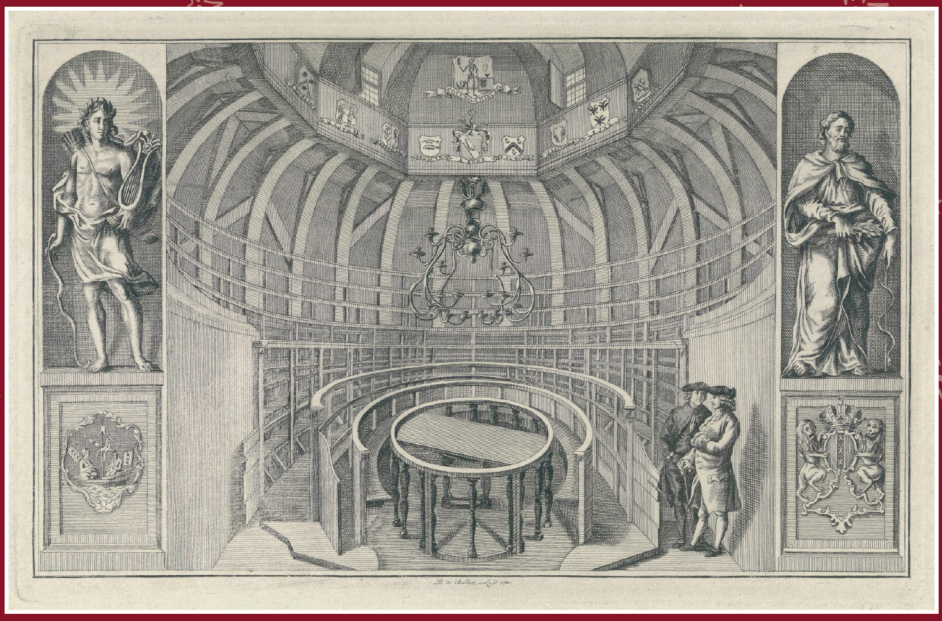
NUNCIUS SERIES
Studies and Sources in the Material and Visual History of Science



L'anatomia tra lettere e arti

Rappresentazioni e immaginari dal XVI al XXI secolo

A cura di / Edited by
Linda Bisello & Carla Mazzarelli

BRILL

L'anatomia tra lettere e arti: rappresentazioni e immaginari dal XVI al XXI secolo

Nuncius Series

Studies and Sources in the Material and Visual History of Science

VOLUME 16

The titles published in this series are listed at *brill.com/nuns*

L'anatomia tra lettere e arti: rappresentazioni e immaginari dal XVI al XXI secolo

A cura di / Edited by

Linda Bisello
Carla Mazzarelli

Col supporto redazionale di / With editorial assistance from

Imma Iaccarino and Sofia Bollini

BRILL

LEIDEN | BOSTON

The open access publication of this book has been published with the support of the Swiss National Science Foundation.

Swiss National Science Foundation

Cover illustration: Incisione di Barent de Bakker, Interno del teatro anatomico Collegium Chirurgicum di Amsterdam, 1780. [Engraving by Barent de Bakker, Interior of the anatomical theater Collegium Churgical, Amsterdam]

The Library of Congress Cataloging-in-Publication Data is available online at https://catalog.loc.gov
LC record available at https://lccn.loc.gov/2025042090

Typeface for the Latin, Greek, and Cyrillic scripts: "Brill". See and download: brill.com/brill-typeface.

ISSN 2405-5077
ISBN 978-90-04-69163-6 (hardback)
ISBN 978-90-04-69164-3 (e-book)
DOI 10.1163/9789004691643

This book is printed on acid-free paper and produced in a sustainable manner.

2

Between Allegory and Instrument: the Seventeenth Century London Anatomy Theatres of Inigo Jones and Robert Hooke as Sites of Visualization

Christine Beese

In the course of the seventeenth century, two anatomical theaters were established in London for the performance of public anatomies. For the first theatre in 1636, the Barber Surgeons Company commissioned the Renaissance architect Inigo Jones, who was known for his courtly stage designs as well as for his public buildings.[1] The mathematician Robert Hooke, who was the curator of experiments at the Royal Society and among the founders of an empirical science, oversaw the construction of a second theatre for the College of Physicians from 1679.[2] The first theater can be characterized as emblematic of

1 For a detailed analysis of Jones' anatomical theatre see Susannah Bach, *The Barber-Surgeons' Anatomy Theatre* (Cambridge: University of Cambridge, 1999). Concerning Jones' work for the English court I refer to D.J. Gordon, "Poet and Architect: The Intellectual Setting of the Quarrel Between Ben Jonson and Inigo Jones," *Journal of the Warburg and Courtauld Institutes* 12, no. 1 (1949), doi:10.2307/750261; Stephen Orgel and Roy C. Strong, *Inigo Jones: The Theatre of the Stuart Court*, 2 vols. (London: Sotheby Parke Bernet, 1973), Leonard Barkan, "The Imperialist Arts of Inigo Jones," *Renaissance drama* 7 (1976); John Orrell, *The Theatres of Inigo Jones and John Webb*, 1. publ. (Cambridge: Cambridge University Press, 1985); John Peacock, *The Stage Designs of Inigo Jones The European Context*, 1. publ. (Cambridge: Cambridge Univ. Press, 1995) and Vaughan Hart, *Inigo Jones The Architect of Kings* (New Haven: Yale Univ. Press, 2011). Recently David Theodore reflected on Jones' concept of anthropomorphic architecture David Theodore, "Turning Architecture Upside-down: From Inigo Jones to Phenomenology," *Log* (*New York, N.Y. 2003*), no. 42 (2018).

2 The anatomical theatre of Robert Hooke was examined in detail for the first time by Matthew Walker, *Robert Hooke, the Early Royal Society and the Practices of Architecture*, History of Art (University of York, 2009). doi:516566. His dissertation on Hooke's architectural practice resulted in a monographic essay on the architecture of the Royal College of Physicians: Matthew Walker, "Architecture, Anatomy, and the New Science in Early Modern London: Robert Hooke's College of Physicians," *Journal of the Society of Architectural Historians* 72, no. 4 (2013), doi:10.1525/jsah.2013.72.4.475. Concerning the epistemic function of architecture, objects and images in Hooke's work I refer to Lisa Jardine, "Monuments and Microscopes: Scientific Thinking on a Grand Scale in the Early Royal Society," *Notes and records of the Royal Society of London* 55, no. 2 (2001), doi:10.1098/rsnr.2001.0145, Michael Cooper and Michael Hunter, eds., *Robert Hooke Tercentennial Studies* (Aldershot: Ashgate, 2006), Meghan C. Doherty, *Carving Knowledge: Printed Images, Accuracy, and the Early Royal Society*

Renaissance culture, based on an analogous understanding of the world, and linked to practices of veiling and unveiling. By contrast, the second theater is seen to open a new path to a rational and anti-illusionistic way of perceiving nature and the role of humans within nature.

Several historical developments suggest that the approach to representation adopted in the two theaters differed considerably; between the construction of the first and the second building, the English Civil War took place, which ended the monopoly of the Church of England in matters of faith and led to a short period of parliamentary rule that was followed by the restoration of the monarchy. The loss of political and religious unity and the fragmentation of English society were accompanied by a fragmented view of the human body: After 1628, the discovery of the circulatory system by the English physician and anatomist William Harvey called into question the doctrine of the four humors, which had held sway since antiquity as the basis of the entire system of thought. In the spirit of René Descartes, the single parts and functions of the body came to be seen in isolation, and inductive reasoning gained prevalence.[3]

While both buildings as a type find their reference in the anatomical theatre of Padua or Leiden, their epistemological reference points seem to diverge. If Jones' theatre is read as an allegory, Hooke's theatre is seen as an instrument. The present text aims to explore to what extent such a distinction is accurate, to what extent it is shaped by discourses of functionality in the nineteenth and twentieth centuries. In order to clarify this question, the following section examines which concept of representation the two spaces were subject to in each case.

1 The Barber-Surgeon's Theater and the Order of the English Kingdom

In contrast to the first anatomical theatres on the continent the first anatomical theater in England was not erected by a university but by the City Company

of London (ProQuest Dissertations Publishing, 2010), Felicity Henderson, "Robert Hooke and the Visual World of the Early Royal Society," *Perspectives on science* 27, no. 3 (2019), doi:10.1162/posc_a_00312 and Alexander Wragge-Morley; *Aesthetic Science Representing Nature in the Royal Society of London, 1650–1720* (Chicago, London: The University of Chicago Press, 2020). doi:10.7208/9780226681054.

3 Paradigm shifts in the medical world of early modern London are best described in Charles Webster, *The Great Instauration: Science, Medicine and Reform 1626–1660* (London: Duckworth, 1975) and Harold J. Cook, *The Decline of the Old Medical Regime in Stuart London*, 1. publ. (Ithaca u.a: Cornell Univ. Press, 1986).

of the Barber-Surgeons, who had traditionally competed with the academic College of Physicians for royal privileges and dominance within in the medical field.[4] Instead of creating a new space within an existing building the Surgeons commissioned a separate oval-shaped building that embodied the Company's conception of the world and their place within it (fig. 2.1).

As well as playing a role as a royal guild charged with training the king's surgeons for the royal navy, the Company-members sought to advance a philosophical understanding of the world. By combining theory with manual skills, the surgeons sought to rival academically trained physicians and they claimed to have the knowledge needed to reveal the divine order of nature.[5] Thus, both the political and the intellectual spheres influenced the form of representation that was expressed in the anatomical theatre of the Royal Surgeons.

While many other guilds, and particularly the religious ones, had been dissolved during the Reformation and their property had been confiscated, Henry VIII allowed the surgeons to merge with the barbers in 1540 to form a joint trade company.[6] This strengthened their status within the city guild system, which safeguarded the social, political and religious order. The Company was also granted the right to receive for its public anatomies four bodies a year chosen among the criminals who had been publicly hanged. Executions and dissections thus became "two acts in a single drama", charged with both legal and spiritual connotations.[7] Spectacles of public punishment were demonstrations of power and quasi-religious festivals. These events were regarded as an act of restoration in a world disrupted by crime. Similar in their cathartic character to public punishment, the spectators of anatomies were involved in a universal healing process and fostered a recognition of one's mortality and a moral reflection on a godly life.[8] Corresponding to the anatomical theater of

4 The history of the Company of Barbers and Surgeons is well presented in Ian Burn, *The Company of Barbers and Surgeons* (London: Farrand Press London, 2000).

5 Lynda Payne, "'a Spedie Reformation'. Barber-Surgeons, Anatomization, and the Reformation of Medicine in Tudor London," in *Paracelsian Moments: Science, Medicine, and Astrology in Early Modern Europe*, ed. Gerhild Scholz Williams and Charles D. Gunnoe (Philadelphia: Penn State University Press, 2003).

6 Concerning the dissolving of religious guilds see Vanessa Harding, "Reformation and Culture 1540–1700," in *The Cambridge Urban History of Britain. Vol. 2: 1540–1840*, vol. 2, ed. Peter Clark (Cambridge: Cambridge University Press, 2000), 2.

7 Jonathan Sawday, *The Body Emblazoned Dissection and the Human Body in Renaissance Culture*, 1. publ. (London: Routledge, 1995), 66–67.

8 Richard van Dülmen, *Theater des Schreckens Gerichtspraxis und Strafrituale in der frühen Neuzeit* (München: Beck, 1985), 10.

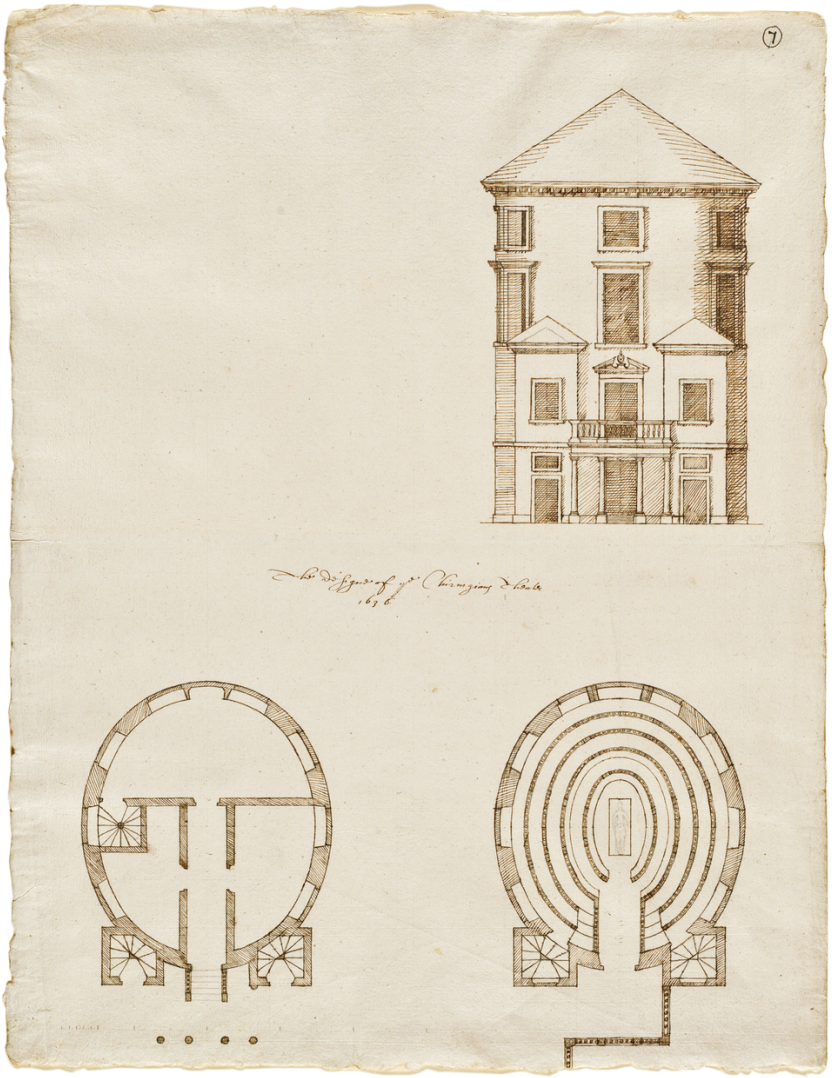


FIGURE 2.1 Inigo Jones, The Designs of the Anatomy Theater of the Barber-Surgeons' Hall, 1636

Leiden, the Barbers' auditorium in London was adorned with skeletons and human skins as *memento mori* symbols.[9]

9 Edward Hatton, *New View of London: Or, an Ample Account of That City*, 2 vols. (London: J. Nicholson, 1708), 597.

With the aim to draw the attention of the audience to the royal principles of justice that brought the bodies to the theatre, a bust of King Charles I was erected in 1641, when the king was still the head of the society chosen by God.[10] The English kings' right and practice of rule derived from the understanding that although the ruler had a mortal "body natural", he also embodied the entire "body politic".[11] It is by this anthropomorphic analogical thinking that Harvey endeavors to reconcile his revolutionary insight into the circulation of blood with the world view of English royalty. In the dedication Harvey likens the King's role in the state to the heart's role in the body: Just as the heart is the driving force of the body, so the king is the center of his kingdom, the sun of this microcosm, the heart of the state.[12]

There was a hierarchy within the company, as there was among the city guilds, and that hierarchy was reflected in the arrangement of the audience for anatomical dissections. Inigo Jones' experience in designing theatres is apparent in his design in the sophisticated sequence of arrivals established for the audience and the dissector, and in the organization of concentric seating. The lower two levels of cedar seats, arranged in an elliptical form, provided seating for the members of the Company's Court, the livery and important visitors; and was reached through the main entrance at first-floor level from the hall across the gallery and through the central door (fig. 2.2).

The broken pediment of the door can be compared with the door of the Banqueting House and emphasized the importance of the ceremonial entrance on an otherwise austere exterior.[13] The common freemen, the apprentices, and members of the public stood on the higher three tiers. A stair tower on each side of the main entrance, each with a narrow wooden door, gave direct access to the upper tier from outside. The balustrades prevented the occupants of the upper and lower tiers from mixing, which is similar to the division used in Jones' design of the Cockpit Theatre (1616–1618). The performance and the clothing of the surgeons recalled the state visits and other public ceremonies in which the Company took part, and served to heighten the dramatic and spectacular nature of the event.[14]

---

10 Hatton, *New View of London*, 597.

11 Marie-France Fortin, "The King's Two Bodies and the Crown a Corporation Sole: Historical Dualities in English Legal Thinking," *History of European ideas*, 2021, doi:10.1080/01916599.2021.1914934.

12 William Harvey, *Exercitatio Anatomica De Motu Cordis Et Sanguinis in Animalibus* (Frankfurt: Wilhelm Fitzer, 1628), 3.

13 Bach, *The Barber-Surgeons' Anatomy Theatre*, 35.

14 Bach, *The Barber-Surgeons' Anatomy Theatre*, 4–11.

FIGURE 2.2 Inigo Jones, Anatomy Theater of the Barber-Surgeons' Hall, London 1636 (Watercolour by Charles Harding, 1762)

2 The Barber-Surgeon's Theatre and the Epistemic Function of the Arts

In order to signal the Company's intellectual ambitions, Jones and the surgeons developed a complex spatial and artistic system of microcosm and macrocosm, which represented the conditions and possibilities of absolute cognition through the human senses. For Jones himself, this question was a subject close to his heart. After all, the epistemological quality of his own art had been called into question by the poet Ben Jonson with whom he had developed the royal masks. Taking up the contest of the arts known as the *Paragone*, Jonson labelled Inigo Jones' artistic work as "outward celebration" and "shew".[15] Following Jonson, the architect's work was aimed at the sensual perception of the body, while the poet spoke to the mind. Buildings, like all earthly matter, were considered corruptible bodies, whereas the word, like the spirit, was held to be immortal.[16] Jones responded to these attacks with the means of his art and created a stage set in Albion's Triumph that symbolises the connection between theory and practice through architecture. A richly decorated proscenium arch shows two pilasters supported by an old and a young woman as personifications of theory and practice. Following Jones, form and content, matter and spirit cannot be separated. In line with the surgeons Jones asserted that his profession is a liberal and not a mechanical art.[17]

In accordance with Italian architectural theory, Jones assumed that a building must correspond to the proportions of the microcosm and macrocosm in order to achieve true harmony. Human proportions in particular were read as an expression of divine rules of harmony. As Jones' drawing book from 1614 makes clear, the architect devoted a great deal of energy to capturing human proportions and anatomical details in his drawings. His exercises were based not least on Vesalius' publication *De humani corporis* and Valverde's version of this publication.[18] Concerning the anthropomorphic mindset, the architect was also in agreement with the physicians. In particular Helkiah Crooke and

15 Gordon, "Poet and Architect: The Intellectual Setting of the Quarrel between Ben Jonson and Inigo Jones", 155.

16 Christine Stevenson, *The City and the King: Architecture and Politics in Restoration London* (New Haven: Yale University Press, 2013), 28.

17 Gordon, "Poet and Architect: The Intellectual Setting of the Quarrel between Ben Jonson and Inigo Jones", 167.

18 I would like to thank Monique Kornell for these tips. The catalogue of Abraham van der Doort proves that Jones gave his edition of Vesalius's book to Charles I: Oliver Millar, ed., *Abraham Van Der Doort's Catalogue of the Collections of Charles I.*, The Walpole Society 37 (1958–60), 125. Jeremy Wood assigns the Vesalius template to individual drawings by Jones:

Robert Fludd, who were closely associated with the Surgeons' Guild, based their writings on anthropomorphic thinking. Under the influence of Neoplatonism, Crooke and Fludd divided the structure of the body and the structure of the world into three corresponding realms (fig. 2.3).

In his book *Mikrokosmographia* (1615), which he dedicated to the Barber Surgeons Company, Crooke stated that the liver, kidneys, and genitals corresponded to the sublunary world, the chest and heart to the celestial world, and finally the head as the seat of the soul to the heavenly or divine world. The human body is described as the stately mansion of the soul, containing outward walls as well as special rooms such as kitchen, office and so on.[19]

In his extensive work *Utriusque cosmi historia*, Robert Fludd, theosophist and physician who joined the London Barber Surgeons Company in 1634, linked the microcosm-macrocosm relationship to the concept of *theatrum mundi*, considering the world as Gods own theatre that could reveal truths to man and teach him about human nature.[20] In the tradition of the memory-theater, which was conceptualized by Giulio Camillo around 1550, the topical cosmos was contained in the inner room of the mind, where ideas and concepts were arranged in a spatial order.[21] Robert Fludd also attempted to locate the physiological areas of perception and knowledge-production within the human head. He imagined the inner world of the mind as a theatrical space, and the human body and mind as being a stage of the cosmos. Drawing on the scholastic theory of the three cerebral ventricles, which were supposed to lead from sensory observation to rational selection, and then to storage in the memory, Fludd addressed the question of whether true knowledge could be obtained through the human senses. According to Fludd, the *mundus sensibilis* can be thought of as a rectangular theater, on whose stage of the microcosm the five senses meet. Conversely, the *memoria visionum* can be thought of as

---

Jeremy Wood, "Inigo Jones, Italian Art, and the Practice of Drawing," *The Art bulletin* (*New York, N.Y.*) 74, no. 2 (1992), doi:10.2307/3045871, 258.

19 Helkiah Crooke, *Mikrokosmographia* (London: William Iaggard, 1615). For further inquiries cf. Jillian F. Linster, "Books, Bodies, and the 'Great Labor' of Helkiah Crooke's Mikrokosmographia" (Iowa: University of Iowa, 2017).

20 On the phenomenon of "intertheatricality", see: Christel Meier, "Enzyklopädie und Welttheater. Zur Intertheatralität von Universalwissen und weltpräsentierender Performanz," in *Enzyklopädistik 1550–1650. Typen und Transformationen von Wissensspeichern und Medialisierungen Des Wissens*, ed. Martin Schierbaum (Berlin: LIT-Verlag, 2009), 18.

21 On the memory theatre, see: Giulio Camillo, *L' Idea Del Theatro. Con 'L'idea Dell'eloquenza,' Il 'De Transmutatione' E Altri Testi Inediti*, ed. Lina Bolzoni, Classici 77 (Milano: Adelphi, 2015).

FIGURE 2.3 Robert Fludd, "The Three Faculties" from *Utriusque Cosmi historia, Tomus secundus de supernaturali, naturali, praeternaturali et contranaturali Microcosmi historia*, 1619, p. 217

a round amphitheater, the macrocosmic stage that is described as a theater of display and of battles of ideas and concepts.[22]

In line with Bach I would argue that the anthropomorphic view, shared by architects and physicians also informs the shape and concept of the anatomical theatre. Assuming this, the private dissecting rooms correspond to the sublunary world, the lecture theater corresponds to the center of bodily and physical life, and the painted dome to heaven.[23] Akin to the "heavens" depicted in contemporary public playhouses such as the Fortune and Hope, the ceiling of the anatomical theater was painted with the stars, planets and signs of the zodiac.[24] The intermediate zone between the lecture theatre and the dome was adorned with the figures of the seven liberal sciences as the means to ascend to true knowledge. Following Fludd's concept, in the anatomical theatre the structure of the world was not only mirrored, but also reproduced. The lecture theatre represented both, the stage of the senses, of bodily experience, and the stage of the intellect, where ideas and concepts struggle in the generative act of creation. The room is to be understood as a kind of experimental set-up in which the interaction of art and craft, of mind and body in the realization of knowledge is demonstrated and examined at the same time.

The elliptical shape of the theatre was unique in England – only on the continent oval churches had been built before. And although it posed technical problems for the craftsmen, the Surgeons deliberately chose this form. To solve this ambitious task, Jones consulted Serlios treatise on architecture and based his construction of the oval on Serlio's specifications given in the third book, where also the depiction of the amphitheater in Verona can be found.[25] Jones' reference to the Roman amphitheater relates not only to the form, but also to the content. Similar to the plays in the roman amphitheater, public dissections revolve around judgement and death. The space creates a setting where audience and actors were part of the same physical realm and therefore constitutive for the event. Apart from specific architectural models, the oval shape was

22 Wilhelm Schmidt-Biggemann, "Robert Fludds Theatrum Memoriae," in *Ars Memorativa*, ed. Jörg J. Berns and Wolfgang Neuber (De Gruyter, 2013); Elizabeth D. Harvey (ed.), *Sensible Flesh: On Touch in Early Modern Culture* (Philadelphia: University of Pennsylvania Press, 2020), 81–91; Fludds epistemic use of images is described by Ute Frietsch, "Robert Fludd's Visual and Artisanal Episteme: A Case Study of Fludd's Interaction with His Engraver, His Printer-Publisher, and His Amanuenses," *Ambix* 69, no. 4 (2022), doi:10.1080/00026980.2022.2133809.

23 Bach, *The Barber-Surgeons' Anatomy Theatre*, 11–20.

24 Sidney Young, *The Annals of the Barber-Surgeons of London* (London: Blades East & Blades, 1890), 134.

25 Bach, *The Barber-Surgeons' Anatomy Theatre*, 20–29.

discussed at that time in connection with the Copernican theory, according to which the Earth and the planets revolve around the sun, as well as Kepler's discovery that the orbits of the planets are not circular but elliptical.[26] If one considers that the dome was equipped with planets orbiting the sun and that the sun with Harvey is to be understood as a symbol of the king, the anatomical theatre appears as a closed cosmos in which the order of the (English) world can be experienced on one's own body and is thus recognizable both sensually and rationally.

Although the anatomical theatre of the Barber-Surgeons embodies Inigo Jones' self-image as an intellectual artist in a special way, it's architecture as such has received little attention from historiography to date. Assumingly this was due in particular to the distinction between art and science as two different cultures, established in the nineteenth century.[27] While Jones' courtly and ecclesiastical works fitted into the concept of architectures as art, the anatomical theatre seemed marginal, hardly worthy of a scientific space. And it certainly didn't help that the building had already been demolished in 1784. In the case of Hooke's anatomical theatre, too, the narrative of the two cultures ensured that the building only came to the attention of researchers at a late stage. Robert Hooke was primarily seen as a mathematician and natural scientist; for a long time, the College of Physicians was attributed to Christopher Wren, whose work instead was judged as "too intellectual".[28] It was only with the dissertation of Matthew Walker, that the architectural design of Hookes anatomical theater, demolished in 1866, was examined more closely.[29]

3 Promoting the Royal College of Physicians

To put it bluntly, one could say, Inigo Jones' anatomical theatre was seen as the work of a celebrative art that did not generate further knowledge, while Robert Hooke's anatomical theatre was regarded as the work of an engineer, a scientific instrument that privileged an objective attitude that led to rational

26 Bach, *The Barber-Surgeons' Anatomy Theatre*, 20–29.

27 Caroline A. Jones and Peter Galison (eds.), *Picturing Science, Producing Art* (New York: Routledge, 1998), introduction.

28 Anthony Geraghty, "The 'Dissociation of Sensibility' and the 'Tyranny of the Intellect': T.S. Eliot, John Summerson and Christopher Wren," in *The Persistence of the Classical, Essays Presented to David Watkin*, ed. F. Salmon (London: Philip Wilson Publishers, 2008).

29 Walker, *Robert Hooke, the early Royal Society and the practices of architecture*; Walker, "Architecture, Anatomy, and the New Science in Early Modern London: Robert Hooke's College of Physicians".

judgements.[30] At first glance it seems that the anatomical theater Hooke designed for the Royal College of Physicians in 1676 could be sought of as a technical tool that was planned to represent the world without any illusionary effect or any idealization. In its elevated position, the anatomical theatre was exposed to sunlight and the large conical lantern and the carefully placed occuli provided natural light to increase visibility. When James Elmes defined the theater in 1823 as "a perfect study of acoustical and optical architecture,"[31] he expressed the nineteenth century ideal of a scientific building that creates a neutral setting in which experiments can be repeated as often as desired under the same conditions. The question is, however, what function the room actually had. In what way does the anatomical theatre of the physicians differ conceptually from that of the surgeons? What understanding of representation characterizes Hooke's space?

Given that the Barber-Surgeon's anatomical theatre had been magnificently restored by Robert Hooke after the Great Fire of 1666, the Physicians' desire for such a facility in their new college building was great. Apart from their institutional rivalry with the surgeons, the physicians needed a public venue to hold their two main lectures. Whilst the Lumleian lectures were a kind of survey lecture for candidates for admission to the College, the Gulstonian lectures dealt with the body system and organs and was aimed at a wider audience.[32] The College of Physicians saw itself as an institution that worked for the public good and Hooke expressed the client's aspirations not least through the use of a classical architectural language, taken from Dutch, French and Italian models.[33] The building design for the Royal College of Physicians agreed between the doctors and Hooke consisted of a four-winged complex around a central courtyard with the anatomical theatre on the east side (fig. 2.4).

Structured by Ionic and Corinthian columns in superposition the two-storey main building on the west side was crowned by a central triangular pediment and a lantern. Above the entrance a round-arched niche was placed that housed a statue of King Charles II.

---

30 Walker, *Robert Hooke, the early Royal Society and the practices of architecture*, 230–231.

31 James Elmes, *Memoirs of the Life and Works of Sir Christopher Wren With a Brief View of the Progress of Architecture in England, from the Beginning of the Reign of Charles the First to the End of the Seventeenth Century*, Cambridge Library Collection (Cambridge: University Press, 1823), 451–452.

32 Walker, *Robert Hooke, the early Royal Society and the practices of architecture*, 213.

33 Alison Stoesser, "The Influence of Dutch Classicist Architects on the Works of Robert Hooke, Scientist and Architect," in *Dutch and Flemish Artists in Britain 1550–1800*, ed. Juliette Roding et al. (Leiden: Primavera Pers, 2003); Walker, *Robert Hooke, the early Royal Society and the practices of architecture*, 210, 228–229.

FIGURE 2.4 Robert Hooke, Courtyard of the College of Physicians, London 1679. Frontispiece from: Henry Plumptre, *Pharmacopoeia Collegii Regalis Medicorum Londinensis*, 1746

To finance the anatomical theatre, the doctors had been able to win John Cutler, a successful grocer who had previously sponsored the Cutler Lecture at Gresham College for Robert Hooke and had been elected an honorary member of the Royal Society in 1664. Cutler expected to be duly honored for his

commitment and demanded a prestigious location for his foundation. Thus, the anatomical theatre was located above the octagonal loggia that gave entrance to the college.[34] Easy to recognize even from a distance, the anatomical theatre became a gateway to pass before entering the college. In the spirit of a theatre motif, an Ionic colonnade was placed in front of the round arches of the substructure. The main entrance was marked by a portico consisting of twin columns on pedestals and a triangular pediment with an inscription in honor of the founder, which extended up to the base cornice of the upper storey. At eye level with the statue of Charles II, a niche with a statue of Sir Cutler was inserted opposite the main façade of the college. The anatomical theatre was accessed via a staircase in the side connecting wing, which was accessible from the inner courtyard. The interior had four ascending tiers, the first two of which had seats and were reserved for members of the college (fig. 2.5). A prominent seat for the president of the college was located opposite the main entrance.

This seat is reminiscent of a university professor's pulpit and emphasises the impression of an academic lecture theatre. John Evelyn and Hooke report their participation in the lectures given by Walter Charleton in the anatomical theatre on the stomach and the blood circulation respectively. Charleton presented the latest anatomical discoveries on specific parts of the body, but without conducting any experiments of his own.[35] Nevertheless the room became at least rhetorically linked to scientific observation. In his opening lecture Charleton stated how much the quality of the theatre and the weight of the client correspond.[36] Furthermore, the frontispiece of the lecture's publication from 1680 stylizes the anatomical theatre as a symbol of universal and regular research. Isolated from its architectural context and surrounded only by sky and clouds, the building presents itself according to all the rules of descriptive geometry and classical architecture (fig. 2.6).

Through images and text, the anatomical theatre becomes synonymous with empirical research aimed at discovery, which, however, does not take place in the rooms themselves.

34 Walker, *Robert Hooke, the early Royal Society and the practices of architecture*, 221–225.

35 Walker, *Robert Hooke, the early Royal Society and the practices of architecture*, 214–219.

36 Walter Charleton, *Enquiries into Human Nature*, Anatomic prælections in the new theatre of the Royal College of Physicians in London (London: Printed by M. White, for Robert Boulter …, 1680), 5–6.

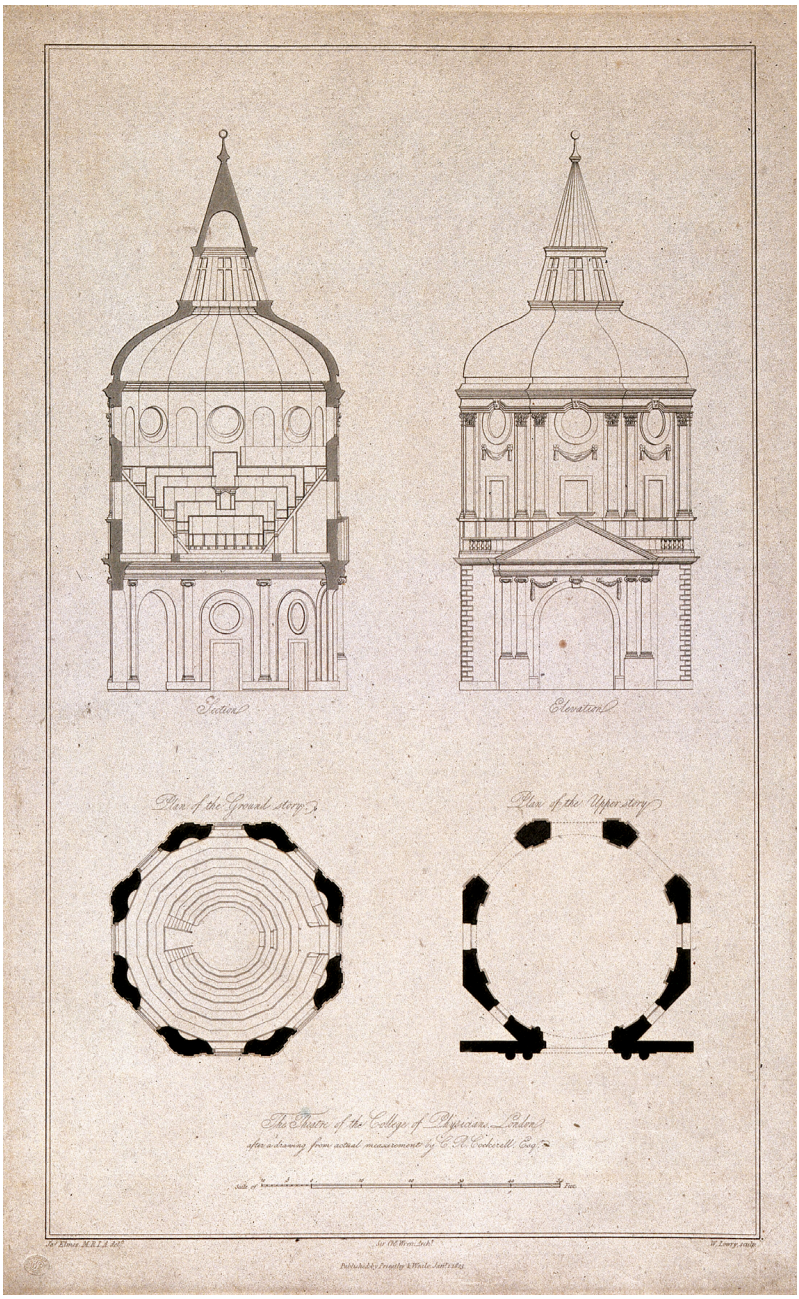


FIGURE 2.5 Robert Hooke, The Royal College of Physicians, Warwick Lane, London: The entrance and anatomical theatre, in elevation and section, with plans. Engraving by W. Lowry after J. Elmes after C.R. Cockerell, 1823

FIGURE 2.6 Robert Hooke, College of Physicians. Frontispiece from: Walter Charleton, *New Enquiries into Human Nature in VI. Anatomic Prælections in the New Theatre of the Royal College of Physicians in London*, 1680

4 Staging without Staging – Robert Hooke and the Detached Scientific Gaze

The anatomical theatre was thus neither a place for the all-encompassing experience of the cosmic order, like that of Inigo Jones, nor was it a place for experimental research, as conducted by the members of the Royal Society. Rather, the anatomical theatre of the College of Physicians became the place to disseminate and authenticate the new empirical method and the authority of the College as a public institution. The problem now was that the staging paradigm of the theatre had not only come under criticism from Protestants who denounced the sinful sensual pleasure of the performances.[37] The sensual public performance was increasingly seen as the antithesis of true scientific research. Sir William Petty, a physician who had studied in Leiden, stated in 1676, that the London anatomical theatre might be the most commodious one that has ever been seen in Europe, but that "the thorough knowledge of the fabrick of animals is not to be attained from the publick and promiscuous Demonstrations from a Theatre, nor from any wordy and tumultory discourses that can be made about it; but from curious and minute Disections".[38] The task for Hooke was to create a space that met both the public demands of the College and the changed image of scientific inquiry. The room therefore had to fulfil the paradox of representing scientific knowledge while at the same time creating the impression that the viewer was witnessing the discovery of the experiments as such.

This is where Hooke's interest in microscopes as a means of visualisation paid off. In his capacity as a naturalist, Hooke had studied the observation of insects and plants through different lenses and published a book in 1665 containing the first illustrations of insects and plants under the microscope. Being the first major publication of the Royal Society, *Micrographia* was disseminated far beyond the specialised public and played a major role in the acceptance of the microscope as a research instrument. In particular, the spectacular copperplate engravings of the magnified insects, which could be seen on fold-out pages, impressed viewers and conveyed the impression of actually looking through a microscope themselves and seeing the hidden beauty of the divine "machines" – as Hooke understood them. Yet, these representations are not

37 As Anthony Geraghty describes, the Protestants initially endeavoured to build the Sheldonian Theatre in Oxford in order to banish academic rites, which were considered unworthy, from the church interior. Anthony Geraghty, *The Sheldonian Theatre Architecture and Learning in Seventeenth Century Oxford* (New Haven: Yale Univ. Press, 2013).

38 William Petty, *The Petty Papers: Some Unpublished Writings of Sir William Petty*, Reprints of economic classics, ed. Henry W.E. Lansdowne (New York: Augutus M. Kelley, 1967), 173.

the reproduction of a single view, but rather different points of view merged into an "ideal" image.[39] The attempt to depict unadulterated reality thus led to another "illusion of the act of looking at the visible world".[40] In the anatomical theatre Hooke is mimicking the same effect by architectural means.

As Matthew Walker shows, Hookes design of the lantern can be traced back to several sources. First of all, Hooke consulted Serlio's fifth book of architecture and cited an ideal church design with a domed roof and a pyramidal structure at its apex.[41] But Hooke's architectural works were also closely linked to his scientific works as he used physical knowledge gained from his experiments to build instruments on a small scale and architectural designs on a large scale.[42] Thus, the lantern of the anatomical theatre resembles in some respects the *scotoscope* designed by Hooke, which was characterized by indirect incidence of light so as not to distort the object depicted. The conical shape of the lantern, with its lateral openings in conjunction with the window reveals cut deep into the structure, provided indirect lighting that was also directed towards the centre of the room. In this way, the illuminated body appeared isolated and separated from its real-world context. As demanded by Hooke and his teacher Robert Boyle, this staging evoked the sense of estrangement of the detached scientific gaze.[43] Analogue to the illustrations of Hooke's *Micrographia*, the architecture of the theatre sought to create a plain and realistic, if highly artificial, effect of direct observation of the body.

Ostensibly, Hooke seems to reject the modes of theatricality adopted in the Surgeons' theater. In contrast to the philosophical concept embodied in the Surgeon's theater as a representation and reenactment of the *theatrum mundi*, the architecture of Hooke's auditorium exhibits its functional parts and appears entirely dictated by the need to maximize visibility. But instruments like the *scotoscope* were used as generators of knowledge, whereas the anatomical theater functioned as an instrument of display and dissemination. With his anatomical theatre Hooke "attempted to facilitate the presentation of scientific discoveries through principles similar to those that had enabled the discoveries in the first place".[44] To be precise: The anatomical theatre was

39 Janice Neri described Hooke's depiction technique as "visual dissections" Janice Neri, *The Insect and the Image: Visualizing Nature in Early Modern Europe, 1500–1700*, Art history (Minneapolis: University of Minnesota Press, 2011), 115.

40 Doherty, *Carving knowledge: Printed images, accuracy, and the early Royal Society of London*.

41 Walker, *Robert Hooke, the early Royal Society and the practices of architecture*, 225.

42 Jardine, "Monuments and microscopes: Scientific thinking on a grand scale in the early Royal Society".

43 Henderson, "Robert Hooke and the Visual World of the Early Royal Society", 401.

44 Walker, *Robert Hooke, the early Royal Society and the practices of architecture*, 234.

the representation of a technical instrument – not the instrument itself. The function of space was not to enable scientific discoveries, but to simulate them by recurring to ways of visualisation that were associated with empirical knowledge making. The building restages a view through an optical instrument and at the same time utilizes the semantics associated with the microscope, namely the "curious and minute" observation to guarantee for the credibility of the knowledge presented.

In contrast to later concepts of objectivity, sensual perception should be regulated by this type of staging, but not silenced. The pleasure that the contemplation of the beauty of nature brought with it was seen as a symptom of the divinity of creation and should therefore be cultivated in the representations.[45] The naturalist (re)presentation of the body in the anatomical theater can be read as a strategy of aestheticization that served to prove God's existence through the beauty of his works. It aimed to stimulate the affective dimensions of the scientific experience, and to incorporate the philosopher's affective states into practices of scientific inquiry and representation. Conscious sensory perception served the knowledge of God and bolstered the Royal Society's claims about the moral and political utility of natural philosophy. Instead of dividing the English nation along religious lines, natural philosophy should be acceptable to different religious parties as it provides evidence of the existence of God through rational arguments. In contrast to enthusiastic passion of religious inspiration, natural philosophy was held to serve both – religious belief and the social order.[46]

The goal of employing and channeling affects connected natural philosophers beyond medical practice to classical theater, whose performances traditionally served to visualize and internalize the appropriate affects. The anatomical theater of the College of Physicians was not merely an instrument of disinterested and functional research. Instead, like its counterpart, it made use of theatrical strategies to perfect human subjective capacities and incapacities by enabling a disciplined work on oneself and on others.[47] Following Wragge-Morley, "the communicability of knowledge was to be guaranteed not only by the vividness of its representation but also by the effects of that representation on the bodies and thence the affective dispositions of readers."[48]

45 Wragge-Morley, *Aesthetic science representing nature in the Royal Society of London, 1650–1720*, 3.

46 Wragge-Morley, *Aesthetic science representing nature in the Royal Society of London*, 10.

47 Matthew L. Jones, *The Good Life in the Scientific Revolution: Descartes, Pascal, Leibniz, and the Cultivation of Virtue* (Chicago: University of Chicago Press, 2006). doi:10.7208/9780226409566, 268.

48 Wragge-Morley, *Aesthetic science representing nature in the Royal Society of London, 1650–1720*, 159.

Against this background, the ornamentation of the theatre is not to be understood as pure decoration in the Loosian sense. Rather, the arts are used specifically to influence the virtue of the visitors. Leon Battista Alberti assumed that architecture affects the human soul through its design and that it therefore also has ethical, theological and epistemic significance. The simplicity and grandeur of a church building should contribute to piety and have an effect on the individual's way of life.[49] In line with Alberti, Hooke applied the classic architectural language not only to honor his client but also to create the right setting for Self-knowledge and knowledge of God.

As Steven Shapin has shown, Hooke and his fellow scientists argued that "the validity of natural knowledge flowed from public presences at its making and public goods as its outcome".[50] Public presence was meant to guarantee that experimental knowledge was reliable and authentic. Given that the moral integrity of the audience members served to vouch for the reliability of the knowledge issuing from dissections and that perfecting human ability was held as a basic requirement for natural philosophical inquiry, it was clear that the anatomical theater would not become obsolete as venue of scientific representation after the Baconian shift. Despite their fundamental differences – Jones makes deliberate use of ceremonial staging strategies that insist of their own theatricality whereas Hooke simulates the detached scientific gaze to receive a naturalist impression – both theatres were designed to impart the respective epistemic virtues to the viewer and required elaborate forms of representation.[51] It was only when natural philosophy had lost its perceived power to cultivate the moral person that theatricality lost its function in scientific settings.

Bibliography

Primary Sources

Charleton, Walter. *Enquiries into Human Nature*. Anatomic prælections in the new theatre of the Royal Colledge of Physicians in London. London: Printed by M. White, for Robert Boulter …, 1680.

Crooke, Helkiah. *Mikrokosmographia*. London: William Iaggard, 1615.

49 Leon Battista Alberti, *Über die Seelenruhe Oder Vom Vermeiden des Leidens in drei Büchern, Edited, Translated and Commented by Hana Gründler, Katharine Stahlbuhk, Giulia Baldelli, Victoria Lorini* (Berlin: Verlag Klaus Wagenbach, 2022), 131–132.

50 Steven Shapin, "The Place of Knowledge: The Spatial Setting and Its Relation to the Production of Knowledge," *Science in Context* 4 (1991), 11.

51 On epistemic virtues see: Lorraine Daston and Peter Galison, *Objectivity* (New York: Zone Books, 2007).

Elmes, James. *Memoirs of the Life and Works of Sir Christopher Wren With a Brief View of the Progress of Architecture in England, from the Beginning of the Reign of Charles the First to the End of the Seventeenth Century*. Cambridge Library Collection. Cambridge: University Press, 1823.

Harvey, William. *Exercitatio Anatomica De Motu Cordis Et Sanguinis in Animalibus*. Frankfurt: Wilhelm Fitzer, 1628.

Hatton, Edward. *New View of London: Or, an Ample Account of That City*. 2 vols. London: J. Nicholson, 1708.

Secondary Sources

Alberti, Leon Battista. *Über die Seelenruhe Oder Vom Vermeiden des Leidens in drei Büchern.* Edited, Translated and Commented by Hana Gründler, Katharine Stahlbuhk, Giulia Baldelli, Victoria Lorini. Berlin: Verlag Klaus Wagenbach, 2022.

Bach, Susannah. *The Barber-Surgeons' Anatomy Theatre*. University of Cambridge, 1999.

Barkan, Leonard. "The Imperialist Arts of Inigo Jones." *Renaissance drama* 7 (1976): 257–85.

Burn, Ian. *The Company of Barbers and Surgeons*. London: Farrand Press London, 2000.

Camillo, Giulio. *L' Idea Del Theatro. Con 'L'idea Dell'eloquenza', Il 'De Transmutatione' E Altri Testi Inediti*. Edited by Lina Bolzoni. Milano: Adelphi edizioni, 2015.

Cook, Harold J. *The Decline of the Old Medical Regime in Stuart London*. Ithaca u.a: Cornell Univ. Press, 1986.

Cooper, Michael, and Michael Hunter, eds. *Robert Hooke Tercentennial Studies*. Aldershot: Ashgate, 2006.

Daston, Lorraine, and Peter Galison. *Objectivity*. New York: Zone Books, 2007.

Doherty, Meghan C. *Carving Knowledge: Printed Images, Accuracy, and the Early Royal Society of London*. ProQuest Dissertations Publishing, 2010.

Fortin, Marie-France. "The King's Two Bodies and the Crown a Corporation Sole: Historical Dualities in English Legal Thinking." *History of European ideas*, 2021, 1–19. doi:10.1080/01916599.2021.1914934.

Frietsch, Ute. "Robert Fludd's Visual and Artisanal Episteme: A Case Study of Fludd's Interaction with His Engraver, His Printer-Publisher, and His Amanuenses." *Ambix* 69, no. 4 (2022): 341–73. doi:10.1080/00026980.2022.2133809.

Geraghty, Anthony. "The 'Dissociation of Sensibility' and the 'Tyranny of the Intellect': T.S. Eliot, John Summerson and Christopher Wren." In *The Persistence of the Classical, Essays Presented to David Watkin*, edited by F. Salmon, 26–39. London: Philip Wilson Pub., 2008.

Geraghty, Anthony. *The Sheldonian Theatre Architecture and Learning in Seventeenth Century Oxford*. New Haven: Yale Univ. Press, 2013.

Gordon, D.J. "Poet and Architect: The Intellectual Setting of the Quarrel Between Ben Jonson and Inigo Jones." *Journal of the Warburg and Courtauld Institutes* 12, no. 1 (1949): 152–78. doi:10.2307/750261.

Harding, Vanessa. "Reformation and Culture 1540–1700." In *The Cambridge Urban History of Britain. Vol. 2: 1540–1840*, edited by Peter Clark, 263–88. Cambridge: Cambridge University Press, 2000.

Hart, Vaughan. *Inigo Jones The Architect of Kings*. New Haven: Yale Univ. Press, 2011.

Harvey, Elizabeth D., ed. *Sensible Flesh: On Touch in Early Modern Culture*. Philadelphia: University of Pennsylvania Press, 2020.

Henderson, Felicity. "Robert Hooke and the Visual World of the Early Royal Society." *Perspectives on science* 27, no. 3 (2019): 395–434. doi:10.1162/posc_a_00312.

Jardine, L. "Monuments and Microscopes: Scientific Thinking on a Grand Scale in the Early Royal Society." *Notes and records of the Royal Society of London* 55, no. 2 (2001): 289–308. doi:10.1098/rsnr.2001.0145.

Jones, Caroline A., and Peter Galison, eds. *Picturing Science, Producing Art*. New York: Routledge, 1998.

Jones, Matthew L. *The Good Life in the Scientific Revolution: Descartes, Pascal, Leibniz, and the Cultivation of Virtue*. Chicago: University of Chicago Press, 2006. doi:10.7208/9780226409566.

Linster, Jillian F. "Books, Bodies, and the 'Great Labor' of Helkiah Crooke's Mikrokosmographia." PhD University of Iowa, 2017.

Meier, Christel. "Enzyklopädie und Welttheater. Zur Intertheatralität von Universalwissen und weltpräsentierender Performanz." In *Enzyklopädistik 1550–1650. Typen und Transformationen von Wissensspeichern und Medialisierungen des Wissens*. Vol. 18, edited by Martin Schierbaum, 3–39. Berlin: LIT-Verlag, 2009.

Millar, Oliver, ed. *Abraham Van Der Doort's Catalogue of the Collections of Charles I*. The Walpole Society 37, 1958–60.

Neri, Janice. *The Insect and the Image: Visualizing Nature in Early Modern Europe, 1500–1700*. Minneapolis: University of Minnesota Press, 2011.

Orgel, Stephen, and Roy C. Strong. *Inigo Jones: The Theatre of the Stuart Court*. 2 vols. London: Sotheby Parke Bernet, 1973.

Orrell, John. *The Theatres of Inigo Jones and John Webb*. Cambridge: Cambridge University Press, 1985.

Payne, Lynda. "'a Spedie Reformation'. Barber-Surgeons, Anatomization, and the Reformation of Medicine in Tudor London." In *Paracelsian Moments: Science, Medicine, and Astrology in Early Modern Europe*, edited by Gerhild Scholz Williams and Charles D. Gunnoe, 71–92, University Park: Penn State University Press, 2003.

Peacock, John. *The Stage Designs of Inigo Jones The European Context*. Cambridge: Cambridge Univ. Press, 1995.

Petty, William. *The Petty Papers: Some Unpublished Writings of Sir William Petty*. Reprints of economic classics, edited by Henry W.E. Lansdowne. New York: Augutus M. Kelley, 1967.

Sawday, Jonathan. *The Body Emblazoned Dissection and the Human Body in Renaissance Culture*. 1. publ. London: Routledge, 1995.

Schmidt-Biggemann, Wilhelm. "Robert Fludds Theatrum Memoriae." In *Ars Memorativa*, edited by Jörg J. Berns and Wolfgang Neuber, 154–69. Berlin: De Gruyter, 2013.

Shapin, Steven. "The Place of Knowledge: The Spatial Setting and Its Relation to the Production of Knowledge." *Science in Context* 4 (1991): 3–218.

Stevenson, Christine. *The City and the King: Architecture and Politics in Restoration London*. New Haven: Yale University Press, 2013.

Stoesser, Alison. "The Influence of Dutch Classicist Architects on the Works of Robert Hooke, Scientist and Architect." In *Dutch and Flemish Artists in Britain 1550–1800*, edited by Juliette Roding et al., 189–206. Leiden: Primavera Pers, 2003.

Theodore, David. "Turning Architecture Upside-down: From Inigo Jones to Phenomenology." *Log* (*New York, N.Y. 2003*), no. 42 (2018): 116–26.

van Dülmen, Richard. *Theater des Schreckens Gerichtspraxis und Strafrituale in der frühen Neuzeit*. München: Beck, 1985.

Walker, Matthew. *Robert Hooke, the Early Royal Society and the Practices of Architecture*. History of Art. University of York, 2009. doi:516566.

Walker, Matthew. "Architecture, Anatomy, and the New Science in Early Modern London: Robert Hooke's College of Physicians." *Journal of the Society of Architectural Historians* 72, no. 4 (2013): 475–502. doi:10.1525/jsah.2013.72.4.475.

Webster, Charles. *The Great Instauration: Science, Medicine and Reform 1626–1660*. London: Duckworth, 1975.

Wood, Jeremy. "Inigo Jones, Italian Art, and the Practice of Drawing." *The Art bulletin* (*New York, N.Y.*) 74, no. 2 (1992): 247–70. doi:10.2307/3045871.

Wragge-Morley, Alexander. *Aesthetic Science: Representing Nature in the Royal Society of London, 1650–1720*. Chicago, London: The University of Chicago Press, 2020. doi:10.7208/9780226681054.

Young, Sidney. *The Annals of the Barber-Surgeons of London*. London: Blades East & Blades, 1890.