour and shaded. Other shaded areas have been suitably coloured, too. On the whole, however, the appearance of the elevations is far from the drawings of contemporaries such as Castle, Gibbs, Campbell, etc. The unusual framing of the wall and roof surfaces using a kind of dark wash border gives the impression that the drawing was outlined with a thick brush. The roof areas are washed without any nuances and the shading is indicated to the effect of a light source entering from the upper right – something that is very unusual. With elevation no. 16, the wash of the roof seems to shift to light blue, and the figures are not competently executed (fig. 6.50). Elevation no. 12 displays as a special feature a cloud of smoke rising from a chimney (fig. 6.51). It is apparent that Wills has made every effort to submit an album of neat and elaborate drawings. Despite his high aspirations, the result is rather naïve, crude, and as Casey puts it “dull”.<sup>1067</sup>

The designs of the other contestants of the Dublin Society competition have not survived. The absence of drawings makes a comparative evaluation of the drawing skills of winner George Ensor difficult. At just 20 years old, he had become clerk of works in the office of the Surveyor General Arthur Jones Nevill (c. 1712-1771) a year prior to the competition and in this position was responsible for the inspection of barracks.<sup>1068</sup> Of the project for the rebuilding of the Court and Market House at Roscommon, Co. Roscommon, on which George worked with his half-brother John Ensor in the early 1760s, drawings have survived.<sup>1069</sup> The *Elevation of the Session House* (fig. 6.52), which might be regarded as contract drawing given the signatures and the inscription “This Plan to be Executed but to be raised 14 ft high to the Girders.” on the verso of the sheet, is a finished drawing following the conventions for architectural drawings as employed by Castle. The entire surface of the elevation is grey washed, the window and door openings are washed in a darker colour, and

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<sup>1066</sup> Sepia ink as described by Lever and Casey is not apparent to me.

<sup>1067</sup> Casey, “Books and Builders,” 149.

<sup>1068</sup> “Ensor, George,” Biography, IAA, accessed June 8, 2023, <https://www.dia.ie/architects/view/1789/ENSOR-GEORGE>.

<sup>1069</sup> I am indebted to my colleague Dr Melanie Hayes for sharing her expertise and the resources relating to John and George Ensor as well as Roscommon Court House.

shading is inserted, too. The openings feature additional shading. However, the quality of the drawings is inferior to those by Castle. This is likewise the case with the other two drawings relating to Court and Market House (figs. 6.53-6.54). Both are monochrome line drawings that appear slightly clumsy in their draughtsmanship. The surfaces are not completely washed in grey, but only window and door openings, as well as interior areas or roof surfaces. There is no additional shading inside the openings. In some cases, the spelling of “jury” is incorrect. On fig. 6.54 this only concerns the “Petty Jurey Room”. However, it looks as if the error was discovered immediately after writing and corrected with the y. On fig. 6.53, “Jurey” is written consistently and has not been corrected. The drawings appear as dull and schematic as those of Wills, albeit in a different way. They seem more in line with the monochrome Palladian conventions of grey washing and shading, which was less the case with Wills’s competition drawings.

It is difficult to judge which of the Ensor brothers made these drawings. Although George was appointed architect, John is named in the documents relating to the building project, he signed the bond of surety, and his handwriting is identifiable on the *Estimate for a Session House and Markett house* (fig. 6.55).<sup>1070</sup> There are earlier examples of collaboration between the brothers in urban speculative ventures in 1740-60.<sup>1071</sup> Letters regarding the Roscommon project suggest that George mainly handled correspondence with clients and suppliers. Was John therefore responsible for producing the drawings? The script used for the room names on figs. 6.53 and 6.54 at least resembles that of John. It is also consistent, for example, with the scheme D ground-floor plan for Headfort House, which may be by him (see fig. 5.69, chapter V). However, the Headfort elevation lacks the grey wash that can be seen in parts of the Roscommon drawings. Scale design and cruciform room dimensions as well as the script of the dimensions, on the other hand, correspond across all drawings. The script of the dimensions further matches *Ground-floor plan for Doneraile*, which might also be by John (see fig. 5.70, chapter V).

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<sup>1070</sup> NLI, MS 10,770, Letters, estimates, plans, etc., relating to the building of Roscommon Courthouse, 1761-1763.

<sup>1071</sup> Melanie Hayes, email to author, March 30, 2023.

The so-called Jarratt Albums at the IAA are further examples illustrating different levels of draughtsmanship at Castle's time. It is thought that they were compiled by the architect Joseph Jarratt (d. 1774) and contain a random collection of prints from French and Italian sources as well as architectural drawings of the mid-eighteenth century. On the basis of these drawings, it was claimed that the "similarity of [Jarratt's] draughtsmanship style to that of Richard Castle suggests a training in the latter's office, perhaps in the late 1730s".<sup>1072</sup> However, doubt has been cast on whether the drawings were genuinely produced by Jarratt, albeit inscribed "Joseph Jarratt Arch<sup>t</sup>." or "Joseph Jarratt Invnt." The levels of skill and the drawing style varies throughout. Only a few of the drawings in the Jarratt Albums approach the standard of draughtsmanship presented by Castle, such as the design for a soffit for the corridor arches at Dublin Castle (fig. 6.56). The design is accurately drawn and shaded, verging on the extreme precision of Castle's penwork and application of washes as seen on his *Design for the ceiling of the Duke of Leinster's bedroom*, c. 1745 (fig. 6.57).

In direct comparison with contemporary Irish architectural drawings, Castle's fluent and high-quality draughtsmanship is outstanding. It is extremely sophisticated in its precise lines, the often large-scale but carefully applied and nuanced washes in grey ink and the equally accurate shading, resulting in greater life and depth of the design. The combination of these drawing techniques results in meticulous works of art and demonstrates how well Castle mastered architectural illustration.

A comparison of Castle's drawings with contemporary drawings in England, however, reveals a different picture. The standard here was at a similarly advanced level to that of Castle. Indeed, Castle's draughtsmanship can hardly be distinguished from those of British contemporaries. This standard had become established in the first half of the eighteenth century in the wake of the increasing adherence to the Jones-Palladio revival and was strengthened by excellent draughtsmen such as Flitcroft. The drawings from Gibbs's office likewise represent a high quality, which is further strengthened by the absence of sketches or unfinished drawings. This standard contrasts clearly with the drawings of previous offices such as those of Vanbrugh or

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<sup>1072</sup> Nicholas Sheaff, "Jarratt and Rococo," *Irish Arts Review* 1, no. 3 (Autumn, 1984): 50.

Pearce, as seen in the Vanbrugh Album or Kings Weston Album. The latter is an anonymously compiled album containing 128 drawings as well as two engravings. The works mainly date from the late 1710s to the late 1720s and reflect different levels of proficiency in terms of drawing skills.<sup>1073</sup> Most of the drawings are not attributed to any individual, around 40 are attributed to the compiler and eight to Vanbrugh's circle. There are plans, elevations, site plans, designs for chimney pieces and other features, constructional drawings (fig. 6.58), sketches, preliminary designs, and more finished drawings. The skill levels represented here vary widely from amateurish to reasonably accomplished. The drawing conventions are likewise varied, e.g., in terms of coloured washes used: they range from unwashed to grey-washed to polychrome.

In contrast, when looking at the drawings of the Palladian elite, the qualitative difference is striking. The precise penwork, the accurate and nuanced application of wash and shading, the overall accomplished execution, and the resulting three-dimensional effect despite the monochromaticity were desirable characteristics of the drawings by Campbell, Flitcroft, Ripley, et al. (e.g., see fig. 3.51, chapter III). The "regime of imitation/emulation" of Palladianism as formulated by Barbara Arciszewska did not halt at paper projects and drawing skills.<sup>1074</sup> Instead, a high level of drawing expertise, it seems, had become as much a part of the standard canon of Palladianism as the grey wash style. The high quality of the drawings has been associated with resistance to dissemination of the Palladian idiom across class boundaries. Burlington and his associates, it is argued, were determined to combat the growing demands of the middle class on Palladianism.<sup>1075</sup> They regarded the spread of Palladianism as a threat to their cultural authority and to the social order that underpinned it. As a result, Burlington's demands for strict conformity to Palladio's rules led to the articulation of a new, exclusive standard of "Palladian authenticity" that could only be achieved by an elite.<sup>1076</sup> This Palladian authenticity suppressed originality in the drawings while demanding excellent drawing skills and a strict

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<sup>1073</sup> Kerry Downes, "The Kings Weston Book of Drawings," *Architectural History* 10 (1967): 7; 9-88.

<sup>1074</sup> Barbara Arciszewska, "Classicism: constructing the paradigm in Continental Europa and Britain," in *Articulating British Classicism: New Approaches to Eighteenth-Century Architecture*, eds. Barbara Arciszewska and Elizabeth McKellar (Aldershot: Ashgate, 2004), 21.

<sup>1075</sup> Arciszewska, "Classicism," 21.

<sup>1076</sup> Arciszewska, "Classicism," 21.



adherence to the conventions. The fact that both are reflected in most of the surviving drawings of the time shows, however, that it was precisely this Palladian authenticity that became widespread in the course of time. Steven Brindle has argued that Richard Castle's work evolved from a vigorous and idiosyncratic interpretation of Palladian and Continental exemplars to a more dull and academic Palladianism as seen in his designs for Leinster House, executed for a client with close links to elite London society.<sup>1077</sup>

To conclude, Castle appears to have set a high standard in Ireland with his architectural drawings based on Palladian drawing conventions, which included a superior level of draughtsmanship. Pearce had found in him a competent draughtsman who was able to promote the Palladian idiom in Ireland. Castle seemed to be able to exert his influence through his own office and through publicly effective initiatives such as competitions. Wills's drawings, which show remnants of Palladian conventions but an inferior draughtsmanship, were discarded in favour of George Ensor. While the Ensor brothers' drawings might not have quite matched Castle's high-quality level either, they were nevertheless more in line with the aesthetic taste and visual habits Castle had come to know in England. There, the diversity of architectural drawings, as seen in earlier offices such as those of Wren, Vanbrugh, and Pearce, had been abandoned in the course of the eighteenth century in favour of a homogeneous style that reflected the Palladian authenticity and required excellence in drawing. This standard in draughtsmanship, initially conceptualised and functioning as a distinctive trademark of elite Palladianism, was naturalised over time by the growing professionalisation of the architectural trade and the spread of the Palladian idiom on a wider scale, both in England and in Ireland.

### **The Relationship Between Architectural Drawing and Engraving**

Engravings, whether in the form of books or as single sheets, were an important source of architectural information besides drawings, despite being regarded a most

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<sup>1077</sup> Steven Brindle, "Richard Castle in the context of British 18th century architecture" (lecture, Richard Castle Architect: One-Day Symposium, Russborough House, November 4, 2022).

unreliable medium through which architectural knowledge was communicated.<sup>1078</sup> They were a means of advertising and preserving the architect's skills as a designer and were an additional source of income. The last part of this chapter will explore the practice of reproduction and imitation within the building industry of the first half of the eighteenth century, which will allow conclusions to be drawn concerning the relationship between architectural drawing and engraving. This has been largely ignored by scholarship so far, perhaps because the medium of print was considered more relevant than hand-copied drawings.

To make a print, the engraver either used existing presentation drawings as direct models, or new drawings were provided. However, the relative dearth of such preparatory drawings makes it difficult to determine their relevance to the respective engravings. Fortunately, for some architectural books, all or large numbers of preparatory drawings have survived, as is the case for Gibbs's or Campbell's publications, for example. Another source besides preliminary drawings themselves are historical documents, such as letters. These papers sometimes reveal how the drawings were to be prepared before they were handed over to the engraver for further processing. For Vanbrugh's venture to publish designs for Blenheim Palace in the *Description of the Palace of Blenheim*, for example, he instructed Henry Joynes "to draw the Two Fronts, pretty exact they being for the Engraver to work from".<sup>1079</sup> For the publication project regarding the rebuilding of Magdalen College referred to above, a letter from Holdsworth to President Butler records that a total of nine individual drawings (two plans, four elevations, and three sections) were conceived to create a total of "three Copper plates of one large sheet each".<sup>1080</sup> Given that Borlach did not seem to have all the latest plans, he had to draw a part of the plan, the grove, "at pleasure". This was to be "rectified and represented as planted at present" on the plate. This indicates, on the one hand, that in this case it was the engraver's task to fill in the correct appearance of the grove in what seems to be on the plate directly and, on the other hand, that Borlach was a confident draughtsman to draw a version of the grove even without a template. Unfortunately, Borlach's preliminary drawings for the

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<sup>1078</sup> Walker, *Architects and Intellectual Culture*, 76.

<sup>1079</sup> Walker, *Architects and Intellectual Culture*, 75.

<sup>1080</sup> MC, FA14/1/2C/7.

engravings have not survived. Vertue's *Plan for rebuilding Magdalen College*, dated 1731, seems to be the only plate mentioned in Holdsworth's letter that was realised or survived (see fig. 6.35). From Holdsworth's correspondence, however, we are informed that the drawings were finished with shading, which means that the engraver did not have to transfer it to the engravings it independently.

That Borlach was involved in the world of architectural illustration is further reflected in the perspective of William Bruce's Kinross House (fig. 6.59). It was engraved by Richard Cooper, the inscription "JG. Borlach delint." clearly referring to Borlach as draughtsman of the preliminary drawing. As noted in chapter I, it has been suggested that the perspective, together with the corresponding floor plans, were originally intended for John Abraham Sleszer's *Theatrum Scotiæ* or its unsuccessful sequel *Scotia Illustrata*, published in 1693.<sup>1081</sup> Given that the drawings for Kinross appear in lists of "draughts [...] in readiness to be engraved" already before 1700 in connection with Sleszer's publication *Ancient and Present State of Scotland*, it is clear that these cannot be drawings produced by Borlach.<sup>1082</sup> His drawing(s) must have been made much later. It was not until 1811 that the perspective and the ground plans were finally published in William Adam's *Vitruvius Scoticus*. The engraving of the perspective of Kinross can thus be considered a duplicate copy. Borlach's drawing copied from a template was in turn reproduced by Cooper for the engraving. It is yet another example of the omnipresence of fluid copying in the architectural scene and the print trade. The question of why Borlach had come to produce a preparatory drawing for Kinross to be engraved remains unanswered for the time being. It is furthermore difficult to assess what his drawing would have looked like. Was it washed and shaded or was this the responsibility of the engraver to add to the engraving?

The preliminary drawings associated with Gibbs's *Book of Architecture* are at least, with two exceptions, all rendered in the grey wash style, complete with shading. They are detailed finished drawings giving the engravers specific parameters and leaving little room for individual variation. In most cases, the plates depict exactly

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<sup>1081</sup> Friedman, *James Gibbs*, 25; 336 note 19; Simpson, *Vitruvius Scoticus*, 10; 29; Harris, *British Architectural Books and Writers*, 103 note 34.

<sup>1082</sup> Walter Scott, David Laing, and Thomas Thomson, eds., *The Bannatyne Miscellany II* (Edinburgh: Ballantyne and Co., 1836), 320; 322; 328.

what was given in the preparatory drawings, including wash and shading – in other words, the engravers adhered to the provided modes of depiction and translated them directly into the engravings. We have here an imitative reproductive process that probably started with the original drawing, continues with Borlach’s (or another draughtsman’s) copy, and ends with the engraved reproduction. The desire for uniformity and conformity, which was to be achieved through copying and repetition, clearly manifested itself in Gibbs’s printing projects. However, the fact that the preliminary drawings were copied so closely in this case cannot be taken as a benchmark and applied to the perspective of Kinross. For, the implementation by engravers seems to differ between the various projects, in the same way that publications generally differ in their representation modes.

Indeed, the execution of the plates for Borlach’s own publication *Designs of Architecture* deviates from that of the plates in *A Book of Architecture*. They are simple outline engravings, the surfaces of the elevations rendered with shading only, without a full-scale grey wash being recreated (fig. 6.60). However, since Borlach is not credited as draughtsman, it is likely that he did not produce the preliminary drawings for the engravings. The manner of representation featuring only shading and no large-scale reproduction of grey washed surfaces is likewise employed in two prints which, according to the inscription, were drawn and etched by Gibbs himself (“J:G: delin: et Scul.” and “J:G. delin et scul:” respectively). One sheet shows an elevation and plan for Dupplin Castle, Perth and Kinross<sup>1083</sup> (fig. 6.61), the other an entrance elevation and a plan for Comley Bank Lodge, Alloa, Clackmannanshire (fig. 6.62).<sup>1084</sup> The etchings are youthful works by Gibbs and, as far as I know, the only ones he made himself. Like the engravings in Borlach’s *Designs of Architecture*, the two elevations by Gibbs include only shading and are not completely hatched to imitate grey wash. The nature of the prints is evidence that Gibbs did not master the technique of intaglio engraving and consequently made use of skilled engravers for his later projects. This might also be the reason why he refrained from imitating grey wash here. The fact that Gibbs at the time of the creation of the two etchings in the early 1710s had not yet

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<sup>1083</sup> Dupplin Castle is about 18 km linear distance from Kinross House, which was reproduced by Borlach and published as an engraving.

<sup>1084</sup> Friedmann, *James Gibbs*, 103-105.

adopted the grey wash style that later became a characteristic feature of his work, suggests that the preliminary drawings might have been similarly executed, i.e., only with shading and without any extensive wash.

On close inspection, both the preparatory drawings and the engravings – albeit to a lesser extent – for Campbell’s *Vitruvius Britannicus* are characterised by a certain degree of variability in terms of representation and execution. One reason for this might be that the designs were in part provided by the featured architects themselves or were reproduced from earlier engravings. It is noticeable that many preliminary drawings are neither washed nor shaded. Eileen Harris notes that it was left to the engravers to include this in their engravings independently.<sup>1085</sup> Often, however, at least the shadows were indicated on the drawings, a detail that seems to have passed unnoticed in previous research despite a recent doctoral thesis.<sup>1086</sup> Importantly, on the drawing of the elevation for Belton House, Lincolnshire (fig. 6.63), for example, the shadows cast by the dormer-windows and other projecting parts of the building are pencilled in and can be found reversed on the engraving (fig. 6.64). In addition, the window and door openings are darkened, and the surface of the receding building parts is imitating grey wash in the form of parallel hatchings, both features not seen in the preparatory drawing. Similarly, this applies to *A New Design of my Invention* (fig. 6.65). The drawing appears unfinished and schematic, it is completely blank, with neither grey wash nor shading. Two pencil lines, however, indicate the edges of the shadows of the main and side buildings across the receding sections of the building, which are executed accordingly on the engraving. Furthermore, the engraving emulates grey wash and shading, and the window and door openings are again given a dark appearance (fig. 6.66).

There are also engravings in *Vitruvius Britannicus* that do not emulate a grey wash style at all, or only to a limited extent, such as the elevation of an *Unexecuted design for a house for Paul Methuen* (fig. 6.67). Here, the representation mode of the

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<sup>1085</sup> Harris, *British Architectural Books and Writers*, 144 note 1.

<sup>1086</sup> O’Hara, “Colen Campbell,” 54.

preliminary drawing was almost exactly reproduced (fig. 6.68).<sup>1087</sup> Thus, on the drawing as well as on the engraving, there is no large-scale grey wash or grey wash emulation, but only the roof area and the area of the entrance hall are grey washed/imitating grey wash and the window openings are black washed/imitating black wash (although the three entryways to the entrance hall are blank on the drawing). The shading, too, was transferred to the engraving accordingly. Harris's conclusion that the preparation of the preliminary drawings for the engravings for *Vitruvius Britannicus* made Campbell "the master of this grey wash style", as the "drafting quality would be reflected in the engraving" thus proves not entirely accurate. Altogether, it seems that Campbell, in contrast to his adversary Gibbs, placed less importance on a uniform presentation within his publication and gave his engravers greater creative autonomy. This might partly be because he had less money available for his publications. In fact, Campbell entered into a partnership with several booksellers for the first edition of his *Vitruvius Britannicus* to form a joint stock enterprise.<sup>1088</sup> The invested capital was used as an advance for the publication and the booksellers were later entitled to the profit share of the sale. This may also explain the partially inconsistent design of the plates within the volumes, which while transformed from "rough and heterogenous architect's drawings into a uniform type of elevation and plan," nevertheless exhibit an element of variability in terms of the presentation of shading and emulation of grey wash.<sup>1089</sup> All the same, the included plates show that Campbell was diligent in his selection in order to achieve and promote both the best possible popularity of the book as well as his own popularity as an architect.

It is in the nature of printed works to reproduce drawings for such purposes. The impact that architectural engravings and prints with their relative uniform visual style in turn exerted on drawings was just as defining. Indeed, "the relationship between architectural prints and drawings throughout the early modern period was a

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<sup>1087</sup> However, there are several architectural differences between drawing and engraving. For example, the drawing features no vases on the staircase and no festoons on the top floor. Instead, the figures on the first floor are placed above a balustrade, which is not the case on the engraving.

<sup>1088</sup> Connor, "The making of 'Vitruvius Britannicus'," 16.

<sup>1089</sup> Connor, "The making of 'Vitruvius Britannicus'," 22.

fluid two-way street with neither media holding primacy.”<sup>1090</sup> It was noted above that many architects and draughtsmen borrowed modes of representation from printed works and reproduced these in their drawings as well as their own printed works. The explanatory texts on Castle’s drawings are only one example of the imitation of printed works in architectural draughtsmanship. Copying architectural prints for study and reference purposes has likewise been touched upon earlier. It was an integral part of architectural practice since the Renaissance and it was not only printed illustrations of treatises that were mechanically reproduced, but also drawings, loose prints, and physical works, such as ancient ruins in Rome.<sup>1091</sup> Drawings based on Renaissance authorities were not new to the eighteenth century – architectural treatises such as Vignola’s *Regola* had long been extremely popular. Michael J. Waters has discovered hand-drawn copies after Vignola in twenty albums that were made before the nineteenth century, among others in the Talman Collection at the Ashmolean Museum.<sup>1092</sup> The copy from the Vanbrugh Album showing the entablature of Vignola’s Castello Farnese, Caprarola (plate 32), which is probably by Pearce, is not included in Waters’s list (fig. 6.69). Waters notes that each of these copies is different from the printed original. This indicates that it was not always a case of straightforward copying, but that a certain degree of individuality was permitted, at least in drawings of this more private kind. This can be seen clearly in the drawing of the truncated diagram of the Doric order, with a fluted column and bucranium motif in the metope, which according to Lorimer and Newton is probably by Pearce and was taken from Palladio (fig. 6.70).<sup>1093</sup> Despite the fact that it is a copy from a printed original (i.e., monochrome), it has a light red wash to emphasise the mass of the sectioned column.

Similarly, the architectural prints that served as models for drawings of this kind “were fundamentally unstable, mutable entities that actively interfaced with

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<sup>1090</sup> Michael J. Waters, “A Renaissance without Order: Ornament, Single-sheet Engravings, and the Mutability of Architectural Prints,” *Journal of the Society of Architectural Historians* 71, no. 4 (December 2012): 512.

<sup>1091</sup> Michael J. Waters, and Cammy Brothers, *Variety, Archaeology, & Ornament. Renaissance Architectural Prints from Column to Cornice* (Charlottesville: University of Virginia Art Museum, 2011), 6.

<sup>1092</sup> Waters, “A Renaissance without Order,” 512.

<sup>1093</sup> Lorimer, and Newton, *The collection of drawings by Sir John Vanbrugh*, 81; 170.

drawings and were constantly subject to variation and user modification.”<sup>1094</sup> Indeed, printed books varied not only between different editions, but also from copy to copy. Engraved images were likewise frequently misinterpreted, manipulated, and used in ways that the original creator could never have anticipated or controlled.<sup>1095</sup> No straightforward imitative reproduction occurred here, and the fear that one’s own works might be affected was expressed by Vanbrugh when he asked Lord Marlborough to safekeep his drawings of Blenheim intended for printing, “lest they should be published (as it often happens) to great disadvantage.”<sup>1096</sup> Readers were aware of the circulation of pirated, plagiarised, and corrupted works.<sup>1097</sup> This can be concluded from annotated treatises, of which Inigo Jones’s copy of Palladio’s *Quattro Libri* is arguably the most famous. His extensive notes, written over many years and cross-referenced to other books, suggest that he compared the pages in his copy of Palladio’s text with the buildings as they were constructed on site.<sup>1098</sup> Jones further commented where he was able to compare the woodcuts in the book with Palladio’s autograph drawings.<sup>1099</sup> This practice continued throughout the eighteenth century. Pearce, too, compared his 1601 edition of Palladio’s *Quattro Libri* with the buildings in situ, observing mistakes in the engravings of the Palazzo Chiericati, the Villa Barbaro, and the Villa Valmarana at Lisiera when he visited them.<sup>1100</sup> He recognised that often the engravings, with their abstract views, were misleading not because of their inaccuracy but because they failed to show the effect of the buildings on the site.<sup>1101</sup>

The authority of Renaissance architects such as Palladio or Vignola was thus established through the ages according to how their work was reproduced. This was achieved through the circulation of their own printed works or pirated from Italian drawing books, which were easily accessible in Britain (e.g., Giacomo Leoni’s Palladio

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<sup>1094</sup> Waters, “A Renaissance without Order,” 490.

<sup>1095</sup> Bermingham, *Learning to draw*, xii.

<sup>1096</sup> Walker, *Architects and Intellectual Culture*, 82.

<sup>1097</sup> Waters, “A Renaissance without Order,” 503.

<sup>1098</sup> Christy Anderson, *Inigo Jones and the classical tradition* (Cambridge; New York; Melbourne: Cambridge University Press, 2007), 91.

<sup>1099</sup> Christy Anderson, “Live words and experience in early modern architecture,” in *Architecture, Art and Identity in Venice and its Territories, 1450–1750. Essays in honour of Deborah Howard*, eds. Nebahat Avcioğlu and Emma Jones (Farnham: Ashgate Publishing, 2014), 84.

<sup>1100</sup> McParland, *Public architecture in Ireland*, 180.

<sup>1101</sup> McParland, *Public architecture in Ireland*, 181.



translation of 1715, considered the “true fount of the Palladian ascendancy”<sup>1102</sup> until replaced by Isaac Ware’s edition of 1738), through the circulation of drawings and manuscript copies of their treatises among the elite, and through citation in the local buildings. The latter were again reproduced in new architectural books, such as Jones’s Banqueting House inspired by Palladio, which appeared in *Vitruvius Britannicus*. Both Campbell’s preliminary drawing and the engraving, however, fail to capture a true representation of the actual building (figs. 6.71-6.72). As Christy Anderson points out, Campbell regularises the façade and the monochromaticity of the two-dimensional images does not capture the variety of colours used in the building, resulting in a flat and uniform appearance.<sup>1103</sup> An unwashed measured drawing for the Banqueting House by John Rudd from 1770 is itself thought to be a copy after the engraving from Campbell’s *Vitruvius Britannicus*.<sup>1104</sup> This case demonstrates the “fluid practice of transmediation in which drawings were made into prints, prints were remade into drawings, and both were translated into built architecture.”<sup>1105</sup>

One who perfectly internalised this practice of transmediation is John Aheron (d. 1761) whose two manuscript models for his *General Treatise of Architecture*, published in 1754, perfectly imitate the appearance of a printed treatise. They represent – albeit as an isolated case – a peak moment within the culture of imitation in the eighteenth century. His earlier drawings for Dromoland Castle from the 1740s are likewise executed in an “impressive hatched technique”, simulating the “dense burin-incised lines of copper-plate engraving” (fig. 6.73).<sup>1106</sup> This drawing is a precise copy after plate 61 of William Kent’s *Designs of Inigo Jones* (1727) whose execution reveals the origins of Aheron’s distinctive style.<sup>1107</sup> The drawings of the two manuscripts are rendered with thousands of tightly arranged, meticulously ruled lines

<sup>1102</sup> Arciszewska, “Classicism,” 22.

<sup>1103</sup> Christy Anderson, “Palladio and the Open Work,” in *Palladio: 1508 – 2008, il simposio del cinquecentenario*, ed. Franco Barbieri (Venezia: Marsilio, 2008), 344.

<sup>1104</sup> “Measured drawings of the Banqueting House, Whitehall, London: elevation,” RIBApix, accessed June 15, 2023, [https://www.ribapix.com/Measured-drawings-of-the-Banqueting-House-Whitehall-London-elevation\\_RIBA34580](https://www.ribapix.com/Measured-drawings-of-the-Banqueting-House-Whitehall-London-elevation_RIBA34580).

<sup>1105</sup> Waters, “A Renaissance without Order,” 513.

<sup>1106</sup> Christine Casey, “‘Such a piece of curiosity’: John Aheron’s *A General Treatise of Architecture*,” *The Georgian Group Journal* V (1995): 65.

<sup>1107</sup> Casey, “‘Such a piece of curiosity,’” 67.

drawn in horizontal, vertical, and diagonal arrangements in order to create a distinction between light and shadow and to enhance the particular elements of each design (figs. 6.74-6.75). They are not merely a plain copy of copperplate engravings, but deliberately compete against these.<sup>1108</sup> The two manuscripts differ from each other, and the final printed work is not a straightforward copy either. While the first represents a conglomerated folio volume using a variety of different types and formats of paper and featuring varying scales and executions of the drawings, the second is neater and more uniform in style and execution. Christine Casey ties this change to Aheron's witnessing of the Dublin Society competition of 1745. On the day the competition was decided, Aheron presented his first manuscript to the Dublin Society.<sup>1109</sup> Casey proposes that because of the insights he obtained into contemporary architecture there, the favouring of Ensor's proposals, and a possible discussion with the competitors and the committee, including Castle, led him to revise his manuscript. Castle thus might have acted as a formative instance here as well, leading to the extravagant designs of Aheron becoming more practical, economical, and homogenous in presentation.

To conclude, the reciprocal copying and emulation of drawings and printed works in the course of the eighteenth century led to enormous quantities of two-dimensional serial images being endlessly mutable, ready-made to be reused and reinterpreted at any scale and in any medium.<sup>1110</sup> They were available to and collected by an ever-growing and less expert audience and thus, in addition to drawings, became increasingly integral to the training and construction process. Towards the end of the century, architecture was more and more built after prints which provided standardised information. They replaced the architect on the building site, for there was an increasing use of architectural prints, which now acted as intermediaries. The culture of imitation and the desire for homogeneity further resulted in a blurring of the genres of architectural literature and illustration in the second half of the

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<sup>1108</sup> Casey, "Such a piece of curiosity," 65.

<sup>1109</sup> Casey, "Such a piece of curiosity," 71.

<sup>1110</sup> Michael J. Waters, "Architecture: Renaissance Building Culture between Production and Place," in *A Cultural History of Objects in the Renaissance*, eds. Dan Hicks, William Whyte, and James Symonds (London: Bloomsbury Publishing, 2022), 170.

eighteenth century.<sup>1111</sup> The abundance of available materials replaced the architect as a sole provider of expert knowledge.

## Conclusion

This chapter provided a detailed examination and comparative analysis of the practices and conventions employed in eighteenth-century architectural drawing offices based on the study of architectural drawings, other visual material, and archival sources. In this way, it contributed to the state of knowledge in this field, including the roles of different professionals within the offices. The architectural offices were of major relevance to the practice and style of eighteenth-century architecture.

The literature review at the chapter's outset has shown that there are considerable gaps in scholarly research on architectural draughtsmanship in the early eighteenth century, particularly with regard to the production of drawings in the drawing office and the equipment and tools used. While there is at least some information available on the drawing offices of the Office of Works and Office of Ordnance, much less is known about the drawing offices of architects outside of these government organisations. An overarching comparative approach is required, however, to understand the broader trends in early eighteenth-century architectural draughtsmanship, which is what this chapter has attempted to initiate.

It was established that architectural offices produced a wide variety of drawings, each serving various purposes beyond mere representation. Analysis of albums by James Gibbs and Richard Castle suggests that a typical building project in the eighteenth century might have required the production of hundreds of drawings. The surviving drawings represent only a small fraction of the total number produced for these projects. The quantity and distribution of the drawings depended on the architect's personal preferences, the organisational structure of the office, and the scope of the project. In offices, where leading architects delegated the finishing of preliminary drawings to their assistants, sketches were more prevalent, while the

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<sup>1111</sup> Martin, "The Ascendancy of the Interior," 22.

preservation of preliminary or project drawings was important in terms of copyright protection and establishing authorship. In this context, project drawings could, for example, document the design specifications to identify discrepancies between design and construction. This type of drawing, but also preliminary drawings for engravings, were often kept safe. A keen publisher, Gibbs was particularly anxious to protect his designs, as evidenced by his efforts to keep copies of his designs and his involvement in a number of legal disputes. As a highly valued source of architectural knowledge, architectural drawings were used for various purposes, including the acquisition and preservation of knowledge, the creation of templates for craftsmen, and as teaching material. Drawings were often copied from prints or other drawings, and this practice helped to share and transmit architectural information. Many architects, including Gibbs, Wren, and Pearce, collected drawings by other architects.

Archival sources provided a valuable snapshot of the material culture of an eighteenth-century architectural office. Orders establish that the offices maintained a tidy and well-lit working environment, with essential supplies like paper, writing and drawing tools, as well as cleaning materials. A variety of paper types and sizes was used for different purposes within the office, not only for the preparation of drawings but also for the wealth of paperwork that occurred in such an environment. Although there were no standard sizes for drawings, similar dimensions were often observed for drawings within albums. In addition, the drawings that were preparatory for the engravings in Gibbs's *Rules for Drawing* and *Bibliotheca Radcliviana* are of the same sizes, compared to the preliminary drawings for engraving in *A Book of Architecture*. This suggests that Gibbs was becoming more professional in his approach to publishing his work. Overall, it can be concluded that the paper was cut to a convenient format in the architectural offices.

In addition to this, it has been shown that Castle's explanatory texts, with its consistent structure and neat calligraphy, distinguishes his drawings from those of his contemporaries. Unlike military maps or engineering drawings, architectural drawings were generally devoid of extensive explanatory text. Castle's *Explanations* add another level of clarity and sophistication to his drawings and are yet another indication of his possible military background.

The diversity of architectural drawings, as seen in earlier offices such as those of Wren, Vanbrugh, and Pearce, was abandoned in the course of the eighteenth century. Instead, a grey wash style was adopted by numerous architects and draughtsmen across Britain and Ireland. The desire for anonymity in the drawings of the offices of Gibbs, Castle, and other architects of the period points to a larger trend of office-based architectural practice. This trend was characterised by a standardisation of drawing methods and styles, which served to obscure the contributions of individual draughtsmen. The uniformity of the grey wash style reflects besides the spread of Palladian aesthetics the growing professionalisation of the architectural trade. This development goes hand in hand with a general scientification as well as the desire to achieve a universally legible, publishable standard of representation. However, the homogenous style of representation complicates the distinguishing of individual hands. Precisely this may have been a decisive factor in the style's widespread popularity. The far-reaching adoption of a uniform mode of representation ultimately led to an increased equality of opportunity. With many using the same drawing conventions, the background or training of the draughtsmen becomes less relevant. This particularly benefited foreigners like Castle and Borlach, who sought employment outside their home countries and enjoyed success by conforming to the uniform mode of representation. With his technical sophistication, Castle dominated architectural draughtsmanship in Ireland in the first half of the eighteenth century. Other architects like George and John Ensor or Michael Wills were less skilled, whilst apparently also trying to follow the grey wash style. Therefore, a slightly greater range of variability can be observed in the Irish drawings of the most prominent architects compared to those in England. Nevertheless, the standardisation of architectural representation had significant effects, as it allowed for a democratisation of architectural design and the dissemination of architectural knowledge to a wider audience.

Finally, it was demonstrated that the relationship between architectural drawings, engravings, and built architecture was complex and fluid and that these media constantly interacted with and influenced each other. This can be seen, for example, in the production of Colen Campbell's *Vitruvius Britannicus*, where the

engravers were given a certain degree of creative autonomy in reproducing the preparatory drawings. It can likewise be observed in the use of architectural engravings as models for drawings, where draughtsmen borrowed modes of representation from printed works, but also added their personal style. In this way, the authority of Renaissance architects such as Palladio and Vignola was established by the dissemination of their printed works and drawings. However, this authority was not based on the accuracy of their representations, but rather on the way in which their work was reproduced and interpreted. The abundance of available two-dimensional materials, generated by copying and reproduction, eventually led to the replacement of the architect as the sole mediator of expert knowledge.

## CONCLUSION

In the first half of the eighteenth century, Richard Castle and Johann Gottlieb Borlach, two accomplished Dresden draughtsmen, successfully integrated into prominent architectural practices in Britain and Ireland. Their achievement in becoming important protagonists in the local building industries can be attributed to their ability to adapt their skills to the conventions of British office practices and of mastering the fashionable grey wash style. Although many biographical questions concerning Castle and Borlach remain unanswered, a comprehensive contextual understanding of the milieu from which they emerged has been achieved. The limited evidence on their early development, which suggests diverse connections, but also their later roles as draughtsmen away from their initial home, required an extended study on the development of architectural skill and drawing in eighteenth-century Europe. Thus, the somewhat fruitless archival research on Castle and Borlach ultimately presented an opportunity to effectively open up the wider world of the architectural office through the lens of these two migrant building professionals. Given that both had started their professions in Germany but did not remain there, the contextualisation could not be limited to a single location. The thesis has demonstrated that an examination of a broad range of contemporary drawings and offices is crucial for understanding the working methods of eighteenth-century draughtsmen and architects such as Castle and Borlach. It is precisely this combination of micro and macro perspectives that leads to a holistic understanding of architectural history, a concept that is only slowly beginning to gain momentum in academia. The work therefore represents an impetus and encouragement to further explore the intersection between architectural history and the surrounding social, cultural, and political landscape by bringing together these diverse perspectives. This will allow the forces that have shaped the built environment to be seen in a wider context. This thesis provides a foundation for future research and fosters a deeper appreciation for the complexities of architectural history.

The available information and the few newly discovered evidence about Castle and Borlach required research into establishing how draughtsmanship was learnt by individuals like them. This involved exploring the various routes to architectural and

engineering expertise in Germany in the late seventeenth and early eighteenth centuries. The opportunities available included attending academies, completing a craft apprenticeship, a training within a building authority, or receiving specialised training in the military. It has been shown that at that time numerous educational institutions and training environments in Germany strove for relatively high teaching standards in architecture, construction, and engineering. Yet, there was neither a specific craft apprenticeship for training as architectural journeyman, nor for qualification as *Baumeister*, nor a corresponding academic curriculum at a relevant faculty. Instead, the individual training contexts were combined, with those focused on hands-on learning (craft apprenticeship, training within a building authority) initially prevailing. In the course of the eighteenth century, academic training gained increasing popularity for building practitioners, especially in contrast to a training provided by the building authorities. The academies established a form of teaching that combined both practice and theory. In general, there appears to have been moves in all the discussed training contexts to increasingly professionalise teaching. This was enforced, for example, through (entrance) exams, professional and certified teaching staff, expanded curricula, practical exercises, and theoretical study of specific literature. For the latter, however, there have been recent calls in research not to overestimate its importance compared to the “tacit knowledge” in architectural production.<sup>1112</sup> Nevertheless, according to the above considerations, some influence of architectural tracts on learning cannot be denied. An additional aspect for the acquisition of knowledge and in particular for its consolidation is dialogue and discussion about the content of the lessons, which was particularly identified in the contexts of academies and cadet schools. Pamela Long has pointed out that building sites are likewise places of discussion and “knowledge production” and additionally lists “libraries, laboratories, courts and arsenals, where scholars, practitioners and patrons came together” to exchange ideas.<sup>1113</sup> To this can be added the guilds, which encouraged the development of knowledge through their inherent guild rituals.

The acquisition of drawing skills was essential within all discussed training

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<sup>1112</sup> Anderson, “Live words and experience,” 81.

<sup>1113</sup> Anderson, “Live words and experience,” 83.



contexts and the introduction of more rigorous and professional training methods, as well as the accessibility of manuals throughout Europe in the course of the eighteenth century contributed to the emergence of a new generation of highly skilled draughtsmen. As has been shown on various occasions, the copying of books, prints, or drawings, but also of three-dimensional models, constituted the foundation of any engagement with drawing, be it in an academic, craft, or military training context. While this is not necessarily a new observation, the high status and necessity attached to the act of copying in subsequent professional life has become clearer. In addition, the combination of the various training routes at the beginning of the eighteenth century, before an academic training dominated, had the effect of expanding or consolidating knowledge and expertise (including drawing skills) in the various spheres. Surviving study drawings copied from various two-dimensional representations testify to the trainees' endeavours to acquire comprehensive drawing skills beyond instruction. All this is important in order to understand the development of the diverse drawing skills of eighteenth-century draughtsmen. Even after completing training, manual reproduction continued to be an integral part of everyday architectural or engineering practice. Fortification designs and artillery drills were reproduced for commanders, project drawings were prepared after originals for record keeping or as teaching material. Preparatory drawings for engravings were copied from original drawings or prints and the fair-copy of preliminary drawings in the architectural office for the client is a reproductive process, too. There was more to the practice of copying than improving drawing skills; copying was used to create a uniform style in the office.

In order to understand the evolution of the office styles to which Castle, Borlach, and most draughtsmen were exposed, a wide-ranging study of the development of architectural drawing in eighteenth-century Europe was undertaken, as most studies on the subject have so far been focused on specific collections, architects, or buildings. Only through such a broad approach is it possible to expand the existing knowledge of architectural draughtsmanship and to show the range of influences upon office practices in the period. Eva Röell demonstrated this with her work on the development and use of architectural drawings in the eighteenth-century Dutch Republic. She has provided a

comprehensive overview on the subject, making it an important reference for my research as well as for future endeavours. By building on her approach and insights, it is possible to flesh out the transnational and interdisciplinary character of drawing practices as well as their diversity and complexity. As architecture became increasingly professionalised, drawings gained recognition as works of art in their own right, leading to the development of new conventions for effective communication. While standardised colour techniques emerged in engineering, the predominant style in British civil architecture shifted towards a homogenous grey. This distinctive British characteristic can be attributed to several factors, such as the influence of government institutions, the professionalisation of the architectural trade and draughtsmanship, and the prevalence of monochrome prints and engravings.

The complex matter of reconstructing architectural offices, the production of drawings as part of these offices, and the historical evidence that we can extract from them, has received comparatively little scholarly attention so far. Here, it has been illustrated that a variety of small-scale particulars may be exploited to approach this subject and explore it within a larger setting. This was achieved by combining isolated findings from previous research, newly discovered and previously known historical documents, and architectural drawings. This multitude of micro-insights into the architectural practice of the eighteenth century facilitates new insights into the big picture, contributing to the understanding of drawing practices and their role in the evolution of the architect's profession. These processes encompass underdrawing, the use of the stylus, the exploration of different projections and colours, patterns of shading (washed or hatched) and washes, the application of the perspective square, the design of scale bars and window/door openings, the use of flaps or frames, and the relationship between paper sizes and drawings.

The examination of drawing sizes within offices has revealed the different types of paper used by the offices. On the basis of the existing architectural drawings, however, it was not possible to identify a standard type of paper that was used universally. It seems that the sheets were trimmed, either in the offices or later. Similar sizes were mostly used for drawings contained in presentation portfolios, and the preparatory drawings for Gibbs's *Rules for Drawing* and *Bibliotheca Radcliviana*

are roughly the same size. While it is not possible to estimate the scale of drawing production precisely, the tangible data referred to above, such as paper orders or suites of drawings for specific projects, suggests that the drawings produced for a single project ranged in the hundreds. The surviving drawings are but a fragment of that production. Assuming that James Gibbs was involved in around 164 building projects known to us and that roughly 100 drawings were produced for each (plus/minus), the almost 1000 drawings preserved today may effectively represent only c. 6% of his overall output. Clearly, draughtsmanship was the vehicle for building production and the sheer scale of production required many hands. Castle and Borlach were part of the great human engine that on a day-to-day basis powered this industry in the period, equipped with the necessary skills and tools.

The devices of draughtsmanship have been explored using the tools of formal and connoisseurial analysis. For the French engineers, polychromy is the decisive feature, characterised by the standardised and codified use of colours developed by Vauban. This also applies to the British Office of Ordnance. Coloured washes were likewise employed in civil architecture, but no strict adherence to specific rules was necessary. Fontana and his office in Italy worked with colours to mark different architectural features. This is also the case for Wren and his office, as well as in Germany for the architects of the *Oberbauamt* such as Pöppelmann, Longuelune, or de Bodt. The drawings by Leoni, Galilei, Gibbs, Pearce, and Castle are somewhat more restrained in their polychromy. Coloured washes are used for certain construction situations or building materials but are limited to just a few colours (mainly light red, yellow, green-blue) and are relatively infrequently encountered. While colour was used relatively consistently throughout the different offices, at least prior to the domination of the grey wash style, other means of representation, such as shading or the design of the windows/doors, as well as the drawing techniques, appear somewhat more diverse and flexible. In Wren's office, Laine favoured wash shading, while Woodroffe applied hatched shading. With Ripley taking on more responsibility in the Office of Works, the receding building parts were modelled in a light grey wash, given that the monochrome grey wash style prevailed by this time. Projecting elements remained blank. A ruled shading technique for the roofs can furthermore be

documented for Ripley's office, featuring an additional grey wash towards the top. Grey wash shading is recorded for Pöppelmann, Longuelune, and de Bodt in Germany. In some cases, a shift in drawing techniques can be observed. For example, Hawksmoor initially used a hatched shading technique, but later tonal modelling with grey wash shading dominated.

Similarly, Gibbs modified his drawing practice over time, an aspect that does not seem to have been hitherto recognised. The determination and evolution of his drawing style from the early heterogeneous style towards the later homogeneous Palladian grey wash style is a contribution to understanding Gibbs's drawings and his office practice. Especially for the early drawings several influences can be identified, which are not exclusively of Italianate origin, but were likewise provided by individuals from England, such as Wren and his circle. A focus on Italy without recognising the wider influence of other places such as Germany or the Netherlands is a general shortcoming within research. However, this pigeonholing often practised in the past does not work when assessing Gibbs's drawings. It has been likewise clearly shown that Gibbs did not draw all of the drawings for his projects himself but partly relied on other draughtsmen that worked under his instructions. They cultivated a homogenous office style, most evident in the preliminary drawings for his publications. It appears that it was Gibbs's aim to make his own drawings indistinguishable from those which had been produced by his office staff. This lack of distinction between different hands contributed to a long-held perception in academia: the supremacy of the architect as lone force driving the building industry. For this reason, it is necessary to overcome the attribution of drawings to individuals and instead treat them as products of the architectural offices made through collaborative work. A new approach should be a generalised language that encompasses the "office of Gibbs" as being responsible for the drawings. Having said this, it is not necessary to clarify matters of attribution in every detail as it is more important to understand and emphasise that the work of an architectural office was collaborative in nature.

The first comprehensive exploration of Richard Castle's drawn legacy examined his drawing style, office procedures, and collaborations with Pearce and Ensor. It also

contextualised Castle's work with reference to Vanbrugh and Pearce. Castle's mature drawings reveal a meticulous approach to architectural representation, in line with the contemporary conventions for architectural drawings, which favoured a monochromy using grey wash and shading. A special feature of Castle's drawings is the insertion of *Explanations*, a practice that is rare elsewhere. The extremely tidy and precise pen technique finds parallels in the drawing style of architects like Gibbs but diverges from that of Vanbrugh and Pearce. This might be explained by Castle's drawing talent, but also by a rigorous education. While the analysis of the drawings did not reveal definite information about Castle's background or educational context, they point towards engineering and the ordnance. Based on certain characteristics, the assumption of a military-engineering education suggested by previous research can be strengthened. The use of coloured washes in some of the drawings alone, however, cannot be a decisive argument for a military education. After all, outside the military and engineering sector, draughtsmen across Europe likewise employed coloured washes for their designs. Indeed, Castle's use of imitative colours in his drawings for *Essay on artificial navigation* departs from standard military drawing practice. Apart from that, however, what these drawings clearly demonstrate is Castle's ability to adapt to different circumstances or assignments. While his other drawings correspond to the monochromy of architectural drawings and the visual habits of clients from the field of civil architecture, the polychromy of the Newry Canal drawings is adapted to the common visual language used in the field of engineering, contributing to the unambiguous comprehensibility of the designs. Furthermore, the fact that Castle wrote two treatises on water, one on inland navigation and one on Dublin's water supply, as well as that his only description of his early travels are dealing with engineering work, are strong indications of an engineering past. His architectural drawings, too, at times feature classical conventions of engineering draughtsmanship, such as the recurring use of perspective, the aerial/illusionistic rendering of rooftops or ditches, as well as the adding of *Explanations*, and might thus be indicative of Castle's potential training in this field.

Progress regarding the understanding of the collaborative working methods in architectural offices was achieved by script analysis. As evidenced by the Richmond

Lodge Album, Castle not only produced drawings for Pearce, but also fair-copied memoranda. Ensor, in turn, conducted such clerical work for Castle, most probably from about the mid-1730s onwards. It can further be assumed that Ensor at least added the *Explanations* to certain drawings by Castle, as well as measurements or scale bars. The few drawings attributed to Ensor that have survived, hardly allow any conclusions to be made about his drawing skills or style. Undoubtedly, though, he was an essential member of Castle's office. Ensor's estimates and other papers are characterised by a high degree of orderliness and tidiness, and his handwriting is perfectly legible. These skills clearly qualified him as competent clerk and certainly came in handy on the construction site as well. For Castle, who was pedantic in his practical approach and prepared exceptionally meticulous drawings, Ensor was an essential member to his architectural office.

Furthermore, the study revealed that Castle not only introduced a high quality of draughtsmanship to Ireland, but that he also influenced Irish architects and draughtsmen. While the high level of Castle's drawings was unparalleled in Ireland, excellent drawing skills seemed to have become the norm in England in the course of the eighteenth century. Initially protecting Palladian authenticity from those outside the upper class and mastered only by patronised individuals such as Gibbs, Flitcroft etc., the increasing professionalisation of the architectural trade and the academisation of drawing training led to a widespread increase in standards of architectural draughtsmanship. The convention of the grey wash style was thus not only a stylistic medium of the Palladian Office of Works but was adopted by architects and draughtsmen beyond. Through commercial dissemination, the grey wash style became a signature of the Palladian idiom and accommodated the visual habits of the client elite, influenced by the monochromaticity of both old and new architectural printed works and drawings. Apart from minor expressions of individuality, the prevailing homogeneity of the drawings, which complicates attributions today, may have once represented an opportunity for success in the competitive British building trade. Both Castle and Borlach naturalised in such a way that they became part of the seamless mode of representation that characterised the Palladian project of British architecture.

The homogeneity of eighteenth-century drawings presents a problem for today's researchers, as it poses challenges in distinguishing and attributing different hands. This becomes apparent not least from the many false attributions that have been made in the past and will certainly be further revised in the future. As Röell already noted, the limits of using drawings as sole sources of evidence must be recognised. Only by connecting and contextualising individual elements, can the collaborative nature of European eighteenth-century architectural offices and draughtsmanship, as exemplified by the practices of Gibbs, Castle, and their contemporaries be understood. This necessitates a shift in research methodology away from individual attribution to a more holistic approach that recognises the collective efforts of an entire office.

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als Prozeßvormund des nichtehelichen Kindes der verstorbenen Ehefrau des Kl. zu Fritzlar Maria Carolina Franziska, (Lic. Johann Andreas Dietz, RKG-Prokurator, Wetzlar).

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## APPENDIX

**Tab. 1 Glossary *Oberbauamt***

| <b>German term<br/>(<i>Oberbauamt</i>)</b>                 | <b>English translation</b>                                  | <b>English equivalent at<br/>the Office of Works</b>                                                            |
|------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| <i>(Land)bauschreiber</i>                                  | (state) building scribe                                     | Deputy Comptroller                                                                                              |
| <i>Akzisebaudirektor</i>                                   | excise overseer                                             | –                                                                                                               |
| <i>Cammer-Conducteur</i>                                   | conductor of the chamber                                    | Comptroller of the Chamber                                                                                      |
| <i>Conducteur</i>                                          | conductor                                                   | Clerk of Works                                                                                                  |
| <i>General-Intendant der<br/>Civil und Militär-Gebäude</i> | general administrator of<br>civil and military<br>buildings | Surveyor-General                                                                                                |
| <i>Hauptgärtner</i>                                        | main gardener                                               | Master or Chief<br>Gardener                                                                                     |
| <i>Kommödientischler</i>                                   | comic joiner                                                | –                                                                                                               |
| <i>Kommödienzimmermeister</i>                              | comic master carpenter                                      | –                                                                                                               |
| <i>Künstler und<br/>Kunsthandwerker</i>                    | artists and craftspeople                                    | Artists and Craftspeople                                                                                        |
| <i>Landbaumeister</i>                                      | state master builder                                        | Chief Clerk of the King's<br>Works                                                                              |
| <i>Maurermeister</i>                                       | master mason                                                | Master Mason                                                                                                    |
| <i>Oberbauamtszahlmeister</i>                              | chief paymaster                                             | Paymaster                                                                                                       |
| <i>Oberbauschreiber</i>                                    | chief building scribe                                       | Comptroller                                                                                                     |
| <i>Oberkommissar</i>                                       | chief commissioner                                          | Deputy Surveyor                                                                                                 |
| <i>Oberlandbaumeister</i>                                  | chief state master builder                                  | Surveyor of the Royal<br>Gardens, Surveyor of<br>Gardens and Waters,<br>Surveyor of the King's<br>Private Roads |
| <i>Polier/Adjunkt</i>                                      | foreman/adjunct                                             | Assistant                                                                                                       |
| <i>Sekretär</i>                                            | secretary                                                   | Secretary                                                                                                       |

|                             |                     |                  |
|-----------------------------|---------------------|------------------|
| <i>Theatralischer</i>       | theatre             | —                |
| <i>Architect/Inspecteur</i> | architect/inspector |                  |
| <i>Zahlmeister</i>          | paymaster           | Deputy Paymaster |
| <i>Zimmermeister</i>        | master carpenter    | Master Carpenter |
| <i>Zahlmeister</i>          | paymaster           | Deputy Paymaster |
| <i>Zimmermeister</i>        | master carpenter    | Master Carpenter |

Job descriptions in the Saxon *Oberbauamt*, their English translations, and pendants in the British Office of Works.

**Tab. 2 Paper Sizes**

| <b>Paper</b>                | <b>Dimensions in mm<br/>(height x width)</b> | <b>Dimensions in in.<br/>(height x width)</b> |
|-----------------------------|----------------------------------------------|-----------------------------------------------|
| <b>BROWN PAPERS</b>         |                                              |                                               |
| Large Cap / Bagg Cap        | 482.6 x 584.2                                | 19 x 23                                       |
| Kentish Cap                 | 457.2 x 546.1                                | 18 x 21.5                                     |
| Western Cap                 | 444.5 x 520.7                                | 17.5 x 20.5                                   |
| Small Ordinary              | 381 x 457.2                                  | 15 x 18                                       |
| Ditto 2 Pound               | 355.6 x 558.8                                | 14 x 22                                       |
| Ditto 1 Pound double        | 292.1 x 457.2                                | 11.5 x 18                                     |
| Ditto ½ Pound double        | 393.7 x 495.3                                | 15.5 x 19.5                                   |
| <b>WHITED BROWN</b>         |                                              |                                               |
| Lomb. Hand                  | 431.8 x 533.4                                | 17 x 21                                       |
| Royal                       | 482.6 x 609.6                                | 19 x 24                                       |
| Middle French               | 444.5 x 533.4                                | 17.5 x 21                                     |
| Small French                | 406.4 x 495.3                                | 16 x 19.5                                     |
| Middle Hand                 | 406.4 x 508                                  | 16 x 20                                       |
| Small Hand                  | 368.3 x 457.2                                | 14.5 x 18                                     |
| Cut Hand                    | 381 x 584.2                                  | 15 x 23                                       |
| <b>PRINTING SUPER ROYAL</b> | 584.2 x 596.9                                | 23 x 23.5                                     |
| Printing Royal              | 469.9 x 596.6                                | 18.5 x 23.5                                   |
| Royal Blue                  | 469.9 x 596.6                                | 18.5 x 23.5                                   |
| Cartridge Paper             | 469.9 x 596.6                                | 18.5 x 23.5                                   |
| Printing Demy               | 374.6 x 501.6                                | 14.75 x 19.75                                 |
| Writing Demy                | 387.4 x 482.6                                | 15.25 x 19                                    |
| Demy Blue                   | 400 x 501.6                                  | 15.75 x 19.75                                 |
| Large Post                  | 374.6 x 482.6                                | 14.75 x 19                                    |
| Crown                       | 368.3 x 463.5                                | 14.5 x 18.25                                  |
| Printing Fools Cap          | 342.9 x 444.5                                | 13.5 x 17.5                                   |
| Writing Fools Cap           | 330.2 x 406.4                                | 13 x 16                                       |

|                                     |                |               |
|-------------------------------------|----------------|---------------|
| Fan Paper large                     | 361.9 x 571.5  | 14.25 x 22.5  |
| Fan Paper small                     | 361.9 x 463.6  | 14.25 x 18.25 |
| Chancery double                     | 374.6 x 558.8  | 14.75 x 22    |
| “Bastard” or double Copy            | 374.6 x 482.6  | 14.75 x 19    |
| Pot                                 | 317.5 x 393.7  | 12.75 x 15.5  |
| <b>Addenda from Richard Johnson</b> |                |               |
| FIRST CLASS                         |                |               |
| Double Elephant                     | 584.2 x 711.2  | 23 x 28       |
| Imperial                            | 559 x 768      | 22 x 30.25    |
| Imperial, half                      | 559 x 384      | 22 x 15.13    |
| Medium Writing                      | 444.5 x 571.5  | 17.5 x 22.5   |
| Post, large                         | 419.1 x 533.4  | 16.5 x 21     |
| Post, small                         | 342.9 x 419.1  | 13.5 x 16.5   |
| Post, thin                          | 387 x 495      | 15.24 x 19.49 |
| Pot, double                         | 431.8 x 647.7  | 17 x 25.5     |
| Short demy                          | 355 x 514      | 13.98 x 20.24 |
| Superfine Fools Cap                 | 342.9 x 412.75 | 13.5 x 16.25  |
| Super Royal                         | 488.95 x 698.5 | 19.25 x 27.5  |

Names and measurements of the paper sizes most likely used in the architectural offices in the eighteenth century. Sizes have been derived from Charles Leadbetter, *The Royal Gauger* (London: E. Wicksteed, 1739), 44 and supplemented from Richard Johnson, *New Duty on Paper. The Paper-Maker and Stationer’s Assistant* (London: Debrett, 1794), 4v-8r.